Decentralized Destination Management for Sustainable Tourism with Women Empowerment and Social Inclusion

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Abstract: - Blockchain technology (BC) is a promising assistive tool that could revolutionize destination management and accessible tourism administration while fostering social inclusion. Although there have been conceptual discussions regarding opportunities, challenges, and functionalities of utilizing BC in accessible travel planning, inclusive ticketing systems, personalized services, and equitable resource allocation, there remains a significant need for a robust methodological cost-benefit optimization framework to assess the impact of BC adoption (BCA) in real-world tourism and hospitality (T&H) projects, particularly in social inclusion and administration strategies for equitable experiences. This paper presents a methodological foundation of such a framework, as a structured personalized systematic literature review to find, evaluate, and discuss BCA initiatives for women's empowerment in smart tourism projects and determine the factors that influence the impact of the studies. The findings revealed that BCA in T&H can help in improving fidelity, transparency, and accountability in destination management; in advancing scalability, information sharing, sustainable knowledge, and security in accessible hospitality; and in enhancing anonymity, accessibility, and trust in social inclusion initiatives. The paper's novelty lies in the introduction of a knowledge bibliographic data-mining sequence that decodes, using cost-benefit optimization, publication bias assessment, and text/content analysis classification, the impact of the studies in T&H in terms of key findings, variables, issues, opportunities, implications, and potentiality. T&H sustainability is propelled by BC-based technologies, innovation, and technical administration capabilities, and managers and practitioners will find valuable knowledge to reevaluate destination management issues, accessible hospitality challenges, and social inclusion functionalities and consider the potentiality to address them with BCA for equitable experience strategies.

Key-Words: - Decentralized Finance (DeFi), Destination Management, Accessible Hospitality, Social Inclusion, Sustainable Smart Tourism, Women Empowerment.

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1 Introduction

Smart tourism -the integration of digital technology, IoT, and AI into tourism services- is increasingly used as a tool for women's empowerment, safety enhancement, and economic development. While women make up over 50% of the tourism workforce, they are often concentrated in lower-paid, informal roles, [1], [2]. Smart technologies help bridge this gap by providing digital tools for entrepreneurship, training, and improved safety measures, [3], [4], [5], [6].

Key aspects and issues of smart sustainable tourism and women include empowerment through entrepreneurship and training, safety and security, bridging the digital divide, and challenges, [7], [8], [9]. For empowerment through entrepreneurship and training, smart tourism initiatives, such as the "Safe Tourism Destination for Women" program in India, use digital platforms and training to help women to move from household duties to becoming guides and boat operators. These programs have significantly increased income, allowing for better decision-making power and education for their children.

Technology is essential to improving the security and safety of female employees and visitors, [1], [2], [10], [11]. Safer settings can be created with the use of tools like smart destination management systems and location-based applications, [6], [8], [11], [12], [13]. By giving women in rural regions access to digital skills, marketing tools for goods like crafts

and regional food, and online booking platforms, sustainable tourism promotes gender equality (SDG 5) by closing the digital divide.

Despite advancements, women continue to confront barriers such restricted funding, high-speed internet in remote regions, and enduring gender stereotypes that push them to the periphery of the USD 11 trillion industry, [4], [14], [15], [16], [17]. These issues should be addressed by assistive technological tools for smart, sustainable tourism with women empowerment. Key technologies include IoT for safety, AI for sustainable supply chains, VR/AR for promoting cultural heritage, and blockchain technology (BC) for distributed, decentralized, and sustainable smart tourism, [15], [16].

Three tourism and hospitality (T&H) domain sectors are engaged in a sustainable smart tourism project with women's empowerment, according to bibliography, [17], [18], [19], [20], [21], [22], [23], [24], [25]: Destination Management (DM), which focuses on developing training programs, promoting women's professional advancement, and developing gender-equal tourism policies, [1], [2], [10], [17]; Accessible Hospitality (AH), where intelligent sustainable tourism is assisting in changing attitudes about women's roles in society, [6], [15], [18], [19], [20]; and Social Inclusion (SI), which empowers women by generating employment, increasing income, and fostering leadership through community-based, sustainable, and fair tourism, tackling financial barriers and patriarchal norms by granting women economic independence and decision-making power, positively affecting their families and communities, despite enduring problems like gender inequality in leadership, [1], [2], [21], [22], [23], [24], [25].

Tourism is a vital instrument for accomplishing more general social goals like SDG 5 (Gender Equality), as models like community-based tourism explicitly boost local women's economic engagement and social status, increasing education, health, and self-confidence, [17], [21], [23].

The paper highlights the potential of BC as an assistive tool in smart tourism management, emphasizing its role in addressing DM administration issues, handling AH challenges, and promoting SI initiatives. Blockchain, as a distributed database, offers transparency, knowledge, information sharing, security, and efficiency, which are critical for creating inclusive tourism experiences while addressing technical administration challenges, [26], [27], [28]. Its features, such as shared ledgers, peer-to-peer transmission, pseudonymous transactions, irreversibility of records, and computational logic, enable secure and efficient management of transactions and data, ensuring accessibility for all stakeholders, [26], [29], [30].

In the context of accessible tourism, BC can streamline processes such as ticketing, reservations, and payments, reduce intermediaries and enhance operational performance, [18], [19]. Smart contracts, a key feature of BC, can automate transactions and ensure secure payments, improving customer satisfaction and accessibility, [3], [4], [5], [6], [20]. Additionally, BC-based marketplaces provide low entry barriers, increased competition, and privacy protection, making T&H services more inclusive and accessible to diverse groups, [7], [8], [11], [21].

The BC adoption (BCA) further supports accessible tourism social inclusion initiatives, because it enhances fidelity, integrity, and trust, and provides unique digital assets that can enhance personalization, AI and decentralized finance (DeFi) functionality, and inclusivity, [26], [29], [30]. BCA can be used to create digital souvenirs, provide verifiable proof of donations for conservation efforts, and improve loyalty programs, [3], [7], [16]. According to [5], [9]. and [14] modern technologies, research, and innovation enhancing managerial capabilities and driving hotel sustainability. BC with AI and DeFi functionalities also offer opportunities for creating accessible platforms for hotel bookings and other tourism services, reducing intermediaries, and ensuring secure transactions, [8], [11], [16].

Following the literature, BC could considerably assist the tourism business. It can boost performance, increase customer happiness, and provide competitive benefits, [7], [8], [9], [18]. Even more, BCA could enhance tourism in several ways: platform's assistance could improve the traveler experience; cross-border payments could become quicker and easier; the diversification provided using the BC could protect the currency and strengthen the banking system; and the BC could help reduce overall operating costs. Finally, BC replaces intermediaries, cuts costs, and has the potential to become a record-keeping system for all the activities, [3], [4], [6], [16].

[7], [8], [9], [10], [11] outline potential ways that BC, travel, and hospitality could influence one another in the future and foresee a productive partnership. Additionally, according to [3], [7], [16], [26], [29], and [30], using BC, machine learning, FinTech, and knowledge management can open new possibilities in the travel and hotel industry. According to [3], [7], [8], [9], [16], and [17] the BCA in T&H industry has been classified as follows: inventory management, tracking and maintenance, booking, payments (including tax compliance),

loyalty programs and customized marketing, tokenization, identity and privacy, baggage tracking, smart contracts, smart tourism through decentralized applications, avoidance of intermediation, and action coordination and competition.

Despite these advantages related to BCA for sustainable T&H, (i) destination management issues (such as personalized planning, seamless booking, attractions with interactive experiences, smart hotel services, and data-driven management); (ii) accessible hospitality challenges (namely inclusive experiences for quests with disabilities, improving independence, and simplified controls for room settings), and (iii) social inclusion concerns (like promoting accessible tourism for people with disabilities and encouraging visitor engagement) remain barriers to widespread BCA for sustainable smart tourism with women empowerment, [1], [2].

Hence, to the best of our knowledge, no comprehensive study discusses the BCA contributions on some DN technical administration issues (e.g., personalized planning, seamless booking with online travel agencies/OTA, smart hotel services, etc.), accessible hospitality challenges (e.g., inclusive experience for quests with disabilities, simplified controls for room settings, etc.), and social inclusion concerns (e.g., supporting women's entrepreneurship in tourism, creating community-based tourism, etc.). So, addressing these issues, challenges, and concerns is crucial to fully leverage BC as assistive technology for DM, AH, and SI initiatives in smart tourism management.

