

DIGITAL GOVERNMENT AND SMART CITIES IN THE DIGITAL TRANSFORMATION AGE: FOCUSING ON KNOWLEDGE TRANSFER TO PARTNER COUNTRIES

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ABSTRACT

The demand for knowledge transfer and experience sharing in terms of digital government and smart cities among partner countries has significantly increased. Digital government-related projects have been mainly proposed for the convenience of the system providers for the short-term or one-time instance without considering the mid-term to the long-term direction of digital government in partner countries. Due to this limitation, after the Knowledge Transfer projects are completed, the government partner countries that participated in the projects have examined the Knowledge Transfer projects and need to build improvement plans to promote the related project in efficient, effective, and sustainable ways with mid-term to long-term perspectives. This study focuses on the knowledge transfer projects in the digital government and smart cities that the Korean government and major public institutions carried out and analyses the status of digital knowledge transfer or official development assistance (ODA) projects from 2011 to 2020. In doing so, the study looked into establishing public sector systems such as digital government and smart cities and analysed the current status and research results of domestic and foreign studies related to assessment and diagnosis. Through this, major factors that determine the performance of digital government ODA were identified, and an analysis framework was derived for the analysis of existing cases of digital government knowledge transfer implementation.

Among the existing cooperative digital government projects in place, smart cities were selected as major applicable cases for analysis by incorporating the advice of internal consultants, who have rich prior experiences in project implementation, on these projects. Moreover, an in-depth analysis was conducted regarding efficiency, effectiveness, and sustainability. The scope of in-depth analysis areas is to cover smart city projects from design solutions to social problems such as ICT, construction, logistics, and transportation, to safety & disaster management while facilitating export activities as a modular project. Based on in-depth analysis results, the issues or factors related to the efficiency, effectiveness, and sustainability of digital government knowledge transfer project implementation were derived as implications. These were incorporated into the development of the digital government knowledge transfer projects implementation framework.

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The implementation framework for knowledge transfer projects is expected to enable the governments or the knowledge transfer project teams of digital government to launch follow-up and ongoing projects after their first project's completion. It will serve as a related guideline for the digital government project so that the digital government system of partner countries can achieve efficiency, effectiveness, and sustainability.

Methods: In-depth analysis of each case

The integrated data center construction project integrates and manages information resources from the central administrative agencies to optimize them effectively. Smart City projects are a substance of comprehensive technology innovation such as ICT, construction, logistics, transportation, safety and disaster management etc., As a major project with an approach toward resolving social problems with ICT, it is easy to export for its export as module-type export. The study analyses the status of digital knowledge transfer or Korean ODA projects over the last decade by using in-depth analysis.

The smart cities project overview

A Smart City features an aggregate of technology innovation encompassing ICT, construction, logistics & transportation, safety and disaster management etc., to make living and workspaces smart. Each smart city project is implemented separately, depending on the sector. Transportation and water resources management are implemented in the land and transportation sector and disaster & safety management are implemented with E-government. The Ministry of Land, Infrastructure & Transportation has run the [K-City Network] global cooperation program as part of its international cooperation project.

Conclusion

A strategy to promote a sustainable smart city is summarized as follows. Korea assists with consistent directions and continuity from the stage of knowledge transfer project consulting so that it can be developed into a sustainable long-term national project in a partner country. Securing sustainability is of critical importance to spread smart city projects for the mid and long-term including digital twin technology for disaster management and data structure design based on smart city DB system operation and its scalability.

Keywords: Digital government, Smart cities, Knowledge transfer projects