Measures to Introduce Next-generation Transit System for Smart City

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Summary

1. (Background) To alleviate the effects of overpopulation, smart city projects based on information and communications technology (ICT) are being pursued worldwide. A key challenge to that end is building an advanced transportation system that provides convenient and affordable urban transit.

2. (Needs) To accommodate the self-driving car in a smart city, a next-generation cooperative intelligence transport system (C-ITS) is needed based on a two-way data collection system that connects vehicles and infrastructure.

3. (Expected effects) The C-ITS is expected to tackle urban transportation issues through data connection to the Internet of Things (IoT), a key feature of a smart city. The system is also expected to mitigate potential early-stage problems arising from disarrangement of self-driving and man-operated vehicles. In turn, C-ITS will likely improve road safety and efficiency in the era of autonomous vehicles.

4. (Proposed measures) To effectively introduce the C-ITS to urban areas, the government should lead efforts to distribute related devices and prepare standards to connect data to smart city technology for convergence. In addition, C-ITS services and methods to construct them are needed through an analysis of transportation issues in target cities.

Policy implications

① For the C-ITS to efficiently collect and provide data, problems with existing devices should be identified and resolved. Starting with a government-led distribution of commercial vehicles, a policy is needed to shift market-led support for non-commercial vehicles to private sector assistance led by the government.

② To improve reliability, the C-ITS service must be connected to systems that provide road and climate data, transportation information from the private sector, and e-Call service. Standardization and interface standards like those for crime and disaster prevention should also be prepared for convergence with smart city systems.

③ Based on analyses of traffic conditions (i.e., congestion, number of registered vehicles, traffic violations, public transportation, and parking), accident information (i.e., areas prone to crashes, accidents by type and vehicle purpose, and those involving pedestrians), and other data (weather and road conditions), new services appropriate for the target city are needed or the existing C-ITS service should be upgraded.

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