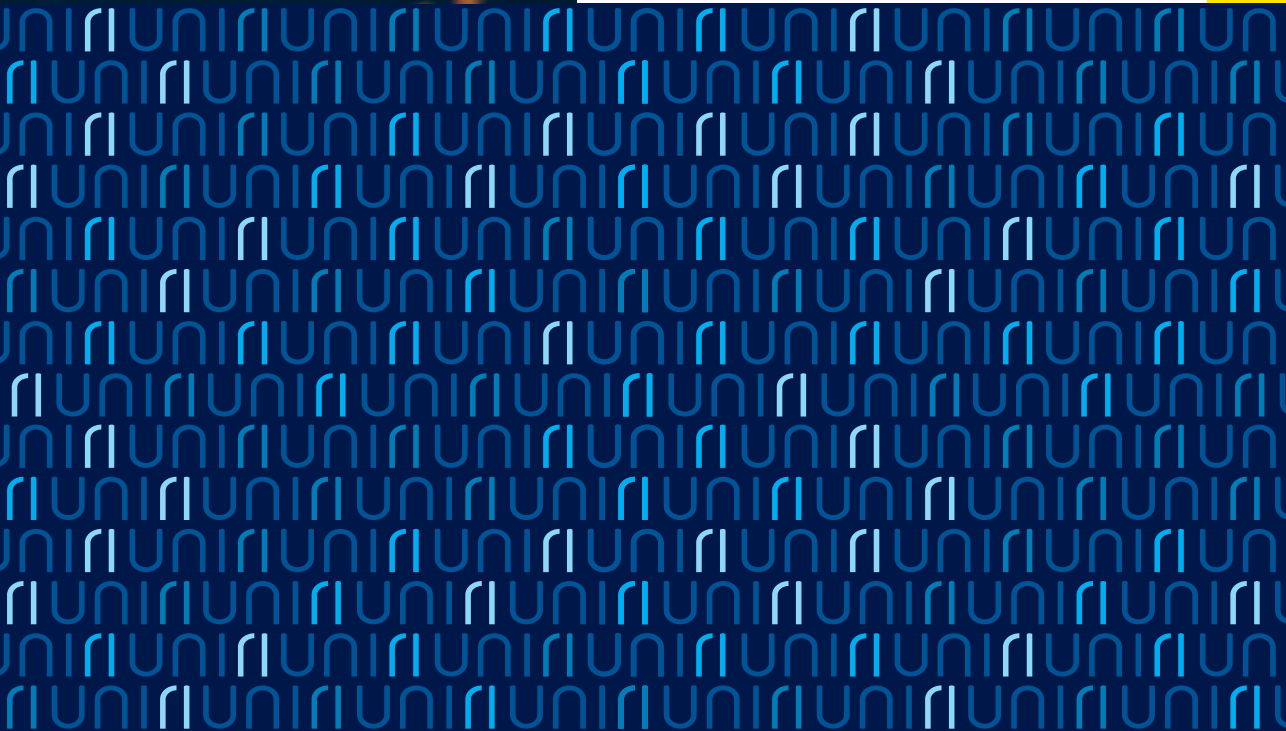


Saša Drezgić  
Alen Host  
Marko Tomljanović  
Saša Žiković

# **ECONOMICS AND BUSINESS OF THE POST COVID-19 WORLD**

Research monograph – First Edition



*Economics and business of the post COVID -19 world*

**Publisher:**

University of Rijeka, Faculty of Economics and Business

**For the Publisher:**

Saša Drezgić

**Editors:**

Saša Drezgić

Alen Host

Marko Tomljanović

Saša Žiković

**Reviewers of Edition:**

Zoran Grubišić

Uroš Pintarić

Branimir Skoko

**Reviewers of Papers:**

Dubravka Jurlina Alibegović

Boštjan Antončič

Ana Babić

Slađana Benković

Predrag Bijelić

Antonija Buljan

Borna Debelić

Maja Ivanović Đukić

Marija Đžunić

Tea Golja

Maja Grđinić

Ivan Gržeta

Pavle Jakovac

Radmila Janičić

Mirjana Jemović

Veljko Jeremić

Zoran Ježić

Branimir Kalaš

Dragana Radenković Jocić

Petra Karanikić

Hoda Mansour

Srdjan Marinković

Vesna Janković - Milić

Goran Milovanović

Igor Novaković

Primož Pevcin

Žarko Popović

Ana Pošćić

Marko Primorac

Ognjen Radović

Snežana Radukić

Tamara Rađenović

Srdjan Redžepagić

Jelena Stanković

Tatjana Stevanović

Martina Solenički

Hrvoje Šimović  
Milan Deskar Škrbić  
Ana Štambuk  
Ivan Uroda  
Vinko Zaninović

**Technical Editors:**

Elizabetha Ribarić  
Sanja Jovanović

**Proofreader:**

Kristina Kaštelan

**Graphic Design:**

Grafika Helvetica for the Center for Electronic Publishing (CEN)

First Edition (2023)

100 copies

ISBN 978-953-7813-76-5

In compliance with the act issued by the Senate of the University of Rijeka (Class: 007-01/22-03/02, Registration number: 2170-57-01-22-424, on 22nd November 2022), this book is published as a part of the University of Rijeka edition.

The University of Rijeka covers the cost of this electronic publication carried out by the Center for Electronic Publishing (CEN).

**INTERNATIONAL SCIENTIFIC CONFERENCE „ECONOMICS AND BUSINESS OF THE POST COVID-19 WORLD” - ECONOMICS OF DIGITAL TRANSFORMATIONS“: June 23- 25, 2021 – Rijeka – Opatija- Republic of Croatia**

**Organizer:**

University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia

**Partners:**

Cleveland State University, Maxine Goodman Levin College of Urban Affairs, Cleveland, USA  
Universite Cote d'Azur, Balkan Institute of Science and Innovation, Nice, France  
University of Antwerp, Faculty of Applied Economics (TEW), Antwerp, Belgium  
University of Belgrade, Faculty of Economics, Belgrade, Serbia  
University of Coimbra, Faculty of Economics, Coimbra, Portugal  
University of Ljubljana, School of Economics and Business, Ljubljana, Slovenia  
University of National and World Economy (UNWE), Department of Finance, Sofia, Bulgaria  
University of Sarajevo, School of Economics and Business, Sarajevo, Bosnia and Herzegovina  
Ural Federal University, Graduate School of Economics and Management, Ekaterinburg, Russia

**Programme Committee:**

**President: Saša Drezgić**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia

**Members:**

**Zhanna Belyaeva**, Ural Federal University, Graduate School of Economics and Management, Ekaterinburg, Russia  
**Vesna Buterin**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Cathy Yi-Hsuan Chen**, Humboldt-Universität zu Berlin, School of Business & Economics, Berlin, Germany  
**Shieh Chich-Jen (Charles)**, College of Quantitative Economic, Huaqiao University, Xiamen, Fujian, China  
**Antonio Portugal Duarte**, University of Coimbra, Faculty of Economics, Coimbra, Portugal  
**Tea Golja**, Juraj Dobrila University of Pula, Faculty of Interdisciplinary, Italian and Cultural Studies, Pula, Croatia  
**Wolfgang Karl Härdle**, Humboldt-Universität zu Berlin, Institute for Statistics und Econometrics School of Business and Economics, Berlin, Germany  
**Ned W. Hill**, John Glenn College of Public Affairs, Columbus, Ohio, USA  
**Alen Host**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**David S. Hulse**, University of Kentucky, Gatton College of Business and Economics, Lexington, USA  
**Maja Klun**, University of Ljubljana, Faculty of Administration, Ljubljana, Slovenia  
**Kemal Kozarić**, University of Sarajevo, School of Economics and Business, Sarajevo, Bosnia and Herzegovina  
**Iryina Lendel**, Cleveland State University, Maxine Goodman Levin College of Urban Affairs, Cleveland, USA  
**Andrija Mihoci**, Brandenburg University of Technology Economic Statistics and Econometrics, Germany  
**Katarina Ott**, Institute of Public Finance, Zagreb, Croatia  
**Almir Peštek**, University of Sarajevo, School of Economics and Business, Sarajevo, Bosnia and Herzegovina  
**Saša Ranđelović**, University of Belgrade, Faculty of Economics, Belgrade, Serbia  
**Nina Begičević Redep**, University of Zagreb, Faculty of Organization and Informatics, Varaždin, Croatia  
**Srdjan Redzepagic**, University of Nice Sophia Antipolis, Nice, France  
**Danijela Sokolić**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Silvia Trifonova**, University of National and World Economy (UNWE), Department of Finance, Sofia, Bulgaria

