

# Bigdata and Open Data Strategy of Korea

2017.11.29

# 1. BigData Strategy and Examples of Korea

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# 1. Implementation Progress of Public Big Data Projects



**Build the bigdata data platform and start pilot projects**

Analyze Online Price Index using open big data in Statistics Korea

**Expand pilot projects**

Operated 5 pilot projects including forest fire forecast by Korea Forest Service

Performed 6 occasional subject of analysis including effective operation method for city bus in Gwangju city

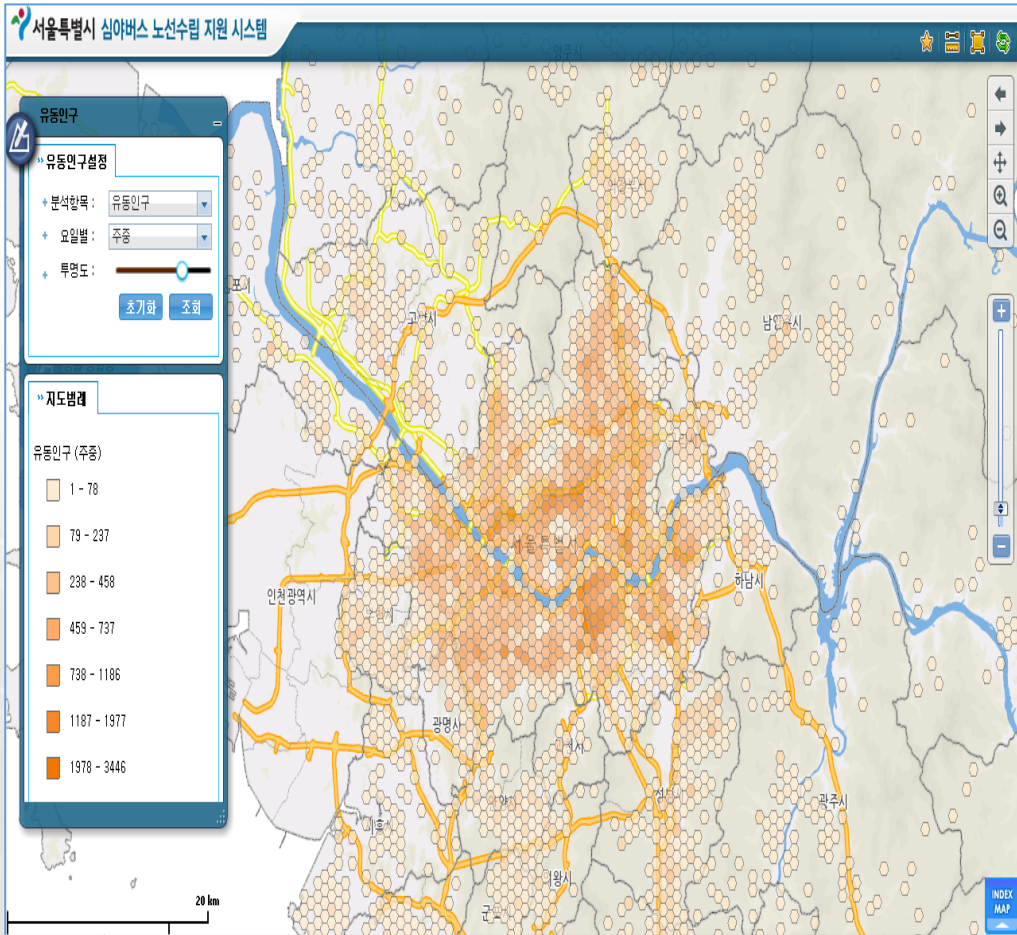
**Implementation of more Projects**

Improvement of fiscal transparency on the apartment maintenance fee

