

Research on Planning and Design of "Internet + Intelligent Sports Park"

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Abstract

Incorporating intelligent technology to create an intelligent sports park integrating physical exercise, recreation, and ecological environment improvement, which can effectively solve the problems faced by the national fitness facilities, meet the fitness needs of various groups of people, and effectively improve the city. The utilization of space will enhance the digital intelligence of urban sports facilities, promote the construction of smart towns, and better meet the needs of residents for smart living.

Keywords

Internet +; intelligent sports park; planning and design.

1. Introduction

Under the background that "healthy China" has risen to the national strategy and the consumption of residents has been upgraded, people's consumption concepts are gradually changing, and the enthusiasm for fitness for all is getting higher. The development of national fitness is inseparable from the strong support of venues and facilities. The government work report of the two sessions in March 2018 included the "multi-channel increase of fitness facilities and facilities for all" in the government's requirements of "improving security and improving people's livelihood". Sports parks are specialized parks with more comprehensive sports and fitness facilities for all kinds of competitions, training and daily leisure and fitness activities for the public. It is understood that the construction of sports parks has become an important part of the development of sports and the promotion of national fitness in major cities across the country.

2. Characteristics of the intelligent sports park:

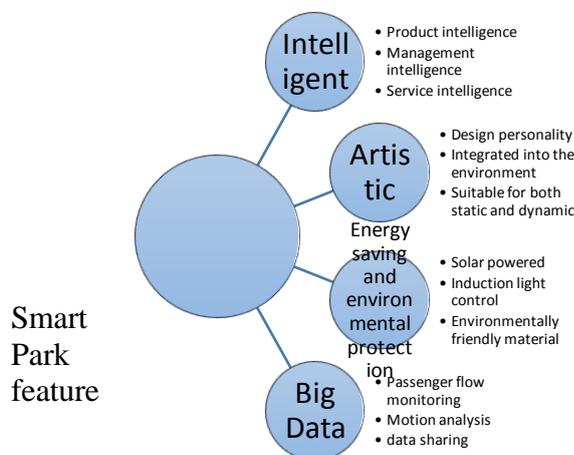


Figure 1. The characteristics of intelligent sports park

3. Planning and Design of "Internet +" Intelligent Sports Park

3.1 Nanjing Lishui Intelligent Sports Park

Researched and designed by Nanjing Wande Sports Industry Group Co., Ltd., using the "Internet + Sports Equipment" maintenance management system, the whole crowd intelligent sports park located in the sports park is the new intelligent sports park in Nanjing. There are four main highlights:

Highlight 1: Music Intelligent Fitness Trail

On the music intelligent fitness trail, you only need to input basic indicators such as gender, age, height, weight, etc. on the starting point equipment, you can start to play happily with different music beats, without any wearable equipment, at the end of the exercise. Fitness data such as steps and calories can be easily obtained. Based on the concept of universal science and fitness, the intelligent trails are targeted at all fitness groups, including children, adolescents, middle-aged and disabled people, combined with the physical characteristics of various groups of people, taking into account their physical fitness, motor function and psychological cognition. And the action safety protection and other factors are comprehensively designed and produced, and the music intelligent fitness trail is designed to achieve the effect for the whole people, and is the development trend of the future.

Highlight 2: Intelligent speaker control system

Square dance can not only enrich the spiritual and cultural life of the people, but also help to enhance physical fitness and mental health. It has become a spontaneous cultural choice for many people. However, in recent years, due to conflicts between law and order, such as law and order, noise, and venues, square dance has become a highly controversial existence. The reason for the square dance problem is multi-faceted. The lack of management of equipment and personnel by the square dance organizers is one of the reasons. However, the intelligent speaker control system can solve such a problem well. Popularly speaking, the intelligent speaker control system is based on the development of Bluetooth audio. There is a fixed speaker on the wall. If you want to dance the square dance, bring your mobile phone or USB flash drive, you can come over and pass directly. Bluetooth is paired with the speakers, the music in the phone can be broadcasted through the fixed speakers, and the sound size can be adjusted, then you can start to dance with the music to achieve the effect of music interaction.

Highlight 3: Multi-kinetic cage sports field

The multi-purpose cage sports field is a unique functional area of the entire sports park. The intelligent solar multi-functional basketball hoop and cage climbing park in the cage multi-purpose sports field is its biggest highlight. "The difference with the general sports park is that it integrates intelligence, leisure and comfort. It is a set of intelligent systems that can meet the needs of athletes of different levels, ages and needs, saving space and achieving good effect."

