Lifecycle Cost Management of Prefabricated Decoration Projects: A Project Lifecycle Management-Based Model and Practical Insights

Li Xu[1,*], Caiwei Ma[1], Tao Zhang[2], Qiling Zeng[2], Dongjiao Fan[1]
[1]Xinyu University, Xinyu, Jiangxi, China
[2]Zhongding International Engineering Co., Ltd., Nanchang, Jiangxi, China
**Corresponding Author*

Abstract: As an emerging model in prefabricated construction, prefabricated decoration aligns with China's aim to promote the high-quality development of its construction industry. Based on project lifecycle management theory, this study considers the different stages of the prefabricated construction project lifecycle as well as its participants. Specifically, this study analyzes the key points of cost management and control, constructs a lifecycle cost-management model for prefabricated decoration projects, and investigates corresponding cost-management measures. Finally, suggestions are made for the further promotion and application of prefabricated decoration.

Keywords: Prefabricated Decoration; Project Lifecycle; Cost Management

1. Introduction

Prefabricated decoration is an important development path for China's construction industry as it adapts to Industry 4.0 and responds to the Made in China 2025 plan. It is also a key area for the transformation and upgrading of the construction industry under China's "carbon peak" and "carbon neutrality" targets. The Implementation Plan for Carbon Peaking in Urban and Rural Construction (Chinese Construction Standard [2022] No. 53), issued by the Ministry of Housing and Urban–Rural Development and the National Development and Reform Commission, calls for the full decoration and delivery of new residential buildings, aiming to reduce resource consumption and pollution. This plan also promotes prefabricated decoration and the application of modular components such as integrated bathrooms and kitchens, focusing on parts and components that are detachable, modifiable, and reusable. The 14th Five-Year Plan for Science and Technology Development in Housing and Urban-Rural Construction (Chinese Construction Standard [2022] No. 23) mentions tasks such as "research on integrated design methods for residential decoration," "development of healthy and environmentally friendly decoration materials, parts, and components," "research on low-carbon decoration and renovation design technologies for different scenarios," and "development of a new packaged technology system for low-carbon, green, and environmentally friendly prefabricated decoration." With the maturation of prefabricated decoration technology, coupled with policy support for prefabricated construction, the prefabricated decoration industry is expected to see rapid growth. According to the In-Depth Research Report on the Prefabricated Decoration Industry released by the Industrial Securities Economic and Financial Research Institute, the market size of the prefabricated decoration industry is expected to reach 632.7 billion yuan by 2025, with a compound annual growth rate of 38.26%. From both policy and market perspectives, the development of the prefabricated decoration industry holds significance for building sustainable homes and promoting the high-quality development of prefabricated construction.

Compared with traditional decoration, prefabricated decoration is more efficient in terms of time, labor, energy, and materials. It addresses the high costs associated with secondary decoration and enhances compatibility between structural and decorative work. However, the construction market has yet to establish a clear advantage for prefabricated decoration. The reasons include a lack of cost advantage, low market acceptance, and poor supply-demand conditions. According to existing research, the main obstacles to cost

 Copyright @ STEMM Institute Press

management in prefabricated decoration include an incomplete industrial chain, an imperfect industrialization system, insufficient standardization, dimensional deviations in prefabricated components, a low overall assembly rate, inadequate consideration of coordination between different stages and participants, an incomplete personnel training system, a lack of effective incentives and policies, and public skepticism [1-5]. Such issues are inherently linked with the characteristics of prefabricated decoration. First, compared with traditional decoration, prefabricated decoration involves additional participants, such as component suppliers and logistics providers, increasing coordination costs throughout the project timeline. Second, prefabricated decoration requires synchronization with structural and electromechanical work, requiring early consideration of the types, modules, accuracy, and quantity of prefabricated components based on the design and layout of the building structure. Third, during the construction stage, coordination is needed for the production and transportation of prefabricated components, on-site assembly, the schedule of decoration work, and overlapping construction involving multiple specialized decoration tasks [6]. Moreover, compared with traditional decoration, prefabricated decoration faces challenges related to economies of scale and high initial investment in the mass production of standardized components. Initial production costs increase, along with transportation, transaction, and execution costs during the construction stage, contributing to overall cost increments [7-10]. Prefabricated decoration therefore imposes higher requirements for coordination across all stages of a project's lifecycle and among all participants.

