

DIGITAL TRANSFORMATION OF TOURISM, A GREAT STEP FORWARD?

CIPRIAN NIMARĂ *

ABSTRACT: *Over the past few years, the phrase “digital transformation in travel” has been repeatedly mentioned more and more. During the outbreak of the Covid-19 pandemic, many faces of the tourism and travel industry have been slowed down or ceased. And as a result, the importance and demand for radical digital experience are becoming enormous. The owners of travel businesses have been implementing various solutions to adjust their presence on the digital platforms and offering great digital experiences. This paper aims to show how the digital transformation has fundamentally changed the model of thinking in terms of tourism and how can modern digital technologies create novel opportunities and values.*

KEY WORDS: *tourism, travel, digital transformation, Covid-19 pandemic*

JEL CLASSIFICATIONS: *R0, R1, Z3*

1. INTRODUCTION

The Internet information space is easily available and accessible worldwide to travellers, tourism industry agents, but also researchers, teachers and students, and has become increasingly complex and dynamic. Considering this, the use of digital technologies enhancing efficient communication and articulation between the different tourism actors within destination networks and markets should be recognized as valuable for business success (Dexeus, 2019).

At the European level, the Joint Research Centre of the European Commission on Learning and Skills for the Digital Era highlights the importance of “harnessing the potential of digital technologies to innovate education and training practices, improve access to lifelong learning and to deal with the rise of new (digital) skills and competencies needed for employment, personal development and social inclusion” (Carretero, et al., 2017). This effort has been translated into detailed guidelines, such as

* Lecturer, Ph.D., University of Petroșani, Romania, ciprian.nimara@yahoo.com

the DigComp 2.1: The Digital Competence Framework for Citizens and the Digital Competence Framework for Educators. At the same time, according to the World Economic Forum's (Traskevich & Fontanari, 2021) latest report: "The greatest societal impact may be the effect of digital transformation on the travel workforce, which could represent as many as one in every 11 jobs worldwide by 2025. Intelligent automation will change the nature of some travel jobs and eradicate others altogether". In this scenario, it is vital for Higher Education Institutions, especially in the field of tourism, hospitality and Education, to keep pace with enduring digital transformation.

Presently many countries can benefit from tourism because they have been able to build a highly formidable tourism sector. The top four countries with buoyant tourism are France, Spain, United States and China. France is named as the number one destination of tourist visits. It is not far-fetched having France as the world's most visited country because of its beauty, rich culture, exquisite cuisine and historical landmarks (Buia & Nimară, 2016). It has been able to lure millions of visitors every year by leveraging on its tourism industry. One factor that distinguishes France from other countries in terms of tourism is that there is consistency in the service of experience rendered to tourists regardless of where they are from. Also, France has been able to replicate the experience in such a way that anyone can enjoy it from anywhere in the world. France has been able to leverage the tool of technology and the French experience is brought to whoever wills it even in the comfort of their homes by the virtue of the digital world.

Greece was one of the first European Union countries to announce the date of and conditions and protocols for, border reopening. Since that announcement, Greece's disease incidence has remained steady and there have been no changes to the announced protocols. The research shows that Greece is now among the top five summer destinations for German travellers for the first time. In July and August 2021, Greece has reached inbound airline ticketing levels that were approximately 50% of that achieved in the same period last year. This exceeds the rate in most other European summer destinations, including Croatia (35%), Portugal (30%), and Spain (40%). In contrast, some destinations that have had inconsistent communications around the time frame of reopening have shown net cancellations of flights for June and July 2021.

Digital solutions can be an effective tool to bridge communication and to create consistency on protocols between governments and the private sector. In China, the health QR code system, which reflects past travel history and contact with infected people, has been widely used during the reopening stage. Travellers have to show their green, government-issued QR code before entering airports, hotels and attractions. The code is also required before flight check-in and, at certain destination airports, after landing.

The idea of a smart destination, derived from the smart city concept, thus refers to the use of technology in tourist destinations to improve the quality of services and tourist satisfaction.

Furthermore, with the help of smart destinations, cities can seek new mechanisms to promote innovation in tourism destinations by implementing and developing information and communication technologies to create differentiated and highly competitive tourism services.

2. THE NEED OF INFORMATION IN TOURISM INDUSTRY

Industries are coming to the point of view that the digital world is the future world and the best way to approach the future is to stay open minded to the solutions of technological innovation. For those who work in the tourism industry, a structure of the hybrid workplace must be put in place for their benefit. From the growth technology has witnessed over the years, there is not stopping at all for the world of digital.

