



# Creating Sustainable Tourism Through Innovation [Digital-Based Marketing in the Tinalah Rural Tourism]

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**Abstract.** The tourism sector has experienced positive development in recent periods. This situation is a positive signal for the industry and the attractiveness of supporting tourism. Various roles of tourism are present, such as: increasing the economy; empowering people to be considered part of the community's lifestyle. Changes in the behavior of tourists draw more tourists to rural tourism as an alternative tourist attraction. This positive signal makes managers have to be more attractive and innovative, especially with their marketing activities. This study aims to explore digital-based marketing innovations carried out by the rural tourism of Tinalah. The concept of diffusion of innovation is used to explore activities carried out by rural tourism through innovative instruments such as innovations, time, marketing communication channels, and social systems. Qualitative research was conducted to find out the various digital marketing innovations carried out by the Tinalah rural tourism, Yogyakarta special region. Collecting data in this study through interviews and using The *Miles Huberman* method through four stages: transcription, reduction, categorization, and conclusions. The results show that the concept of diffusion innovation has been applied through supporting instruments such as innovation, time, communication channels, and social systems. This research is expected to be a guide for other rural tourism in creating strategies that will be used. This study is unique because it shows how the rural tourism of Tinalah used strategic applications to make its tourism more sustainable.

**Keywords:** Sustainable tourism · Innovation · Digital marketing · Rural tourism

## 1 Introduction

The development of digital technology can change various sectors globally [1, 2]. These changes give rise to new perspectives in managing marketing strategies, including the use of every opportunity that arises [3]. The development of digital technology has a direct impact on improving management performance and determining market targets [4]. The impact of changes in digital technology is not only seen in the industrial sector but also other sectors, including tourism [1, 5]. As one of the priority sectors of the Indonesian government, tourism is seen as a sector that is ready for the post-COVID-19 era. This situation can be seen in the enthusiasm of the community when carrying

**Table 1.** Tourist Village Clusters

No	Clusters	Total
1	Pilot	709
2	Developing	967
3	Advance	158
4	Independent	2
	Total	1836

**Source:** Ministry of Tourism and Creative Economy of the Republic of Indonesia

out tourism activities amidst the loosening of community mobility policies [6]. Tourism activities are one of the answers to negative feelings caused by the pandemic [7]. Various tourism supporting instruments are an attraction for tourists, such as tourist objects [8], cultural tourism [9], culinary [10], agriculture [11], and tourism villages that have their advantages and uniqueness [12].

The presence of tourism villages as one of the instruments of tourism in Indonesia is another alternative for tourists. A tourism village is an interesting collaboration between accommodation and other facilities offered to tourists [13, 14]. This combination is becoming increasingly interesting because there is community participation in its management [15]. The development of tourist villages is currently becoming increasingly competitive, as can be seen from the various offers of tourist village attractions [16, 17]. The presence of tourist villages in Indonesia is significantly interpreted as one of the efforts of each region to create independence through its potential [18]. The following data can be seen in Table 1.

Serious attention needs to be given to policymakers in efforts to develop rural tourism. This situation is becoming increasingly complex with the presence of information technology [19]. Various changes that exist make rural tourism managers need to redesign the strategy they are running. Managers need to rearrange innovation strategies by looking at effectiveness and conditions in the field. Continuous innovation needs to be raised as a way to achieve organizational goals [20]. The theory of the diffusion of innovation focuses on the creation and implementation of innovations over time. Every line in the organization must focus on finding new innovations that can be applied. Innovation is not always a significant or radical change, but the few innovation changes that have been made have fulfilled the elements of this theory. The management of the tourism sector is also inseparable from the application of the diffusion of innovation. Various research results related to this area are presented to strengthen the importance of innovation diffusion [21, 22]. Tourism sector managers can find out how the strategies that will be used can be applied and accepted by tourists. This situation explains that a strategy or innovation is not only based on one particular point of view but also considers another point of view, namely the service recipient [23].

The rapid development of technology means the innovation strategy implemented will intersect with the use of technology. Various sectors understand the importance of

the presence of technology, and the tourism industry is no exception [24]. The use and application of technology in organizational management activities is no longer a difficult thing but should be considered as an opportunity that must be taken [25, 26]. Competition in the competitive and collaborative era like today forces organizational managers to think creatively in the marketing strategies they use [27]. Following developments, tourism village managers began to use digital tools in their marketing activities, such as websites, social media, and other digital tools [28, 29]. By using digital technology, an organization can reach more people with marketing [30], improve service quality [31], reduce marketing costs [32], and more profitability [33].

One of the rural tourism that has started to apply technology in marketing activities is the rural tourism of Tinalah. This rural tourism is a special-interest tourist area that seeks to maximize its natural potential [12]. Tinalah rural tourism is located in Kulon Progo Regency, Yogyakarta Special Region. This area combines the concept of nature with the cultural values that exist in the community. Some of the attractions include camping, outbound, caving, and other activities. The utilization of technology by rural tourism managers is an innovation in to develop rural tourism and reach a wider market [34, 35]. This study aims to explore digital-based marketing innovations carried out by the rural tourism of Tinalah. The concept of diffusion of innovation is used to explore activities carried out by rural tourism through innovative instruments such as innovations, time, marketing communication channels, and social systems.

## 2 Literature Review

### 2.1 Sustainability Strategy

The main focus of organizational sustainability has emerged in the social and environmental areas. In responding to business changes, organizations need to design strategies that can meet market needs [36], and care about the organizational environment [37]. The current focus of the organization is not merely pursuing income but considering the economic and social environment to create sustainable management [38]. Understanding creating sustainable management will make organizations competitive [39]; increase organizational value [Galvo et al., 2020]; and further strengthen brands in consumers' minds [40]. Various changes that occur make the organization have an obligation to re-understand the strategy that is being implemented, especially in marketing.