Optimizing the cost management of prefabricated decoration can have economic benefits for companies, conserve resources, and help protect the environment. However, there are currently many deficiencies in China's cost management of prefabricated decoration. The technical management system remains underdeveloped, and the industry mainly focuses on the structural systems of prefabricated buildings, leading to an imbalanced development of prefabricated decoration. Therefore, based on project lifecycle management (PLM) theory, this study considers the different stages and participants in the project lifecycle and analyzes the key points of cost management and control. On that basis, a lifecycle cost-management model for prefabricated decoration projects is constructed, and corresponding cost-management measures are investigated. Finally, suggestions are made to further promote and apply prefabricated decoration.

2. Lifecycle of Prefabricated Decoration Projects and Key Points for Cost-Management

2.1 Lifecycle of Prefabricated Decoration Projects

In effect since 2017, the Technical Standard for Assembled Buildings with Concrete Structure (GB/T 51231-2016) defines prefabricated decoration as "a decoration method in which factory-produced interior components are assembled on-site using dry construction methods" [11]. This approach involves the use of an industrialized model, where interior decoration components are designed in a modular manner and then assembled on-site according to decoration code standards, mainly through dry operations, to achieve full building decoration. Prefabricated decoration is an industrialized model characterized by standardized design, industrialized production, assembly-based construction, and information-driven collaboration.

PLM theory concerns the implementation of a series of management measures throughout the entire process, encompassing project initiation, implementation, completion, and maintenance and demolition. The main goals are to smoothly and stably implement the project, conserve project resources, and reduce project costs [12]. Compared with other project management theories, PLM allows for control over the entire project lifecycle by focusing on each stage of project implementation. Thus, the implementation of management control measures becomes more detailed, strengthening cost control throughout the project lifecycle, enhancing economic efficiency, and achieving high project benefits at the lowest cost [13].

Improvements to China's building industrialization system bring new development opportunities for the prefabricated decoration industry while also setting higher requirements for cost management in prefabricated decoration projects. Against this background, PLM theory

Copyright @ STEMM Institute Press

can help guide all project participants to engage in the cost-management process, achieve cost management throughout the entire project, and control all cost elements involved.

Aligning with the concept of sustainable development, the lifecycle of a prefabricated decoration project includes five main stages: research and development (R&D) and design, production and transportation, construction and installation, operation and maintenance, and recycling and demolition (Figure 1). The R&D and design stage encompasses various activities such as technology R&D, technical consulting, scheme design, and construction drawing design. The production and transportation stage involves system orders, production preparation, standardized production, and storage and transportation. The construction and installation stage includes construction preparation, on-site storage, on-site construction, prefabricated component installation, and quality inspection. The operation and maintenance stage covers market sales as well as operation and maintenance management. The recycling and demolition stage involves demolition, scrapping, and construction waste disposal. By contrast, traditional decoration processes are carried out by five main parties—survey, design, construction, supervision, and management—each operating independently according to their own management methods. The separate and autonomous management of data and information leads to low collaboration efficiency and high costs. The lifecycle of a prefabricated decoration project includes an external entity (i.e., government) and multiple internal participants, including owners, prefabricated component manufacturers, decoration construction institutions, and supervision institutions. Currently, throughout the lifecycle of a prefabricated decoration project, the government maintains a guiding role, providing incentives and supervision to the various internal participants.

