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Towards Smart Trends for Tourism Development and its Role in the Place Sustainability-Karbala Region, a Case Study

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ABSTRACT

Tourism is currently considered one of the most important economic sectors that directly or indirectly affect societies and have a positive role in achieving spatial development, whether on (the country, regions, or cities) and its sustainability, and one of the modern trends in the field of achieving sustainability is adopting Elements of (intelligence) in development activities, the most important of which is smart tourism, which has the potential to make a qualitative and quantitative transition in the life of the local community in various aspects (economic, social, environmental, and environmental urban) if smart variables (smart governance - sustainability - technology - innovation - accessibility and smart mobility - communication and information technologies - social capital - cultural heritage - creativity) are taken more seriously in applying them to the reality of the situation in planning, implementation and management, allowing the investment of strengths and positive disks to overcome risks, challenges and weaknesses. This study was distinguished from the previous studies on the topics of smart tourism in that it relied on all indicators that contribute to the development of smart tourism in the field of sustainable spatial development by relying on the development potential of the regions, which greatly encourages the introduction of smart technology mainly in development. As is the case in the province (Karbala) in Iraq, which was chosen as a study area because of its great tourism development potential to find the available and latent opportunities in the transition to smart tourism, as well as to assess its role in sustainable development. The study reached important results through the use of statistical methods, including SPSS, represented in the presence of a strong correlation between smart tourism indicators and sustainable spatial development. Tourism supply and demand directly interact intimately, whose results are reflected on the entire Karbala region in the short and long term.

1. INTRODUCTION

The rapid development of information and communication technology has led to radical changes in the general behavior of tourism and its general structure, this prompted many countries of the world such as the United Kingdom, Italy, China, Korea and others to launch smart tourism initiatives on a wide range due to the smart tools and elements they possess that can be exploited in tourism activity [1]. Accordingly, the development and sustainability of tourism spatially needs innovative strategies in various economic, social, political, cultural and environmental development axes aimed at improving the quality of life of the local population and raising the economic capacity in the regions of their presence by preserving the principles of sustainable development [2]. Technical progress and technology at the present time have a great impact on human life in the spatial space, in which technology is integrated with tourism activities that are directed towards tourists and in a way that contributes to the development of the tourism process through tourist attractions, smart accessibility, smart facilities, smart services, the advantages of smart communication, smart events and management Smart [3]. The activation of smart tools and trends in the tourism field, leads to an increase in the effectiveness of the spatial attraction of tourist sites and the ability of tourism potentials to develop the regions and cities in which they are located, and thus achieve sustainable spatial development. So when tourist sites are characterized by the application of smart technologies and trends in all joints of activities, mobility, access, attractiveness, facilities and services, this generates important positive effects on governance, environment, economy, quality of life and social aspects of the population in the long term [4].

Research questions: The research questions came as follows: What are the most prominent smart trends for smart tourism? Does it contribute to activating tourism development to reach spatial sustainability? Does the study area have the ability and capabilities to build smart tourism? Is there a correlation between smart tourism and sustainable spatial development?

Hypothesis: By adopting smart trends and tools in tourism, it is possible to develop and activate the diverse tourism potentials in the study area (Karbala region) in a way that achieves tourism development, thus achieving spatial sustainability in the various axes, economic, social, cultural, environmental, urban, which proves the existence of a strong correlation between smart tourism and spatial sustainability.

Research objectives: Theoretical analysis of the field of scientific knowledge related to the study to arrive at a

proposed approach to developing and sustaining spatial development through the investment of smart trends in tourism activity. Accurate spatial analysis of natural and human potential and technology that can be invested in tourism activity to achieve spatial sustainability of the Karbala region. Determining the interrelationship between smart trends and their investment in smart tourism and sustainable spatial development.

