

---

# SUSTAINABLE DIGITAL MARKETING: A SYSTEMATIC REVIEW AND CONTENT ANALYSIS OF CURRENT RESEARCH

---

Preliminary communication

UDK: 004.728:339.138

JEL classification: M31, M14, Q01, A13, D83

DOI: 10.17818/DIEM/2025/1.5

Paper received: February 12, 2025

Paper accepted: June 9, 2025

## **Abstract**

*Sustainability is no longer just a trend but an essential priority for all ecosystem stakeholders and digital marketing activities can support this priority. This paper explores sustainable digital marketing which is becoming an attractive research field for a growing number of experts and scientists in recent years. To establish a theoretical framework for exploring this field, this paper provides an overview of the existing literature collected from the WoS platform and the Scopus database. The conducted research indicates that the concept of sustainable digital marketing contributes to social and environmental well-being, highlighting business sustainability, among other things, partly due to the increasingly active engagement of consumers as well as companies. Analyzed papers cover the concept's application across various industries, the use of different technologies to put sustainable digital marketing into practice, and its impact on brand reputation and support for sustainable consumer behavior.*

**Keywords:** *sustainability, digital marketing, sustainable digital marketing*

## **1. INTRODUCTION**

The concept of sustainability is no longer just a popular trend but has become a crucial area of research. The concept, further accelerated by the COVID-19 pandemic, refers to the ability of present generations to fulfill their own needs without compromising the ability of future generations to do the same. Therefore, the concept of sustainability demands the adoption of sustainable practices in both everyday life and business, requiring collective efforts and systematic changes from all stakeholders involved (Hrustek et al., 2024).

Thus, on the one hand, companies must think about how to integrate sustainable practices in all phases of their business process, how to transform their business models into sustainable practices, and how to communicate and promote sustainable behaviors among all stakeholders within the system. On the other hand, consumers are the ones who more than ever demand transparency about the origins of products they use, the conditions under which they are made, and how they can help support the ecosystem and are turning to the Internet for information more than ever. This highlights the growing importance and rapid emergence of sustainable digital marketing, which is the focus of this paper.

The main purpose of this paper is to analyze the existing literature which covers the topic of sustainable digital marketing. To the best of the author's knowledge, a paper covering content analysis about this topic doesn't exist. Therefore, this paper aims to fill this gap, and in order to fulfill this goal, desk research was conducted and the results are presented below.

## 2. THEORETICAL BACKGROUND

For decades, digital marketing has been a continuously evolving field that is studied and developed daily. This form of marketing refers to the creation of digital marketing campaigns that take place in a digital environment. Notably, digital marketing encompasses the use of numerous marketing strategies and tactics designed to engage with customers in a digital environment, where they spend more time than ever. Beyond simply connecting and communicating with consumers, digital marketing tools are used to build brand awareness, stimulate consumer interest and desire to make a purchase, convert potential into existing consumers, track purchases in a digital environment, and use appropriate tools to retain users (Gregurec, 2023; Arantes, 2022). In other words, digital marketing tools are used to track consumer behavior and their journeys in the digital environment, gathering valuable user data to foster long-term, profitable relationships (Gregurec et al., 2022; Saura et al., 2020). By leveraging these insights, companies across various industries can enhance their ability to understand customers, satisfy their needs in real time, and communicate value more effectively (Low et al., 2020) in a sustainable way (Hwangbo & Kim, 2019). And because of that, sustainable digital marketing can be a good tool for companies to gain and retain a competitive advantage (Odoom et al., 2025).

Digital marketing is seen as a crucial tool for bridging the gap between societal values and market behavior when it comes to sustainability (Hwangbo & Kim, 2019). It emphasizes not only economic benefits but also the social responsibility of companies (Jin et al., 2024). So, when digital marketing is transformed and used together with the concept of sustainability and when it is applied through sustainable practices, it can be considered as the concept of sustainable digital marketing.

In this context, sustainable digital marketing can be seen as the implementation of marketing strategies that ethically and sustainably promote environmentally conscious businesses within the digital environment (Tchanturia & Dalakishvili, 2023). Arantes (2022) defined sustainable digital marketing as a field that uses all digital platforms and applications to foster relationships among stakeholders, taking into account the need and importance of immediacy, personalization, interaction, and message relevance for communicating sustainable behaviors of brands and/or companies to promote and/or influence individuals to adopt sustainable behaviors. By aligning marketing efforts with broader sustainability objectives, sustainable digital marketing helps foster a sustainable and ethical business ecosystem, particularly in support of the Sustainable Development Goals (SDGs) (Odoom et al., 2025). In more detail, this would imply the promotion of products or services that are sustainable, ethical and environmentally friendly in a personalized manner satisfying individual customers' sustainability preferences (Hwangbo & Kim, 2019). In that way it brings long-term benefits to both companies and users, but also to society and the planet as a whole. So, sustainable digital marketing balances the triple bottom line of profit, people and environment (Odoom et al., 2025) and helps build a more sustainable future.

