

Sustainable Tourism Practices and Strategies in Living Museum Management: A Meta-Synthesis Systematic Review

Tjokorda Gde Agung Wijaya Kesuma Suryawan^{1*)}; Gede Sri Darma²⁾; Agus Fredy Maradona³⁾

¹⁾ tjokagungwk@gmail.com, Universitas Pendidikan Nasional, Indonesia

²⁾ sridarma@undiknas.ac.id, Universitas Pendidikan Nasional, Indonesia

³⁾ agusfredym@undiknas.ac.id, Universitas Pendidikan Nasional, Indonesia

*) Corresponding Author

ABSTRACT

Objectives: This study explores sustainable tourism practices in living museum management, focusing on strategies that enhance visitor engagement while ensuring heritage preservation and contributing to sustainable development. It aims to identify key sustainability practices, their implementation, and outcomes, balancing visitor experience and cultural conservation.

Methodology: A meta-synthesis systematic review was conducted on empirical studies related to sustainable tourism in living museums. The analysis incorporated highly reputable, peer-reviewed literature to identify patterns, best practices, strategies, and challenges in sustainability, particularly regarding environmental, cultural, and economic dimensions of living museum management.

Finding: This study reveals that living museums effectively engage visitors through immersive experiences while advancing sustainable tourism. Key strategies include collaboration with local communities, cultural asset preservation, and environmentally responsible practices to minimise ecological impacts. Furthermore, a holistic approach integrating environmental, cultural, and economic sustainability strategies enhances their roles as heritage custodians and strengthens local development.

Conclusion: Living museums provide immersive cultural experiences while balancing heritage conservation and visitor engagement. Their commitment to sustainability, through cultural preservation, ecological responsibility, and economic viability, ensures long-term resilience and meaningful community participation. By integrating comprehensive strategies, these institutions reinforce their role as protectors of heritage and catalysts for sustainable regional development.

Keywords: Sustainable Tourism; Living Museums; Cultural Heritage; Museum Management; Visitor Engagement.

Submitted: 21-10-2024

Revised: 19-02-2025

Accepted: 28-02-2025

Article Doi:

http://dx.doi.org/10.22441/jurnal_mix.2025.v15i1.005

INTRODUCTION

Living museums offer a dynamic platform for cultural immersion and heritage conservation, setting them apart from traditional museums. Unlike conventional museums that rely on static collections displayed behind glass, living museums engage visitors with interactive experiences that bring history to life (Choi & Kim, 2021; Dirgantoro & Martinez, 2016; Wang & Meng, 2023). These institutions recreate historical settings and cultural practices, providing interactive exhibits that allow visitors to actively participate in the narrative. Demonstrations of traditional crafts, agricultural practices, and historical reenactments are common features, enabling visitors to experience firsthand the lifestyles and traditions of past eras.

The active participation of local communities is a cornerstone of living museum operations (Song et al., 2024). Local artisans, performers, and historians often serve as guides and educators, sharing their knowledge and skills with visitors. This involvement not only enriches the visitor experience but also helps preserve and transmit intangible cultural heritage, such as oral histories, folk traditions, and artisanal techniques. By providing a platform for these cultural expressions, living museums contribute to the safeguarding of cultural diversity (Choi & Kim, 2021; Song et al., 2024) and subsequently to the realization of Sustainable Development Goals (Figure 1), adopted by all United Nations member states in 2015, aim to eradicate poverty, preserve the environment, and ensure global well-being by 2030 (Suryawan, Meryawan, et al., 2024; Suryawan, Putri, et al., 2024).



Figure 1: Sustainable Development Goals (SDGs)

Source: United Nations Department of Economic and Social Affairs (2024)

More specifically, this experiential approach fosters a deeper understanding and appreciation of cultural heritage, aligning with Sustainable Development Goal (SDG) 11 (sustainable cities and communities) – strengthening the conservation and sustainable use of cultural and natural heritage. By engaging visitors in active learning and providing them with meaningful cultural experiences, living museums cultivate a sense of respect and stewardship for heritage sites and practices. (Magliacani & Sorrentino, 2021). This connection is essential for the long-term preservation of cultural heritage, as it inspires visitors to support and advocate for heritage conservation efforts. Moreover, living museums can empower local communities and promote responsible tourism practices, contributing to SDGs 8 and 9, which are promoting sustainable tourism that creates jobs and livelihoods. The economic impact of living museums extends

beyond ticket sales and visitor spending. These institutions often support local economies by sourcing goods and services from local businesses, creating employment opportunities, and fostering entrepreneurship (Lavy et al., 2023; Olivares & Piatak, 2022). Local craftsmen or artisans may sell their products at museum shops, and traditional food vendors may operate within museum grounds, providing visitors with authentic cultural experiences while supporting local livelihoods.

However, ensuring the long-term sustainability of these unique institutions necessitates the adoption of responsible tourism practices (Scheyvens et al., 2021). As living museums attract increasing numbers of visitors, they must manage the associated pressures on their physical and cultural resources. Overcrowding, environmental degradation, and the commercialization of cultural practices are potential risks that can undermine the integrity and sustainability of these museums (Nguyen, 2021). Therefore, it is crucial for living museums to implement strategies that balance visitor engagement with heritage preservation. This includes managing visitor flow, using eco-friendly infrastructure, and fostering community involvement in decision-making processes (Olivares & Piatak, 2022).

Furthermore, living museums must continuously adapt to changing societal values and expectations (Wang & Meng, 2023). As the demand for authentic and meaningful travel experiences grows, these institutions can lead by example in promoting sustainable tourism practices. By integrating principles of environmental sustainability, cultural sensitivity, and economic inclusivity into their operations, living museums can serve as models for other cultural and tourism institutions. Living museums offer a unique and dynamic approach to cultural heritage preservation and education. Through interactive and immersive experiences, they engage visitors in meaningful ways, foster a deeper appreciation for cultural heritage, and contribute to sustainable development goals. To ensure their long-term sustainability, these institutions must adopt responsible tourism practices that balance the needs of visitors, the environment, and local communities. Effective management practices often involve collaborative efforts with local communities, ensuring that the benefits of tourism are shared equitably and that local voices are included in decision-making processes (Scheyvens et al., 2021).

In the field of cultural heritage management, the concept of sustainable tourism practices has emerged as a critical consideration for maintaining the delicate balance between visitor engagement, preservation of historical and cultural assets, and environmental stewardship (Ikasari, 2021). This balance is particularly vital in living museums, where the immersive experiences offered can significantly impact both the cultural heritage being showcased and the natural environment. Living museums, which transport visitors to the past through experiential learning (P. Hansson & Öhman, 2022), have a unique responsibility to implement sustainable practices that ensure the longevity of their exhibits and the well-being of the surrounding community.

Additionally, living museums must navigate the challenges of high visitor traffic, which can lead to wear and tear on historical structures and artifacts, as well as environmental degradation. Sustainable tourism practices in this context involve not only preserving the physical integrity of cultural assets but also maintaining the authenticity of the experiences offered (Sumardi et al., 2021). This means that living museums must constantly innovate in their approaches to visitor management, ensuring that their practices do not detract from the historical and cultural significance of the exhibits. They must cater to the diverse needs and expectations of visitors,

which can range from educational goals to entertainment. At the same time, they must safeguard the authenticity and preservation of their historical collections and environments. This involves not only protecting physical artifacts and buildings but also ensuring that the cultural narratives and traditional practices presented remain true to their origins.

Minimizing the ecological footprint of living museums is also crucial for sustainable management, involving the adoption of energy-efficient technologies, waste reduction measures, and promotion of eco-friendly behaviours among visitors and staff. Some museums have implemented renewable energy sources, water-saving devices, and recycling programs to mitigate environmental impact. Sustainable landscaping practices, like using native plants and creating wildlife habitats, further enhance the ecological value of museum grounds. Concurrently, effective content development in living museums, essential for maintaining educational and cultural integrity (Derda, 2023), necessitates dynamic and engaging exhibits that attract repeat visitors. Enhancing visitor experience through interactive displays, knowledgeable staff, and innovative technology is paramount. Economic viability is equally pivotal, with museums relying on ticket sales, donations, and grants for funding. Sustainable practices not only reduce operational costs but also attract visitors seeking responsible tourism experiences. Social equity initiatives ensure fair distribution of economic benefits and access to cultural and educational opportunities (Gonsales, 2021; Sheikh, 2020). By integrating environmental, cultural, and economic sustainability strategies, living museums can preserve heritage while offering enriching cultural experiences.

Despite the growing body of scholarship on sustainable tourism within cultural heritage management (Magliacani & Sorrentino, 2021), a significant gap persists in addressing the distinct challenges and strategic imperatives of living museums in harmonising visitor engagement with sustainability objectives. Existing studies largely focus on conventional museums and heritage sites, often neglecting the interactive and experiential dimensions of living museums, which require distinct management strategies (Carvalho & Camacho, 2023; Loach & Rowley, 2022; Sørensen & Grindsted, 2021). Moreover, while prior research has explored environmental and cultural sustainability, the interplay between economic, social, and ecological sustainability in living museums remains underexamined (Cheng et al., 2023; Sahahiri et al., 2023; Shehata & Mostafa, 2017). To bridge this gap, this study conducts a meta-synthesis systematic review of empirical research on sustainable tourism practices in living museum management. By synthesising key themes, best practices, and challenges, it seeks to develop a holistic framework encompassing cultural heritage preservation, community engagement, and environmental stewardship. Additionally, it critically examines how living museums navigate competing priorities, including content development, visitor experience enhancement, economic viability, and social equity. By offering a nuanced understanding of sustainable management in this unique institutional context, the study contributes to both theoretical discourse and practical policymaking in the field.

LITERATURE REVIEW

Sustainable tourism practices are crucial for managing living museums, facilitating cultural immersion and heritage preservation. Research underscores the transformative potential of interactive and sustainable collection displays, fostering cultural exchange and supporting sustainable tourism initiatives (Corona, 2024). Integrating sustainability into educational programs and exhibitions further enhances visitor experiences and aligns with sustainable

tourism principles (P. Hansson & Öhman, 2022). Furthermore, advancements in deep learning and multimedia technologies improve visitor engagement and incorporate sustainable solutions (Wen & Ma, 2024). The adoption of sustainable business models and Industry 5.0 concepts in GLAM (Galleries, Libraries, Archives, and Museums) institutions enhances operational efficiency, visitor engagement, and cultural sustainability, positioning living museums as innovative tourism destinations (Botti & Baldi, 2024). These approaches encompass innovative content development, enhanced service quality, economic viability, social equity initiatives, and preservation of historical and cultural heritage.

Content development in living museums requires innovative, interactive approaches distinct from traditional museums (Ning & Liu, 2024; Siegel et al., 2023; Varutti, 2024), focusing on creating immersive experiences for contemporary audiences (Ning & Liu, 2024). Integration of technology, such as immersive exhibits and digital sensory marketing, enhances visitor experiences and supports content development (Amrita, Mandiyasa, et al., 2024; Istvandity et al., 2024). Digitization and multimedia deepen visitor connections to cultural heritage, fostering appreciation for history and tradition and preserving cultural identity (McCabe, 2024; Siegel et al., 2023; Specht & Loreit, 2021). Simultaneously, enhancing service quality is equally essential in providing memorable and educational experiences in living museums. Riva & Agostino (2022) stress the importance of assessing visitor experiences to design engaging exhibits and improve museum attractiveness for meeting visitor expectations effectively. Cellini et al. (2024) highlight how regional institutional quality influences service provision in museums, suggesting insights applicable to enhancing service quality in living museum contexts. Leveraging social media for real-time feedback on visitor experiences is advocated by Yudhanto et al. (2024) as a valuable strategy for continuous service improvement. Understanding cultural context, as discussed by Bertacchini et al. (2018) and Cellini et al. (2024), informs the adaptation of services to cultural nuances and visitor preferences, thereby enhancing overall service quality.

Ensuring economic viability, social equity, and heritage preservation are also paramount for managing living museums. Botti & Baldi (2024) highlight the importance of economic sustainability, advocating for diverse revenue streams through partnerships, events, and crowdfunding. Understanding visitor expectations and economic outcomes is key to optimizing offerings and sustainability (Specht & Loreit, 2021). Olivares & Piatak (2022) emphasize inclusivity through cultural representation and internal policies, while Luo et al. (2024) stress targeted social equity initiatives to address racial disparities. Elnaggar et al. (2024) advocate for preventive conservation and disaster risk reduction to maintain cultural integrity, while Kaplun et al. (2024) emphasize high-quality exhibits and efficient conservation algorithms. These approaches ensure that living museums uphold cultural responsibilities while maintaining sustainability. Unlike conventional museums, living museums engage visitors through dynamic, participatory experiences, requiring unique management strategies (Chakravarty, 2008; Popoli & Derda, 2021; Setiyarti et al., 2021). While traditional museums focus on static displays, living museums highlight cultural exchange and heritage preservation (K. Hansson & Dahlgren, 2022). As has been discussed, existing literature often overlooks the specific challenges of living museums, such as balancing cultural integrity with evolving visitor expectations and integrating interactive technologies. Consequently, a holistic sustainability approach, encompassing economic, social, and ecological dimensions, is essential for managing these complexities.