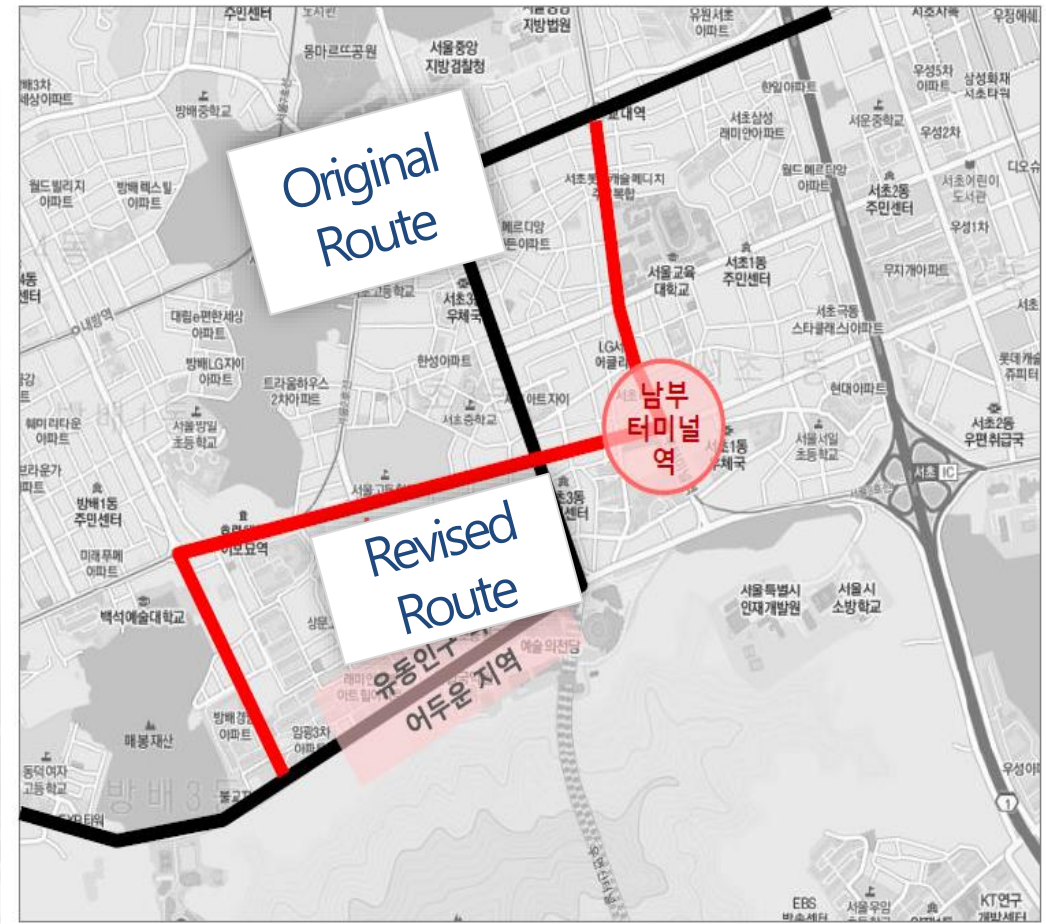
Recognition of local government's discord issues

# 2. Night Bus route

Analysis of population density using night telecommunication Data



Changing bus routes to area where there is a large floating population



# 3. Selection of the location of CCTV

## Outline

### Purpose

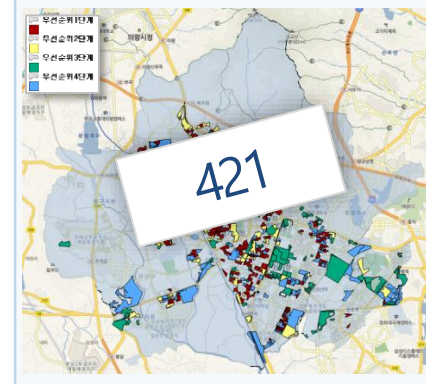
- Established of CCTV installation plan reflecting weak areas to security

### Data

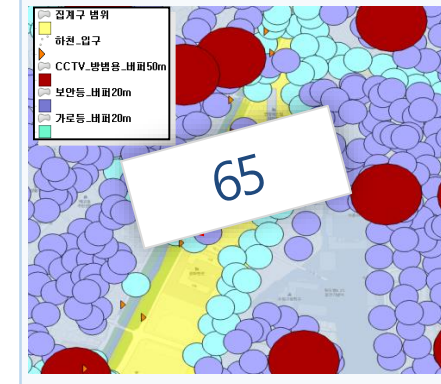
- Number of CCTV : 1,292
- Number of Security Light : 12,517
- Number of Street Light : 17,731
- Number of district : 1,880

