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Current Situation And Solutions For Implementing Conditions And Processes For Developing Smart Tourism Destinations In Vietnam

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ABSTRACT: Currently, most provinces and cities in Vietnam are implementing the Smart Tourism Development Project broadly, with a specific focus on developing smart tourism destinations (STDs). However, the outcomes have been limited. The primary reason for this is the insufficient evaluation of the actual conditions and processes required for developing smart tourism destinations in Vietnam, leading to a lack of feasible and effective solutions. To assist tourism destinations in Vietnam in successfully developing STDs, we propose comprehensive and effective solutions based on an accurate assessment of the current conditions including Enhancing the awareness, behavior, and attitudes of stakeholders regarding the conditions and processes for developing smart tourism destinations; Successfully developing and implementing the Smart Tourism Development Project in provinces and cities across Vietnam; Designing the operational architecture for smart tourism at destinations; Establishing management centers for smart tourism destinations in Vietnam; Training and developing human resources for smart tourism; Implementing appropriate policies for leaders and workers at smart tourism destinations.

Keywords: smart tourism destination, conditions, process, solutions

I. INTRODUCTION

Currently, most provinces and cities in Vietnam are implementing the Smart Tourism Development Project, with a specific focus on developing smart tourism destinations (STDs). However, the results have been limited. The primary reason for this is the insufficient evaluation of the actual conditions and processes required for developing smart tourism destinations, leading to a lack of feasible and effective solutions. Addressing this issue is both necessary and urgent for Vietnam as a whole, as well as for its individual provinces and cities. Despite the importance of this topic, no previous studies have adequately addressed it. Therefore, we have chosen to investigate this issue in our research.

II. CURRENT CONDITIONS AND PROCESSES FOR DEVELOPING SMART TOURISM DESTINATIONS IN VIETNAM

2.1. Current Conditions for Developing Smart Tourism Destinations in Vietnam

To investigate this situation, we conducted a survey using questionnaires with 450 participants. This group included 100 central and local government tourism management officials and 100 business tourism management officials from seven selected provinces and cities in Vietnam (Quang Ninh, Hanoi, Hue, Da Nang, Khanh Hoa, Ho Chi Minh City, and Phu Quoc), 200 tourists, and 50 lecturers directly teaching at tourism training institutions. The results obtained are summarized in Table 2.1.

Table 2.1. Summary of evaluations on the current conditions for developing smart tourism destinations in Vietnam

No	Criteria	Average Score	Average
1	State Tourism Management Agency at the Destination	2.89	1
2	Smart Governance at the Destination	2.73	2
3	Leadership of the Tourism Destination	2.57	4
4	Tourism Workers at the Destination	2.46	6
5	Smart Infrastructure Systems at the Destination	2.42	7
6	Tourism Resources	2.61	3
7	Smart Living	2.28	12
8	Smart Economy	2.29	11
9	Smart Transportation/ Mobility Systems	2.40	8
10	Smart Environment	2.48	5
11	Smart Residents	2.39	9
12	Smart Tourists	2.37	10
	Overall Average	**2.49**	

The results obtained in Table 2.1 show that, among the conditions for developing STDs, the majority of selected STDs have not yet been achieved (1.25 < Mean = 2.49 ≤ 2.50 – Level "Disagree"). Specifically:

▪ The group of criteria for developing STDs evaluated by research participants as achieved (2.50 ≤ Mean ≤ 3.75 – Level "Agree") includes: State Tourism Management Agency at the Destination (2.50 ≤ Mean = 2.89 ≤ 3.75, ranked first); Smart Governance at the Destination (2.50 ≤ Mean = 2.73 ≤ (2.50 ≤ Mean ≤ 3.75, ranked second); Tourism Resources (2.50 ≤ Mean = 2.61 ≤ 3.75, ranked third); Leadership of the Tourism Destination (2.50 ≤ Mean = 2.57 ≤ 3.75, ranked fourth). Analyzing the degree to which criteria for developing STDs are achieved in each aspect, we obtained the following results:

State Management Agency: The State Management Agency (SMA) at the Destination received varied assessments from research participants. Criteria such as synchronized e-government (Mean = 2.93), electronic administrative procedures (Mean = 2.89), and digitization of management activities (Mean = 2.84) were ranked across different groups. SMA officials rated highest (Mean: 3.31), followed by Enterprise Management Officials (EMO) (Mean: 3.03), and lecturers from tourism training institutions rated lowest (Mean: 2.88). Spearman's rank correlation showed weak consistency between SMA officials and EMO (r ≈ 0.39), and moderate consistency between EMO and lecturers (r ≈ 0.50). Evaluations varied significantly among provinces/cities, with Da Nang ranking highest (Mean: 3.38) and Phu Quoc lowest (Mean: 2.51). Pearson's correlation indicated differences in evaluations across cities, highlighting disparities in implementation efforts. Overall, SMA officials tended to rate their performance higher than others, suggesting potential overestimation. Despite progress in digital transformation, there are notable differences in implementation among regions.