**Davor Vašiček**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Sunčica Vujić**, University of Antwerp, Faculty of Applied Economics (TEW), Antwerp, Belgium  
**Saša Žiković**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Josef Windsperger**, University of Vienna, Faculty of Business, Economics and Statistics, Vienna, Austria  
**Chen Ying**, National University of Singapore, Faculty of Science, Department of Mathematics, Singapore, Singapore

[Organizing Committee:](#)

**President: Marko Tomljanović**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia

**Members:**

**Dorjana Dodić**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Mario Jakopanec**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Pavle Jakovac**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Diana Ježina Radovanović**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Eric Mičetić**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Mihaela Mrvčić**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Elizabeta Ribarić**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Ana Marija Sikirić Simčić**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia  
**Ivan Uroda**, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia

PARTNERS



Maxine Goodman Levin  
College of Urban Affairs



Ural Federal  
University

named after the first President  
of Russia B.N.Yeltsin

UNIVERSITÉ CÔTE D'AZUR   
BALKAN INSTITUTE OF  
SCIENCE AND INNOVATION

• U



C •



University of  
Belgrade



UNIVERSITY OF SARAJEVO  
School of Economics  
and Business

foi

UNIVERSITY OF ZAGREB  
FACULTY OF ORGANIZATION AND INFORMATICS  
VUKAŠIĆIN



University  
of Antwerp

University of Ljubljana

SEB SCHOOL OF  
ECONOMICS  
AND BUSINESS



## SPONSORS



UNIVERSITY OF RIJEKA  
**FACULTY OF ECONOMICS  
AND BUSINESS**

**Faculty of Economics and Business Rijeka**  
<https://www.efri.uniri.hr/en>



MINISTRY OF SCIENCE  
AND EDUCATION  
OF THE REPUBLIC OF CROATIA

**Ministry of Science and  
Education of the  
Republic of Croatia**  
<https://mzo.gov.hr/en>



**University of Rijeka**  
<http://iuri.uniri.hr/about-uniri/>



**University of Rijeka Foundation**  
[http://iuri.uniri.hr/const\\_func/  
university-of-rijeka-foundation/](http://iuri.uniri.hr/const_func/university-of-rijeka-foundation/)



**Ministry of Regional Development and  
EU Funds of the Republic of Croatia**  
<https://razvoj.gov.hr/>



**Embassy of the United States  
Zagreb - Croatia**  
<https://hr.usembassy.gov/>



**Zagreb County, Zagreb,  
Republic of Croatia**  
<https://www.zagrebacka-zupanija.hr/>

**The Unger Foundation**

[http://levin.urban.csuohio.edu/  
unger/](http://levin.urban.csuohio.edu/unger/)



European  
Commission



European Commission, Horizon 2020 „FIN-TECH: A FINancial TECHnology training platform”,  
-ICT-35-2018 CSA project

Project leader - Saša Žiković, PhD

[https://www.efri.uniri.hr/en/fintech\\_financial\\_technology\\_financial\\_supervision\\_and\\_technology\\_compliance/1296/258](https://www.efri.uniri.hr/en/fintech_financial_technology_financial_supervision_and_technology_compliance/1296/258)

Scientific project entitled: Ulaganje u istraživanje i razvoj i konkurentnost Republike Hrvatske i zemalja Zapadnoga Balkana/ Investments in Research and Development and Competitiveness of the Republic of Croatia and the Western Balkans countries (reference number: ZP UNIRI 4/19). Funded by University of Rijeka, Rijeka, Republic of Croatia

Project leader – Marko Tomljanović, PhD

[https://www.efri.uniri.hr/en/investments\\_in\\_research\\_and\\_development\\_and\\_competitiveness\\_of\\_the\\_republic\\_of\\_croatia\\_and\\_the\\_western\\_balkans\\_countries/1499/260](https://www.efri.uniri.hr/en/investments_in_research_and_development_and_competitiveness_of_the_republic_of_croatia_and_the_western_balkans_countries/1499/260)

UNIRI 2018 Scientific Project “Smart cities in the function of development of the national economy”

Project director – Saša Drezgjić, PhD

[https://www.efri.uniri.hr/en/smart\\_cities\\_in\\_function\\_of\\_development\\_of\\_national\\_economy/1306/259](https://www.efri.uniri.hr/en/smart_cities_in_function_of_development_of_national_economy/1306/259)





Saša Drezgić  
Alen Host  
Marko Tomljanović  
Saša Žiković

# **ECONOMICS AND BUSINESS OF THE POST COVID-19 WORLD**

**Research monograph – First Edition**

## Table of Content

INTRODUCTION . . . . .	17
CHAPTER 1 . . . . .	19
<b>Dejan Bodul</b> Workplace privacy and new technologies: Case study of ECHR jurisprudence as a guideline for time after COVID-19?	
CHAPTER 2 . . . . .	35
<b>Matija Damjan</b> Pandemic-driven suspension of IP rights: A new way for promoting public policy objectives?	
CHAPTER 3 . . . . .	51
<b>Francesco Gaspari, Giuseppina Agata Di Guardo</b> Distance learning as a test bed for administrative digitalisation in Italy during and after the Pandemic: The way forward between data protection and the surveillance capitalism issues	
CHAPTER 4 . . . . .	77
<b>Dionis Jurić, Antonija Zubović</b> Online formation of limited liability companies	
CHAPTER 5 . . . . .	93
<b>Romina Alkier, Vasja Roblek, Nenad Petrović</b> The emergence of smart touristic destinations and further development in the post-covid period	
CHAPTER 6 . . . . .	113
<b>Maja Matanić Vautmans, Filip Gelo</b> Long term care (LTC) in Croatia: Current state, COVID-19 impact and development strategy	
CHAPTER 7 . . . . .	141
<b>Tomáš Hanák, Ivan Marović, Lucie Kopečková</b> Impact of the Covid-19 pandemic on the operation of construction companies in the Czech Republic	
CHAPTER 8 . . . . .	161
<b>Jelena Mušanović, Jelena Dorčić</b> Topic modelling of Croatian five-star hotel brands posts on Facebook using Latent Dirichlet Allocation	
CHAPTER 9 . . . . .	181
<b>Ana-Marija Stjepić, Dalia Suša Vugec</b> How the application of technological innovations supports the healthcare industry in the COVID-19 pandemic?	