## Result

### Housing Area



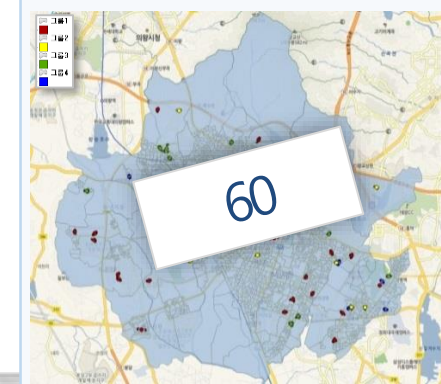
### Stream



### Walk Way

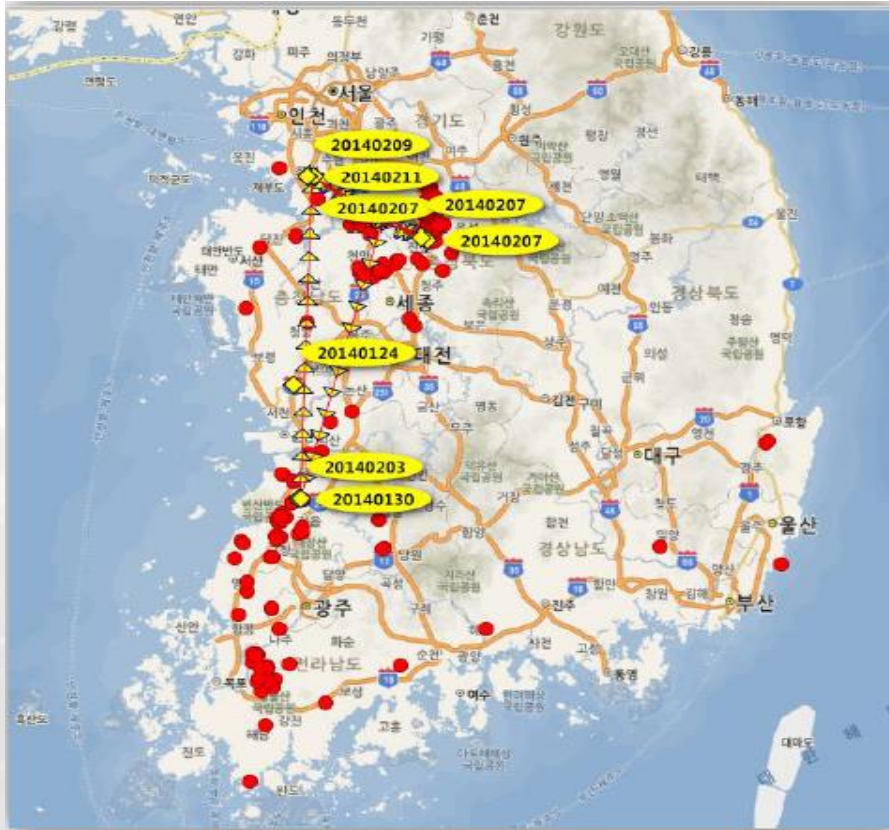


### School Zone

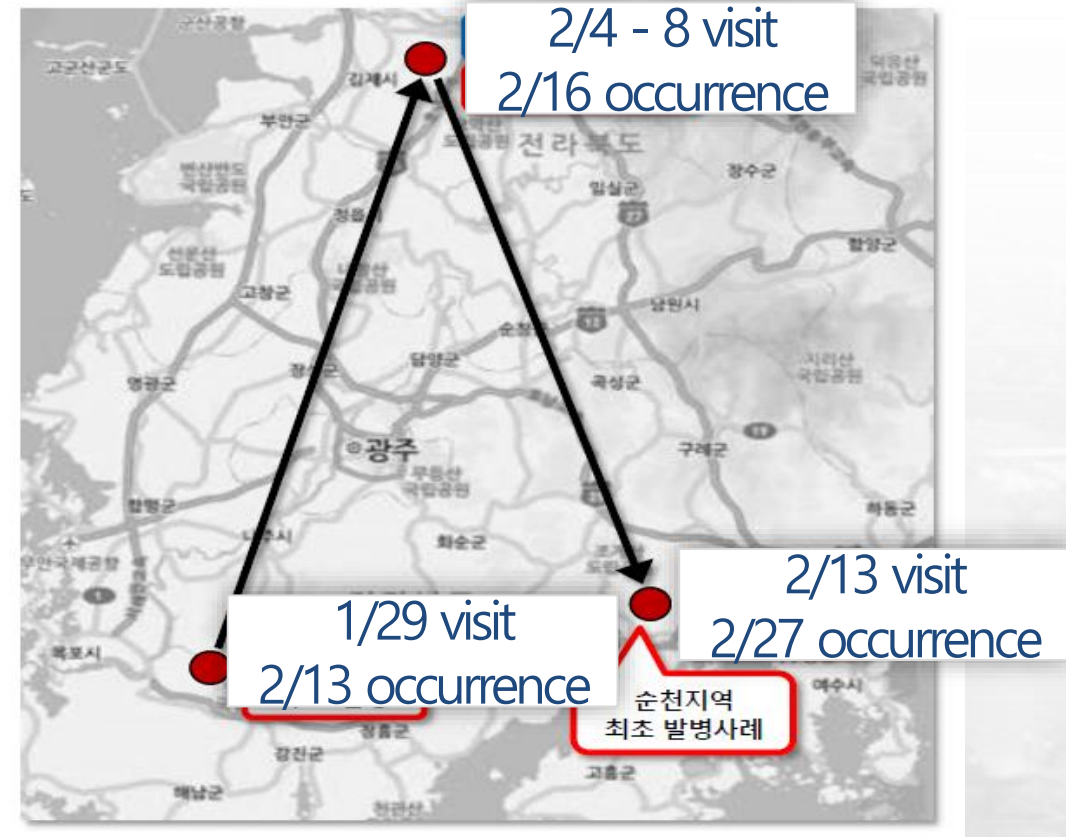


# 4. Prevention of spread of Infectious disease in domestic animals

Spread pattern analysis by using Vehicle for domestic animals ➔ Near Expressway



Correlation between Vehicle route and disease occurrence (2weeks time difference)



# 5. Other cases



Analysis of index for corruption in bidding process and maintenance fee on 160 apartment complexes in Anyang as a demonstration.

