

## Innovation Research on the Development Path of Smart Tourism in Liaoning Province

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**Abstract:** In the new era, the development of China's tourism industry has entered a new stage of massification and industrialization. The tourism model has also changed from "tourism" to "tourism in the whole city". The development of new generation information technology such as big data, Internet of things, artificial intelligence, block chain, etc. is taken to promote the transformation of traditional tourism into smart tourism. This paper takes the status quo and problems of Liaoning smart tourism development belt as the entry point, and explores the development path and countermeasures of the next generation of smart tourism in Liaoning Province by analyzing the intrinsic needs of the development of smart tourism in Liaoning under the background of global tourism and big data.

### 1. Overview of the Overall Development of Smart Tourism in Liaoning Province

In 2011, Dalian City applied to the National Tourism Administration for the pilot city of "Smart Travel" construction, and became the first batch of national pilot cities for Liaoning Province's smart tourism construction. It is also the focus of tourism development in Liaoning Province. From 2014 onwards, according to the requirements of the development of smart tourism in the country and Liaoning Province and the actual development of the tourism industry, the cities of Liaoning Province began to work on the construction of smart tourism. In order to actively promote the integration of smart city construction and regional tourism, local governments have taken smart tourism as an entry point, utilized modern network information technology, and successively carried out research on smart tourism construction by tourism companies, and piloted development of smart travel agencies, smart resorts, and smart hotels[1].

As a major domestic tourism province, Liaoning Province has extremely rich tourism resources. With the pursuit of personalized tourism by tourists, it has further promoted the development of smart tourism in Liaoning Province.

### 2. Problems in the Development of Smart Tourism in Liaoning Province

Tourism data islands are a common form of regional tourism information island phenomenon. Under the constraints of individual local protectionism and development planning, it is difficult for regions in Liaoning to truly establish regional communication and sharing mechanisms with the surrounding provinces and cities, and this has led to the development of smart tourism in Liaoning at a shallow level. In addition, neither information technology nor data communication technology has been widely used, which in turn makes it impossible to sort out, research, and share tourism resource data information, and makes Liaoning tourism data information unable to achieve sharing goals due to lack of technology[2].

The integrated wisdom market in Liaoning is mainly reflected in the fact that the marketing mode of smart tourism products is too single, the market concept is not strong, and brand awareness is insufficient. At present, the Liaoning Tourism Administration Platform and consulting platform formally launched [3]. We have made extensive use of new information platforms such as Wei-blog and We-Chat to vigorously promote all kinds of festival activities and thematic tourism activities in

Liaoning. However, the propaganda and marketing work for specific scenic spots or specific smart tourism products still stays in the more traditional mode. The relevant tourism information has a low penetration rate and cannot fully exploit the development advantages of smart tourism, such as scenic spot digital surveillance, touch screen, etc. Smart tourism products such as access control systems cannot be known by a wide range of people, thus limiting the development of smart tourism.

In view of the fact that Liaoning's tourism resources have a large number of humanistic tourism resources, such as various styles of architecture and precious historical sites, the development and planning of intellectual tourism in Liaoning should pay attention to the exploration of the connotation of humanistic tourism resources. At present, whether it is Liaoning rural tourism or Liaoning mountaineering Travel, humanistic feelings and so on, most of the tourism activities still stay at the level of tourism, information technology has only achieved a simple auxiliary role, leading to smart tourism products are not orthodox, lack of quality, grades need to be improved. Therefore, the integration of the information industry and the tourism industry has only remained on the surface and has not penetrated deeply [4].

### **3. The Path to Innovate the Development of Intelligent Tourism in Liaoning Province**

With the guidance of global tourism, we will build a smart management system around the tourist attractions, hotels, restaurants, farmhouses, shopping and entertainment venues in Liaoning Province. Set up four platforms, such as big data application running platform, global tourism promotion marketing platform, global tourism intelligence service platform and regional tourism certification and supervision platform, to fully integrate government data resources, social data resources, network data resources and enterprise data resources, through the cloud platform Build and construct a network resource pool to form a case base, knowledge base, expert database, case base, and geo-information database, provide important data security for companies to market and provide personalized high-quality services, tourists enjoy smart services, and governments implement intelligent governance and supervision[5]. Actively use new technologies such as the Internet, cloud computing, mobile Internet, and Beidou satellite positioning. Each system is built on a unified core database platform, and data can be exchanged seamlessly with each other.

It mainly focuses on the construction of a smart system for tourist services, including the construction of mobile services, public services, and information push services. Efforts will be made to build a number of intelligent service systems, such as a collection of scenic information broadcasting systems, real-time passenger flow collection, scenic electronic ticketing systems, and scenic tourism e-commerce systems. The construction of a smart service system should actively use new technologies such as mobile Internet, GIS/Beidou satellite positioning, and 3G/4G to realize agile services to tourists.