1.1 Research Purpose

The proposed methodological systematic literature review (SLR) framework, with content analysis classification (CAC) tools, aims to evaluate the applications, benefits, and challenges of BCA, providing a structured approach to their implementation in the T&H sector, [31], [32], [33], [34]. So, the primary objective of this study (proposed SLR framework) is by bridging the gap between theoretical exploration and practical application, to support the development of digital tourism solutions that face administration technical issues, encounter accessible hospitality challenges, and enhance social inclusion functionalities, [21], [23], [33], [34], [35].

Smarter technologies, like BC and AI, innovation, personalized planning, interactive experiences, and ICT-based managerial capabilities driving T&H sustainability and support DM, AH, and SI strategies for equitable experience, [17], [19], [23]. Additionally, OTAs, as digital marketplaces connecting travelers with accommodations, acting as middlemen that list, market, and process bookings for hosts for massive visibility and booking infrastructure DM, [17], [22], [29], [30], [35].

In the presented research, SLR and text/CAC stand-alone autonomous information investigation and knowledge creation tools: identify, through a trusted overview, the state-of-the-art BCA in T&H knowledge with the greatest impact (e.g., the 30 most-cited papers); spot and present the innovation factors (key-findings) behind the impact of the selected bibliographic data; (from the detected key-findings) record and demonstrate managerial capabilities for destination management, administration technical challenges for accessible hospitality, and social inclusion concerns as variables; (from the recorded variables) investigate and gauge BCA issues, risks, limitations, and opportunities (IRLO BCA functions); and (from the IRLO functions) document and propose BCA implications, contributions, questions, potentiality, and outlook (ICQPO BCA application utilities) for equitable experience T&H strategies in smart tourism projects.

The scope of the proposed SLR is defined as "*Identify, spot, record, investigate, and document BCA factors with the greatest impact, and demonstrate their functionality for future use when ambitious and determined management decides to proceed BCA in T&H*", and is supported by a multi-layer research sequence, presented in next Section (Method and Tools), and three embedded research questions.

1.2 Research Questions

The following three research questions (RQs) are formulated to prompt BCA issues in T&H industry.

RQ-1. Nowadays, in the digital era, which are the contemporary destination management, accessible hospitality, and social inclusion core components, operating as key variables (with ICT challenges and BCA functionalities) in T&H industry?

It is important to acknowledge the problems, challenges, and opportunities associated with BCA to support further research. As a result, the subsequent research question (RQ-2) is formulated.

RQ-2. In case of BCA initiatives in smart tourism projects, which are the issues, risks, limitations, and opportunities, as BCA functions associated with the destination management, accessible hospitality, and social inclusion key variables?

What lies ahead for the BCA research and tourism management is another field of study involving implications, obstacles, hypotheses, propositions, potentialities, and future projections. As a result, the subsequent research question (RQ-3) is developed.

RQ-3. Which are, as BCA application utilities, the implications, theoretical contributions (hypotheses, propositions, etc.), questions, potentiality, and outlook of the issues, risks, limitations, and opportunities for T&H strategies in sustainable smart tourism?

To address these three RQs, a comprehensive SLR literature review of peer-reviewed articles on the BCA/tourism and hospitality discipline has been applied in this article.

1.3 Paper's Structure

The rest of the paper is organized as follows: In Section 2 (Method and Tools) the customized PRISMA-adapted protocol and the quantitative and qualitative analysis tools of the proposed SLR framework are illustrated, and a formal cost-benefit optimization framework is presented. In Section 3 (Results), the customized PRISMA protocol is applied with critical consideration, publication bias assessment, and projection to the introduced three RQs. In Section 4 (Discussion), we discuss RQs addressing the following by practical implications commentary. Finally, Section 5 (Conclusions) presents results, accomplishments, findings, practical applications, theoretical implications, contributions, limitations, recommendations, and future research directions.

2 Method & Tools

2.1 Bibliographic Evidence

The scope of this research is supported by a research sequence with key elements: the most influential bibliographic data and the three research questions, [31], [34]. Hence, the proposed structured methodology (main paper's novelty) is the five-layer research sequence:

- SLR selection of (BCA, T&H)-relative bibliographic data and identify those with the greatest impact ("seven most-cited papers") →
- Spotting the innovation factors through text/CAC ("SLR key-findings") as the impact-cause →
- Recording of the T&H thematic areas which, according to our literature research, show the greatest and best prospects for acceptance of BC technology ("administration and social inclusion variables") (RQ-1 addressing) →
- Investigation of IRLO ("issues, risks, limitations, and opportunities") in BCA initiatives (RQ-2 addressing) →
- Documentation of ICQPO ("implications, contributions, questions, potentiality, and outlook") (RQ-3 addressing)

Following a hybrid research approach, our method integrates SLR with quantitative, text/CAC, and qualitative analysis. In particular, the first step involves quantitative analysis to identify the seven most-cited papers in T&H that met all inclusion criteria for eligibility and did not meet any exclusion criteria. Subsequently, the second step incorporate text/CAC analysis on the screened top-cited papers. Following steps are referred to spotting the innovation factors behind (SLR key-findings), recording T&H thematic areas with the greatest potential to adopt BC (administration and social inclusion variables), investigating IRLO (BCA functions), documenting ICQPO (BCA application utilities), and demonstrating BCA functionalities in T&H industry with qualitative analyses and commentary.

Hence, a simple nine-steps flowchart of our methodology is as follows:

Step 1: SLR/personalized PRISMA (seven most-cited papers in BCA/T&H)
Step 2: Text/CAC analysis of the seven most-cited papers
Step 3: Spotting innovation factors (SLR key-findings)
Step 4: Recording administration and social inclusion variables operated as challenges and functionalities in T&H (RQ-1 addressed)
Step 5: Investigating issues, risks, limitations, and opportunities (RQ-2 addressed)
Step 6: Documenting implications, theoretical contributions, questions, potentiality, and outlook (RQ-3 addressed)
Step 7: Qualitative analysis (T&H sustainability) and commentary (T&H strategy for equitable experiences)

Three methodology criteria are employed to guarantee that the maximum number of articles about BCA and T&H would be found, [32], [33].

1st Methodology Criterion (Selection of Methodology). Using the Preferred Re-porting Items for Systematic Reviews and Meta-Analyses (PRISMA) technique to obtain final articles is the first requirement. PRISMA is a systematic literature review process based on evidence that involves identification, screening, eligibility, and inclusion to systematically increase the likelihood of discovering the most relevant articles, [31], [32], [33].

2nd Methodology Criterion (Selection of Databases). The second criterion pertains to the scientific content database that were used for the article search. The Clarivate Analytics/Web of Science database was selected, [32]. The inclusion and exclusion criteria for selecting articles were determined using the databases as "SLR keywords" to ensure the scientific reliability of the article.

3rd Methodology Criterion (Selection of Keywords). Using the right keywords is the third requirement to record the greatest number of related articles, [33]. The following list of query terms used in this research.

The query terms:
"Destination Management" OR "Accessible Hospitality" OR "Social Inclusion"
AND
"Women"
AND
"Blockchain Technology Adoption"

The inclusion and exclusion criteria for selecting articles were determined using the query terms as "SLR keywords" to ensure the BCA-T&H discipline-relativity of the article.

The following list presents the metadata terms range of the studies (time-frame), data source language, and search field. So, the time-frame for the systematic search procedure was defined as being from 2010 to 2025 to ensure coverage of re-cently available knowledge concerning BCA and the two thematic areas in T&H. The data source language for the publications was English. Finally, according to SLR guidelines, [31], our search was conducted with the metadata terms "title", "abstract", and "keywords".

The metadata terms:
Time-frame: 2010-2025
Data source language: English
Search field: "Title", "Abstract", "Keywords"

2.2 Formal Cost-Benefit Optimization Framework

While the previous 2.1 sub-section provides qualitative and bibliographic evidence for blockchain's benefits, a formal cost-benefit optimization framework enables T&H managers to quantitatively assess whether the expected benefits of BCA outweigh the associated costs. This is especially important given the document's acknowledgment that capital-intensive investments deter many T&H companies from adopting BC.

Model Structure

Let us define the following variables for a T&H organization considering BCA:

- C_initial: Initial investment cost (hardware, software, training)
- C_operational: Ongoing operational costs (maintenance, energy, transaction fees)
- B_efficiency: Annual monetary value of efficiency gains (e.g., reduced transaction times, lower labor costs)
- B_trust: Annual monetary value of increased trust (e.g., higher bookings due to improved reputation)
- B_inclusion: Annual monetary value of social inclusion and women empowerment (e.g., new market segments, grants, or incentives)
- B_other: Other quantifiable benefits (e.g., regulatory compliance, reduced fraud)
- T: Time horizon for analysis (years)
- r: Discount rate (reflecting the time value of money)

The Net Present Value (NPV) of BCA is:

NPV = [\sum_{t=1}^{T} \frac{(B_{efficiency} + B_{trust} + B_{inclusion} + B_{other})t - (C{operational})t}{(1 + r)^t}] - C{initial}

Decision rule:

- If NPV > 0, blockchain adoption is economically justified.
- If NPV < 0, the investment is not justified under current assumptions.