CHAPTER 10 . . . . .	197
<b>Lea Perinić, Nada Denona Bogović, Saša Čegar</b>	
The role of social innovations in the green transition of cities	
CHAPTER 11. . . . .	213
<b>Tanja Fatur Šikić, Djula Borozan</b>	
Meeting the low-carbon challenge: The role of EU energy policy	
CHAPTER 12 . . . . .	231
<b>Helena Šlogar, Heri Bezić, Ivan Zagorac</b>	
Digitalization of city services through smart applications and e-services	
CHAPTER 13 . . . . .	247
<b>Viktorija Kunštek</b>	
The potential for the digital transformation of the central state office for Croats abroad	
CHAPTER 14 . . . . .	265
<b>Darwin Beletić, Nenad Vretenar</b>	
Student's perception of robots in the workplace	
CHAPTER 15 . . . . .	283
<b>Marko Brkić, Danijela Sokolić, Iva Zdrilić</b>	
Critical success factors for implementation of ERP system in a public institution	
CHAPTER 16 . . . . .	301
<b>Bono Beriša, Dejan Miljenović</b>	
Evaluation criteria for "Portfolio Greenes" within financial retail products	
CHAPTER 17 . . . . .	317
<b>Iva Gregurec</b>	
Digital marketing activities during COVID-19 pandemic – database review	
CHAPTER 18 . . . . .	335
<b>Lana Galić, Josipa Višić</b>	
Integrating data science in business: Evidence from Croatia	
CHAPTER 19 . . . . .	355
<b>Marko Tomljanović, Danijela Sokolić, Igor Cvečić</b>	
Recent dynamics of the European labour market	
CHAPTER 20 . . . . .	375
<b>Helena Blažić</b>	
Smart city/local tax: Specific consumption/sales tax for the post COVID-19 Croatia	
CHAPTER 21 . . . . .	393
<b>Denis Buterin</b>	
Optimal structure of taxation and response to COVID-19	

CHAPTER 22 . . . . .	409
<b>Josip Grgić</b>	
The role of EU funded financial instruments in addressing the COVID-19 crisis and post recovery period	
CHAPTER 23 . . . . .	425
<b>Neda Vitezić, Dejana Dojčinović Drilo</b>	
Effectiveness of traditional going concern forecasting models based on financial indicators in Croatian economy	
CHAPTER 24 . . . . .	453
<b>Marko Vešligaj</b>	
The process of fiscal decentralization in the Republic of Croatia in the conditions of the COVID-19 crisis	
CHAPTER 25 . . . . .	473
<b>Hrvoje Jošić, Berislav Žmuk</b>	
COVID-19 as an ultimate stock market Black Swan	
CHAPTER 26 . . . . .	493
<b>Mario Pečarić, Šime Jozipović, Andrej Ilievski</b>	
The expected impact of a digital euro on non-Eurozone EU member's states and EU candidate countries: The case of Croatia and North Macedonia	
CHAPTER 27 . . . . .	515
<b>Antonio Kuzmanić, Jasmina Dlačić</b>	
Determinants of a sports fans' loyalty to a sports club	
CHAPTER 28 . . . . .	535
<b>Joško Marić</b>	
Indebtedness and growth of the transition countries of the EU: When public debt affects negatively on economic growth?	
CHAPTER 29 . . . . .	553
<b>Carla Morrone, Luca Attias, Daniela Battisti, Giuseppe Iacono</b>	
Italian digital transformation team: The relevance of the digital awareness	
CHAPTER 30 . . . . .	575
<b>Jasmina Popovska</b>	
Contribution of European innovation scoreboard towards europeanization of innovation policies	
CHAPTER 31 . . . . .	595
<b>Filip Škunca</b>	
Investment portfolio optimization using alternative investments	
CHAPTER 32 . . . . .	617
<b>Marijana Oreb, Saša Drezgić</b>	
Role of government guarantee measures in COVID-19 crisis	

## CHAPTER 5

### The emergence of smart touristic destinations and further development in the post-covid period

*Romina Alkier, Vasja Roblek, Nenad Petrović<sup>3</sup>*

#### ABSTRACT

*The Covid 19 pandemic has hit the tourism industry hard. The consequences are visible in both the social and economic spheres. The tourism industry needs to realign all existing practices and implement more sustainable tourism practices in the post-pandemic period, but technology will also play an important role. To determine the importance and impact of modern technological solutions on the development of smart tourist destinations in the post-pandemic era, the authors used the Leximancer 5.0 tool to analyse 32 scientific articles and prepare examples of good implementation of augmented reality apps. The pandemic brought new technological solutions in tourism hospitality such as robotics and artistic intelligence and accelerated implementation in Big Data analytics tools, the Internet of Things, cloud computing, virtual and augmented reality, and mobile data applications. In summary, the pandemic stimulated both the growth of human interactions with technology and the promotion of reflection on the very complexity of interactions. In tourism emerged the paradigm of attentive tourists who could self-reflectively interact with technology to get the technology touristic experience.*

**Key words:** Automated Content analysis, artificial intelligence, decision making, smart touristic destinations

**JEL classification:** C88, D83, O14, O18, Z32

## 1. Introduction

Technological development is considered one of the factors that have the greatest influence on changes in tourism. Just as the entire tourism industry and its infrastructure underwent a digital transformation in the Fourth Industrial Revolution, so did tourist destinations, which are transformed into Smart Tourist Destinations (STD) as a result. However, it is important to recognise that the main drivers of digital transformation are not the new technologies per se, but their interconnectivity, coherence and sharing, as technologies influence changes in marketing strategies (from advertising to the way people buy, consume or aware) and the attitude of tourists as product or service users and one of the STD stakeholders. It is important that guests accept smart technologies and that destination management also includes smart tourism destination components (the same as smart cities), such as smart business ecosystem and smart experience (Ivars-Baidal et al., 2019). The implementation of Internet of Things (IoT), cloud computing, Near Field Communication (NFC), Radio Frequency Identification (RFID), artificial intelligence, robots, and data-driven mobile applications present as key factors for establishing the STD as they are based on technological innovations and Big Data help to analyse the enormous data from different sources.

As the STD is a relatively new concept and plays an important role in further developing the tourism industry, especially in the Covid-19 period and in the post-Covid-19 period, globally are outgoing productions of the academic publications and practical cases. To better understand the data-driven mobile solutions, the authors discuss some concrete examples that can also serve as managerial implications. Solutions allow tourists to get a better experience about the destination and reduce the needs for organised tours. The solution goal is to provide a traveller with a more safe and personal experience of tourist attractions and events in the post-Covid 19 periods.

Thus, the paper is important for researchers, students, and project managers of smart destination development, experts and decision-makers from city governments.

In addition to an automated content analysis (ACA) focusing on STD, this study presents a future research agenda. According to STD theory, this study's research question is: *what are the main drivers of smart tourism destinations development in post-Covid-19?*

The research is based on a data collection approach based on three steps of preparing the research and analysing the scientific articles published in the Web of Science. The 32 articles identified related to STD were submitted to ACA.

The article consists of the following parts: After the introduction, the second section includes the literature review, and the third section describes the research methods. In the fourth section are presented the results. The fifth section includes a discussion about post-Covid-19 technological solutions in STD. The last section is the conclusion, which presents the main features and limitations of the research.

## 2. Literature review

With the transition to Fourth Industrial Revolution (2011-), the buzzword “Smart Tourism” (ST) emerged. The term “smart” underlines the digital transformation of the processes in the tourism industry and is not to be understood as e-tourism. It is a process of digitalisation and informatisation of the entire tourism industry and its infrastructure. The vital role can be seen in sustainable tourism development, improving the tourist experience and interaction, and enabling the collection and preservation of locals’ well-being in tourist destinations currently transforming into STD. The phrase STD does not mean only locationally separated touristic places closed for the locals but also urban centres (e.g. smart cities) and the rural environment (e.g. smart villages). According to the different authors (Corrêa and Gosling, 2020; de Costa et al., 2018; Pencarelli, 2020), the meaning of STD can be presented as an innovative strategical investment of a tourist destination in a high-tech infrastructure that enables the digital transformation of the destination. The goal of digital transformation is to (i) enable different digital interconnection solutions for communication between the STD stakeholders, too (ii) capture and analyse data from the STD ecosystem and transform it into valuable information for stakeholders and to increase the quality and security (special health security in post-Covid-19) of destination experience with emerging of the data-driven solutions, robots and artificial solutions. The digital transformation has an important impact on increasing guests well-being. The process is based on the introduction of technological solutions within which data is collected from the physical or real-world (via apps, cameras, IoT, sensor) and transferred to cyberspace, where the data is stored and processed and prepared in the form of final information, which is available to users in a physical environment (Oaks et al., 2017). Cyberspace is a digital space where data is collected, analysed and transformed into information based on which solutions are provided to various stakeholders of SDT. It is going for virtual space based on the cyber-physical infrastructure (Roblek and Meško, 2020). The cyber-physical infrastructure has incorporated Big Data analytics, an important role in collecting and analysing information about Covid 19 transmission and thus enabling, based on the information received, the adoption of measures to spread the virus (Gupta et al., 2021). We can conclude that it is for the SDT decision-makers important to understand that cyberspace has more than just the task of enabling the exchange of vast amounts of data.

