Research on the pre-planning of "Planning, Spatial and Calculation" integrated development mode of urban renewal projects

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Abstract. China has entered a period of urban development that emphasizes both existing and new stock. Building a sustainable urban renewal and development model is of great significance for unleashing investment and consumption potential. The "Planning , Spatial and Calculation" integrated development model applies the concept of coordinated planning of industrial planning, spatial planning and economic calculation. Through the mutual adjustment of industrial, spatial calculation and financial investment accounting, it promotes the economic balance of urban renewal projects and provides new ideas for opening up the entry path of social capital and industrial resources and achieving project-driven development of the area. Based on years of local practical exploration, this article deeply explores the associated integration model of "industry - space - economy" in urban renewal projects, innovatively proposes the "economic layer" of urban renewal projects, systematically sorts out the asset composition of urban renewal areas, and more systematically and comprehensively discovers the existing value of renewal projects. Taking the urban renewal project plan of Zhongshan Third Road in Yuzhong District, Chongqing City as an example, the thinking framework, method path and key contents of the pre-planning of the "planning, design and calculation" integrated development model for urban area renewal were constructed.

1 Introduction

At present, China's urban development has entered an important period of urban renewal. The report of the 20th National Congress of the Communist Party of China proposes to carry out urban renewal actions, strengthen urban infrastructure construction, and build livable, resilient and smart cities. The "Decision of the Central Committee of the Communist Party of China on Further Comprehensively Deepening Reform and Promoting Chinese-Style Modernization" adopted at the Third Plenary Session of the 20th Central Committee of the Communist Party of China further clearly requires the establishment of sustainable urban renewal models and policies and regulations. The implementation of the urban renewal initiative is a major strategic decision made by the Central Committee of the Communist Party of China and The State Council with a long-term perspective and meticulous planning. It aims to transform the traditional urban development model and promote high-quality development. By steadily and orderly promoting urban renewal projects, it is possible to effectively stimulate investment vitality and consumption potential, contribute to the sustained and stable growth of China's economy, create high-quality living Spaces, and enable the fruits of urban development to benefit a wider range of people. How to establish a sustainable urban renewal model will be an important issue in China's urban development.

Urban renewal covers a large number of old urban areas and core areas, and the asset value of these areas has a relatively high potential for preservation and appreciation. However, due to issues such as the lack of economic calculation in the early stage of the project, unclear asset management goals for updated products, and ambiguous capital inflow and outflow paths, urban renewal projects often struggle to balance income and expenditure, are highly dependent on the fiscal budget, and the enthusiasm and energy of social forces to participate in urban renewal have never been effectively released. It is urgently necessary to strengthen the concept of asset management in the early planning and design stage of the project. With a broader perspective on asset operation and the industrial chain ecosystem, the thinking of industrial introduction, operation pre-positioning, economic calculation, asset management, and financial fundraising should be integrated into the formulation of the implementation plan blueprint.

The "Planning, Spatial and Calculation" integrated development model applies the concept of "industrial planning + spatial planning + economic calculation", allowing the spatial calculation of industries and the accounting of financial investment to be mutually adjusted, in order to help urban renewal projects achieve economic balance, open up the entry path of social capital and industrial resources, and achieve the effect of projects driving the development of the area. This study introduces

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the concept of the "economic layer" of the district space in the early planning stage of the project. From the perspective of spatial assetization, it sorts out the asset base map and base number, and conducts the project unit and overall profit and loss balance analysis in combination with the project's background advantages and industrial development positioning. It attempts to construct the early planning framework of the project's "Planning, Spatial and calculation" integrated development model To address the issue of the difficulty in balancing the economic income and expenditure of urban renewal projects in the later development, construction and operation stages due to the lack of an economic perspective and accounting logic in the early planning stage, with the aim of enriching and improving the theories and methods of project early planning in the field of urban renewal in China.

2 Literature review and theoretical analysis

2.1 Literature review: research on urban renewal planning

Urban renewal is an inevitable requirement for the development of a city at a certain stage, and there have been a large number of theoretical and practical studies at home and abroad. Especially in the field of urban renewal planning, there have been relatively mature research and practices.

