MECHANISMS TO SUPPORT OPEN INNOVATION IN SMART TOURISM DESTINATIONS: MANAGERIAL PERSPECTIVE AND IMPLICATIONS

Gusakov A. A., Haque A.U., Jogia A. V.[*]

Abstract: This paper examines the business systems in tourist regions that are predisposed to the formation of open innovation systems. The general assumption had been that analysis of the existing mechanisms to support open innovation in tourism and the identification of new trends had aim to do better the practice of managing tourist destinations. To investigate the research phenomenon, various sources of information including publications on innovations in tourism, websites of tourist centers, which are recognized as leaders in smart tourism, as well as sites of leading tourism companies were included. Using Cohen (2014) list, we considered the top 7 out of 15 top tourism destination cities in Europe via 'mapping tourism strategy' while two additional destinations in Europe were only used as case references. Furthermore, top eight travel companies of the Europe as case studies (sample size) for this study because these travel companies are mainly involved in the open innovation. This is a secondary study therefore content and construct validity in the selection of sources has been thoroughly examined. Findings reveal that authorities and businesses in smart tourist destinations, create incubators, accelerators, held hackathons. Previously, there was no conclusive evidence to explain by tourism management shall alter its traditional methods. This article formulates new arguments in favor of the fact that the management of tourist destinations should consider the fundamental changes in tourism due to digital transformation, the platform-based business models, and open innovations platforms.

Keywords: Destination management**,** open innovation in tourism, smart tourism destination, platform-based business models, open innovations platform

Introduction

Strengthening the role of the tourism industry is a feature of the new global economy. For example, tourism is the European Union (EU's) third largest socio-economic activity, representing around 10% of the Gross Domestic Product (GDP) of EU (The European Capital of Smart Tourism initiative, 2018). The publications

---

[*] **Aleksandr A. Gusakov**, PhD Research Scholar, Associate Professor, Peoples' Friendship University of Russia (RUDN University), Russian Federation. **Adnan ul Haque**, Doctorate of Business Administration, Yorkville University, Canada, Business Management Faculty, DBA. **Anjali Vijay Jogia,** BBA, Yorkville University, Canada, Business Management Faculty, BBA.

✉ corresponding author: ahaque@yorkvilleu.ca
✉ gusakov-aa@rudn.ru; Anjali.Jogia@yorkvilleu.ca

POLISH JOURNAL OF MANAGEMENT STUDIES
Gusakov A. A., Haque A.U., Jogia A. V.

2020
Vol.21 No.2

of the United Nations World Tourism Organization (UNWTO) confirm that important indicators of international tourism show growth regardless of the economic situation (UNTWO, 2018). As a cross-cutting sector, tourism employed 266 million people in 2013 equating to 1 in 11 jobs on the world, which includes direct and indirect jobs.

Digital transformation in many areas of life leads to the formation of Smart regions, Smart cities and Smart Tourist Destinations. The entire tourism sector is now facing greater challenges resulting from the enormous complexities, global competition, rapidly changing structures, processes and products, altered values and standards among customers, social change, and many other factors. In the last decade, open innovation has been considered an important mechanism for the development of innovations. The Open Innovation approach was firstly defined and described by Henry Chesbrough (Chesbrough, 2003). Open innovation is widespread in various activities. To identify their role in tourism, it is necessary to study the existing practice of supporting open innovation in leading tourist destinations, as well as in tourism business companies.

Literature Review

The topic of Smart Tourism Destinations (STD) appeared with a view to detailing the concept of smart cities as applied to tourist centers (Buhalis & Amaranggana, 2014; Jasrotia & Gangotia, 2018). The definition of STD was clarified, and elements of a smart tourism system were highlighted (Zhu, Zhang & Li, 2014). (Jasrotia & Gangotia, 2018). The value to the visitor's experience enhanced by six A's in tourism destinations (attractions, accessibility, amenities, available packages, activities, ancillary services) (Buhalis, 2000). The management of the STD should be based on five pillars: Governance, Innovation, Technology, Accessibility and Sustainability (UNWTO, 2019). Many researchers note that the business system of a tourist city has specific features. The degree of influence of these factors depends on the size of the city itself, as well as on the contribution of the tourism industry to the local economy. The interconnectedness of economic systems Tourism Destination forms the prerequisites for the creation of local economic clusters. Over the past decades, many researchers of cluster processes have considered examples of tourism clusters (Nordin, 2003). The creation of cluster structures is associated with the need to increase the degree of trust between local travel companies, which often act as competitors (Czakon & Czernek, 2016; Slusarczyk, Smolag & Kot, 2016). Cooperation between micro sized firms should be better facilitated by government as well as knowledge and know-how initiatives (Pikkemaat & Peters, 2016). The question of the spread of open innovation in the context of coopetition encourages further research.

The specificity of business systems in tourist regions and cities leads to the fact that open innovation systems are being formed, along with closed innovation processes that operate, as a rule, in large network structures (Brunswicker, 2016). To evaluate

open innovation at a tourism destination level several aspects must be considered, "such as the nature of the tourism product, different structures and leaderships of destination management organizations (DMOs), and a variety of entrepreneurial processes and collaboration within the destination" (Pikkemaat & Peters, 2016; Kozicka, Kot & Gede Riana, 2019). The innovation process of product and service development in tourism is becoming more open, emphasizing the importance of external knowledge, and involving a broad range of external actors (Etzelstorfer, Gegenhuber & Hilgers, 2016). As a rule, at the government level, the following mechanisms are used to promote innovation (Beritelli, Bieger, & Laesser, 2013; Bieger, Beritelli & Weinert, 2010): financing; provision of infrastructures; technology and dissemination, which stimulate the dissemination of knowledge and the translation of research results into commercial products, including support for startups; the legal framework, including legislation on intellectual property. At the same time, to increase the effectiveness of support measures, it is necessary to create tools specific to tourism (Rodríguez-Sanchez & William, 2018).

The innovation development ecosystem has undergone significant changes over the past years. The ecosystem of open innovation in the tourism industry is represented by the same elements as in many other areas, e.g. cognitive computing technologies, analytics algorithms, smart applications (Bourke et al., 2019). In different countries and world known tourism destinations created accelerators, venture funds, and various events, such as hackathons, are held. Venture investors are interested in innovative ideas that can be used in tourism and scaled using IT and the Internet - fintech, IoT, search engine, machine learning etc. The tourism industry is favorable for creating start-ups. Experts predict that third wave of tourist start-ups is being built and is going to cover the industry (Skift Research, 2018).