Nevertheless, within the connections between the computer networks that make it up, it allows for analysing problems and modelling practical, real-world solutions. In doing so, it must use a structure that reflects the actual state of the real physical world (Deguchi et al., 2020). The preparations for a »new era« of post-covid-19 tourism requests from the SDT to implement virtualisation and augmented reality solutions (Graziano and Privitera, 2020) and the emergence of artificial intelligence (AI) and robotic solutions. When including robots, it is necessary to pay attention to tourists’ attitudes towards interacting with robots. Research in the Covid-19 period shows that hotel guests had a much greater understanding of interaction with robots. However,



research conducted before the pandemic showed a reluctance on guests to interact with robots. The study's authors conclude that the pandemic caused a change in people's thinking about their perceptions of interacting with robots (Kim et al., 2021).

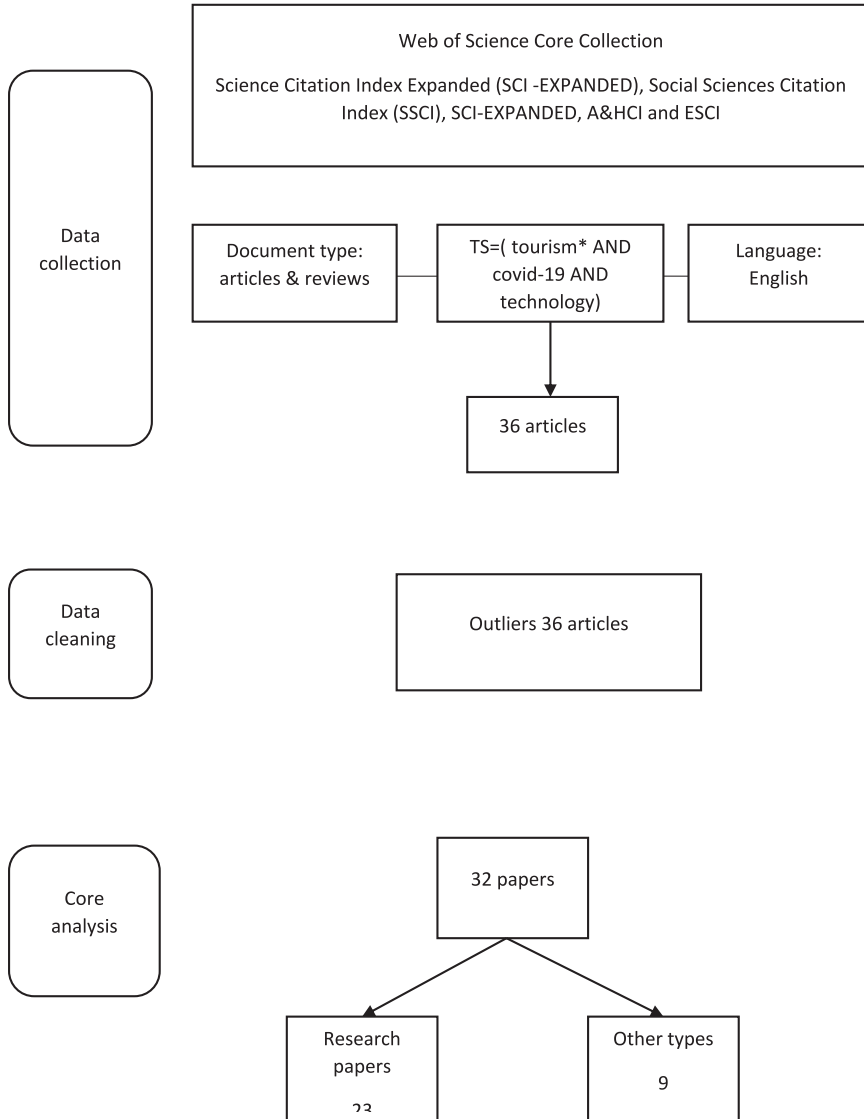
### **3. Methodology**

#### **3.1.Data collection**

The study uses a mixed methodology that includes an automated content analysis. The literature selection was prepared in the three-step screening process (Alkier et al., 2021). presented in Table 1. The first phases include the data collection process. The search for articles was done in the Web of Science database. The Boolean keyword combination was used to search for the relevant papers (TS = (tourism\* AND covid-19 AND technology)AND LANGUAGE: (English) AND DOCUMENT TYPES: (Article, Review)Indexes = SCI-EXPANDED, SSCI, A&HCI and ESCI). It was no temporal restrictions. The search results were limited to the research and review articles published in the refereed journals only. The peer review was limited to scientific journals written in English and was therefore not intended to provide a comprehensive assessment of the state's totality.

In the second phase (data cleaning), only the papers important for the research field include its topics. The second phase includes manual review and selection of peer review papers based on their titles, abstracts, and conclusions. In the third phase (core analyses), the 33 papers were exported from the publishing firms digital libraries. The search was performed on 1. May 2021.

Figure 1: The three steps study protocol



Source: Author's research

Table 1: Research papers used for ACA

Authors	Title	Document type	Journal/publishing year
Allam Z. & Jones S. D.	Future (post-Covid) digital, smart and sustainable cities in the wake of 6G: Digital twins, immersive realities and new urban economies	Research paper	Land Use Policy
Alzola-Melian L., Monroy-Fernandez M., & Penate-Hidalgo M.	Hotels in context of uncertainty: Measuring organisational resilience	Research paper	Tourism Management Perspectives, 2020
Azis N. et al.	How smart tourism technologies affect tourist destination loyalty	Research paper	Journal of Hospitality and Tourism Technology, 2020
Barna, M. & Semak, B.	Main trends of marketing innovations development of international tour operating	Research paper	Baltic Journal of Economic Studies, 2020
Bilsland C., Nagy H., & Smith P.	Virtual internships and work-integrated learning in hospitality and tourism in a post-Covid-19 world	Research paper	International Journal of Work-Integrated Learning, 2020
El-Said O. & Aziz H.	Virtual tours a means to an end: An analysis of virtual tours role in tourism recovery post Covid-19	Research paper	Journal of Travel Research, 2021
Fennell A.D.	Technology and the sustainable tourist in the new age of disruption	Research paper	Journal of Sustainable Tourism
Frey S.B. & Briviba A.	A policy proposal to deal with excessive cultural tourism	Research paper	European Planning Studies, 2021
Gretzel, U. et al.	e-Tourism beyond Covid 19 a call for transformative research	Viewpoints	Information Technology & Tourism, 2020
Graziano T.	Smart technologies, back to the village rhetoric and tactical urbanism: Post Covid planning scenarios in Italy	Research paper	International Journal of E-Planning Research

