

스마트건축 개념을 바탕으로 한 건축물 인증제도의 개편 방향

An Improvement Direction for the Building Certification Systems
based on the Smart Building Concept

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SUMMARY

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The building certification system has been the basis for improving building performance, and as demand has gradually diversified according to the changing conditions of the times, related certification types have also diversified. However, each building certification system and construction standards currently operated in accordance with the law which start from a unique purpose initially. The problem of overlapping additional functions has been raised as the operating period is prolonged, and it is recognized as an obstacle.

In this study, the direction of maintenance and reorganization of the certification system that ultimately reflected the concept of smart architecture was set through various research methods and comparative analysis between building certification systems. To this end, a proposal for setting the integrated application direction of the smart building concept and recommendations for the direction of maintenance and reorganization of the overall certification system were derived.

In order to establish the direction of the integrated application of the smart building concept, the method through reorganization of the current certification system such as the green building certification and the intelligent building certification system was reviewed as an alternative. Also, the establishment of a new certification system was reviewed as another alternative.

As a result of examining the concepts and definitions related to the existing smart architecture, it was determined that the concept elements required in the 'smart' concept started with a smartphone were not included in the existing concepts similar to smart architecture. There have been attempts for smart concepts in the architectural field, such as intelligent buildings and high-speed information and communication buildings since 1990. However, they are not fully satisfied with the smart service needs as they are defined around the functions of the building's mechanical facilities and land communication facilities. Rather than a technology infrastructure and

supplier-centered concept, it should be advanced with a concept that focuses on improving the user-centered quality of life.

As a result of inquiries to experts regarding the current status and issues of the building certification system, a similar system overlapping operation and the existence of overlap between detailed standards and certification items, and the formal implementation of the building certification system were highlighted as a result of an opinion on the policy structure. Matters such as effectiveness issues, rising construction costs, inefficiency due to repeated administrative procedures, and differences in interpretation between certification bodies were derived.

Opinions on the improvement direction of the building certification system and related building standards include: integration of similar systems, system specialization, introduction of operation stage certification, unification of certification bodies and business computerization, and the incorporation of general building standards among the different building certification items. Opinions were presented on the proposal of the initiative policy operation structure.

Based on the above comparative analysis of redundancy and the result of comprehensive review, the following two implications can be presented for the purpose of efficient operation between building standards and certification systems for improving green building-related performance.

First, it is necessary to set the direction of institutional maintenance in accordance with the purpose of establishing and operating the building standards and certification system. The building standards are mandatory and are subject to licensing, ensuring the basic performance level, and the certification system, which is evaluated according to the client's choice, suggests reinforced evaluation items and performance standards to induce specialization and give the appropriate incentives accordingly.

Second, it is necessary to present directions in short- to mid- to long-term stages in order to accompany the effectiveness of maintenance and reorganization. It is possible to reduce resistance to rapid changes and the possibility of errors by pursuing a step-by-step bottom-up strategy targeting related statutes by starting the reform from the easy accessible point rather than a complete system reform from the beginning.

In this study, it was proposed to reflect the concept of smart architecture through the reorganization of the intelligent building certification system as the integrated application direction of the smart architecture concept, and to operate the smart architecture certification system through the unification of the building certification system.

As for the direction of maintenance and reorganization of the certification system, it was emphasized that the direction of maintenance and reorganization in accordance with the general building standards and the purpose of the certification system should be set and promoted step by step. Lastly, the direction for reform was suggested to promote private participation and system operation.

Keywords

Smart Building, Green Building, Building Certification System, Building Standards, Building Performance Policy Amendment