**Eradication of corruption in apartment maintenance fee →  
10% reduction in maintenance fee → Cost reduction of 1.1 trillion KRW**



Thorough control and issue monitoring based on analysis of major press and SNS data → Apply in prevention of local government's discord expansion

**10% Reduction in social conflicts →  
Reduction in conflict duration by 67 days per conflict → Reduction in social cost**



Select and prioritize ranking of workplaces vulnerable to labor supervision and industrial safety, having social issues → Improve administration/provision task efficiency

**Reduction in overdue wage → 1,461 hundred million KRW Reduction for 3 years  
Prevent violation cases → Reduction in dispute cost and protection of labors' rights**

# 6.Challenges & Future Plans

## Challenges

- Public Officers are not familiar with Big Data



- Big Data plan for each ministries
- Funding for promising project

- Hard to find data scientist



- Making Division for Analyzing data

- Hard to share data between ministries and private sector

- Data private data issues

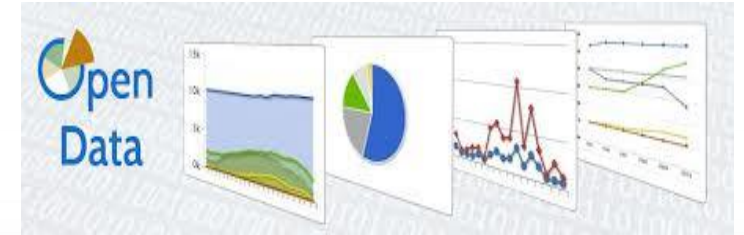
## Future Plans

- Act for promotion of data-based administration
- Establishment of public BigData center

## 2. Open Data Strategy and Examples of Korea

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# 1. Open Data Law



## Open Data Law (2013) VS Information Disclosure Law (1996)

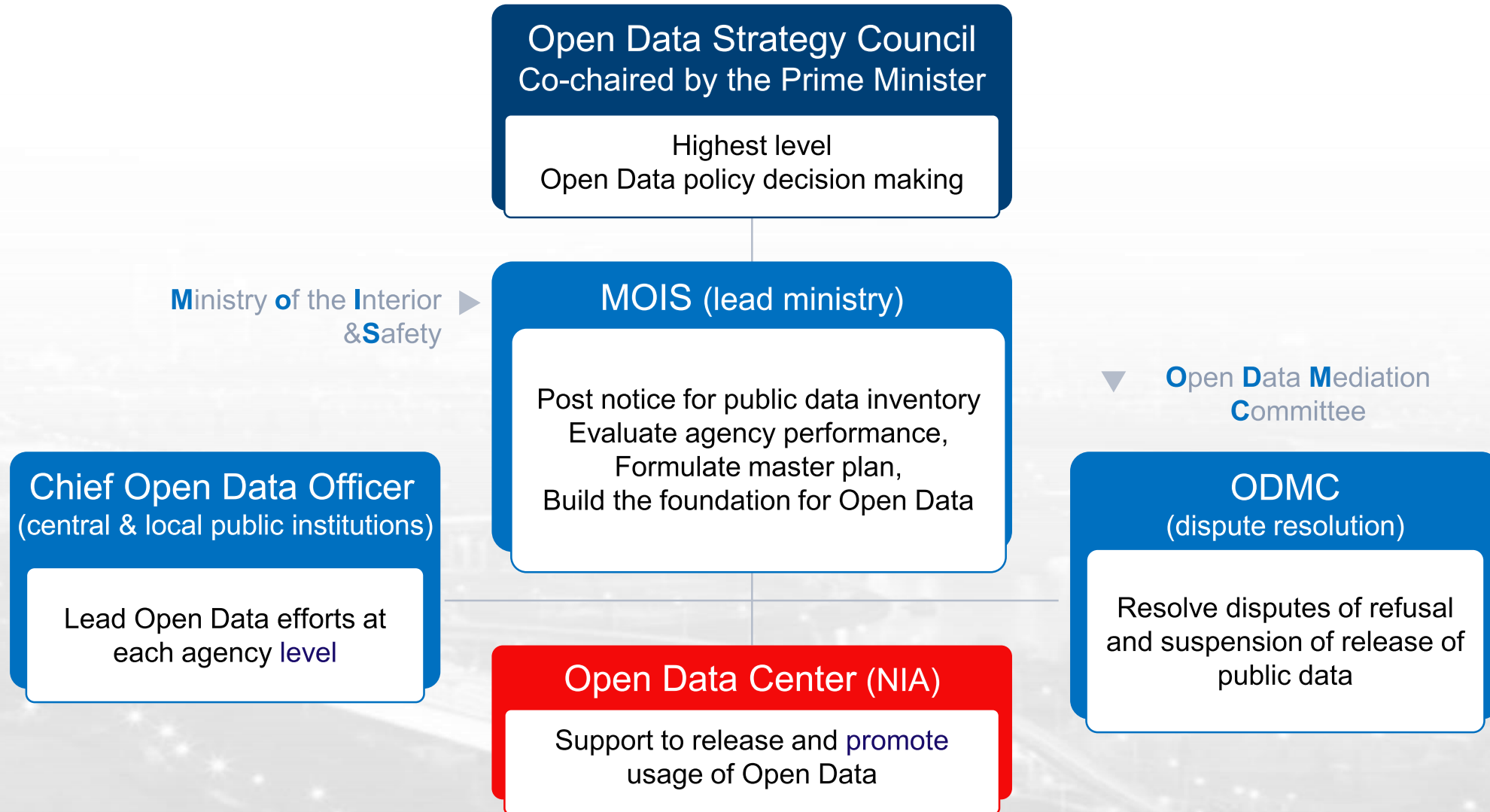
- <http://www.law.go.kr>
- ACT ON PROMOTION OF THE PROVISION AND USE OF PUBLIC DATA(Open Data Law)
  - Basic Principles : open by default & Right to use commercially
  - Scope(Organization) : Central & Local govt, public sector organization
  - Scope(data) : all data except sensitive data : Personal Info, etc