Another approach to take in improving the tourism industry is the approach of building sustenance and resilience in the industry. The weak points of the industry were brought to the fore by the COVID-19 pandemic (Traskevich & Fontanari, 2021) and now more than ever, the tourism industry must be built in a way that it can withstand the different tests of time. A sustainable industry would mean that in times of challenges, the workers in the industry would not have the fear of being let off their jobs because of the inability to sustain them. It means that even without direct input by the government of a nation, the tourism industry has a structure in place that would ensure the generation of funds regularly. Sustainability means that the industry serves as a strong source of economic boost for a nation as a means of revenue generation. Building a resilient tourism industry will ensure that it is strong enough to stand the test of time. It means that the landmarks constituting the centre of attraction for tourists all around the world are constantly maintained and taken care of. Preservation is the key to resilience.

Communication is a key in tourism industry and it is a vital aspect that contributes to the growth of the industry. There is a proper way of passing across information that has to do with travelling and the business of tourism. For many travellers, information is not gotten right so they embark on a particular journey with the wrong expectation in mind. Details of the experience must be accurately and concisely disseminated to the intended tourists (Kim & Youn, 2017). In passing the right information, choosing the most suitable platform when communicating is key as well.

The importance and need for progressive digital transformation in the world as a whole are paramount (Buhalis & O'Connor, 2005). The future of work is no longer what it used to be where people got the luxury of time to prepare themselves to stay relevant based on skill demand. Businesses are changing their tactics from how they used to run to suit the realities of the technological times we are in. Though many tried to deny it and shift the possibility of the future of work across industries, it is no longer deniable that the future all has been anticipating is here and now. Demands of the technological age range from the need for individuals to become technologically savvy to institutions and corporations putting measures in place to ensure a smooth running even when workers are not physically present. Operators in the industry need to improve their e-commerce presence, demand generators need to offer digital experiences, and destination marketing organizations need to up their games (Hua, et al., 2017).

Another avenue for much traffic is through visual image stimulation. Pictures of landmarks can be taken and uploaded online. Excellent image artists can be engaged to tell visual stories of people experiencing the awe present in these majestic locations.

Pictures have been known to form lasting images in the minds of people thereby, creating in them an impression of familiarity through interacting with them. Video content is gaining a truckload of influence on the internet and the tourism industry can leverage on this. When it comes to the production of video content however, a number of factors have to be taken into consideration as they can either make or mar the full impact of the entire story telling. The devices used in the production of a video content have to be top quality, such that when an audience sees it, they experience something akin to the feeling of being on the journey in person. If there is a voice narrating or a person anchoring, excellent delivery and audience engagement have to be the top priority for them (Peralta, 2019).

Technologies like virtual reality and augmented reality can make this possible. To build domestic tourism, the industry can be strategic about employing the tool of digital marketing. Digital marketing provides businesses with a wide array of tools that can help them scale across to a wider range of audience. This can be specifically beneficial for tourism enthusiasts who have the intention of starting a facility of their own. Promoting domestic tourism may be a great way to start as it would bring on the vibe of novelty (Huyen & Nghi, 2019). People have the natural tendency of being attracted to something new that seems attractive. For the individual, it poses a means of groundbreaking achievement to help promote the domestic tourism of a nation. Also, employing the digital space to promote awareness will help to ensure that the information gets to the right people. Tailoring information to the right audience is made possible by the power of internet algorithms. The implication of the internet algorithm is that the right answers are made available to intended tourists under the great content available on the internet (Mele, et al., 2021).

Adobe Digital Insights (ADI) has found that out of the 321 million social engagements, by at least eight of the largest hotels have tested some kind of virtual reality (VR) experience during the past six months. Most of these experiences were programmes that paired VR devices with consumers' mobile devices. They have also found that Augmented Reality/Virtual Reality related experiences increased by 13% on a year over year. The travel related wearable also increased by 44%. Further ADI has already forecasted growth of online revenue for the travel industry for 2020 to hit 98.02 billion dollars. Huff Post reports that over 95% tourists read at least seven reviews before booking their holidays (Moro & Rita, 2018).

It is interesting to note that in the US, 43% of the business trips are "bleisure" (business leisure). According to Nielsen Research "travellers spent an average of 53 days visiting 28 different websites over a period of 76 online sessions, with more than 50% of travellers checking social media for travel tips. Over the next 10 years, travel industry experts predict that the digital travel space worldwide will expand at an annual rate of 3.8% to reach \$11.4 trillion."

3. "SMART" EDUCATION IN TOURISM INDUSTRY

According to data released Digital Market Outlook, total revenue from mobile apps used in the travel segment increased by 38% in 2021 compared to the previous year, reaching \$296 million. This was influenced by the COVID-19 pandemic, with the

need to maintain social distance and numerous restrictions causing those who like to travel to turn even more to digital solutions. According to statistics, four out of ten surveyed travelers from different corners of the world cited mobile contactless payments as one of the leading technologies to boost travel confidence.

