

## **New Scene of Innovation and Development of Smart Venues 5.0**

### **Chongqing International Expo Center CO.,ltd**

#### **Introduction**

Chongqing International Expo Center is located in China's national new area Liangjiang New Area's core region--Yuelai International Convention and Exhibition City, with a total construction area of 600,000 square meters, an indoor exhibition area of 204,000 square meters, and an outdoor exhibition area of 100,000 square meters. It integrates the function of exhibition, conference, catering, accommodation, performing arts and competitions, etc., and is a leading and modern large-scale professional convention and exhibition complex in the world, and also a benchmark for the construction of smart venues and green venues in China.

Since its opening eight years ago, Chongqing International Expo Center has implemented 537 projects, including 242 exhibitions, 61 performances and 215 activities, with a cumulative exhibition area of 11,268,600 square meters and a cumulative audience of 18,736,300.

#### **Main Objectives**

Chongqing International Expo Center always adhere to the concept of "Science and Technology Empowers Venue and Exhibition". We start from three sections: intelligent management, intelligent operation and intelligent service to create a better green and intelligent venue in China. We create real value for exhibition projects with the principal of basing on venues, aiming at needs and empowering exhibitions through services. In addition, with all intelligent sectors are interconnected, data shared, we can always tap the potential demands, make data play its value, continuously optimize our management and improve our service quality.

#### **Opportunity Comes From Challenge**

The year 2020 was undoubtedly the darkest hour for mankind with COVID-19 raging. The global exhibition industry was forced to press the pause button. With the global exhibition industry shrinking by nearly 70%, Chongqing International Expo Center has risen against the trend and undertaken more than 50 exhibition projects, covering an exhibition area of over 2 million square meters and receiving more than 1.5 million visitors. The reason lies in the new opportunities we seized—the new scene of smart

exhibition venues.

## 1. Challenges

As a typical form of new service industry, the exhibition industry is characterized by the congregation of people, which invariably amplifies the challenges of the epidemic for the industry:

- The spreading epidemic restricts the holding of exhibitions
- The travel restrictions limits the exhibition business
- Risk of cluster outbreak of epidemic

## 2. Opportunities

Challenges often bring opportunities-the new industry demand created to overcome the epidemic challenge is the new scene of smart exhibition venues:

- New requirements of online conference and exhibition
- Personnel access and control, information collection and traceability
- Online support for exhibition marketing
- Overall upgrade of audience service
- Contactless field operation
- Efficient management within the team

## Implementation and Outcomes

In view of these new challenges and scenarios, Chongqing International Expo Center has adopted digital innovation of smart venues and managed to be the first venue in China to hold more than 100,000 square meters of exhibitions in 2020, the venue with the largest number of large-scale exhibitions in China in 2020, and the benchmark for the epidemic prevention work of exhibition venues in China. The following are the related achievements of digital innovation of Chongqing International Expo Center:

### 1. "The Third China Convention & Exhibition Innovators Conference", the first live broadcast of online industry activities after the outbreak of epidemic in China

Chongqing International Expo Center Independent IP China Convention & Exhibition Innovators Conference is a renowned industry activity in China. By exploring the forward-looking views of exhibition industry and tracing the technological frontier of exhibition technology application, it has become the vane and source of innovation in China's exhibition industry, and it is a grand event of exhibition industry that has insight into the new development trend of the industry and is deeply recognized by Chinese

exhibition practitioners.

In 2020, the 3rd China Convention & Exhibition Innovators Conference could not be held offline due to the epidemic, but Chongqing International Expo Center responded quickly and actively planned an online China Convention & Exhibition Innovators Conference, realizing the online interaction of Beijing, Shanghai, Hangzhou, Taiwan Province and Chongqing. Through the live broadcast, industry experts and business leaders from well-known institutions such as Alibaba, ReedExpo, Huawei, Tencent and Shanghai University of International Business and Economics communicated regardless of the limit of space, and discussed the path of the global exhibition industry in the post-epidemic era.

### **(1) Implementation**

The 3rd China Convention & Exhibition Innovators Conference innovatively introduced augmented reality technology, integrated the guests in the real world with the stage in the virtual world seamlessly, supplemented by TV column-level content, and finally realized real-time dialogue between the five places, creating a new audio-visual mode of China's exhibition industry activities.