1.1 Smart tourism: Concept and characteristics

The concept of (smart tourism destination) or smart tourism has been discussed in the literature since 2010 and is closely related to the concept of smart cities, Despite the fact that there is no final consensus on the definition of smart tourism, and any location can be labeled as a smart tourist destination, It is necessary to use intensively the technology provided by the smart city, to achieve creative tourism that ensures sustainable development through main dimensions (governance - sustainability - technology - innovation - accessibility - communication and information technologies - social capital - economic leadership - cultural heritage and creativity), Since a result, smart tourism is no longer dependent on a specific spatial dimension, as it may now be linked to any spatial place (city, region, country) that offers potentials for natural or cultural tourist attractions through some planning and administrative procedures [5].

1.2 Techniques of tourism industry intelligence

This research aimed to demonstrate the impact and significance of indicators for smart tourism development as variables, quantitative and qualitative criteria, and to illustrate the transition to smart tourism through its adoption in the modern trend toward creativity and non-compliance with traditional methods in economic, social, cultural, and environmental terms. Development has become one of the old ways of doing things that isn't in line with long-term sustainability and quality. In the areas of development, which improve the attractiveness of cities for tourism activities and increase the flexibility of the spatial fabric in terms of producing job possibilities and establishing a strong tourism identity [6], This can be seen in many countries that have profited from their technology and smart technologies in tourism development and hence sustainable spatial development, such as Singapore and Kuala Lumpur, which have established themselves as worldwide tourist destinations. [7]. Figure 1 shows the smart tourism industry's tendencies and strategies and techniques that are used.

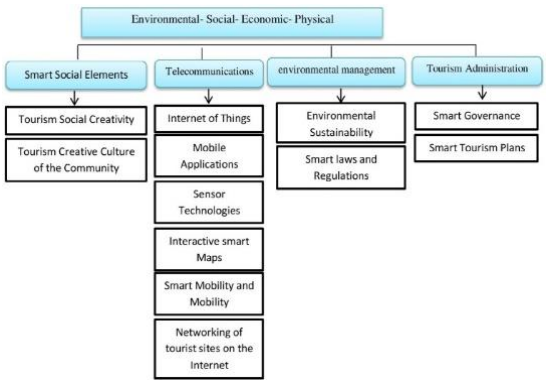

Figure 1. Smart tourism trends and intelligence techniques

2. THEORY AND METHODOLOGY

2.1 Previous studies

Strengthening the theoretical aspect requires research and shedding light on the scientific efforts and previous studies that dealt in one way or another with the main concepts of research, for the purpose of identifying the most prominent results produced by those related studies and what are the most prominent determinants and points of difference with the current research, the following is a review of some studies that dealt with the concept of smart tourism and sustainable spatial development: Study [8], which relied on an exploratory and analytical methodology in the possibilities of smart tourism in Gandia, Valencia, through questionnaire and interviews, and reached the need to adopt strategies that adopt technology for the smart transformation of the city in tourism activity. The researchers [9], also emphasized in their study of Algeria on modern technology in managing tourist destinations, but the study did not focus on the sustainability of the place and the development process that can achieve its results through the adoption of smart tools and trends in tourism. While the study [10], came to clarify the benefit of investing the technology that actually exists in the city of Hebei in the tourism field, and the study reached a basic conclusion that the key to smart tourism is to focus on the population, Also, there should be a direct orientation for tourism companies to rely on smart technologies in the transition from traditional tourism to smart tourism, but they neglected the developmental dimensions of tourism in activating and sustaining the spatial environment. also, there should be a direct orientation for tourism companies to rely on smart technologies in the transition from traditional tourism to smart tourism, but they neglected the developmental dimensions of tourism in activating and sustaining the spatial environment. The study also came [11], and the research relied on the spatial analysis of smart elements on the Yunyang region, but it focused on one element, which is the marketing of tourism products in rural areas. adopted the methodology of analysis of previous literature that focused on the topics of smart tourism, smart development and smart cities, the study focused on one aspect: the role of technology in tourism and then the transformation into smart cities. Thus, the study did not focus on the sustainability of the place and the development process that can achieve positive results from adopting smart trends in tourism.