The focus of sustainable organizations is not only on customers but also on the business environment [41]. With a growing understanding, marketing is considered a way of selling products and techniques that are oriented to meeting needs alone [42]. The essence of marketing is broader, not only related to meeting customer needs but also being able to consider the impact of marketing on future life [43]. Some literature emphasizes the role of marketing in creating sustainable organizational ventures through business value creation [44], and focuses on marketing instruments [45]. Sustainability is a way of thinking to get an organization involved on a wider scale [38]. An understanding of sustainability can be linked to the achievement of environmental, social, and economic goals. The complexity of sustainability is often difficult to understand [46], whether sustainability is strong or whether sustainability is weak [46].

Sustainability in tourism must consider the economic and social environment and be able to maintain its tourist attraction [47]. As one of the new potentials in the tourism sector, the existence of rural tourism needs to be appreciated. The development of rural tourism as a regional potential is interpreted as a way to deal with the effects of acculturation that arise [48]. A rural tourism is an area in which there are tourist attractions [cultural, artificial, natural] packaged in such a way that tourists visit the area [49, 50]. For rural tourism managers to provide a path of interaction between tourists and the local community [51], interesting experiences felt by tourists after visiting will leave an impression in their minds. Designing a competitive rural tourism needs to be understood by managers [52], so that the obstacles that arise, such as consistency, originality, and human resources, can be resolved [53]. Seeing this, the management of rural tourism must consider various aspects originating from the internal and external environment so that, in the end, it does not conflict with the culture and authenticity of the environment [50, 52].

## 2.2 Innovation Diffusion

Sustainable development is the main focus in the development of various sectors [54]. Growing research emphasizes the need for the role of innovation in creating sustainability. The facts on the ground illustrate that there are still activities that ignore the importance of innovation. Sustainability innovation will help organizations achieve various improvements in terms of performance, the economy, and the environment [55]. Innovation is not only related to radical change but simple and new things such as ideas, beliefs, knowledge, implementation, use of technology, and system changes [54, 56].

Diffusion of innovation was originally introduced by Gabriel Tarde in 1903. Understanding this theory guide the relationship between the emergence of an innovation that can be communicated and can be accepted objectively by others. The next development of this concept was popularized in 1964 by Everett Rogers. Diffusion is understood as an innovation process that is presented and communicated over time [20]. Innovation needs to be communicated so that providers and recipients of innovation understand each other. This idea has been used a lot in the development of fields like communication [57], culture [58], agriculture [59], public health [55], law [60], and marketing [61].

Understanding the concept, they believe that if innovation is diffused throughout society, it will eventually be accepted and agreed upon. This concept also defines the diffusion of innovation as a process that communicates information about a new idea that is viewed subjectively. The diffusion of innovation is supported by several elements, including innovation, communication channels, time, and social systems that accept the presence of the innovation [20]. The continuous emergence of organizational innovation is the basis for research activities, especially research related to the field of digital-based marketing [62]. One way to do something new and different in an organization is to use digital technology [20].

## 2.3 Digital Marketing

Improving service performance is an activity carried out by organizations through the use of digital technology [63] and gaining new customers [64]. Through digital technology,

various information about quality products and services can be provided by organizations [65]. The measure of digital technology performance in marketing activities can be seen through several criteria, such as the digital tools used and the goals to be achieved [66], increasing assets, profits, and customer satisfaction [67]. The use of digital technology in organizations is an innovative activity that continues to be developed [20]. Innovation is not only related to radical change but also simple and new things such as ideas, beliefs, knowledge, implementation, use of technology, and system changes [54].

Digital-based marketing makes it easy for organizations to establish relationships with customers through integrated, attractive, deep, and targeted marketing communication channels [63]. Digital marketing does not make customers passive targets but contributors to two-way communication [68]. Some researchers suggest that digital marketing can improve communication efficiency, encourage customer interaction [62], and build brands and sales prospects [69]. Developing a product image in the minds of consumers can be done through virtual content [70] so that the organization will get the attention of customers [71]. Digital marketing content can be in the form of words, images, or motion graphics that attract consumers' attention [71]. Other research explains that engaging content causes users to choose digital portals as a key component in reading, studying, and having memorable experiences [72]. The emergence of various digital platforms is expected to make it easier for tourism managers to reach the market and disseminate information more broadly [19]. The use of digital technology can also be an important guide for tourists in considering the tourism products they want to enjoy [73]. Through digital technology, tourists can contribute to the marketing of tourist destinations through activities such as live broadcast activities, making selfie photos, and commenting on tourist attractions visited [74].

### 3 Methodology

A qualitative descriptive research design was used in this study and tried to explore various things related to digital-based marketing innovations in rural tourism. This research design is combined with existing instruments on the concept of diffusion of innovations, such as innovations, time, marketing communication channels, and social systems. The exploratory case study approach was chosen to explore a single sample [75], so the researcher adopted a constructivist and interpretive design [76]. The applied qualitative research design is limited and is meant to encourage and push people to do more research in the field [77].

This study uses the rural tourism of Tinalah as the object of research. This tourist attraction was chosen because it has a uniqueness that is able to unite natural conditions with cultural values that exist in the community. Some of the achievements that can be achieved by the rural tourism of Tinalah include: being a winner at the rural tourism creative economy event in Kulon Progo Regency and being one of the winners in the category for "digital rural tourism" put on by the Ministry of Tourism and Creative Economy is also a good thing.