Internationally, Eduardo Nativida-Jesus et al. have proposed that the planning content represented by project planning can not only significantly improve the living environment, but also vigorously maintain and continue the social relations, production and living atmosphere, etc. carried by the existing environment, and adapt to the supply and demand environment in the new era[1]. Duncan Bowie proposed that the "planning" in urban renewal planning should be to coordinate and organize the entire process of urban renewal actions at the detailed planning level from the perspective of temporal and spatial succession[2]. Landgrave Serrano Monica et al. believe that urban renewal planning, while understanding the actual needs and causes of the research subjects, will significantly enhance the pertinence of the supply content, thereby significantly improving the effectiveness, operability and guidance of the renewal content after its implementation. Conversely, it is difficult to accurately respond to actual demands[3]. Kim Hyewon et al. proposed that the initiating point of urban renewal planning is the judgment of the change in the balance between supply and demand. It should be noted that no planning can be fully realized. With the changes in factors such as the development stage, the background of The Times, technological revolution, and public satisfaction, the demand side and the supply side will change at any time. Then it is necessary to establish an evaluation and feedback mechanism[4].

In China, Tu Huijun et al. took the "Shanghai Workers' New Village" project as an example and proposed that urban renewal planning should involve the participation of multiple subjects, including residents, neighborhood committees, the government, experts and scholars, commercial interest groups, etc., to avoid the needs of vulnerable groups such as nurses and the elderly[5]. Fan Jinlong et al. took the urban renewal special planning of Huangshi City as an example and constructed the planning and implementation path of renewal projects from four aspects: systematic planning, spatial control, mechanism innovation, and policy guarantee, in order to strengthen the leading role of urban renewal planning and the ability of project overall planning[6]. Hu Jianxin et al. sorted out the overall design strategy and achievements of the urban renewal of the "Jingdezhen Taoxi Chuan Taoxi Machinery Factory Area". Starting from the perspective of industrial and functional planning, they determined the retention, renovation and demolition strategy through value assessment, avoided large-scale demolition and construction, and adopted the integration of new and old buildings and environmental adaptability renovations to promote the sustainable and high-quality development of the industrial area and even urban renewal[7]. Xu Xuanchen, taking the urban renewal planning of the "Core Area of Dongtou Old Town" as an example, believes that planning and design is a process of identifying and solving problems. It should cover a full-spectrum design chain from planning, urban design to architecture, landscape and municipal works to ensure the integrity and consistency of the design[8].

Furthermore, there is relatively little research on the economic analysis related to urban renewal, mainly focusing on the overall economic contribution of urban renewal projects. Adeniran and Arayela studied the relationship between urban renewal projects and economic growth in Nigeria and believed that urban renewal strategies can promote economic growth and are one of the best means to enhance the sustainability of local economic benefits[9]. Liu Guiwen et al. conducted a quantitative calculation of the economic effects of the urban renewal industry from the perspective of industrial development. The research suggests that the current development status of the urban renewal industry has reached a level that can drive economic growth, and it is expected that by 2030, the entire industrial chain will directly contribute 3% to the GDP[10].

In conclusion, research in the field of urban renewal planning mainly focuses on aspects such as planning content, planning mechanism, and the implementation path of planning compilation. However, there is still a lack of in-depth study on the synchronous integration of planning with economic calculation and industrial planning.

2.2 Theoretical analysis

2.2.1 Theoretical connotation: integrated development planning of "planning , spatial and calculation"

Industrial space, as the driving force and "ballast stone" of urban development, plays a significant role in supporting the rapid growth of cities and ensuring the security and stability of industrial and supply chains[11]. Urban renewal provides fundamental support for the transformation and upgrading of industries through infrastructure updates and the renewal of industrial development space[12]. Industrial benefits can also inject new vitality and vigor into urban renewal[13]. Industrial planning for urban renewal projects can guide resources to concentrate on advantageous industries and key fields, achieve optimal allocation of resources, enhance the overall competitiveness and sustainable development capacity of industries, and avoid waste and redundant construction of resources. At the same time, urban renewal serves as an important means of land spatial planning governance[14]. Spatial planning should integrate land consolidation and construction plan design, adhere to inheriting history, promote industrial upgrading and transformation, so as to achieve quality improvement and efficiency enhancement of urban space[15][16]. Integrating urban renewal planning with the territorial space planning system can avoid content duplication and optimize the connection with detailed planning[17], and make it more convenient to guide the implementation of system renewal[18].

