

# *Discussion on the Integration of Hangzhou Urban Planning Management Information Integrated Platform*

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**Abstract:** With the urban planning management informatization development in recent years, Hangzhou has built the database system, planning management system and planning service system, which has excellent application effects. In order to give full play of these systems in the urban planning management of Hangzhou, this paper puts forward the objectives and measures of the integrated construction of information integrated platform, aiming to provide solid support and guarantee for enhancing the effect of urban planning management of Hangzhou and giving full play to the role of integrated information integrated platform.

## **1. Introduction**

In creating the integrated development mode of urban planning management information platform, Hangzhou can improve the corresponding urban planning management mechanism and system by integrating and applying various methods, and that is of great significance. Therefore, in urban planning and management in Hangzhou, we should focus on the construction and development of the integrated information platform and give full play to the value of the integrated information platform.

## **2. The Course of Hangzhou Urban Planning Management Information Integrated Platform Construction**

At the beginning of urban planning management, Hangzhou built the corresponding information resource database system. The core component of the system is a database of urban basic geography, construction project planning approval and planning results. It contains spatial data information and non-spatial data information, and can be targeted query and management by computer. After that, Hangzhou city took the Geographic Information System(GIS) technology and Office Automation(OA) technology as the basic form to create the information system of urban planning management. The main business involved in it is the approval of construction project planning, the management after the approval of planning, the management of planning preparation, etc., which can make all the work achieve the purpose of office automation. It not only enhances the work effects but also promotes the development of office automation and improves the level of planning and management. However, in the process of system implementation, it has the characteristics of

step-by-step, which can not be achieved overnight. It needs to be promoted gradually for the independence of each system and the lack of certain contact. The final stage is to take the full digital planning as the main development goal. In this step, we create an integrated information system that comprehensively applies GIS technology, Remote Sensing technology, Global Positioning System technology, Computer Aided Design technology and OA technology, and combines database, internet and other advanced technologies to initially form a framework of information system integration. The integrated system can better support managing the information resources of urban planning sharing, and also promoting the development of urban planning management automation, digital development and network progress [1].

### **3. The Construction Idea of Hangzhou Urban Planning Management Information Integrated Platform**

The main purposes of integrating related platforms are to provide good services for urban planning management, integrate relevant basic geographic information resources, plan approval information resources, plan compilation information resources by comprehensive use of various technical measures, and create an information integration system with mutual communication performance and high security so that it can be used in the Municipal Bureau. In order to enhance the working ability and service capability of Hangzhou urban planning management, and to ensure the quality of management and decision-making work, we should carry out collaborative work and reasonably share information resources. According to the construction purpose, we should have a clear idea before the construction.

#### **3.1 Enhance the Performance of System Integration of Information Resources**

In order to ensure that the relevant system has a certain information resource integration performance after the construction, in the process of making clear the construction ideas, we should focus on the creation of the centralized storage management system and dynamic update system, etc. We can carry out centralized storage and real-time update for various planning management information resources to facilitate the accurate planning approval link and management after approval. In order to create a good data association relationship between business work and data information, it is necessary to sort out all kinds of data information and other management work in the process of management and planning preparation, to make the business work and data information interact and update in real time.

#### **3.2 Focus on the Application of Cad Technology and Gis Technology**

These two technologies belong to the most important part of the system construction period, and it should be used as the supporting part so that the planning approval work, the management work after the approval, and the planning preparation management work can be integrated into control and application in the relevant system [2].

#### **3.3 Pay Attention to the Preliminary Design of the Overall Framework**

The relevant overall framework mainly involves planning the construction and integration of a network and an integrated platform. First of all, in the process of building a planning network, we can take the completed e-government network system in Hangzhou as the basic part to create a working method involving each urban area and planning branch, to improve the urban two-level linkage mechanism, and to form a good planning network. Secondly, when integrating a planning

map, we should emphasize the integration process of all data and information and establish a planning map involving each region and integrating all information. Finally, we should pay attention to the good construction of the relevant integrated platform. While integrating various management applications, we should create an integrated information platform that integrates each working link, enhance the information management effect and linkage development level of various work, and meet the current development needs in urban planning management [3].

#### **4. Measures for Integrated Construction of Hangzhou Urban Planning Management Information Platform**

In order to ensure the effectiveness of the integrated construction work, the following put forward the corresponding measures and suggestions, to correspondingly help enhance the construction effect and improve the construction status.

##### **4.1 Reasonable Establishment of Relevant Data Standard Mechanism**

The premise of platform construction is that the business has a clear standardization rule and the data information meets the requirements of standardization. In this way, we can promote the good implementation of the data information sharing work and give play to the value of the system in the process of linkage. In this case, we should build the relevant integrated platform data information standard mechanism and other normative requirements. For the basic geographic data information, we need to set special normative standards and put forward the data information processing requirements on the topographic map, framework and place name. In planning approval management, it is necessary to put forward the standards for spatial data information, including the red line drawing standard, the approval drawing standard, the approval database system standard, and the management data information and database standard after approval. In addition, it is necessary to set up specific technical requirements and standards for approval of digital application for construction, including regulatory and constructive detailed planning information management requirements, construction project feasibility study scheme information management requirements, and so on. All planning compilation must be made into electronic version and input into the database system, to facilitate the application in the city Integrated application and good control in planning management [4].