Collecting data in this study through interviews. Questions were posed to the rural tourism manager using "how" and "what" to help provide explanations for the phenomena found [78, 79]. Through interviews, the experience of rural tourism managers and

**Table 2.** Timeline Methodology

Design	Approach	Data Collection	Data Analysis
Qualitative	Case Study	Interview [Digital Marketing]	Miles Huberman: Transcription Reduction Categorization Conclusions

staff will be obtained in bringing up the innovations offered, especially the use of technology in marketing activities [80]. Semi-structured interviews were conducted first by making appointments with prospective informants [77, 78], and then by compiling a list of questions to be asked by the interviewer [81]. Wrote these guidelines so that people can have conversations during certain activities [80].

The interviews in this study were recorded using a tape recorder and analyzed using Miles Huberman Method [82, 83] through four stages. In the first stage, interviews were conducted in Indonesian to facilitate the communication process with informants. The results of the recorded interviews were then heard and transcribed into writing. This was done to ensure that the various meanings implied in the interview activities did not shift [80, 84]. The second stage is data reduction. The results of the interviews that have been transcribed into writing are then selected for words that have meaning. The results of the reduction are read repeatedly to analyze each word that has meaning. Finding words that have meaning and are examined to find basic concepts [83]. The next stage is categorization to show the concepts found in the literature and then compared with the transcription results to ensure consistency and identify other things that arise [83]. This activity is the final examination stage of a series of transcription, coding, and categorization of the data obtained. The meaningful information found will be grouped to identify core themes. The last stage, coding, is identified with further literature to get a conclusion [82, 83]. The recording of the interview was heard repeatedly along with the transcription that had been made. This activity is carried out to ensure that no data is missed or lost in the translation and documentation of data. The literacy process is completed if the next themes are not found (Table 2).

## 4 Finding and Discussion

Sustainability innovation will help organizations achieve various improvements in terms of performance, the economy, and the environment. The diffusion of innovation is supported by several elements, including innovation, communication channels, time, and social systems that accept the presence of the innovation.

### 4.1 Innovation

It becomes important when an organization brings up various innovations as one of its sustainable strategy efforts. Diffusion of innovation is understood as an innovation

process that is presented and communicated over time [20]. Innovation needs to be communicated so that providers and recipients of innovation understand each other. This concept also defines the diffusion of innovation as a process that communicates information about a new idea that is viewed subjectively. The diffusion of innovation is supported by several elements, including innovation, communication channels, time, and social systems that accept the presence of the innovation [20]. Several digital-based marketing innovations carried out by the Tinalah rural tourism manager include the use of websites and social media. The development of digital technology encourages the birth of various digital portals that can be used by rural tourism managers. Some of the digital portals that have become popular for this rural tourism are the website, Instagram, and the Tinalah rural tourism portal through the play store. Rural tourism village managers must be able to fulfill the elements of digital-based marketing activities [74, 85]. The tourists' point of view also places the use of digital technology as a way to meet their needs. The results of the interviews that have been conducted confirm that the process of adopting digital technology does not appear immediately but through a series of processes. The emergence of various kinds of digital platforms is interpreted by the management of the rural tourism as one of the strategies that must be used. This strategy is carried out in response to the use of digital tools that are also used by tourists [73, 86].

*“We have used many marketing communications channels and digital portals. Following the development of the times, we used some until now. The most frequently used ones are the website, the Play Store, and Instagram.” [Manager]*

*“The digital portal contains a variety of interesting and innovative content. We must continue to create interesting content.” [Staff 1]*

*“Content does not always contain information about tourist villages, but we can also turn tourist visit activities into the content.” [Staff 2]*

The digital-based marketing pattern carried out by the Tinalah rural tourism manager is not only thorough. Periodically, the rural tourism manager also sends a chain message as a signal of the existence of a rural tourism. These activities are carried out by rural tourism managers in to establish communication with tourists (Figs. 1 and 2).

## 4.2 Communication Channels

The reality of marketing activities places marketing communication channels into an undeniable element [87]. Subsequent developments put the tourism industry in a favorable position due to the impact of technological developments. The emergence of various kinds of digital platforms makes tourism managers need to think hard about how to manage them. Various contents are tried to appear in digital-based marketing such as videos, photos, or other information. These activities significantly change the face of tourism into something that can offer experiences for tourists [71]. Marketing of tourism products begins with the use of traditional advertising tools such as newspapers, magazines, radio, television, billboards, pamphlets, catalogs, brochures, and pamphlets. Currently, technological developments have brought social networking sites to offer tourism products. The importance of communication channels makes this point of view need to be considered by rural tourism managers. The communication channel is defined as the



Fig. 1. Instagram\_Tinalah



Fig. 2. Play Store

method used by the organization so that the products offered are easily known. The various attractions that are owned by the rural tourism of Tinalah need to be disseminated by the manager. The role of published content as a stimulus becomes important when it is offered by the manager. Several displays often appear in the digital portal they have to describe the various attractions and activities of tourists who visit. One of the digital portals owned by the rural tourism of Tinalah is Instagram. The number of followers of this digital tool reaches around 5000 people, making this marketing tool one of the marketing methods used. The role of connected friendships in this marketing tool is also an important one. Various comments and responses given to each published content that appears are one of the added values (Fig. 3).





Fig. 3. Publication\_Content

### 4.3 Time

The next instrument in the concept of diffusion of innovation is time, which includes the decision process for giving rise to innovation, the category adopted, and the level of adoption [Rogers, 1983]. The manager of the Tinalah rural tourism conveyed several innovative strategies that had been realized professionally. The diffusion of innovation emphasizes that information gathering is needed by managers in making decisions such as digital-based marketing activities. The decisions taken relate to whether it is necessary to adopt or reject the use of digital in marketing activities. The emergence of the COVID pandemic has made rural tourism managers more confident in using digital as one of the innovations that need to be taken.