METHOD

This study employed a systematic literature review technique known as meta-synthesis. A systematic literature review, as highlighted by Snyder (2019), involves identifying, critically assessing, collecting, and analysing relevant research data to answer a specific research question(s). This type of review aims to include all empirical evidence that meets pre-specified inclusion criteria in a systematic, transparent, and reproducible manner.

In addition, a meta-synthesis literature review is a systematic and comprehensive analysis that synthesizes findings from multiple primary research studies on a specific topic. In this context, researcher does not conduct new empirical studies but instead analyse and interpret existing research to develop new insights, theories, or interpretations that go beyond individual study findings. Overall, it aims to integrate and interpret findings from multiple studies to create a more holistic understanding of a particular research area, contributing to the advancement of knowledge and theory development in particular field (Movahed et al., 2023).

Following the method of Sandelowski and Barroso stated in Movahed et al. (2023), this paper outlines the seven-step of meta-synthesis method, as seen in Figure 2. Those seven steps are (1) determining the research question; (2) systematic exploration of resources; (3) searching and selecting the right texts; (4) extracting information from sources; (5) analysis and synthesis of the findings; (6) quality control; (7) presentation of findings. Afterward, this study proposes three research questions based on the objectives outlined in the introduction.

1. What are sustainable tourism practices implemented in living museum management?
2. What are the strategies of each of those sustainable tourism practices implemented in living museum management?
3. What are the outcomes of implementing those sustainable tourism practices and strategies in living museum management?



Figure 2: Sandelowski & Barroso Method of Meta-Synthesis
Source: Movahed et al. (2023)

As the preliminary phase in order to achieve the research objectives, firstly the researcher specifically searched for the keywords “sustainable tourism practices” and “living museum management.” Subsequently, the researcher systematically explored the ScienceDirect, Semantic Scholar, Taylor & Francis Online, Emerald Insight, Sage, and Springer Scopus-

databases, as well as Google Scholar and Publish or Perish databases. The initial articles compiled from all databases were 758 articles. After removing most of the articles due to duplication, non-Scopus-indexed, and out-of-date publication, resulted in 291 selected Scopus-indexed articles. The researcher then utilized VOSViewer to analyse the selected articles, which had been imported into Mendeley (Figure 3; 4; 5).

Subsequently, in the search process, any articles that align with the research questions and objectives are retained, while those that do not are excluded. This refinement and review are conducted using the inclusion and exclusion criteria outlined in the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram (Figure 6). The PRISMA diagram summarizes the screening and selection process, from the initial identification of records to the final inclusion of studies in the synthesis (Page et al., 2021).

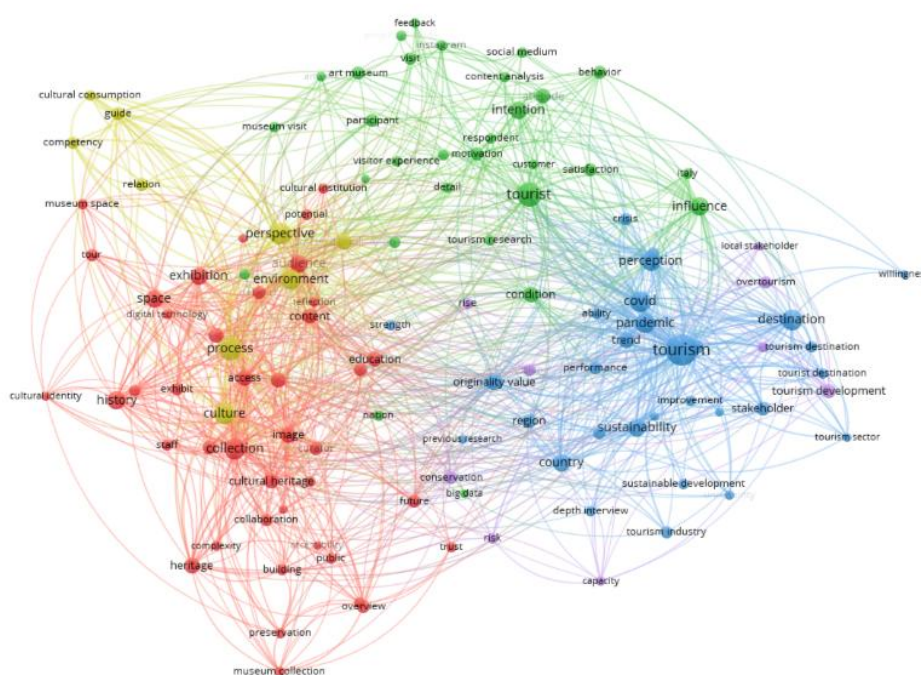


Figure 3: Network Visualization of Sustainable Tourism Practices and Living Museum Management

The VOSviewer network visualization of sustainable tourism practices and living museum management in Figure 3 offers an integrated view of key themes and their connections. Nodes represent studies, with size indicating importance, and edges show connections based on shared keywords (Mardiani & Iswahyudi, 2023).

Key themes include community engagement, which involves local communities in museum activities and ensures tourism benefits are shared locally; cultural heritage preservation, focusing on both physical and intangible heritage; sustainable practices, essential for long-term viability, involving reducing environmental impact and conserving resources; and visitor experience, prioritizing high-quality, inclusive, and satisfying visitor experiences.

Relationships among themes, such as the link between community engagement and heritage preservation, are evident. The visualization, which mainly includes studies from Europe and North America, emphasizes the necessity for more international research. The expanding body of literature highlights the rising significance of sustainable tourism practices and the management of living museums.

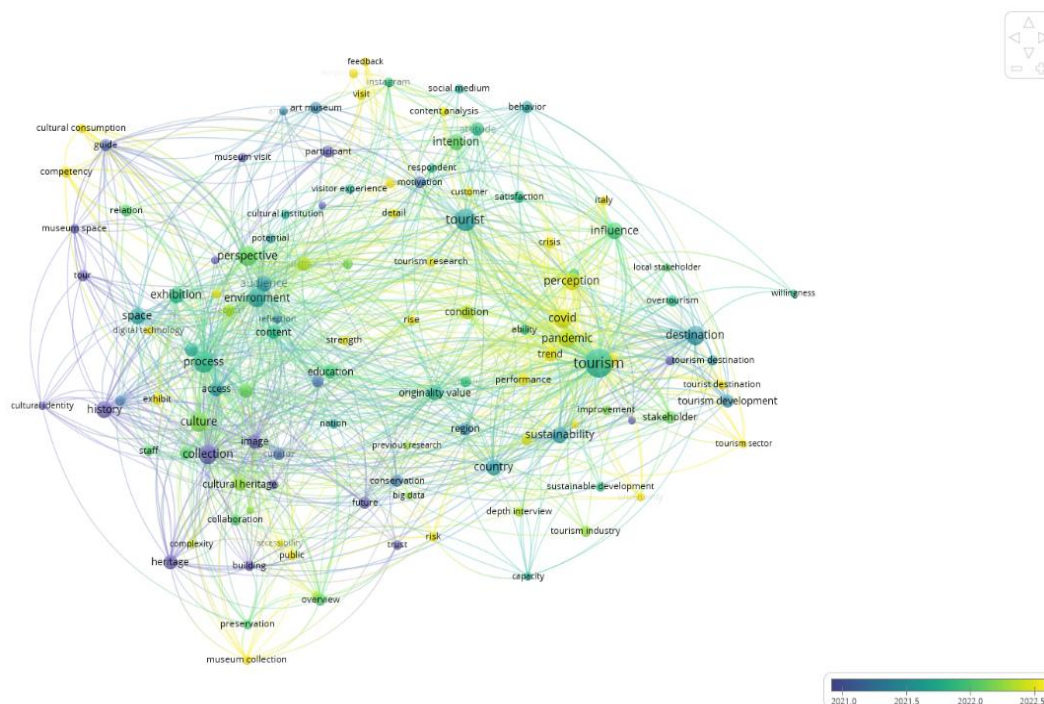


Figure 4: Overlay Visualization of Sustainable Tourism Practices and Living Museum Management

As can be seen in Figure 4, the VOSviewer overlay visualization of sustainable tourism practices and living museum management reveals key themes and their evolution over time (Koval et al., 2022).

Central themes include tourism behaviour, sustainability, community engagement, cultural heritage preservation, and visitor experience. The increasing focus on sustainability and environmental impact highlights efforts to integrate sustainable practices in tourism and museums. Community engagement and social equity have gained importance, emphasizing the need for local involvement and equitable benefit distribution. Cultural heritage preservation remains a consistent focus, while technological innovations enhance visitor experiences through interactive and immersive exhibits.

Predominantly featuring studies from Europe and North America, the visualization indicates a research gap in other regions, suggesting the need for more diverse geographic representation. The growing body of research underscores the field's rising importance and calls for continued exploration of innovative sustainable practices to enhance the global sustainability of living museums. This expansion would not only contribute to a more comprehensive understanding but also promote the application of successful strategies in a variety of cultural and geographic contexts.

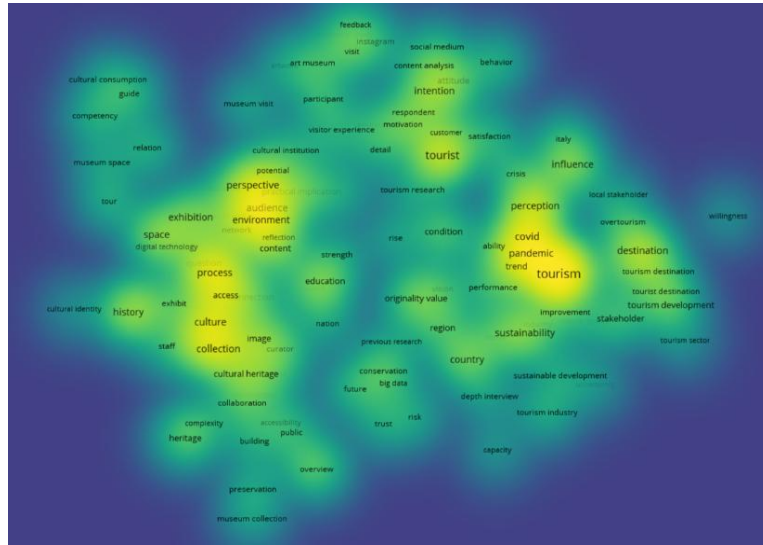


Figure 5: Density Visualization of Sustainable Tourism Practices and Living Museum Management

The VOSviewer density visualization (Figure 5) highlights key themes in sustainable tourism practices for living museums (Koval et al., 2022). Community engagement remains central, alongside cultural heritage preservation. The growing focus on sustainable practices reflects rising awareness of tourism’s environmental and social impacts, while enhancing visitor experiences gains prominence for ensuring satisfaction and retention.

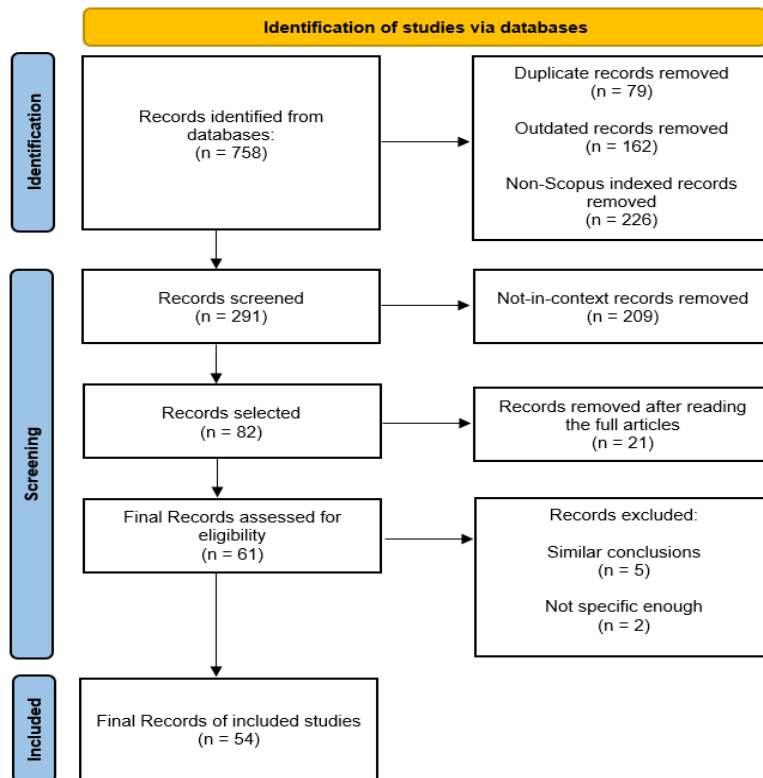


Figure 6: PRISMA Flow Diagram of Literature Search

As presented in Figure 6, following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol, the researchers initially gathered 758 records from several Scopus-indexed databases, including ScienceDirect, Semantic Scholar, Taylor & Francis Online, Emerald Insight, Sage, and Springer, as well as Google Scholar and Publish or Perish, using keywords related to sustainable tourism practices and living museum management. After a meticulous title screening, 79 duplicate records were removed, and 162 records were discarded for being outdated (published more than ten years ago). Additionally, 226 non-Scopus indexed records were excluded, resulting in 291 articles that were subsequently subjected to VOSViewer analysis. The next phase of the selection process involved applying the following inclusion and exclusion criteria to ensure the relevance and quality of the articles.