According to Odoom et al. (2025) to implement sustainable digital marketing effectively five key variables that create a multidimensional approach are: transparency, green products, social and environmental impact, consumer education, and stakeholder engagement. Transparency is essential for open and honest communication between companies and consumers on digital platforms. Transparency refers to openly sharing information about a product's origin, production process, and the people involved in its creation. For a company, this means disclosing details about every stakeholder at each stage, from product development to its final purchase by the consumer. Emphasizing transparency is essential, as it can serve as the foundation for building a sustainable

brand and increasing brand awareness (Odoom et al., 2025; Tchanturia & Dalakishvili, 2023). Integrating environmentally friendly and ethical products into digital marketing strategies is a fundamental aspect of sustainable digital marketing. By showcasing features like recyclability and energy efficiency, brands can appeal to consumers who value sustainability (Odoom et al., 2025; Tchanturia & Dalakishvili, 2023). Social and environmental impact highlight how brands contribute to broader social and environmental causes, reinforcing their reputation as responsible entities. Companies that actively support environmental conservation or community well-being build a strong image of social responsibility. Through digital platforms, companies can showcase initiatives such as reducing carbon footprints, managing waste, or partnering with nonprofit organizations, positioning themselves as actively engaged in sustainability (Odoom et al., 2025). Consumer education considers how companies educate consumers on sustainable practices, empowering them to make responsible choices. By offering educational content on sustainability, companies not only encourage responsible consumption but also build consumer satisfaction and loyalty (Odoom et al., 2025). Engaging all stakeholders through digital collaboration on sustainability initiatives is considered as a key aspect of sustainable digital marketing. Sustainable digital marketing enables companies to showcase stakeholders' contributions to sustainability goals through digital platforms, whether via statements or joint initiatives, reinforcing their image as collaborative and socially responsible entities (Odoom et al., 2025).

### 3. METHODOLOGY

This paper aims to review the literature published up to January 20th, 2025, which covered papers related to sustainable digital marketing. Desk research was conducted to fulfill the set research goal. A content analysis was conducted on the collected secondary data to summarize the existing literature in the Web of Science Core Collection (WoS CC) platform and the Scopus database. The content analysis process consisted of the following stages:

1. Research design – While exploring the field of digital marketing the author noticed that sustainable digital marketing is a term that needs further analysis. According to collected data, there is a noticeable lack of content analysis studies on this topic. So, to fill this gap a content analysis on existing papers in the WoS platform and the Scopus database was made.
2. Search strategy definition and selection of the appropriate publications – The author used two different search queries for two scientific databases, WoS ("digital marketing" near/3 "sustainable" - filtering by Topic) and Scopus digital marketing" W/3 "sustainable" - filtering by Article title, Abstract, keywords). The author used the "near/3" operator on the WoS platform to merge digital marketing and sustainability, and the "W/3" operator in the Scopus database to identify any papers that included these two keywords, with a maximum distance of 3 other words among them. Based on search queries, a total of 51 papers were retrieved across all study categories in the Scopus database and 19 papers in the WoS database until January 20th, 2025. These papers were then subjected to advanced filtering choices, particularly inclusion criteria. The first inclusion criterion required that the publishing language is English, resulting in 18 papers in WoS and 50 in Scopus. Furthermore, the advanced filtering option for the research/subject area further reduced the number of papers. By selecting the research areas Business Economics and Social Sciences Other Topics in WoS, 6 papers were highlighted, while by selecting the subject areas Social Sciences, Business, Management and Accounting, Economics, Econometrics and Finance in Scopus, 41 papers were discovered. Ultimately, it was determined that both databases were appropriate for future analysis.
3. Identifying and removing duplicates – During the initial scan of each paper 4 papers were identified as duplicates, meaning they appeared in both databases. By removing duplicates, 43 unique papers were found (41 in the Scopus database and 2 on the WoS platform).

4. Refining the initial search results – In this phase, all 41 papers were scanned according to titles, abstracts, and primary texts for the purpose of filtering the data according to the given criteria, which were papers investigating the field of sustainable digital marketing. By reviewing each paper, it was determined that a great number of selected papers covered different topics which were not the main aim of this paper. Those papers covered topics such as: how can digital marketing be included in sustainable practice usage, how can implementation of digital marketing help sustainable performance, how can digital technologies be used to promote sustainability, the relationship between digital marketing and sustainable consumer behavior and so on. However, the holistic approach of digital marketing and sustainability, in terms of sustainable digital marketing, was not covered. So, according to titles, abstracts, and primary texts, only 14 papers, all from the Scopus database, meet the given criteria for further study, and they served as a data source for the development of content analysis presented in this paper.