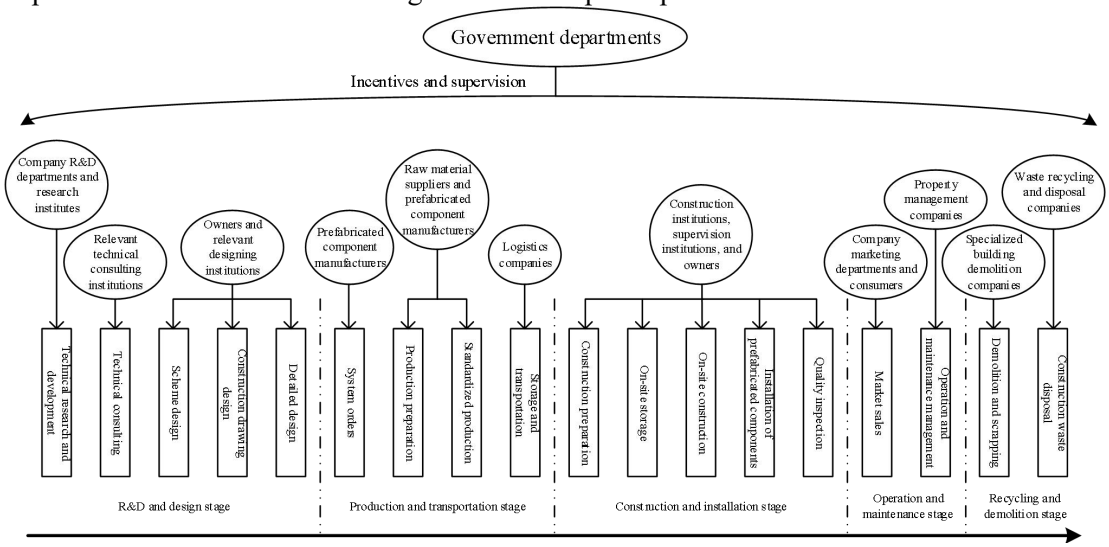


Figure 1. Schematic Diagram of the Lifecycle of Prefabricated Decoration Projects

Guided by PLM theory, modern cost-management concepts such as design-driven cost, efficiency-driven cost, and operation-driven cost are integrated throughout the lifecycle of a prefabricated decoration project. By focusing on each stage of project implementation, cost control is organically combined with cost-management activities throughout the process. This includes designing cost-indicator target values for assessment and integrating cost control with daily production management, thereby enhancing the feasibility, controllability, and reliability of project cost objectives and making project cost management more effective.

2.2 Key Points in the Lifecycle Cost Management and Control of Prefabricated Decoration Projects

Given its simple processes and low technical requirements, traditional decoration still maintains a stable position in the industry. As an emerging model, prefabricated decoration needs to meet not only the demands of decoration but also the requirements for material savings, shortened construction periods, reduced pollution, and stable quality [14]. This study analyzes key points in the cost management and control of prefabricated decoration projects in terms of the various stages of the lifecycle and the roles of different participants.

 Copyright @ STEMM Institute Press

The lifecycle of a prefabricated decoration project involves multiple participants and thus requires considering coordination among them. During the R&D and design stage, firms' R&D departments and research institutes jointly or independently develop new technologies, systems, and products related to prefabricated decoration based on market demand and trends. As the market evolves, these efforts continuously update and refine the functional positioning, assembly rate, building information modeling (BIM), decoration product styles, and target customer groups of the prefabricated decoration project. Subsequently, the owner selects a design institution through bidding and tendering processes. The design institution collaborates with the architectural, structural, mechanical, electrical, and equipment teams to carry out design work for the project. The design institution expresses the owner's design requirements and, through BIM collaboration and other means, discloses technical measures, performance parameters, and construction specifications to the construction team and prefabricated component suppliers. This process also includes coordinating design changes throughout the implementation stage. In the production and transportation stage, prefabricated component manufacturers purchase raw materials from suppliers based on order requirements and coordinate with the design institution to produce prefabricated components based on the principles of modular coordination. They also work with logistics companies to store and transport prefabricated component products according to the construction schedule and adjust the production plan as needed based on the schedule. During the construction and installation stage, the main tasks include the on-site assembly of prefabricated and non-prefabricated components. The construction institution installs the model rooms according to design requirements, clarifies the construction requirements during the decoration process, provides construction disclosure and training, tracks and manages on-site prefabricated components, coordinates multiple types of construction work, and ensures that the project's quality, schedule, cost, and safety requirements are met. The construction institution also protects finished products to avoid damage to the decoration. In the operation and maintenance stage, the owner coordinates with the property management company to manage the project's operation and maintenance. In the recycling and demolition stage, the project undergoes secondary updates, renovations, or demolition and recycling based on the product's service life or other requirements.