Inclusion criteria encompassed peer-reviewed journal articles indexed in Scopus, published within the last five years (2020–2024). The studies had to focus on sustainable tourism practices and living museum management, particularly those contributing to sustainability frameworks, innovation strategies, or technological integration within the context of living museums. Exclusion criteria were applied to remove studies that focused on traditional (non-living) museums without explicit sustainability considerations. Furthermore, studies that lacked theoretical or methodological depth on sustainable museum practices were excluded, as were papers addressing sustainability in tourism in a broader sense without specific relevance to living museum contexts.

Following these criteria, 209 articles were eliminated due to their broad discussions that did not specifically address living museums. An additional 21 articles were excluded after further detailed reading, and seven more were discarded for not providing an in-depth focus on sustainable practices in living museum management. As a result, the final corpus consisted of 54 articles, which were synthesized through a detailed analysis, categorization, and coding process for the literature review.

RESULTS AND DISCUSSION

Results

Upon completing the article collection phase, an extensive review was conducted to meticulously identify and select relevant data from specified sources. The subsequent task involved extracting, synthesizing, and critically discussing this data within the context of literature review articles. Movahed et al. (2023) delineate this synthesis process as encompassing several key stages: initially encoding and categorizing the collected data, followed by comparative analysis to discern patterns and relationships, and finally integrating findings to construct a comprehensive understanding of the topic. This methodological approach not only aims to consolidate existing knowledge but also to unearth novel insights or interpretations that contribute to advancing scholarly discourse.

Following the synthesis phase, validation and quality control procedures were implemented to ensure the robustness and reliability of the synthesized outcomes. Subsequently, the synthesized results are presented, providing a coherent and structured narrative that reflects the cumulative insights gleaned from the reviewed literature. This methodological framework underscores the importance of systematic approaches in literature synthesis, emphasizing the role of synthesis in generating new knowledge and informing evidence-based practices.

Descriptive Analysis and Synthesis

Tabel 1 List of Selected Articles and Articles' Category

No.	Authors	Year	Publication	Category
1	Medina-Chavarria et al.	2024	Journal	Historical & Heritage Preservation
2	Gozzoli et al.	2024	Journal	Economic Viability
3	Bianchi & Milano	2024	Journal	Service Quality Enhancement
4	Pung et al.	2024	Journal	Economic Viability
5	Siegel et al.	2024	Journal	Content Development; Service Quality Enhancement; Economic Viability; Social Equity Initiatives; Historical & Heritage Preservation
6	Istvandity et al.	2024	Journal	Content Development
7	Pickering	2024	Journal	Historical & Heritage Preservation
8	Varutti	2024	Journal	Content Development
9	Reitstätter & Christidou	2024	Journal	Service Quality Enhancement
10	Song et al.	2024	Journal	Content Development; Social Equity Initiatives
11	Saryusz-Wolska et al.	2024	Journal	Content Development
12	Aroles & Morrell	2024	Journal	Service Quality Enhancement
13	Clements	2024	Journal	Economic Viability
14	Luo et al.	2024	Journal	Content Development; Service Quality Enhancement; Social Equity Initiatives; Historical and Heritage Preservation
15	Girolami et al.	2024	Journal	Service Quality Enhancement
16	James-Williamson et al.	2024	Journal	Historical & Heritage Preservation
17	Ceccarelli et al.	2024	Journal	Content Development; Service Quality Enhancement
18	Perez-Bermejo et al.	2024	Journal	Content Development; Service Quality Enhancement
19	Corona	2024	Journal	Content Development; Historical & Heritage Preservation
20	Richards	2024	Journal	Content Development
21	Botti & Baldi	2024	Journal	Economic Viability
22	Shaby et al.	2024	Journal	Social Equity Initiatives
23	Yi et al.	2024	Journal	Content Development; Service Quality Enhancement
24	Elnaggar et al.	2024	Journal	Historical & Heritage Preservation
25	Tian et al.	2024	Journal	Content Development; Service Quality Enhancement

26	Furferi et al.	2024	Journal	Content Development; Service Quality Enhancement
27	Wen & Ma	2024	Journal	Content Development; Service Quality Enhancement
28	Cellini et al.	2024	Journal	Service Quality Enhancement
29	Väisänen et al.	2023	Journal	Service Quality Enhancement
30	Garau-Vadell et al.	2023	Journal	Social Equity Initiatives
31	Ortanderl & Bausch	2023	Journal	Content Development
32	Siegel et al.	2023	Journal	Content Development; Economic Viability
33	Najda-Janoszka & Sawczuk	2023	Journal	Service Quality Enhancement
34	Cesário et al.	2023	Journal	Content Development
35	Wallis & Noble	2023	Journal	Social Equity Initiatives
36	Wang & Meng	2023	Journal	Content Development
37	Derda	2023	Journal	Content Development; Service Quality Enhancement
38	Robaina-Calderín et al.	2023	Journal	Content Development; Service Quality Enhancement
39	Bilynets & Cvelbar	2022	Journal	Service Quality Enhancement
40	Rhee et al.	2022	Journal	Content Development
41	P. Hansson & Öhman	2022	Journal	Content Development; Service Quality Enhancement; Social Equity Initiatives
42	Koukoulis et al.	2022	Journal	Content Development; Service Quality Enhancement
43	Olivares & Piatak	2022	Journal	Social Equity Initiatives
44	Buchczyk	2022	Journal	Content Development; Social Equity Initiatives
45	Riva & Agostino	2022	Journal	Service Quality Enhancement; Economic Viability
46	Kłudkiewicz	2021	Journal	Social Equity Initiatives
47	Popoli & Derda	2021	Journal	Content Development
48	O'Hagan	2021	Journal	Content Development; Service Quality Enhancement
49	Kim et al.	2021	Journal	Economic Viability
50	Choi & Kim	2021	Journal	Service Quality Enhancement
51	Centorrino et al.	2021	Journal	Service Quality Enhancement
52	Lacoe et al.	2020	Journal	Content Development
53	Spence	2020	Journal	Content Development
54	Dang et al.	2020	Journal	Historical & Heritage Preservation

As displayed in Table 1, the selected articles encompass a wide range of categories crucial to the sustainability of living museums, including historical and heritage preservation, economic viability, service quality enhancement, content development, and social equity initiatives. This comprehensive categorization not only underscores the diverse strategies employed to uphold cultural heritage and ensure financial stability but also emphasizes efforts to enhance visitor engagement and overall museum experience. By categorizing these approaches, researchers gain valuable insights into the complex landscape of sustainable museum management. These insights facilitate the identification of emerging trends, critical gaps in knowledge, and promising opportunities for future research and practical implementation.

Table 2 Categorization of Sustainable Tourism Practices in Living Museum Management

First-order Categories	Second-order Categories	Findings
Content Development	Content Marketing Strategies	Content marketing in living museums uses valuable, relevant content to attract visitors, highlight unique exhibits, and enhance their experience through storytelling, interaction, and education (Cesário et al., 2023; Derda, 2023; Song et al., 2024).
	Educational Content Creation	It enhances visitor learning about exhibits, history, and cultural significance, aiming to educate, inspire curiosity, and foster meaningful interactions (Cesário et al., 2023; Derda, 2023).
	Social Interaction Facilitation	Social Interaction Facilitation in a living museum involves creating spaces and activities that promote visitor engagement, dialogue, and collaboration, enhancing their experience and fostering a sense of community (Siegel et al., 2023; Song et al., 2024).
Service Quality Enhancement	Staff Behaviours and Attitudes	Staff behaviours and attitudes in living museums include their actions and demeanour, with positive interactions essential for engaging visitor experiences (Luo et al., 2024; Riva & Agostino, 2022).
	Information Facilities	Information facilities in living museums provide visitors with relevant details about exhibits, collections, and history to enhance their understanding and experience (Choi & Kim, 2021).
	Quality of Service Provision Enhancement	Enhancing service quality in living museums involves improving visitor services through innovative technologies, personalized

		experiences, and staff training to create memorable and engaging experiences (Cellini et al., 2024).
Economic Viability Strategies	Revenue Diversification	Revenue diversification in living museums involves generating income from various sources beyond traditional funding to enhance financial sustainability (Botti & Baldi, 2024; Kim et al., 2021).
	Length of Stay Extension	Length of stay extension in living museums involves strategic efforts to increase visitor duration through engaging exhibits, interactive experiences, educational programs, and amenities that enhance the overall museum experience (Specht & Loreit, 2021).
Social Equity Initiatives	Community Engagement	Community engagement in living museums involves collaborative interactions with local residents, organizations, and stakeholders to co-create and preserve cultural heritage and natural resources (Olivares & Piatak, 2022; Wallis & Noble, 2023).
	Accessibility Enhancement	It ensures individuals of all abilities can fully benefit from the museum experience through inclusive design, digital technologies, community engagement, and staff training ((Olivares & Piatak, 2022; Song et al., 2024; Wallis & Noble, 2023).
	Act of Nature Preservation	Nature preservation in living museums involves biodiversity conservation, sustainable practices, educational programs, community engagement, and celebrating cultural heritage (Hansson & Öhman, 2022; Kłodkiewicz, 2021).
Historical and Heritage Preservation	Tangible Cultural Heritage Protection	Preserving tangible cultural heritage in living museums involves conserving artifacts, structures, and sites of historical and cultural significance within an interactive museum setting (Luo et al., 2024).
	Intangible Cultural Heritage Protection	Protecting intangible cultural heritage in living museums involves safeguarding and promoting traditions, rituals, performances, and knowledge systems to preserve cultural diversity (James-Williamson et al., 2024).

Cross-Cultural
Collaboration

Cross-cultural collaboration in living museums brings together diverse cultures to develop inclusive programs that promote understanding and appreciation of global heritage. (Corona, 2024; James-Williamson et al., 2024; Kaplun et al., 2024).

Living museums offer interactive experiences but face challenges in balancing education, visitor attraction, and revenue generation. Sustainable tourism practices address these by reducing environmental impact, supporting local communities, and enhancing visitor engagement. As shown in Table 2, key strategies include engaging storytelling, educational exhibits, and technological advancements for personalised experiences, improving service quality. Revenue diversification, such as dynamic pricing and experiential tourism, ensures financial stability, while social equity initiatives promote accessibility and cultural preservation. Historical and heritage preservation remains central, with tangible heritage protected through conservation, adaptive reuse, and digital preservation, while intangible heritage is safeguarded via community involvement, intergenerational knowledge transfer, and documentation. These interconnected strategies reinforce a holistic sustainability model, balancing economic, social, and environmental priorities to ensure living museums thrive while maintaining their educational and cultural integrity.

To establish this sustainability framework, the synthesis process within this meta-synthesis approach systematically integrated findings from diverse scholarly sources, extracting recurring themes and establishing conceptual linkages. Through iterative coding, categorisation, and cross-referencing, key insights were identified, ensuring reliability through comparative methodological evaluation. By synthesising these findings, this study consolidates a comprehensive sustainability framework that bridges theoretical perspectives with practical applications, providing a structured foundation for future research and policy development in the field.