##### **4.2 Scientific Integration of Data and Information**

The content of this kind of construction work mainly involves basic geographic data information, data information of planning approval type, data information of planning compilation type and file type, data information of administrative office type, and so on. There are two kinds of data: spatial and non-spatial. 1) The data information level of basic geographic types is a vital achievement data content during surveying and mapping management. It is the current situation base map data information in planning management, including the base map data needed to be applied during planning approval and compilation. At the same time, it can also be used as an important basis in current situation investigation. In the construction work, all kinds of scale map data should be integrated. With the help of the database system, all departments can share and apply each other to form a good planning status display system. 2) For the data information of planning approval type, it is the final result data information of the construction project in the planning permission level, and it is also the reliable basis for the preparation work. In the work of data integration construction, we should integrate the specific project planning land information, approval business data information, site selection information, graphics and file data information, and so on. Land use red

line as the main content of data collection and processing, combined with the general construction plan to form the information index base map of planning approval, which can provide good services for planning approval to a certain extent [5]. 3) The information content is the final achievement of planning compilation management, which belongs to the important basis and basic guarantee of specific planning permission of construction project. During the construction period, we should comprehensively integrate all kinds of overall and zoning planning information content and integrate the constructive and controlling planning content into it, taking the importance of compilation work into account. The system integrates special planning data, feasibility study data and other features, and also designs different data platform levels. With the support of this hierarchical data platform, the effectiveness of planning compilation is enhanced. 4) The information content of the file type is to store all the information during the planning management period into the file, which is convenient for future investigation and management. The design of the file data information integration system in the comprehensive platform can help the relevant planning approval work and planning preparation work combine with each other, forming a good guarantee for interactive query of data information. 5) The administrative office type information refers to all kinds of office information related to daily administrative sending and receiving, projects, etc. The integrated platform can be used to integrate the data and information, so that it can be connected with business projects. In daily work, it can quickly query all kinds of data and information of administrative office and business in multiple data correlation. It can also be used as a reference to help the relevant departments manage and control all data information in an integrated way [6].

#### **4.3 Focus on the Integrated Construction of the Platform**

After completing the above data and information construction work, it is necessary to carry out the reasonable integration construction for the platform by integrating different platforms, to improve the relevant system mode and enhance information comprehensive management. The main construction measures are as follows:

##### **(1) Integrate multiple applications**

From the perspective of the essence, for the integrated platform, it is the integration of planning management and other administrative work, which belongs to an integrated system composed of multiple applications. First of all, it is the relevant administrative office application system, which needs to integrate and automate the management of receiving and sending documents and create a mode that can interact with the planning and management work. In addition, it is necessary to connect with the application of archives management, set up the data information interfaces, so as to form the advantage of integrated management in the process of linkage. Secondly, the planning approval work is processed automatically. Hence, the image content, text content and table content can be integrated to enhance the auxiliary performance of the system in decision-making. Thirdly, it is necessary to take the tracking management after examination and approval as the basic form, and then integrate it with the pictures and words of each link to realize the tracking management purpose of each link. Finally, it is necessary to carry out the construction of automation in planning compilation management, provide a good basis for the relevant review work, and further promote the improvement of the effect and quality of planning compilation work simultaneously as integrated management. In addition, related applications also need to be connected with the approval system in the municipal administration service center system, which can better share resource information and ensure good business collaboration [7].

##### **(2) Implement integrated design processing for the system**

The designed integrated platform system should play a good role in comprehensively utilizing

data information and resources in the specific office. With the help of the existing database system, basic geographic information technology and drawing technology, the integrated management mode of pictures, words and tables in each working link is created, and the design can carry out the comprehensive management of municipal and district level planning. The integration system is mainly a platform for the municipal administration service center with information resource sharing and collaborative processing abilities. The relevant planning management departments then regard advanced technology as the basis to integrate various data information of planning approval management, management after approval, compilation management and administrative office, and input them into the database system. After the release of data and information, mainly released in the public planning information service system.

## 5. The Effect of Integrated Construction of Hangzhou Urban Planning Management Information Platform

Through the above system design ideas and suggestions, the information integration platform has achieved good results in the application period. First of all, it can ensure that all kinds of information resources can be well shared, and there is a certain degree of collaboration between various businesses. In the internal work, various planning and management work can be integrated together. Each industry can be integrated Information resources can be shared and processed between different services, with good linkage effect and highly-collaborative office. From the external level, it can ensure the dynamic sharing of information resources between departments and other departments, and improve the performance of external collaborative work. Secondly, it can ensure the comprehensive interactive processing between various data streams and business streams. After the integration construction, it can clarify the logical relationship between each other and even promote the common processing between the two. Finally, it can combine municipal work with district work, which is no longer limited to the traditional form of independent work, break the information island, and make the urban planning management departments at all levels effectively carry out the corresponding work at the same time of joint processing and sharing of data and information. It can be seen that Hangzhou has made good progress after carrying out the integrated construction of urban planning management information platform, and the relevant platform has certain promotion value [8].

## 6. Conclusion

To sum up, the urban planning management departments in Hangzhou have begun to explore the methodology of integrating management information comprehensive platform. Therefore, in practice, we should combine the characteristics of various systems and applications, strengthen the research and analysis, and constantly integrate various data information, systems and technologies. Following these guidelines, we can enhance the quality and effectiveness of the construction work simultaneously.

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