*“Creating interesting content and publishing it according to schedule has become a routine activity carried out by Tinalah’s tourist village at this time”. [Manager]*

*“The video content of the publication is indeed interesting, but it cannot replace the real appearance of a real tourist village.” Publication videos have an important role in stimulating tourist visits”. [staff 1 & 2]*

The adoption process by the manager is carried out in stages and with full consideration. The decision to adopt digital tools was taken after considering various things about the effectiveness of use and achieving maximum results.

### 4.4 Social System

The last instrument of the diffusion of innovation is the social system that will be felt by individuals, community groups, or organizations [Rogers, 1983]. The results of the study reveal that the existing social system needs to be present to produce attractive products and services. Each of these elements can meet the other’s needs through mutual agreement. As in the rural tourism of Tinalah, the manager provides several locations and

activities that can be accessed by tourists or organizations. Activities that can be done include outbound, camping and other activities related to the culture and environment of the local community.

*“Some of the attractions that we offer include camping, outbound, river crossing, and several community activities that can be followed.” [staff 1]*

*“Not only small groups of tourists, but large groups of tourists can also access the various attractions of this tourist village.” [Manager]*

The essence of management activities is how to be able to make tourists have positive perceptions as service recipients. Good cooperation from various parties will lead to the desired results. A tourist attraction must provide space for tourists to express opinions, open doors to investors, and have an attractive appeal. The important role of local government is also very necessary. The policies taken are also very influential on the sustainability of the region, not least in achieving success, stability, security and the local economy.

Adopting and implementing innovations is a complex and gradual process. Innovating in various situations will bring the organization to new phases and levels as a process of adapting to change [20]. The findings in this study highlight the diffusion of innovation as a new strategy that is carried out continuously over time. Furthermore, this study also confirms that the management of rural tourism does not only wait for tourists to come, but also requires a step in attracting tourist visits. The role of digital technology further emphasizes the dominance of marketing activities carried out in a modern way [88]. Finding innovation is an important step in creating sustainable management. The innovations that arise will grow over time and are interrelated. The emergence of innovation will involve sources of knowledge, analysis, decision-making, implementation, and confirmation of the strategy used [89]. The innovations used not only contribute to the organization but also the development of the community and region.

The use of technology as an innovation in rural tourism marketing activities is important. The use of digital tools and social media as one of the adoptions of advances in information technology needs to be considered. The role of the website and Instagram is more dominantly used by the Tinalah rural tourism manager and requires a high focus [90]. Presenting digital content as a stimulus needs to be done. Rural tourism village managers position various published content in the form of photos, videos, or graphics as a way to encourage tourist attendance. The different attractions of rural tourism are one of the reasons for their presence. Travelers are the value maximizers from the presence of published content who can like, comment, and re-share the content they get [71]. Tourists are not only interpreted as a passive group, but they also have greater power. Seeing such conditions, tourism managers need to follow this trend.

In this competitive and collaborative era, rural tourism manager needs to reconsider the strategy used. The various strengths of attractions that are owned are a differentiator in the minds of tourists. The shift in the mindset of tourists when determining tourist destinations needs to be considered. Tourists are now starting to shift from mass tourism options to more specialized tourism. The rural tourism is interpreted as a collaboration of culture, nature, and community activities into a complementary unit. The emergence

of innovation in the development of rural tourism needs to be present throughout the ages, from management to marketing activities for sustainable tourism.

## 5 Conclusions

The results of the study found that the management of the Tinalah rural tourism had fulfilled the elements of the concept of diffusion of innovation. Some existing instruments that can be used include innovations, time, marketing communication channels, and social systems. The innovation instrument emphasizes the use of digital tools in appropriate and effective marketing activities to achieve goals. The communication channel instrument emphasizes the use of attractive methods in the process of delivering innovations that are presented through conventional and modern digital-based channels. The time instrument confirms the duration of the effectiveness of the innovation and the accuracy of bringing the innovation back regularly. The last instrument is the social system related to the acceptance of innovation by tourists. They can respond directly in the form of suggestions or comments through existing digital tools.

This study will contribute to the perspective of sustainable tourism through the concept of diffusion of innovation. Rural tourism, as a new sector of tourism, needs to redesign the innovation strategy that will be carried out. Through the innovation diffusion instrument, the rural tourism will have a guide in determining the innovations that will be offered to tourists. Research on the diffusion of innovations in rural tourism has not been much done, so this research will be able to close the research gaps that existed before. Innovation needs to be carried out by rural tourism managers all the time so that sustainability will continue to be maintained.

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## References

1. Shin H, Perdue RR. Hospitality and tourism service innovation: A bibliometric review and future research agenda. *Int J Hosp Manage* [Internet]. 2022;102. Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85123852658&doi=10.1016%2Fj.ijhm.2022.103176&partnerID=40&md5=9f5608708e847315adb7d987f926b80>
2. Zheng C, Yuan J, Zhu L, Zhang Y, Shao Q. From digital to sustainable: A scientometric review of smart city literature between 1990 and 2019. *Journal of Cleaner Production*. 2020 Jun 10;258:120689.
3. Orzes G, Matt DT, De Longhi A, Bonfanti A, Brunetti F, Pedrini G. Digital transformation challenges: strategies emerging from a multi-stakeholder approach. *The TQM Journal*. 2020 Jan 1;32[4]:697–724.
4. Hoang VA, Dang M, Nguyen NV, Nguyen NT, Henry D. What drives target status decision in emerging markets acquisitions? *Journal of Economics and Development*. 2020 Jan 1;23[2]:203–18.