Smart Governance at Destinations: Stakeholders generally assess tourist destinations on "Smart Governance" criteria (Mean Score = 2.73, ranked second), highlighting achievements like smart wifi systems (Mean Score = 3.08) and e-government implementation (Mean Score = 2.76). Local Government Leaders rated highest (Mean Score: 2.94), followed closely by Destination Management Professionals and Tourism Education Institution Faculty (Mean Score: 2.82), while Tourists rated lowest (Mean Score: 2.61). Strong correlations were found between Local Government Leaders and Destination Management Professionals (r ≈ 0.88), and between Academic Researchers and Faculty (r ≈ 0.86), indicating broad consensus. However, tourists' evaluations differed significantly from other stakeholders. Evaluations across provinces/cities varied, with Hanoi leading (Mean Score: 3.43), followed by Da Nang and Ho Chi Minh City, while Phu Quoc rated lowest (Mean Score: 2.51). Significant differences were observed between cities using Pearson's correlation coefficient. Practical observations and discussions with local leaders reveal discrepancies between perceived and actual implementation, particularly noting challenges in Phu Quoc. Thus, alignment between stakeholder evaluations and the reality of "Smart Governance at Destinations" remains inconsistent.

Tourism Resources: Most research subjects evaluated the tourist destinations (TDs) as meeting the criteria for this condition (2.50 ≤ Avg = 2.61 ≤ 3.75, ranked third). Specifically: "Capacity of the resource point over 150 people" (Avg 2.68, ranked 1st); "Diversity and uniqueness of resources" (Avg 2.62, ranked 2nd); "Good resource protection and enhancement" (Avg 2.61, ranked 3rd); "Tourist attractiveness of the destination" (Avg 2.55, ranked 4th). Comparing the evaluations of different groups of research subjects on this condition, the results indicate that there is no significant difference between the evaluations of state management agencies (Avg: 3.13); enterprise managers (Avg: 2.95); tourists (Avg: 2.22); and lecturers (Avg: 2.85). Using the

Spearman rank correlation coefficient to compare the evaluations of SMA with those of EMO, we found the correlation coefficient r ≈ 0.86 (relatively strong correlation), indicating consistency between the two evaluations with no difference. Using the Spearman rank correlation coefficient to compare the evaluations of EMO with those of tourists, we found the correlation coefficient r ≈ 0.78 (strong correlation), indicating consistency between the two evaluations with no difference. Using the Spearman rank correlation coefficient to compare the evaluations of tourists with those of lecturers, we found the correlation coefficient r ≈ 0.86 (strong correlation), indicating consistency between the two evaluations with no difference. Comparing the evaluations of different provinces/cities on this condition reveals significant differences, with Khanh Hoa province rated the highest (Avg: 3.08); followed by Ho Chi Minh City (Avg: 2.67); Da Nang City (Avg: 2.65); Hue City (Avg: 2.57); Quang Ninh province (Avg: 2.52); Hanoi City (Avg: 2.48); and finally Phu Quoc (Avg: 1.89). Combining other methods such as practical observation, listening to reports from provincial/city state management leaders, and direct conversations with them about this condition, we obtained the following results: each researched province/city has its own strengths in resources. However, the evaluations of the research subjects are quite consistent with the actual conditions.

▪ The group of conditions for developing smart tourist destinations (STDs) that research subjects evaluated as not yet achieved by the selected tourist destinations (1.25 ≤ Avg < 2.50 - "disagree" level) includes: "Smart environment" (Avg: 2.48, ranked 5th); "Tourism workforce at the destination" (Avg: 2.46, ranked 6th); "Smart infrastructure system at the destination" (Avg: 2.42, ranked 7th); "Smart transportation/mobility system" (Avg: 2.40, ranked 8th); "Smart residents" (Avg: 2.39, ranked 9th); "Smart tourists" (Avg: 2.37, ranked 10th); "Smart economy" (Avg: 2.29, ranked 11th); and "Smart living" (Avg: 2.28, ranked 12th). A specific analysis of the research subjects' evaluations on the degree to which each condition's criteria were met at the selected tourist destinations revealed the following results:

Smart Environment: The results indicate that most research subjects evaluated the tourist destinations (TDs) as not meeting the criteria for this condition (Avg: 2.48, ranked 5th). Among the five criteria under this condition, only "Sustainable planning" was agreed upon by the research subjects as being met by the TDs (Avg: 2.56, ranked 1st). The remaining criteria were rated as not met, including "Creating environmental attractiveness" (Avg: 2.55, ranked 2nd); "Good energy efficiency" (Avg: 2.47, ranked 3rd); "Environmental protection and pollution reduction" (Avg: 2.45, ranked 4th); and "Use of renewable energy sources" (Avg: 2.36, ranked 5th). Comparing the evaluations of different groups of research subjects on this condition, the results show that the SMA (Avg: 2.64) had the highest rating; followed by EMO (Avg: 2.57); tourists (Avg: 2.61); and lecturers (Avg: 2.36), who did not agree that the selected destinations met the criteria for a "smart tourism environment." Using the Spearman rank correlation coefficient to compare the evaluations of SMA with those of EMO, we found a correlation coefficient r ≈ 0.65 (strong correlation), indicating consistency between the two evaluations. Comparing the evaluations of enterprise managers with those of tourists, the correlation coefficient was r ≈ -0.84 (negative correlation, not strong), indicating inconsistency. Comparing the evaluations of tourists with those of lecturers, the correlation coefficient was r ≈ -0.03 (negative correlation, not strong), indicating inconsistency. These results show a lack of consensus between the evaluations of SMA and EMO and those of tourists and lecturers. We believe this difference may be because state management agencies and enterprise managers rated these criteria higher than the actual situation. Direct conversations with some state management officials and enterprise leaders revealed that the criteria under this condition have not yet been achieved in reality. The environment at the selected destinations does not meet these criteria.

Smart Tourism Workforce: Research subjects evaluated the "Tourism Workforce at the Destination" poorly (Avg: 2.46, ranked 6th). Key deficiencies included: good tourism professional qualities (Avg: 2.77), good tourism professional skills (Avg: 2.52), and foreign language skills (Avg: 2.40). Digital skills were notably lacking: soft skills such as safety (Avg: 2.38) and communication (Avg: 2.32), and hard skills including product management (Avg: 2.36) and AI usage (Avg: 2.36) were rated below criteria thresholds. State management agencies (Avg: 2.71) and enterprise managers (Avg: 2.83) perceived better alignment than tourists (Avg: 2.29) and lecturers (Avg: 2.55). Spearman's rank correlation showed strong agreement between state agencies and enterprise managers (r ≈ 0.90), but disagreement with tourists (r ≈ -0.90) and lecturers (r ≈ -1.00). Direct discussions with tourism workforce members confirmed these findings, indicating a gap between perceived and actual readiness for smart tourism workforce criteria at selected destinations.

Smart Infrastructure System: The study's subjects evaluated the infrastructure system at the selected destinations as not meeting the criteria for a smart infrastructure system (1.25 < Avg = 2.42 ≤ 2.50 - "disagree" level), ranking it 7th. The specific criteria within this condition are ranked as follows: Rapid and diverse development of electrical and energy infrastructure (Avg: 2.34, ranked 1st); Investment in electronic authentication systems (Avg: 2.30, ranked 2nd); Strong development and widespread coverage of information and telecommunications infrastructure (Avg: 2.26, ranked 3rd); Smart building management systems (Avg: 2.22, ranked 4th); Growing data infrastructure in both public and private sectors (Avg: 2.15, ranked 5th); Use of data analysis and exploitation technology (Avg: 2.36, ranked 6th); Smart lighting systems (Avg: 2.08, ranked

7th); Smart electricity and water metering systems (Avg: 1.98, ranked 8th). When comparing the evaluations of different groups of research subjects on the state of the smart infrastructure system at the selected destinations, the results show that enterprise managers (Avg: 2.62, ranked 1st) and tourists (Avg: 2.52, ranked 2nd) evaluated it as "agree." In contrast, state management agencies (Avg: 2.36, ranked 3rd) and lecturers (Avg: 2.17, ranked 4th) evaluated it as "disagree." Using the Spearman rank correlation coefficient to compare the evaluations of state management agencies with those of enterprise managers, we found a correlation coefficient r ≈ 0.07 (weak positive correlation), indicating a lack of agreement. Comparing the evaluations of enterprise managers with those of tourists, the correlation coefficient was r ≈ 0.03 (weak correlation), again showing a lack of agreement. Comparing the evaluations of tourists with those of lecturers, the correlation coefficient was r ≈ 0.05 (weak correlation), indicating a lack of consensus. These results demonstrate a lack of consensus among the evaluations of the research subjects from state management agencies, enterprise managers, tourists, and lecturers regarding the state of the smart infrastructure system at the selected destinations. We believe this discrepancy might be due to the novelty of the smart infrastructure system criteria for the research subjects, leading to incomplete understanding during their evaluations. Moreover, the implementation of these criteria for a smart infrastructure system at the destinations is still new to Vietnam in general and the selected destinations in particular. In direct conversations with some tourism industry leaders from the selected provinces and cities, they also indicated that the smart infrastructure system at their destinations did not meet these criteria. Comparing the evaluations of different provinces and cities on this condition shows a variation. Hanoi has the highest average score (Avg: 2.65), followed by Da Nang (Avg: 2.64), Ho Chi Minh City (Avg: 2.63), Hue (Avg: 2.58), Khanh Hoa (Avg: 2.58), Quang Ninh (Avg: 2.41), and finally Phu Quoc (Avg: 2.04).