Regarding project participants, all stakeholders need to be involved in all stages of the project, with each stage having different focal tasks. The owner plays a leading role throughout the project's lifecycle and, through contract management and process tracking, ensures the division of labor and cooperation among all participants. Meanwhile, the operation mode of prefabricated decoration projects demands higher coordination capabilities from the owner, who must lead the design team in establishing an effective information collection and collaboration platform for the decoration process. The owner also oversees the entry of process information by all participants, ensuring the timely, efficient, and transparent exchange of information. The design team's level of BIM determines the quality of the prefabricated decoration project. The assembly characteristics of prefabricated decoration and the trend toward large-scale customization impose higher requirements on the modularization, standardization, and detailed processing of the design team. The design team also needs to help the owner achieve information collaboration among all participants and cooperate with the construction team for timely design changes. The quality of prefabricated components provided by manufacturers directly affects final decoration quality. Therefore, manufacturers need to strictly control the procurement of raw materials, focus on new-technology R&D, improve the flow of component production lines, communicate with the design team during component production, ensure the modularization and standardization of component production, improve the pass rate of components at the factory, and arrange delivery according to the project's schedule. Logistics companies are responsible for transporting prefabricated components from manufacturers to the construction site. Protective measures formulated based on transport distance, route, and component type affect the acceptance rate of components upon arrival. Additionally, the ability to respond to unexpected disturbances during transportation is crucial for coordinating the project schedule. The construction institution is the main body for the on-site construction of

Copyright @ STEMM Institute Press

prefabricated decoration projects. Although prefabrication characteristics shift the focus of quality management toward the component manufacturers, the construction institution plays an equally important role. The development of special construction organization plans, management of model rooms, control of detailed structures, training of and disclosure to construction personnel, communication and coordination among participants, protection of finished products, and quality reviews all demand higher professional standards from the construction institution. Moreover, aside from the main participants mentioned above, government departments, technical consulting institutions, and others also play vital roles in the successful implementation of prefabricated decoration projects.

3. Lifecycle Cost-Management Model for Prefabricated Decoration Projects

3.1 Model Development

The lifecycle cost of a prefabricated decoration project encompasses the costs throughout the entire cycle, including those related to R&D, design, production, transportation, construction, installation, operation, maintenance, demolition, and recycling. Based on PLM theory, cost management for the entire lifecycle of a prefabricated decoration project involves getting all participants to form a systematic, connected, and integrated operation with clear division of labor throughout all stages. This helps achieve cost optimization and healthy development throughout the lifecycle of the project and establish a standardized circulation system.

The lifecycle cost-management model for prefabricated decoration projects is a collaborative model characterized by information sharing, risk sharing, and benefit sharing. To optimize the lifecycle cost for prefabricated decoration, the first step is to establish a cooperative contractual alliance characterized by information, risk, and benefit sharing based on the contractual content and cooperation goals of the participants in various stages of the lifecycle. This helps foster a long-term, stable community of shared interests. Second, the orderly division of labor can enhance organizational management in the lifecycle circulation process, coordinate the interests of all participants, and improve the production efficiency of prefabricated decoration. Furthermore, an information management platform can help establish an efficient information dissemination mechanism to ensure instant communication and sharing among all participants. In addition, multiple operational mechanisms, such as cost control, risk prevention, quality traceability, technological innovation, and brand promotion, are introduced throughout the process, forming a smart, information-based, integrated cost-management model (Figure 2).

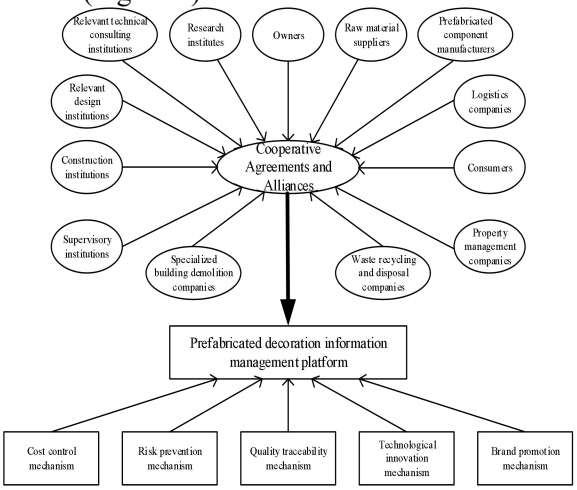


Figure 2. Cost-Management Model for the Lifecycle of Prefabricated Decoration Projects