# 2. Open Data Portal

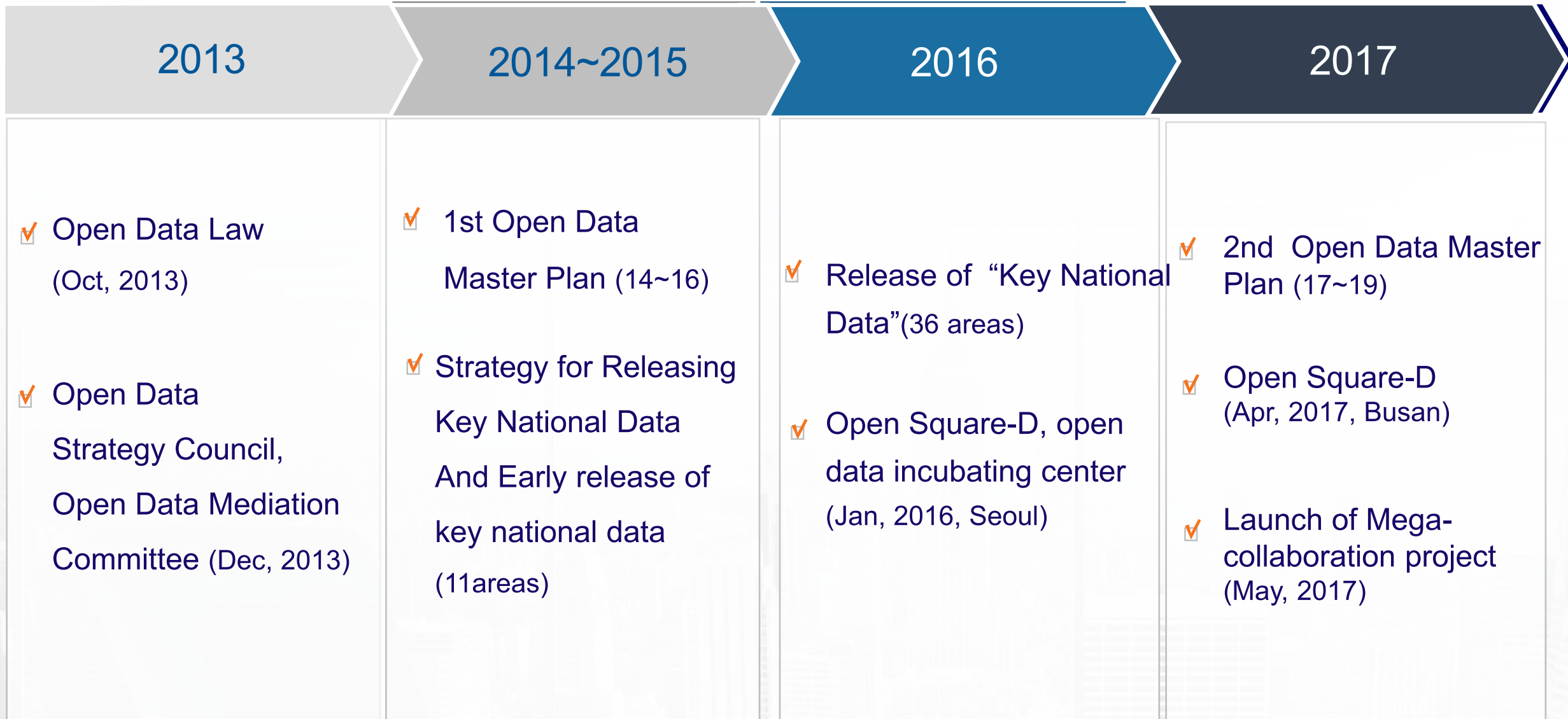
• <http://www.data.go.kr>

The screenshot shows the Open Data Portal homepage. At the top, there is a navigation bar with the logo "DATA Open Data Portal .GO.KR" and a "Sitemap KOREAN" link. Below the navigation bar, there are five tabs: "Data Set", "Application", "Use Cases", "Sharing Info", and "Information Use". A search bar is present with the text "Search the data!" and a magnifying glass icon. To the right of the search bar, there is a dropdown menu showing "2.Earthquake shelter". Below the search bar, there is a button labeled "Data list" with a hand cursor icon. The main content area is divided into two sections: "National Core Open Data" and "Data category". The "Data category" section features a grid of 16 icons representing various categories: Education, Land, Administration, Finance, Industry & Employment, Welfare, Food & Health, Culture & Tour, Medicine, Safety, Transportation, Environment & Weather, Science & Research, Agriculture, Diplomacy, and Law. Below the "Data category" section, there are three promotional banners. The first banner is orange and titled "데이터1번가" (Data 1st Street), with the text "여러분이 필요로 하는 공공데이터를 자유롭게 신청할 수 있는 데이터소통창구" and buttons for "Apply" and "Learn more". The second banner is white and titled "오픈데이터 포럼" (Open Data Forum), with the text "민·관 협력을 통한 공공데이터 개방 정책 수립 및 공공데이터 활용성 증진을 위해 운영되는 단체" and an image of hands holding a tablet. The third banner is blue and titled "공공기관 중복·유사 서비스 신고" (Report Duplicate/Similar Services of Public Institutions), with the text "민간에서 개발한 공공데이터 활용 서비스가 공공기관에서 제공되거나 