2.2 The literature review

The research attempted to determine the reality of the tourism potential present available in the Karbala region, and then to determine the extent to which smart trends are applied to tourism activity as a sustainable development tool, by addressing previous studies in this field. Including the development of societies and the advancement of the economic and service reality and the development of the region spatially, in addition to the fact that what was studied was mainly about the general principles of smart cities with weakness in the assertion that smart tourism requires more aspects as an economic activity related to the visitor demand and the ability of attracting them to cities through smart trends. Also, other studies have taken one of the needs of smart tourism without knowing all of the requirements and smart trends, therefore the goal of this study was to attain comprehensiveness in tourism intelligence and development potential for the study area.

2.3 The concept of intelligence and the characteristics of smart tourism

The first beginnings go back to the use of the concept (intelligence) to the nineties of the twentieth century, which depends mainly on technology and communication technologies, and in common that this term (smart) describes the technological, economic and social developments supported by modern technologies [4], for any place to be smart, there are important elements or areas that must be of high quality: economy, environment, mobility, governance, and people's quality of life, and then the mechanisms of applying these tools depend on public policies and their orientations, as well as related to the activities of society, which is necessary to have independence and high awareness [12], Therefore, the view of these smart trends, which represent (the model of intelligence) as a panacea to enhance the attractiveness of tourist destinations and then activate the tourism and spatial development in general.

The concept of (smart tourism) was launched, which was considered a continuation of the smart city model in order to include some issues that are directly related to it, such as the elements of quality of life and sustainability at all levels of the tourism process, starting from the application of the elements of intelligence on the consumer / tourist to the introduction of these elements into the economic structures supporting the sector tourist, and to the tourist destination in the spatial field, because of its direct effects on economic development in the short term, in addition to the general goal, which is to achieve long-term sustainable development. Although the concept of (intelligence) has been associated with cities mainly and with key elements represented in the use of technology, effective management of resources and capabilities, livability and quality, sustainability, and governance, but these tools have been linked to smart tourism in an intertwined manner [13]. Thus, smart tourism includes a number of elements and trends that are associated with the smart city. Whereas tourism, as defined by the World Tourism Organization, is “a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes” [14], Therefore, it is possible to consider smart tourism as a logical progression from traditional tourism to e-tourism, which paved the way for intelligence by relying on innovations and technological guidance for tourist places and consumers and the widespread reliance on information and communication technologies and systems in tourism ICT (Table 1) [15].

In order to make tourism smarter, there must be synergy and joint efforts among various governments, public and private sectors, in addition to academic institutions and civil society organizations, and relying on a sustainable planning approach that keeps pace with global development [16], and smart management that will transform tourist sites into innovative and flexible systems characterized by their ability to maintain basic functions in the tourism field in the face of various pressures and challenges related to absorptive capacity, growth and sustainable use of the acapabilities vailable and latent natural and human [17], and a method for employing technology and smart technologies along with activities to enhance monitoring and reach the appropriate decisions that will sustain tourism and enhance its development capabilities in the spatial environment [18].

Smart tourism is green, clean, sustainable and quality tourism that meets short-term economic needs and long-term sustainable development [19], and it works to enhance livability and quality of life, provide job opportunities, increase revenues, and develop other sectors in which they are linked [20].

Smart tourism is a flexible concept that provides the possibility of discussing it in many areas, including the spatial level [21]. Being a tool for spatial development in its various sectors that contribute to reducing regional inequality, since tourism planning is integrated with it, improving the living environment and providing the services and infrastructure required by the tourist regions to become effective and able to retain more tourists [22].

It is no secret that these capabilities represent a reputation for tourist places and that their investment in the correct manner generates positive results through the increase in the number of potential tourists who are looking for tourist places with an excellent reputation, and it comes from their high competitive capabilities [23].

2.4 Methodology

The study relied on a descriptive and analytical methodology for all of the arguments related to tourist development and the most prominent smart trends, The analytical hierarchy process (AHP) was used in conjunction with an electronic statistics tool to produce the research results (Expert Choice), which is one of the ways for obtaining the most accurate results, and which is one of the methods for obtaining the most exact results It is critical to assess data and information in a three-level hierarchical way using SWOT elements (strengths, weaknesses, opportunities, and threats), which is a methodical identification of numerous factors to design the most effective plan for reducing weakness and threat risks, and then realize the possibility of applying smart trends to develop Sustainable tourism, by processing the information obtained through field surveys, questionnaires, and deep and focused interviews with groups of tourists and tourism professionals from government institutions and academics conducted in the study area.