Regarding the development of new products and services and the innovation strategies of tourism enterprises, it is important to distinguish between global travel companies and SMEs (Peters, Pikkemaat, 2015; Pikkemaat, 2008). On the one hand, tourism consists of global travel companies, commonly known as international hotel chains, which are managed in the same way as multinational manufacturing conglomerates. On the other hand, many micro and small firms around the world participate in tourism, which is often called one-person business. Small and micro firms often do not have the resources to focus on the search and implementation of innovations. They use the infrastructure created by government agencies and large private companies, for example, mobile communications and Internet access. They copy the innovations that they have seen with partners or competitors. But they themselves do not develop fundamentally new ideas. In general, a low degree of innovation is typical for small and medium tourist markets, and the international tourism industry competes with innovation worldwide (Peters, Pikkemaat, 2015). Many innovations in tourism are associated with the "migration" of people and knowledge from other sectors (Rodríguez-

POLISH JOURNAL OF MANAGEMENT STUDIES
Gusakov A. A., Haque A.U., Jogia A. V.

2020
Vol.21 No.2

Sanchez & William, 2018). This goal is served by events such as specially organized meetings between companies of different types of activities, as well as informal communication and networking. These events are also part of the concept of open innovation. The exchange of people and knowledge is an important prerequisite for innovation. At the same time, the influx of new entrepreneurs and professionals in the field of tourism requires strengthening the exchange of information and knowledge in the industry, as well as encouraging teams to include an appropriate combination of skills and competencies through the provision of information, advice and mentoring.

Since small travel companies, as a rule, do not have the time and means to search, study and develop innovations, it is advisable to create sets of innovative technological solutions that are ready for implementation. Public procurement of tourism innovations can create new markets or support access to markets for innovators (Rodríguez-Sanchez & William, 2018). Public funding programs should create best practices that can serve as an incentive for others in the industry (Bieger et al., 2010). The integration of information technology in open innovation process facilitate to implementation the network approach, which can evolve to "an ecosystem (or network of opportunities) made up of a series of nodes (small start-ups, inventors, brokers), which are held together by mutual self-interest, trust and open communications" (Ahmed & Shepherd, 2010). Elements of such an ecosystem are created by companies that are interested in finding fresh ideas and new competencies to expand the list of their products, solve old problems, and quickly master new technologies. For this purpose, corporate business incubators, venture funds are created, various resources are allocated, for example, office space and consulting support. Information resources created both in major tourist centers (new York, London, Moscow) and in the small city of Linz (Etzelstorfer et al., 2016) allow us to find and implement innovative solutions that help to consolidate the public to overcome the negative impact on the depletion of local resources and the emergence of the phenomenon of over-tourism.

Maráková & Medveďová (2016) note that more research is needed on the use of innovations in tourism. Tourism should be represented in research conducted by the Innovative Research Centre of the European Commission. There is insufficient data on the impact and effectiveness of the various tools used in research on innovation policy assessment. They believe that innovation policy should also be targeted at target groups that are of interest to other sector policies (for example, small and medium-sized enterprises). The territorial dimension is also important, and it would be useful to study how policies affect the dynamics of organizational innovation in the sector and help create innovation systems (Maráková & Medveďová, 2016).

The next section looks at examples of existing elements of an ecosystem of open innovation, which were created in well-known tourist centers, regions, as well as in tourism companies. Taken together, these results provided an opportunity to

discuss the prospects for supporting open innovation in tourism, as well as the forms and activities that are necessary for this. Digital transformation in tourism and wide distribution of platform-based business models put the new tasks before the authorities and DMO. To increase the activity of creating and implementing innovations, smart tourist destinations should use mechanisms to support open innovation.

Various types of platforms are being created in tourist destinations to increase the innovation and competitiveness of the tourism business. Such platforms should become a place for communication between stakeholders for discussion, search for consensus on ideas and projects created by users. Open Innovation Platform must be supported by the Destination Management Organization (DMO). Another type of platform reflects new business models that have become common in recent years. The rapid development of the Internet has led to the formation of new business models, including in the tourism industry. It is impossible to overestimate the impact of the emergence of a shared economy and a company such as Airbnb on the tourism industry (Heo, 2016). "Tourist destinations would nearly perfectly meet the prerequisites for an industry service platform… There is a kind of a structural equivalence of a Web network/platform strategy and a destination's cooperation strategy" (Neidhardt & Werthner, 2018).

The next section looks at examples of existing elements of an ecosystem of open innovation, which were created in well-known tourist centers, regions, as well as in tourism companies. Taken together, these results provided an opportunity to discuss the prospects for supporting open innovation in tourism, as well as the forms and activities that are necessary for this. Digital transformation in tourism and wide distribution of platform-based business models put the new tasks before the authorities and DMO. To increase the activity of creating and implementing innovations, smart tourist destinations should use mechanisms to support open innovation.
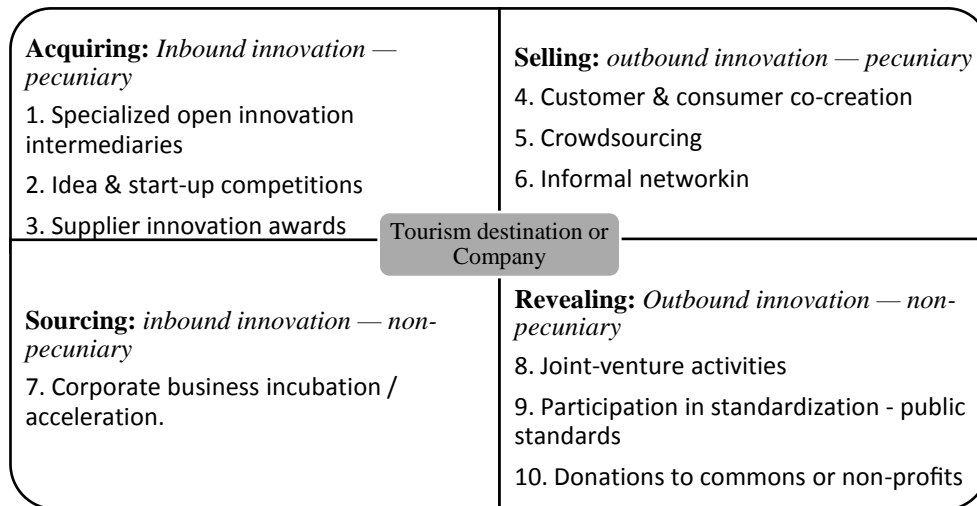
Methodology

Since, this study is a secondary study, therefore we adopted the strategy of Boes, Buhalis & Inversini, (2015) by considering the case study approach to examine the digitalization of tourism because of exploratory nature of research. The technique of using case study approach within the tourism related studies is that it is effective in identifying interlinked factors of Smart Tourism Destination (Boes et al. 2015). Benbasat et al. (1987) argued that the case study methodology is frequently used when study is in the formative stage. Interestingly, the present study considers smart tourism, which is specifically multidisciplinary and remain relatively new despite gaining recognition in recent times. In the present research, multiple case studies (tourism destinations) are considered, which allows for cross-case analysis that provide more holistic view of the research findings (Bonoma, 1985). This research intakes the "mapping smart tourism destination in the EU" as a first step to

POLISH JOURNAL OF MANAGEMENT STUDIES
Gusakov A. A., Haque A.U., Jogia A. V.