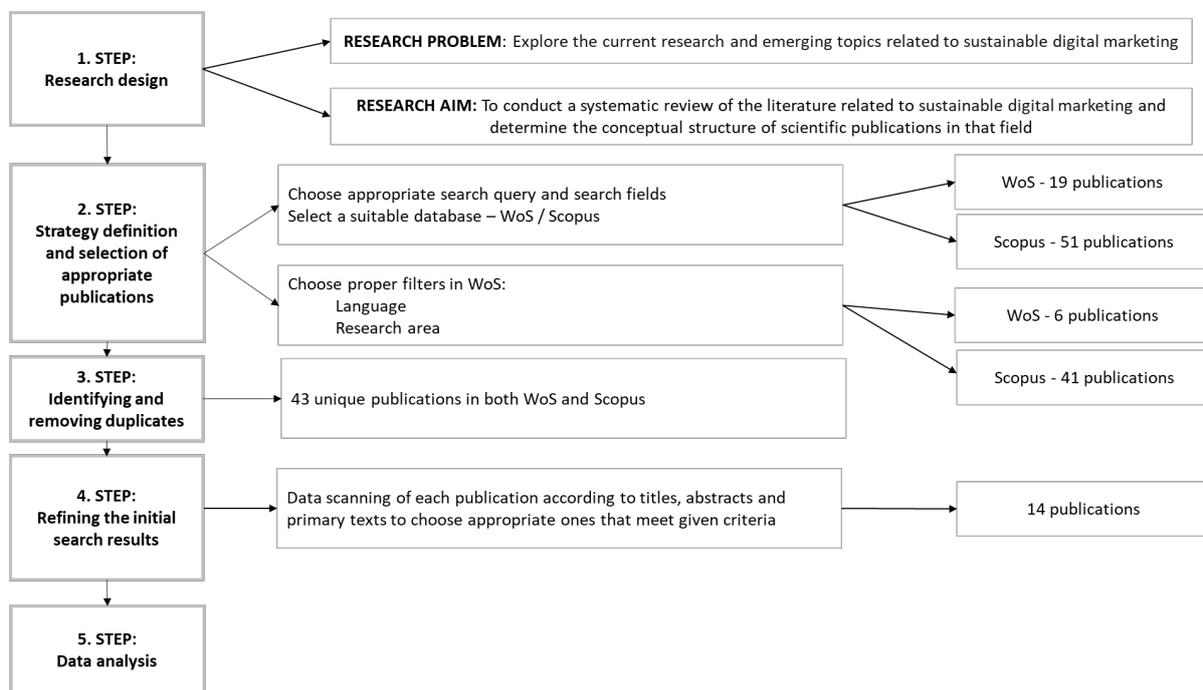


Figure 1 Stages of the research process

Source: author's own.

## 4. RESEARCH DATA

The primary goal of this paper is to conduct a systematic review of the literature related to sustainable digital marketing and to conduct content analysis based on scientific publications in that field. The review focuses on papers published in the WoS CC platform and the Scopus database until January 20th, 2025.

To achieve this goal, desk research was conducted, and according to collected secondary data on the term „sustainable digital marketing“, after the fourth phase of the research process, 14 papers covering the research topic were filtered. All 14 papers were published between 2019 and 2025. The total number of citations of all 14 papers is 186 (without self-citations 154) and H-index 6. The highest number of analyzed papers was published in 2023 and 2024, 4 per year. The highest level of citations was achieved in the year 2024, when the number of citations reached 70 (Figure 2).

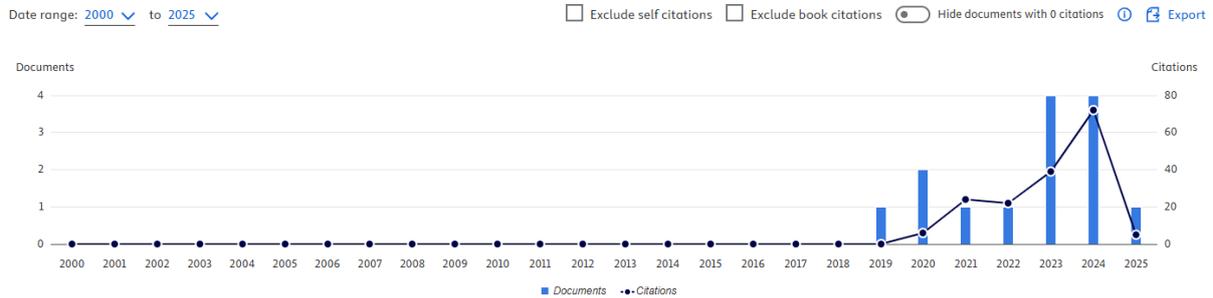


Figure 2 Distribution of published papers and citations by year

Source: author’s own based on Scopus database, January 20th, 2025.

These publications included 8 original research articles, 4 book chapters, 1 review article, and 1 editorial article. 6 of the papers were published in the journal Sustainability which is not surprising considering that the topics are directly related to the name of the journal. The paper entitled “Session-Based Recommender system for sustainable digital marketing” was the first published scientific paper on this topic. The paper was published in 2019 and written by Hwangbo H. and Kim Y. The most cited paper (80 times) was published in the year 2020, and it is the paper “Smart digital marketing capabilities for sustainable property development: A case of Malaysia” written by Low S., Ullah F., Shirowzhan S., Sepasgozar S.M.E. and Lee C.L. published in journal Sustainability (see Table 1).

