

## A Brief Analysis on the Smart Tourism from the Perspective of China's Tourism Industry Transformation

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**Keywords:** Tourism Industry, Industrial Transformation, Smart Tourism

**Abstract:** in Recent Years, with the Improvement of Public Living Standards and the Development of Living Quality, Tourism Has Increasingly Become a Popular Choice for the Public to Enjoy Consumption. Meanwhile, with the Rapid Development of Artificial Intelligence, Big Data and Information Technology, Tourism Which Based on Mobile Big Data Has Become a New Way of Tourism. It Has Brought a Brand-New Traveling Experience to Chinese Tourists and Simultaneously Promoted a Great Change in the Development Pattern of China's Tourism Industry. This Paper is Mainly in the Context of the Transformation and Development of China's Tourism Industry. Based on China's Tourism Industry, This Paper Mainly and Comprehensively Analyzes Smart Tourism. Firstly, the Basic Concept of Smart Tourism and a Caa Three Leveled Construction Framework of Smart Tourism Which Created by Lingyun Zhang et al. is Analyzed; Secondly, According to the Preliminary Development under the Case of China's Tourism Industry Transformation in China's Key Cities, This Paper Analyzes the Present Situation of China's Smart Tourism; Lastly, in View of the Present Situation of China's Smart Tourism, This Paper Puts Forward Reasonable Development Strategies and Prospect Forecast.

### 1. Introduction

The Transformation and Development of Tourism Industry is the Hot Spot of Tourism Industry in Recent Years. At the National Level, Plan for Deepening the Reform of Party and State Institutions Had Been Proposed in March 2018. the Aim is to Enhance and Demonstrate Cultural Confidence; Adhere to the Path of Socialist Cultural Development with Chinese Characteristics; Coordinate the Development of Cultural Undertakings, Cultural Industries and Tourism Resources; Improve the Soft Power of National Culture and the Influence of Chinese Culture. the Responsibilities of the Ministry of Culture and the National Tourism Administration Will Be Integrated, and the Ministry of Culture and Tourism Will Be Formed as an Integral Part of the State Council.

On the One Hand, under the Guidance of the State Council's Opinions on Speeding Up the Development of Tourism (National Development Agency No. 41). in Order to Realize the Transformation of Tourism Industry and Form a New Economic Growth Point, Tourism Began to Seek to Combine with Big Data and Information Technology. on the Other Hand, under the Influence of the Formation and Development of Smart Cities, "Smart Tourism" Came into Being.

Therefore, this paper mainly grasps the two basic points of the transformation of tourism industry and urban smart tourism, and makes a comprehensive analysis of smart tourism. By combing the basic concept and the skeleton system of smart tourism and being based on the analysis of the transformation and development of tourism industry in key cities in China, obtaining the present situation of our country's smart tourism. Finally, it puts forward a reasonable direction of development for smart tourism. Thus, it has a positive effect on the transformation and development of China's tourism industry.

## **2. Development Status of Smart Tourism**

### **2.1 The Origin and Concept of Smart Tourism**

The concept of “smart” came from a 2008 speech by IBM President Mingsheng Peng on “smart earth”. Wisdom is an advanced stage of intelligence, but it is beyond intelligence in terms of scope, wisdom is more concerned with human's full participation and function. [1] Some scholars believe that, “Smart tourism is a systematic and intensive management reform based on the new generation of information and communication technology (ICT) to meet the individual needs of tourists, provide high-quality and satisfactory services, and achieve the sharing and effective use of tourism resources and social resources”. [2] There are also scholars believe that, “Smart tourism is based on the new generation of information technology and combined with the original technology, aiming at building the perception layer, network layer and application layer, and making full use of the public platform to provide applications to the government, enterprises, tourists and residents, so as to build a highly information-based modern tourism”. [3] But now the definition of smart tourism has not yet formed a complete and unified theory. But basically, they all emphasize the use of information technology and the background of big data to promote the transformation of the tourism industry. So tourists can form a new sense of tourism experience.

### **2.2 Caa Construction Framework of Smart Tourism**

Lingyun Zhang and others believe that “A CAA framework system consisting of the capabilities of intelligent tourism, the attributes of smart tourism, and the applications of smart tourism should be constructed”. [1] Among them, capability refers to the advanced information technology capability of smart tourism, attribute refers to whether the application of smart tourism is for public welfare or profit, and application refers to the specific functions that smart tourism can provide to the interest subjects of all parties, such as: application for tourists, government, enterprises and residents, etc. From this tourism framework system, it can be seen that smart tourism is an industrial upgrading and innovative application that relies on advanced information technology capabilities to serve the interests of all parties.

### **2.3 Core Technologies of Smart Tourism**

Smart tourism mainly relies on the four core information technologies: Internet of things, mobile communication, cloud computing and artificial intelligent technology. Through intelligent sensation, recognition technology as well as background data analysis to achieve smart marketing, service, management and application. Internet of things can be used in acquisition terminals and smart terminals; mobile communication technology can be applied to intelligent voice and mobile tour guides; cloud computing technology can be applied to commercial data interfaces and data computing cloud-based; artificial intelligence technology can be applied to tourists' behavior regulation and precision service. As the core means of relying on smart tourism, these core technologies can better link the interaction of all parties' interests and realize the modernization and intelligence of smart tourism.