2020
Vol.21 No.2

commence an in-depth analysis of smart destinations. Paris, Lyon, Helsinki, London, Barcelona, Vienna, Lisbon, Dublin as well as some regions from Italy were included in this study because those tourism destinations yield some of the most innovative smart solutions. Support mechanism to promote open innovation within the tourism is key theme to investigate therefore, corporate open innovation systems within travel companies were also explored. Boyd Cohen's criterion for ranking was used for the selection (Cohen, 2014). It syndicates a huge variety of regional as well as global rankings of Smart tourism destination elements, within these rankings the selected EU tourism destinations.

This study adopted desk research as the method of data collection. Descriptions of tourist destinations were taken from publications only in peer-reviewed journals and conferences. This ensures that the strategy of constructive and meaningful reliability and validity is followed (Faizan & Haque, 2019). At present, several types of ranking are available for smart tourism destinations. Examples of corporate innovation systems in tourism companies in Europe has been taken from the list of Phocuswright Inc that owns innovation platform and supports networking with tourism innovation infrastructure organizations in different countries. We also considered "Startup Support Ecosystem List" to ensure we rightly select the smart tourism travel companies. Since the research area of open innovation is dynamically developing, another part of the information was collected directly from websites. Only information was considered that makes it possible to analyze the current programs and initiatives, data on completed projects, past events, blogs were excluded from this study. All data was collected during January to April 2019.

Results

The Chesbrough & Brunswicker (2013) innovation classification will be used to analyse what types of open innovation are used in different tourist destinations, as well as by different travel companies. The types of innovations from this classification that are used in tourism are divided into four groups according to Dahlander & Gann (2010) – Figure 1. All types of innovations are numbered to make it easier to present analysis data in tabular form.

Acquiring: *Inbound innovation — pecuniary*

1. Specialized open innovation intermediaries

2. Idea & start-up competitions

3. Supplier innovation awards

Selling: *outbound innovation — pecuniary*

4. Customer & consumer co-creation

5. Crowdsourcing

6. Informal networkin

Tourism destination or Company

Sourcing: *inbound innovation — non-pecuniary*

7. Corporate business incubation / acceleration.

Revealing: *Outbound innovation — non-pecuniary*

8. Joint-venture activities

9. Participation in standardization - public standards

10. Donations to commons or non-profits

Figure 1: Structure of our different forms of openness.
Source: based on Dahlander & Gann (2010).

Table 1: List of open innovation projects in world travel destinations and countries

N	City, Country, Source	Organization / Project / Initiative
1.	Paris, France (Welcome City Lab, 2019)	Welcome City Lab
2.	Lyon, France (European Capital of Smart Tourism, 2019)	Smart Tourism Award at the ONLYLYON Tourism Fair
3.	Helsinki, Finland (MyHelsinki, 2018)	MyHelsinki - testing ground for open innovation, Startup community Maria 01
4.	London, UK (London Councils, 2018, Trampery, 2018)	London Office of Technology and Innovation, Traveltech Lab
5.	Dublin, Ireland (Kitchin, Coletta, & McArdle, 2017)	Programmable City project - development of open data portals
6.	Italy (Italian Tourism Startup Association, 2019)	Italian Tourism Startup Association
7.	Barcelona, Spain (Mobile World Capital Barcelona, 2019a; Seggitur, 2019)	Innovation Hub Travel Edition, SEGITTUR - national agency for the development of tourism innovation
8.	Vienna, Austria (WienTourismus, 2014)	"Open Innovation Process" - Vienna 2020 Tourism Strategy
9.	Lisbon, Portugal (Fábrica de Startups, 2018)	Fábrica de Startups

The ecosystem of support for open innovation at the state and regional levels also includes the creation of business incubators, in which there are programs for acceleration of workouts. In this case, to finance start-up innovation companies,

POLISH JOURNAL OF MANAGEMENT STUDIES
Gusakov A. A., Haque A.U., Jogia A. V.

**2020
Vol.21 No.2**

support is allocated from budgets of various levels, and private investors are attracted. Another way to find innovative solutions and teams that possess the competencies necessary to implement such a solution is hackathons. These examples show that countries and regions in which tourism plays a large role in the economy are adopting programs to support innovation in this area.

Table 2: Mechanisms of a support system for open innovation

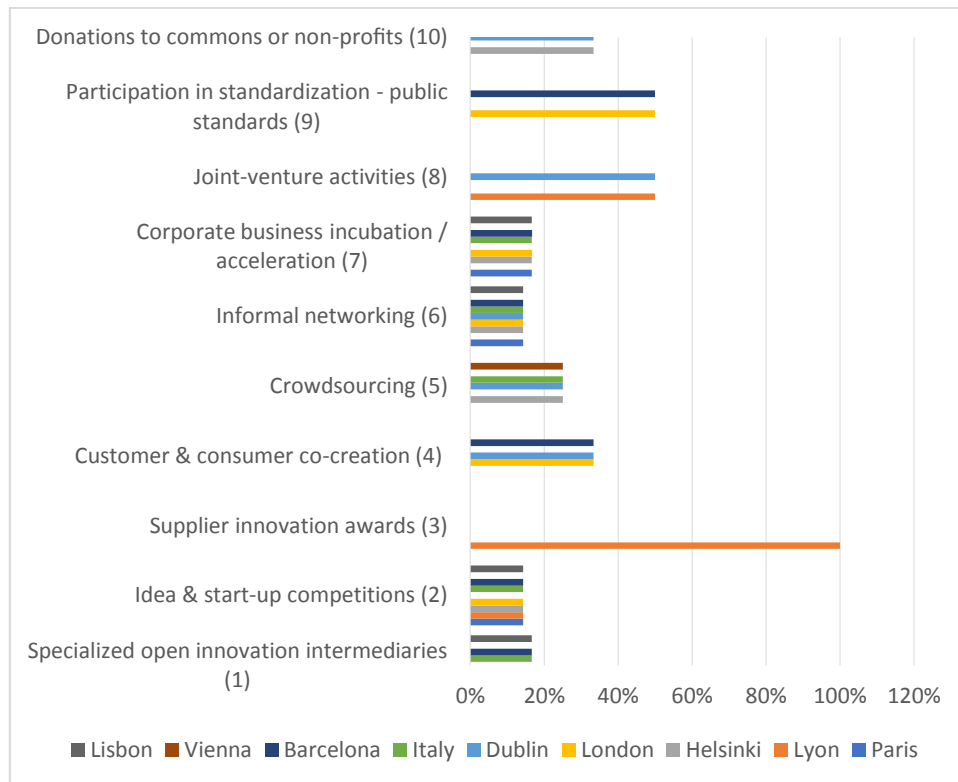| City, Country	Types of open innovations									
	1	2	3	4	5	6	7	8	9	10
Paris, France	X	X				X	X			
Lyon, France		X	X							
Helsinki, Finland	X	X			X	X	X			X
London, UK	X	X		X		X	X	X	X	
Dublin, Ireland				X	X	X				X
Italy	X	X			X	X	X			
Barcelona, Spain	X	X		X		X	X	X	X	
Vienna, Austria					X					X
Lisbon, Portugal	X	X				X	X			