Example implementation

Suppose a mid-sized hotel group is considering BC for seamless booking and women-empowering entrepreneurship platforms:

- C_initial = $200,000
- C_operational = $30,000/year
- B_efficiency = $40,000/year (labor and OTA fee savings)
- B_trust = $15,000/year (increased bookings from improved transparency)
- B_inclusion = $10,000/year (new grants and market segments)
- B_other = $5,000/year (reduced fraud)
- T = 5 years
- r = 5% (0.05)

Calculate NPV:

- Total annual benefit = $40,000 + $15,000 + $10,000 + $5,000 = $70,000
- Annual net benefit = $70,000 - $30,000 = $40,000
- Present value of annual net benefit over 5 years:
  - o PV = $40,000 * [1 - (1 + 0.05)^-5] / 0.05 ≈ $40,000 * 4.3295 ≈ $173,180
- NPV = $173,180 - $200,000 = -$26,820

Interpretation:

- The investment is not justified under these assumptions. However, if benefits increase (e.g., more grants, higher efficiency), or costs decrease, the NPV could become positive.

How this cost-benefit optimization methodology improves the suggested research

• Closes the gap between qualitative claim and quantitative judgment.
• Allows managers to base investment decisions on data.
• Supports policy advocacy by quantifying the social and economic worth of women's empowerment and participation.
• Allows scenario analysis (e.g., what if funds increase, or operating costs go down?).

Practical actions for T&H practitioners

• Gather organization-specific data for each variable.
• Use the NPV calculation to analyze BC projects.
• Test a range of scenarios by adjusting assumptions (e.g., larger benefits of inclusion, lower costs).
• Use outcomes to guide board-level decisions or grant applications.

Conclusion

By integrating a cost-benefit optimization framework, a formal, quantitative tool for evaluating BCA in T&H was provided. This enhancement supports more rigorous and evidence-based decisions. Additionally, it aligns with the document's goals of promoting sustainable, inclusive, and women-empowering destination management.

3 Results

Our SLR research focused on four T&H thematic areas (women and entrepreneurship, women and FinTech, women and digital transformation, and women and sustainable entrepreneurship performance/SEP) that indicate significant maturity for BCA acceptance, [1], [5], [11], [26], [29], [30] (Figure 1).

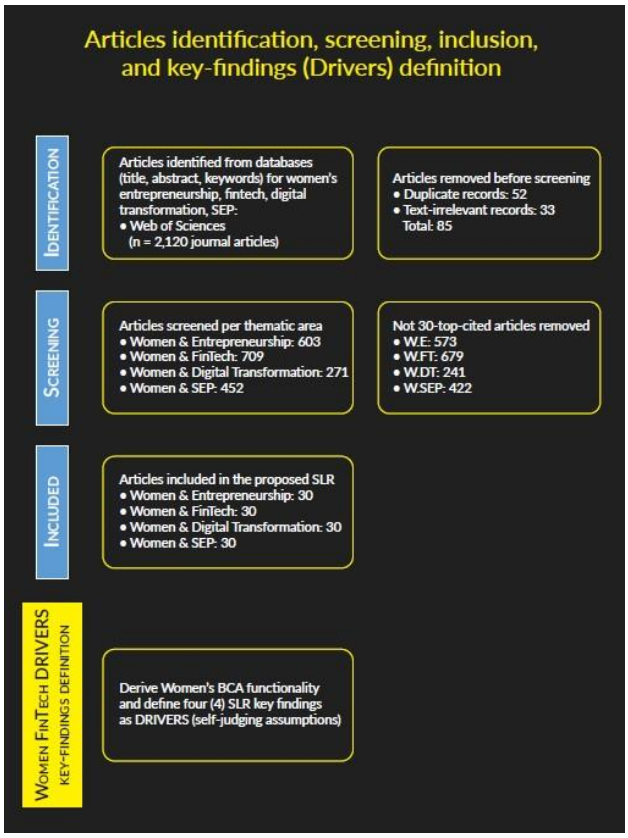


Fig. 1: Sustainable tourism framework: PRISMA-adapted diagram
Source: created by the authors

Initially, 2,120 articles related to "women" and "BCA" and "destination management" or "accessible hospitality" or "social inclusion" were identified. Then, 85 duplicate and text-irrelevant articles were removed before screening. Following, the remaining articles were projected to the four thematic areas (entrepreneurship, fintech, digital transformation, and SEP) for screening. Subsequently, 30 of the most-cited articles were included in the proposed SLR for each thematic area. Finally, a text/CAC analysis of these 30 most-cited articles spotted four key-findings as the cause of their impact.

3.1 The SLR Key-findings

The four (4) spotted innovation factors considered as papers' impact mainspring (characterized as SLR key-findings in our framework), after a text/CAC analysis with self-judging assumptions, are as follows:

Key-finding #1: Smart contract utilization advances performance, accessibility, trust, and transparency.

Key-finding #2: Adopting cryptocurrencies enhance efficiency, performance, and privacy.

Key-finding #3: Same-data information and knowledge sharing promotes economic efficiency,

security, information sharing, boosting regulatory functions, and cutting costs and improves fidelity, traceability, faithfulness, sustainability, sustainable knowledge, and accountability.

Key-finding #4: Digital transactions facilitate obey-the-rules transparency, boosting legal regulatory functions, and foster accessibility and strengthens legal functions, loyalty, commitment, transparency, decentralization, direct peer-to-peer transactions, cutting costs, knowledge, and integrity.

3.2 The DM, AH, and SI Key Variables

From the above four key-findings (sustainable smart tourism SLR drivers) and our text/CAC analysis, the following key variables, as sustainable T&H domain application areas with BCA functionality (RQ-1), are produced:

• Five (5) destination management variables: (PP) Performance Planning (from key-findings #1, #2, #3, and #4); (SB) Seamless Booking (from key-findings #1 and #3); (IE) Attractions with Interactive Experiences (from key-findings #3 and #4); (SS) Smart Hotel Services (from key-findings #1, #2, and #4); and (DM) Data-driven Management (from key-findings #3 and #4) (Figure 2).

• Four (4) accessible hospitality variables: (IE) Inclusive Experiences for guests with disabilities (from key-findings #3 and #4); (II) Improving Independence through features like text-to-speech (from key-findings #3 and #4); (DC) Digital Communication (from key-findings #2, #3, and #4); and (SC) Simplified Controls for room settings (from key-findings #1, #2, #3, and #4) (Figure 2).

• Four (4) social inclusion variables: (WE) Supporting Women's Entrepreneurship in tourism (from key-findings #1 and #3); (CT) Creating Community-based Tourism (from key-findings #3 and #4); (AT) Promoting Accessible Tourism for people with disabilities (from key-findings #1, #2, and #3); and (VE) Encourage Visitor Engagement (from key-findings #3 and #4) (Figure 2).

Comments: The RQ-1 "Nowadays, in the digital era, which are the contemporary destination management, accessible hospitality, and social inclusion core components operating as key variables (with ICT challenges and BCA functionalities) in T&H industry?" has been ad-dressed and domain application areas where BCA is widespread for a sustainable T&H industry are defined.

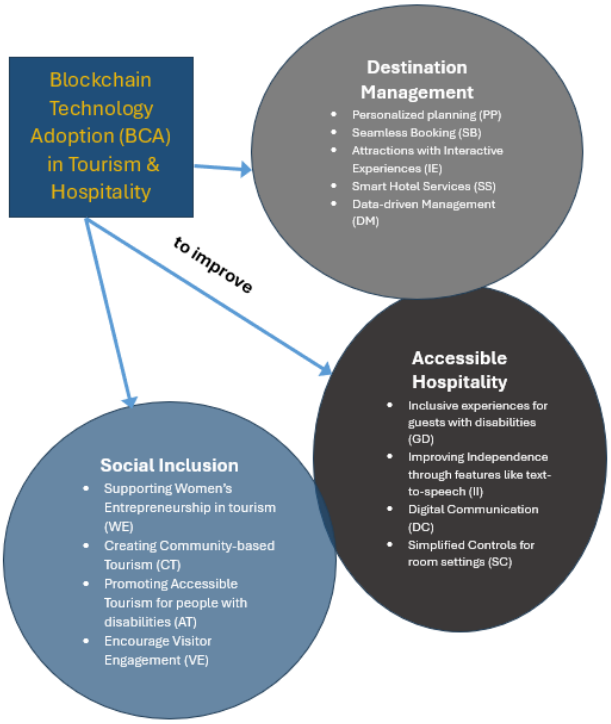


Fig. 2: Sustainable smart tourism: The key variables (core components) in destination management, accessible hospitality, and social inclusion.
Source: created by the authors

3.3 The IRLO BCA Functions

From the above key variables and text/CAC analysis, the following issues, risks, limitations, and opportunities, as BCA IRLO functions (RQ-2), are produced:

• Ten (10) IRLO functions from the five DM variables: Security risks (from SB and DM); Trust (from PP, SB, and DM); Transparency (from SB and GD); Privacy (from PP); Loyalty (from GD and SS); Integrity (from SB, SS, and DM); Fidelity (from GD); (sustainable) Knowledge (from PP, SB, SS, and DM); Information Sharing (from SB, SS, and DM); and Traceability (from DM).