Grundner L. & Neuhofer B.	The bright and dark sides of artificial intelligence: A future perspectives on tourist destination experiences	Research paper	Journal of Destination Marketing & Management, 2021
Ilkanizadedeh S. et al.	The potential use of drones for tourism in crises: A facility location analysis perspective	Research paper	Journal of Risk and Financial Management
Ivanov Hristov, S., Webster C., & Stoilova E.	Biosecurity, crisis, management, automation technologies and economic performance of travel, tourism and hospitality companies- A conceptual framework	Conceptual paper	Tourism Economics, 2020
Kim S. et al.	Preference for robot service or human service in hotels? Impacts of the Covid-19 pandemic	Research paper	International Journal of Hospitality Management, 2021
Kunzmann R.K.	Smart cities after Covid-19: Ten narratives	Research paper	disp – The Planning Review, 2020
Kwok J.O.A. & Koh M.G.S.	Covid-19 and extended reality (XR)	Research letter	Current Issues in Tourism, 2020
Lee Jun-W. & Kim Hee Y.	Does VR tourism enhance user's experience?	Research paper	Sustainability, 2021
Lee P., Hunter Cannon W., & Chung, N.	Smart tourism city: Developments and transformations	Concept paper	Sustainability, 2020
Mohanty P., Hassan A., & Ekis, E.	Augmented reality for relaunching tourism post-Covid 19: socially distant, virtually connected	Literature review	Worldwide Hospitality and Tourism Themes, 2020
Prokapis C., Simillidou A., & Stylianou M.C.	Tourist's perceptions regarding the use of anthropomorphic robots in tourism and hospitality	Research paper	International Journal of Contemporary Hospitality Management, 2020
Önder I. & Gunter, U.	Blockchain: Is the future for the tourism and hospitality industry?	Commentary paper	Tourism Economics, 2020

Radojević B., Lazić L., & Cimbalević M.	Rescaling smart destinations – the growing importance of smart geospatial services during and after Covid-19 pandemic	Research paper	Geographica Pannonica, 2020
Reis et al.	Service robots in the hospitality industry: The case of Henn-na hotel, Japan	Research paper	Technology in Society, 2020
Seyitoglu F. & Ivanov, S.	A conceptual framework of the service delivery system design for hospitality firms in the (post-) viral word: The role of service robots	Research paper	International Journal of Hospitality Management, 2020
Seyitoglu, F. & Ivanov, S.	Service robots as a tool for physical distancing in tourism	Research note	Current Issues in Tourism, 2020
Sharma Deep G., Thomas A., & Paul J.	Reviving tourism industry post-Covid-19: A resilience-based framework	Research paper	Tourism Management Perspectives, 2021
Shin H. & Kang, J.	Reducing perceived health risk to attract hotel customers in the COVID-19 pandemic era: Focused on technology innovation for social distancing and cleanliness	Research paper	International Journal of Hospitality Management, 2020
Stankov U., Filmonau V., & Vujičić M,	A mindful shift: an opportunity for mindfulness-driven tourism in a post-pandemic world	Article's commentaries	Tourism Geographies, 2020
Stankov U. & Gretzel U.	Digital well-being in the tourism domain: mapping new roles and responsibilities	Viewpoints	Information Technology & Tourism, 2021
van Tatenhove M.P.J.	Covid-19 and European maritime futures: different pathways to deal with the pandemic	Research paper	Maritime Studies, 2021

Van Thanh Thi N. et al.	The role of human-machine interactive devices for post-COVID-19 innovative sustainable tourism in Ho Chi Minh City, Vietnam	Research paper	Sustainability
Qumariyah N.N. et al.	Sonia: An integrated Indonesia online tourism system in new normal era	Research paper	International Journal of Innovative Computing, Information and Control, 2020

### 3.2. Data analysis

In the case of ACA, it is going for a definitive study where we want to define, analyse and present the textual consistency of patterns, clusters and the meanings of qualitative data using a text-mining tool such as Leximancer. It is an application of a mixed-method that we use to analyse qualitative data. The program uses statistical algorithms to define and describe textual concepts or themes (McNamara and Duffy-Deno, 2019). The use of Leximancer software, unlike programs such as NVivo, reduces the researcher's bias as it does not require manual data coding. Leximancer is considered a more objective tool in studying a large amount of qualitative data, mainly because it is studied by the program rather than the researcher. Indeed, Leximancer allows the automatic generation of results, which it classifies into a theme and a concept map (Leximancer, 2020). Thus, the epistemological influence of a researcher that could cloud the analysis is minimal (Wilk et al., 2018).

Table 2 presents the themes and concepts obtained with the ACA of papers listed in table 1. Figure 2 presents the concept map for selected, analysed papers in Table 2.

Table 2: Themes and concepts

Theme	Concepts	Hit
tourism	tourism, technology, tourists, experiences, smart, cities, destination, digital, information, management, quality, life, environment, well-being, communication, marketing, devices, application	2773
service	service, use, social, hospitality, robots, AI, human, hotel, technological, virtual, value, intelligence, work, reality, level, access	1821
industry	industry, development, travel, future, systems, world, support, people, business, activities, market, effects, further, education	1589
COVID	COVID, pandemic, sector, economic, global, crisis, change, E-tourism, countries, EU	1124
urban	urban, sustainable, local, public, innovation, economy, health, cultural, governments	800
online	online, demand, learning, real	339
satisfaction	satisfaction	107



million and \$120 million in direct tourism jobs, many of them in small and medium-sized enterprises (UNWTO, 2021).

The Covid-19 left social and economic consequences on the tourism industry, and the tourism industry has now to consider reorienting current unsustainable business practices based on global mass tourism (Sharma et al., 2021). The revitalisation of the tourism industry requires tourists to change their behaviour toward their expectations regarding destination experiences and offer. Tourists must become more discerning consumers, aware of the real seriousness of the consequences of the Covid-19 pandemic and possibly other future pandemics, socio-economic factors and environmental impacts (Kaushal and Srivastava, 2021). The practice of socio-cognitive mindfulness is coming to the fore, drawing attention to the importance of human existence and the search for solutions to deal with the problems of modern life based on experience (Pearce, 2020). In Western societies, mindfulness is already considered a major driving force in lifestyle change, which can be seen in increasingly conscious consumers and producers of products and service providers increasingly based on mindfulness (Sheth et al., 2011). Therefore, in tourism, the vision of Western businesses is expected to be one of vigilance, and tourism development policymakers (from state to local levels, both in the profit and non-profit sectors and in public administration) are expected to direct the further development of the tourism industry towards long-term sustainability and promote the creation of more compassionate urban and rural tourism (theme: urban) (Pearce, 2020). Managers in the tourism industry, as well as political leaders and CEOs of tourism destinations, must therefore redefine the vision of mindfulness tourism, provide organisational solutions and, due to the current decline in business in 2020 and 2021, focus on informing tourists about the innovative solutions needed to the reformulated concept of tourism services in the “new normal conditions”. Vigilance in tourism is recognisable for its positive impact on tourist well-being and transformative effects on the tourism experience (Stankov et al., 2020a; Wang et al., 2020), as well as its potential impact on a sustainable touristic industry plan and employee performance (Johnson and Park, 2020).

In the wake of the Covid-19 pandemic (Themes: Covid, Industry and Service), smart technologies are also increasing in the tourism industry. For example, hotels have begun implementing robots more quickly to reduce the social distance (Seyitoğlu and Ivanov, 2020a).

Based on previous research (Kim et al., 2021; Reis et al., 2020), in the case of service robots within high customer contact settings, due to their analytical and mechanical nature, they often already surpass humans in performing standardised work processes. However, in individual cases, service robots are not yet in the phase of desired technological maturity and cannot replace humans. Soon, it can be expected that robotic technology, with the help of AI, will replace the empathic intelligence of employees. Cristou et al. (2020) found in a study that tourists prefer anthropomorphic robots. The authors believe that the use of anthropomorphic robots in tourism can impact the overall improved experience. However, respondents in their survey also indicated frustration, sadness, and disappointment with robots in the tourism



industry. Seyitoğlu and Ivanov (2020b) prepared a conceptual framework for using service robots in the hospitality industry (post-)viral world. Authors have been identified three service delivery system designs: robotic, human-based, and mixed. The authors advise hospitality managers to research tourist expectations before implementing any of the models. Also, Reis et al. (2020) point out that a new challenge for organisations will be to decide whether it makes sense to replace humans with service robots completely or whether it is better to implement mixed methods with humans' anthropomorphic robots.