Smart Residents: The study's subjects evaluated the residents at the selected destinations as not meeting the criteria for smart residents (1.25 < Avg = 2.39 ≤ 2.50 - "disagree" level), ranking them 9th. The specific criteria within this condition are ranked as follows: Willingness to participate in community life (Avg: 2.55, ranked 1st); Social and racial diversity (Avg: 2.47, ranked 2nd); Open-mindedness and readiness to learn (Avg: 2.39, ranked 3rd); Capability suitable for the operation of the destination (Avg: 2.28, ranked 4th); Creativity (Avg: 2.27, ranked 5th). Comparing the evaluations of different groups of research subjects on the state of smart residents at the selected destinations, the results from Table 2.5B show that enterprise managers (Avg: 2.71, ranked 1st) evaluated it positively ("agree"); lecturers (Avg: 2.39, ranked 2nd), state management agencies (Avg: 2.37, ranked 3rd), and tourists (Avg: 2.25, ranked 4th) evaluated it negatively ("disagree"). Using the Spearman rank correlation coefficient to compare the evaluations of SMA with those of EMO, we found a correlation coefficient r ≈ -0.30 (moderate positive correlation), indicating disagreement between these opinions. Comparing the evaluations of EMO with those of tourists, the correlation coefficient was r ≈ 0.10 (weak correlation), showing lack of consensus. Comparing the evaluations of tourists with those of lecturers, the correlation coefficient was r ≈ 0.80 (strong correlation), indicating high agreement. These results demonstrate a lack of consensus among the evaluations of the research subjects from state management agencies, enterprise managers, tourists, and lecturers regarding the state of smart residents at the selected destinations. We believe this discrepancy may stem from the novelty of the criteria for smart residents among the research subjects, leading to incomplete understanding during their evaluations. Through direct conversations with some residents at the destinations belonging to the selected provinces and cities, they also indicated that they have not yet achieved these criteria. Comparing the evaluations of different provinces and cities on this condition reveals variations. Ho Chi Minh City and Hanoi evaluated their residents as meeting the criteria for smart residents. Ho Chi Minh City had the highest average score (Avg: 2.77), followed by Hanoi (Avg: 2.62). The other provinces evaluated their residents as not meeting the criteria for smart residents: Khanh Hoa province (Avg: 2.45); Quang Ninh province (Avg: 2.41); Thua Thien Hue province (Avg: 2.34); Da Nang City (Avg: 2.32); and Phu Quoc (Avg: 1.87). Using other methods such as listening to reports from tourism industry leaders and direct conversations with residents of the destinations in the selected provinces and cities, we learned that no province has residents who meet the criteria within this condition; they are still in the process of striving to meet them.

Smart Tourists: The study's subjects evaluated tourists at the selected destinations as not meeting the criteria for smart tourists (1.25 < Avg = 2.37 ≤ 2.50 - "disagree" level), ranking them 10th. The specific criteria within this condition are ranked as follows: Habit of consuming online transactions (Avg: 2.53, ranked 1st); Willingness to share their data using smart technologies (Avg: 2.46, ranked 2nd); Creating opportunities for social innovation, actively finding and experiencing their natural environment in smart tourism ecosystems and destinations (Avg: 2.35, ranked 3rd); Flexible interaction with other stakeholders via online platforms (Avg: 2.34, ranked 4th); Co-creation to enhance and personalize smart experiences. Actively participating in creating experiences (Avg: 2.32, ranked 5th); Using smart software, utilities on smart mobile devices (Avg: 2.31, ranked 6th); Using online services (Search for information, book services to experience at destinations, share feelings after the trip) (Avg: 2.30, ranked 7th). Comparing the evaluations of different groups of research subjects on the state of smart tourists at the selected destinations, the results show that EMO (Avg: 2.85, ranked 1st) evaluated it positively ("agree"); tourists (Avg: 2.29, ranked 2nd), SMA (Avg: 2.20, ranked 3rd), and lecturers (Avg: 2.11, ranked 4th)

evaluated it negatively ("disagree"). Using the Spearman rank correlation coefficient to compare the evaluations of SMA with those of EMO, we found a correlation coefficient r ≈ 0.36 (moderate positive correlation), indicating disagreement between these opinions. Comparing the evaluations of EMO with those of tourists, the correlation coefficient was r ≈ 0.27 (weak correlation), showing lack of consensus. Comparing the evaluations of tourists with those of lecturers, the correlation coefficient was r ≈ 0.125 (weak correlation), also indicating lack of consensus. These results demonstrate a lack of consensus among the evaluations of the research subjects from state management agencies, enterprise managers, tourists, and lecturers regarding the state of smart tourists at the selected destinations. We believe this discrepancy may stem from the novelty of the criteria for smart tourists among the research subjects, leading to incomplete understanding during their evaluations. Through direct conversations with some tourists at the destinations belonging to the selected provinces and cities, they also indicated that they have not yet achieved these criteria. Comparing the evaluations of different provinces and cities on this condition reveals variations. Only tourists in Thua Thien Hue province, as evaluated by the research subjects in Hue, met the criteria for smart tourists (Avg: 2.57). The other provinces evaluated their tourists as not meeting the criteria for smart tourists: Da Nang City (Avg: 2.47); Quang Ninh province and Hanoi City (Avg: 2.45); Khanh Hoa province (Avg: 2.37); and Phu Quoc (Avg: 1.85). Through direct conversations with tourists at the destinations in the selected provinces and cities regarding their self-evaluation against the criteria for smart tourists, they indicated that they have not yet achieved these criteria.