• Eight (8) IRLO functions from the four AH variables: Faithfulness (from IE); Accountability (from II and DC); Transparency (from GD, DC, and SC); Privacy (from GD and SC); Loyalty (from GD and SS); Integrity (from SB, SS, and DM); Fidelity (from GD); and (sustainable) Knowledge (from GD, II, DC, and SC).

• Eight (8) IRLO functions from the four SI variables: Security risks (from AT); Trust (from WE, CT, AT, and VE); Privacy (from AT); Integrity (from WE and AT); Traceability (from CT and VE); Anonymity (from AT); Faithfulness (from CT and VE); and Accessibility (from WE, CT, AT, and VE).

Comments: The RQ-2 "In case of BCA initiatives in smart tourism projects, which are the issues, risks, limitations, and opportunities, as BCA functions associated with the destination management, accessible hospitality, and social inclusion key variables?" has been addressed.

3.4 The ICQPO BCA Application Utilities

From the above IRLO functions and text/CAC analysis, the following BCA implications, contributions, questions, potentiality, and outlook, as BCA ICQPO application utilities for T&H strategies in smart tourism (RQ-3), are documented and proposed.

• Seven (7) ICQPO application utilities from the ten DM IRLO functions: Decentralization enhances the sustainability of T&H projects and supports women's empowerment (from transparency, sustainable knowledge, information sharing, and integrity); How to protect data subjects against data harm upgrades T&H sustainability and women empowerment (from security risks, privacy, and faithfulness); Governance and internal control advances T&H sustainability and women empowerment (from security risks, integrity, and loyalty); auditability enhances T&H sustainability (from traceability, trust, and fidelity); Direct peer-to-peer transactions via cryptocurrencies eliminate middlemen, reduce transaction time, and strengthen T&H sustainability (from security risks, trust, and transparency); Holding companies accountable for their sustainability claims refines T&H sustainability (from fidelity and sustainable knowledge); and Capital-intensive investment deters most T&H companies from adopting BC affecting sustainable smart tourism projects with women's empowerment (from trust, privacy, information sharing, and fidelity).

• Eight (8) ICQPO application utilities from the eight AH IRLO functions: Decentralization improves T&H projects' sustainability and supports women's empowerment (from transparency, sustainable knowledge, and integrity); How to protect data subjects against data harm upgrades T&H sustainability and women empowerment (from privacy and faithfulness); Governance and internal control advances T&H sustainability and women empowerment (from integrity and loyalty); auditability enhances T&H sustainability (from fidelity and accountability); Direct peer-to-peer transactions via cryptocurrencies eliminate middlemen, reduce transaction time, and strengthen T&H sustainability (from faithfulness, loyalty, and transparency); Holding companies accountable for their sustainability claims refines T&H sustainability (sustainable knowledge, faithfulness, and ac-countability); Capital-intensive investment deters most T&H companies from adopting BC affecting sustainable smart tourism projects with women empowerment (from fidelity); and Scalability boosts women empowerment (from integrity, sustainable knowledge, and ac-countability).

• Five (5) ICQPO application utilities from the eight SI IRLO functions: How to protect data subjects against data harm upgrades T&H sustainability and women empowerment (from security risks, privacy, and faithfulness); Governance and internal control advances T&H sustainability and women empowerment (from security risks and integrity); auditability enhances T&H sustainability (from traceability, anonymity, and accessibility); Direct peer-to-peer transactions via cryptocurrencies eliminate middlemen, reduce transaction time, and strengthen T&H sustainability (from security risks and trust); and scalability boosts women's empowerment (from integrity, traceability, accessibility, and anonymity).

Comments. The RQ-3 "Which are, as BCA application utilities, the implications, theoretical contributions (hypotheses, propositions, etc.), questions, potentiality, and outlook of the issues, risks, limitations, and opportunities for T&H strategies in sustainable smart tourism?" has been addressed.

Addressing the implications, theoretical contributions, questions, potentiality, and outlook on account of BCA application utilities is crucial to fully leverage BC as assistive technology with sound destination management [22], [26], accessible hospitality [10], [18], [19], [20], and social inclusion functionalities [17], [21] in smart tourism projects [7], [8], [11], [12], [15].

Notes: Accessible hospitality is about utilizing technology (IoT, mobile apps, voice commands, in-room tablets) to offer inclusive experiences for guests with disabilities. It has features like text-to-speech, digital communication, and simpler controls for room settings. It also boosts staff efficiency by automating duties and offering real-time visibility into guest needs, making travel more seamless and equal for everybody.

Online travel agencies (OTAs; e.g., Airbnb, Booking.com, VRBO, Expedia, etc.) are online platforms connecting travelers with accommodation in sustainable smart T&H. They solve destination management complexity and concerns using sync tools. They act as intermediaries listing, marketing and processing bookings for hosts, taking commissions (about 3%) for vast exposure and

booking infrastructure. But if you have many OTA's, you must use sync tools.

Technology-driven tourism activities leverage digital resources, such as apps, AI, VR/AR, and automation, to craft personalized and immersive travel journeys from discovery to on-site exploration, offering personalized planning, seamless booking (e.g., OTAs), interactive experiences (AR museum guides, virtual tours), smart hotel services (robot delivery, mobile check-in), and data-driven management.

3.5 Derived Qualitative Assessment (Driving Factors for T&H Sustainability)

Analyzing the SLR derivative information the proposed sequence "key variables as sustainable domain application areas where BCA is widespread in T&H industry → IRLO as BCA functions → ICQPO as BCA application utilities" was assessed qualitatively and documented as integrated accumulated knowledge in tabular (Table 1 and Table 2) and graphical format (Figure 3, Figure 4, Figure 5, Figure 6, Figure 7, and Figure 8). The derived information can be characterized as driving factors for T&H sustainability in smart tourism projects, [13], [17].

Table 1. Sustainable smart tourism driving factors: The effect of fourteen (14) BCA functions on the three T&H thematic sectors

BCA Functions (RQ-2)	Tourism and Hospitality Thematic Sectors		
	DM	AH	SI
Faithfulness		√	√
Fidelity	√	√	
Accessibility			√
Transparency	√	√	
Trust	√		√
Integrity	√	√	√
Traceability	√		√
Accountability		√	
Loyalty	√	√	
Privacy	√	√	√
Anonymity			√
Security risks	√		√
Knowledge	√	√	
Information sharing	√		

Source: created by the authors

Comments: RQ-2 has been addressed and consequently the ambitious T&H management, that is considering investing in the development BC initiatives in the areas of administration and social inclusion, has a clear picture of the issues, risks, and limitations it will address, as well as the opportunities that will be created. It is important to acknowledge the problems, challenges, and opportunities associated with BCA to support sustainable T&H management and strategies for equitable experiences.

Table 2. Sustainable smart tourism driving factors: The implications, theoretical contributions, questions, potentiality, and outlook, as BCA application utilities, for the three T&H thematic sectors

BCA Application Utilities (RQ-3)	Tourism and Hospitality Thematic Sectors		
	DM	AH	SI
Capital-intensive investment deters most T&H companies from adopting BC affecting sustainable smart tourism projects with women empowerment	√	√	
Decentralization improves T&H projects sustainability and supports women empowerment	√	√	
Scalability boosts women empowerment		√	√
Auditability enhances T&H sustainability	√	√	√
Holding companies accountable for their sustainability claims refines T&H sustainability	√	√	
How to protect data subjects against data harm upgrades sustainability & women empowerment	√	√	√
Governance and internal control advances T&H sustainability and women empowerment	√	√	√
Direct peer-to-peer transactions via cryptocurrencies eliminates middlemen, reduces transaction time, and strengthens T&H sustainability	√	√	√

Source: created by the authors

Comments: The RQ-3 has been addressed and therefore, in the case of investments for the development of BC projects in the areas of T&H administration and social inclusion, the responsible management will have a clear picture of the implications, prospects, and uncertainties it will face, as well as of future development potentiality. It is important to acknowledge unpredictability, consequences, expectations, and future potentiality associated with BCA to support sustainable T&H management and strategies for equitable experiences.