In analyzed 14 papers only 5 keywords occurred more than three times. Those keywords are: marketing, digital marketing, sustainability, sustainable development and sustainable digital marketing. The mentioned keywords are distributed in 2 clusters of different colors with 8 links and a total link strength of 12 (see Figure 3). The first cluster, colored in red, includes 3 keywords (digital marketing, sustainable development and sustainable digital marketing). The second cluster, which is colored green, includes 2 keywords (marketing and sustainability). The most frequent keyword was marketing with 6 occurrences. This keyword is followed by other four keywords with 3 occurrences. This is not a surprise because to explain the term “sustainable digital marketing”, which is the main topic of this paper, all mentioned keywords are important and linked. Although 5 keywords are not so wide, it should be noted that this research field is still in its infancy, and it is expected to be broadened through the years.

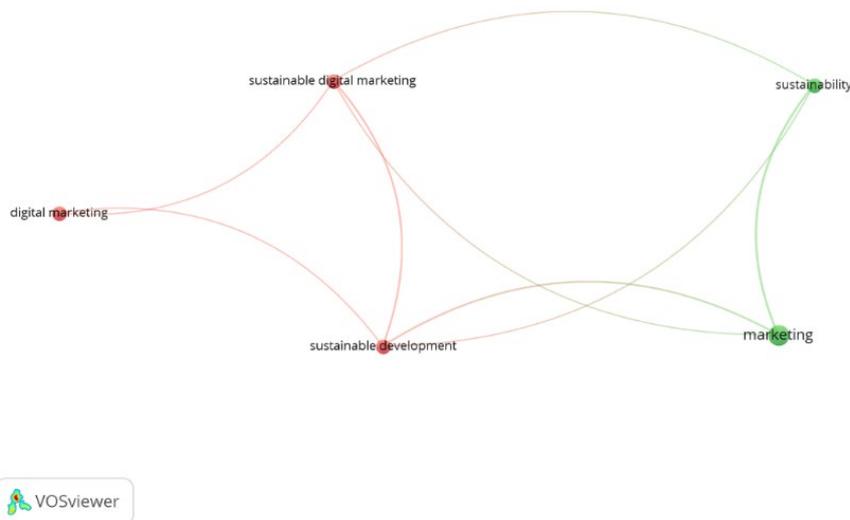


Figure 3 Visualization map of keywords co-occurrence

Source: author’s own based on Scopus database, January 20th, 2025 using tool VOSviewer.

Table 1 summarizes the most significant findings from 14 publications published in the WoS CC Platform and Scopus Database.

Table 1 The most important findings of papers published on the topic of sustainable digital marketing

RANK	TITLE	AUTHOR(S)	YEAR	JOURNAL	CITATIONS	DOCUMENT TYPE	PAPER SUMMARY
1	Smart digital marketing capabilities for sustainable property development: A case of Malaysia	Low S.; Ullah F.; Shirowzhan S.; Sepasgozar S.M.E.; Lee C.L.	2020	Sustainability	80	Original research article	The paper explores the potential of smart digital marketing and the integration of sustainable technologies to transform the Malaysian real estate industry. The paper analyzes existing digital marketing practices in the Malaysian real estate industry, pinpointing key factors that influence the adoption of smart digital technologies, including ease of use, practicality, and cost-effectiveness. It also addresses the challenges that need to be overcome to successfully implement a strategy to improve digital capabilities for sustainability. Additionally, it proposes a Smart Digital Marketing Technology Acceptance Model (MTAM) connecting technology acceptance with sustainable digital marketing strategies.
2	Digital marketing for sustainable growth: Business models and online campaigns using sustainable strategies	Saura J.R.; Palos-Sanchez P.; Herráez B.R.	2020	Sustainability	32	Editorial article	Exploring innovative business models emphasizing two-way engagement with online users is the topic of this paper. The paper focuses on the transition toward sustainability in digital advertising and digital marketing strategies. It highlights the increasing significance of integrating sustainable practices into digital marketing strategies and examines their impact on business sustainability in the digital environment, aligning with the modern emphasis on socially responsible approaches in the digital environment.
3	Session-Based Recommender system for sustainable digital marketing	Hwangbo H.; Kim Y.	2019	Sustainability	17	Original research article	The paper examines the improvement of product recommender systems in the context of sustainable digital marketing in the fashion industry. The importance of sustainable practice integration and technologies such as collaborative filtering and deep learning techniques in digital marketing activities, especially in recommender systems are covered within this paper. Sustainability and personalization are emphasized as important for the development of more effective recommender systems in online fashion retail.
4	Sustainable Digital Marketing: Factors of Adoption of M-Technologies by Older Adults in the Chinese Market	Zhang B.; Ying L.; Khan M.A.; Ali M.; Barykin S.; Jahanzeb A.	2023	Sustainability	14	Original research article	The factors of mobile technology adoption among the elderly in the Chinese market are investigated in this paper. Using the extended Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB), the paper examines how perceived value, performance expectations, effort expectations, subjective norms, and self-efficacy shape the attitudes and intentions of elderly users toward mobile technologies. It provides valuable insights for marketing managers to develop effective and sustainable digital marketing strategies tailored to the elderly population in the Chinese market.
5	Sustainable Digital Marketing Under Big Data: An AI Random Forest Model Approach	Jin K.; Zhong Z.Z.; Zhao E.Y.	2024	IEEE Transactions on Engineering Management	11	Original research article	The paper examines the role of big data and artificial intelligence in sustainable digital marketing. It analyzes the characteristics of big data and introduces an AI-driven Random Forest Model (RFM) for predicting consumer behavior. Using a real example company, the authors collected and analyzed customer data, demonstrating that the RFM model outperforms traditional methods in predicting the number of potential customers. Additionally, the paper highlights the demographic characteristics of customers of real example company, contributing to a deeper understanding of sustainable digital marketing within the context of big data and AI.
6	Explorative Study of Tourist Behavior in Seeking Information to Travel Planning	Lemy D.M.; Pramezwarly A.; Juliana; Pramono R.; Qurotadini L.N.	2021	International Journal of Sustainable Development and Planning	7	Original research article	The paper offers valuable insights for tourism stakeholders in navigating the evolution of tourism behavior, emphasizing the importance of digital engagement, health security, community participation, and adaptable marketing strategies. It highlights the necessity of developing sustainable digital marketing approaches, focusing on building personal trust with tourists, adopting innovative guest engagement strategies, and promoting collaboration and integration among stakeholders.