Introducing a cost-control mechanism allows for the dynamic monitoring and adjustment of costs related to procurement, production, construction, and promotion across the entire lifecycle. This helps address the high costs associated with the initial stages of project development. Introducing a risk-prevention mechanism enables all participants to learn about market dynamics and project conditions in a timely manner, achieving a balance of supply and demand information and mitigating market and project construction risks. Introducing a quality traceability mechanism allows for the real-time tracking of the production and construction status of prefabricated decoration throughout the lifecycle, achieving quality control and maintaining the need for public awareness of prefabricated decoration costs. Introducing a technological innovation mechanism facilitates timely technical improvements in production, construction, and installation issues related to prefabricated decoration. It allows for the timely updating of design drawings and installation methods via the information management platform, thus advancing production and on-site installation progress. Introducing a brand-

 Copyright @ STEMM Institute Press

promotion mechanism enhances the recognition and promotion of prefabricated decoration products among the public as well as potential collaborating companies or institutes, thereby increasing competitiveness in the construction market.

In summary, the lifecycle information management of prefabricated decoration aims to reduce construction and circulation costs and risks, promote collaboration among all participants, and maximize benefits for all stakeholders involved in different stages. It leverages modern management techniques to achieve integrated and collaborative development through information sharing, risk sharing, and benefit sharing among all participants throughout the lifecycle.

3.2 Lifecycle Cost-Management Measures for Prefabricated Decoration Projects

3.2.1 Cost management in the project R&D and design stage

The tasks in this stage involve R&D and design. First, to enhance innovation in prefabricated decoration technology and its cost-management efficiency, it is necessary to conduct technical and product R&D based on market demand and the current development status. The first step in R&D for cost management is to analyze factors based on information collected through market surveys, including market orientation, resources, R&D feasibility, and economic viability. With the support of this information, R&D departments and research institutes can jointly or independently develop new technologies, systems, and products related to prefabricated decoration. As the market evolves, the functional positioning, assembly rate, BIM collaborative application requirements, decoration product styles, and target customer groups of prefabricated decoration projects continuously change. Second, in the design task, cost-management measures need to be implemented under the guidance of PLM theory, and the key points of cost management and control in each stage must be fully considered. It is also essential to focus on details and integrate cost information from each stage to reasonably assess the total cost of the prefabricated decoration project, thereby strengthening cost control.

3.2.2 Cost management in the project production and transportation stage

Cost management in this stage encompasses various aspects such as raw material procurement costs, production line R&D costs, production labor costs, storage costs, and transportation costs. First, the quality of raw material procurement affects the quality of prefabricated component products. Procurement parties should be selected based on the qualifications of raw material suppliers, social reputation, market satisfaction, and credit records. Alternatives should also be chosen for the same raw material to respond to issues such as material quality problems, price fluctuations, and supply shortages. The proper inspection and storage of raw production materials should also be carried out upon on-site arrival. Second, prefabricated components directly affect decoration quality and cost management. The degree of standardization in their production should be enhanced in accordance with code requirements, and strict control should be maintained over the quality of prefabricated components. Such efforts can ensure compatibility between prefabricated components and civil construction as well as design modules, thus improving the acceptance rate of prefabricated components upon arrival. Additionally, the volume of system orders for prefabricated component products should be compatible with their production capacity to avoid quality-management lapses caused by rushed production, which could lead to cost losses. Third, prefabricated decoration projects involve multiple prefabricated component manufacturers and logistics providers. It is important, then, to coordinate all parties and align with the construction schedule, which is crucial for ensuring the progress and quality of the project. It is necessary to coordinate the transportation plans of logistics providers with the prefabricated component production plans and construction schedule plans. A reasonable transportation plan for prefabricated components should be developed according to the type of prefabricated components and transportation distance. Protection measures should also be taken during transportation to minimize storage costs after prefabricated components arrive on-site.