Table 1. A comparison according to general indicators between traditional tourism, e-tourism and smart tourism

Smart Tourism	e-Tourism	traditional tourism	pointer
bridging digital & physical	digital	material	Sphere
sensors & smartphones	websites	Live meeting	Core technology
during trip	pre- & post-travel	During flight only	Travel phase
big data	information	little information	Lifeblood
technology-mediated co-creation	interactivity	One-way	Paradigm
ecosystem	value chain/intermediaries	tourist destination	Structure
public-private-consumer collaboration	B2B, B2C, C2C	Weak collaboration between the supporting sectors	Exchange

Source: the researcher relying on [9];

The Pearson correlation analysis method was used to analyze the correlation between smart trends and their role in tourism development, as well as the link between smart tourism and spatial sustainability, based on the results of the questionnaire and interviews conducted in the study area using the (SPSS) program, the Pearson correlation which is one of the most well-known electronic statistical programs Due to the logical and accurate results that are extracted and its ability to determine correlations and its speed in processingvast amounts of varied types and numbers very quickly, which helps researchers and specialists greatly in reaching the results.

3. RESULTS AND DISCUSSION

The study area represents (Karbala governorate), one of the Iraqi governorates, which is located to the southwest of the capital, Baghdad, about 105 km and on the transportation line linking Iraq with the Arabian Peninsula, it has great tourism potential for development, which represent the characteristics of tourism offer and request, it enjoys a rich historical and religious heritage, which enabled it to be a great source of tourism for the country and for many regions [22] (Figure 2). However, attempts to develop tourism and its sustainable development require concerted efforts and synchronization of global development in various fields, especially in the field of introducing smart trends in this vital and dynamic industry.

The focus on Karbala governorate came from the fact that it has high tourism and development potentials compared to the governorates and regions of Iraq, as (Table 2) refers to the indicators of hotels, as they possess high percentages of the total country, as it indicates the important position of Karbala governorate in terms of tourism, and therefore the possibility of tourism development is available through effective smart plans.

Table 2. Special Indicators of the hotel system in Karbala governorate compared to Iraq 2022

sequence	standard	Percentage of the total of Iraq
1	Number of hotels	30%
2	Employees in the hotel activity	40%
3	wages paid	25%
4	Revenues	42%
5	spending	35%
6	Guests	35%

Source: the authorrelying on [23, 24];

While the tourist demand for Karbala governorate is constantly increasing annually, Due to the religious tourist attractions that the central city enjoys, which encourages an increase in the demand for natural, cultural and historical tourism potentials in the development of smart tourist destinations, if they are appropriately invested, being distinguished by a religious center, which contributed to making it a tourist attraction, to which millions of visitors and tourists flock daily and annually, which encourages the investment of this competitive advantage and the transformation into smart tourism through the integration of its tools and its introduction as a development dimension whose impact spreads to the whole region, not just the central city.

The study was based on conducting a preliminary analysis to find out the effective indicators in smart tourism that negatively or positively affect the achievement of this goal. in order to reach the achievement of tourism development in the Karbala region through the introduction of smart trends as basic indicators in the process of intelligent transformation of the sustainable tourism making, the S.W.O.T strategic analysis method was used, in which the method of discussing focused and deep interviews was adopted face to face with specialists in the tourism field (academics, workers in the tourism field, employees in the local authority) by (30) participants in the study area in addition to field survey and direct observation to determine the most prominent strengths and weaknesses (internal factors) opportunities and threats (external factors) through which it is possible to reach an integrated planning vision and initiate the development of appropriate policies for decision-makers for sustainable regional development, then analyze the factors and arrange them according to priorities and importance through the Analytic Hierarchy (AHP) method (Table 3).