5. Lesar L, Weaver D. A Diffusion Perspective on the Discontinuance of Sustainable Tourism Quality Control Tools. *J Travel Res* [Internet]. 2021; Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85107453623&doi=10.1177%2f00472875211017232&partnerID=40&md5=e9e679e711c7ec6f49d697fba66db974>
6. Roziqin A, Mas'udi SYF, Sihidi IT. An analysis of Indonesian government policies against COVID-19. *Public Administration and Policy*. 2021 Jan 1;24[1]:92–107.
7. Al-Msallam S. The impact of tourists' emotions on satisfaction and destination loyalty – an integrative moderated mediation model: tourists' experience in Switzerland. *Journal of Hospitality and Tourism Insights*. 2020;3[5]:509–28.
8. Sumaryadi S, Hurriyati R, Wibowo LA, Gaffar V. The Relationship Between the Quality of Destination and Tourist Satisfaction: The Role of Destination Attributes. *J Asian Financ Econ Bus*. 2021;8[4]:929–37.
9. Putra IDGAD, Adhika IM, Yana AAGA. Reviving cultural tourism in kendran bali indonesia: Maintaining traditional architecture and developing community-based tourism. *Civil Engi Arc*. 2021;9[2]:328–38.
10. Hernández-Mogollón JM, Campón-Cerro AM, Di-Clemente E. Culinary travel experiences, quality of life and loyalty. *Spanish Journal of Marketing - ESIC*. 2020 Jan 1;24[3]:425–46.
11. Fatmawati I, Bestari SA, Rostiani R. Key Success Factors' Identification of Farm Tourism: A Case from Indonesia. In: Prof. J, P. S, M.M. T, Z. R, editors. 2020 International Conference on Agribusiness and Rural Development, IConARD 2020 [Internet]. Universitas Muham-madiyah, Yogyakarta, Indonesia: EDP Sciences; 2021. Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85100442566&doi=10.1051%2Ffe3sconf%2F202123202020&partnerID=40&md5=33bb582b522258fdffb6333082aca29e>
12. Sulisty A. Tourism Marketing 3.0 On Tinalah Tourist Village An Effort To Increase The Quality Of Tourist Product. *Journal of Tourism Destination and Attraction*. 2021;9[3]:1–8.
13. Aman T, Shah M, Jamal H, Khan Y, Arif M, Noor R. A cross sectional analysis of tourism development and social development. *J Environ Manage Tour*. 2021;12[2]:487–94.
14. Kuninggar MD, Muryani C, Yusup Y. Potential development strategy of Gumeng tourism village, Jenawi District, Karanganyar Regency. In: Nandi, Wijayani P, Muryani C., Che leh F, Sartohadi J., Yani A., et al., editors. IOP Conf Ser Earth Environ Sci [Internet]. IOP Publishing Ltd; 2021 [cited 2019 Aug 31]. Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85103437059&doi=10.1088%2f1755-1315%2f683%2f1%2f012138&partnerID=40&md5=24fdb498ce5a7c20ea152cbeb5dd0cff>
15. Muhammad D, Hanggraito AA, Anshori HA, Aisyahdi nahda F. Study of Classification of Tourism Villages in Sleman Regency. Sleman Regency Tourism Office. Yogyakarta: Dinas Pariwisata Kabupaten Sleman; 2020.
16. Aly MN, Hamid N, Suharno NE, Kholis N, Aroyandini EN. Community involvement and sustainable cave tourism development in tulungagung region. *J Environ Manage Tour*. 2021;12[2]:588–97.
17. H. Demolingo R, Damanik D, Wiweka K, Pramania Adnyana P. Sustainable Tourist Villages Management Based on Javanese Local Wisdom 'Memayu Hayuning Bawono' Best Practice of Desa Wisata Pentingsari, Yogyakarta. *International Journal of Tourism & Hospitality Reviews*. 2020;7[2]:41–53.
18. Alatas BI, Fardaniah R. Daftar Desa-Desa Wisata Penerima Penghargaan ADWI 2021 [Internet]. *antaranews.com*. 2021. Available from: <https://www.antaranews.com/berita/2574693/ini-daftar-desa-desa-wisata-penerima-penghargaan-adwi-2021#:~:text=Juara%204%20Desa%20Wisata%20Tinalah,Tamansari%2C%20Banyuwangi%2C%20Jawa%20Timur>.
19. Hudaefi FA, Beik IS. Digital zakāh campaign in time of Covid-19 pandemic in Indonesia: a netnographic study. *Journal of Islamic Marketing*. 2021 Jan 1;12[3]:498–517.
20. Rogers EM. Diffusion of innovations. 3rd ed. New York : London: Free Press ; Collier Macmillan; 1983. 453 p.