3.2.3 Cost management in the project construction and installation stage

In this stage, compared with traditional renovation, the responsibility of construction institutions is relatively reduced. However, quality and cost management by the construction institutions—as the actual on-site operators and

Copyright @ STEMM Institute Press

presenters of the final products—remain critical. First, prefabricated decoration work should be broken down by the type of work, and a detailed flowchart for overlapping construction involving multiple specialties should be developed based on the construction sequences of different types of work, the complexity of the process, and the construction period. This helps avoid the quality and cost risks associated with overlapping tasks. Second, during project implementation, a dedicated team should be assigned to protect finished and semifinished products. Written handovers with the supervisory institution and the next work phase personnel should be conducted promptly, reward and punishment measures should be established, and irregular inspections should be carried out to identify quality responsibilities. Third, the frequency of training on new equipment, technologies, materials, and processes for decoration should be increased. Special attention should be paid to the construction details of model projects and the results of interface construction training and assessment. A training plan for prefabricated decoration construction should be developed, with dedicated funds allocated, training scope and personnel clarified, and a reward and punishment mechanism for assessment implemented.

3.2.4 Cost management in the project operation and maintenance stage

In this stage, it is necessary to delve into the implementation process of project operation and maintenance, strengthen supervision and management, ensure that the project's functions operate normally, and reduce the project's operation and maintenance costs. First, based on actual project operations, operation and maintenance measures should be formulated, and the operations of similar projects can be referenced to learn from them, thereby improving cost management in the operation and maintenance stage. Second, consulting firms should be commissioned to conduct project operation cost audits to ensure the rationality of project operation cost accounting and reduce operation and maintenance costs.

3.2.5 Cost management in the project demolition and recycling stage

In this stage, a demolition plan should be developed based on actual circumstances, focusing on the recycling of materials and waste to minimize waste during the demolition process. This helps reduce project resource consumption and improve the utilization efficiency of various resources in the project. Meanwhile, for projects requiring renovation, project quality needs to meet the relevant standards, and the normal functioning of the project should be ensured. The feasibility and economic viability of the renovation should be emphasized to reduce resource waste and avoid greater losses, thereby achieving the goals of lifecycle cost management for prefabricated decoration projects.

4. Countermeasures and Suggestions

The lifecycle development of prefabricated decoration projects in China faces various challenges. Therefore, when conducting cost-management research, it is essential to consider the actual development of the prefabricated decoration market and establish a complete and systematic lifecycle cost-management model for projects, effectively promoting the healthy lifecycle operation of prefabricated decoration projects.

Optimize the information management platform for prefabricated decoration and promote organizational collaboration among participants. Compared with traditional decoration, prefabricated decoration requires higher standards of organizational management. By integrating modern smart construction technologies such as BIM and building IoT platforms, it is possible to optimize information management platforms for prefabricated decoration, link all participants in the lifecycle of prefabricated decoration, improve organizational management processes throughout the lifecycle, promote collaboration among participants, and facilitate the integration and sharing of information resources. This can enable the coordinated development of the entire process, including R&D and design, production and transportation, construction and installation, and marketing and usage, thus enhancing the quality and cost efficiency of prefabricated decoration projects.

Emphasize the construction quality of prefabricated decoration projects and increase brand promotion efforts. The public's demand for product and service quality is increasing with the continuous improvement of social consumption levels. Therefore, to promote the lifecycle development of prefabricated decoration projects and increase their profit margins, it is necessary to focus on the quality of

 Copyright @ STEMM Institute Press

prefabricated components and implement a quality-traceability mechanism. Moreover, focusing on brand promotion and establishing an influential brand for prefabricated decoration will enhance brand value and improve the market competitiveness of prefabricated decoration. We recommend using standardized and modularly designed prefabricated decoration projects as a pilot, encouraging on-site visits, and allowing the public and consumers to obtain greater perceived value of prefabricated decoration.

Integrate lifecycle resources for prefabricated decoration projects and achieve stable, coordinated development. By leveraging advanced technologies and management experience, it is possible to integrate and optimize the lifecycle of prefabricated decoration projects, stabilize the circulation model throughout the lifecycle, and achieve a cluster effect in prefabricated decoration. Through knowledge, technology, and resource sharing, a complementary and coordinated resource development environment can be formed. Additionally, by utilizing the resources, technologies, and management models of leading construction enterprises, it is possible to enhance the utilization efficiency of prefabricated decoration resources, achieve optimal resource allocation, expand production scale, attract social investment, and improve economic benefits, ensuring the stable lifecycle development of prefabricated decoration projects.

