Research on the Construction of Community Three-dimensional Prevention and Control System under the Perspective of Wisdom Policing

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Abstract: In the context of the big data era learning from the development and service model of "Internet + " and "New wisdom+ ", wisdom policing has become the inevitable trend and the trend of the times that can be the driving force of the transformation and upgrading of public security work. As an important strategic deployment to advance the basic work of public security in China, the integrated business model and working methods of community policing have shown insufficient vitality. Under the new situation, the concept of wisdom policing will be injected into the construction of community policing. The prevention and control and maintenance effects inject new momentum into the construction of community policing to provide new development ideas for transformation, upgrading, reform and innovation.

1. Introduction

1.1 Wisdom Policing.

The arrival of the era of big data has promoted the construction of public security informatization. At present, the public security work has basically changed from traditional policing to information policing. With reference to the development model of "Internet +" and "Wisdom +", a new form of wisdom policing model emerged.

Community policing which is the core of the fourth police reform in modern Western history is an important strategic plan for advancing the basic work of public security in China. It is of great significance to inject the concept of intelligent policing into the construction of community policing to effectively manage the public security situation and maintain the overall stability of the country. Supported by technologies such as the Internet, the Internet of Things, cloud computing, smart engines, video technology, data mining, and knowledge management.

Wisdom policing which has public security information as its core, by means of being interconnected, connected, and intelligent promote the high degree of integration and coordination of the various functional modules of the public security system to realize the new concept and new model of police development with the goal of "strength integration, high degree of sharing, and in-depth application" of police information [1].

1.2 Three-dimensional Prevention and Control System.

With the arrival of the era of intelligent security, the three-dimensional prevention and control system has risen to the level of national strategy. At the same time, the requirements for the overall three-dimensional prevention and control construction and the community prevention and control construction have also been further improved.

Three-dimensional social security prevention and control system means that in order to cope with the complex and changeable security situation in the new era, improve their ability to control a dynamic society, create a peaceful and harmonious social environment, and promote the modernization of the public security governance system and governance ability, public security departments integrate police resources and social resources at multiple levels and in various categories, coordinate security and prevention fields in urban and rural areas, online and offline, three-dimensional and peaceful areas, and integrate various means and measures such as attack, prevention, management and control into one. It is the holistic system of all-space-time,

all-dimensional, three-dimensional dynamic prevention and control of public security.

2. The Way of Building Community Three-dimensional Prevention and Control System

2.1 Further Enrich the Information Collection Channels of Community Policing.

With the existing social public service platforms such as "Four Clouds" and "One Network" as the core, it provides a variety of information sources for the collection of information by providing a full range of community services for the community. "Four Clouds" is "Property Cloud"(Property Emergency Management Platform), "Elevator Cloud"(Elevator Emergency Rescue Disposal Platform), "Community Policing Cloud"(Smart Community Policing Cloud Management Platform) and "Fire Cloud"(Smart Fire Cloud Management Platform), "One Network" refers to the intelligent object network monitoring network.

Serving property parks, property companies, elevators, and elevator maintenance companies,with the help of some government housing management systems such as online sign-up and filing systems, original property enterprise credit systems and second-hand housing trading systems, the platform helps the community police department to obtain real-time and accurate information on the distribution of parks, standard address information and housing population information.

"Elevator cloud" platform provides community residents with real-time and nearby elevator emergency rescue services. Through government public services such as complaints about warranties, random shots, owners 'votes, and one-click alarms, community residents could obtain direct people's livelihood demands. Through daily communication systems such as neighborhood circle, news activities, questionnaires etc , community residents could real-timely master and control the sensitive topics of the park and public opinion guidance. Through the "fire cloud" equipment management, inspection and overhaul, the security system of the park is built, and both the key places and key parts are supervised in real time to avoid potential fire hazards in a timely manner. Through online property payment, park concessions, living stewards, community services and other convenient people's life services, the satisfaction and happiness of the people in the park will be improved, and the information on the park's housing and personnel will be further enriched and improved to form a multi-dimensional, three-dimensional, real-time personal information portrait for community policing.

The platform will transform and incorporate the old community and abandoned community into closed management in order to further expand the information acquisition channel through the free replacement of anti-copying access control, ladder control, and the installation of wireless intelligent material monitoring equipment for the park, as well as technical and defensive means such as linkage with monitoring equipment.

The property company introduces the housing information into the platform. After the owner's real name registers the telephone number and identity information, the property company issues the access card and authorizes the mobile phone APP for the owner. Through the management of the owner, family members, tenants, visitors, vehicles, etc., the platform could record real-time access information. Human images are synchronized and captured by the cameras of access control and in the parks. Through "video face recognition", "video vehicle information recognition", "video object recognition", and "video fireworks warning system", data are provided for key population comparisons and security precautions.