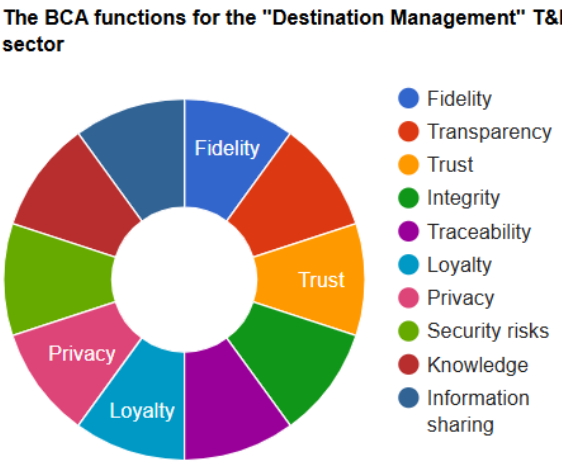


Fig. 3: The BCA functions as driving factors for sustainable T&H destination management
Source: created by the authors

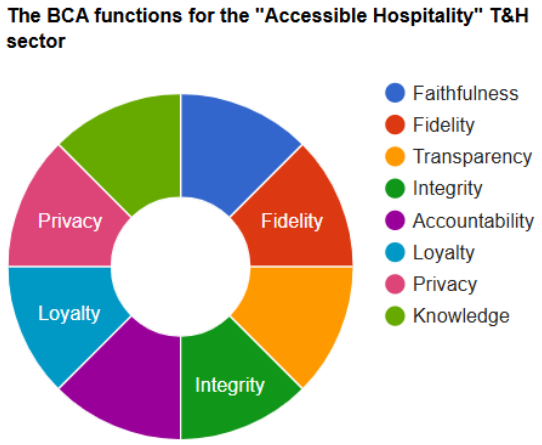


Fig. 4: The BCA functions as driving factors for sustainable T&H accessible hospitality
Source: created by the authors

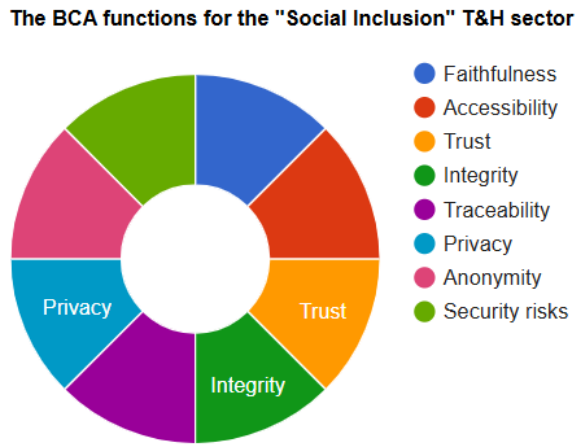


Fig. 5: The BCA functions as driving factors for sustainable T&H social inclusion.
Source: created by the authors

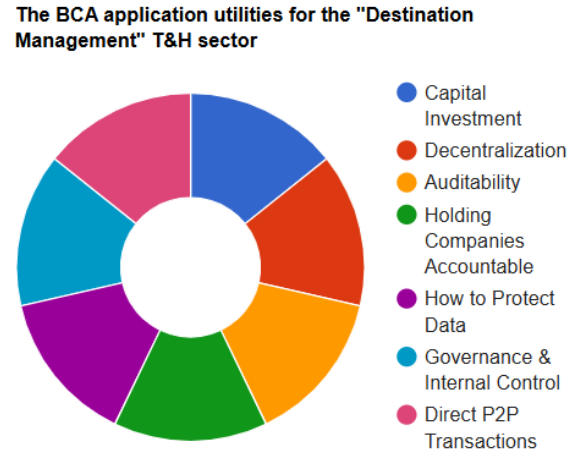


Fig. 6: The BCA application utilities, as driving factors for sustainable T&H destination management.
Source: created by the authors

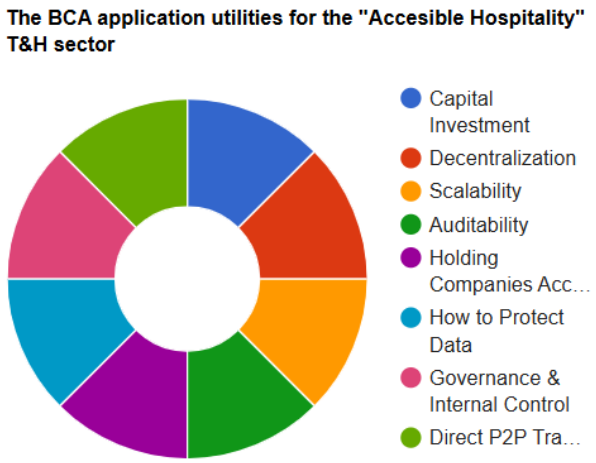


Fig. 7: The BCA application utilities, as driving factors for sustainable T&H accessible hospitality.
Source: created by the authors

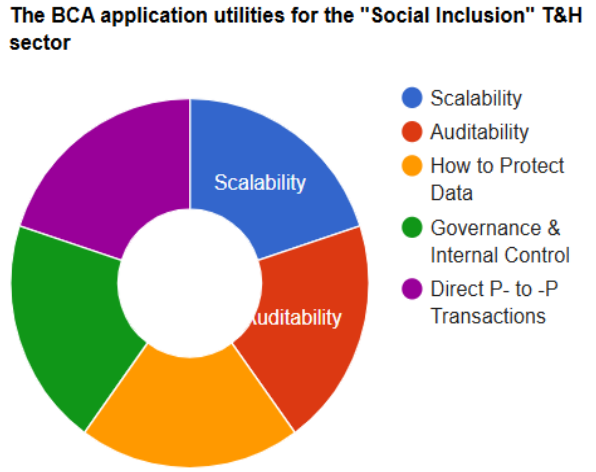


Fig. 8: The BCA application utilities, as driving factors for sustainable T&H social inclusion.
Source: created by the authors

3.6 Publication Bias Assessment

Document's PRISMA-based screening process is limited to article counts and does not include meta-analytic synthesis, sensitivity analysis, or publication bias assessment. So, to enhance the methodological rigor and provide a more robust evidence base, we will incorporate a publication bias assessment and outline how a sensitivity analysis could be integrated, using the context and data provided in the document.

Publication bias assessment

Publication bias occurs when studies with positive or significant results are more likely to be published and included in reviews, potentially skewing the findings. In the context of the reviewed document:

- Funnel plot approach (conceptual):

With 2,120 articles identified, 85 removed, and 30 most-cited articles selected for synthesis, there is a

risk that only highly visible or positive-outcome studies are included.

• Qualitative assessment:

Research reliance on the "most-cited" articles may inherently favor studies with positive or novel findings, as these are more likely to be cited and published in high-impact venues.

To mitigate this, future reviews should consider including a random sample of less-cited or unpublished studies (e.g., dissertations, preprints) to balance the evidence base.

How publication bias assessment enhances the proposed research

• Publication bias assessment: Provides transparency about the potential overrepresentation of positive findings and encourages a more balanced synthesis.

Sensitivity analysis: Demonstrates the stability (or lack thereof) of the review's conclusions, increasing confidence in the results or highlighting areas of uncertainty.

• Actionable steps for future reviews: Extract effect sizes and standard errors from included studies to enable quantitative bias assessment (e.g., funnel plots, Egger's test). Systematically vary inclusion criteria and document the impact on synthesized findings.

By incorporating publication bias assessment and outlining sensitivity analysis, the proposed systematic review process is strengthened. These enhancements provide a more nuanced and reliable synthesis of the literature on blockchain adoption in tourism and hospitality, supporting more evidence-based recommendations for sustainable, inclusive, and women-empowering destination management.

3.7 Inter-coder Reliability Measures

At this point we have identified a methodological gap: the content analysis classification in the document produces categorical labels (key-findings, variables, IRLO functions, ICQPO utilities) but does not report inter-coder reliability, significance tests, or controls for confounding variables. To address this, we will enhance the methodology by incorporating inter-coder reliability measures and outline how significance testing and confounding controls could be integrated, using best practices from qualitative and mixed-methods research.