### **(2) Outcomes**

The 3rd China Convention & Exhibition Innovators Conference has aroused great concern and influence in the industry with a total of 9.5 million visitors from the five live broadcast platforms. This is a successful attempt of Chongqing International Expo Center on online conference and exhibition live broadcast, and also a preparation for a better service in the future and empowering the exhibition in advance.

## **2. Epidemic prevention and control system and certificate management system—the first management and control practice of intelligent epidemic prevention personnel in China**

In the aspect of epidemic prevention measures for exhibition visitors, Chongqing International Expo Center makes full use of its technical strength, approached the actual needs of exhibition epidemic prevention, and responded quickly and successfully in building an **epidemic prevention and control system**. The system has effectively solved the problems of single technical means, too much manpower investment, different awareness and attention of the organizers on epidemic prevention and control, imperfect information collection standards of exhibition personnel, and inability to trace the source afterwards.

### **(1) Implementation**

With face recognition, big data, cloud computing and other technologies, the system takes the lead in adopting new epidemic prevention methods in China. Through the advanced algorithm and docking the health code platform of National Big Data Management Center, we can get accurate feeding back on desensitized personnel health information and travel track, and screening personnel health risks in real time in seconds. After the exhibitors arrive at the site, they only need to swipe their ID cards to

realize the completion verifying their ID, feedback the health code status (green code and gray code), and measuring of their body temperature at the same time. Only after all the information is normal can they enter the venue, and the information will be stored in the background for future reference, and the information will be encrypted and transmitted throughout the whole process to prevent users' privacy from leaking. This way simplifies the login process, the system responds quickly, the traffic speed is fast, the user's experience is improved, the safety standard is improved, the information collection is comprehensive, accurate and confidential, and the traceability work is guaranteed.

## **(2) Outcomes**

In 2020, Chongqing International Expo Center held more than 50 exhibitions and received more than 1.5 million visitors, without any outbreak of the epidemic.

In the aspect of construction personnel management, Chongqing International Expo Center built the **certificate management system** according to its own five-step method of epidemic prevention safety login, that is, presenting certificates-testing body temperature-disinfection-safety inspection-access control scanning. By integrating the information of construction enterprises, the entry and exit task orders are established, which is convenient for pavilion administrators and security guards to quickly control the entry construction personnel.

## **(1) Implementation**

With cloud platform, artificial intelligence, identity verification, online payment and other technical means, the system collects the data of construction enterprises and construction personnel in advance, and establishes the integrity database of construction enterprises and personnel. The system automatically and asynchronously verifies the health information of personnel and feeds back the health status of personnel. During the deployment and dismantling period, the construction area will be accessed through the combination of face recognition, ID card verification and the background health information audit results. At the same time, on-site personnel are checked through video surveillance, intelligent sensing, hand-held mobile devices, etc., so as to effectively prevent idle personnel from entering the exhibition site and avoid safety accidents.

## **(2) Outcomes**

The construction of this system promotes the development of construction reservation and compliance, unifies the admission units and personnel to the management platform in time, establishes the mechanism of on-site follow-up inspection and three real management, further standardizes the on-site management of exhibitions and improves the on-site safety.

### **3. VR visiting system-China's first twin virtual venue application**

The **VR visiting system** built by Chongqing International Expo Center has effectively solved the problems that organizers can't visit the exhibition hall on the spot during the

epidemic, and they can only review the venue environment and surrounding conditions afterwards through paper materials, which is not intuitive enough.

### **(1) Implementation**

VR visiting system uses VR virtual reality technology, which allows customers to immerse themselves in viewing the real scene of the whole venue through online platform at any time. Including 100 scenes with 720-degree panoramic view, such as surrounding panorama, traffic, square, landing hall, venue, commercial corridor, unloading passage and parking lot, and four 10-minute dynamic VR video tours.

### **(2) Outcomes**

In 2020, the VR visiting system assisted the sales department to complete the sales of over 90 projects, all of which completed the inspection and sales of pavilions online through the system.

## **4. The intelligent service platform of the exhibition-the intelligent service has been comprehensively upgraded**

Chongqing International Expo Center fully investigates the organizers, exhibitors and audiences, takes the demand as the main body, constantly explores the possibility of bringing advanced technology to the exhibition industry, reserves a variety of exhibition intelligent service solutions, and builds a one-stop service platform for the exhibition-exhibition intelligent service platform. It effectively solved the problems of traffic congestion, large flow of people, and difficulty in dining in super-large exhibitions.