### **2.4 Progress of Smart Tourism in China**

In July 2011, the National Tourism Administration has been clear about the tourism development strategic target, that is, to broaden the scope of the relevant application software platform and tools within 10 years, to strengthen the information and intelligence of tourism management services and marketing process, to improve the information base of tourism, set up information sharing platform, tourism resources library, to build an information sharing platform, and to cultivate a number of leading demonstration enterprises. At present, partial cities in China begin to explore the construction. In 2012, 18 cities including Beijing, Wuhan, Chengdu, Fuzhou and Xiamen were identified as “the first batch of national smart tourism pilot cities”. In 2013, 15 cities including Tianjin, Guangzhou, Hangzhou and Qingdao were designated as “the second batch of national smart tourism pilot cities”.

## **2.5 Current Situation of Smart Tourism in Key Cities**

The construction of smart tourism in Nanjing. The basic idea is “government-led, multi-party participation and market-oriented operation”, which is mainly targeted at tourists and the government for planning and construction, providing intelligent services for tourists and supporting the government for intelligent management at the same time. During the construction of smart tourism in Nanjing, the initiative of various parties was fully mobilized. Smart tourism alliance was formed by the government, tourism, enterprises, tourism service providers and other entities, and all parties realize win-win cooperation through resource exchange. [1]

The construction of smart tourism in Shanxi. In January 2013, Taiyuan, the capital of Shanxi Province, was included in the “second batch of national smart tourism pilot cities” list by the national tourism administration, and the tourism industry of Shanxi Province began to enter a period of transformation. In June 2014, “Travel to Shanxi” website of Shanxi provincial people's government was established, which provided rich tourism information for the government, scenic spots and tourists, and the website is the first portal of smart tourism in Shanxi Province. In November 2014, the construction of Shanxi smart tourism geographic information service platform was completed and passed acceptance. In 2015, five scenic spots in Shanxi were ranked in the top 100 in the China's best smart tourism (scenic spots) ranking, from high to low, were Qiao's compound, Mountain Wutai, Yungang grottoes, Prime Minister of Imperial City and Mt. Mianshan. [4]

## **3. Problems in the Development of Smart Tourism**

### **3.1 The Social Popularity of Smart Tourism is Not High**

Most people still stay in the past traditional traveling ways, and they know little about smart tourism, a new form of travel. It may even be completely strange to some people. Therefore, in the transformation and construction of tourist attractions, the application of this technology is often ignored. Instead, price wars are fought among enterprises, forming a vicious circle and seriously affecting the quality of the experience of tourists. In addition, tourists do not use or aren't used to using smart tourism, which is a new way of travel, will further hinder the development of smart tourism.

### **3.2 Regional Development Level of Smart Tourism is Unbalanced**

Some cities with tourism as the main development pillar industry or regions with a higher level of information technology development have a higher level of development of smart tourism; however, in some inland regions with backward economy or regions with low level of information technology development, the development level of smart tourism is relatively low and even has not been developed or applied yet. The reasons for this include whether there are opportunities to be a pilot city of smart tourism, and whether it has advantages in politics, economy, culture, etc.

### **3.3 Lack of Professionals in the Construction of Smart Tourism**

One the one hand, China's current stage of tourism talent is generally single, mostly only stay in the knowledge and skills of tourism that they're familiar with, few of them can skillfully use the Internet thinking and integrate information into tourism. On the other hand, the main managers of the tourism industry are still the leaders of the traditional tourism industry. Their management philosophy is seriously inconsistent with the current social background, and they generally lack forward-looking ideas. Therefore, it seriously affects the promotion and application of smart tourism, and further hinders the transformation and development of China's tourism industry.

### **3.4 The Application Scope of Smart Tourism is Still Narrow**

The construction of smart tourism in China is mainly carried out through the traditional mode of “government-led and multi-party participation”. Although this mode is conducive to concentrating efforts, it limits the construction enthusiasm of all market subjects to a certain extent. Due to the

government's leading role and the difficulty in delegating power, the application scope of smart tourism will inevitably narrow in the construction of smart tourism. At present, the application of smart tourism is mainly focused on the construction of tourism mobile client platform, enterprise e-commerce platform network and other platforms. However, due to the lack of application of artificial intelligence and regulatory systems, technological breakthroughs are still needed.

#### **4. Development Strategies of Smart Tourism Construction**

##### **4.1 Increase the Quality of Interactive Experience in the Scenic Spot**

In view of our social popularity of smart tourism is not high, we should increase the promotion of the “smart tourism” strategy by China’s national tourism administration and further promote the thinking of smart tourism such as smart transportation, smart hotels and smart catering. Strengthen the connection between the construction of smart tourism and people's lives, so as to improve the quality of interactive tourism experience, give tourists a better sense of travel experience and make them better understand the connotation of smart tourism.