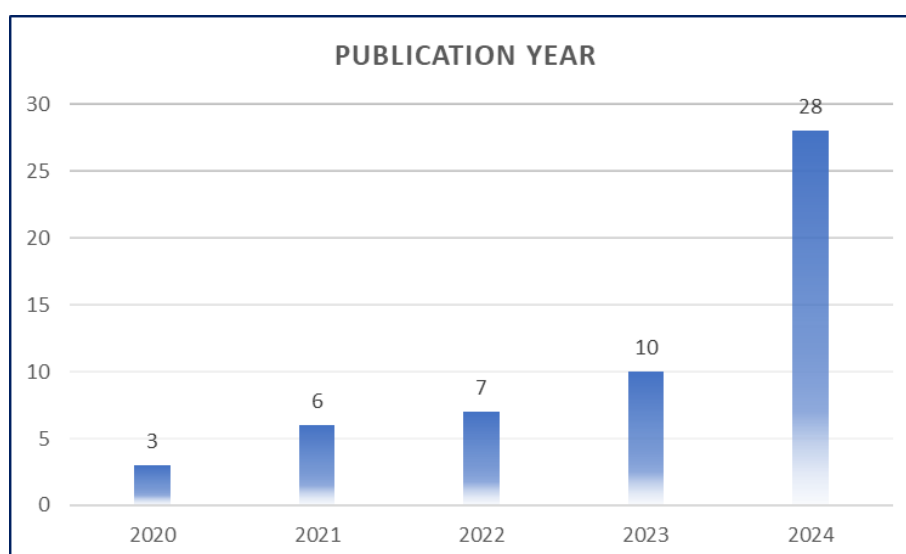


Figure 7: Selected Articles Grouped by Year of Publication

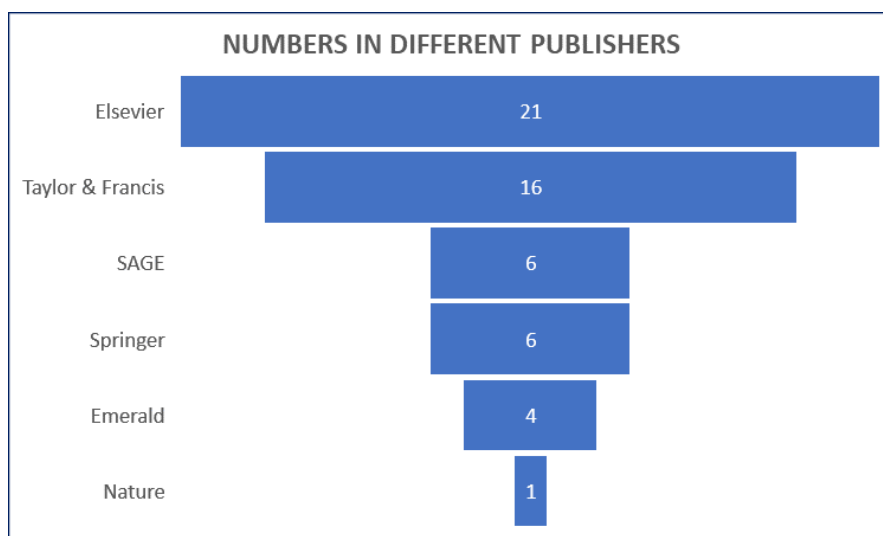


Figure 8: Number of Articles Published by Different Publishers

Figure 7 shows the publication years of the selected articles (2020–2024), reflecting the increasing focus on sustainable tourism in living museums. Concurrently, Figure 8 highlights the distribution of these articles by publisher, revealing key outlets for disseminating research on sustainable practices in living museum management. This ensures the inclusion of reputable and impactful studies. The concentration of recent publications further signifies the dynamic evolution of sustainability strategies within the sector. Additionally, the diverse range of publishers underscores the interdisciplinary nature of research in sustainable living museum management.

Table 3 Top 10 Journals Associated to the Topic

Rank	Journals (publisher)	Documents	H-index	SJR	Scopus Quartile
1	Museum Management and Curatorship (Taylor & Francis)	13	40	0.52	Q1
2	Journal of Destination Marketing & Management (Elsevier)	4	75	2.45	Q1
3	Heritage Science (Springer)	3	35	0.52	Q1
4	Annals of Tourism Research (Elsevier)	2	216	3.45	Q1
5	Heliyon (Elsevier)	2	88	0.62	Q1
6	Scientific Reports (Nature)	1	315	0.9	Q1
7	Building and Environment (Elsevier)	1	205	1.65	Q1
8	International Journal of Hospitality Management (Elsevier)	1	169	2.92	Q1
9	International Journal of Contemporary Hospitality Management (Emerald)	1	126	2.84	Q1
10	Ad Hoc Networks (Elsevier)	1	110	1.34	Q1

Table 3 identifies the top 10 journals publishing research on sustainable tourism practices in living museum management. This table details these journals, including the number of relevant

articles published (Documents), alongside metrics for journal quality and impact: H-index (productivity and influence), SJR Ranking (citation impact), and Scopus Quartile. Researcher can ensure that the studies used are both reputable and impactful.

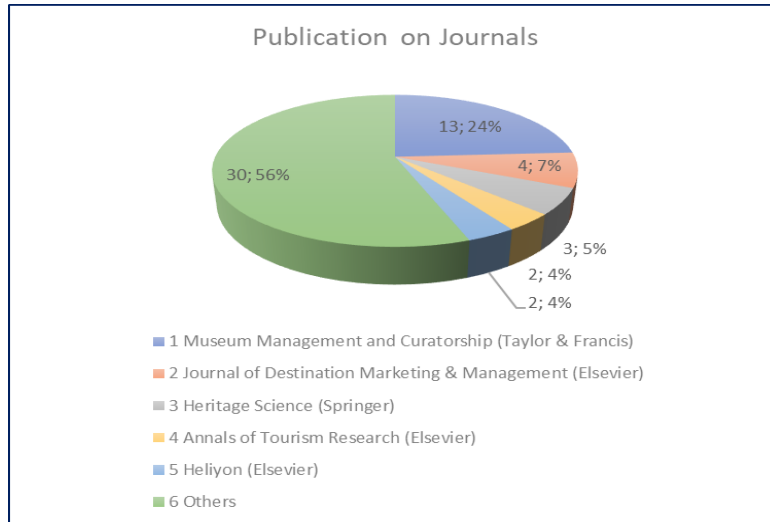


Figure 9: Percentage of Journals Associated to the Topic

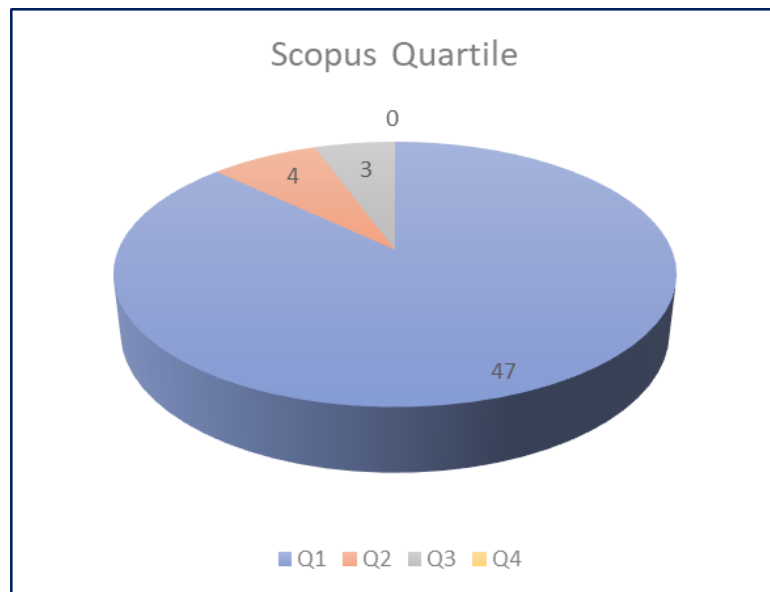


Figure 10: Number of Selected Articles Published on Scopus-indexed Journals

Figures 9 and 10 offer insights into the distribution of research on sustainable tourism practices in living museum management across different journals and the citation impact of these journals. Figure 9 reveals that the journal "Museum Management and Curatorship" (Taylor & Francis) is a leading source of research on this topic, while Figure 10 demonstrates that the majority of the selected articles are published in high-impact Q1 journals. These findings collectively indicate the overall credibility and significance of the research in this field.

management strategies for sustainability integration in operations. These themes underscore the multifaceted approach essential for effective sustainable practices in living museum management.

Quality Control

In conducting this systematic literature review titled, critical appraisal of the literature ensures rigorous evaluation and interpretation of findings. The CASP (Critical Appraisal Skills Program) instrument design by Bowling (2002), used in this review, assesses nine categories including (1) clarity of objectives; (2) study design; (3) research methods; (4) sampling strategy; (5) ethical considerations; (6) results reporting; (7) results answering research questions; (8) discussion of limitations, and (9) implications, rated as "yes," "no," or "not reported" to evaluate both quantitative and qualitative methodologies concurrently (McCarthy et al., 2018). By applying CASP criteria systematically, the review enhances the credibility of synthesized findings, informs recommendations for advancing sustainable tourism practices in museums, and supports future research directions in the field.

The use of the CASP tool ensures a rigorous and standardized approach to quality appraisal, enhancing the credibility of the systematic literature review. Based on the quality appraisal, all of the included studies demonstrated high methodological rigor and sound reporting practices. This indicates that the findings of the systematic literature review are based on reliable and trustworthy evidence.

Discussion

The research mind map in Figure 12 visualizes the relationships among the categories derived from the selected articles on sustainable tourism practices in living museum management, following a thorough reading of all the selected papers. This mind map is divided into five main categories: Content Development, Historical and Heritage Preservation, Service Quality Enhancement, Economic Viability Strategies, and Social Equity Initiatives.

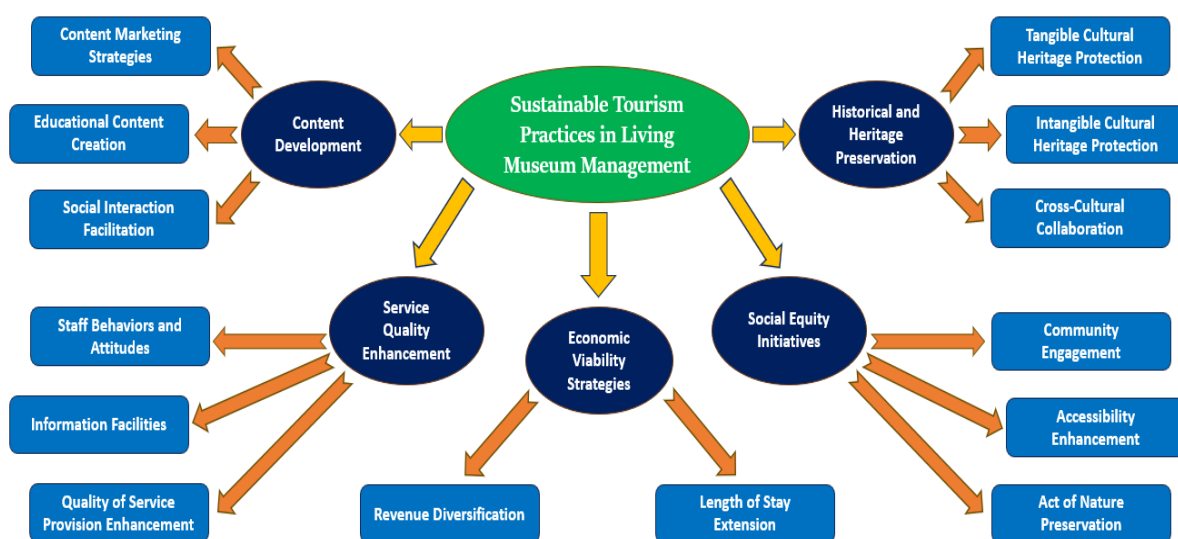


Figure 12: Research Mind Map

Content development involves three key strategies: Content Marketing Strategies, Educational Content Creation, and Social Interaction Facilitation, all aimed at creating immersive and engaging visitor experiences. Service quality enhancement includes Staff Behaviours and Attitudes, Information Facilities, and Quality of Service Provision Enhancement, all essential for delivering a positive visitor experience. Economic viability strategies involve Revenue Diversification and Length of Stay Extension, securing financial stability and enhancing visitor satisfaction through varied and engaging activities. Social equity initiatives encompass Community Engagement, Accessibility Enhancement, and Act of Nature Preservation, ensuring inclusivity and accessibility for all visitors while contributing to environmental sustainability. Historical and heritage preservation focuses on safeguarding both tangible and intangible cultural heritage, as well as cross-cultural collaboration, ensuring that cultural traditions and artifacts are maintained for future generations. By integrating these interconnected strategies, living museums can create enriching, inclusive, and sustainable experiences for all visitors.

Content Development

Content development in living museums presents unique challenges and opportunities. While traditional museums focus on static displays, living museums require a more interactive and experiential approach to engage visitors effectively (Ning & Liu, 2024; Siegel et al., 2023; Varutti, 2024). This shift towards dynamic content development necessitates innovative strategies to create immersive experiences that resonate with contemporary audiences (Ning & Liu, 2024). The integration of technology, such as immersive exhibits and digital sensory marketing, can enhance the visitor experience and contribute to the success of content development in living museums (Istvandy et al., 2024). Furthermore, the use of digitalisation and multimedia technology can facilitate deeper connections between visitors and cultural heritage, not only fostering a greater appreciation for history and tradition (McCabe, 2024; Specht & Loreit, 2021), but also contributes to the ongoing transmission of cultural identity (Siegel et al., 2023). Content development in living museums is a dynamic and evolving field that requires innovative approaches to engage visitors, preserve cultural heritage, and promote educational experiences. By embracing technology, fostering visitor engagement, and prioritizing cultural immersion, living museums continue to serve as vital platforms for heritage preservation and cultural exchange.