Figure 2: Mechanisms of Support system across the globe

The specialized openness innovation is mostly evident in the EU smart cities (Fig 1). Large companies traditionally apply closed innovations, that is, independently conduct research and development, or order them to third-party companies and universities. But in recent years, they also seek to increase their competitiveness and stay on the crest of a new technological wave through open innovation mechanisms. Companies of various activities related to the tourism industry, launch programs to support and accelerate startups, buy startups, invest in new businesses. Consider a few examples of such initiatives from major travel companies.
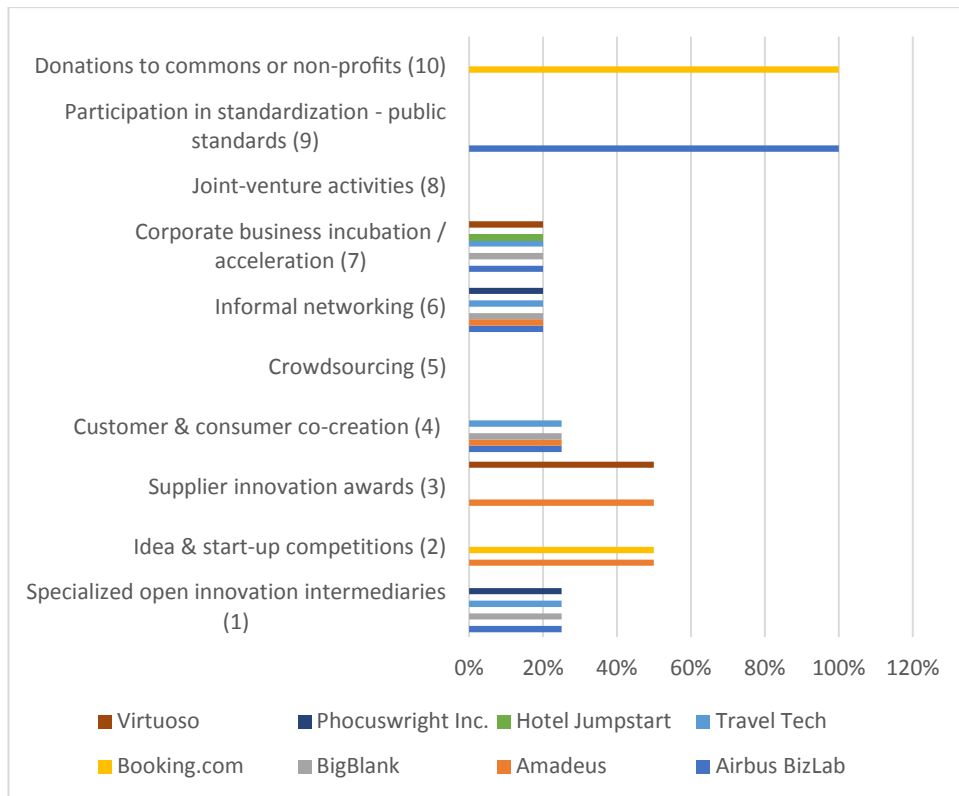
Table 3: Corporate open innovation systems in travel companies

Company / Program	Mechanisms of support open innovation
Airbus BizLab (Airbus BizLab, 2019)	Global aerospace business accelerator where startups and Airbus intrapreneurs speed up the transformation of innovative ideas into valuable businesses
Amadeus (Amadeus IT Group SA, n.d.)	Amadeus Ventures is a venture capital fund which invests in new startups working at the intersection of

	technology and tourism. This program provide financing, industry knowledge, technology and customer search for companies in the Amadeus portfolio.
BigBlank, Paris (BigBlank, 2019)	Accelerator for startups in tourism industry. Access to the group's expertise, technologies, and customer insights.
Booking.com, Amsterdam (Booking.com Booster Programme, 2019)	Booking.com Booster Programme invite innovative startups who are contributing to a more sustainable travel industry to help relieve pressure on overcrowded tourist areas, have positively impact the environment, and social ventures that are supporting local communities in the tourism industry.
Travel Tech, London (Founders Factory, 2019)	Travel Tech is one of the Founders Factory startup accelerator programme. Travel Tech collaborate with easyJet company to support the travel startups.
Hotel Jumpstart (Expedia Group Partner Solutions, 2018)	Mentorship-driven accelerator programme for innovative travel tech start-ups led by Expedia Affiliate Network (EAN) and Hotels.com.
Phocuswright Inc. (Phocuswright Inc, 2018)	The Phocuswright Innovation Platform help to finding startups, new products, partners, investors, essential research and an exclusive group of pioneers in tourism.
Virtuoso (Virtuoso, 2019)	Virtuoso Incubator program with purpose of the to ensure Virtuoso Member Agencies have access to the very best technology available in the industry, regardless of source

Table 4: Mechanisms of a support system for open innovation in travel companies

Company / Program	Types of open innovations									
	1	2	3	4	5	6	7	8	9	10
Airbus BizLab	X			X		X	X		X	
Amadeus		X	X	X		X				
BigBlank	X			X		X	X			
Booking.com		X								X
Travel Tech	X			X		X	X			
Hotel Jumpstart							X			
Phocuswright Inc.	X					X				
Virtuoso			X				X			

**2020
Vol.21 No.2**

POLISH JOURNAL OF MANAGEMENT STUDIES
Gusakov A. A., Haque A.U., Jogia A. V.