In educational settings, the effectiveness of teaching and learning processes “is dependent upon the user’s perceptions of competency and the quality of the actual learning and teaching material and its mode of delivery” (Peralta, 2019).

More generally, and with regard to the digital technology used in research and practice in Tourism Education, demonstrate that “the majority of tourism netnography studies have been conducted on Web 1.0, Web 1.5 and Web 2.0 (websites, tourism blogs, and social media) (Tavakoli & Wijesinghe, 2019).

Other platforms, using Web 3.0, Web 4.0 and Web 5.0 technologies, are rarely explored by netnographers”. These authors provide examples of digital technology that is being (or is expected to be) used in manifold contexts by practitioners, educators and researchers in the field, as presented in Table 1.

Table 1. Digital technology used in manifold contexts

WEB PARADIGM	DIGITAL TECHNOLOGY
Web 0.5/1.0	Unidirectional websites, organisation weblogs or blogs
Web 1.5	Content Management Systems (CMS)
Web 2.0	Personal or corporate weblogs or blogs
	Podcasting (e.g. Lonely Planet)
	Social networking (e.g. TravelTogether, TravelGirls)
	User-generated content (e.g. TripAdvisor)
	Online videos (e.g. YouTube, Travelistic)
	Rich Site Summary or RSS (e.g. Expedia)
	Tagging tools (e.g. Flickr)
	Mash-ups and open application programming interfaces
	Wikis (e.g. Wikitravel)
	Web 2.5
Navigation applications for route planning and GPS services (e.g. Waze, Google Maps)	
Picture galleries (e.g. Instagram)	
Web 3.0	Second Life – navigating virtual hotels (e.g. Virtual Aloft)
	Second Life – navigating virtual destinations
Web 3.5	Natural language processors
	3D virtual social networks (e.g. vTime)
Web 4.0	Smart tourism (e.g. tourism digital friend – e-agent)
Web 5.0	”Sensory-emotion Web” based on artificial intelligence

Source: Tavakoli, R.; Wijesinghe, S.N.R. (2019), The evolution of the web and netnography in tourism: A systematic review, Tourism Management Perspectives, Vol. 29

Digitalization is not only a convenience for the customer but also a way to reduce costs, increase the scale of information impact, and a chance to reach new audiences. To increase their competitiveness, travel industry players must remain open to technological innovations that correspond with social needs and trends and help

improve financial efficiency. Even though more than half of global travel sales are made through online channels, there is still much work to be done in this area.

The further increase in the use of booking systems by vacation planners fits well with the strategy of promoting social distance due to the constant risk of the next wave of coronavirus, reduces the risks associated with a possible infection, and helps minimize the costs of tour operators and industry intermediaries.

A digitalized tourism sector must innovate and generate new business opportunities to ensure the continued competitiveness, growth and sustainable development of the sector. The ultimate goal is to make a solid contribution to achieving the sustainable development goals of the United Nations and the global development community (Balula, et al., 2019).

In the same way the smartphone has transformed telecommunications and media, a comprehensive smart travel model, one that includes smart visas, borders, security processes and infrastructure, will revolutionize tourism. With consolidation of these tools, passengers can book their flights and check in online, have their boarding passes on their smartphones, go through automated clearance gates and even validate their boarding passes electronically to board planes.

Today's travel agency customer expects a more personalized offer and it is in this area (compared to other industries) that the travel sector has a lot of catching up to do.

Opportunities for better tailoring offers to the individual needs of potential travelers include:

- better travel search engines;
- dynamic pricing engines that can optimize seat occupancy while maintaining;
- appropriate cost/quality ratios;
- mobile applications;
- IoT-based devices used, for example, by hotels for voice control of air conditioning, and by airlines for tagging travelers' luggage.

An analysis of traveler behavior showed that as many as 86% became interested in a particular trip after seeing others' photos. This effect is even more substantial in the case of Generation Z, as up to 92% gave this answer.

That's not all, more than 50% of those surveyed confirmed that they had booked a trip based on videos and photos shared on social media by their friends, relatives or acquaintances. The growing popularity of travel blogs or trip reports to various corners of the world shared online should therefore come as no surprise.

In addition, mobile apps are becoming increasingly important in the travel stage. This is due to a simple fact – we usually have a smartphone at hand. It serves as a map and replaces the paper guidebook and restaurant finder, it also comes in handy when check in into hotels, paying bills, or at museums as a guide.

Of course, this is not the end of the possibilities offered by the digital transformation of the tourism sector at the travel stage.

Increasingly, tourists can use augmented reality to better understand a country's culture, and artificial intelligence allows travel to remote corners of the world without knowing the language.

4. CONCLUSIONS

The digital transformation in the tourism sector thus acts as a link between the customers of travel agencies and other companies involved in servicing tourism, and service providers, for whom the ability to take advantage of modern solutions is an opportunity to differentiate themselves and gain a competitive advantage.