Content Marketing Strategies

Content marketing plays a pivotal role in the development and promotion of living museums, leveraging digital platforms and social media to showcase unique experiences and engage with visitors throughout their journey (Furferi et al., 2024; Wang & Meng, 2023). By implementing robust strategies, museums can effectively attract, inform, and connect with diverse audiences before, during, and after their visits, enhancing overall visitor experience and fostering lasting relationships (Choi & Kim, 2021; Florido-Benítez, 2023). Utilizing targeted online campaigns tailored to specific demographics and interests enables museums to reach broader audiences, while employing storytelling techniques helps create compelling narratives that resonate deeply with potential visitors.

Moreover, encouraging user-generated content further amplifies the museum's reach and engagement (Gonsales, 2021). By empowering visitors to share their experiences and reviews online, museums not only benefit from organic promotion but also foster a sense of community involvement and ownership (Suryawan et al., 2022, 2023). Highlighting special events, unique

programs, and interactive exhibits through digital channels strengthens audience connection and loyalty, cultivating an ongoing dialogue that supports the museum's mission and objectives. Consistent and strategic content marketing efforts play a vital role in sustaining public interest, driving visitor traffic, and ensuring the long-term viability and growth of living museums.

Subsequently, effective content marketing strategies are integral to the success of living museums, facilitating enhanced visibility, engagement, and community interaction (Furferi et al., 2024; Wang & Meng, 2023). By harnessing digital tools and platforms to promote their offerings and engage with diverse audiences, museums can foster a deeper appreciation for cultural heritage while ensuring sustainable growth. Emphasizing storytelling, user-generated content, and targeted campaigns not only attracts visitors but also enriches their museum experience, fostering meaningful connections that contribute to the institution's overall vitality and relevance in the community.

Educational Content Creation

Creating educational content in living museums is essential for engaging visitors and fostering a deeper understanding of cultural heritage and history. By incorporating interactive and immersive experiences, these museums can effectively communicate complex narratives and offer educational opportunities to diverse audiences. These initiatives not only entertain but also serve as platforms for learning and cultural exchange (Kaplun et al., 2024). A key aspect of this educational content creation is integrating technology to enhance visitor experiences. Technologies like augmented reality and deep learning can create interactive exhibits that engage visitors in dynamic and informative ways (Luo et al., 2024). Leveraging these immersive technologies allows museums to cater to modern audience preferences and deliver educational content innovatively.

Additionally, digitalization and multimedia technology in educational content creation help museums foster deeper connections between visitors and cultural heritage. This approach enables a more personalized and engaging experience, enhancing visitors' understanding and appreciation of historical artifacts and narratives (Wang & Meng, 2023). By utilizing technology as an educational tool, living museums can cater to various learning styles and preferences. Moreover, the design and curation of educational content significantly shape visitor experiences. Interactive exhibitions and hands-on activities provide a multi-sensory learning experience, allowing visitors to engage with history tangibly and memorably. By creating immersive and participatory educational content, museums can effectively convey the significance of cultural heritage and promote a deeper connection with the past (Kaplun et al., 2024).

Social Interaction Facilitation

Content development in living museums serves to educate and engage visitors while playing a crucial role in facilitating social interactions within the museum space. Wang & Meng (2023) highlight that by creating immersive and interactive experiences, living museums can foster connections, dialogue, and shared experiences among visitors, enhancing the overall social dynamics within the museum environment. These social interactions contribute to a sense of community and shared learning, enriching the museum experience. The integration of technology in content development can further enhance social interaction within living museums. According to Luo et al. (2024), technologies such as augmented reality and digital

storytelling provide opportunities for collaborative exploration and shared narratives among visitors. By incorporating interactive elements that encourage group participation and discussion, museums can create a social environment that promotes dialogue, exchange of ideas, and mutual learning.

Moreover, the design of interactive exhibits and hands-on activities in living museums can serve as catalysts for social interaction. By providing opportunities for visitors to engage with each other through collaborative tasks or group activities, museums create spaces where individuals can connect, communicate, and learn together. These shared experiences foster social bonds and create a sense of belonging and community within the museum setting (Wang & Meng, 2023). Additionally, the educational content curated in living museums can spark conversations and debates among visitors, leading to meaningful social interactions. By presenting diverse perspectives, challenging narratives, and thought-provoking themes, museums encourage visitors to engage in dialogue, reflection, and exchange of ideas. These interactions contribute to a dynamic and interactive museum environment where visitors can learn from each other, share insights, and build connections based on their shared experiences.

Service Quality Enhancement

Enhancing service quality in living museums is crucial to providing visitors with memorable and educational experiences. Previous research by Riva & Agostino (2022) emphasizes the importance of assessing visitor experiences to design engaging exhibits and enhance overall museum attractiveness. By analysing visitor feedback and preferences, living museums can tailor their services to meet visitor expectations. Cellini et al. (2024) highlight the impact of regional institutional quality on service provision in museums. While this study focuses on traditional museums, the findings can be extrapolated to living museums. Exploring how local institutions influence service quality in living museums could provide valuable insights for enhancing visitor experiences.

Digging into the realm of social media, previous researchers suggest leveraging online reviews to assess visitor experiences in museums (Yudhanto et al., 2024). By monitoring social media platforms, living museums can gather real-time feedback and identify areas for service quality improvement. Understanding the cultural context is essential for tailoring services in living museums. Bertacchini et al. (2018) and Cellini et al. (2024) discuss how the characteristics of museums influence the types of services offered. Adapting services to align with cultural nuances and visitor preferences can enhance the overall service quality. Enhancing service quality in living museums requires multifaceted approaches. By addressing these aspects, living museums can elevate their service offerings and provide visitors with enriching and memorable experiences.

Staff Behaviours and Attitudes

Staff members in living museums act as interpreters of history and culture, guiding visitors through immersive experiences (Song et al., 2024). Positive staff attitudes and knowledgeable interactions significantly enhance visitor understanding and appreciation of the museum's offerings. Effective communication by staff is essential for delivering educational programs and engaging visitors in meaningful learning experiences. Roche et al. (2022) emphasize the importance of staff communication in designing and redesigning exhibits to meet visitor

interests. Clear and engaging communication fosters meaningful interactions and enriches the visitor experience.

Training and development programs for staff members are vital for improving their knowledge and skills in visitor interactions (Derda, 2023). Well-trained staff are better equipped to engage visitors and provide informative and enjoyable experiences. Staff behaviours directly influence visitor satisfaction and perceptions of service quality in living museums. Positive staff attitudes and friendly interactions significantly contribute to visitor satisfaction (King et al., 2023; Nguyen, 2021; Sheikh, 2020; Yang et al., 2023). Staff members who exhibit enthusiasm, empathy, and professionalism create a welcoming and enjoyable environment for visitors. In addition, staff members in living museums must demonstrate cultural sensitivity and awareness to cater to diverse visitor demographics. Understanding the cultural backgrounds and preferences of visitors is essential for providing inclusive and respectful experiences.

Information Facilities

Information facilities in living museums are essential for enhancing visitor experiences and service quality by providing crucial information and fostering deeper engagement with exhibits. They bridge traditional presentations and modern technology, catering to diverse visitor preferences. Wen & Ma (2024) emphasize integrating modern technologies to create dynamic, interactive presentations that make learning engaging and memorable. As communication technology evolves, the demand for multifunctional devices encourages innovation in services that offer immersive experiences. Incorporating features like augmented reality and virtual tours allows museums to attract tech-savvy audiences while respecting traditional cultural heritage.

Continuous improvement of information facilities is vital to meet changing visitor expectations. Wen & Ma (2024) suggest that future museum mobile applications should enhance functionality and user experience for greater satisfaction. Additionally, establishing two-way communication on social media can enrich visitor interaction. Gao & Yu (2024) highlight the importance of leveraging social media for meaningful engagement and feedback, allowing museums to enhance overall visitor experiences and foster a sense of community.

Quality of Service Provision Enhancement

Incorporating innovative technologies such as Virtual Reality (VR), Augmented Reality (AR), and Artificial Intelligence (AI) is pivotal in transforming the visitor experience. These technologies not only make exhibits more interactive and immersive but also enable museums to engage visitors on a deeper level. According to Cellini et al. (2024), modern museums are increasingly adopting VR, AR, and AI to revolutionize how visitors interact with exhibits, thereby enhancing engagement and understanding. Moreover, personalized recommendation systems driven by AI play a crucial role in tailoring the museum experience to individual visitor preferences. As noted by Wen & Ma (2024), these systems analyse visitor demographics and behaviours to deliver customized content presentations and interactions. By offering personalized recommendations, museums can significantly enhance visitor satisfaction by ensuring each visitor receives content that resonates with their interests and preferences.

Continuous staff training is equally essential to maintain high service standards. Museum staff trained in the use of new technologies and customer service techniques are better equipped to assist visitors effectively, answer questions, and enhance overall visitor experience. By

integrating innovative technologies, implementing personalized visitor interactions through AI-driven systems, and investing in continuous staff training, living museums can elevate their service quality, foster visitor engagement, and ultimately create memorable experiences that leave a lasting impact on visitors.

Economic Viability Strategies

The significance of economic sustainability measures in private museums is underscored in the study by Botti & Baldi (2024), which addresses the inherent risks of private management and emphasizes the importance of securing public and private funding for innovative projects. Private museums frequently employ strategies such as forming partnerships and conducting crowdfunding campaigns to diversify revenue streams and support sustainability initiatives. Research into visitor experiences within museums, as discussed by Specht & Loreit (2021), provides valuable insights for enhancing economic viability. Insights gleaned from online reviews and assessments help museums understand visitor expectations and the role of digital technologies in improving engagement. These insights can guide the development of strategies aimed at increasing revenue generation and ensuring financial sustainability in living museums.

Additionally, leveraging insights from visitor research can guide the development of innovative strategies aimed at bolstering financial health. Implementing digital technologies such as virtual tours, interactive exhibits, and personalized visitor experiences can significantly enhance visitor satisfaction and loyalty. These enhancements not only improve the overall visitor experience but also create opportunities for additional revenue streams, such as online ticket sales and virtual memberships. By continuously adapting to visitor needs and technological advancements, living museums can ensure their financial sustainability and long-term success.

Revenue Diversification

Revenue diversification is crucial for the economic sustainability of living museums (Choi & Kim, 2021; Hafidz & Sharma, 2022; Nguyen, 2021; Olivares & Piatak, 2022; Sheikh, 2020). Exploring multiple income sources beyond traditional funding models enhances financial resilience and adaptability to market changes. Diversifying revenue streams reduces reliance on a single funding source, enabling museums to navigate economic uncertainties and sustain operations (Bernini & Galli, 2023; Lavy et al., 2023; Russo-Spena et al., 2022). Clements (2024) highlights the importance of corporate partnerships, philanthropic donations, and income from events and programs for building a stable financial foundation.

Subsequently, digital technologies play a significant role in revenue diversification for living museums (Choi & Kim, 2021; Russo-Spena et al., 2022; Wang & Meng, 2023). Botti & Baldi (2024) note that digital platforms offer income opportunities through online ticket sales, virtual tours, and merchandise sales. Embracing digital innovation allows museums to tap into new revenue streams and expand their global reach (Furferi et al., 2024; Tsakoumaki et al., 2023), enhancing accessibility and visibility of museum offerings.

Additionally, hosting events and renting out museum spaces can be lucrative for living museums. Leveraging unique spaces for weddings, corporate events, and cultural programs generates additional income while showcasing heritage (Botti & Baldi, 2024). Educational programs and workshops also diversify revenue and fulfil the mission of cultural education. Revenue-generating workshops and initiatives attract diverse audiences and generate income

through ticket sales and program fees, providing engaging experiences that attract visitors and generate revenue simultaneously (Alnasser & Yi, 2023).

Length of Stay Extension

Effective interpretation of cultural heritage plays a crucial role in extending visitors' length of stay. Providing compelling narratives and contextual information can deepen visitors' connection to cultural artifacts, encouraging them to linger longer in the museum (Sheikh, 2020; Specht & Loreit, 2021). Digital engagement and virtual experiences further impact visitors' length of stay. Riva & Agostino (2022) discuss integrating digital technologies to enhance visitor experiences and extend their time spent in the museum. Virtual tours, interactive apps, and digital exhibits attract tech-savvy visitors and provide alternative ways to explore museum collections.

Visitor satisfaction and available amenities also influence the decision to prolong their stay. Botti & Baldi (2024) emphasize the importance of providing comfortable facilities, rest areas, and dining options to enhance the overall experience. Prioritizing visitor comfort and convenience creates a welcoming environment that encourages longer engagement with the museum's offerings (Corona, 2024; Florido-Benítez, 2023).