Figure 3: Travel companies using support system for open innovation

It is evident that crowdsourcing and joint ventures are not often used by big travel companies (Fig 2). It is interesting to note that contribution to ecosystem in the shape of donation to non-profit firms and participation in standardized public interest are major focus of these big travel companies (Fig 2).

Discussion

The innovation development ecosystem has undergone significant changes over the past years. Young people who, as founders of Facebook, Airbnb, Instagram, were able to turn a new idea into a startup, and then into a company worth billions of dollars, inspire many by their example. Since many world-famous tourist destinations have dynamic business structures, universities and research organizations, they are developing an innovation ecosystem to support open innovation in various fields. Such support directly or indirectly helps travel companies. The ecosystem of open innovation in the tourism industry is represented by the same elements as in many other areas. In different countries and world known tourism destinations created accelerators, venture funds, and various

POLISH JOURNAL OF MANAGEMENT STUDIES
Gusakov A. A., Haque A.U., Jogia A. V.

2020
Vol.21 No.2

events, such as hackathons, are held. An analysis of examples of the existing elements of the innovation ecosystem shows which programs and activities are in place in tourist centers, most of which are recognized as smart cities, smart tourist places or are striving to become them. This analysis allows us to formulate recommendations for DMOS to change management approaches, both to the formation of strategies for the development of tourist destinations, and to the mechanisms for their implementation.

The rapidly changing innovative landscape in tourist destinations requires close attention from the DMO. At the same time, innovative companies that have achieved success in one region, with the help of modern technologies, can extend their activities to the whole world and thereby dramatically change the situation in previously successful tourist destinations. So, the rapid development of Airbnb has made it more difficult to manage tourist flows. These flows are not controlled by travel agencies. The development of services for the selection of individual tourist guides also destroys traditional group tourism. These tendencies of loss of control over the situation to a large extent contribute to the fact that signs of over tourism appear in the most popular tourist destinations. In these conditions, DMEs do not always have enough experience and skills to develop tools for promoting innovations themselves. They should be proactive in and create the conditions for seeking innovation in the open market, that is, for creating mechanisms for open innovation. At the same time, organizations responsible for the development of a tourist city or region form their support criteria in order to identify the most useful ideas and startups. To increase the level of implementation of innovative solutions in local tourism, DMEs should attract and collect the best practices, and open innovation mechanisms can help.

Large companies operating in the tourism sector are also changing their approaches and seeking to increase their competitiveness by searching for external sources of new technologies and business models. Moreover, the solutions that are supported in corporate startup acceleration programs are not always directly related to the traditional field of activity of a large company - founder. These can be ideas that will lead to significant changes in the tourism industry, as well as to solving old problems. So, Booking.com Booster Programme supports small companies, who are contributing to a more sustainable travel industry. These examples show that even large and successful companies operating in the tourism industry are changing their approaches to improving competitiveness through open innovation, as well as to implement their social responsibility.

Strengthening the role of business solutions based on various types of platforms creates a different challenge for DMO. An example of the effective application of the platform approach was demonstrated by Vienna in the development of its strategy of innovative tourism development. Another type of platform reflects new business models that have become common in recent years. The rapid development of the Internet has led to the formation of new business models, including in the

tourism industry. It is impossible to overestimate the impact of the emergence of a shared economy and a company such as Airbnb on the tourism industry (Heo, 2016). "Tourist destinations would nearly perfectly meet the prerequisites for an industry service platform… There is a kind of a structural equivalence of a Web network/platform strategy and a destination's cooperation strategy" (Neidhardt & Werthner, 2018). Since the tourist product is primarily a good experience, it is based on information aggregated from various sources.

To increase the level of innovation among travel companies, it is important to provide convenient forms for exchanging information, ideas, working solutions, etc. As practical examples show, in many tourists centers much attention is paid to the creation of special sites and the search for effective formats for the exchange of specific knowledge and experience. To organize mutually beneficial contacts of startups with large companies in the tourism industry, special events are usually organized (Traveltech Lab in London); specific benefits of smart services are portrayed in the study of Kanovska (2018). Meetings and constructive discussions on interaction opportunities allow small and medium enterprises to find a place in the value chain, establish useful contacts, and get contracts from large companies. Tourism-specific innovation platforms could be the starting point to increase interest and practice in the tourism industry and could also provide the infrastructure to create networks of procurers (Kurowska-Pysz et al., 2018), establish a dialogue between government departments and suppliers and learning from others good practices. The example of Helsinki shows how far the authorities can go in opening data about the city and its subsystems, and how attractive such data becomes for commercial companies in terms of providing innovative services to residents and visitors to the city. The creation of a special unit in government, such as the London Office of Technology and Innovation, shows the importance of innovation management processes in a smart tourist destination.

We live surrounded by platforms. Multisided platforms are a business model that is only effective if several interconnected groups of product and customer suppliers participate in it simultaneously. Digital technology has given this business model a new life. The more user groups of such platforms, the more useful they become for participants. Thanks to such solutions, even niche solutions, small companies began to find their customers around the world. On the other hand, the widespread penetration of platform solutions as well as the penetration of large network companies can lead to negative consequences for local business. They may be limited in the ability to set prices for their product. Part of the funds for services that the client pays will go to the owners of the platforms. From the point of view of the local authorities, it is important that there may be a risk that a part of the funds and taxes may leave the place / region to the countries where the owners of the platform solutions are registered. These aspects show that it is important for DMOs and authorities to find a consensus with the owners of the new platform solutions.

DMOs can play a mediating role when external stimuli need to be transferred into the destination. Furthermore, DMOs can foster collaborative innovation networks and support them by providing innovation project structure and a framework for innovation processes (Pikkemaat & Peters, 2016). DMO need to cooperate with business to attract stakeholders in projects to create elements of open innovation in the form of acceleration programs for start-ups and venture funds. The need to involve all stakeholders in the dialogue and in the process of creating competitiveness of destinations becomes even more urgent in connection with the new technological wave, new business models that threaten the sustainability of the development of popular tourist places and regions.

Since DMOs can play the role of one of the facilitators of the process of creating local and regional tourism clusters, as well as turning them into innovation clusters, then we should look for forms of participation of DMO in the development of an open innovation ecosystem.