Smart Economy: stakeholder researchers evaluated the economies in selected Destination Development Locations as not meeting the criteria for a smart economy (1.25 < mean score = 2.29 ≤ 2.50 - "Disagree"). (Ranked 11th). Specifically, the criteria under this classification are ranked as follows: Flexibility in the operation of the tourism labor market at destinations (mean score: 2.41, ranked 1st); Ensuring social mobility across community strata at destinations (mean score: 2.32, ranked 2nd); Innovation readiness among community members at destinations (mean score: 2.26, ranked 3rd); High productivity and global-local connectivity of tourism enterprises at destinations (mean score: 2.16, ranked 4th). Analysis of stakeholder groups' evaluations regarding the current state of smart tourism at the selected study destinations reveals the following: EMO (mean score: 2.67, ranked 1st) rated as "Agree"; SMA (mean score: 2.39, ranked 2nd); tourists (mean score: 2.26, ranked 3rd); lecturers (mean score: 2.11, ranked 4th) rated as "Disagree". Using the Spearman rank correlation coefficient to compare SMA's evaluation with EMO's evaluation, a correlation coefficient of approximately r = 0.40 (moderate positive correlation) suggests inconsistency between these opinions. Using the same method to compare EMO's evaluation with tourists', a coefficient of approximately r = -0.80 (strong negative correlation) indicates disagreement between these perspectives. Evaluating tourist's assessment against lecturer's shows a coefficient of approximately r = 0.01 (very weak positive correlation), implying further discordance. These results underscore a lack of consensus among stakeholders regarding the current state of the smart economy at the study destinations. This discrepancy may stem from stakeholders' limited familiarity with the relatively new criteria defining a smart economy at these destinations, leading to inconsistent evaluations. Direct discussions with leaders from the studied DDLs in various provinces/cities also confirm their assessment that their local economies have not yet met the criteria for a smart economy at these destinations. Comparing evaluations across provinces/cities reveals significant disparities. All selected study provinces/cities self-assess that their economies have not achieved the criteria for a smart economy, including Da Nang City and Ho Chi Minh City (mean score: 2.46); Khanh Hoa province (mean score: 2.38); Thua Thien Hue province (mean score: 2.20); Quang Ninh province (mean score: 2.20); and Phu Quoc (mean score: 1.94). Observations of related products and indicators further affirm these findings, indicating a gap in meeting the criteria for a smart economy at these destinations.

Smart Living: Stakeholder researchers evaluated the quality of life in selected Destination Development Locations (DDLs) as not meeting the criteria for smart living (1.25 < mean score = 2.28 ≤ 2.50 - "Disagree"). (Ranked 12th). Specifically, the criteria under this classification are ranked as follows: Cultural facilities (cultural centers, children's houses, labor cultural houses, cinemas, circuses, theaters, literary and artistic exhibition houses, museums, squares, libraries, village cultural houses, village headquarters, village clubs), meeting defined standards, and technologically integrated (mean score: 2.38, ranked 1st); Social cohesion at the destination (mean score: 2.35, ranked 2nd); Smart educational system management (mean score: 2.23, ranked 3rd); Smart security system (mean score: 2.22, ranked 4th); Smart healthcare system (mean score: 2.20, ranked 5th). Comparing stakeholder groups' evaluations regarding the current state of smart tourism at the selected study destinations, the results obtained show that EMO (mean score: 2.71, ranked 1st) rated it as "Agree"; state management agencies' stakeholders (mean score: 2.37, ranked 2nd); lecturers (mean score: 2.12, ranked 3rd); tourists (mean score: 1.96, ranked 4th) rated it as "Disagree". Using the Spearman rank correlation coefficient to compare SMA's evaluation with EMO's, a correlation coefficient of approximately r = 0.85 (strong positive correlation) indicates high agreement between these opinions. Using the same method to compare EMO's evaluation with tourists', a coefficient of approximately r = 0.50 (moderate positive correlation) suggests relative consistency between these perspectives. Evaluating tourist's assessment against lecturer's shows a