As we have already mentioned, Big data also plays an important role in tourism (Themes: Tourism, Industry and Service). For SDT is important to analyse data: i). People generate information in their communication, known as user-generated content (UGC). People are using different social media applications and social networking tools which are all encompassed by the UGC (Instagram, Facebook, TikTok, Twitter, Youtube), online reviews platforms (TripAdvisor), booking systems (Booking.com, Hotels.com), travel tickets reservation systems (Skyscanner), blogs, chat rooms, discussion boards, comments (travellers stories), collaborative maps (OpenStreetMap) and others (Lukyanenko et al., 2019); ii) data captured different data-driven mobile applications, IoT, cameras and different sensors in SDT environment. The using of analytical big data systems have a positive impact in the tourism industry on increase sales by attracting new customers and retaining existing ones by improving it, creating new product and services, customising the type, identifying current trends and reducing operating costs or generating prices in real-time (Côrte-Real et al., 2019). Big data also influence decreasing the risk of uncertain situations (Williams and Baláz, 2015) and improves tourism effectiveness (Pee and Kankanhalli, 2016). It is also important to note the role of Big Data in restoring the confidence of tourists, which has declined in 2020 and 2021 due to the outbreak of the Corona 19 virus, which also leaves psychological consequences on people, and in this case, the velocity has a vital role in restoring confidence as one of the characteristics of Big Data. It is predicted that in post-pandemic time, Big Data's role will also increase in analysing changes in tourists' behavior and preferences (Sheresheva, 2020).

The next technological solution in STD present data-driven mobile apps. For the tourism industry, as for other areas of human activity, the most important are the technological and application solutions that enable connections between people, reporting about the situation and replace physical interactions (Themes: Tourism and Service). When STD decides to implement such technological solutions, it is necessary to gain the trust of the end-users. It is also necessary to regulate it with legislation that prohibits unauthorised use of information or users control.

Technological solutions for tourists' awareness of a real event or place enable virtual and augmented services (topic: virtual, service) to represent an important transformative experience for tourists. The tourism industry is gradually becoming aware of this attention potential, and commercial applications emerge to take advantage of meta-perception in the tourist experience (Stankov et al., 2020b). We know two approaches: i.) virtuality, which takes place through online platforms and usually requires 3D glasses,

allowing virtual visits to natural and cultural sights of the destination, virtual walks through museums and galleries, or easy booking of a destination. 3D view, a “real walk” through the image, can more easily decide and choose an accommodation (bungalow, room, hotel) and immediately see what they get. There are no surprises, which means higher guest satisfaction and less bad mood, negative reviews and loss of money. A great advantage is to offer virtual tours for those who, for some reason, cannot get to the place but would like to see the resort (El-Said and Aziz, 2021). ii) the Second approach is augmented reality (AR) that is defined as an interactive experience of a real-world environment where the objects in the real world are enhanced by computer-generated perceptual information. This format is more convenient for travel service providers because it allows mobile augmented applications (Mohanty et al., 2020).

In practice case SDT can use mobile applications as it is shown in the Opatija case:

- historical 3D reconstruction,
- augmented reality-driven exploration,
- a gamification approach to sightseeing.

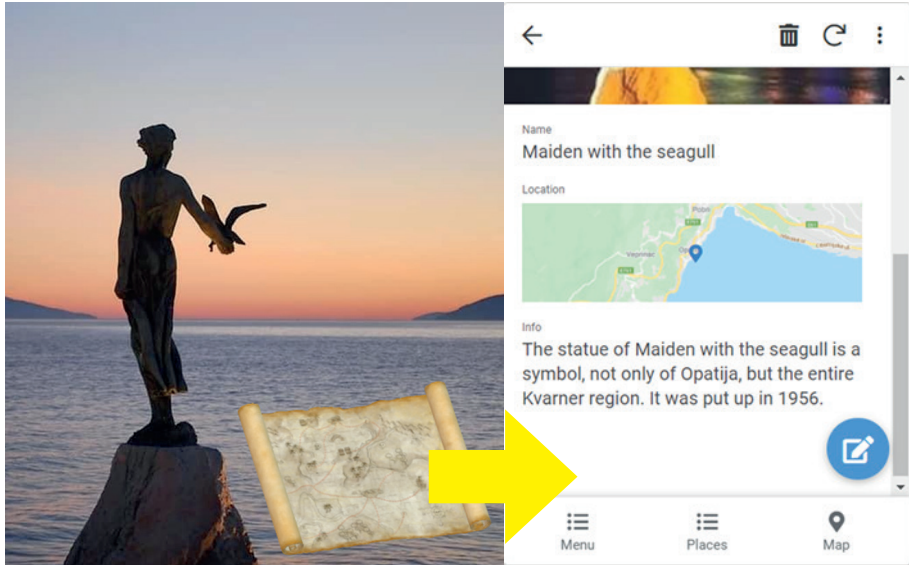
Historical 3D reconstruction is presented in Figure 2. It is going for the possibility of displaying a specific historical event in the form of animated 3D models (objects and characters) over camera image in real-time.

Figure 2: Augmented reality – historical 3D reconstruction



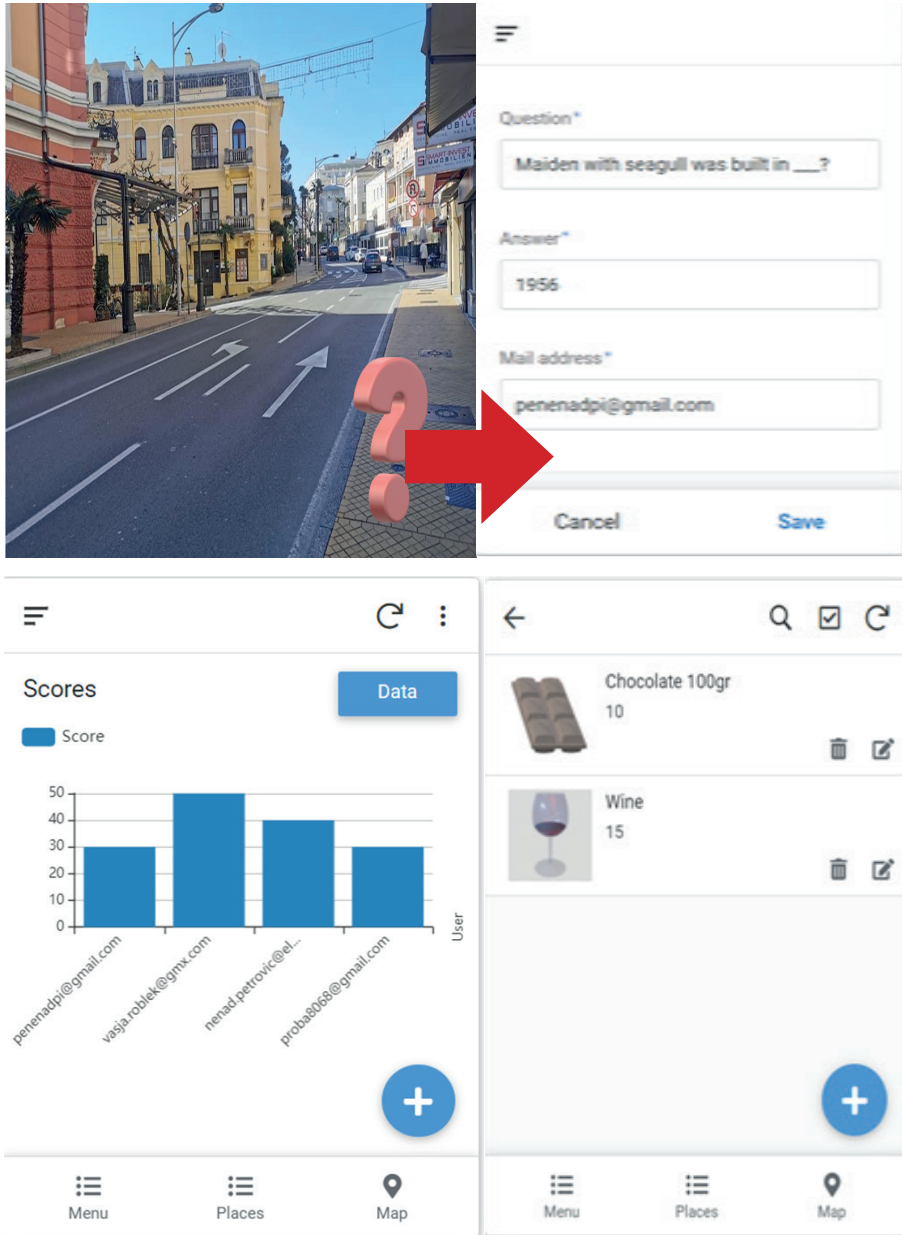
In Figure 3 is presented a case of the augmented reality-driven exploration. It is going for when the 3D object appears near famous locations, and function of the touching the object redirects to the info page.