Managerial Implications

The paper is effective on providing relevant role in open innovation to deal with the concerns of the ecosystem. Moreover, this paper theorizes the important smart tourism and open innovation concepts in EU to explain the tourist experiences which helps in bridging the theories on smart technologies to be adopted in the era of information sharing. The article is also contributing to the conceptualization of how modern-day tourists are shifting from traditional and digital to smart technologies by promoting the new smart service ecosystem. Among some of the important managerial implications, the most important one from this article is that DMOs and other tourism related businesses could learn about the practical smart tourism scenarios and open innovation discussed in this paper. The public investment could learn to improve their functioning by installing ICTs and working on the risk control by having smart technologies infrastructure (beacons, sensors, official apps, and so on). Smart tourism concept through smart destination scenario could be improved by using real impact technologies regarding demand satisfaction while feedback could be attained through employing smartness level as part of destination strategy. This article also proposed that connectivity is essential aspect in connecting geographic regions, especially rural destinations where there are higher barriers for smart destinations construction. We proposed that residential (higher) connectivity and transit (limited) connectivity as well as remote or disconnected regions (no internet) through scalable strategies by suggesting DMOs to form stronger collaboration and facilitate visitors via a powerful tool of disseminating information. It is also recommended that big travel companies should more focus on improving the outlook of the region by contributing to public standardization and donations to non-profit firms as a support for the community. It is essential to have transparent communication between DMOs, consumers, and businesses so that trust enhances, and data sharing improves. A better approach

could be to have simpler contract rather than having terms and conditions. These contracts should be more flexible in its functionality. Moreover, the privacy concerns should be improved by ensuring user's features and details are not used without their consent by any marketing firms and so on.

Conclusion

Open innovation is actively used in various activities and in companies of various sizes. The use of such innovations radically changes the sphere of tourism. As an example, we can cite the fact that network hotels in the look for customers begin to place their offers on the Airbnb platform. Large tourist centers and regions create elements of an open innovation ecosystem. These mechanisms are also used by large companies operating in this industry. Accelerators for small innovative companies offering fresh solutions for tourism, as well as venture funds are created with the participation of authorities in partnership with business structures. Local authorities and DMO play a key role in the development of programs to increase the innovative activity of local companies. Strategic plans for the development of tourist centers include activities to support start-ups and other participants in the open innovation process. The fundamental change in the tourism sector in recent years, caused by the digital transformation and new platform-based business models, requires new approaches on the part of the authorities and DMO. These results show the role of tourism policy as a supporter of education, networking, and investments in tourism destinations. Open data portals combined with open access mechanisms for these data allow providing a fundamentally new level of information services for both tourists, residents and for managing a tourist destination. To be smarter tourism destinations should implement the mechanisms of open innovation support.

Limitations and Future Research Directions

Future studies should work on improving the existing limitations. This study used narrative descriptive approach by using smart mapping strategy, which is one of the effective methods to advance in this industry. However, the primary method could be used in future studies to have more direct information from the tourists and visitors using smart technologies. This study considered only nine out of 15 destination in the EU for study purpose and sample size is over 50% but there are 27 countries in EU. This means that results could only be specified to considered countries. For higher generalizability, the sample size should be increased. Moreover, the cross-sectional comparative analysis should be made to investigate the smart technologies in different destinations. It would be interesting to explore the variation among different regions. A comparative analysis should be considered by the future studies. In addition to that, it would be interesting to have in-depth interviews at DMOs to understand the insight perspective about how the regions

POLISH JOURNAL OF MANAGEMENT STUDIES
Gusakov A. A., Haque A.U., Jogia A. V.

2020
Vol.21 No.2

are progressing and what are some of the interlinked challenges. The expert opinions and experiences would further expand the knowledge about the research problem.

Acknowledgement

References

Ahmed, A. K., and Shepherd, C. D. (2010). *Innovation Management*. Pearson: Harlow.

Airbus BizLab, (2019). The Acceleration Programme, Available at: https://www.airbus-bizlab.com/about, Access on: 01.04.2019.

Amadeus IT Group SA, (2019). Amadeus Ventures. *Amadeus IT Group SA,* Available at: https://amadeus.com/en/ventures, Access on: 01.04.2019.

Benbasat, I., Goldstein, D., and Mead, M. (1987). The case research strategy in studies of information systems. *MIS Quarterly,* 11(3), 369–386.

Beritelli, P., Bieger, T., and Laesser, C. (2013). The new frontiers of destination management - Applying variable geometry as a function-based approach, *Journal of Travel Research*, 53(4), 403-417.

Bieger, T., Beritelli, P., and Weinert, R. (2010). *Bericht Schlussevaluation InnoTour*, Evaluation des Förder- und Finanzierungsansatzes, St. Gallen.

BigBlank. (2019, Mar 04), Exploring new horizons, bringing people together and sharing unique memories: the travel of tomorrow has yet to emerge, Access on: 01.04.2019.

Boes, K., Buhalis, D., and Inversini, A. (2015). *Conceptualising smart tourism destination dimensions.* In: I. Tussyadiah & A. Inversini (Eds.), Information and communication technologies in tourism 2015 (pp. 391–403). Cham, Switzerland: Springer.

Bonoma, T. (1985). Case research in marketing: Opportunities, problems, and a process. *Journal of Marketing Research,* 22(2), 199-208.

Booking.com Booster Programme, (2019). *Innovative Start-ups,* Available at: https://booster.bookingcares.com/booster-2019-about, Access on: 22.04.2019.

Bourke, E., Kovacova, M., Kliestikova, J., Rowland, Z. (2019). Smart industrial internet of things devices, services, and applications: Ubiquitous sensing and sensory data, predictive analytics algorithms, and cognitive computing technologies. *Analysis and Methaphysics, 18*: 50-56.

Buhalis, D., and Amaranggana, A. (2014). *Smart tourism destinations.* In: Z. Xiang & I. Tussyadiah (Eds.), Information and communication technologies in tourism. (pp. 553–564). Dublin: Springer.

Brunswicker, S. (2016). *Managing Open Innovation in Small and Medium-Sized Enterprises* (SMEs). In: R. Egger I. Gula and D. Walcher (Eds.), Open Tourism. Open Innovation, Crowdsourcing and Co-Creation Challenging the Tourism Industry (pp. 250-271). 1st ed. Springer.

Chesbrough, H. (2003). *Open innovation. The new imperative for creating and profiting from technology*. Boston, MA: Harvard Business School Press.

Chesbrough, H., Brunswicker S. (2013). *Managing open innovation in large firms*. Survey report. Haas School of Business, UC Berkeley; Fraunhofer Institute for Industrial

Engineering, Fraunhofer Society.