The platform provides dynamic, realistic 3D real estate VR effect maps to facilitate the police to clearly understand the details of houses, population, vehicles, dogs, facilities and other things. Based on mobile Internet, cloud computing and intelligent object connection technology, the platform has developed a variety of intelligent security products, such as wireless smart smoke alarms, wireless smart flammable gas alarms, wireless smart one-key alarms, and wireless smart intrusion detection alarms. Intelligent security equipment can be programmed, set the equipment's location, type, belonging to the basic information, as well as alarm linkage personnel and alarm information.

Relying on the architecture of "four clouds and one network", with outstanding features such as

advanced design concepts, fast networking speed, and strong functional plasticity, this platform is considered as scientific and technological achievements. If it is improved, it can fully exploit its greater role and potential, and bring about a revolution in public security grass-roots policing and informatization construction.

2.2 Implementation of Socialized Management.

In this age of Internet data, people can go out without cash, but it is precisely smartphones that are most indispensable. From the perspective of the property combined with the experience of introducing social forces to participate in the construction of the community, the open abandoned management community need be closed, and the real name system for residents of the community need be installed in accordance with the "one person, one machine" approach. It could provide online payment, owner voting, security services, home help, express delivery, automatic fire alarm and other convenience services.

As these services are fast and easy to use, involving all aspects of the daily life of the masses, many people and store owners actively request the installation of platforms, objectively forming a linkage network covering the entire region.

The platform is driven by business flow, and standard process design is adopted for the platform's access control management, equipment management, complaint repair, hand-to-hand shooting, neighborhood circle and other information collection links, as well as one-key alarm, object monitoring and alarm and other emergency rescue links. It also supports users to design custom workflows based on actual needs.

All the participating departments and personnel of the platform are implemented the responsibility of setting posts and clearly defining the division of labor, supporting the development of the work content, work area and scope of activities of the participants. The platform supports the deployment of operational timing and responsible personnel for each link, and the responsible personnel include community police and social personnel such as grid staff, owners, and property personnel.

The platform records the operation process and work track in detail and provides automated performance appraisal means for the performance appraisal of responsible units and personnel at all levels.

In the community, the smoke sensor alarm connected to the platform is installed, and sensing equipment is added to the entrance control, floor entrance, elevator and other parts of the community. The owner can enter the door through the mobile phone's two-dimensional code, avoiding the hidden danger of IC card being copied.

In this process, the masses enjoy services and convenience, and the public security departments need no longer enter the home through traditional visits. They can grab fresh and accurate dynamic data in the background, so as to efficiently and accurately complete the basic public security data collection work, avoiding the problem of the police not being in place, knocking on the door, or even information fraud.

In this way, the platform can not only collect the personal and vehicle information of the owner, but also accurately provide the owner's housing area, the nature of the housing, and the information that the public security cannot grasp such as the maintenance of elevators and the number of Fire-fighting facilities, thus forming a huge database. It is convenient for the public security organs to grab from the background according to the needs of the work, and to break down the data flow barriers from the root causes and consolidate the basic work of public security.

3. The Way of Building Community Three-dimensional Prevention and Control System

The platform is based on Internet of Things technology and implements localized management of alarm information. So that such as park owners, family members, "nine small" site leaders, property managers, property security, grid staff, full-time civilian police, full-time auxiliary police and other personnel, all of these people are automatically involved in the community security work, thus forming a new pattern of group defense and multi-linked three-dimensional protection that the

community police and social forces participate in together.

When the platform sends a bio-linked device alarm, the alarm information will be pushed to the relevant responsible person for the device setting by means of SMS, telephone, and APP message push. After receiving the alarm information, the platform command center can find the location information of the alarm incident at the first time on the command screen map, as well as the alarm equipment information associated with it, such as the owner, property company personnel, company head, grid staff, full-time civilian police and full-time auxiliary police personnel. The command center conducts real-time command and scheduling of personnel and disposal on the ground through multiple video calls and real-time linkage with the surrounding video system. In the process of alarm disposal, police officers can initiate business collaboration and obtain more business support through video chat.

With the advent of the era of sharing, it is no longer possible to do a good job in comprehensive social management by the government alone. Based on this consideration, the platform has added the "hand-shot" function that similar software does not have, which facilitates the masses to photograph various types of security hazards with their mobile phones. The system automatically forms a repair incident and submits it to the property and management departments in a timely manner. From this objective, we have enlarged the network of prevention and control. In this process, the system automatically rewards the participants with cash, which greatly stimulates the enthusiasm of the people to participate; The entire process from the report for repair, maintenance, and feedback is automatically recorded by the system. The public security departments and relevant functional departments carry out the entire process of tracing. If the problem is not corrected and the work is delayed, they shall be ordered to rectify it in a timely manner and investigate it in accordance with the law.

Acknowledgement

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