Figure 3: Augmented reality-driven exploration



As shown in Figure 4, the gamification approach can put the questions at the photos of different destination locations. The right answers to the questions bring points. The application user receives a certain reward within the destination (e.g., a discount on a tourist service, a product specific to the destination, digital products, promotions). Digital coupons can be sent to an e-mail. The gamification apps aim is also to present the sponsors and supporters of the SDT.

Figure 4: Gamification



For the implementation of such applications, we adopted AppSheet, Google Apps Script and AR.js. The role of AppSheet is to render rich info pages (including images, graphs, maps) about tourist locations, starting from Google Sheets tables. Moreover, Google Apps Script gives the ability

to implement backend logic where necessary, such as score calculation and coupon generation in the gamification approach. Finally, AR.js is a lightweight web-based framework that enables high-performance location- and marker-based augmented reality in real-time, even on older devices. According to our previous results (Petrović et al. 2020; Petrović et al., 2021), this technology combination leads to much faster multiplatform AR-enabled mobile application development, even by domain experts (such as personnel working in tourism).

The post-covid period will be important for STD that smart mobile solutions will help decrease the risk of infection. Such technological solutions reduce the need for social contact, as the individual can access all the important resources about a particular sight by himself. Thus, the person does not need to be in a group with a tour guide, nor does he need to borrow a tablet or headphones on-site, as all information flows directly to his mobile phone (tablet) via the augmented reality app (Fennell, 2021).

When implementing virtual and augmented solutions, it is necessary to pay attention to tourists' knowledge about digital technologies. For example, Paulo et al. (2018) expose the need for a deeper understanding of adoption in the tourism industry the mobile augmented reality in a consumer context. We still do not have enough knowledge about tourists' behaviour using virtual or augmented solutions. However, understanding the concept of attentive tourist can help us the definition of Loureiro et al. (2020) that "attentive tourist is a person who focuses its attention on the present moment (not on the past or the future), dedicated to the actual somatic feelings lived in the destination openly, non-reactively and without judgment, rather than tourists accepting their current emotions and thoughts". Stankov et al. (2020a) prepared a new paradigm for creating a new categorisation of tourism typologies and will also enable new and post-covid-19 customised tourist profiles. The tourism industry's goal must thus become the provision of tourist services of mindfulness as a gesture for the benefit of tourists, which will be reflected in ensuring the well-being of guests and respect for guests' needs in the post-covid period. It is going for the main reversal offer of domestic and natural culinary, presentations of local cultural and natural sights, and a focus on green, health, and sustainable tourism (Sharma et al., 2021). Such a tourist offer is that the guest can stay in the destination outside the main season, whereby the destinations' offer also moves into continental areas (thematic: urban) (Graziano, 2021). The redefined offer, also supported by technological solutions, requires creating and adapting to a new and differently designed tourist etiquette and creating a space to improve guest loyalty (theme: Satisfaction) (Azis et al., 2020).

## 5. Conclusion

The article focuses on technological factors that will significantly impact the continued successful operation of STDs in the post-Covid era. For example, the development of technologies on STD increasingly focuses on technologically enhanced experiences and insists on using cutting-edge

technologies to increase competitiveness in the fourth industrial revolution. However, the everyday use of technology and different technologies during the journey lead to different problems. Kabat-Zinn (2018) thus emphasises that the human habit of needing to fill every moment with mental content persists during the journey, ultimately leaving travellers dissatisfied.

Covid-19 influenced changes in the marketing of travel services and also brought technological changes to the hospitality industry. For example, hotels began to invest more in robotics and artificial intelligence and were encouraged to implement and enhance existing virtual solutions. Visual and immersive technologies are becoming a part of the tourist offer, which is not intended to replace the trip but to allow guests to get more information about STD with the help of the apps before arrival and visit unique places upon arrival and be informed about them. Such apps aim to limit social contact as much as possible while providing all the information that a traveller would otherwise receive in a guided group or through information solutions within the offer on-site. It should be noted that the pandemic highlighted the complexity of human-technological interactions, confirming some recent calls for attentive tourists capable of more self-reflection when interacting with technology in the context of collecting tourist experiences (Stankov et al., 2020a).

The pandemic has led society to start demanding responsible behaviour from everyone, which is also important for the sustainable development of STDs, which need better to protect the environment and natural and cultural resources. The future implementation of smart technologies will be important for STDs in the post-pandemics period. The STD will have to adapt its marketing strategies to get more attentive tourists who will demand a more attentive and sustainable tourism experience from tourism service providers. To this end, STDs will need to invest in further technological development in the post-pandemic period, particularly in AI, advanced solutions for interacting with tourists and analytical tools to analyse and transform data into value-added information. All this to provide the guest with the most authentic and, at the same time, safest tourist experience.

A major limitation of the article is that it is based on an analysis of scientific articles published during the Covid 19 outbreak. However, no research was conducted to reflect both managers and users of STD services on the opportunities and threats of implementing modern technological solutions in the post-pandemic period. The authors presented an augmented reality app solution within a tourist destination that can serve as an example of good practice.

## References

1. Alkier, R., Milojica, V., Roblek, V. (2021) "The impact of covid 19 on tourism and hospitality" In Proceedings of the 10<sup>th</sup> international scientific symposium "region, entrepreneurship, development, June 17-19, Osijek,

Croatia: Josip Juraj Strossmayer University of Osijek, In Press.

2. Azis, N. et al. (2020) "How smart tourism technologies affect tourist destination loyalty" *Journal of Hospitality and Tourism Technology*, Vol. 11, No. 4, pp. 603-625, doi: <https://doi.org/10.1108/JHTT-01-2020-0005>.
3. Corrêa, S. C. H., Gosling, M. D. S. (2020) "Travelers' Perception of Smart Tourism Experiences in Smart Tourism Destinations" *Tourism Planning & Development*, Vol. 18, No. 4, pp. 415-434, doi: <https://doi.org/10.1080/21568316.2020.1798689>.
4. Côrte-Real, N., et al. (2019) "Unlocking the drivers of big data analytics value in firms" *Journal of Business Research*, Vol. 97, pp. 160-173, doi: <https://doi.org/10.1016/j.jbusres.2018.12.072>.
5. da Costa Liberato, P. M., Alén-González, E., de Azevedo Liberato, D. F. V. (2018) "Digital technology in a smart tourist destination: the case of Porto", *Journal of Urban Technology*, Vol. 25, No. 1, pp. 75-97, doi: <https://doi.org/10.1080/10630732.2017.1413228>.
6. El-Said, O., Aziz, H. (2021) "Virtual Tours a Means to an End: An Analysis of Virtual Tours' Role in Tourism Recovery Post COVID-19" *Journal of Travel Research*, doi: <https://doi.org/10.1177/0047287521997567>.
7. Fennell, D. A. (2021) "Technology and the sustainable tourist in the new age of disruption" *Journal of Sustainable Tourism*, Vol 29, No, 5, pp. 767-773, doi: <https://doi.org/10.1080/09669582.2020.1769639>.
8. Graziano, T. (2021) "Smart Technologies, Back-to-the-village rhetoric, and tactical urbanism: Post-COVID planning scenarios in Italy" *International Journal of E-Planning Research*, Vol. 10, No. 2, pp. 80-93, doi: <https://doi.org/10.4018/IJEPR.20210401.oa7>.
9. Graziano, T., Privitera, D. (2020) "Cultural heritage, tourist attractiveness and augmented reality: insights from Italy" *Journal of Heritage Tourism*, Vol. 15, No. 6, pp. 666-679, doi: <https://doi.org/10.1080/1743873X.2020.1719116>.
10. Gupta, D. et al. (2021) "Future smart connected communities to fight covid-19 outbreak" *Internet of Things*, Vol.13, doi: <https://doi.org/10.1016/j.iot.2020.100342>.
11. Ivars-Baidal, J. A. et al. (2019) "Smart destinations and the evolution of ICTs: a new scenario for destination management?" *Current Issues in Tourism*, Vol. 22, No. 13, pp. 1581-1600, doi: <https://doi.org/10.1080/13683500.2017.1388771>.
12. Johnson, K. R., Park, S. (2020) "Mindfulness training for tourism and hospitality frontline employees" *Industrial and Commercial Training*, Vol. 52 No. 3, pp. 185-193, doi: <https://doi.org/10.1108/ICT-10-2019-0095>.
13. Kabat-Zinn, J. (2018) *The healing power of mindfulness*, London: Piatkus.
14. Kaushal, V., Srivastava, S. (2021) "Hospitality and tourism industry amid COVID-19 pandemic: Perspectives on challenges and learnings from India" *International Journal of Hospitality Management*, Vol. 92, doi: <https://doi.org/10.1016/j.ijhm.2020.102707>.