Cohen, B. (2011). *Smart cities wheel.* Available at: http://www.boydcohen.com/smartcities.html, Access on: 22.04.2019.

Cohen, B. (2014). The *10 smartest cities in Europe.* Available at: http://www.fastcoexist.com/3024721/the-10-smartest-cities-in-europe#7, Access on: 28.05.2019.

Czakon, W., and Czernek, K. (2016). The role of trust-building mechanisms in entering into network coopetition: the case of tourism networks in Poland, *Industrial Marketing Management*, 57, 64-74.

Dahlander, L.; and Gann, D. (2010). *How open is innovation?* Research Policy, 39, 699–709.

Etzelstorfer, S., Gegenhuber, T., and Hilgers, D. (2016). *Opening Up Government: Citizen Innovation and New Modes of Collaboration.* In: R. Egger, I, Gula and D. Walcher (Eds.), *Open Tourism. Open Innovation, Crowdsourcing and Co-Creation Challenging the Tourism Industry* (pp. 354-373). 1st ed. Springer.

European Capital of Smart Tourism. (2019, Feb 09). *Lyons Preliminary Programme of Activities as 2019 European Capital of Smart Tourism,* available at: https://smarttourismcapital.eu/wp-content/uploads/2018/11/Lyons-Preliminary-Programme-of-Activities-as-2019-European-Capital-of-Smart-Tourism.pdf, Access on: 26.04.2019.

European Capital of Smart Tourism. (2018), *An EU initiative to reward innovative and smart tourism in European Cities!* Available at: https://smarttourismcapital.eu, Access on: 22.04.2019.

Expedia Group Partner Solutions. (2018). *Hotel Jumpstart – Win top prize,* Available at: https://expediapartnersolutions.com/resources/news/press/luggage-storage-start-up-stasher-wins-top-prize-in-hotel-jumpstart, Access on: 28.03.2019.

Fábrica de Startups. (2018, Dec 17). *We Help People Become Successful Entrepreneurs*, Available at: http://www.fabricadestartups.co/, Access on: 12.03.2019.

Faizan, R., and Haque, A.U. (2019). Working Efficiency of Contrasting Genders under Eustress, Distress, Hyper-Stress, and Hypo-Stress, *Prabandhan: Indian Journal of Management,* 12(11), 32-45.

Faizan, R., Haque, A.U., Cockrill, A., and Aston, J. (2019). Females at Strategic Level Affecting Logistics Firms' Competitiveness: Qualitative Comparative Analysis of Contrasting Gender in Pakistan and Canada, *Forum Scientiae Oeconomia* 7(1), 57-71.

Founders Factory. (2019), *Power to Founders - London,* Available at: https://foundersfactory.com, Access on: 27.12.2019.

Heo, C.Y. (2016). Sharing economy and prospects in tourism research, *Annals of Tourism Research*, 58(C), 166–170.

Italian Tourism Startup Association. (2019). *Riuniamo le migliori startup del travel - Startup, mentor, imprese e istituzioni in unico network,* Available at: https://www.startup-turismo.it/en/italian-tourism-start-ups-association/, Access on: 27.12.2019.

Jasrotia, A., and Gangotia, A. (2018). Smart Cities to Smart Tourism Destinations: A Review Paper. *Journal of Tourism Intelligence and Smartness*, 1(1), 47-56.

Kanovska, L. (2018). Smart services and their benefits for manufacturers from a global perspective. *Ekonomicko-manazerske spektrum,* 12(2), 46-56.

POLISH JOURNAL OF MANAGEMENT STUDIES
Gusakov A. A., Haque A.U., Jogia A. V.

2020
Vol.21 No.2

Kitchin, R., Coletta, C., and McArdle, G. (2017). *Urban informatics, governmentality and the logics of urban control*. The Programmable City Working Paper 25, socarxiv. Available at: https://osf.io/27hz8, Access on: 22.04.2019.

Kozicka, K., Kot, S., and Gede Riana, I. (2019). The efficiency of cooperation between the participants in the supply chain in the tourism-related branch of industry in relation to client satisfaction, *Sustainability*, 11(17), art. no. 4716.

Kurowska-Pysz, J., Szczepańska-Woszczyna, K., Štverková, H., and Kašík, J. (2018). The catalysts of cross-border cooperation development in euroregions, *Polish Journal of Management Studies*, 18(1), pp. 180-193.

London Councils. (2018). *London Office of Technology and Innovation,* Available at: https://www.londoncouncils.gov.uk/who-we-are/london-office-technology-and-innovation-loti, Access on: 22.04.2019.

Maráková, V., and Medveďová, M. (2016). *Innovation in tourism destinations*. Forum Scientiae Oeconomia Volume 4 No. 1, pp. 33-43

MyHelsinki. (2018). *Helsinki Marketing – Open data and innovation*, Available at: https://www.myhelsinki.fi/en/helsinki2018-meeting/open-data-and-innovation, Access on: 22.04.2019.

Mobile World Capital Barcelona. (2019a). *Startup Ecosystem Overview,* Available at: https://mobileworldcapital.com/report/startup-ecosystem-overview-2019/#slide0, Access on: 17.04.2019.

Mobile World Capital Barcelona. (2019b). *Innovation Hub Travel Edition,* Available at: https://mobileworldcapital.com/travel-innovation-hub/, Access on: 28.05.2019.

Neidhardt, J., and Werthner, H. (2018). IT and tourism: still a hot topic, but do not forget IT, *Information Technology & Tourism*, 20, 1–7.

Nordin, S. (2003). *Tourism Clustering and Innovation - Paths to economic Growth and Development.* The European Tourism Research Institute: Mid Sweden University.

Peters, M., and Pikkemaat, B. (2015). *INNOTOUR: An Innovation in Tourism Policy.* In: H. Pechlaner & E. Smeral (Eds.), Tourism and Leisure - Current Issues and Perspectives of Development in Research and Business, (pp.51-64). Wiesbaden, Germany: Gabler verlag Springer.

Pikkemaat, B. (2008). *Innovation in small and medium sized tourism enterprises: A review of the literature and an agenda for research*. Paper presented at the TTRA European Conference Competition in Tourism: Business and Destination Perspectives. Helsinki, Finland.

Pikkemaat, B., and Peters, M. (2016). *Open innovation: A chance for the innovation management of tourism destinations?* Open Tourism (pp. 153–169). Berlin, Heidelberg: Springer.

Rodríguez-Sanchez, I., and William, A. (2018). *Opportunities to Minimise the Risks of Innovation in Tourism. Policy Recommendations for decision makers at national, regional, local level*. Full report, Available at: https://www.surrey.ac.uk/sites/default/files/2018-07/policy-recommendations-pdf.pdf, Access on: 18.02.2019.