7	Recommendation Systems for e-Shopping: Review of Techniques for Retail and Sustainable Marketing	Stalidis G.; Karaveli I.; Diamantaras K.; Delianidi M.; Christantonis K.; Tektonidis D.; Katsalis A.; Salampasis M.	2023	Sustainability	5	Review article	The paper presents a comprehensive overview of the current state of recommendation systems for e-shopping, highlighting the need to balance accuracy, explainability, and user satisfaction. It also explores the challenges and future directions in the field, emphasizing the importance of aligning recommendation systems with marketing goals, utilizing advanced technologies, ensuring user acceptance, and prioritizing explainability and diversity in recommendations.
8	Sustainable Digital Marketing Model of Geoenery Resources under Carbon Neutrality Target	Zhang Y.; Xia Z.; Li Y.; Dai A.; Wang J.	2023	Sustainability	2	Original research article	The paper explores a sustainable digital marketing model for geothermal resources in alignment with China's carbon neutrality goals. The authors analyze the influence of geothermal energy as a clean and renewable source of energy on the reduction of carbon dioxide emissions and with this in mind they propose a BPNN neural network. The model aims to improve the accuracy of digital marketing for geothermal resources, promoting their broader adoption and supporting carbon neutrality efforts. Additionally, the paper compares traditional price forecasting methods with the BPNN model and discusses the significance of digital marketing in advancing sustainable energy solutions.
9	Sustainable digital marketing: Proposal for a renewed concept	Arantes L.	2022	Promoting Organizational Performance Through 5G and Agile Marketing	0	Book chapter	The book chapter explores the concept of sustainable digital marketing, addressing a gap in the literature by examining the connection between digital marketing and sustainability. It investigates how digital marketing can contribute to the spread of more sustainable behavior among different target groups. The chapter analyzes digital marketing, sustainable consumer behavior, and the climate crisis, proposing a new concept of sustainable digital marketing. It highlights real changes in both consumer behavior and business models, with a focus on the transparent use of resources so that the concept of sustainable digital marketing can evolve.
10	Why Do We Need Sustainable Digital Marketing?	Tchanturia N.; Dalakishvili R.	2023	Handbook of Research on Achieving Sustainable Development Goals With Sustainable Marketing	0	Book chapter	The book chapter explores sustainable digital marketing in response to growing consumer awareness of environmental issues and the growing demand for green business practices. It highlights a shift in consumer behavior, with consumers becoming more selective, preferring brands that align with their environmental values. The chapter shows how companies can adopt sustainable digital marketing strategies, ensuring that business success is aligned with environmental and social responsibility.
11	Sustainable Digital Marketing and the Digital Supply Chain Management Theoretical Aspects	Işoraitè M.	2024	Lecture Notes in Intelligent Transportation and Infrastructure	0	Book chapter	The book chapter explores the role of digital marketing and digital supply chain management in improving business sustainability and competitiveness. It highlights how digitalization has become essential for businesses to adapt to changing consumer behavior, market trends, environmental challenges, and social expectations. The chapter reviews the existing literature on digital marketing and digital supply chain management, identifying key factors, benefits, challenges, and best practices for successful implementation. It offers insights and guidance for managers and policymakers to effectively adopt and promote sustainable digital marketing strategies, ensuring long-term business growth while meeting sustainability goals.
12	Logistics SMEs' marketing budget re-engineering for sustainable digital marketing development	Giakomidou D.S.; Kriemadis A.	2024	Journal of Infrastructure, Policy and Development	0	Original research article	The paper investigates the impact of restructuring the marketing budget on the digital development of small and medium-sized enterprises (SMEs) in the logistics sector. The authors analyzed website data from five selected SMEs over a year to determine the optimal level of marketing budget. The key finding is that different budget levels have different effects on digital development metrics, with investments between \$500 and \$2,500 increasing the number of visitors, while only investments above \$5,000 improve search engine rankings. The paper concludes that smart restructuring of the marketing budget can significantly improve the digital development of SMEs in logistics, which may also lead to a higher bounce rate.