By creating compelling experiences that cater to diverse interests, living museums can prolong visitors' engagement, foster cultural appreciation, and create memorable experiences that encourage repeat visits (Pennings, 2015). Embracing innovative strategies and leveraging technology further enhance visitor experiences, extending their time spent in the museum and contributing to a more enriching and immersive cultural journey.

Social Equity Initiatives

The study by Olivares & Piatak (2022) underscores the pressing need for museums to adopt more inclusive practices, emphasizing the importance of social equity initiatives to ensure diverse participation in living museums. Inclusivity is not just a moral imperative but also essential for the sustainability and relevance of museums in a multicultural society. By broadening their audience base, museums can foster a more comprehensive understanding and appreciation of cultural heritage (Gonsales, 2021).

To achieve this, it is crucial for museums to actively engage a diverse audience. Olivares & Piatak (2022) suggest that supporting cultural representation and implementing both internal policies and external programs can significantly motivate diverse audiences to participate. This involves creating exhibits and programming that reflect the experiences and histories of various cultural groups, as well as ensuring that museum staff and leadership are representative of the broader community. Such efforts can help to dismantle barriers that have historically excluded certain groups from participating in cultural institutions.

Moreover, Luo et al. (2024) highlight the necessity of understanding racial disparities in engagement as a foundation for developing targeted social equity initiatives in living museums. Recognizing and addressing these disparities is essential for promoting diversity within museum spaces. This involves not only acknowledging the historical and ongoing impacts of racism and exclusion but also actively working to create environments where all visitors feel welcome and valued. Luo et al. (2024) emphasize that museums must move beyond tokenistic inclusion and work towards genuine, systemic change that promotes racial inclusivity.

Community Engagement

By involving local communities in exhibit curation and interpretation, these museums empower residents to share their stories and heritage, fostering pride and ownership. McCabe (2024) that these institutions act as platforms for dialogue, collaboration, and activism, encouraging active participation in cultural preservation and interpretation, ensuring the museum's relevance and meaningfulness to its audience. Song et al. (2024) discussed the importance of cultural representation in museums. Engaging diverse community members in curation ensures multiple perspectives and voices are represented, promoting cultural diversity and inclusivity. Shaby et al. (2024) emphasize identifying barriers to participation in museums. Living museums can collaborate with local communities to address factors like language barriers, economic constraints, or lack of cultural relevance, making museums more accessible and welcoming. Finally, Olivares & Piatak (2022) suggest museums serve as forums for community issues and collaboration. Living museums can host events, workshops, and discussions that foster dialogue between community members, staff, and local organizations, enhancing community engagement and strengthening the museum's role as a cultural and social hub.

Accessibility Enhancement

Enhancing accessibility in living museums is crucial to ensure that all individuals, regardless of their abilities, can fully engage with and benefit from the museum experience. According to Olivares & Piatak (2022), inclusive design principles should be integrated into museum spaces to ensure accessibility for all visitors. By incorporating features such as tactile exhibits, audio descriptions, and wheelchair ramps, living museums can create a welcoming environment for individuals with diverse needs (Varutti, 2023). Moreover, they also suggest that staff training and awareness are essential for promoting accessibility in museums. By providing training on disability awareness, communication techniques, and assistive technologies, living museums can empower staff to better support visitors with disabilities and create a more inclusive environment.

Song et al. (2024) highlighted the role of modern technologies in enhancing digital accessibility in museums. Utilizing tools such as virtual tours, mobile apps with audio guides, and interactive exhibits can improve the museum experience for visitors with visual or hearing impairments, promoting inclusivity in living museums. By consulting with individuals with disabilities and advocacy groups, living museums can identify specific needs and implement tailored solutions to enhance accessibility for all visitors (Corona, 2023; Wang & Meng, 2023). Additionally, Luo et al. (2024) discuss the benefits of universal design approaches in creating inclusive museum spaces. By adopting universal design principles that consider the diverse needs of visitors, living museums can ensure that exhibits, pathways, and facilities are accessible to individuals of all abilities.

Act of Nature Preservation

Hansson & Öhman (2022) highlight the vital role of living museums in biodiversity conservation by preserving native species and raising awareness about biodiversity loss. Through interactive exhibits, tours, and workshops on habitat restoration and wildlife conservation, these museums educate visitors on environmental stewardship. Song et al. (2024) further emphasize the importance of living museums in promoting sustainable practices and

preserving natural landscapes by integrating traditional ecological knowledge and indigenous practices into exhibits.

Green initiatives, such as energy-efficient technologies and waste reduction strategies, enhance both conservation efforts and visitor experiences (Amrita, Suryawan, et al., 2024). By implementing renewable energy and eco-friendly materials, museums set an example for visitors to adopt sustainable practices. Workshops on sustainability reinforce the museum's leadership in environmental education, fostering a community of individuals committed to environmental protection.

Historical and Heritage Preservation

Historical and heritage preservation within living museums plays a critical role in both showcasing and safeguarding cultural heritage for current and future generations. Elnaggar et al. (2024) emphasize that preventive conservation is paramount in maintaining the authenticity and integrity of cultural artifacts during the preservation process. They argue for the consideration of local context, societal values, and available resources when devising strategies for preventive conservation of heritage collections in museums (Elnaggar et al., 2024).

Moreover, effective risk analysis is essential for mitigating environmental threats and ensuring the long-term preservation of cultural artifacts. Elnaggar et al. (2024) stressed the importance of ongoing monitoring of environmental conditions and advocate for the implementation of comprehensive disaster risk reduction strategies tailored to specific museum settings to protect heritage from natural disasters.

In a related context, Kaplun et al. (2024) highlight the necessity of developing innovative museum exhibit models that prioritize high quality while minimizing computational complexity in conservation algorithms. Consequently, the preservation of historical and heritage assets within living museums necessitates a holistic approach integrating preventive conservation strategies, rigorous risk analysis, and innovative exhibit design to ensure the enduring safeguarding of cultural heritage.

Tangible Cultural Heritage Protection

Preventive conservation constitutes a pivotal strategy in the safeguarding of tangible cultural heritage within living museums. According to Medina-Chavarria et al. (2024), this approach is paramount for preserving the authenticity and integrity of cultural artifacts over time. However, Elnaggar et al. (2024) pointed out a significant practical challenge in preventive conservation management, highlighting risks associated with the absence of standardized guidelines and systematic standards for preserving poorly documented but valuable collections. In enhancing visitor engagement and understanding of tangible cultural heritage, multisensory museum experiences play a vital role. Elnaggar et al. (2024) explored the integration of multisensory approaches in museum exhibits as a means to deepen visitor connections with cultural artifacts and enrich their overall museum experience.

In addition to these strategies, continuous professional development and training for museum staff are essential to the success of preventive conservation efforts (Elnaggar et al., 2024; Specht & Loreit, 2021). Staff members must be well-versed in the latest conservation techniques and risk management practices to effectively protect cultural heritage. Ongoing education and training programs can help museum professionals stay updated on best practices and emerging

trends in the field, ensuring that they are equipped to address the unique challenges of preserving tangible cultural heritage (Magliacani & Sorrentino, 2021).

Intangible Cultural Heritage Protection

Preserving intangible cultural heritage within living museums is crucial for safeguarding traditions, practices, and expressions that are transmitted across generations. Community engagement plays a pivotal role in this endeavour. James-Williamson et al. (2024) argue that involving local communities in heritage preservation efforts fosters a sense of ownership and ensures the continuity of intangible cultural practices. Educational programs and interpretive activities within living museums play a vital role in raising awareness about intangible cultural heritage. According to James-Williamson et al. (2024), museums fulfil an educational role by informing visitors about the significance of intangible heritage through interactive exhibits and storytelling sessions. Concurrently, sustainable management practices are essential for the enduring preservation of intangible cultural heritage in living museums, ensuring a balance between heritage conservation and environmental or social concerns.

Engaging visitors through immersive and interactive experiences is crucial for cultivating appreciation and understanding of intangible cultural heritage within living museums. Kaplun et al. (2024) highlight the role of sensory stimuli and cognitive processes in shaping visitors' perceptions and expectations of intangible heritage exhibitions. This interactive engagement enhances the overall visitor experience and fosters a profound connection to intangible cultural practices.

Cross-Cultural Collaboration

Community participation and co-creation are fundamental to successful cross-cultural collaborations in living museums (Choi & Kim, 2021; Derda, 2023). Kaplun et al. (2024) stress the significance of involving local communities in interpreting and presenting intangible cultural heritage, which promotes cultural ownership and pride.

Educational initiatives are also instrumental in promoting intercultural learning and collaboration within living museums. James-Williamson et al. (2024) underscore the role of museums in offering educational programs that encourage cultural diversity and intercultural dialogue among visitors. They highlight interactive exhibits and interpretive activities that prompt visitors to explore and appreciate diverse cultural traditions, thereby fostering cross-cultural understanding and collaboration.

CONCLUSION

This study addresses the critical issue of balancing cultural heritage preservation with the need for visitor engagement and sustainable tourism in living museums. As living museums continue to play an essential role in cultural education and tourism, they face the challenge of adopting responsible practices that both protect heritage and generate economic benefits. The systematic review reveals that adopting sustainable tourism practices is crucial for ensuring the long-term viability of these institutions. Effective strategies include conserving cultural assets, minimizing ecological impacts, and maintaining the authenticity of visitor experiences. Furthermore, collaboration with local communities emerges as a key factor in distributing tourism benefits and enhancing decision-making processes.

The findings highlight that the integration of environmental, cultural, and economic sustainability strategies can significantly strengthen the role of living museums in achieving their dual goals of heritage conservation and visitor engagement. Museums that adopt resource-efficient operations, focus on authentic cultural narratives, and involve local communities can create more enriching and sustainable experiences. These practices not only safeguard cultural heritage but also contribute to community development through tourism revenue and active local participation. The study implies that managers should focus on sustainable practices and community engagement as foundational elements for achieving both cultural preservation and tourism goals.

To solve the challenges facing living museums, it is essential to adopt a holistic approach that integrates sustainability across all facets of operations. Future research should explore innovative approaches to enhancing the economic resilience of museums, such as revenue diversification and the use of technology to attract diverse audiences. Additionally, further investigation is needed into how cultural representation and inclusive practices can improve visitor engagement and community involvement. These areas offer significant potential for advancing both academic understanding and practical strategies for sustainable museum management.

REFERENCES

- Alnasser, N. S., & Yi, L. J. (2023). Strategies applied by different arts and cultural organizations for their audience development: A comparative review. *Heliyon*, 9(5). <https://doi.org/10.1016/j.heliyon.2023.e15835>
- Amrita, N. D. A., Mandiyasa, I. K. S., Suryawan, T. G. A. W. K., Handayani, M. M., Nugroho, M. A., Puspitarini, E. W., Haro, A., Purbaya, M. E., Rivai, D. R., Munizu, M., Saktisyahputra, Mustikadara, I. S., Syapudin, Kirniasari, I., Wibisono, L. K., & Judijanto, L. (2024). *DIGITAL MARKETING (Teori, Implementasi dan Masa Depan Digital Marketing)* (Efitra, Ed.; 1st ed.). PT. Green Pustaka Indonesia. www.greenpustaka.com
- Amrita, N. D. A., Suryawan, T. G. A. W. K., Idayanti, I. D. A. A. E., Putri, C. I. A. V. N., Suwastawa, I. P. A., Boari, Y., Daffa, F., & Judijanto, L. (2024). *GREEN MARKETING (Dunia Baru dalam Dunia Marketing)* (Y. Agusti, Ed.; 1st ed.). PT. Sonpedia Publishing Indonesia. www.buku.sonpedia.com
- Aroles, J., & Morrell, K. (2024). Marketisation and the Public Good: A Typology of Responses among Museum Professionals. *Work, Employment and Society*. <https://doi.org/10.1177/09500170241247117>
- Bernini, C., & Galli, F. (2023). Networking and spatial interactions: What contributes most to increasing museums' attractiveness? *Papers in Regional Science*, 102(6), 1215–1232. <https://doi.org/10.1111/pirs.12764>
- Bertacchini, E. E., Dalle Nogare, C., & Scuderi, R. (2018). Ownership, organization structure and public service provision: the case of museums. *Journal of Cultural Economics*, 42(4), 619–643. <https://doi.org/10.1007/s10824-018-9321-9>
- Bianchi, R. V., & Milano, C. (2024). Polycrisis and the metamorphosis of tourism capitalism. *Annals of Tourism Research*, 104. <https://doi.org/10.1016/j.annals.2024.103731>
- Bilynets, I., & Knezevic Cvelbar, L. (2022). Tourist pro-environmental behaviour: The role of environmental image of destination and daily behaviour. *Annals of Tourism Research Empirical Insights*, 3(2). <https://doi.org/10.1016/j.annale.2022.100070>