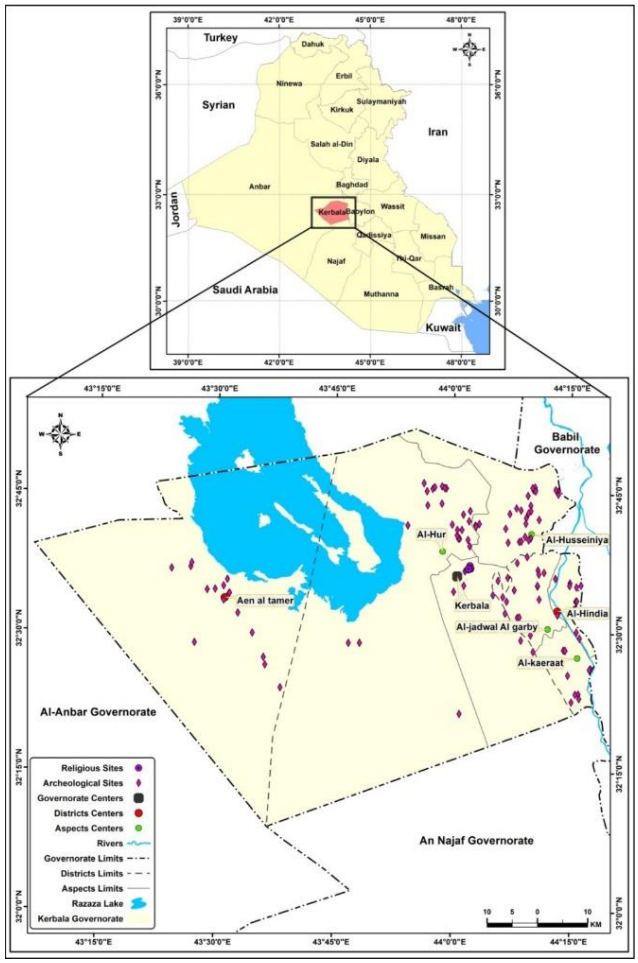

Figure 2. The administrative map of the study area (Karbala governorate) with the spatial distribution of tourism potential 2022 [25, 26], using thep ARC GIS 10.8 program

The research adopted the Analytic Hierarchy Process (AHP) by using the statistical program (Expert Choice) for S.W.O.T elements to process information in a quantitative rather than descriptive manner to determine priorities or evaluation and selection at three levels, it is the most common method in individual and group decisions through pairwise comparisons between factors for each group and then between the four groups for S.W.O.T analysis, and by adopting the (Saaty) scale.

Table 3. Matrix SWOT analysis of tourism potential in Karbala governorate

Smart indicators of the sustainable tourism development strategy (first level)					
Criteria	**Strengths**	**Priorities**	**Criteria**	**Weaknesses**	**Priorities**
	Priorities for Level 2 (0.34)	for Level 3		Priorities for Level 2 (0.21)	for Level 3
S1	Tourist sites with international tourist attractions	0.4258	W1	Technological weakness and modesty of tourism institutions in smart tourism activation	0.2165
S2	Geographical location provides easy access	0.0653	W2	Weak coordination between the authorities responsible for tourism development	0.1943
S3	Provides a cultural structure that helps to accept and develop the idea of smart tourism.	0.0505	W3	Shortage of electric power supply The deterioration of the urban structure and the emergence of slums.	0.0433
S4	The increasing use of communication technologies and modern technology for the local community, tourists and companies specialized in tourism activity.	0.1362	W4	Old and traditional networks of transport	0.0601
S5	Availability of a segment of the workforce in the tourism field that has the ability to deal with smart technology.	0.0963	W5	There is a weakness in the use of electronic commerce related to tourism marketing	0.0387
S6	Availability of service infrastructures (hotels, restaurants, parking lots) with the possibility of electronic reservations.	0.1136	W6	The lack of integrated geographical databases in the tourism activity	0.1884
S7	The presence of a website for the management of the government authority for tourism activity on the Internet.	0.1123	W7	Weak promotion of non-religious tourism potential as a result of the weak trend towards introducing smart elements into the media and communication	0.1225
			W8	There is no system based on operational information technologies to manage financial transactions and order systems.	0.0117
			W9	Human resources in the operational management of smart trends are still weak in terms of scientific background and experience.	0.1245
Criteria	**Opportunities**	**Priorities**	**Criteria**	**Threats**	**Priorities**
	Priorities for Level 2 (0.29)	for Level 3		Priorities for Level 2 (0.16)	for Level 3
O1	The global trend towards investing in tourism within a smart field	0.051	T1	The lack of coherence between the various sectors that support sustainable tourism development, such as transport, industry, and various community services	0.2997
O2	Attitudes towards the automation of development activities, including the tourism sector, at the national level.	0.0474	T2	The conflict between government laws and legislation, which is often an obstacle in the possibility of activating smart and sustainable tourism development.	0.1998
O3	The expansion of the global tourism region in Karbala and the annual increase in the number of tourists.	0.1989	T3	Weakness in financial allocations in the field of smart investment within the regional development plan	0.0614
O4	Initiating a first stage in designing smart maps for tourism at the country level.	0.195	T4	Weakness of the governmental and institutional system that has the possibility of issuing laws and legislation in the field of smart tourism	0.1546
O5	Paying attention to the principles of sustainability and incorporating them intensively into the general policies of countries.	0.3483	T5	Lack of awareness of the importance of moving towards the intelligence of tourism activity and the weakness of the planning decision.	0.0898
O6	The transition from traditional tourism to smart tourism contributes to increasing the quality of life of the population from the economic, social and environmental aspects	0.1594	T6	The lack of an integrated scientific system to ensure effective monitoring of the quality and sustainability of tourism	0.1947