In urban construction, economic assessment serves as the prerequisite for the raising and utilization of project funds, and it is the basis for making decisions on the implementation of industrial planning and spatial planning[19]. "Planning, Spatial and Calculation" integrated development is a development model that collaborates with industrial planning, spatial planning, and economic calculation logic to jointly promote project implementation. It focuses on the mutual adjustment of industrial, spatial quantity calculation, and financial investment accounting in the early planning stage to help the project achieve economic revenue and expenditure balance, thereby laying the conditions for the pre-planning of project development, investment and financing, investment promotion and cooperation, and industrial introduction. The concept of integrated "Planning , Spatial and Calculation" in the early planning stage is conducive to optimizing the economic calculation scheme of urban renewal projects, opening up the entry path of social capital and industrial resources, and achieving the goal of project-driven development of the area.

2.2.2 Theoretical tool: "economic layer" of urban renewal projects

The urban layer is the superposition of comprehensive information from multiple aspects such as physical space, ecology, economy and culture. It is a dynamic information carrier, containing both explicit visualized information and implicit non-visualized information of each urban element[20]. The "economic layer" proposed in this article is based on the red line boundary of the project and the administrative boundary of the district, and expands the planning dimension to the scope of industrial economy. It is the layer of asset value and location value for urban renewal projects. The core of the layer concept lies in "isolation" and "superposition"[21], that is, to isolate a certain type of key element from the complex urban geospatial system, form a separate layer of that category domain, and superimpose them on each other as needed. Furthermore, by integrating digital technologies, data can be obtained based on Internet map apis and POI, processed and integrated for expression. This enables the acquisition of a fundamental spatial information data base that integrates the geographic spatial elements of roads, land use, and buildings, as well as their attribute information, and a current three-dimensional volume information model[22].

After forming a complete layer system, by superimposing a dynamic "economic layer" on the static geospatial layer, the visualization of content economic attributes such as land development intensity, industrial functional space, and infrastructure layout can be achieved. With the help of digital technology, the management of layer modular attribute information is realized, and economic calculation results are output in real time during the dynamic optimization and adjustment of the module scheme. Conduct multi-scheme economic calculations and comparisons, efficiently output economic plans for the entire project development process, so as to determine the project packaging method, cooperation model, development sequence and other contents, open up a sustainable implementation path for urban renewal projects in terms of district planning coordination and economic balance, and ensure the smooth progress of the project.

Based on the "economic layer" digital tool, the integrated development concept of "Planning , Spatial and Calculation" can more intuitively broaden the value recognition scope of urban renewal projects, providing path innovation and tool foundation for the potential tapping and reshaping of project value.

3 Model construction and research method: Integrated development planning of "Planning, Spatial and Calculation" based on the "economic layer"

3.1 Theoretical application

3.1.1 Sorting out the base figures of the asset map

The sorting out of the asset base map of urban renewal projects is the foundation for the establishment of the "economic layer". Within the economic radiation range of the project, elements such as location advantages, leading industries, and service functions are sorted out as references to provide precise data support and strategic basis for project planning and product positioning. Within the project red line range, sort out, screen and extract the spatial patches of the project's existing assets, the preliminary implementation modules of "retention, renovation, demolition and addition", etc., as the objects for scheme adjustment and related information carriers, including geographical modules such as land, buildings and roads. Assign economic attribute information such as building area, development investment, saleable area, sales and operating income to each module as calculation data. Collect the above-mentioned module patches and their corresponding attribute information as key elements in a new layer to form an "economic layer". At this point, the "economic layer" serves as the carrier of economic measurement information, which includes not only the current asset base map and data of the project but also the assets and their operation data after the completion of the initial construction plan of the project.

3.1.2 Implementation-oriented planning based on dynamic optimization of "economic layers"

After obtaining the base data of the current asset map of the project and the economic assessment data of the preliminary implementation plan, the overall positioning and industrial system of the area can be clearly defined based on the project's location advantages, leading industries, service functions and other conditions, and the project planning scheme can be further optimized. The layout, volume and business plan content of each module of "retention, renovation, demolition and addition" are optimized and adjusted within the framework of restrictions such as the planning conditions of the land plot and the demands of the property rights subject. The economic calculation results output in real time by the digital platform or form formula link are used as the basis for adjustment. Ultimately, the optimal plan under the current conditions can be efficiently determined. Based on this plan as the initial blueprint, development cooperation and investment promotion roadshows will be carried out, connecting with the developers and operators of the area, potential industrial entities, and investment and financing entities. As the information on market trends and the content of cooperation negotiations continue to enrich, the project implementation plan will be dynamically optimized. And as the contracts of the participating entities in each link are signed, the planning scheme will have increasingly higher implementers.