Integrating inter-coder reliability measures

To ensure the trustworthiness and reproducibility of the content analysis classification, the following steps should be added to the methodology:

• Multiple coders: At least two independent researchers should code the same set of articles using the established classification scheme (key-findings, variables, IRLO functions, ICQPO utilities).

• Coding protocol: Develop a detailed codebook with definitions and examples for each category to standardize the coding process.

• Reliability assessment: Calculate inter-coder reliability using Cohen's Kappa (for two coders) or Krippendorff's Alpha (for more than two coders). These statistics measure the degree of agreement beyond chance.

Significance tests for category frequencies

To determine whether certain categories (e.g., key-findings or variables) are overrepresented or associated with specific outcomes:

• Chi-Square Test: Use a chi-square test to assess whether the distribution of coded categories differs significantly from what would be expected by chance.

Example: If 'trust' is coded as a key-finding in 25 out of 30 articles, while 'privacy' appears in only 10, a chi-square test can determine if this difference is statistically significant.

Controlling for confounding variables

To ensure that observed associations are not due to confounding factors (e.g., publication year, journal impact, geographic focus):

• Stratified analysis: Analyze the frequency of categories within subgroups (e.g., by year, region, or journal type) to check for systematic biases.

• Regression analysis: If quantitative data are available (e.g., citation counts, impact scores), use regression models to control for potential confounders when assessing the relationship between blockchain adoption themes and reported outcomes.

4 Discussion

Addressing research questions using thematic aggregation and expert judgment. The document addresses three key research questions (RQs) related to BCA for sustainable smart T&H projects.

• (RQ-1) The research identifies the main variables in destination management (PP, SB, IE, SS, and DM), accessible hospitality (GD, II, DC, and SC), and social inclusion (supporting women's entrepreneurship/WE, creating community-based tourism/CT, promoting accessible tourism for people with disabilities/AT, and encouraging visitor engagement/VE).

• (RQ-2) The paper identifies fourteen (14) BCA functions (ten destination management-related, eight accessible hospitality-related, and eight social inclusion-related), such as security risks, accountability, trust, transparency, privacy, loyalty,

integrity, fidelity, faithfulness, anonymity, traceability, sustainable knowledge, information sharing, and accessibility.
• (RQ-3) The article outlines eight (8) BCA application utilities (seven for destination management, eight for accessible hospitality, and five for social inclusion), such as capital-intensive investment deters most T&H companies from adopting BC affecting sustainable smart tourism projects with women empowerment, decentralization improves T&H projects sustainability and supports women empowerment, scalability boosts women empowerment, auditability enhances T&H sustainability, holding companies accountable for their sustainability claims refines T&H sustainability, governance and internal control, direct peer-to-peer transactions via cryptocurrencies eliminates middlemen, reduces transaction time, and strengthens T&H sustainability, and how to protect data subjects against data harm (privacy breach, exploitation, disempowerment) upgrades sustainability and women empowerment.

To address the three RQs using thematic aggregation and expert judgment, we have synthesized the paper's systematic literature review findings, content analysis, and qualitative commentary. This approach draws on the authors' expert interpretation of literature, rather than quantitative hypothesis testing or analytical derivations. So, each RQ is addressed by identifying recurring themes, key variables, and expert insights as presented in the document.

RQ-1: What are the contemporary core components (key variables) of destination management, accessible hospitality, and social inclusion in the digital era, especially regarding ICT challenges and blockchain adoption in tourism and hospitality?
Thematic aggregation:
• The document identifies three main thematic sectors: Destination Management (DM), Accessible Hospitality (AH), and Social Inclusion (SI).
• Through content analysis, the following key variables are highlighted:
Destination management: Performance Planning, Seamless Booking, Interactive Experiences, Smart Hotel Services, Data-driven Management.
Accessible hospitality: Inclusive Experiences for guests with disabilities, improving independence (e.g., text-to-speech features), digital communication, simplified controls for room settings.
Social inclusion: Supporting women's entrepreneurship, creating community-based tourism, promoting accessible tourism for people with disabilities, encouraging visitor engagement.
Expert Judgment:
• These variables are considered the most impactful and mature for blockchain adoption, as they address both operational and social challenges in tourism and hospitality.
• The expert synthesis emphasizes that integrating BC with these variables can drive sustainability, inclusivity, and women's empowerment in smart tourism.

RQ-2: What are the issues, risks, limitations, and opportunities (IRLO functions) associated with BCA in these key variables?
Thematic aggregation:
• The document aggregates issues, risks, limitations, and opportunities into IRLO functions for each thematic sector:
Common IRLO functions: Security risks, trust, transparency, privacy, loyalty, integrity, fidelity, faithfulness, anonymity, traceability, sustainable knowledge, information sharing, accessibility, accountability.
• Each function is mapped to specific variables (e.g., trust is linked to performance planning and seamless booking; accessibility is linked to women's entrepreneurship and community-based tourism).
Expert Judgment:
• The expert assessment highlights that while blockchain offers significant opportunities (e.g., enhanced trust, transparency, and accessibility), it also introduces challenges such as security risks, privacy concerns, and the need for robust governance.
• The paper notes that capital-intensive investment and technical complexity are major barriers to widespread adoption, especially for smaller organizations.

RQ-3: What are the implications, theoretical contributions, questions, potentialities, and outlook (ICQPO utilities) of these issues, risks, limitations, and opportunities for tourism and hospitality strategies in sustainable smart tourism?
Thematic aggregation:
• The document synthesizes implications and outlooks into ICQPO application utilities, such as:
Decentralization: Improves sustainability and supports women's empowerment.
Data protection: Enhances privacy and security, protecting against data harm.
Governance and internal control: Advances sustainability and accountability.

Auditability: Ensures traceability and compliance, fostering trust.
Peer-to-peer transactions: Eliminates intermediaries, reduces costs and transaction times.
Scalability: Enables broader adoption and boosts women's empowerment.
Capital-intensive investment: Recognized as a deterrent for many organizations, affecting the pace of adoption.
Expert judgment:
• The expert synthesis concludes that BCA can transform tourism and hospitality by making operations more transparent, efficient, and inclusive.
• The outlook is optimistic for organizations that can overcome investment and technical barriers, with BC serving as a catalyst for equitable and sustainable tourism experiences.
• The document recommends that future strategies focus on leveraging BC's strengths while proactively addressing its challenges, especially in supporting women and marginalized groups (Table 3).

Table 3. Thematic aggregation of the three RQs

RQ	Thematic Focus	Key Insights (Expert Judgment)
1	Key Variables	DM: Planning, Booking, Experiences, Services, Data; AH: Inclusion, Independence, Communication, Controls; SI: Women's Entrepreneurship, Community Tourism, Accessibility, Engagement
2	IRLO Functions	Trust, Transparency, Security, Privacy, Loyalty, Integrity, Traceability, Accessibility, Accountability, etc.
3	ICQPO Utilities	Decentralization, Data Protection, Governance, Auditability, Peer-to-Peer, Scalability, Investment Barriers

Source: created by the authors

Practical implications. The proposed framework for sustainable smart tourism with women empowerment, is leveraging BCA and has several practical implications for DM, AH, and SI.

Hence, in DM: Performance planning is enhanced (BCA enables efficient and transparent planning processes and improves operational performance and customer satisfaction); Seamless booking is improved (BC-based systems streamline booking processes, reduce intermediaries, ensure secure transactions, enhance the traveler experience); Interactive experiences are refined (BCA facilitates attractions with interactive experiences such as AR and VR and enriches the visitor experience); Smart hotel services are boosted (BCA supports smart hotel services, including automated check-ins, personalized room settings, and robot-assisted services); and data-driven management is strengthened (BCA enables secure and transparent data sharing and improves decision-making and operational efficiency).

Additionally, in AH: Inclusive experiences are enhanced (BCA supports features like text-to-speech, digital communication, simplified controls, and creates accessible environments for guests with disabilities); Independence is strengthened (BCA enhances the independence of guests with disabilities making hospitality services more inclusive); Communication is refined (BCA facilitates secure and efficient digital communication between guests and service providers); and Simplified controls are boosted (BC-based systems enable user-friendly controls for room settings while improving the overall guest experience).

Finally, in SI: Women's entrepreneurship is strengthened (BCA empowers women entrepreneurs in tourism by providing decentralized platforms and reducing barriers to entry); Community-based tourism is boosted (BCA facilitates community-driven tourism initiatives, and promotes local engagement and economic development); Accessible tourism is upgraded (BCA enhances accessibility for people with disabilities ensuring equitable travel experiences); and Visitor engagement is advanced (BCA fosters trust and transparency encouraging active participation and engagement from visitors).