From Table 3, it is noted that the study area possesses internal and external factors, some of which encourage the achievement of the goals of smart tourism development and the sustainability of the region, and some of them represent challenges, for which solutions and strategies must be developed to overcome them, In order to be able to achieve these goals, this requires a development strategy that works to enhance strengths and opportunities against weaknesses and threats (Table 4), according to the (Saaty) analysis that was extracted through the Hierarchical Analysis Program (AHP), for the purpose of achieving all the following development goals for smart tourism:

(A) smart economic development.

(B)smart social and cultural development.

(C) smart environmental development.

In view of the great potentials possessed by the study area

(Karbala region), which encouraged this to enhance its strengths and the opportunities it possesses, this contributed to the adoption of a development strategy (SO) to advance the reality of the tourism situation and the trend towards adopting intelligence as a key element in achieving tourism development and its sustainability, which is positively reflected on sustainable regional development events.

Table 4. Matrix of smart tourism development strategy for spatial sustainability of Karbala Governorate

Matrix of smart tourism		
The strategy	SO	WO
Accomplished goals	A.B.C	A.C
The strategy	ST	WT
Accomplished goals	A.C	A.B

Source: the authorbased on the analysis of the results of (S.W.O.T) Table 4, The Hierarchical Analysis Method (AHP).

Reaching an integrated vision about the indicators related to smart trends in the extent of their capabilities in directing the current (traditional) tourism to (smart) tourism (Table 5), a questionnaire was conducted for an intentional sample that included (100) tourists who hold university degrees exclusively during the period from 5-8/1/2022 to find out their responses in two main axes (smart tourism) (sustainable spatial development) of the Karbala region, and then determine the nature of the correlation between between them. In both of them, the five-point scale (Type Sscale-Likert) was used to determine the weights of each variable from the set of variables for the study. From the analysis (Tables 5 and 6), it is noted that there is a strong correlation and a clear impact of smart tourism on spatial development and its sustainability with a value of (0.9126). This result came through analyzing the respondents' answers in the (SPSS.26 program) and the adoption of the correlation analysis tool (Pearson). for the studied variables, also, the value of The F distribution calculator (14.963) for the simple linear regression, which is greater than the tabular F value for the simple linear regression (6.85), This indicates the evidence of morale, and thus we reject the null hypothesis and accept the alternative hypothesis of the existence of a correlation between smart tourism and sustainable regional development (Table 7).