### **(1) Implementation**

The system adopts cloud computing, big data, 5G, LBS, traffic guidance, reverse car search, indoor Bluetooth positioning, face recognition, intelligent sensing, VR live broadcast and other technical means to form various service sectors according to the actual needs of the exhibition. And through websites, apps, WeChat official account, applets, etc., we can provide one-stop services to the organizers, exhibitors and audiences.

### **(2) Outcomes**

Through the system, the audience's time-sharing management is realized, and the flow of people is accurately controlled and channeled to ensure the safety of on-site personnel; Through the system, vehicles are classified, divided and managed, and accurately induced to ensure smooth traffic. During the Smart China Expo, the traffic was in good condition, and there were no blocking points within 10 km around the venue; Using advanced face recognition algorithm and verification technology, a portrait database is established to stably support face recognition, so as to realize audience login and access control during the exhibition. And we ensured the efficiency of large people logging in. Accurately verify user information and improve exhibition safety; Provide a variety of ordering modes for the exhibition, intelligent and efficient dining experience, and ensure that 8,000 people eat at the same time.

During the Smart China Expo in 2019, the cumulative number of users in the system exceeded 400,000, and a total of 421,048 viewers registered through the system. During the four-day extension of the official system platform, the number of visitors reached 505,086, and the system was opened 1,257,589 times in total, with the cumulative visits of all functional pages exceeding 8 million times. The official score of the applet is as high as 4.8 (out of 5). In 2020, the exhibition intelligent service system has also been applied to dozens of national large-scale tour exhibitions, such as China Educational Equipment Exhibition (200,000 square meters), National Pharmaceutical Machinery Exposition and China International Pharmaceutical Machinery Exposition (200,000 square meters), PHARMCHINA (180,000 square meters) and China International Animal Husbandry EXPO (120,000 square meters). It has been widely praised by the organizers, which has enhanced the adhesion between us and our customers.

## **5. Self-service leasing system-Smart operation to realize contactless service**

The self-service leasing system developed in Chongqing International Expo Center can effectively improve the efficiency of venue operation and relieve the pressure of customer service. During the epidemic period, it realized the contactless service between the venue and customers, and it is the first self-service leasing system with independent intellectual property rights in China's convention and exhibition venues.

### **(1) Implementation**

Using the electronic mall model for reference, the system realized the online completion of the whole process of exhibition inquiry, leasing order, payment and deposit refund. It solves the problems that the original business can only be handled at the counter of the on-site service center, such as crowded personnel, long service acceptance time, low efficiency and poor service experience.

### **(2) Outcomes**

Self-service rental system has served over 200 exhibitions and accepted nearly 1 million business orders. The average waiting time of customers from the rental order to the delivery is shortened from the original 3 hours to 40 minutes.

## **6. Integrated management platform-data exchange and multi-end collaboration**

The integrated management platform developed in Chongqing International Expo Center focuses on the whole life cycle management of exhibition projects and integrates sales management, procurement management, operation management, business management, service management and financial management. We have opened up the existing system, realized data exchange, form a business closed loop, and comprehensively improved management efficiency.

### **(1) Implementation**

In this project, the original data such as personnel, customers, projects, services and finance are standardized by establishing master data standards. We adopt hybrid cloud architecture and interface technology to effectively integrate local existing systems and

cloud service application resources. On this basis, a unified office portal, a rights management center, a data center and a data analysis platform are built. At the same time, it will supplement the construction of the missing functional sections and form a unified and perfect integrated management platform.

## **(2) Outcomes**

Through the implementation of this project, the unified management and control of the company's information system has been strengthened, and an effective data sharing, management and guarantee system has been established to ensure the integrity, standardization and consistency of the business. It laid a solid foundation for the rapid development of the company's intelligence.

## **Conclusion**

Chongqing International Expo Center redefines the innovative development of smart venues through the application of a series of information technology in the new scene of post-epidemic exhibition. Chongqing International Expo Center will continue to adhere to the concept of “Science and Technology Empowering Venue, Science and Technology Empowering Exhibition”, and build a better green and smart venue in China.