General implications. Decentralization (BCA eliminates intermediaries, enabling direct peer-to-peer transactions and reducing costs and transaction times); Scalability (BCA provides scalable solutions for managing large volumes of data and transactions in the T&H industry); Auditability and Transparency (BCA ensures traceability, accountability, and compliance with regulations, fostering trust among T&H stakeholders); Data protection (BCA enhances privacy and security, protecting sensitive data from breaches and exploitation); Sustainability (BCA supports sustainable practices by holding T&H companies accountable for their claims and promoting efficient resource allocation).

The proposed smart tourism framework using BC has the potential to address key challenges in DM, AH, and SI. By improving transparency, efficiency, accessibility, and trust, BCA can drive sustainability and equitable experiences in the T&H industry.

How can social inclusion be improved in smart tourism? SI in smart tourism can be advanced by leveraging BCA to create equitable, accessible, and inclusive experiences for all stakeholders. The following ways, discussed in the paper, can support social inclusion:
1. Hospitality accessibility can be improved with BC-based smart platforms (platforms that cater to

individuals with disabilities, offering features like text-to-speech, voice commands, and simplified navigation); inclusive experiences (BC with AR and VR creates immersive and accessible experiences for travelers with diverse needs); and accessible payment systems (BC-based payment systems are secure and easy to use including those with disabilities).
2. Community-based tourism can be promoted by empowering local communities (BC supports community-driven tourism initiatives, allowing local communities to directly offer services and experiences to travelers).
3. Women's entrepreneurship can be boosted with decentralized platforms (BCA provides women entrepreneurs access to BC-based marketplaces, reduces barriers to entry, and enables them to showcase their services globally) and micro-finance opportunities (BC for DeFi solutions offers financial support to women in tourism).
4. Trust and transparency are strengthened with traceability (BC provides transparent records of transactions, ensuring trust between travelers, service providers, and local communities) and accountability (BCA holds tourism companies accountable for their sustainability and social inclusion claims through BC-based audit trails).
5. Trust through anonymity is enhanced with privacy protection (BC's ability to ensure anonymity helps travelers feel secure in sharing their data, fostering trust and inclusivity); and secure identity management (BCA secures identity verification, ensures privacy, and reduces discrimination).

Formal quantitative model – Publication bias assessment – Thematic aggregation & expert judgement

To enhance paper's functionality, we have synthesized the proposed methodology and findings regarding the use of (a) formal quantitative models (cost-benefit optimization), (b) publication bias assessment and sensitivity analysis, and (c) thematic aggregation and expert judgement. Below is a concise overview of each approach, supported by examples and actionable insights from the document:

(a) Formal quantitative model: Cost-benefit optimization framework
Purpose & use: The document introduces a formal cost-benefit optimization framework to quantitatively assess whether the expected benefits of BCA in T&H outweigh the associated costs. This model is especially relevant for managers considering capital-intensive investments in BC technology.

How it works: Variables include initial investment (hardware, software, training), operational costs, and quantifiable benefits (efficiency, trust, inclusion, fraud reduction).
The Net Present Value (NPV) formula is used:
NPV = [Sum of discounted annual net benefits over time] - Initial investment If NPV > 0, the investment is justified; if NPV < 0, it is not.

The proposed cost-benefit optimization framework bridges qualitative assertions and quantitative decision-making and empowers data-driven investment decisions supports scenario analysis (e.g., impact of increased grants or reduced costs).

(b) Publication bias assessment / Sensitivity Analysis
Purpose & use: To ensure the systematic review's findings are robust and not skewed by selective inclusion of positive studies.

How it works: The publication bias a ssessment recognizes that selecting only the most-cited or positive-outcome studies can overstate benefits. Suggests using funnel plots (if effect sizes are available) to visually assess bias. Recommends including less-cited or unpublished studies for a balanced evidence base.

Sensitivity Analysis: Tests the robustness of findings by varying inclusion criteria (e.g., including less-cited articles or excluding lower-quality studies).If key findings change significantly with different samples, results may not be robust.

The publication bias assessment increases transparency and reliability of the review highlights areas of uncertainty or overrepresentation of positive findings and encourages future reviews to extract effect sizes and systematically vary inclusion criteria.

(c) Thematic aggregation & expert judgement
Purpose & use: Synthesizes findings from systematic literature review, content analysis, and qualitative commentary to address research questions.

How it works: Proposed thematic aggregation identifies recurring themes and key variables (e.g., performance planning, seamless booking, women's entrepreneurship) across destination management, accessible hospitality, and social inclusion. Following, aggregates issues, risks, limitations, and opportunities (IRLO functions) and maps them to these variables.

Expert judgement: Authors interpret and synthesize literature based on their expertise, rather than relying solely on quantitative hypothesis testing. Expert judgement provides actionable insights and practical implications for practitioners and policymakers.

The thematic aggregation and expert judgment offers a holistic, nuanced understanding of complex issues, supports evidence-based recommendations for sustainable, inclusive, and women-empowering tourism strategies. Even more, ensures that both operational and social challenges are addressed.

These methodologies, when combined, provide a rigorous, transparent, and actionable foundation for evaluating and implementing BC in sustainable T&H management.

5 Conclusions

BC technology boosts sustainable smart tourism projects, by enhancing transparency, trust, accessibility, and efficiency through smart contracts, digital transactions, and decentralized platforms. It supports women empowerment, inclusive tourism, loyalty initiatives, streamlines operations, and secure payments. Additionally, BCA offers competitive benefits to T&H managers, because improves DM with personalized planning, seamless booking, attractions with interactive experiences, smart hotel services, and data-driven management; AH through inclusive experiences for guests with disabilities, improved independence through features like text-to-speech, digital communication, and simplified controls for room settings; and SI by supporting women's entrepreneurship in T&H, creating community-based tourism, promoting accessible tourism for people with disabilities, and encouraging visitor engagement. Even more, BCA boosts sustainability and T&H managers will find valuable tools to reevaluate destination management's technical administration issues, handle accessible hospitality challenges, and reassess SI concerns and functionalities; and consider the potentiality to address them with BCA for equitable with women empowerment strategies. Limitations are referred to the high costs upon capital-intensive investments deter most T&H companies from adopting BC, affecting sustainable smart tourism projects with women empowerment. Finally, future research directions would explore BC integration with AI and VR/AR for enhanced personalization, investigate the scalability of BCA in large-scale T&H operations, and study the long-term BCA impact on social inclusion and sustainability.

Declaration of Generative AI and AI-assisted Technologies in the Writing Process During the preparation of this work, the author(s) utilized artificial intelligence (AI) technologies solely for the purpose of linguistic refinement and grammatical correction. Following the application of these tools, the author(s) comprehensively reviewed, verified, and edited the resulting text. The author(s) maintain full accountability and responsibility for the accuracy, integrity, and final content of the publication.

References:

[1] Stylianou, C., Liasidou, S., Garanti, Z. Women Entrepreneurs' Role in Tourism Co-Creation and Policy: Examining the Case of Cyprus. *Tour. Hosp.* 2025, 6, 33. https://doi.org/10.3390/tourhosp6010033.

[2] Akter, M., Gafur, I., Hossien, M.A. Motivations and Issues for Women Entrepreneurs in Enhancing Business Performance in the Smart Tourism Sector of Bangladesh: A Case Study. *European Journal of Theoretical and Applied Sciences* 2024, 2, 574-584. https://doi.org/10.59324/ejtas.2024.2(1).50.

[3] Basdekidou, V., Papapanagos, H. SEP and Blockchain Adoption in Western Balkans and EU: The Mediating Role of ESG Activities and DEI Initiatives. *FinTech* 2025, 4(3), 37. https://doi.org/10.3390/fintech4030037.

[4] Giannaris, P.S., Mastorakis, N.E. Overview of Taxonomy and Ontology Approaches for the Classification of Blockchain Components. *WSEAS Transactions on Computer Research*, 2023 11, 33-56, https://doi.org/10.37394/232018.2023.11.4.

[5] Weshah, S. Modeling and Analyzing of Financial Data within Digital Transformation Era and its Impact on Balanced Scorecards Utilizations: A Theoretical Review. *WSEAS Transactions on Financial Engineering* 2024, 2, 180-186, https://doi.org/10.37394/232032.2024.2.17.

[6] Onaolapo, A.K., Akindeji, K.T., Adefarati, T., Moloi, K. A Comprehensive Review of the Smart Microgrids' Modeling and Control Methods for Sustainable Developments. *WSEAS Transactions on Power Systems* 2024, 19, 285-306, https://doi.org/10.37394/232016.2024.19.26.

[7] Gretzel, U. The future of blockchain technology for tourism and hospitality. In Blockchain for Tourism and Hospitality Industries; Routledge: 2023, Oxfordshire, UK; pp. 139-150. https://doi.org/10.4324/9781003351917.