Table 5. Analyzing the role of smart trends in achieving sustainable smart tourism in Karbala Governorate

Variables	Questionnaire questions	Weighted average	Standard deviation	Overall level of response
Smart Governance	Focusing on smart methods in wise, contributes to enhancing cooperation and participation between government and citizenship.	4.13	0.5	Agree
Environmental sustainability	Intelligent tourism of tourist places, contributes to making planning decisions in accordance with environmental sustainability.	4.2	0.4	Strongly Agree
Technology	The use of technology and smart technologies contributes to increasing the tourist attraction of the diverse tourism potentials.	3.77	0.74	Agree
Innovation	Smart tourism provides innovative solutions to manage tourist places (time management - purchases - tourist reservation systems).	4.02	0.77	Agree
Accessibility and smart mobility	The introduction of smart transportation, mainly, helps to increase the on-site linkage between tourists and tourism potentials in the Karbala region.	4.29	0.51	Strongly Agree
information technologies	Possession of smart means of communication on the Internet helps in raising and developing tourism marketing.	4.56	0.38	Strongly Agree
Social Capital	Smart tourism has a positive impact on strengthening social.	4.11	0.66	Agree
Economic Leadership	Smart trends contribute to increasing the competitive advantage of tourism.	4.15	0.68	Agree
Cultural Heritage	The contribution of smart tourism to preserving cultural heritage and protecting cultural identity.	3.68	0.77	Agree
Creativity	Smart trends increase the chances of moving from traditional tourism to sustainable tourism.	3.89	0.73	Agree
Vision change	The adoption of smart trends in tourism contributes to improving the mental image to the tourist areas.	3.57	0.89	Agree
Mutual Satisfaction	The trend towards smart tourism will gain the satisfaction of the tourists coming to the Karbala region.	3.35	0.92	Agree
General Average		3.98	0.67	Agree

Source: the authorbased on the analysis of the results of the questionnaire using the SPSS.26 program.

Table 6. Analysis of the role of smart tourism in sustainable regional development in Karbala Governorate

Developmental axis	Questionnaire questions	Weighted mean	Standard deviation	Overall level of response
Economic	Smart tourism contributes to enhancing per capita income by developing tourist destinations and increasing tourists.	3.89	0.6	Agree
	Tourism is an important activity in providing job opportunities as a result of its strong association with other development sectors.	3.23	0.83	Agree
	Smart tourism encourages enhancing the competitive advantage of tourist sites.	3.47	0.72	Agree
social and cultural	Smart tourism works to integrate tourism activity with society in a sustainable manner by benefiting from local expertise and competencies.	3.73	0.56	Agree

	The smart technology contributes to providing an element of security and safety in the region (surveillance cameras, sensors, smart management in urban areas, etc.).	3.26	0.57	Agree
	It provides an opportunity for positive public participation in all aspects of the development process.	3.14	0.59	Agree
Environmental	The active role of smart tourism in providing a sustainable environment that increases tourist attractions and reduces environmental pollution.	4.33	0.79	Strongly Agree
	Intelligent management of natural resources and capabilities, which contributes to the optimal investment of those resources, preservation of the environment.	3.25	0.67	Agree
	The use of information and communication technology in managing, preserving and updating the cultural heritage of the tourist place.	2.26	0.81	Agree
physical	The trend towards intelligence in the field of tourism contributes to the creation and revival of new cities and villages according.	3.9	0.85	Agree
	Smart tourism development works on developing basic infrastructure and community services in urban areas to suit the requirements of sustainability.	3.64	0.83	Agree
	Sustainable smart tourism enhances the dimensions of sustainability in planning and designing urban land uses.	3.93	0.97	Agree
General Average		3.5	0.73	Agree

Source: the authorbased on the analysis of the results of the questionnaire using the SPSS.26 program.

Table 7. Correlational relationship between (smart tourism) and (sustainable regional development) in the province of Karbala
Acknowledgement

Determination Coefficient	**Correlation**	**(at 1% level)**		**coefficients unstandardized**	**Constant**	**Variables X, Y**
R^2	R	F value		B	A	smart tourism
1.83	0.9126	F (tab)	F (calc)	1.177	111.486	Sustainable regional development
		6.85	14.963			

Source: the authorbased on the analysis of the results of the questionnaire using the SPSS.26 program.