According to the actual situation of tourism in Liaoning Province, the construction of smart tourism marketing system focuses on tourism companies such as scenic spots, tourist hotels, travel agencies, and farmhouses, and vigorously promotes online travel, online booking, online interactive and other smart travel services.

### **4. Countermeasures for the Development of Intelligent Tourism in Liaoning Province**

Liaoning should also imitate Beijing and Shanghai and set up relevant offices responsible for tourism informationization. From the perspective of the overall system, we should guide the tourism industry to the information age. At the same time, it is necessary to work with relevant departments to formulate new informatization standards for local smart tourism new industries, guide and standardize the informationization of the tourism industry in Liaoning, and urge the completion of the specific implementation of the tourism information center and hotline center. This means that the government and industry's tourism resources and information resources can be rationally coordinated and the tourism informationization process can be steadily advanced. In addition, the establishment of a leading group for smart tourism, which focuses on specialized talents, will guide

the scientific development of the smart tourism industry [6].

The cooperation mechanism of this article mainly starts from two aspects:

First, with the principle of “government guidance, market-driven, corporate, and social investment” as the basic principle, we will advocate the establishment of investment and financing mechanisms that are compatible with the development of the smart tourism industry in order to realize diversified and multi-channel smart tourism development.

Second, to enhance the development potential of Liaoning's smart tourism, it is to cultivate Liaoning's local smart tourism software development companies, information technology companies, and online travel operators, so as to form a group of enterprises for the development of future smart tourism in Liaoning. At the same time, the government should promote the establishment of a related system for the incubation, cultivation and service of smart tourism ventures, and gradually form an “incubation-acceleration-scale production” smart tourism startup incubation mechanism, and actively explore the sustainable development of smart tourism in light of local actual needs in Liaoning [7].

The establishment of a smart tourism industry fund is mainly aimed at the venture capital investment of smart tourism companies and smart tourism industries in the province, which aims to shake the release of tourism resources in the province. In view of the different starting point of informatization of the relevant tourism management departments and tourism companies within and outside the province, Liaoning tourism management departments cannot “simply” treat them equally. Instead, they need to integrate related resources and introduce private capital through the establishment of management agencies and supporting service facilities. Build smart tourism to explore more scientific and effective smart tourism development model.

At present, the two scientific development models that have emerged from the establishment of a smart tourism fund are:

The first is the standardization construction, that is, the Liaoning government encourages related tourism and information industry enterprises to provide incentives for funds when they develop smarter tourism, when they meet the corresponding standards set by the government and passes the legal, fair, and fair evaluation of relevant agencies [8].

The first is the grading construction. According to the existing smart tourism resources, market development conditions, and the maturity of enterprise management of each company, it is divided into different levels. For enterprises with a good foundation for development and enterprises with better resources, honors encourage excess funds.

The other important purpose of setting up a smart tourism fund is to support the construction of projects that are more fundamental to tourism informatization, consolidate the information security system, strengthen the construction of an information-based security environment, and play a leading role in the industry, and encourage each other in Liaoning. The advanced enterprises have started the pace of piloting first, rewarding potential stock companies for excellent testing, thereby creating a good social and economic environment for the development of smart tourism.

The construction of tourism big data is an important foundation for the development of smart tourism industry. From this, we can also know that talent training should be the basis for the operation of smart tourism projects. Experts, technology, and funds are indispensable factors in the construction of smart tourism. The operation of the smart tourism industry in the later period cannot be separated from the coordination and cooperation of various talents. Under the development situation in which the tourism informatization process continues to advance, the demand for talent knowledge structure has also ushered in major breakthroughs in the development of smart tourism.

At present, smart tourism construction mainly requires two types of talents: first, professional talents with professional tourism expertise or computer software and hardware information technology, and their job settings are mainly for specialized groups or specialized positions; second, compound talents who possess skills in communications, computers, and networks, as well as professional knowledge in tourism. Their positions are set for a wider range of people and require more complicated work [9]. Therefore, they need to have higher personalities. Therefore, at present, we should actively promote the development of a system of smart tourism that is based on the

government's relevant departments, with tourism and information companies as the main body, and well-known universities and colleges as the training ground for personnel. In the limited teaching time, improve and strengthen the ability of smart tourism training objects to operate the front-end computer software and hardware equipment required for the development of smart tourism, innovation capabilities in the development of tourism e-commerce platforms, and the design and use of RFID smart guidance systems. Ability and so on, so as to establish an intelligent tourism backbone team capable of mastering and applying information technology.

## 5. Conclusion

Facing the opportunities and challenges brought by smart tourism, Liaoning Province should find out the problems and deficiencies in the development of smart tourism based on the current development status of smart tourism, and concretely analyze specific issues, recognizing the need to realize the rapid development of smart tourism in Liaoning Province. We must closely integrate the actual situation in Liaoning Province, find suitable paths and countermeasures for the development needs of Liaoning, and comprehensively promote the construction of smart tourism in Liaoning Province.

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