15. Loureiro, S. M. C., Stylos, N., Miranda, F. J. (2020) "Mindfulness May Enhance Perceived Value of Travel Experience" *Service Industries Journal*, Vol. 40, No.11-12, pp. 800-824, doi: <https://doi.org/10.1080/02642069.2019.1600672>
16. Lukyanenko, R. et al. (2019) "Expecting the unexpected: Effects of data collection design choices on the quality of crowdsourced user-generated content" *MIS Quarterly*, Vol. 43, No. 2, pp. 623-648, doi: <https://doi.org/10.25300/MISQ/2019/14439>.
17. McNamara, P., Duffy-Deno, K., Marsh, T. (2019) "Dream content analysis using Artificial Intelligence" *International Journal of Dream Research*, Vol. 12, No. 1, pp. 42-52, doi: <https://doi.org/10.11588/ijodr.2019.1.48744>.
18. Mohanty, P., Hassan, A., Ekis, E. (2020) "Augmented reality for relaunching tourism post-COVID-19: socially distant, virtually connected" *Worldwide Hospitality and Tourism Themes*, Vol. 12, No. 6, pp. 753-760, doi: <https://doi.org/10.1108/WHATT-07-2020-0073>.
19. Paulo, M. et al. (2018) "Understanding mobile augmented reality adoption in a consumer context" *Journal of Hospitality and Tourism Technology*, Vol. 9 No. 2, pp. 142-157, doi: <https://doi.org/10.1108/JHTT-01-2017-0006>.
20. Pearce, P. L. (2020) "Tourists' perception of time: Directions for design" *Annals of Tourism Research*, Vol. 83, doi: <https://doi.org/10.1016/j.annals.2020.102932>.
21. Pee, L. G., Kankanhalli, A. (2016) "Interactions among factors influencing knowledge management in public-sector organisations: A resource-based view" *Government Information Quarterly*, Vol. 33, No. 1, pp. 188-199, doi: <https://doi.org/10.1016/j.giq.2015.06.002>.
22. Pencarelli, T. (2020) "The digital revolution in the travel and tourism industry" *Information Technology & Tourism*, Vol. 22, No. 3, pp. 455-476, doi: <https://doi.org/10.1007/s40558-019-00160-3>.
23. Peterlin, J. et al. (2021), "Automated content analysis: The review of the big data systemic discourse in tourism and hospitality" *Systems Research and Behavioral Science*, Vol. 38, No. 3, pp. 377–385, <https://doi.org/10.1002/sres.2790>.
24. Petrović, N., Roblek, V., Nejković, V. (2021) "Mobile Applications and Services for Next-Generation Energy Management in Smart Cities". In Proceedings of the 6th Virtual International Conference on Science, Technology and Management in Energy, 14-15 December, 2020, Niš: ALFATEC D.O.O.
25. Petrović, N. et al. (2020) "Approach to Rapid Development of Data-Driven Applications for Smart Cities using AppSheet and Apps Script". In Proceedings of the 10<sup>th</sup> International conference on Applied Internet and Information Technologies, 16 October, Novi Sad: Technical faculty "Mihajlo Pupin" Zrenjanin, University of Novi Sad.
26. Reis, J. et al. (2020) "Service robots in the hospitality industry: The case of Henn-na hotel, Japan" *Technology in Society*, Vol. 63, doi: <https://doi.org/10.1016/j.techsoc.2020.101423>.



27. Roblek, V. Meško, M. (2020) "Smart city knowledge management". In Proceedings of the 21st Annual International Conference on Digital Government Research Theme: Intelligent Government in the Intelligent Information Society, 14-15 June, Seoul, New York: ACM, pp. 52-60, doi: <https://doi.org/10.1145/3396956.3398263>.
28. Seyitoğlu, F., Ivanov, S. (2020a) "Service robots as a tool for physical distancing in tourism" *Current Issues in Tourism*, doi: <https://doi.org/10.1080/13683500.2020.1774518>.
29. Seyitoğlu, F., Ivanov, S. (2020b) "A conceptual framework of the service delivery system design for hospitality firms in the (post-) viral world: The role of service robots" *International Journal of Hospitality Management*, Vol. 91, doi: <https://doi.org/10.1016/j.ijhm.2020.102661>
30. Sharma, G. D., Thomas, A., Paul, J. (2021) "Reviving tourism industry post-COVID-19: A resilience-based framework" *Tourism Management Perspectives*, Vol. 37, doi: <https://doi.org/10.1016/j.tmp.2020.100786>.
31. Sheresheva, M. Y. (2020) "Coronavirus and tourism" *Population and Economics*, Vol. 4, No. 2, pp. 72-76, doi: <https://doi.org/10.3897/popecon.4.e53574>.
32. Sheth, J. N., Sethia, N. K., Srinivas, S. (2011) "Mindful consumption: a customer-centric approach to sustainability" *Journal of the Academy of Marketing Science*, Vol. 39, No.1, pp. 21-39.
33. Stankov et al. (2020a) "E-mindfulness—the growing importance of facilitating tourists' connections to the present moment" *Journal of Tourism Futures*, Vol. 6, No. 3, pp. 239-245, doi: <https://doi.org/10.1108/JTF-11-2019-0135>.
34. Stankov, U., Filimonau, V., Vujičić, M. D. (2020b) "A mindful shift: an opportunity for mindfulness-driven tourism in a post-pandemic world" *Tourism Geographies*, Vol. 22, No, 3, pp. 703-712.
35. UNWTO (2021) "2020: Worst year in tourism history with 1 billion fewer international arrivals", Available at: <https://www.unwto.org/news/2020-worst-year-in-tourism-history-with-1-billion-fewer-international-arrivals> [Accessed: May 12, 2021].
36. Wang, J. et al. (2020) "Smart tourism destination experiences: The mediating impact of arousal levels" *Tourism Management Perspectives*, Vol. 35, doi: <https://doi.org/10.1016/j.tmp.2020.100707>.
37. Williams, A. M., Baláž, V. (2015) "Tourism risk and uncertainty: Theoretical reflections" *Journal of Travel Research*, Vol. 54, No. 3, pp. 271-287, doi: <https://doi.org/10.1177/0047287514523334>.
38. Wilk, V., Harrigan, P., Soutar, G. N. (2018) "Navigating online brand advocacy (OBA): An exploratory analysis", *Journal of Marketing Theory and Practice*, Vol. 26, No. (1–2), pp. 99–116, doi: <https://doi.org/10.1080/10696679.2017.1389246>.