개발예정인 서비스와 기능이 중복되거나 유사한 경우, 이를 알려달라" and a button for "바로가기" (Go). Below the banners, there are two sections: "Use Cases" and "Popular Data". The "Use Cases" section features a video thumbnail for "올쏘 Allso" (Olso Allso) with the text "올쏘 Allso" and "Allso utilizes public data from the Korea Food an...". The "Popular Data" section has a toggle for "File Data" and "Open API", and lists several data items: "The Cholla province Haenam county library pres...", "The materials of one's possession/reading list", "The agrifood encyclopedia", "Traffic accident information", and "Tsunami Emergency Shelter Status".

# 3. Organization Framework



# 4. Overview of Open Data History of Korea



# 5. Key National Data and Data Standardization

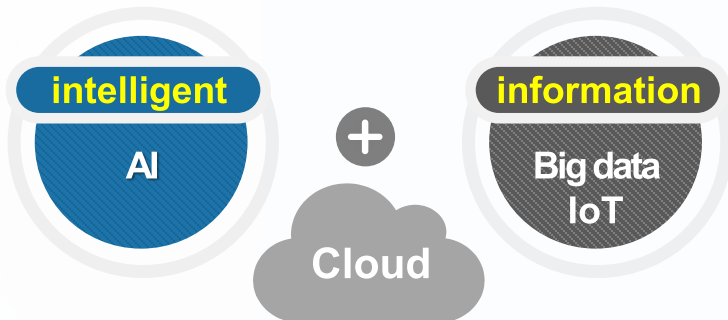
- Releasing intelligent, converged, or social problem-solving types of 'Key National Data'
- Data Standardization in order to improve utilization of open data



4<sup>th</sup> Industrial Revolution  
Early 21C~



Intelligent ICT



## Data Standardization

'15. 43 datasets

'16. 79 datasets

'17. 100 datasets

# 6. 2<sup>nd</sup> Open Data Master Plan ('17-'19)

Vision **Digital society where citizens and businesses prosper with data**

Goal

- 1 Create new added value through expansion of data-focused industrial ecosystem
- 2 Make citizens better off through increased use of data in everyday life

Strategy

Support release of quality data and growth of industrial ecosystem

Expand citizen engagement and facilitate open data use in daily life

Achieve a data-driven platform government and public-private governance framework



