Strategies and Innovation of Local Governments in the Age of Data Economy

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I. Cases of Data Utilization by Local Government in Korea
Innovative Public Services - Transportation

Big-data and public transportation control

Seoul’s ‘TOPIS’ is a Comprehensive Transportation Management Center that Operates and Manages Seoul Metropolitan City's Overall Transportation Situation.


"Bus + Subway" public transport information integration

1) All Bus & Subway arrival time
2) Last bus & Subway information
3) All Bus & Subway route, transfer service
4) Bus detour & congestion information
5) Incident information

Evaluation of bus Company

1) Result of bus operation (not-stop, reckless driving)
2) Basic data for operation cost calculation (total travel distance, frequency of bus running)

Notice for securing bus driving

1) Real-time interval
2) Real-time detour route
3) Incident information

Notice for securing bus driving

1) Bus location and speed
2) Data related with bus operation

Source: https://seoulsolution.kr/en/content/7608
Innovative Public Services - Transportation

- Big-data and public transportation control

Seoul’s ‘TOPIS’ is a Comprehensive Transportation Management Center that Operates and Manages Seoul Metropolitan City's Overall Transportation Situation.

- ‘TOPIS’ analyzes traffic card details and real time operation data, socioeconomic index
- Data uses them for planning of new bus route analysis or subway planning of running interval

Source: Seoul Metropolitan Government, Seoul's Challenges & Achievements in Sustainable and Intelligent Urban Transport
Innovative Public Services - Transportation

**Big-data and public transportation control**

‘TOPIS’ is Seoul’s intelligent traffic system, gathering citizen’s transportation card to analyze traffic needs

**Night Bus Route**

- ‘Olbbami bus(Owl bus)’ is the late-night bus
- The Seoul Metropolitan Government utilized 3 billion telecommunication volume data of KT(a Korean private mobile telecommunication company) to determine the route of operation while creating a late-night bus

**Special Bus Route**

- Through traffic predictor system, City of Seoul manage ‘Daramji bus(Squirrel bus)’ in specific time, certain courses especially about commute time
- Gathering real-time traffic data and tracing bus operation for offering bus transfer data and bus riding time data on personal mobile application, internet or ARS
Innovative Public Services – Security & prevent crime

**Big-data analysis: the Select the CCTV installation area**

Gwang-ju Metropolitan Government collects data on empty houses to select CCTV installation areas

- Analyze power usage patterns over the last three months to define an empty house
- Determining the location of CCTV installation using variables that are significant to the risk of crime
Innovative Public Services – Tourism & Travel

**Big-data analysis: Analysis of tourist information**

Jeon-ju local government conducts big data analysis to revitalize local tourism

- Development of customized tourism policies by analyzing tourist patterns
- Collect floating population data from telecommunication data
- Analysis of tourist characteristics and major inflow areas using credit card company sales data

II. Data-related laws and policies of Korean local governments
Structure of the Korean Local Autonomy System

- Mostly based on central government policy directions

- South Korea's government has been acknowledged as having the most advanced digital capabilities among the Organization for Economic Cooperation and Development (OECD) countries.

- South Korea ranked No. 1 among 33 countries surveyed for "Digital Government Index (DGI): 2019," the first-ever report published by the OECD that measures the level of digitalization, efficiency and transparency of public sectors of 29 member countries and 4 non-member countries.
Designing the Next Generation E-Government

Aiming to Intelligent Government


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# Overview of South Korea’s Legal System

## Data Legal System of Korea

### Data

- Act on Promotion of the Provision and Use Public Data
- Act on the Revitalization of Data-Based Administration
- Special Act on Promotion of Information and Communications Technology, Vitalization of Convergence Thereof, ETC.
- Act on the Development of Cloud Computing and Protection of its Users
- Electronic Government Act
- Act on Promotion of Information and Communications Network Utilization and Information Protection
- Personal Information Protection Act
- Credit Information use and Protection Act
- Act on the Consumer Protection in Electronic Commerce, ETC.

### Protection

### Utilization

### Existing Law

- Credit Information use and Protection Act
- Personal Information Protection Act
- Electronic Government Act
- Framework Act on National Informatization
- Act on Promotion of the Provision and Use of Public Data(2013)
- Framework Act on Intelligent Informatization(2019)
- Communication Network Utilization and Information Protection considering the GDPR and balanced using of data(2020)
- Act on the Revitalization of Data-Based Administration(2020)
- Enacting and Reviewing the Framework Act on the Promotion of Data Production, Transaction and Utilization(2021) ⋮

### New Law
The Act on the Activation of Data-based Administration (2020) of Korea

Purpose: Strengthen the responsibility, responsiveness, and reliability of public institutions through objective and scientific administration by regulating matters necessary for the promotion of data-based administration to improve the quality of life of the people.

Governance
- Committee on the Data-based Administration Activation
- Master plan and action plan on the data-based administration

Process
- Registration of data
- Collect and Use of registered data
- Request for providing data
- Decision on the request for providing data
- Coordination of denial for providing data
- Request for providing civil data
- Management of the received data

Infra
- Data management system
- Standardization of data-based administration
- Data Integrating Management Platform
- Chief Data-based Administration Officer
- Data Analyzing Center
- Assessment
- Sharing best practices
- Training professionals
- International cooperation
## Data-related policies of local governments

### Status of municipal ordinances by local government

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III. Issues and Considerations in the Utilization of Data by Local Governments
Considerations for local government data utilization

How to make sustainable and innovative digital government?

Establish a Legal & Policy Foundation

- Get Organizations and Budget
- Establish the mid-to-long term strategies for data utilization
- Establish a technical infrastructure, such as building a data platform

Establish a Framework for Data Utilization

- Structuralize the selection of areas that require data utilization
- Prepare procedures for data utilization, such as methods and subjects etc.

Technical Support & Secured the Availability

- Find a way to get the data
- Securing quantitative and qualitative levels of data
- Training and hiring big data experts or Establish a specialized data analysis institution
Considerations for local government data utilization

How to make sustainable and innovative digital government?

Cooperation with Various Organization

- Maximize utilization through collaboration with diverse organizations with data (Public Organizations, Enterprises, Research Institutes, Universities, etc.)
- Establish a governance for Cooperation

Establish a Data Management System

- Establish an Information protection system
- Set-up the Data management system (manager, managing methods etc.)
- Evaluate the data utilization and analysis results

Secure the Reliability from Citizens

- Encourage the citizens participation
- Secure the personal information rights and Prepared the measures to minimize infringement
- Control the data abuse and misuse
Thank you
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