Already today, companies in the tourism, hospitality, or aviation sectors are consistently using artificial intelligence, machine learning or future analytics, for example, in marketing campaigns or online events and workshops for the tourism industry. All of this translates into an increase in the visibility of their brands, making customer acquisition much more straightforward and, most importantly, cost-effective.

The digital transformation in the tourism industry means adapting modern solutions to the daily tasks of organizing travel – from choosing a destination and planning an itinerary to booking flights and other modes of transportation, as well as hotels or generating offers that are maximally tailored to customers' needs and taking virtual tours before actually choosing a destination.

The future of travel is technology-based, so tourism jobs will require both technical and advanced soft skills used to effectively implement and manage smart initiatives. The greatest societal impact of digital transformation in tourism may be the effect on the sector's workforce, which directly and indirectly represents 1 in every 10 jobs worldwide. Like in other economic sectors, intelligent automation will change the nature of some travel jobs and eradicate others altogether. However, digitally-enabled growth will also generate new employment opportunities that could outpace the automation of existing roles, especially as strong growth is forecast for the sector.

A smart destination is one with a strategy for technology, innovation, sustainability, accessibility and inclusivity along the entire tourism cycle: before, during and after the trip. A smart destination is also one with residents as well as tourists in mind, factoring multilingualism and seasonality into tourism planning.

The use of technologies including the location-based services, artificial intelligence, augmented and virtual reality, and blockchain technology has resulted in a tourism offer that is more attractive, efficient, inclusive, and economically, socially and environmentally sustainable than its predecessor.

Digitalization provides the tools, frameworks and technologies to create or add value to tourism products and experiences but the success of digitalization depends on the capacity of the tourism sector to share, learn and collaborate. Potential tourists, who want to discover new places, visit these destinations by being convinced in different ways.

REFERENCES:

- [1]. **Balula, A.; Moreira, G.; Moreira, A.; Kastenzholz, E.; Eusebio, C.; Breda, Z.** (2019) *Digital transformation in tourism education*, ToSEE, Tourism in Southern and Eastern Europe, Vol. 5, pp 61-72
- [2]. **Buhalis, D.; O'Connor, P.** (2005) *Information communication technology revolutionizing tourism*. Tourism Recreation Research, 30(3)
- [3]. **Buia, Gr.; Nimarã, C.** (2016) *Resurse și destinații turistice*, Editura Universitas, Petroșani

-
- [4]. **Carretero, S.; Vuorikari, R.; Punie, Y.** (2017) *DigComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels and examples of use*, EUR 28558 EN
- [5]. **Dexeus, C.** (2019) *The deepening effects of the digital revolution*, in Fayos-Solá, E. and Cooper, C. (Eds), *The future of tourism*, Springer, Cham
- [6]. **Hua, L. Y.; Ramayah, T., Ping; T. A.; Jun-Hwa, C.** (2017) *Social media as a tool to help select tourism destinations: The case of Malaysia*. *Information Systems Management*, 34(3)
- [7]. **Huyen, K. N.; Nghi, N. Q.** (2019) *Impacts of the tourists' motivation to search for novelty to the satisfaction and loyalty to a destination of Kien Giang marine and coastal adventure tourism*. *International Journal of Social Science and Economic Research*, 4(4)
- [8]. **Kim, J. H.; Youn, H.** (2017) *How to design and deliver stories about tourism destinations*. *Journal of Travel Research*, 56(6)
- [9]. **Mele, E.; Kerkhof, P.; Cantoni, L.** (2021) *Analyzing cultural tourism promotion on Instagram: a cross-cultural perspective*. *Journal of Travel & Tourism Marketing*, 38(3)
- [10]. **Moro, S.; Rita, P.** (2018) *Brand strategies in social media in hospitality and tourism*. *International Journal of Contemporary Hospitality Management*
- [11]. **Patiar, A.; Ma, E.; Kensbock, S.; Cox, R.** (2017) *Students' perceptions of quality and satisfaction with virtual field trips of hotels*, *Journal of Hospitality and Tourism Management*, Vol. 31
- [12]. **Peralta, R. L.** (2019) *How vlogging promotes a destination image: A narrative analysis of popular travel vlogs about the Philippines*. *Place Branding and Public Diplomacy*, 15(4)
- [13]. **Tavakoli, R.; Wijesinghe, S.N.R.** (2019) *The evolution of the web and netnography in tourism: A systematic review*, *Tourism Management Perspectives*, Vol. 29
- [14]. **Traskevich, A.; Fontanari, M.** (2021) *Tourism potentials in post-COVID19: The concept of destination resilience for advanced sustainable management in tourism*. *Tourism Planning & Development*
- [15]. **World Economic Forum** (2017) *Digital transformation initiative: Aviation, travel and tourism industry*, Geneva: Switzerland