21. Almeida-Santana A, David-Negre T, Moreno-Gil S. New digital tourism ecosystem: understanding the relationship between information sources and sharing economy platforms. *Int J Tour Cities*. 2020;6[2]:335–45.
22. Nuryakin, Priyo JS. Service quality, trust and customer loyalty: The role of customer satisfaction at the hotel services industry in Indonesia. *Qual Access Success*. 2018;19[166]:50–5.
23. Dearing JW, Singhal A. New directions for diffusion of innovations research: Dissemination, implementation, and positive deviance. *Human Behav and Emerg Tech*. 2020 Oct;2[4]:307–13.
24. Polyanskova NV. Development concept for ski resorts in the context of the economy digitalization. Vol. 139, *Lecture Notes in Networks and Systems*. Springer; 2021. 570 p.
25. Almeida S, Campos AC. New avenues for business competitiveness: the case of a community of practice in the hotel sector. *Int J Cult Tour Hosp Res* [Internet]. 2021; Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85111018303&doi=10.1108%2fIJCTHR-12-2020-0285&partnerID=40&md5=db0cb6ea9118a0c4d0d8257a2474d370>
26. Druzhynina V, Likhonosova G, Lutsenko G, Kushal I. Innovative technology in terms of socio-economic value diffusion: Accounting and analytical support. *European Journal of Sustainable Development*. 2020;9[3]:476–89.
27. Hassan A, Rahimi R. Consuming “innovation” in tourism: Augmented reality as an innovation tool in digital tourism marketing. In: *Digital Marketing and Consumer Engagem: Concepts, Methodologies, Tools, and Applications* [Internet]. IGI Global; 2018. p. 215–52. Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85041636798&doi=10.4018%2f978-1-5225-5187-4.ch012&partnerID=40&md5=1d35e261ea44757b9e21368df9a83049>
28. Varnajot A. Digital Rovaniemi: contemporary and future arctic tourist experiences. *Journal of Tourism Futures*. 2019 Jan;6[1]:6–23.
29. Zhu Y, Lynette Wang V, Wang YJ, Nastos J. Business-to-business referral as digital cooperation strategy: Insights from an industry-wise digital business network. *European Journal of Marketing*. 2020 Jan 1;54[6]:1181–203.
30. Tarazona-Montoya R, Peris-Ortiz M, Devece C. The value of cluster association for digital marketing in tourism regional development. *Sustainability*. 2020;12[23]:1–18.
31. Kamarudin AH, Preece C, Khalid K, Davidson R, Ekaabi MA. Smart policing service quality: conceptualisation, development and validation. *Policing: An International Journal*. 2020 Jan 1;43[5]:707–21.
32. Sánchez-Teba EM, García-Mestanza J, Rodríguez-Fernández M. The application of the inbound marketing strategy on costa del sol planning & tourism board. Lessons for post-covid-19 revival. *Sustainability* [Switzerland]. 2020;12[23]:1–15.
33. Petryanina OV. Prospects for Promoting a Tourist Product Using Virtual Information Space Technologies [Internet]. Vol. 133, *Lecture Notes in Networks and Systems*. Springer; 2021. 305 p. Available from: [https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087571971&doi=10.1007%2f978-3-030-47458-4\\_36&partnerID=40&md5=a339ad24ac8353da369b53d158e03ef7](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087571971&doi=10.1007%2f978-3-030-47458-4_36&partnerID=40&md5=a339ad24ac8353da369b53d158e03ef7)
34. Darma IDP, Sutomo, Hanum SF, Iryadi R. Plant Conservation Based on Tri Mandala Concept on Homegarden at Pakraman Penge Village, Baru Village, Marga District, Tabanan Regency, Bali. *J Trop Biodiv Biotech*. 2020;5[3]:189–200.
35. Setyadi R. Analysing Tourism Application Using Information Technology Governance Trust Model in COVID-19 Pandemic Situation. In: Saputro S., Sajidan, Suparmi, Nugraha D.A., editors. *J Phys Conf Ser* [Internet]. IOP Publishing Ltd; 2021 [cited 2020 Oct 24]. Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85103507580&doi=10.1088%2f1742-6596%2f1842%2f1%2f012006&partnerID=40&md5=15436df7cdbc4532b8efbb307eca5b25>

36. Giantari IGAK, Sukaatmadja IPG. Effects of environmental orientation, green marketing mix and social capital on the competitive advantage of real estate developers in Bali. *Property Management*. 2021;
37. Navarrete SDS, Borini FM, Avrichir I. Environmental upgrading and the United Nations Sustainable Development Goals. *Journal of Cleaner Production*. 2020 Aug 10;264:121563.
38. Amrutha VN, Geetha SN. A systematic review on green human resource management: Implications for social sustainability. *Journal of Cleaner Production*. 2020 Feb 20;247:119131.
39. Mont O, Palgan YV, Bradley K, Zvolska L. A decade of the sharing economy: Concepts, users, business and governance perspectives. *Journal of Cleaner Production*. 2020 Oct 1;269:122215.
40. Baldassarre B, Keskin D, Diehl JC, Bocken N, Calabretta G. Implementing sustainable design theory in business practice: A call to action. *Journal of Cleaner Production*. 2020 Nov 10;273:123113.
41. Kluza K, Ziolo M, Spoz A. Innovation and environmental, social, and governance factors influencing sustainable business models - Meta-analysis. *Journal of Cleaner Production*. 2021 Jun 20;303:127015.
42. Slater S, Demangeot C. Marketer acculturation to diversity needs: The case of modest fashion across two multicultural contexts. *Journal of Business Research*. 2021 Sep 1;134:702–15.
43. Henckens MLCM, Worrell E. Reviewing the availability of copper and nickel for future generations. The balance between production growth, sustainability and recycling rates. *Journal of Cleaner Production*. 2020 Aug 10;264:121460.
44. El-Haddadeh R, Osmani M, Hindi N, Fadlalla A. Value creation for realising the sustainable development goals: Fostering organisational adoption of big data analytics. *Journal of Business Research*. 2021 Jul 1;131:402–10.
45. Kowalska M. Sme managers' perceptions of sustainable marketing mix in different socio-economic conditions—a comparative analysis of sri lanka and poland. *Sustainability [Switzerland]*. 2020;12[24]:1–23.
46. Turkson C, Acquaye A, Liu W, Papadopoulos T. Sustainability assessment of energy production: A critical review of methods, measures and issues. *Journal of Environmental Management*. 2020 Jun 15;264:110464.
47. Bhaduri K, Pandey S. Sustainable smart specialisation of small-island tourism countries. *Journal of Tourism Futures*. 2019 Jan 1;6[2]:121–33.
48. Hettema J, Egberts L. Designing with maritime heritage: adaptive re-use of small-scale shipyards in northwest Europe. *Journal of Cultural Heritage Management and Sustainable Development*. 2019 Jan 1;10[2]:130–43.
49. Manrai LA, Manrai AK, Friedeborn S. Environmental determinants of destination competitiveness and its Tourism Attractions-Basics-Context, A-B-C, indicators: A review, conceptual model and propositions. *Journal of Economics, Finance and Administrative Science*. 2020 Jan 1;25[50]:425–49.
50. Wiweka K, Demolingo RH, Karyatun S, Adnyana PP, Nurfikriyani I. Tourist Village Rejuvenation and Overtourism Management : the Desa Wisata Nglanggeran Lifecycle Experience , Yogyakarta , Indonesia. 2021;8[1]:1–16.
51. Havadi Nagy KX, Espinosa Segui A. Experiences of community-based tourism in Romania: chances and challenges. *Journal of Tourism Analysis: Revista de Análisis Turístico*. 2020 Jan 1;27[2]:143–63.
52. Arida INS, Wiguna PPK, Narka IW, Febrianti NKO. Development Planning of Tourist Village Using Participatory Mapping [Case study: Mambal Village, Badung Regency, Indonesia]. *IOP Conference Series: Earth and Environmental Science*. 2017;98[1].
53. Hassan S, Mahrous AA. Nation branding: the strategic imperative for sustainable market competitiveness. *Journal of Humanities and Applied Social Sciences*. 2019 Jan 1;1[2]:146–58.
54. Tiwari V, Thakur S. Environment sustainability through sustainability innovations. *Environ Dev Sustain*. 2021 May;23[5]:6941–65.