coefficient of approximately r = 0.50 (moderate positive correlation), indicating moderate agreement between these opinions. These results highlight a lack of high consensus in evaluations among stakeholders (SMA, EMO, tourists, and lecturers) regarding the current state of smart living at the study destinations. This difference may be attributed to stakeholders' limited familiarity with the relatively new criteria defining smart living at these destinations, leading to inconsistent evaluations. Direct discussions with leaders from the studied DDLs in various provinces/cities also indicate that their quality of life has not yet met the criteria for smart living at these destinations. Comparing evaluations across provinces/cities reveals significant disparities. The selected study provinces/cities self-assess that their quality of life has achieved the criteria for smart living, including Hanoi City (mean score: 2.78); Ho Chi Minh City (mean score: 2.50); other provinces such as Khanh Hoa (mean score: 2.38); Thua Thien Hue province (mean score: 2.24); Quang Ninh province (mean score: 2.17); and finally Phu Quoc (mean score: 1.84). Observations of products related to the criteria of smart living at the study destinations in various provinces/cities further indicate that these criteria have not been fully met.

2.2. Current Situation of the Smart Tourism Destination Construction Process in Vietnam

To understand this current situation, we conducted a survey using a questionnaire with 450 stakeholders, including 100 national and local level policy-makers and 100 tourism developers and operators across 7 provinces and cities in Vietnam selected for study (Quang Ninh, Hanoi, Hue, Da Nang, Khanh Hoa, Ho Chi Minh City, Phu Quoc), as well as 200 tourists and 50 lecturers actively teaching at tourism training institutions.

The results obtained in Table 2.2 show that stakeholders' evaluations are evenly distributed across three types of processes. Among them, the process "Identifying core factors constituting smart tourism destinations and developing these factors first, followed by constructing the remaining factors" was most preferred by stakeholders evaluating the selected provinces and cities for study (accounting for 42.9%). The process "Sequentially constructing each component factor of smart tourism destinations" (37.8%, ranked second) and "Simultaneously constructing all component factors of smart tourism destinations" (37.8%, ranked third) were also evaluated.

Comparing the evaluations of stakeholder groups regarding the current situation of the smart tourism destination construction processes at the selected study destinations, the results obtained are as follows: Using the Spearman rank correlation coefficient to compare SMA's evaluation with EMO's, we found a correlation coefficient of approximately r ≈ 1 (indicating a very strong positive correlation), indicating complete consensus between these opinions. Using the same method to compare EMO's evaluation with tourist's, we found a correlation coefficient of approximately r ≈ 0.50 (indicating a relatively strong positive correlation), suggesting moderate consensus between these opinions.

Table 2.2. Evaluation of stakeholders on the current state of the smart tourism destination construction process in Vietnam

No	Criteria	Level of Agreement												Avg
		1		2		3		4		5		Total		
		No	Rate %	No	Rate %	No	Rate %	No	Rate %	No	Rate %	No	Rate %	
1	Simultaneously constructing the elements constituting smart tourism destinations	0	0	1	0.22	1	0.22	26	5.78	59	13.11	87	19.3	3
2	Sequentially constructing each element constituting smart tourism destinations	0	0	0	0.00	7	1.56	45	10.00	118	26.22	170	37.8	2
3	Determine the core factors constituting smart tourism destinations and construct these factors first,	0	0	0	0.00	7	1.56	47	10.44	139	30.89	193	42.9	1

										450	100	
followed by constructing the remaining factors												
TOTAL									450	100	

Using Spearman's rank correlation coefficient to compare the evaluations of tourists with those of lecturers selected for the study, we found the correlation coefficient r ≈ 1 (indicating a very strong correlation), showing that the two evaluations are entirely consistent. This result indicates a high level of agreement among the evaluations of SMA, EMO, tourists and lecturers regarding the state of the process for developing smart tourism destinations at the selected research sites. Through direct discussions with tourism industry leaders responsible for digital transformation in the selected provinces/cities, we found that all provinces are still in the stage of developing smart tourism development proposals or submitting proposals to the Government for approval, and no province has yet implemented an approved proposal. This means that smart tourism development in these provinces/cities is just beginning. Therefore, the awareness and actions of the research subjects regarding the process of developing smart tourism destinations are still very limited.

III. SOLUTIONS FOR IMPLEMENTING CONDITIONS AND PROCESSES FOR DEVELOPING SMART TOURIST DESTINATIONS IN VIETNAM

▪ **Enhancing Awareness, Behavior, and Attitudes among Party Leaders, Government Officials, Local Communities, and Workers in the Tourism Sector**
Purpose:

To provide Party leaders, government officials at all levels, local communities, and workers in the tourism sector with a comprehensive and accurate understanding of the theory behind smart tourism, smart tourist destinations, and the construction of smart tourist destinations. This knowledge will serve as a guiding principle for effectively implementing all activities related to smart tourism.

Content:
- Training on the fundamentals of smart tourism.
- Digital technology and innovation.
- E-Government, Digital Government, digital transformation, and the development of smart tourism.
- Utilization of specialized information systems.
- Training on digital skills in tourism.
- Skills in smart tourism management.
- Skills for smart tourism labor.
- Communication skills in a digital environment.
- Fostering a positive attitude towards smart tourism labor.