The multi-functional basketball stand adopts an integrated structure setting, the human body automatically senses the light, controls the whole process intelligently, and fully utilizes solar energy charging. The single-running lighting time is up to 5 hours, energy saving and environmental protection, and the basketball stand only needs the original equipment. Based on intelligent modification, the upgrade is convenient and the cost is low. The stadium's two sets of lighting equipment, namely conventional LED lighting equipment and solar-sensing lighting equipment, so that even if someone walks to the backboard to play the ball at night, the solar sensor light will light up for the first time.

The difference with the general sports ground is that adults can take care of their children while exercising. Cage climbing paradise is a combination of children's growth and development rules and comprehensive physical and mental development requirements. It is equipped with multi-functional cage climbing equipment to help children exercise upper and lower limb strength and systemic coordination, develop walking ability and balance ability, and cultivate space. Perceived ability and divergent thinking ability. Here, children can climb and play freely and safely. Parents can play and exercise on their own. They can also observe the children playing, and the elderly can dance their

favorite square dance. With such a place where adults and children can have fun together, the citizens who brought their children to the sport expressed their reassurance.

Highlight 4: "Sweep" to sweep out faulty facilities

In the whole crowd intelligent sports park, almost all the fitness facilities have two-dimensional codes. Any problems such as failure to use, damage to facilities, etc., only need to be swept, it can be solved. With the continuous development of Internet technology, mobile phones have become an indispensable part of every enjoyment of smart life. Nanjing Wande has set up a QR code on each device, and can scan more than 300 scientific fitness immediately after scanning. Guide the video, you can take photos and repair damaged equipment at any time, so that the equipment management system is networked and instant. The whole crowd intelligent demonstration sports park has a physical measurement wall, simple detection points and a physical quality detection cabin. There are also many intelligent experiences based on "Internet +", such as passenger eye, fitness video network guidance, music fitness and wisdom. Music Fitness Zhidao uses the latest sports mode algorithm through facial recognition, fingerprint scanning and other means to scientifically record and analyze the number of exercises, time, step size and other data, reflecting energy consumption in real time, representing the development direction of intelligent fitness.

3.2 Shuhua Intelligent Sports Park

As a professional and scientific sports health solution provider, Shuhua uses smart management and scientific fitness to lead the nation's fitness future. Shuhua not only provides comprehensive intelligent venues and facilities for national fitness projects, but also provides new management. The software platform can provide comprehensive services in the middle and late stages of the project to meet the fitness needs of different social groups and improve the health and wisdom of the city. In addition, Shuhua Intelligent Sports Park is also equipped with intelligent cages, intelligent access control, intelligent lighting, smart fitness path, smart fitness station, intelligent trails and other intelligent products. It can be said that Shuhua intelligent software platform and smart fitness equipment can easily help the management department to achieve intelligent management and help people to science and fitness. Relying on the nationwide dealer system and terminal outlets, Shuhua has established a domestic industry-leading sales service system, eliminating the worries of the construction of sports park authorities, and regularly conducting regular training for service personnel. "Certified Customer Service Engineer" certificate, service personnel must be certified to work; at the same time establish a system, perfect user files, dispatch professionals to regularly maintain and overhaul the installed equipment to ensure that the equipment is scientifically and reasonably maintained and used.

Shuhua Intelligent Sports Park has the unparalleled advantages of traditional national fitness venues to meet the fitness needs of all types of people. For the management department, it is possible to monitor the use of equipment flow, rationally allocate the opening hours of the sports park, and provide decision-making basis for the layout and equipment selection of the sports park. At the same time, through information technology to guide residents to scientific fitness, the rational use of fitness equipment and facilities in the sports park; effective collection of site use data and resident fitness data, local sports authorities can use this as a basis for targeted local fitness guidance.

It is worth mentioning that Shuhua Intelligent Sports Park can effectively improve the utilization of urban space, improve the digital intelligence of urban sports facilities, promote the construction of smart towns, and better meet the needs of residents for smart life. At the 2018 China International Sporting Goods Expo, Shuhua has launched a full-smart smart fitness solution including smart sports parks with the theme of "Full Scene Intelligence, Big Data Health" (covering commercial fitness, enterprises). Career fitness, family fitness, and national fitness) have received attention and praise from all walks of life.

3.3 Fuzhou City People's Park upgrade

The iconic project of the construction of the leisure sports city in Zhangzhou, which was jointly established by Langfang Dachang Xiajiajiamei Sporting Goods Co., Ltd. and Zhangzhou Sports Bureau, was officially completed in the People's Park of Zhangzhou City. The project will provide a high-end smart and comfortable leisure and fitness venue for the surrounding 100,000 residents.