3.2 Integrated development planning framework for "planning , spatial and calculation"

To promote the smooth progress and long-term development of the project, fair, reasonable and sustainable protection of the interests of all parties should be ensured in the planning scheme, and the interests and demands of all participating entities should be comprehensively considered and balanced. In the planning process, from the perspectives of the government and the project's coordinating entity, research should be conducted on the responsibilities, rights, interests, and income distribution mechanisms among secondary development institutions, property operators, financial institutions, and other entities. The role positioning, profit model, and income situation of the project's coordinating entity throughout the entire process of the district's renewal, including the early-stage development and construction, mid-stage asset operation, and late-stage asset securitization exit, should be clearly defined. The government should accurately calculate the fiscal balance at the district level, increase the urban fiscal asset income, actively promote the introduction of industries in the existing urban renewal districts and the revitalization of existing assets, and do a good job in the relay planning of fiscal income such as industrial taxes. The coordinating entity of urban renewal projects should accurately calculate the overall project assessment, that is, the profit and loss balance account at the company level, and at the same time, conduct economic assessments for each sub-unit within the project, so as to better carry out the division of labor and benefit distribution among the entities at each stage of the project. Based on the "economic layer", a "Planning, Spatial and Calculation" integrated development planning framework for the participation of multiple subjects and the sustainable development of the project is established, as shown in Figure 1.

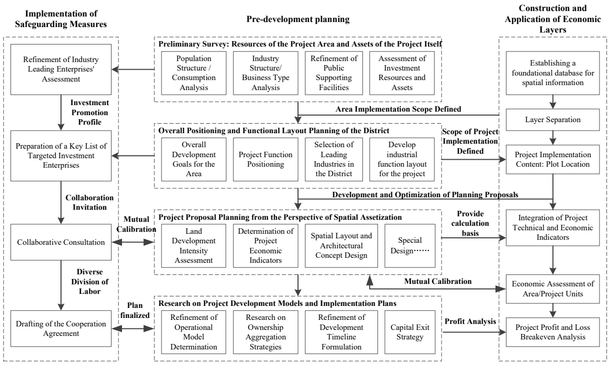

Fig. 1. Integrated Development Planning Framework of "Planning , Spatial and Calculation" for Urban Renewal Projects.

4 Case Studies: Urban Renewal Project of Zhongshan Third Road in Chongqing City

The Zhongshan Third Road Urban Renewal Project is located in Shangqing Temple and Daxigou Sub-district, Yuzhong District. The total land area is approximately 240 mu, and the current construction area is about 600,000 square meters. The area where the project is located mainly serves residential, administrative office and modern historical and cultural display functions. The surrounding area is rich in cultural, educational, sports and health resources, and has a solid foundation for science and technology innovation industries. However, most of the buildings were constructed before 2000, and there are many problems that restrict development, including a decline in population vitality, a high degree of deviation between work and residence, low efficiency in industrial development, poor urban appearance and image, and heavy traffic pressure. In January 2024, the delegation from Yuzhong City proposed the "Proposal on Supporting the Construction of the Zhongshan Third Road Urban Renewal Project" at the Second session of the Sixth People's Congress of the city. It was listed as a key suggestion for supervision by the municipal leaders, and a special study on the renewal planning scheme was immediately launched.

Based on the "economic Layer" tool and the integrated development theory of "Planning , Spatial and Calculation", this paper takes the Zhongshan Third Road Urban Renewal Project in Chongqing as a case. With the aid of digital information technology and in combination with on-site project research, it sorts out the asset resources within the project scope, establishes an "economic layer", and clarifies the overall positioning of the project according to the background resources of the area. Optimize the plan in combination with industrial trends and market directions, refine the economic calculation of the project, and explore the planning path of the integrated development model of "Planning, Spatial and Calculation".

4.1 Scheme construction: Construction of the "economic Layer" based on value extraction

Through in-depth research on the functional and business types of the "Shangqing Temple - Liangkou Road" renewal area where the Zhongshan Third Road project is located and its surrounding areas, based on the higher-level planning, the background resources, functional elements and industrial distribution of the project area are sorted out from the three aspects of "industry, culture and supporting facilities" Clarify the location advantages of the project's mother urban area and its main functions of administrative office and modern and contemporary historical and cultural display, and carry out the exploration of asset and resource value, as shown in Figure 2. Ultimately, the project positioning of the "Central and Local Cooperation Demonstration Zone" should be clearly defined, and the industrial direction of "the front hall of digital and intelligent manufacturing Industry and the humanistic corridor of a better life" should be determined based on the characteristics of local key enterprises and functional services.