Increase government incentives and supervision efforts and optimize the lifecycle cost-management mechanism for prefabricated decoration projects. Issues such as disorderly market competition and low production efficiency continue to hinder the lifecycle development of prefabricated decoration projects. Therefore, during the lifecycle development of prefabricated decoration projects, it is necessary to enhance government incentives and supervisory measures, improve laws and regulations, increase corporate responsiveness, standardize market order, optimize the lifecycle cost-management mechanism, and protect the interests of all participants, thus promoting the healthy development of prefabricated decoration projects throughout the entire lifecycle.

Acknowledgments

This paper is supported by the Jiangxi Provincial Key R&D Program Project “Research on Standardization and Integration Key Technologies for Quality Improvement of Assembled Residence” (No. 20224BBG72002), the Technical Service Project “Research and Demonstration of Building Assembly Decoration Technology System” (No. HX23026), and the Technical Service Project “Research on Technological Innovation of Assembled Steel Structure Building” (No. TS20220119).

References

[1] Hwang, B.-G.; Shan, M.; Looi, K.-Y., Key constraints and mitigation strategies for prefabricated prefinished volumetric construction. J. Cleaner Prod. 2018, 183, 183–193.

[2] Fan Min. “Research on the Selection of Key Technologies in the Development of the ‘Technical Standards for Prefabricated Interior Finishing Projects’”. Anhui Architecture, 2026, 33(9): 6–8.

[3] Cheng, C.; Shen, K.; Li, X.; Zhang, Z., Major barriers to different kinds of prefabricated public housing in China: The developers’ perspective. In ICCREM 2017, American Society of Civil Engineers: 2017.

[4] Liang Jiandong, Luan Wentao. Key Points and Problem Analysis in the Design Practice of Prefabricated Interior Finishing for High-Rise Residential Buildings . China Building Decoration, 2026, (15): 62–64.

[5] Attouri, E.; Lafhaj, Z.; Ducoulombier, L.; Linéatte, B., The current use of industrialized construction techniques in France: Benefits, limits and future expectations. Cleaner Eng. Technol. 2022, 7, 100436.

[6] Sun, X. Research on the performance of quality management of prefabricated interior decoration of residential projects. Master's Dissertation, Shandong Jianzhu University, 2023.

[7] Jiang Miao-yi. Analysis of Constraints on the Development of Prefabricated Interior Finishing and Discussion on Design Strategies. Interior Design and Decoration, 2025, (7): 118–120.

[8] Wu, H.; Qian, Q. K.; Straub, A.; Visscher, H., Exploring transaction costs in the prefabricated housing supply chain in China. J. Cleaner Prod. 2019, 226, 550–563.

[9] Mao, C.; Xie, F.; Hou, L.; Wu, P.; Wang, J.; Wang, X., Cost analysis for sustainable off-site construction based on a multiple-case

Copyright @ STEMM Institute Press

study in China. Habitat Int. 2016, 57, 215–222.

[10]Qi, B.; Wang, M., Problems and countermeasures of the development of PC-constructions in China. Constr. Econ. 2014, 35, (7), 18–22.

[11]Miao Qing, Zhou Jingmin. “Survey on the Current Status of Old Residential Buildings in the Context of Urban Renewal and Research on Technical Solutions for Prefabricated Interior Finishing”. Housing Science and Technology, 2026, (9): 39–50.

[12]Ouyang Mingyong, Wei Xu, Wang Erlong, et al. Research and Application of Prefabricated Interior Construction Techniques for High-Quality Residential Buildings . Construction Economics, 2024, 45 (S2): 193–197.

[13]Xiong, X.; Yang, L.; Liu, A.; Wang, J., Research on project cost management under the integrated model of project management and supervision using PLM theory. Highway 2023, 68, (9), 295–300.

[14]Li, M. Research on the influencing factors of prefabricated decoration promotion based on WSR methodology. Master's Dissertation, Shandong Jianzhu University, 2022.

 Copyright @ STEMM Institute Press