Implementation Measures:
- Conduct training sessions on smart tourism, digital technology, and innovation; E-Government, Digital Government, digital transformation, the development of smart tourism, and the use of specialized information systems at tourism training institutions, within tourism enterprises, or local communities.
- Provide training on digital skills in tourism, smart tourism management skills, smart tourism labor skills, communication skills in a digital environment, and the use of smart tourism equipment at enterprises or tourism training institutions.
- Foster a positive attitude towards smart tourism labor through practical work experiences at enterprises or any other suitable environments and times, facilitating self-training for managers and workers.
- Integrate smart tourism development and digital transformation content in the tourism sector into training and development programs for tourism human resources.
- Ensure close coordination among various stakeholders in the training and development of smart tourism human resources (State management agencies on tourism, educational institutions, and tourism enterprises).

▪ **Developing and Successfully Implementing a Smart Tourism Development Proposal in Provinces/Cities of Vietnam**
Purpose:

To enable provinces and cities to successfully develop smart tourism broadly and smart tourist destinations specifically.

Content:
- Formulate a Smart Tourism Development Proposal for the province/city to be submitted for government approval and subsequent implementation.
- Develop and implement comprehensive programs and plans for smart tourism development, focusing particularly on the construction of smart tourist destinations within the province/city.

- Digitize, connect, and integrate tourism data from the province/city into the national information and data management system following the guidelines of the Ministry of Culture, Sports, and Tourism.
- Facilitate data sharing and connectivity to contribute to the development of the smart tourism ecosystem.
   Implementation Measures:
- Collaborate with the General Department of Tourism to execute and implement the Proposal in the respective provinces/cities.
- Enhance state management in the fields of information technology and tourism within the locality, ensuring adherence to current regulations.
- Prioritize budget allocation for activities related to Proposal implementation and investment in tourism infrastructure development.
- Ensure information accessibility for businesses, residents, and tourists in the application of technology within the tourism sector.
- Establish a friendly tourism environment, promote civilized conduct, and ensure compliance with legal regulations at tourist destinations.
- Strengthen coordination and inter-regional linkages to optimally exploit the potential and strengths of the locality for smart tourism development.
- Develop policies to encourage and support businesses in investing in information technology applications, as well as connecting and sharing data with common systems, platforms, and applications within the tourism sector.

- **Business Architecture for Smart Tourism at Tourist Destinations**
   Purpose:
   To optimize the management and labor operations in tourism, and enhance the provision and delivery of tourism services, aiming to save time and costs while best meeting the needs of tourists.
   Content:
- Develop and effectively implement a smart management and service provision model at tourist destinations.
- For tourists: Enable interaction and service support through three different methods: via destination-provided online web services, mobile applications (iOS/Android), and multifunctional tourist cards.
- For tourism service providers: Provide mobile payment support services for fee collection, access control, service usage statistics, and recording and responding to tourist feedback to both promote and improve service quality.
- For tourism management authorities: The application allows for the management of tourist activities, transparency in the service exploitation process of service providers, and overall improvement in tourism service quality.
- Build and effectively implement smart management and service provision processes:
   + Smart input service management and provision processes: food, beverages, infrastructure, equipment, water, and energy.
   + Smart tourism service management and provision processes: accommodation, attractions, dining, and merchandise supply points.
   Implementation Measures:
- The destination management authority should implement policies allowing tourism enterprises to develop smart tourism business architectures at the destination.
- Destination leaders should actively propose and apply the implementation process of smart tourism operations.
- Collaborate with software design companies specializing in smart tourism management to develop management software tailored to the needs and capabilities of businesses at the destination.
- Deploy smart tourism management software at the destination.
- Train management staff and workers on smart management operations and service provision processes for tourists.
- Implement smart service provision and delivery processes at the destination.
- Provide instructional guides for tourists to follow smart service provision and delivery processes at the destination.

- **Establishing the Smart Tourism Operations Center in Vietnam**
   Purpose:
   The Smart Tourism Operations Center aims to serve the command, management, and supervision of tourism activities at a tourist destination, ensuring efficiency and sustainability, enhancing the destination's competitiveness, and improving the quality of tourist experiences.
   Content of Building the Smart Tourism Operations Center:
   To establish a Smart Tourism Operations Center, the following tasks are required:

- Develop technology infrastructure, smart equipment, internet-connected devices (IoT), sensors, tracking and monitoring devices. Ensure secure and safe information technology infrastructure.
- Build a data center layer based on cloud computing with an open, secure architecture capable of integrating, sharing, and expanding resources, serving as an essential part of the tourism infrastructure and smart city platform where various solutions are integrated.
- Develop solution and application layers: including big data systems capable of storing, sharing, and providing information for interactive application systems; service integration systems that allow the development and provision of new services from multiple partners; and intelligent operations centers that provide forecasting, emergency response information, and timely decision-making.
- Train and develop human resources with the necessary skills and knowledge to manage and operate the system.