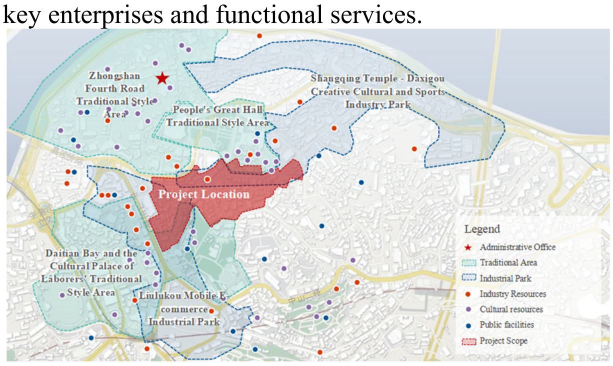

Fig. 2. The Current Status Map of Assets and Resources in the Project Area.

Focusing on the project itself, sort out the land ownership and building conditions within the project scope. Based on tapping the potential of land value and enhancing the value of the area, determine the scope and volume of the "retention, renovation, demolition and addition" of the urban renewal project, so as to formulate the spatial implementation plan. As shown in Figure 3, it was finally determined that 14,4698 square meters would be retained, 13,1322 square meters would be renovated, 41,9539 square meters would be demolished, and 43,4063 square meters would be newly built.

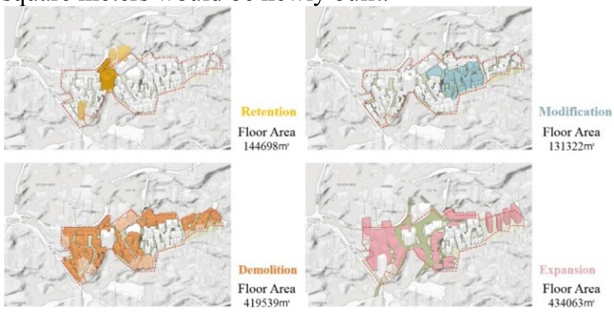

Fig. 3. Space Planning for "Retention, Renovation, Demolition and Addition".

Finally, in combination with the initial implementation plan of the "retention, renovation, demolition and addition", the various assets within the project will be modularized, and economic attribute information will be added to the modules of their operational and saleable assets, entering the economic calculation stage. As shown in Figure 4, the economic attributes of the serviced apartment module within the project scope are presented, including technical and economic indicators such as a total construction area of 16,170 square meters, a saleable area of 8,085 square meters, a unit price of 18,000 yuan per square meter, a total cost of 10.28 million yuan, and an expected income of 35.25 million yuan. All modules are assigned economic attribute information, and the total project construction cost, net profit, net profit margin, payback period and other economic indicators are calculated in the background. By analogy, mark the economic attributes of all modules and complete the economic benefit calculation at the level of each module unit and the project company as a whole.

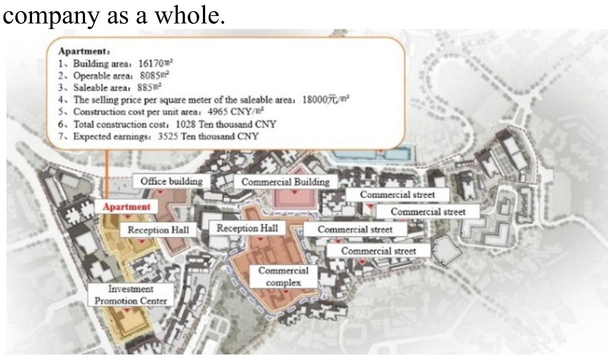

Fig. 4. Illustration of the "Economic Layer" of Zhongshan Third Road Urban Renewal Project

4.2 Solution optimization and application: An integrated development strategy of "planning , spatial and calculation" based on value reshaping