55. Ngongo BP, Ochola P, Ndegwa J, Katuse P. The technological, organizational and environmental determinants of adoption of mobile health applications [m-health] by hospitals in Kenya. *PLoS ONE* [Internet]. 2019;14[12]. Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076417807&doi=10.1371%2fjournal.pone.0225167&partnerID=40&md5=9043bc0fecfb0aceacf0462cb238a271>
56. Dillette A, Ponting SSA. Diffusing innovation in times of disasters: considerations for event management professionals. *J Convent Event Tour*. 2021;22[3]:197–220.
57. Mardhiyah D, Hartini S, Kristanto D. An integrated model of the adoption of information technology in travel service. *Int J Innov Creat Change*. 2020;11[11]:283–99.
58. Hong JW, Kwak YS, Kwak YS. The effect of diffusion of online culture content on medical tourism: Analysis of keyword. *Int J Database Theory Appl*. 2016;9[11]:293–304.
59. Gracheva RG, Sheludkov AV. Diffusion of Organic Agriculture in Russia: Features and Implications for Rural Development. *Reg Res Russ*. 2021;11[4]:578–88.
60. Sun PC, Hong CF, Kuo TF, Iqbal R. Chance discovery in a group-trading model – creating an innovative tour package with freshwater fish farms at yilan [Internet]. *Lect. Notes Comput. Sci*. Springer Verlag; 2017 [cited 2017 Apr 2]. 157 p. [Tojo S., Nguyen L.M., Nguyen N.T., Trawinski B., editors. 9th Asian Conference on Intelligent Information and Database Systems, ACIIDS 2017; vol. 10192 LNAI]. Available from: [https://www.scopus.com/inward/record.uri?eid=2-s2.0-85018509996&doi=10.1007%2f978-3-319-54430-4\\_16&partnerID=40&md5=040818396de88faebd7b0b2dd38c642e](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85018509996&doi=10.1007%2f978-3-319-54430-4_16&partnerID=40&md5=040818396de88faebd7b0b2dd38c642e)
61. Hassan A, Jung T. Augmented reality as an emerging application in tourism marketing education. In: *Digital Marketing and Consumer Engagem: Concepts, Methodologies, Tools, and Applications* [Internet]. IGI Global; 2018. p. 425–43. Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85041576493&doi=10.4018%2f978-1-5225-5187-4.ch022&partnerID=40&md5=33a49c2398b1c7345500c9621075c27>
62. Ritz W, Wolf M, McQuitty S. Digital marketing adoption and success for small businesses: The application of the do-it-yourself and technology acceptance models. *JRIM*. 2019 Jun 10;13[2]:179–203.
63. Hofacker C, Golgeci I, Pillai KG, Gligor DM. Digital marketing and business-to-business relationships: a close look at the interface and a roadmap for the future. *EJM*. 2020 May 21;54[6]:1161–79.
64. Foroudi P, Gupta S, Nazarian A, Duda M. Digital technology and marketing management capability: achieving growth in SMEs. *QMR*. 2017 Apr 10;20[2]:230–46.
65. Alzougool B. The use and continuance use of social media applications by small and medium enterprises in Kuwait. *GKMC*. 2019 Sep 2;68[6/7]:471–90.
66. Arrigo E. Social media marketing in luxury brands: A systematic literature review and implications for management research. *MRR*. 2018 Jun 18;41[6]:657–79.
67. Tran PKT, Nguyen PD, Le AHN, Tran VT. Linking self-congruity, perceived quality and satisfaction to brand loyalty in a tourism destination: the moderating role of visit frequency. *Tour Rev* [Internet]. 2021; Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85103908079&doi=10.1108%2fTR-04-2020-0143&partnerID=40&md5=ada11c12c979a0ec57e1b7be48646f24>
68. Karjaluoto H, Mustonen N, Ulkuniemi P. The role of digital channels in industrial marketing communications. Karjaluoto, Pauliina Ulkuniemi H, editor. *Journal of Business & Industrial Marketing*. 2015 Jul 6;30[6]:703–10.
69. Na Y, Kim J. Sensibility and response keywords of users according to posting types of fashion Instagram: Focused on Koreans' fashion brands. *IJCST*. 2019 May 21;32[1]:23–36.
70. Xian X. Consumer acceptance and use of virtual reality: An empirical investigation. *J Nonlinear Convex Anal*. 2020;21[8]:1719–26.