- Botti, A., & Baldi, G. (2024). Business model innovation and Industry 5.0: a possible integration in GLAM institutions. *European Journal of Innovation Management*. <https://doi.org/10.1108/EJIM-09-2023-0825>
- Bowling, A. (2002). *Research Methods in Health* (2nd ed.). Open University Press.
- Buchczyk, M. (2022). Transforming legacies, habits and futures: reshaping the collection at the Museum of European Cultures. *International Journal of Heritage Studies*, 28(5), 563–577. <https://doi.org/10.1080/13527258.2021.2025143>
- Carvalho, A., & Camacho, C. F. (2023). Addressing Sustainability in Portuguese Museums and Heritage: The Role of Cultural Policies. *Heritage*, 6(12), 7742–7754. <https://doi.org/10.3390/heritage6120407>
- Ceccarelli, S., Cesta, A., Cortellessa, G., De Benedictis, R., Fracasso, F., Leopardi, L., Ligios, L., Lombardi, E., Malatesta, S. G., Oddi, A., Pagano, A., Palombini, A., Romagna, G., Sanzari, M., & Schaerf, M. (2024). Evaluating visitors' experience in museum: Comparing artificial intelligence and multi-partitioned analysis. *Digital Applications in Archaeology and Cultural Heritage*, 33. <https://doi.org/10.1016/j.daach.2024.e00340>
- Cellini, R., Cuccia, T., Ferrante, L., & Lisi, D. (2024). The Quality of Regional Institutional Context and Museum Service Provision: Evidence from Italy. *Italian Economic Journal*, 10(1), 155–195. <https://doi.org/10.1007/s40797-023-00222-w>
- Centorrino, P., Corbetta, A., Cristiani, E., & Onofri, E. (2021). Managing crowded museums: Visitors flow measurement, analysis, modeling, and optimization. *Journal of Computational Science*, 53. <https://doi.org/10.1016/j.jocs.2021.101357>
- Cesário, V., Freitas, J., & Campos, P. (2023). Empowering cultural heritage professionals: designing interactive exhibitions with authoring tools. *Museum Management and Curatorship*. <https://doi.org/10.1080/09647775.2023.2209896>
- Chakravarty, K. (2008). The Living Museum Movement in India From Heritage Interpretation to Heritage Action? *D Ia Logue: In d Ia-B Erl In*, 67(1), 137–150. https://www.academia.edu/33889497/The_Living_Museum_Movement_in_India_From_Heritage_Interpretation_to_Heritage_Action_In_Dialogue_India_Berlin
- Cheng, Y., Zhu, K., Zhou, Q., El Archi, Y., Kabil, M., Remenyik, B., & Dávid, L. D. (2023). Tourism Ecological Efficiency and Sustainable Development in the Hanjiang River Basin: A Super-Efficiency Slacks-Based Measure Model Study. *Sustainability (Switzerland)*, 15(7). <https://doi.org/10.3390/su15076159>
- Choi, B., & Kim, J. (2021). Changes and challenges in museum management after the COVID-19 pandemic. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2). <https://doi.org/10.3390/joitmc7020148>
- Clements, J. (2024). Private art museums and their local creative communities: A case study of Mona. City, *Culture and Society*, 36. <https://doi.org/10.1016/j.ccs.2023.100565>
- Corona, L. (2023). Digitization for the visibility of collections. *Collection and Curation*, 42(3), 73–80. <https://doi.org/10.1108/CC-06-2022-0024>
- Corona, L. (2024). Stored collections of museums: an overview of how visible storage makes them accessible. *Collection and Curation*. <https://doi.org/10.1108/CC-06-2023-0020>
- Dang, R., Liu, R., & Luo, T. (2020). Lighting quantity indexes for lighting paintings in museums. *Building and Environment*, 182. <https://doi.org/10.1016/j.buildenv.2020.107142>
- Derda, I. (2023). Museum exhibition co-creation in the age of data: Emerging design strategy for enhanced visitor engagement. *Convergence*. <https://doi.org/10.1177/13548565231174597>

- Dirgantoro, B. P., & Martinez, J. J. L. (2016). Extending Information On Museum Artefacts Through Augmented Reality: Indonesian National Museum Case. *Journal of Game, Game Art and Gamification*, 01(01), 7–13. <https://doi.org/10.21512/jggag.v1i1.7243>
- Elnaggar, A., Said, M., Kraševac, I., Said, A., Grau-Bove, J., & Moubarak, H. (2024). Risk analysis for preventive conservation of heritage collections in Mediterranean museums: case study of the museum of fine arts in Alexandria (Egypt). *Heritage Science*, 12(1). <https://doi.org/10.1186/s40494-024-01170-z>
- Florido-Benítez, L. (2023). The location of airport an added value to improve the number of visitors at US museums. *Case Studies on Transport Policy*, 11. <https://doi.org/10.1016/j.cstp.2023.100961>
- Furferi, R., Di Angelo, L., Bertini, M., Mazzanti, P., De Vecchis, K., & Biffi, M. (2024). Enhancing traditional museum fruition: current state and emerging tendencies. *Heritage Science*, 12(1), 1–38. <https://doi.org/10.1186/s40494-024-01139-y>
- Gao, B., & Yu, S. (2024). Upgrading museum experience: Insights into offline visitor perceptions through social media trends. *Emerging Trends in Drugs, Addictions, and Health*, 4. <https://doi.org/10.1016/j.etdah.2023.100137>
- Garau-Vadell, J. B., Orfila-Sintes, F., & Rejón-Guardia, F. (2023). Residents' willingness to become peer-to-peer tourism experience providers in mass tourism destinations. *Journal of Destination Marketing and Management*, 27. <https://doi.org/10.1016/j.jdmm.2022.100745>
- Girolami, M., La Rosa, D., & Barsocchi, P. (2024). A CrowdSensing-based approach for proximity detection in indoor museums with Bluetooth tags. *Ad Hoc Networks*, 154. <https://doi.org/10.1016/j.adhoc.2023.103367>
- Gonsales, F. I. (2021). Social marketing for museums: an introduction to social marketing for the arts and culture sector. *RAUSP Management Journal*, 56(3), 314–333. <https://doi.org/10.1108/RAUSP-08-2020-0194>
- Gozzoli, R. B., Gozzoli, P. C., & Wattanacharoensil, W. (2024). Resilience model for a destination support: Pattaya, Thailand. *Heliyon*, 10(4). <https://doi.org/10.1016/j.heliyon.2024.e26599>
- Hafidz, Q., & Sharma, M. (2022). Understanding the Potential of Indonesian Museums. *Jurnal AKSI (Akuntansi Dan Sistem Informasi)*, 7(2). <https://doi.org/10.32486/aksi.v7i2.413>
- Hansson, K., & Dahlgren, A. N. (2022). Choice, Negotiation, and Pluralism: a Conceptual Framework for Participatory Technologies in Museum Collections. *Computer Supported Cooperative Work: CSCW: An International Journal*, 31(4), 603–631. <https://doi.org/10.1007/s10606-022-09441-8>
- Hansson, P., & Öhman, J. (2022). Museum education and sustainable development: A public pedagogy. *European Educational Research Journal*, 21(3), 469–483. <https://doi.org/10.1177/14749041211056443>
- Ikasari, H. (2021). Strategies to Improve the Attractiveness of Sam Poo Kong Temple As Cultural Tourism Site of Semarang City, Central Java, Indonesia. *Journal of Indonesian Tourism and Development Studies*, 9(1), 1–9. <https://doi.org/10.21776/ub.jitode.2021.009.01.01>
- Istvandity, L., Baker, S., & Long, P. (2024). Creative futures for cultural heritage: a typology of creative practice in the GLAM sector – towards a creative heritage approach. *Museum Management and Curatorship*, 1–17. <https://doi.org/10.1080/09647775.2024.2331444>

- James-Williamson, S. A., Dolphy, J. E., & Parker, S. Y. (2024). Absence heritage: A critical analysis for awareness, preservation and resilience. *International Journal of Geoheritage and Parks*, 12(1), 1–19. <https://doi.org/10.1016/j.ijgeop.2023.12.001>
- Kaplun, D., Romanov, S., Ipalakova, M., Daineko, Y., Bolatov, Z., & Tsoy, D. (2024). Application of immersive technology in a museum. *Procedia Computer Science*, 231, 385–390. <https://doi.org/10.1016/j.procs.2023.12.222>
- Kim, D. S., Lee, J. Y., Chun, B. S., Hwang, G. Y., Paek, W. K., & Byun, B. K. (2021). SMEP (Science Museum Exhibition Platform) for Sharing and exchange system of natural history collection. *Journal of Asia-Pacific Biodiversity*, 14(3), 299–301. <https://doi.org/10.1016/j.japb.2021.07.003>
- King, E., Smith, M. P., Wilson, P. F., Stott, J., & Williams, M. A. (2023). Creating Meaningful Museums: A Model for Museum Exhibition User Experience. *Visitor Studies*, 26(1), 59–81. <https://doi.org/10.1080/10645578.2022.2129944>
- Kłudkiewicz, K. (2021). Regional identity and national identity. Provincial museums in Prussia at the turn of the twentieth century. *Museum History Journal*, 14(1–2), 51–68. <https://doi.org/10.1080/19369816.2021.1990594>
- Koukoulis, K., Koukopoulos, D., & Tzortzi, K. (2022). Connecting the museum to the city environment from the visitor’s perspective. *Applied Computing and Informatics*, 18(3–4), 221–234. <https://doi.org/10.1016/j.aci.2019.09.001>
- Koval, V., Arsawan, I. W. E., Suryantini, N. P. S., Kovbasenko, S., Fisunen, N., & Aloslyna, T. (2022). Circular Economy and Sustainability-Oriented Innovation: Conceptual Framework and Energy Future Avenue. *Energies*, 16(1). <https://doi.org/10.3390/en16010243>
- Lacoe, J., Painter, G. D., & Williams, D. (2020). Museums as Classrooms: The Academic and Behavioral Impacts of “School in the Park.” *AERA Open*, 6(3). <https://doi.org/10.1177/2332858420940309>
- Lavy, B. L., Zavar, E., & Tamima, S. (2023). Heritage as businesses: COVID-19 disruptions to Texas museums, heritage sites, parks, and protected places and their responses to evolving guidance. *International Journal of Geoheritage and Parks*, 11(4), 652–668. <https://doi.org/10.1016/j.ijgeop.2023.11.004>
- Loach, K., & Rowley, J. (2022). Cultural sustainability: A perspective from independent libraries in the United Kingdom and the United States. *Journal of Librarianship and Information Science*, 54(1), 80–94. <https://doi.org/10.1177/0961000621992824>
- Luo, D., Doucé, L., & Nys, K. (2024). Multisensory museum experience: an integrative view and future research directions. *Museum Management and Curatorship*. <https://doi.org/10.1080/09647775.2024.2357071>
- Magliacani, M., & Sorrentino, D. (2021). Embedding sustainability dimensions in university collections management: a “scientific journey” into a natural history museum. *Journal of Cultural Heritage Management and Sustainable Development*, 11(4), 395–410. <https://doi.org/10.1108/JCHMSD-03-2020-0044>
- Mardiani, E., & Iswahyudi, M. S. (2023). Mapping the Landscape of Artificial Intelligence Research: A Bibliometric Approach. *West Science Interdisciplinary Studies*, 01(08), 606–618.
- McCabe, S. (2024). Theory in tourism. *Annals of Tourism Research*, 104. <https://doi.org/https://doi.org/10.1016/j.annals.2023.103721>
- McCarthy, B., Trace, A., O’Donovan, M., Brady-Nevin, C., Murphy, M., O’Shea, M., & O’Regan, P. (2018). Nursing and midwifery students’ stress and coping during their