Urban renewal actions are a process of achieving economic revival and social and cultural reconstruction of the old urban Spaces[23]. Its value reshaping must be carried out under the conditions of meeting the requirements of "the area of demolished buildings within the urban renewal area or project shall not exceed 20% of the current total building area", "the ratio of demolition to construction within the urban renewal area or project shall not exceed 2", "the rate of local and nearby resettlement of residents shall not be less than 50%", as well as the national standards for plot ratio and building height limit, and the project planning conditions. Only in this way can the economic plan of the project be optimized. According to the above-mentioned norms and development positioning, industrial planning, and spatial planning requirements, the floor area of commercial complexes can fluctuate between 60,000 and 80,000 square meters. The adjustment of the architectural plan and its corresponding industrial planning and spatial planning schemes directly affects the proportion of saleable and operable floor area of the project, which in turn influences the overall revenue and expenditure of the project. By leveraging digital technology and associating the "economic layer" with the "industrial layer" and "spatial layer", economic and technical indicators such as "retention, renovation, demolition and addition"and product types can have a domino effect. During the dynamic adjustment calculation process, the total cost, total revenue, net profit, net profit margin and other estimated values of each module unit and the entire project are output in real time, achieving mutual adjustment between industrial space calculation and financial investment accounting. With the maximization of spatial capacity and the discounted value of full-cycle revenue as the goal of scheme adjustment, the asset value of the project is reshaped.

At each stage of adjusting the architectural space plan, the corresponding calculation results respond in real time and the economic plan is intuitive and visible, which is conducive to the implementation of the "operation in advance" concept. In the planning stage, the investment promotion roadshow is carried out in advance, and the investment promotion operation plan, development cooperation agreement and other contents are used as the basis for economic plan calculation and incorporated into the early planning to lock in cooperation in development and construction, investment promotion and operation, etc. At the same time, targeted guarantees can be made for the implementation of public service facilities and environmentally friendly facilities, and they can be deployed in combination with commercial Spaces, which is conducive to promoting a win-win situation in terms of social, environmental and economic benefits.

4.3. Calculation output and plan formulation: Analysis of project development models and overall break-even point

In the dynamic optimization of the above-mentioned plan, the maximum utilization of the current building volume allowed by the control plan is carried out. Project plans with reasonable functional layout, harmonious style, economic feasibility and the ability to meet the development of industrial space are selected to conduct the final development model and overall break-even analysis. According to the project development cooperation plan and investment promotion arrangement, the project is further packaged and divided into four independently calculated project units to facilitate phased and rolling development and match the funding plan, as shown in Figure 5. At the same time, it is convenient to clarify the cooperation interface for different cooperative units.

According to the implementation plans of the four sub-projects, economic calculations were conducted respectively, and the profits obtained were -2.39 billion yuan, -1.31 billion yuan, -575.6 million yuan, 419.3 million yuan, and -925.5 million yuan respectively, as shown in Table 1.

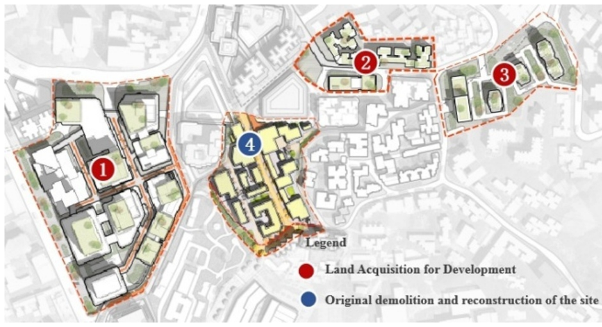

Fig. 5. Division of Project Units and Economic Assessment.

Table 1. Table of Economic Calculation Indicators.

Category		Total	Project ①	Project ②	Project ③	Project ④
Demolish building (m^2)		382796	211072	54235	57541	59948
New Building (m^2)	Office	59918	48151	2376	0	9391
	Commercial	141036	0	30064	60416	50556
	Residential	33518	15512	1836	16170	0
	Apartment	174022	92195	17550	29820	34457
	Underground	462720	291911	34276	76586	59947
Investment Income (Ten thousand CNY)	Newly constructed	1381009	779769	203783	246904	150553
	Investment Amount	1141820	648766	146220	288835	57999
	Revenue	-239189	-131003	-57563	41931	-92554

From the economic measurement indicators of the project unit, it can be seen that achieving economic balance within the project is rather difficult. Therefore, while striving for policy funds, it is necessary to rely on market forces and financial tools. Based on the calculation results, the final project development plan is proposed to adopt the development model of "project bidding + net land transfer + asset securitization", specifically:

(1) Clearly defining the overall coordination for area development (between the municipal real estate group and district state-owned platform company) and establishing a joint venture company to determine the coordinating entity through project bidding;

(2) The project coordination entity is responsible for the first-level rectification function, implements the pre-expropriation consultation and "pre-land supply" system, applies for mortgage loans, and resolves the issue of the source of funds for the first-level rectification;

(3) After the net land is formed, it will be sold to the project's coordinating entity for self-operation and exit through asset securitization. As show in figure 6.