13	Web of wonders: Sustainable digital marketing strategies for unforgettable African tourism destinations	Al-Romeedy B.S.	2024	Promoting Responsible Tourism With Digital Platforms	0	Book chapter	The book chapter explores sustainable digital marketing strategies for African tourist destinations, highlighting the need to promote unforgettable travel experiences while preserving natural and cultural heritage. It emphasizes the importance of aligning digital marketing efforts with the principles of sustainable tourism. In addition, the chapter explores how emerging technologies, such as blockchain and artificial intelligence, can improve the sustainability and effectiveness of digital marketing campaigns. The chapter provides recommendations for improving digital marketing strategies while ensuring the long-term sustainability and success of African tourist destinations.
14	Sustainable digital marketing practices and consumer brand engagement—a brand reputation mediation investigation	Odoom R.; Odoom P.T.; Amu P.Y.; Adams M.	2025	Journal of Strategic Marketing	0	Original research article	The paper explores the connection between sustainable digital marketing practices and consumer brand engagement. In the paper sustainable digital marketing is defined through five key dimensions: transparency, ethics, social and environmental impact, consumer education, and engagement. The research findings indicate that four of these dimensions (excluding consumer education) have a significant positive impact on brand reputation, which indirectly enhances consumer engagement. The paper provides practical insights for businesses and researchers on how to optimize sustainable digital marketing strategies to strengthen brand reputation and consumer engagement.

Source: author's own.

Analyzed papers examine the role of sustainable marketing in advancing sustainability to a higher level. The authors of these papers emphasize sustainable digital marketing as an effective approach that integrates a holistic perspective with sustainability principles. Additionally, the papers highlight sustainable digital marketing as a response to increasing consumer awareness of environmental issues and the rising demand for eco-friendly business practices in everyday life. Tchanturia & Dalakishvili (2023) highlight the change in consumer behavior, where individuals are becoming more selective and favor brands that align with their environmental values. To understand what motivates consumers in their decision-making for sustainable consumption Arantes (2022) in her paper presented factors such as: cognitive barriers to sustainability, the self (self-signaling, self-identification, social identification), social influence and social norms, and product characteristics and sustainable behavior. On the other hand, a few authors pointed out that companies need to transform their business models to create products using sustainable materials, to recuse waste, to use digital supply chain management, to provide services that support sustainability and so on (Tchanturia & Dalakishvili, 2023; Işoraitè, 2024; Low et al., 2020). Odoom et al. (2025) in their paper identify five variables that are important for sustainable digital marketing implementation: transparency, green products, social and environmental impact, consumer education, and stakeholder engagement. According to the authors, each of these elements plays an important role in building trust, strengthening consumer loyalty, and enhancing a brand's reputation which was the main focus of this paper.

Saura et al. (2020) point out that under the influence of the development of new technologies, new business models focused on the use of sustainable strategies have begun to emerge. These new business models, influenced by digital transformation, observe how consumers in the digital environment behave, how they generate content, and what tools they use. Technologies such as big data and artificial intelligence can contribute to a deeper understanding of sustainable digital marketing and predict consumer behavior in a more sustainable way (Jin et al., 2024). Besides big data and artificial intelligence, Al-Romeedy (2024) explored the impact of blockchain to improve the effectiveness and sustainability of digital marketing campaigns. Low et al. (2020) in their paper explore the potential of smart digital marketing and the integration of sustainable technologies to transform the real estate industry with a particular focus on attracting

new consumers or retaining existing ones, thus making business smart and sustainable. The authors proposed a model (Smart Digital Marketing Technology Acceptance Model), linking the TAM technology acceptance model with sustainable digital marketing strategies. Also in another analyzed paper, authors used the Technology Acceptance Model (TAM) but in combination with the Theory of Planned Behavior (TPB) to measure the attitudes and behavioral intentions of the elderly towards mobile technology (B. Zhang et al., 2023).

