

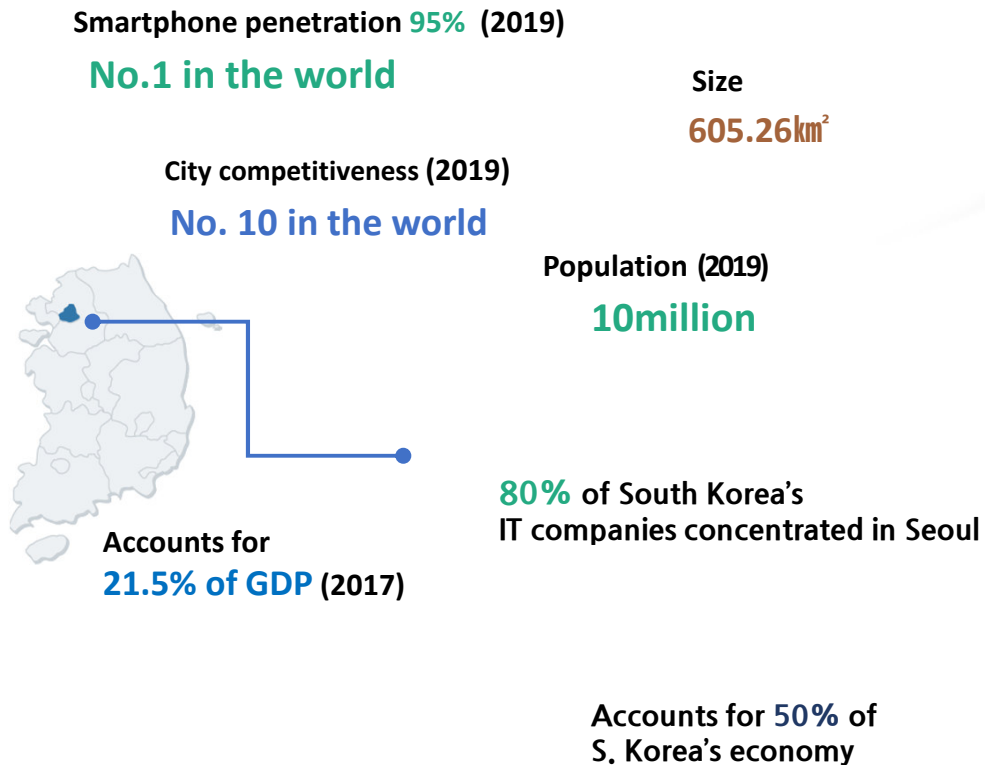
This is not an ADB material. The views expressed in this document are the views of the author/s and/or their organizations and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy and/or completeness of the material's contents, and accepts no responsibility for any direct or indirect consequence of their use or reliance, whether wholly or partially. Please feel free to contact the authors directly should you have queries.

Seoul e-Government Road Map and Projects

Creating the future of Seoul with its citizens and businesses based on data

Smart City Policy Division
Director Kyeonghee KO

Status of Seoul



The World's No. 1 E-Government (2003-2017)

Smart Infrastructure

Entire city connected with
high-speed network and Wi-Fi

- High speed network: **421Km**
- Public Wi-Fi : **3,958 places (11,666 AP)**
- CCTV : **80,503**

Active participation in resolving urban issues

- Average 22,000 public opinions
received per day
- 8 million public inputs datafied annually