The total area of the People's Park in Cangzhou City is 42.8 hectares. The park is divided into six major scenic spots, such as Nanmen Square, fitness activity area, quiet area of mountain forest, water scenic area, parking office area and flower cultivation area. According to the park's ecological environment, site characteristics, and sports forms, Dachang Xiajia Jiamei Sports Design Team is the starting point for the people and the people, rationally allocate the site rate and green space rate, and carry out scientific functional division. The design team takes the fitness and recreation as the core, fully reflects the park's ecological and humanistic characteristics, and combines the history, folklore, mass art and other elements around the park to redesign the chess culture and recreation area, fashion smart fitness area, children's play and physical fitness. The 10 major fitness areas, such as the expansion area, are dotted in the six scenic spots, so that the upgraded and renovated People's Park not only becomes a place for citizens to relax, but also becomes a collection of "sports, leisure, culture, entertainment, tourism". An integrated sports and leisure park. In addition, according to the fitness characteristics of the people around the park and the terrain of the site, Dachang Xiajia Jiamei Company not only meets the needs of fitness and leisure in the whole cycle and the whole population, but also combines natural conditions, local conditions and reasonable allocation. In the application of intelligent facilities, it is the first in the industry to connect personal sports information and health information with the management cloud platform, realize intelligent management and scientific health guidance, build a fitness big data platform, and provide powerful health for the whole people. Data support.

3.4 Even Jiangxi Jiangbin Intelligent Sports Park

The construction project of Jiangxi Jiangbin Intelligent Sports Park is one of the practical projects of the Fujian Provincial Party Committee and the Provincial Government in 2018. The total land area is 9,679 square meters, with a total investment of more than 4 million yuan. There is a fitness square and 2 basketball courts. 1 table tennis court, 1 tennis court, 2 air volleyball courts, 2 gate courts, 2 bocce courts, a 20-meter x 40-meter 5-a-side football pitch. Full-featured smart fitness station, intelligent body test station and combined training station, with intelligent functions for health screening, physical testing, exercise prescription, big data management, etc., to help improve the flexibility, coordination and sensitivity of trainers, reaction. Compared with the traditional sports park, the Jiangxi Jiangbin Intelligent Sports Park combines traditional intelligence with cloud intelligent management. There is an intelligent physical monitoring system and a comprehensive training station in the central fitness square. The two sets of intelligent systems are integrated in two ways: First, through physical training, physical training such as height, weight and grip strength can be detected, and our body's reaction ability, psychological pressure and other data can be detected. After the inspection, The system automatically opens a "sports prescription" that can be transmitted to the phone via Bluetooth for video guidance anytime, anywhere. The second is to be able to store the data of the physical monitoring of the people in the county as a reference data for the government's future monitoring of national physique, and to change the shortcomings of traditional physical monitoring points to detect single and low utilization rate. In addition, the lighting fixtures of Jiangxi Jiangbin Intelligent Sports Park can also be controlled by light sensing to achieve timed switching lights. When the general public wants to use this venue, they can use the mobile APP to check cloud data to see if the venue is occupied. .

4. Intelligent sports park planning and design

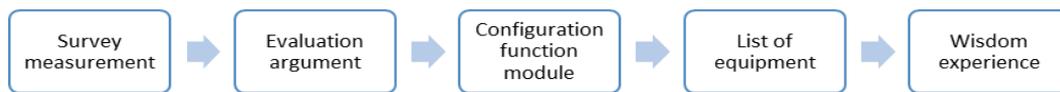


Figure 2. Intelligent sports park planning and design flow chart

The planning and design of the intelligent sports park, first of all, must be surveyed and measured by the professional team for different venues, provide a reliable evaluation and demonstration for the implementation of the sports park, and allocate a reasonable list of sports park function modules and equipment for the national fitness project, including various types. Intelligent fitness equipment, intelligent multi-functional sports venues, intelligent fitness trails and other national fitness equipment products, reservation system, passenger flow monitoring system, sports APP and other software systems are used in series to form a smart sports park, covering children's play area, youth and youth strength training area, the elderly leisure area, the intelligent landscape path area, the intelligent fitness station area, the intelligent management room, the smart fitness room and other fitness areas, fully meet the fitness needs of different groups, truly cover the entire population, realize equipment intelligence, service intelligence, management intelligence, and the use of energy-saving and environmentally-friendly materials construction, fully integrated with the park environment, to create a new national fitness smart experience.

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