Sustainable digital marketing can be implemented in various industries, and one of them is the tourism industry. An effective strategy for developing sustainable digital marketing involves fostering communication, engaging with tourists, and gathering insights from their evaluations. Given the financial and economic potential of this industry, there is a strong interest in the implementation of sustainable digital marketing, along with a need to ensure the well-being and comfort of both officials and the broader community (Lemy et al., 2021). Al-Romeedy (2024) in his book chapter highlighted the need for sustainable digital marketing to create a memorable travel experience while preserving the natural and cultural heritage of tourist destinations. Sustainable digital marketing plays a key role in the carbon trading market and is considered an excellent option for promoting the rapid development of carbon neutrality (Y. Zhang et al., 2023). Sustainable digital marketing can be used in businesses of all sizes, not just in different industries. Including those small and medium-sized companies involved in logistics (Giakomidou & Kriemadis, 2024). Regardless of the industry, the recommender system is becoming one of the important tools for conducting sustainable digital marketing activities. Stalidis et al. (2023) presented a review of e-shopping recommender systems, emphasizing the need to balance accuracy, explainability, and user satisfaction. In another paper, also covering e-commerce, the recommender system, both Attribute-Based Recommenders (ABRs) and Behavior-Based Recommenders (BBRs) are analyzed, especially in terms of sustainability. Mentioned systems are becoming essential for the identification, grouping, interaction, and tracking of satisfaction and loyalty of consumers in the fashion industry (Hwangbo & Kim, 2019). In this paper, the authors proposed new fashion product recommendation methods for sustainable digital marketing, leveraging session-based recommendations and attribute, patterns data.

And Išoraitė (2024) in her book chapter highlighted key factors, benefits, challenges, and best practices for the effective implementation of sustainable digital marketing in supply chain management and gave valuable insights and recommendations for managers and policymakers to facilitate the adoption and promotion of sustainable digital marketing practices.

## 5. RESEARCH IMPLICATIONS AND LIMITATIONS

Sustainable digital marketing is still an under-researched scientific field, according to conducted research and data analysis. After going through all of the phases of the research process, which is presented in the methodological section of this paper, it can be noted that all 14 papers were published between 2019 and 2025, and all of them emphasize the importance of sustainability and digital marketing and the holistic concept of sustainable digital marketing in this modern era. After analyzing all the papers, it can be seen that the papers provide valuable insights into the development of sustainable digital marketing, highlighting its significance in business sustainability, consumer engagement, and environmental responsibility. Although analyzed papers cover different topics such as the development of sustainable digital marketing across various industries (real estate, tourism, hospitality, e-commerce, and energy), the influence of emerging technologies (AI, big data, blockchain, and neural networks), and its impact on brand reputation and consumer engagement, or its general impact on the development and support of sustainable consumer behavior, a common thread can be drawn. That common thread is that sustainable digital marketing is no longer just a trend but it is a necessity in today's business environment. Companies must embrace innovative technologies, adapt to evolving consumer preferences, and integrate sustainability into their digital strategies to remain competitive while contributing to

social and environmental well-being, as today's consumers expect. Despite the importance of this field, only a few authors are actively investigating it. Nevertheless, the author of this paper believes that this research field will continue to evolve in the future. In the meantime, the scientific significance of this paper remains unquestionable.

However, this paper and the conducted research have certain limitations. The first and most fundamental limitation of this paper is that the content analysis is solely reliant on the Web of Science core collection platform and Scopus database. Although the Web of Science and Scopus are considered fairly comprehensive databases, future research should expand the scope of this study to strengthen and enrich the findings by using other scientific databases to gain a more comprehensive analysis. Additionally, used search query also contributes to the research's restriction, as the author limited herself in this way. Also, the usage of advanced filtering options (language and research area) on one hand, and data scanning on the other, conducted for the purpose of refining the initial search results need to be pointed out as possible limitations of this paper. By using filtering options, some papers covering the main research topic could be excluded from the analysis. Likewise, data scanning, which included analysis of titles, keywords and abstracts could potentially exclude important papers in the research area.

## 6. CONCLUSION

Although academic interest in digital and sustainable marketing is growing, the holistic concept of sustainable digital marketing remains underexplored. Most existing research focuses on the individual effects of digital marketing and sustainable marketing, without fully examining the combined approach of sustainable digital marketing, as is the case with most of the papers analyzed for the purpose of writing this paper. This gap underscores the need for a deeper investigation into the holistic impact of sustainable digital marketing.

Different sustainability challenges require a shift in the behavioral habits of all ecosystem stakeholders to collectively reduce their carbon footprint. The holistic concept of sustainable digital marketing can play a crucial role in protecting the well-being of people and the planet, driving a collective transformation across the entire ecosystem and promoting a more sustainable future.