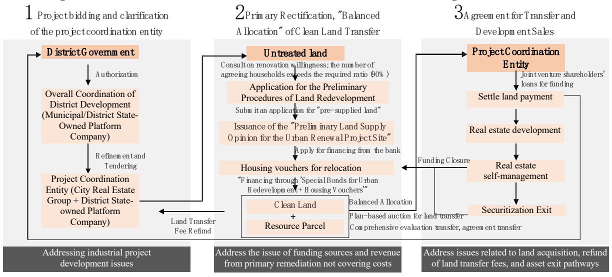

Fig. 6. Diagrammatic Representation of Project Development Models

4.4 Summary: Urban renewal planning innovation through the integration of spatial, industrial, and economic layers.

The key to the sustainable development of urban renewal projects lies in taking economic sustainability as the foundation, and thereby being able to continuously ensure the balance and coordination in social, environmental and cultural aspects. The "Planning, Spatial and calculation" integrated development model is aimed at maximizing the sustainable self-sustaining capacity of the development project itself. It dynamically optimizes the implementation plan by combining the "economic layer" with the background advantages of the area, market trends and investment promotion cooperation, etc., to ensure that the early planning and design have high feasibility. Based on the case of the Zhongshan Third Road Urban Renewal Project in Yuzhong District, Chongqing City, the following thoughts are proposed:

(1) Adhering to the urban renewal concept of integrated "Planning, Spatial and Calculation"development, it emphasizes the utilization of the district-level resource and location advantages to tap and reshape the value of project assets. Taking this as the blueprint for the plan, it seeks a balance point among economy, society and environment based on the demands of the project's property rights subjects, market dynamics and the situation of pre-investment promotion, to facilitate the implementation of the planning. Explore the planning and implementation paths for different types of urban renewal, such as old residential areas, old streets, old industrial zones, and old commercial areas.

(2) Attach great importance to the planning concept of "economic layer", and combine the digital information technology platform to superimpose multiple layers of economic, industrial, spatial planning, etc., to achieve real-time linkage between the planning implementation plan and the calculation results, supporting the optimization of the planning scheme and the entire process of project update and implementation.

(3) From the perspective of the municipal government's competent authorities, a digital platform is used as the foundation for urban renewal project planning to form a unified strategy for provincial and municipal urban renewal projects. Dynamically update and accumulate to build a case library for urban renewal projects, a database of advantageous industries that can be imported, a database of enterprise cooperation, a database of typical problem-solving experiences that can be drawn upon, and a database of technical and economic indicator experiences.

(4) Clarify the rights and responsibilities among the government, the coordinating entity, the construction and implementation entity, the operation entity, the property rights entity, the social capital party, the industrial resource party and other entities, as well as the demands of the stakeholders. Strengthen communication and exchanges, establish mutually beneficial conditions and trust and cooperation relationships based on economic calculations and agreements, and form a long-term development mechanism for the project.

5 Conclusion

Under the backdrop of strict control over local government debts and hidden debts, as well as the equal emphasis on existing and new debts in the transformation of urban economic development, it is particularly urgent to calculate the economic accounts of urban renewal projects and actively introduce social forces to participate in urban renewal work. As a guiding research for urban renewal projects, the pre-project planning must first plan out clear paths for the entry and exit of funds among the participants at each stage of urban renewal. It is necessary to comprehensively coordinate and balance the division of labor and benefit distribution among the project participants throughout the process, clarify the basic situation, determine the direction, calculate the quantity and price, and clarify the plan. The "Planning, Spatial and calculation" integrated development model based on the "economic layer" can take into account industrial and spatial elements. In the early planning stage, it can explore the economic potential of the project's background resources and long-term operation, changing the pursuit of short-term cash flow of the project to the goal of enhancing the economic efficiency and value of the area and even the city. It can also transform the short-term debt financing model into an equity financing model that is like an equity fund. Change the project exit mainly relying on direct asset sales to a securitization exit based on asset management operations such as REITS, and collaborate with multiple entities to jointly implement urban renewal projects.

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