Task

Meet the demand of **businesses and new industries**

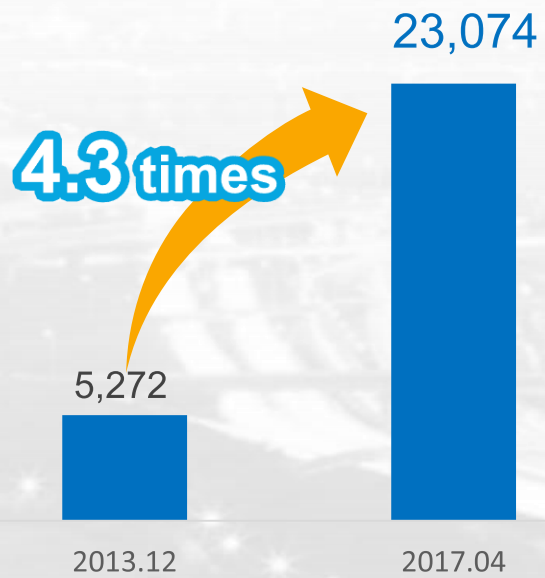
Make easy access of **citizens**

Establish a data-driven **government**

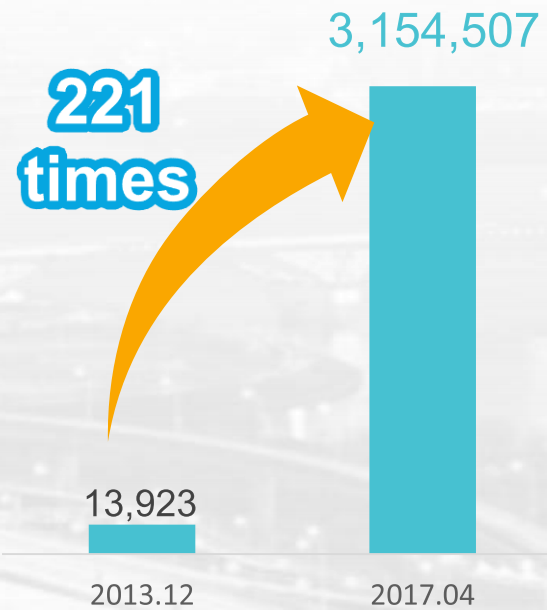
# 7. Use of Open Data



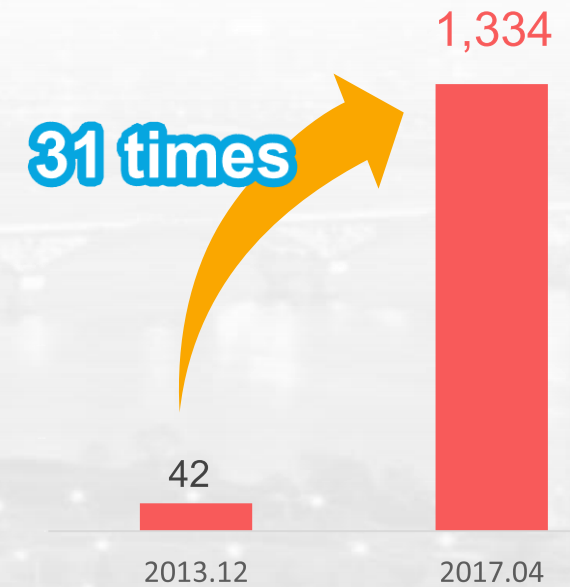
No. of Datasets Released



No. of Data Downloads



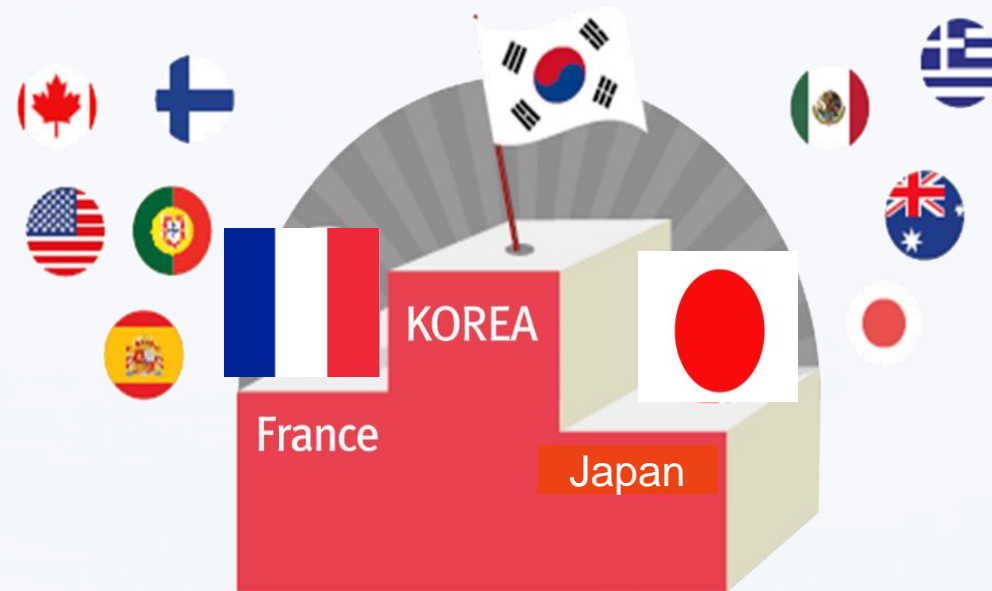
No. of Web/App Service Developed



# 8. World Class Open Data

## OECD OUR data Index : 1<sup>st</sup>(2015, 2017)

1<sup>st</sup> place for 2 times in a row in '15 and '17



# 9. Example : KimgisaNavi & GOODAC



## KimgisaNavi

### data sources

Road signs, Gas prices, Highway traffic data

- ✓ Effective navigation service with release of road signs data through mediation of ODMC(mediation committee)
- ✓ Acquired by Kakao for \$62m. (2015.5)
- ✓ Currently Kakao transport platform service (KakaoNavi)