##### **4.2 Promote Regional Smart Tourism Coordination**

In view of the regional development level of smart tourism is unbalanced, on the one hand, we should further promote the application scope of smart tourism in the transformation of the tourism industry, beautify the urban landscape and highlight the regional characteristics of different regions. By means of the construction of rest nodes and rest facilities which combined with urban greening construction to beautify the recreation space environment; On the other hand, in order to strengthen marketing publicity, we should closely combine the tourism experience themes of different regions, formulate appropriate marketing strategies, summarize and analyze the development, construction and operation modes of pilot provinces and cities timely. According to local conditions to promote, implement and widely use multiple channels, multiple means to its image publicity and destination marketing.

##### **4.3 Cultivate Professionals with Smart Tourism Thinking**

In view of the current situation that the tourism professionals in China are only familiar with the knowledge and skills of tourism, on the one hand, in the process of tourism professionals training, we should add the training strategy of Internet and information technology, and increase the mining and reuse of “tourism-technology” compound professionals; one the other hand, the management of tourism industry should be reformed to promote industry leaders with innovative thinking, so as to promote the transformation and development of traditional tourism to smart tourism.

##### **4.4 Expand the Application Scope of Smart Tourism**

In view of the narrow application scope of smart tourism in China, one the one hand, we should try to stimulate the awareness of various market entities to participate in the construction of smart tourism, and further explore and dig the new economic profit points of smart tourism enterprises; on the other hand, support tourism enterprises to carry out information reform, make them grasp the latest trends of smart tourism, and provide a variety of forms and aspects of intelligent tourism services. Also, tourism departments and other relevant departments should form linkage to obtain tourist information and form tourist data accumulation and analysis system. To fully understand the changes in tourists' needs, effectively integrate tourism resources to meet tourists' personalized needs, so as to establish and improve the service system of smart tourism and promote the overall transformation and development of the tourism industry.

#### **5. The Growing Trend of Smart Tourism**

Smart tourism has a broad application prospect. It not only leads the development trend of world tourism and becomes a model of the combination of modern service industry and science and

technology, but also improves the management platform, enhances the competitive advantage and meets the individual needs of tourists [5].

### **5.1 Smart Tourism Will Lead the Development Trend of World Tourism**

Smart tourism mainly relies on the four core information technologies: Internet of things, mobile communication, cloud computing and artificial intelligent technology. Through intelligent sensation, recognition technology as well as background data analysis to achieve smart marketing, service, management and application. The application of this technology will inevitably change people's travel consumption habits and travel experience, and become an important form of tourism industry transformation and development. China attaches more importance to the development of "smart tourism" at present, and in addition to China's own superior tourism resources, this will certainly make China occupy a dominant position in the world tourism competition pattern and become an important force leading the development of the world tourism industry.

### **5.2 Smart Tourism Will Promote the Transformation and Development of the Tourism Industry**

The foundation of smart tourism is tourism information, and its core and key are "smart". As socialism with Chinese characteristics has entered a new era, the principal contradiction in our society has been transformed into the contradiction between unbalanced and inadequate development and the people's ever-growing needs for a better life. Therefore, it can be seen that the tourism demand of Chinese tourists will increase further and tourists will pay more attention to the experience and comfort of tourism. The emergence and application of smart tourism can provide tourists with more accurate travel services according to local conditions, maximize the use of travel time, thus promote the transformation and upgrading of the domestic tourism industry.

### **5.3 Smart Tourism Will Enhance the Competitive Advantage of Information Technology**

As a development concept, smart tourism has no technical standards and construction development model now, and the current construction of smart tourism is exploratory construction. Therefore, some scholars believe that "In the future competition pattern of the tourism industry dominated by smart tourism, who is involved in the development of smart tourism standards, who participate in the integration of smart tourism technology and who participate in the exploration of smart tourism business model will get the most profitable part of the world tourism industry and occupy the market advantage and competitive initiative of the tourism industry." [5]

## **6. Summary**

Under the background of the transformation and development of China's tourism industry, this paper makes a comprehensive analysis of smart tourism. By analyzing CAA three leveled construction framework of smart tourism, smart tourism should construct a framework composed of smart tourism capability, attribute and application; by analyzing the current situation of the development of smart tourism in Nanjing and Shanxi, obtaining the problem of the social popularity of smart tourism is not high, regional development level of smart tourism is unbalanced, lack of professionals in the construction of smart tourism and the application scope of smart tourism is still narrow. And give advice on increasing the quality of interactive experience in the scenic spot, promoting regional smart tourism coordination, cultivating professionals with smart tourism thinking and expanding the application scope of smart tourism. Finally, the development trend of smart tourism is analyzed, namely it will lead the development trend of world tourism, promote the transformation and development of the tourism industry and enhance the competitive advantage of information technology.

To include smart tourism in the transformation and development of the tourism industry is a way to respond to the national policy and adapt the planning and management of multidisciplinary, scientific and intelligent scenic spots that meets the requirements of China's development in the new

era. Also it's an inevitable trend following the trend of The Times. Smart tourism is of great strategic significance to perfect the intellectualization of scenic spots, improve the level of personalized service and promote the development level of tourism industry.

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