[8] Ratna, S., Saide, S., Putri, A.M., Indrajit, R.E., Muwardi, D. Digital transformation in tourism and hospitality industry: A literature review of blockchain, financial technology, and

knowledge management. *EuroMed J. Bus.* 2024, 19, 84-112, https://doi.org/10.1108/EMJB-04-2023-0118.

[9] Treiblmaier, H., Leung, D., Kwok, A.O.J., Tham, A. Cryptocurrency adoption in travel and tourism – an exploratory study of Asia Pacific travellers. *Current Issues in Tourism* 2021, 24, 3165-3181, https://doi.org/10.1080/13683500.2020.1863928.

[10] Ramart, P., Subanjui, R. Guidelines for Developing Tourism Business Models for Foreign Elderly Tourists to Enhance Service Excellence in Thailand's Tourism Industry. *WSEAS Transactions on Business and Economics* 2025, 22,2253-2261, https://doi.org/10.37394/23207.2025.22.177.

[11] Sánchez-Martín, J.-M., Guillén-Peñafiel, R., Hernández-Carretero, A.-M. Artificial Intelligence in Heritage Tourism: Innovation, Accessibility, and Sustainability in the Digital Age. *Heritage* 2025, 8(10), 428, https://doi.org/10.3390/heritage8100428.

[12] Kouremenos, D., Ntalianis, K., Mastorakis, N.E. Bridging Accessibility, Innovation, and Multimodal AI for Inclusive Tourism Education. *WSEAS Transactions on Advances in Engineering Education* 2025, 22, 33-40. https://doi.org/10.37394/232010.2025.22.4.

[13] Pechlivanis, C. Implementing IoT Technology in Practice: Monitoring the Supply Chain for Sustainable Operation. *WSEAS Transactions on Systems*, 2023, 22, 349-359, https://doi.org/10.37394/23202.2023.22.38.

[14] Feng, R., Pyeman, J.B. Tax Reduction and Fee Reduction on The High-Quality Development of Companies based on The Background of Digital Transformation. *WSEAS Transactions on Computer Research* 2026, 14, 171-179, https://doi.org/10.37394/232018.2026.14.15.

[15] Geng, S., Chau, H.-W., Jamei, E., Vrcelj, Z. Demystifying the Use of Open-Access Data in Smart Heritage Implementations. *Tourism and Hospitality* 2024, 5(4), 1125-1150, https://doi.org/10.3390/tourhosp5040063.

[16] Pranita, D., Sarjana, S., Musthofa, B.M., Kusumastuti, H., Rasul, M.S. Blockchain Technology to Enhance Integrated Blue Economy: A Case Study in Strengthening Sustainable Tourism on Smart Islands. *Sustainability* 2023, 15, 5342, https://doi.org/10.3390/su15065342.

[17] Turmudi, H., Absori, A., Wardiono, K., Budiono, A., Hernanda, T., Wula, Z., Nimasari, E.P. Policies on Ecotourism Villages based on Sustainable Development Goals in Boyolali, Indonesia. *WSEAS Transactions on Environment and Development* 2026, 22, 190-203, https://doi.org/10.37394/232015.2026.22.15.

[18] Teixeira, P., Eusébio, C., Teixeira, L. access@tour by Action: A Platform for Improving Accessible Tourism Conditions. *Computers* 2024, 13,263, https://doi.org/10.3390/computers13100263.

[19] Teixeira, P., Eusébio, C., Teixeira, L. How to Develop Information Systems to Improve Accessible Tourism: Proposal of a Roadmap to Support the Development of Accessible Solutions. *Computers* 2024, 13, 69, https://doi.org/10.3390/computers13030069.

[20] Tlili, A., Altinay, F., Altinay, Z., Zhang, Y. Envisioning the future of technology integration for accessible hospitality and tourism. *International Journal of Contemporary Hospitality Management* 2021, 33, 4460–4482, https://doi.org/10.1108/IJCHM-03-2021-0321.

[21] Santos, E. From Neglect to Progress: Assessing Social Sustainability and Decent Work in the Tourism Sector. *Sustainability* 2023, 15, 10329, https://doi.org/10.3390/su151310329.

[22] Ristanović, V., Budić, H., Marinac, A. Sustainability in Tourism Through the Use of Local Resources in Smart Destinations: A European Perspective. *WSEAS Transactions on Business and Economics* 2025, 22, 2037-2051, https://doi.org/10.37394/23207.2025.22.163.

[23] Austin, T., Rawal, B.S. Model Retraining: Predicting the Likelihood of Financial Inclusion in Kiva's Peer-to-Peer Lending to Promote Social Impact. *Algorithms* 2023, 16, 363, https://doi.org/10.3390/a16080363.

[24] Nanos, I., Kotzaivazoglou, I., Papaioannou, E., Assimakopoulos, C., Fragidis, G. (2024). Greek Consumers' Perceptions of Traceability in the Food Supply Chain. In Kavoura, A., Borges-Tiago, T., Tiago, F. (eds) Strategic Innovative Marketing and Tourism. ICSIMAT 2023, Ionian Islands, Greece: Springer Proceedings in Business and Economics Springer, Cham, 2024, pp. 147-155, https://doi.org/10.1007/978-3-031-51038-0_17.

[25] Nanos, I., Papadopoulos, N., Oikonomou, M.G., Kotzaivazoglou, I., Fragidis, G. (2025). The Role of Packaging on Consumers'

Behavior in Greece. In: Kavoura, A., Briciu, VA., Briciu, A. (eds) Strategic Innovative Marketing and Tourism. ICSIMAT 2024, Brasov, Romania: Springer Proceedings in Business and Economics. Springer, Cham, 2025, pp. 123-131, https://doi.org/10.1007/978-3-031-81962-9_14.

[26] Monserrath Yáñez, Cristian Inca, Franklin Coronel, Angel Mena. Time Series Models and Machine Learning for Predicting Tourism Demand in Emerging Destinations. *WSEAS Transactions on Computer Research* 2026, 14, 471-478. https://doi.org/10.37394/232018.2026.14.41.

[27] Li, H., Chen, Q., Ariffin, S.B. A Review on Blockchain-Based Supply Chain Finance, *WSEAS Transactions on Computer Research* 2026, 14, 90-103, https://doi.org/10.37394/232018.2026.14.8.

[28] Varveris, D., Basdekidou, V., Basdekidou, C., Xofis, P. Smart Forest Modeling Behavioral for a Greener Future: An AI Text-by-Voice Blockchain Approach with Citizen Involvement in Sustainable Forestry Functionality. *FinTech.* 2025, 4(3):47. https://doi.org/10.3390/fintech4030047.

[29] Karaki, B.A., Al-Kasasbeh, O. Analyzing the Banking Sector- Fintech Companies Nexus in Jordan. *WSEAS Transactions on Business and Economics* 2024, 21, 280-287, https://doi.org/10.37394/23207.2024.21.25.

[30] Rezniks, A., Strebko, J., Romanovs, A., Bikovska, J., Lektauers, A., Petuhova, J. FinTech in Supply Chains: Post-COVID Challenges and Solutions. *WSEAS Transactions on Business and Economics* 2023, 20, 2627-2637, https://doi.org/10.37394/23207.2023.20.224.

[31] Nosratabadi, S., Zahed, R.K., Ponkratov, V.V., Kostyrin, E.V. Artificial Intelligence Models and Employee Lifecycle Management: A systematic Literature Review. *Organizacija* 2022, 55(3), 181-198, https://doi.org/10.2478/orga-2022-0012.

[32] Lim, W., Kumar, S., Ali, F. Advancing knowledge through literature reviews: What, Why, and How to contribute. *Serv Ind J.* 2022, 42,481-513, https://doi.org/10.1080/02642069.2022.204794.

[33] Tugwell, P., Tovey, D. PRISMA 2020. *Journal of Clinical Epidemiology* 2021, 134, A5-A6, https://doi.org/10.1016/j.jclinepi.2021.04.008.

[34] Almatarneh, Z., Alslihat, N., Ineizeh, N.I., Hussein, O.J., Jarah, B.A.F. Literature Review Related to the Accounting Information System and Performance in Jordanian Companies. *WSEAS Transactions on Business and Economics* 2024, 21, 2389-2398, https://doi.org/10.37394/23207.2024.21.197.

[35] Yadav, R., Patil, A. Research Notes: Isomorphism and Hospitality Firms: An Examination of Institutional Pressures. *Financial Engineering* 2025, 3, 495-504. https://doi.org/10.37394/232032.2025.3.42.

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