Implementation Solutions for Building the Smart Tourism Operations Center:
Establishing a Modern Smart Operations System:
Invest in technology infrastructure, equipment, and storage services with essential equipment such as monitoring room display systems, IOC center control room displays, recognition devices, data digitization, installation of surveillance cameras, wifi, electrical systems, network systems, audio systems, and fire safety systems. At the local level, create a smart tourism application layer within the smart city operations center.

   (1) Reduce IT infrastructure costs, minimizing fragmented and inconsistent investments across related agencies, thereby rationalizing and saving public investment budgets.
   (2) Optimize infrastructure use for core information systems, enhancing service readiness.
   (3) Professionalize the operations team, reducing risks during application implementation and operation.

Data Collection:
Gather data from various sources into a centralized database system, including data from specialized applications, systems within the center, and direct integration from standalone files and digital platforms (AI, chatbots, social networks). Clean, standardize, and model data for tourism sectors, aggregate statistical reports, charts, and in-depth analysis to support decision-making. Provide and publish tourism information to agencies, organizations, and individuals as per legal regulations.

Developing Applications and Digital Platforms:
- Develop applications and tools for monitoring, supervising, and managing through data collected by the Smart Tourism Operations Center.
- Applications for tourists: tourism information portals, smart device applications for destination information, cultural events, attractions, cuisine, transportation, weather updates, online service bookings, and payments.
- Applications for tourism management authorities and destination managers: leverage new technologies in analysis and forecasting such as artificial intelligence (AI), big data, management tools, analytical reports, supervision; build data analysis systems for management and operation tasks; receive and handle feedback from tourists, individuals, and organizations about tourism.
- Applications for businesses and service providers: digital platforms for tourism management and business, compliance with statistical reporting regulations, etc.

Cybersecurity and Information Safety:
Ensure oversight, operation, and network security, build a four-layer information security model as guided by the Ministry of Information and Communications. Maintain a team of cybersecurity professionals to operate, monitor, support, and respond to incidents 24/7 for the entire system.

Developing Smart Tourism Human Resources:
Increase the quantity, quality, and structure of human resources to effectively operate the system.

Smart System Governance and Operation Mechanisms:
Open, flexible, and efficient management and operational mechanisms.

Awareness Raising and Advocacy:
Promote awareness among tourists, individuals, and organizations involved, fostering consensus among all stakeholders.

- **Training and Development of Smart Tourism Workforce**
Purpose:
To cultivate a smart tourism workforce capable of meeting the requirements for developing smart tourism destinations in Vietnam.
Content:
Training and developing management personnel in technology application skills for both managerial and specialized tasks; Training and enhancing the tourism workforce's proficiency in digital skills and technological competencies within the tourism sector.
Implementation Measures:

Conduct surveys to assess and classify the computer literacy levels of current tourism workforce members at various tourism destinations across provinces/cities (including leaders, managers, and workers) to devise specific training plans and appropriate training mechanisms. Organize training sessions, retraining programs, and skill enhancement courses in computer literacy and technology skills for direct tourism service providers, management teams, and employees of tourism enterprises, including travel agencies, transportation services, tour guides, tourist boats, and ships. Support educational institutions (including secondary schools offering tourism career guidance, vocational training in tourism, and universities specializing in tourism education) in adopting and utilizing international IT standards for the tourism workforce. Assist educational institutions in strengthening collaboration with enterprises to develop training programs and IT competency standards, organizing training sessions to ensure graduates are ready to work in digital environments at tourism enterprises.

▪ **Adequate Policies for Leadership and Smart Workers at Tourism Destinations**
Purpose:
Motivate proactive learning and training among management leaders and smart workers to excel in digital environments within smart tourism destinations.
Content:
Establish and implement policies on advanced management, professional skills, and IT proficiency enhancement; Develop policies fostering innovation and creativity in technology-driven operations to support the development of smart tourism destinations.
Implementation Measures:
Provide salary increases or additional income; Offer monetary bonuses or gifts, or provide courses on advanced management, professional skills, and technology for leaders, managers, and workers who achieve high labor productivity through effective technology application in tourism operations.

IV. CONCLUSIONS

Based on the results obtained, we conclude that the majority of smart tourism destinations in Vietnam have not yet achieved the criteria for constructing smart tourism destinations. Most tourism destinations have not clearly defined the processes for building smart tourism destinations. The primary reasons for this situation stem from the perceptions, behaviors, and attitudes of stakeholders involved (state tourism management agencies, tourism destinations, and residents at tourism destinations) in implementing the conditions and processes for constructing smart tourism destinations. To assist tourism destinations in successfully constructing smart tourism destinations, we propose that tourism destinations implement our recommended solutions systematically and effectively. Each solution has its own advantages and limitations. To maximize their effectiveness, tourism destinations should coordinate and implement these solutions in a synchronized and efficient manner.

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