4. CONCLUSIONS

This research focuses on fundamental goals, the most important of which is the introduction of techniques, trends, and current technology in the promotion of tourism and its spatial sustainability, which has the potential to be a scientific and valuable addition at both the local and global levels.

Given the modern world's tendency to rely on advanced technologies and to introduce the technological dimension radically in various aspects of life, such as the Internet, movement technology, and communications, as well as to benefit from electronic technologies such as interactive maps and sensing, it has become necessary to use them in spatial development activities, including tourism, by focusing on scientific concepts, including Smart and integrative concepts.

And, based on the foregoing review of the study's theoretical framework and concepts, designing a model of smart trends for smart tourism through a set of indicators that were separated from the smart city and integrated into the general principles of sustainability for the development of tourist places in general and the distribution of spatial development in a balanced manner in the Karbala region, which was represented by one of the study's questions about the possiblities of investing smart trends in the transition from traditional tourism to sustainable smart tourism capable of giving a positive outlook in all economic, social, environmental and even urban fields.

The matter was emphasized in the assumption that the adoption of technology and smart trends leads to achieving tourism sustainability and smart spatial development in view of what was revealed of the great potentials that characterize the study area (Karbala region), whether natural or human, and its ability to offer. And the tourism demand that can be invested, according to the methods used (s.w.o.t, ahp), the questionnaires that were conducted, and the statistical programs used in the study (Expert Choice) and (SPSS), which also proved the existence of a strong link between smart tourism and spatial development. Thus, it is also mentioned through the questionnaires that were done by focused and in-depth interviews on two rounds to know the viewpoints of the competent authorities in the tourism industry, as well as the methodologies that were utilized in studying the potentials of smart tourism in the research area.

However, one of the limitations that this study encountered at the spatial level is the lack of previous studies that adopted the concept of intelligence in tourism and, as a result, focused on smart cities or their reliance on an element or some smart trends in tourism, and the use of smart technology in the tourism field necessitates a strong will among the relevant authorities and the issuance of laws that obligate the competent authorities in the field of tourism, and the provision of financial and technical support so that the results are positive and clear in the cities and tourist regions.

The study also discovered that introducing smart technologies and trends in tourism helps to modernize and activate tourism potentials, as well as improve regional growth, sustainability, and ease of use by beneficiaries and local inhabitants.

This study serves as a starting point for a number of others that look at the smart dimension, technology, and sustainability as important tools for keeping up with global development and work to inform decision-makers and relevant authorities about their importance and the need to incorporate them into public policies for regional development, as they are

essential tools for the present and future as a result of the qualitative shift in human life, and not to stop at the available means at the spatial level, but to take advantage of all smart elements in reviving and activating sustainable development, including the smart tourism industry (Figure 3).

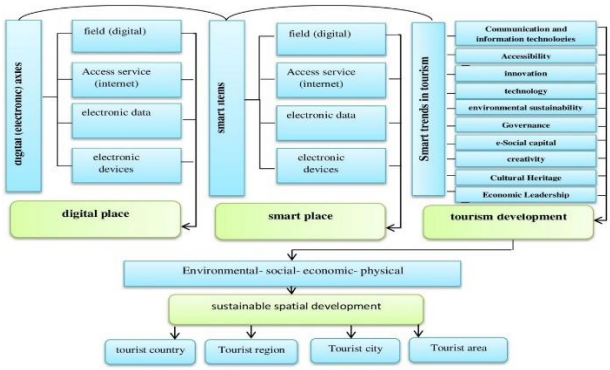

Figure 3. Scheme for achieving smart tourism development in a sustainable spatial environment

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NOMENCLATURE

S.W.O.T	SWOT analysis (strengths, weaknesses, opportunities, and threats)
SPSS	IBM SPSS Statistics Base
AHP	analytical hierarchy process
SO	a strategic (strengths-opportunities)
WO	a strategic (weaknesses -opportunities)
ST	a strategic (strengths - threats)
WT	a strategic (weaknesses - threats)
R	Pearson Correlation