## REFERENCES

- Al-Romeedy, B. S. (2024). Web of wonders: Sustainable digital marketing strategies for unforgettable African tourism destinations. In *Promot. Responsible tourism with digit. Platforms* (pp. 168–188). IGI Global; Scopus. <https://doi.org/10.4018/979-8-3693-3286-3.ch010>
- Arantes, L. (2022). Sustainable digital marketing: Proposal for a renewed concept. In *Promot. Organ. Perform. Through 5G and Agile mark.* (pp. 55–74). IGI Global; Scopus. <https://doi.org/10.4018/978-1-6684-5523-4.ch004>
- Giakomidou, D. S., & Kriemadis, A. (2024). Logistics SMEs' marketing budget re-engineering for sustainable digital marketing development. *Journal of Infrastructure, Policy and Development*, 8(8). Scopus. <https://doi.org/10.24294/jipd.v8i8.6080>
- Gregurec, I. (2023). Digital marketing activities during COVID-19 pandemic – database review. *ECONOMICS AND BUSINESS OF THE POST COVID-19 WORLD; Research Monograph – First Edition*, 317–334.
- Gregurec, I., Tomašek, L., & Hrustek, L. (2022). *Complexity of Creating Customer Experience under the Influence of Digital Transformation* (V. Bevanda, Ed.; pp. 111–119). Beograd: Udruženje ekonomista i menadžera Balkana (UDEKOM). <https://doi.org/10.31410/LIMEN.S.P.2021.111>
- Hrustek, L., Tomičić Furjan, M., & Gregurec, I. (2024). Integration of Sustainability in Higher Education Institutions. *SymOrg 2024 XIX INTERNATIONAL SYMPOSIUM PROCEEDINGS UNLOCKING THE HIDDEN POTENTIALS OF ORGANIZATION THROUGH MERGING OF HUMANS AND DIGITALS*, 260–266.
- Hwangbo, H., & Kim, Y. (2019). Session-Based Recommender system for sustainable digital marketing. *Sustainability (Switzerland)*, 11(12). Scopus. <https://doi.org/10.3390/SU11123336>

- Išoraitė, M. (2024). Sustainable Digital Marketing and the Digital Supply Chain Management Theoretical Aspects. In *Lecture Notes. Intell. Transp. Infrastruct.: Vol. Part F2296* (pp. 223–228). Springer Nature; Scopus. [https://doi.org/10.1007/978-3-031-52652-7\\_22](https://doi.org/10.1007/978-3-031-52652-7_22)
- Jin, K., Zhong, Z. Z., & Zhao, E. Y. (2024). Sustainable Digital Marketing Under Big Data: An AI Random Forest Model Approach. *IEEE Transactions on Engineering Management*, 71, 3566–3579. Scopus. <https://doi.org/10.1109/TEM.2023.3348991>
- Lemy, D. M., Pramezwar, A., Pramono, R., & Qurotadini, L. N. (2021). Explorative Study of Tourist Behavior in Seeking Information to Travel Planning. *International Journal of Sustainable Development and Planning*, 16(8), 1583–1589. Scopus. <https://doi.org/10.18280/ijstdp.160819>
- Low, S., Ullah, F., Shirowzhan, S., Sepasgozar, S. M. E., & Lee, C. L. (2020). Smart digital marketing capabilities for sustainable property development: A case of Malaysia. *Sustainability (Switzerland)*, 12(13). Scopus. <https://doi.org/10.3390/su12135402>
- Odoom, R., Odoom, P. T., Amu, P. Y., & Adams, M. (2025). Sustainable digital marketing practices and consumer brand engagement—a brand reputation mediation investigation. *Journal of Strategic Marketing*. Scopus. <https://doi.org/10.1080/0965254X.2025.2453690>
- Saura, J. R., Palos-Sanchez, P., & Herráez, B. R. (2020). Digital marketing for sustainable growth: Business models and online campaigns using sustainable strategies. *Sustainability (Switzerland)*, 12(3). Scopus. <https://doi.org/10.3390/su12031003>
- Stalidis, G., Karaveli, I., Diamantaras, K., Delianidi, M., Christantonis, K., Tektonidis, D., Katsalis, A., & Salampasis, M. (2023). Recommendation Systems for e-Shopping: Review of Techniques for Retail and Sustainable Marketing. *Sustainability (Switzerland)*, 15(23). Scopus. <https://doi.org/10.3390/su152316151>
- Tchanturia, N., & Dalakishvili, R. (2023). Why Do We Need Sustainable Digital Marketing? In *Handb. Of Research on Achieving Sustainable Development Goals With Sustainable Marketing* (pp. 372–386). IGI Global; Scopus. <https://doi.org/10.4018/978-1-6684-8681-8.ch020>
- Zhang, B., Ying, L., Khan, M. A., Ali, M., Barykin, S., & Jahanzeb, A. (2023). Sustainable Digital Marketing: Factors of Adoption of M-Technologies by Older Adults in the Chinese Market. *Sustainability (Switzerland)*, 15(3). Scopus. <https://doi.org/10.3390/su15031972>
- Zhang, Y., Xia, Z., Li, Y., Dai, A., & Wang, J. (2023). Sustainable Digital Marketing Model of Geoenergy Resources under Carbon Neutrality Target. *Sustainability (Switzerland)*, 15(3). Scopus. <https://doi.org/10.3390/su15032015>