

보편적 서비스 개념을 고려한 스마트도시계획 및 사업 개편방안 연구

Planning and Policy Measures for Universal Services in Smart Cities

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SUMMARY

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In response to the Fourth Industrial Revolution and to solve various urban problems in citizens' daily lives, the Ministry of Land, Infrastructure and Transport is pursuing various smart city projects such as National Pilot Smart Cities, Smart Challenges, R&D for innovative growth, and Creative Talent Promote Project. In addition, local governments are also establishing smart city plans in an attempt to embrace innovative technologies tailored to them. To ensure the smart city services and technologies work stably and sustainably, considerations should be given to actual end users, rather than unilaterally supplying these services and technologies. In this context, suppliers (central and local governments and private companies) are striving to identify and develop smart city services closely associated with citizens' daily lives regardless of their income level or age, whether they be urban or rural residents.

In 2020, the Ministry of Land, Infrastructure and Transport made the first attempt to review and analyze the performance of the smart city finance projects pursued so far. However, smart city plans have never been subject to such performance evaluations, nor have there been efforts to understand the status of smart city infrastructure and service operations nationwide. This hampers the sustainability and actual efficacy of the smart

city services. In this regard, it is necessary to carry out comprehensive evaluations of smart city infrastructure, services, and planned projects, and to find measures to improve the effectiveness of smart city policies that would yield services that citizens would find useful and beneficial.

Different cities have different specificities depending on their geographic, cultural, and environmental backgrounds, and the characteristics of the residents living therein. However, there are common needs that should essentially be met for people to live, and services to meet these needs should be necessitated and prioritized in smart city plans. Although smart cities are increasingly common and there exist various smart city services, citizens' awareness and experience of the smart city and smart city services still remain insignificant.

The purpose of this study is to define the universal smart city services and establish a system to apply and introduce them, thereby making the smart city services more closely associated with citizens' daily lives and contributing to the development and dissemination of successful smart cities.

The key findings in this study are as follows. First, the universal services defined in this study are divided into public services and market-driven services depending on their purposes. Public services prioritize public interest, for example, citizens' safety, and aim to provide equal services to everyone. They can be seen as priming services to build fundamental infrastructure before introducing advanced, next-generation services. Market-driven services aim to encourage innovative, technologically advanced players in the private sector to take part in and generate profits therefrom. Both public and market-driven services intend to implement and expand basic services that aim to solve common urban problems seen in any city. On the contrary, specialized services are intended to provide pioneering "test-bed" services in consideration of regional specificity.

Second, to identify the types of universal urban problems and the corresponding smart city services, we carried out a quantitative analysis using statistical data and a qualitative analysis that involved identifying urban problems in smart city plans. Fifteen local governments were selected as the subjects, divided into large (more than 1,000,000 population), medium (500,000 to 1,000,000), and small (fewer than 500,000) cities. The most commonly observed problems in both quantitative and qualitative analyses were

transportation, welfare, environment, and work. We also conducted a survey of 1,100 citizens living in smart cities on their awareness of smart city services. The results showed that the residents saw fine dust, climate change, garbage, parking, and aging as major urban problems and thought that solutions in the fields of environment, transportation, and welfare were needed. These observations and survey results suggest that the types of urban problems citizens found and the services they needed did not vary by the size of the city and the classification of the population. Given these results and the situation of the times, the priority areas of the universal smart city services are transportation, welfare, environment, and work.

Third, based on the universal smart city services identified herein and the concept of specialized services, we suggest that Article 27 (Smart City Service) and Article 31 (Vitalization of Civil Engagement) of the Smart City Planning Guidelines should be revised and newly established, respectively. Here, we present the concepts of public services (universal services) that should be financed and supported by the public sector, market-driven services (universal services) that should be pursued and managed by private players while the government playing enabler roles by, for example, easing regulations that hinder the dissemination of the services, and specialized services that aim to resolve specific urban problems.

Fourth, we suggest orientations to revamp smart city challenge projects in consideration of the size of the city and regional characteristics. The smart city challenge projects are categorized into City Challenges and Town Challenges depending on the size of the city, but they have insufficiencies in thoroughly understanding the urban problems they face and taking tailored approaches depending on the size of the city. In this context, these projects should be revamped to provide services that citizens actually need and find useful and further categorize them, for example, into urban, rural, and combined urban-rural projects, in the pursuit of activities tailored to individual cities.

Fifth, we describe the roles of the integrated smart city platform and measures to expand relevant services in consideration of the needs for solutions in transportation, welfare, environment, and work identified in this study. In these four areas, 12 services with the highest demands from citizens can serve as the backbone of relevant services that can be interlinked with them. In particular, services interlinked with these backbone services in transportation, welfare, and environment should be given priority as these areas are closely associated with public safety.

Sixth, we present measures to improve the smart city and service certification scheme in consideration of the universal service concept. These measures aim to facilitate the establishment of smart cities and produce actual outcomes by, for example, expanding the scope of the compulsory evaluation areas for smart city certification and applying additional weight to essential services.

Keywords :

Urban Regeneration Works, Neighborhood Regeneration Works, Neighborhood Regeneration Revitalization Area, Urban Regeneration Special Account Investment, Urban Regeneration Center, Urban Regeneration Company(tentatively named), Policy Funds-Loan Product