Phocuswright Inc. (2018). *Startup Support Ecosystem List,* Available at: https://www.phocuswright.com/Free-Travel-Research/List-of-Travel-Startup-Support-EcosystemPrograms-andEntities?fbclid=IwAR12sqtCcVynGOHM341qItXj0yJTROM6cwpp_PUIfkNlC2SP

p5BXki1i94/, Access on: 26.03.2019.

Seggitur. (2019). *Standardization of Smart Tourist Destinations,* Available at: https://www.segittur.es/es/DTI/dti-detalle/Normalizacin-Destinos-Tursticos-Inteligentes/#.XoafB4hKhPY, Access on: Access on: 29.12.2019.

Skift Research. (2018). *Skift Research E-Book: The New Wave of Venture Capital and Startups in Travel*, Available at: https://research.skift.com/reports/skift-research-e-book-the-new-wave-of-venture-capital-and-startups-in-travel/, Access on: 07.01.2019.

Slusarczyk, B., Smolag, K., and Kot, S. (2016). *The supply chain of a tourism product.* Actual Problems of Economics, 179 (5), pp. 197-207

Trampery. (2018). *Traveltech Lab,* Available at: https://thetrampery.com/programmes/traveltech-lab-membership-programme//, Access on: 22.05.2019.

United Nations World Tourism Organization – UNWTO (2018). *UNWTO World Tourism Barometer*. Volume 16, November 2018, Available at: https://www.e-unwto.org/loi/wtobarometereng, Access on: 26.03.2019.

UNWTO (2019). *UNWTO Guidelines for Institutional Strengthening of Destination Management Organizations (DMOs) – Preparing DMOs for new challenges*, UNWTO, Madrid, Available at: https://www.unwto.org/global/publication/unwto-guidelines-institutional-strengthening-destination-management-organizations-dmos-p, Access on: 13.05.2019.

Virtuoso. (2019). *Virtuoso Incubator,* Available at: https://www.virtuoso.com/Marketing-Landing-Pages/Virtuoso-Incubator/, Access on: 26.03.2019.

Welcome City Lab. (2019). *Adopt a transformational hotel,* Available at: https://welcomecitylab.parisandco.com/News/Tourism-observatory/Adopt-a-transformational-hotel, Access on: Access on: 22.03.2020.

WienTourismus. (2014). *Tourismus Strategie 2020. Wien jetzt oder nie*, Available at: http://tourismusstrategie2020.wien.info, Access on: 22.02.2020.

World Tourism Organization (2018). *UNWTO Knowledge Network*. Available at: http://know.unwto.org/content/what-platform, Access on: 22.02.2019.

MECHANIZMY WSPIERAJĄCE OTWARTE INNOWACJE W INTELIGENTNYCH CELACH TURYSTYKI: PERSPEKTYWA ZARZĄDZAJĄCA I IMPLIKACJE

Streszczenie: Niniejszy artykuł analizuje systemy biznesowe w regionach turystycznych, które są predysponowane do tworzenia otwartych systemów innowacji. Ogólnym założeniem było to, że analiza istniejących mechanizmów wspierania otwartych innowacji w turystyce i identyfikacja nowych trendów miały na celu usprawnienie praktyki zarządzania destynacjami turystycznymi. Aby zbadać zjawisko badawcze, uwzględniono różne źródła informacji, w tym publikacje na temat innowacji w turystyce, strony internetowe centrów turystycznych, które są uznawane za liderów inteligentnej turystyki, a także strony wiodących firm turystycznych. Korzystając z listy Cohena (2014), wzięliśmy pod uwagę 7 z 15 najlepszych miast turystycznych w Europie za pomocą „strategii turystyki mapowej", a dwa dodatkowe miejsca docelowe w Europie wykorzystano jedynie jako referencje. Ponadto osiem najlepszych firm turystycznych w Europie jako studia przypadków (wielkość próby) w tym badaniu, ponieważ te firmy turystyczne są głównie zaangażowane w otwarte innowacje. Jest to badanie wtórne, dlatego treść i poprawność

POLISH JOURNAL OF MANAGEMENT STUDIES
Gusakov A. A., Haque A.U., Jogia A. V.

2020
Vol.21 No.2

konstrukcji w wyborze źródeł została dokładnie zbadana. Wyniki pokazują, że władze i firmy w inteligentnych destynacjach turystycznych tworzą inkubatory, akceleratory, organizują hakatony. Wcześniej nie było przekonujących dowodów na to, że zarząd turystyki zmieni swoje tradycyjne metody. W tym artykule sformułowano nowe argumenty przemawiające za tym, że kierownictwo miejscowości turystycznych powinno rozważyć zasadnicze zmiany w turystyce wynikające z transformacji cyfrowej, opartych na platformie modeli biznesowych i platform otwartych innowacji.

Słowa kluczowe: zarządzanie miejscem docelowym, otwarte innowacje w turystyce, inteligentne miejsce docelowe turystyki, oparte na platformie modele biznesowe, platforma otwartych innowacji

在智能旅遊目的地支持開放式創新的機制：管理學的觀點和意義

摘要：本文研究了旅遊區中傾向於形成開放式創新系統的業務系統。一般的假設是，對支持旅遊業開放創新的現有機制進行分析並確定新趨勢旨在更好地管理旅遊目的地。為了調查這一研究現象，包括了各種信息資源，包括有關旅遊業創新的出版物，被公認為智能旅遊業領導者的旅遊中心網站以及領先旅遊公司的網站。根據科恩（Cohen, 2014）的列表，我們通過"映射旅遊策略"將歐洲15個頂級旅遊目的地城市中的前7個視為了歐洲，而歐洲另外兩個目的地僅作為案例參考。此外，本研究以歐洲排名前八的旅行社為案例研究（樣本量），因為這些旅行社主要參與開放式創新。這是一項次要研究，因此，在選擇來源方面的內容和構建效度已得到全面檢查。調查結果表明，聰明的旅遊目的地中的主管部門和企業創建了孵化器，加速器和舉辦的黑客馬拉松。以前，沒有確鑿的證據可以解釋旅遊管理部門應改變其傳統方法。本文提出了新的觀點，以支持以下事實：旅遊目的地的管理應考慮由於數字化轉型，基於平台的業務模型和開放式創新平台而造成的旅遊業的根本變化。

關鍵字：目的地管理, 旅遊業開放式創新, 智能旅遊目的地, 基於平台的業務模型, 開放式創新平台