71. Mathew V, Soliman M. Does digital content marketing affect tourism consumer behavior? An extension of technology acceptance model. *Journal of Consumer Behaviour*. 2021;20[1]:61–75.
72. Babin J, Hulland J. Exploring online consumer curation as user-generated content: A framework and agenda for future research, with implications for brand management. *Spanish Journal of Marketing - ESIC*. 2019 Jan 1;23[3]:325–38.
73. Castillo CAM, Jimber JADR. Quality, satisfaction and loyalty indices. *Journal of Place Management and Development*. 2018 Jan 1;11[4]:428–46.
74. Harrigan P, Evers U, Miles M, Daly T. Customer engagement with tourism social media brands. *Tourism Management*. 2017;59:597–609.
75. Yin RK. *Case Study Research ; Design and Methods*. Third. Vol. 5, *Case Study Research ; Design and Methods*. New Delhi; 2003.
76. Creswell J, David. *Research Design Qualitative, Quantitative and Mix Methods Approaches*. 2019;388–388.
77. Zarezadeh ZZ, Rastegar HR, Gretzel U. Reviewing the Past to Inform the Future: A Literature Review of Social Media in Tourism. *Czech Journal of Tourism*. 2018 Dec 1;7[2]:115–31.
78. Pathak A, Intratrat C. Use of Semi-Structured Interviews to Investigate Teacher Perceptions of Student Collaboration. 2012;8:11.
79. Rodrigues D, Martinez LF. The influence of digital marketing on recruitment effectiveness: a qualitative study. *European Journal of Management Studies*. 2020 Jan 1;25[1]:23–44.
80. Reichstein C, Härting RC. Potentials of changing customer needs in a digital world - A conceptual model and recommendations for action in tourism. *Procedia Computer Science*. 2018;126:1484–94.
81. Lakner Z, Kiss A, Merlet I, Oláh J, Máté D, Grabara J, et al. Building Coalitions for a Diversified and Sustainable Tourism: Two Case Studies from Hungary. *Sustainability*. 2018 Apr 5;10[4]:1090.
82. Miles MB, Huberman MA. *qualitative \_Data Analysis.pdf*. Second Edi. London: SAGE Publications Inc.; 1994.
83. Ye L, Pan SL, Wang J, Wu J, Dong X. Big data analytics for sustainable cities: An information triangulation study of hazardous materials transportation. *Journal of Business Research*. 2021 May 1;128:381–90.
84. Sharma A, Sharma S, Chaudhary M. Are small travel agencies ready for digital marketing? Views of travel agency managers. *Tourism Management*. 2020 Aug;79:104078.
85. Haneef SK. An Exploratory Study of the Digital Marketing Trends in Dubai Tourism Industry. *Journal of Tourism Challenges and Trends*. 2017 Dec;10:25–43.
86. Bochert R, Cismaru L, Foris D. Connecting the members of Generation Y to destination brands: A case study of the CUBIS project. *Sustainability [Internet]*. 2017;9[7]. Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85022325069&doi=10.3390/2fsu9071197&partnerID=40&md5=ba7abdd3a223b0e68e215459c876b80c>
87. Chawla Y, Chodak G. Social media marketing for businesses: Organic promotions of web-links on Facebook. *Journal of Business Research*. 2021 Oct 1;135:49–65.
88. Del Vecchio P, Valentina N, Giuseppina P. A methodology for the virtual destination management based on users' involvement: Perspectives and opportunities for the smart growth of destinations. In: Soliman K.S., editor. *Proc Int Bus Inf Manag Assoc Conf - Innov Manag Sustain Econ Compet Advant: From Reg Dev Glob Growth, IBIMA [Internet]*. International Business Information Management Association, IBIMA; 2015 [cited 2015 Nov 10]. p. 2547–59. Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84976347280&partnerID=40&md5=896b4088753ab9c58c7e5ab7c43217cf>
89. Caramel C, Anzani A. The Liberty Network in Varese Province: Strategies for Its Knowledge and Enhancement [Internet]. *Lect. Notes Civ. Eng. Springer*; 2019. 89 p. [Lecture Notes in



Civil Engineering; vol. 26]. Available from: [https://www.scopus.com/inward/record.uri?eid=2-s2.0-85062589103&doi=10.1007%2f978-3-030-11422-0\\_6&partnerID=40&md5=a24fdf77444a86904206f6735faab97e](https://www.scopus.com/inward/record.uri?eid=2-s2.0-85062589103&doi=10.1007%2f978-3-030-11422-0_6&partnerID=40&md5=a24fdf77444a86904206f6735faab97e)

90. Yoo S, Jung K, Nguyen VT, Piscarac D. The Effectiveness of Jeju Island Mixed Reality Tourism Application: Focusing on the Moderating Role of Users Culture Involvement. *International Journal of Advanced Culture Technology*. 2020;8[2]:116–28.

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