- undergraduate education programmes: An integrative review. *Nurse Education Today*, 61, 197–209. <https://doi.org/10.1016/j.nedt.2017.11.029>
- Medina-Chavarria, M. E., Gutiérrez, A., & Saladié, Ò. (2024). Managing visitor flows in protected areas in a context of changing mobilities: An analysis of challenges, responses, and learned lessons during the pandemic in Tarragona Province (Spain). *International Journal of Geoheritage and Parks*, 12(1), 135–146. <https://doi.org/10.1016/j.ijgeop.2024.01.005>
- Movahed, A. B., Aliahmadi, A., Parsanejad, M., & Nozari, H. (2023). A systematic review of collaboration in supply chain 4.0 with meta-synthesis method. *Supply Chain Analytics*, 4. <https://doi.org/10.1016/j.sca.2023.100052>
- Najda-Janoszka, M., & Sawczuk, M. (2023). Exploring engagement in value creation—a multi-stakeholder perspective in the museum context. *Museum Management and Curatorship*, 38(1), 92–109. <https://doi.org/10.1080/09647775.2022.2158910>
- Nguyen, L. (2021). Factors Influencing Museum Visits: An Empirical Study in Vietnam. *Journal of Asian Finance, Economics and Business*, 8(8), 217–227. <https://doi.org/10.13106/jafeb.2021.vol8.no8.0217>
- Ning, Y., & Liu, S. (2024). Research on Strategies for the Integrated Development of Culture and Tourism in Hezhou City under the Background of High-Quality Tourism Development. *Academic Journal of Humanities & Social Sciences*, 7(1), 164–169. <https://doi.org/10.25236/ajhss.2024.070125>
- O’Hagan, L. (2021). Instagram as an exhibition space: reflections on digital remediation in the time of COVID-19. *Museum Management and Curatorship*, 36(6), 610–631. <https://doi.org/10.1080/09647775.2021.2001362>
- Olivares, A., & Piatak, J. (2022). Exhibiting Inclusion: An Examination of Race, Ethnicity, and Museum Participation. *Voluntas*, 33(1), 121–133. <https://doi.org/10.1007/s11266-021-00322-0>
- Ortanderl, F., & Bausch, T. (2023). Wish you were here? Tourists’ perceptions of nature-based destination photographs. *Journal of Destination Marketing and Management*, 29. <https://doi.org/10.1016/j.jdmm.2023.100799>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *In The BMJ* (Vol. 372). BMJ Publishing Group. <https://doi.org/10.1136/bmj.n71>
- Pennings, M. (2015). Art Museums and the Global Tourist: Experience Centers in Experience scapes. *Athens Journal of Tourism*, 2(4), 209–221. <https://doi.org/10.30958/ajt.2-4-1>
- Perez-Bermejo, J. A., Reisman, S. J., Ma, J., Carrison-Stone, D., Cerrito, C., Ribeiro, A. J. S., Conklin, B. R., & Yu, K. (2024). Give heart cells a beat: An interactive museum exhibit that synchronizes stem cell-derived cardiomyocytes to visitors’ heartbeat. *Stem Cell Reports*, 19(3), 426–433. <https://doi.org/10.1016/j.stemcr.2024.01.004>
- Pickering, M. (2024). ‘Qualifying the sacred: recognising First Nations cultural values in the management and repatriation of museum collections.’ *Museum Management and Curatorship*, 39(1), 20–35. <https://doi.org/10.1080/09647775.2023.2283832>

- Popoli, Z., & Derda, I. (2021). Developing experiences: creative process behind the design and production of immersive exhibitions. *Museum Management and Curatorship*, 36(4), 384–402. <https://doi.org/10.1080/09647775.2021.1909491>
- Pung, J. M., Houge Mackenzie, S., & Lovelock, B. (2024). Regenerative tourism: Perceptions and insights from tourism destination planners in Aotearoa New Zealand. *Journal of Destination Marketing and Management*, 32. <https://doi.org/10.1016/j.jdmm.2024.100874>
- Reitstätter, L., & Christidou, D. (2024). Alone together? Solitary and shared visiting practices of pairs in the art museum. *Museum Management and Curatorship*. <https://doi.org/10.1080/09647775.2024.2312579>
- Rhee, B. A., Pianzola, F., Choi, J., Hyung, W., & Hwang, J. (2022). Visual content analysis of visitors' engagement with an instagrammable exhibition. *Museum Management and Curatorship*, 37(6), 583–597. <https://doi.org/10.1080/09647775.2021.2023902>
- Richards, G. (2024). The curatorial turn in tourism and hospitality. *International Journal of Contemporary Hospitality Management*, 36(13), 19–37. <https://doi.org/10.1108/IJCHM-06-2023-0905>
- Riva, P., & Agostino, D. (2022). Latent dimensions of museum experience: assessing cross-cultural perspectives of visitors from tripadvisor reviews. *Museum Management and Curatorship*, 37(6), 616–640. <https://doi.org/10.1080/09647775.2022.2073560>
- Robaina-Calderín, L., Martín-Santana, J. D., & Muñoz-Leiva, F. (2023). Immersive experiences as a resource for promoting museum tourism in the Z and millennials generations. *Journal of Destination Marketing and Management*, 29. <https://doi.org/10.1016/j.jdmm.2023.100795>
- Roche, J., Barber, G. L., Batlle, M., Bell, L., Hulm, E. M., Lynch, E., Martin, I., McDwyer, E., McLoone, F., Mu, M., Neenan, E. E., & Ryan, C. (2022). Academic writing in museums. *Museum Management and Curatorship*, 37(5), 555–560. <https://doi.org/10.1080/09647775.2021.1961819>
- Russo-Spena, T., Tregua, M., D'Auria, A., & Bifulco, F. (2022). A digital business model: an illustrated framework from the cultural heritage business. *International Journal of Entrepreneurial Behaviour and Research*, 28(8), 2000–2023. <https://doi.org/10.1108/IJEER-01-2021-0088>
- Sahahiri, R. M., Griffin, A. L., & Sun, Q. (2023). Investigating Ecotourism Opportunities Measurements in a Complex Adaptive System: A Systematic Literature Review. In *Sustainability (Switzerland)* (Vol. 15, Issue 3). MDPI. <https://doi.org/10.3390/su15032678>
- Saryusz-Wolska, M., Hochmuth, H., & Stach, S. (2024). Entrepreneurs of memory: Selling history in the GDR Museum shop in Berlin. *Memory Studies*. <https://doi.org/10.1177/17506980231224697>
- Scheyvens, R., Carr, A., Movono, A., Hughes, E., Higgins-Desbiolles, F., & Mika, J. P. (2021). Indigenous tourism and the sustainable development goals. *Annals of Tourism Research*, 90. <https://doi.org/10.1016/j.annals.2021.103260>
- Setiyarti, T., Ratih Anggarwati Dewi, K., Sundari, P., Handayani Denpasar, S., & Semarang, S. (2021). STRATEGI PENGELOLAAN DAN PENGEMBANGAN MUSEUM ARMA SEBAGAI SEBUAH LIVING MUSEUM. *Jurnal STIE Semarang*, 13(1), 152–164. <https://doi.org/10.33747>
- Shaby, N., Peleg, R., & Coombs, I. (2024). Participatory Research with Museum Practitioners: A reflection on the process. *Research in Science Education*. <https://doi.org/10.1007/s11165-024-10167-4>

- Shehata, A. M. A. E.-R., & Mostafa, M. M. I. (2017). Open Museums as a Tool for Culture Sustainability. *Procedia Environmental Sciences*, 37, 363–373. <https://doi.org/10.1016/j.proenv.2017.03.002>
- Sheikh, S. A. H. El. (2020). Factors affecting pre-visit destination image: application on the Grand Egyptian Museum (GEM). *Journal of Humanities and Applied Social Sciences*, 2(3), 215–234. <https://doi.org/10.1108/jhass-11-2019-0075>
- Siegel, L. A., Tussyadiah, I., & Scarles, C. (2023). Exploring behaviors of social media-induced tourists and the use of behavioral interventions as salient destination response strategy. *Journal of Destination Marketing & Management*, 27. <https://doi.org/https://doi.org/10.1016/j.jdmm.2023.100765>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Song, Y., Gilardi, F., & Lam, C. (2024). Building culturally sustainable communities. Community museums and transmedia storytelling. *Museum Management and Curatorship*, 39(1), 2–19. <https://doi.org/10.1080/09647775.2023.2209868>
- Sørensen, F., & Grindsted, T. S. (2021). Sustainability approaches and nature tourism development. *Annals of Tourism Research*, 91, 103307. <https://doi.org/https://doi.org/10.1016/j.annals.2021.103307>
- Specht, I., & Loreit, F. (2021). Empirical Knowledge About Person-Led Guided Tours in Museums: A Scoping Review. *Journal of Interpretation Research*, 26(2), 96–130. <https://doi.org/10.1177/10925872211065653>
- Spence, C. (2020). Scenting the Anosmic Cube: On the Use of Ambient Scent in the Context of the Art Gallery or Museum. In *i-Perception* (Vol. 11, Issue 6). SAGE Publications Ltd. <https://doi.org/10.1177/2041669520966628>
- Sumardi, R., Mahomed, A., & Najib, M. (2021, May 19). Sustainable Tourism Recommendations: Systematic Literature Review. <https://doi.org/10.4108/eai.14-9-2020.2304433>
- Suryawan, T. G. A. W. K., Meryawan, I. W., Sumerta, I. K., & Idayanti, I. D. A. A. E. (2024). The Mediating Role of Positive Emotion in the Nexus of Marketing Strategies and Sustainable Marine Tourism: Study on Coral Reef Conservation Area at Mengiat Beach, Bali. *Jurnal Indonesia Sosial Teknologi*, 5(5). <https://doi.org/https://doi.org/10.59141/jist.v5i5.1056>
- Suryawan, T. G. A. W. K., Putri, C. I. A. V. N., Geriadi, M. A. D., Dwijayanthi, A. A. I., & Miranti, R. (2024). Tri Hita Karana for environmental resilience: Enhancing coral reef conservation and sustainable practices in Mengiat Beach Bali. *Journal of Community Service and Empowerment*, 5(1), 23–33. <https://doi.org/10.22219/jcse.v5i1.29858>
- Suryawan, T. G. A. W. K., Sumerta, I. K., Vataru, I. G. A., & Abdullah, S. (2022). The Impact of Online Reviews and Ratings toward Shopee's Customer Purchase Intention in Gianyar Regency. *JBTI: Jurnal Bisnis: Teori Dan Implementasi*, 13(3), 176–192. <https://doi.org/10.18196/jbti.v13i3.16655>
- Suryawan, T. G. A. W. K., Sumerta, I. K., Widiyanti, A. P. S., & Abdullah, S. (2023). How Product Review, Price and Ease of Transaction Affect Online Purchase Decision: Study of Bukalapak Users in Gelgel Village, Bali. *JBTI: Jurnal Bisnis: Teori Dan Implementasi*, 14(1), 287–305. <https://doi.org/10.18196/jbti.v14i1.18463>
- Tian, F., Li, K., Huang, X., Zhang, X., Wang, N., Song, Y., Zhu, Q., & Li, Y. (2024). An empirical study of virtual museum based on dual-mode mixed visualization: the

- Sanxingdui bronzes. *Heritage Science*, 12(1). <https://doi.org/10.1186/s40494-024-01241-1>
- Tsakoumaki, M. C., Lala, D. M., Tsaroucha, A., & Psalti, A. (2023). Advanced Digitization Methods for the Protection and Dissemination of Cultural Heritage towards Digital transformation: The Archaeological Museum of Delphi. *Procedia CIRP*, 118, 1056–1060. <https://doi.org/10.1016/j.procir.2023.06.181>
- United Nations Department of Economic and Social Affairs. (2024). Sustainable Development: The 17 Goals. United Nations Department of Economic and Social Affairs. <https://sdgs.un.org/goals>
- Väisänen, H. M., Uusitalo, O., & Rynnänen, T. (2023). Towards sustainable servicescape – tourists’ perspectives of accommodation service attributes. *International Journal of Hospitality Management*, 110. <https://doi.org/10.1016/j.ijhm.2023.103449>
- Varutti, M. (2023). The affective turn in museums and the rise of affective curatorship. *Museum Management and Curatorship*, 38(1), 61–75. <https://doi.org/10.1080/09647775.2022.2132993>
- Varutti, M. (2024). Awe in the museum: casting light on the role of the curator. *Museum Management and Curatorship*. <https://doi.org/10.1080/09647775.2024.2331442>
- Wallis, N., & Noble, K. (2023). The slow museum: the affordances of a university art museum as a nurturing and caring space for young children and their families. *Museum Management and Curatorship*. <https://doi.org/10.1080/09647775.2023.2269145>
- Wang, Z., & Meng, J. (2023). Dialogues with cultural heritage via museum digitalisation: developing a model of visitors’ cognitive identity, technological agent, cultural symbolism, and public engagement. *Museum Management and Curatorship*. <https://doi.org/10.1080/09647775.2023.2269164>
- Wen, J., & Ma, B. (2024). Enhancing museum experience through deep learning and multimedia technology. *Heliyon*, e32706. <https://doi.org/10.1016/j.heliyon.2024.e32706>
- Yang, Y., Liu, S., & Song, X. (2023). The Co-creation of Museum Experience Value From the Perspective of Visitor Motivation. *SAGE Open*, 13(4). <https://doi.org/10.1177/21582440231202118>
- Yi, X., Liu, Z., Li, H., & Jiang, B. (2024). Immersive experiences in museums for elderly with cognitive disorders: a user-centered design approach. *Scientific Reports*, 14(1). <https://doi.org/10.1038/s41598-024-51929-4>
- Yudhanto, Y., Pratisto, E. H., Purnomo, F. A., Hidayat, T. N., Haqimi, N. A., & Ardhi, O. D. W. (2024). Design and Development Museum Ticketing System (MTS) with Design Thinking Method. *Procedia Computer Science*, 234, 1212–1219. <https://doi.org/10.1016/j.procs.2024.03.117>