Monthly users

3.4m

downloads

10m

## GOODOC

### data sources

Hospital/pharmacy location, Hospital designation, Emergency hospital data

- ✓ Started service in 2012, but impossible for such a small startup to gather massive amount of health data **FAIL**
- ✓ After enforcement of the Open Data Law, service resumed based on health-related open data
- ✓ Successful business - **entered Japanese market**

staff

2→50

revenue

\$3.8m  
( '15)

Monthly users

1m

downloads

3m

# 9. Example : Parking Lot Share

## Parking lot Share

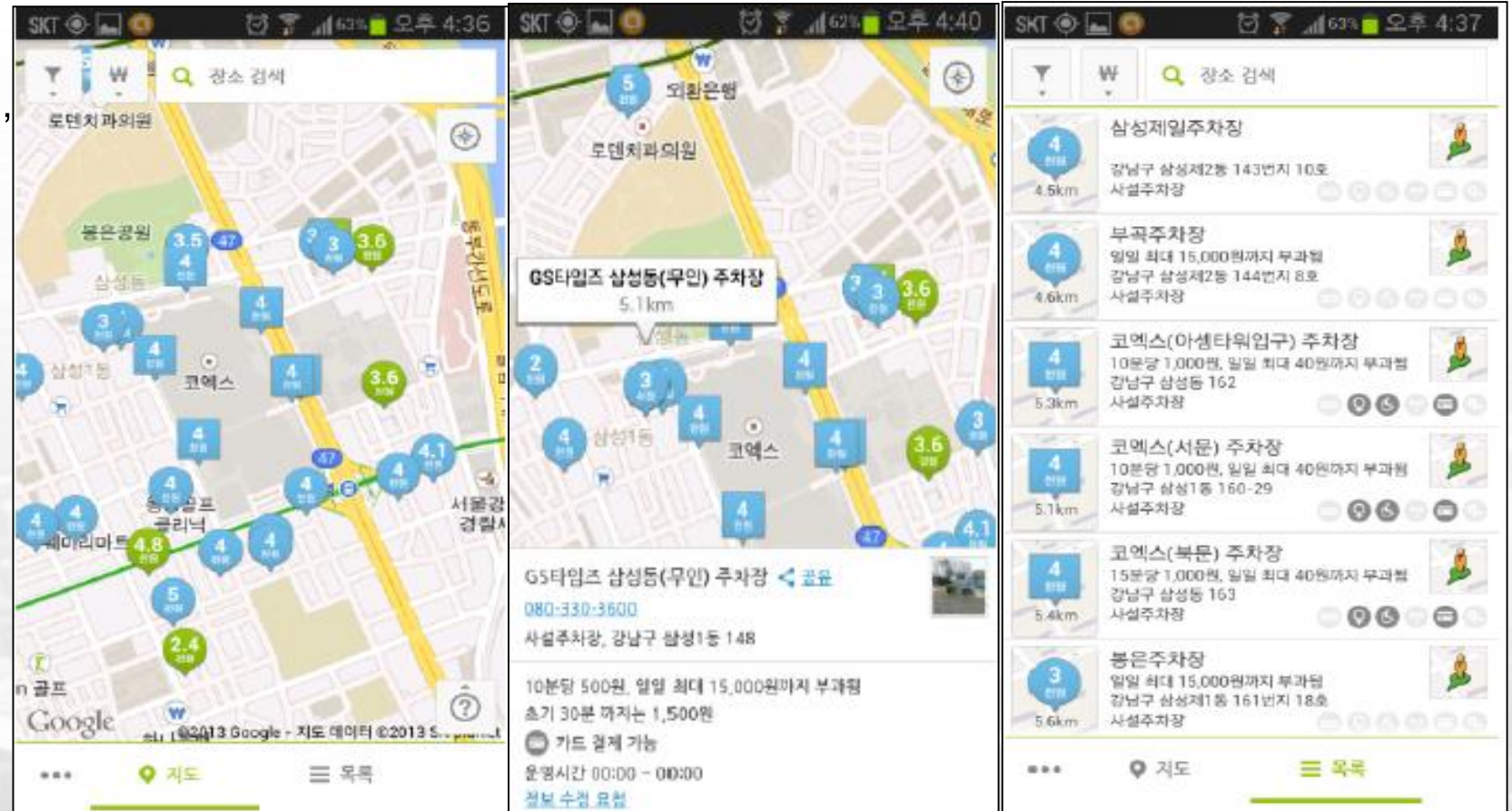
### data sources

Location & Price of parking lot, CCTV location

- ✓ 90% is parking lot in the building, Only 10% is public parking lot
- ✓ Private Parking lot share
- ✓ Mobile payment

downloads

0.5m



# 10.Challenges at First Stage

- Public Officer do not want to open data
  - Data is not refined well
  - No data
  - Responsibility regarding incorrect data
- Open data may not be used by private sector

# 11.Success factor

- Making “Public data policy division” at MOIS
- Open data Law was enacted
- Designating the person in charge
  - All ministries
  - Public agencies
- Assessment by MOIS
  - Including Government Performance Evaluation  
by Office for Government Policy Coordination under Prime Minister



**¡Gracias!**

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