Smart Citizen

Smart Service

Expansion of high-technology
based service

- 518 kinds of administrative
information service
- 3PB (PetaByte) Public data

Organizational Chart

2
5
districts

Entire city staffs

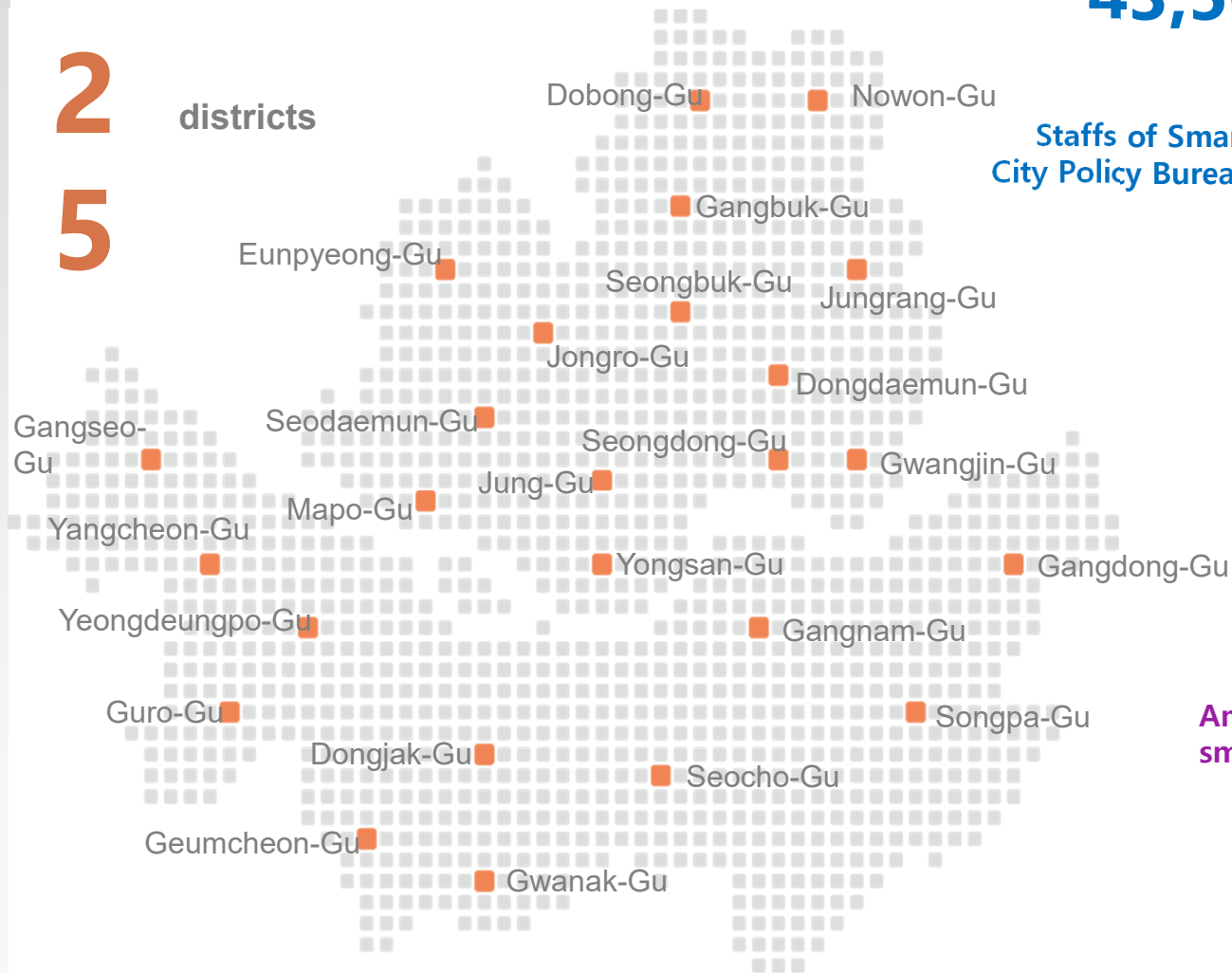
43,500

City hall: 10,200 staff &
District offices: 33,300 staff

Staffs of Smart
City Policy Bureau

200 staffs

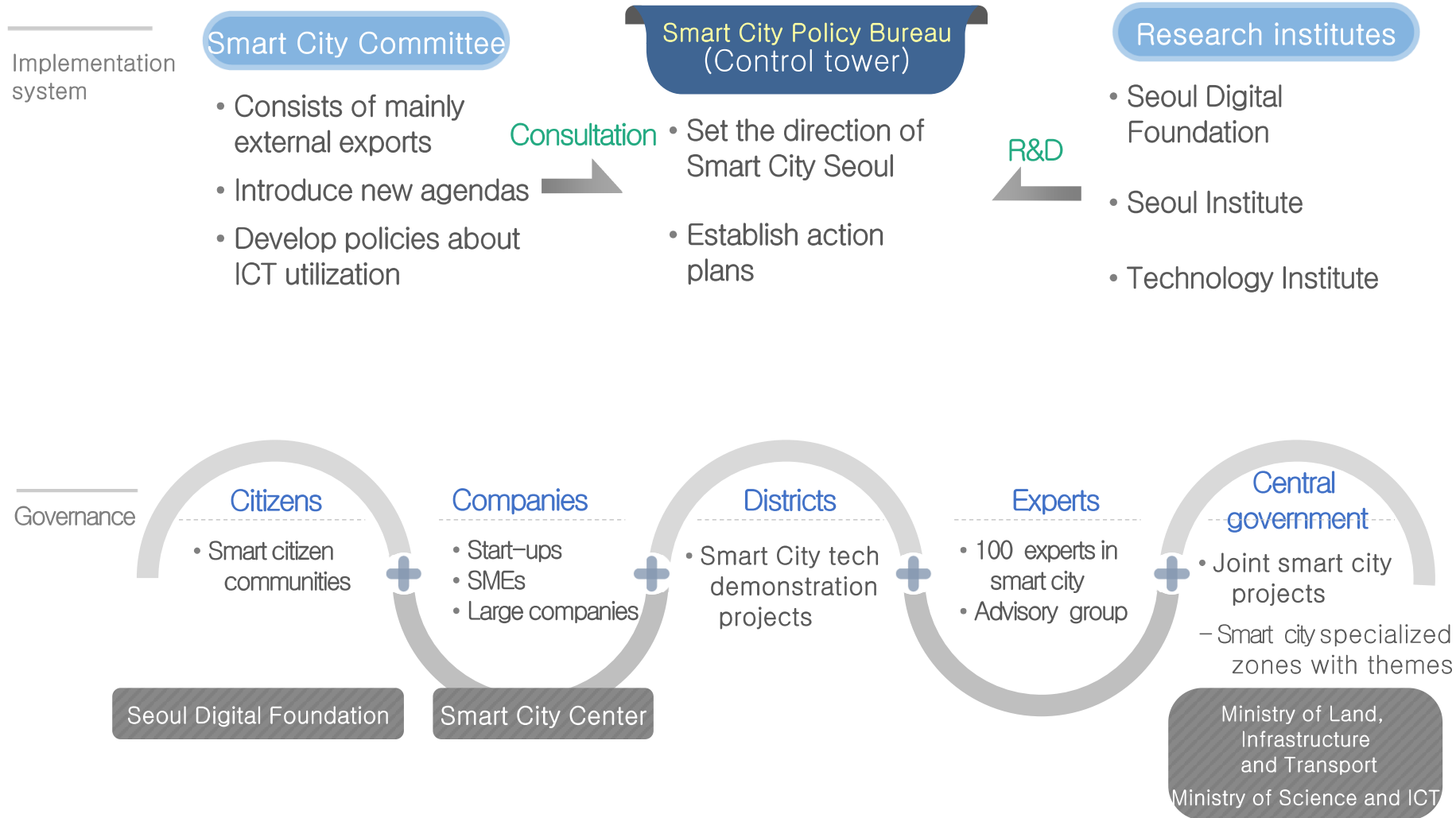
(The total city staffs related with
ICT from each department is 500)



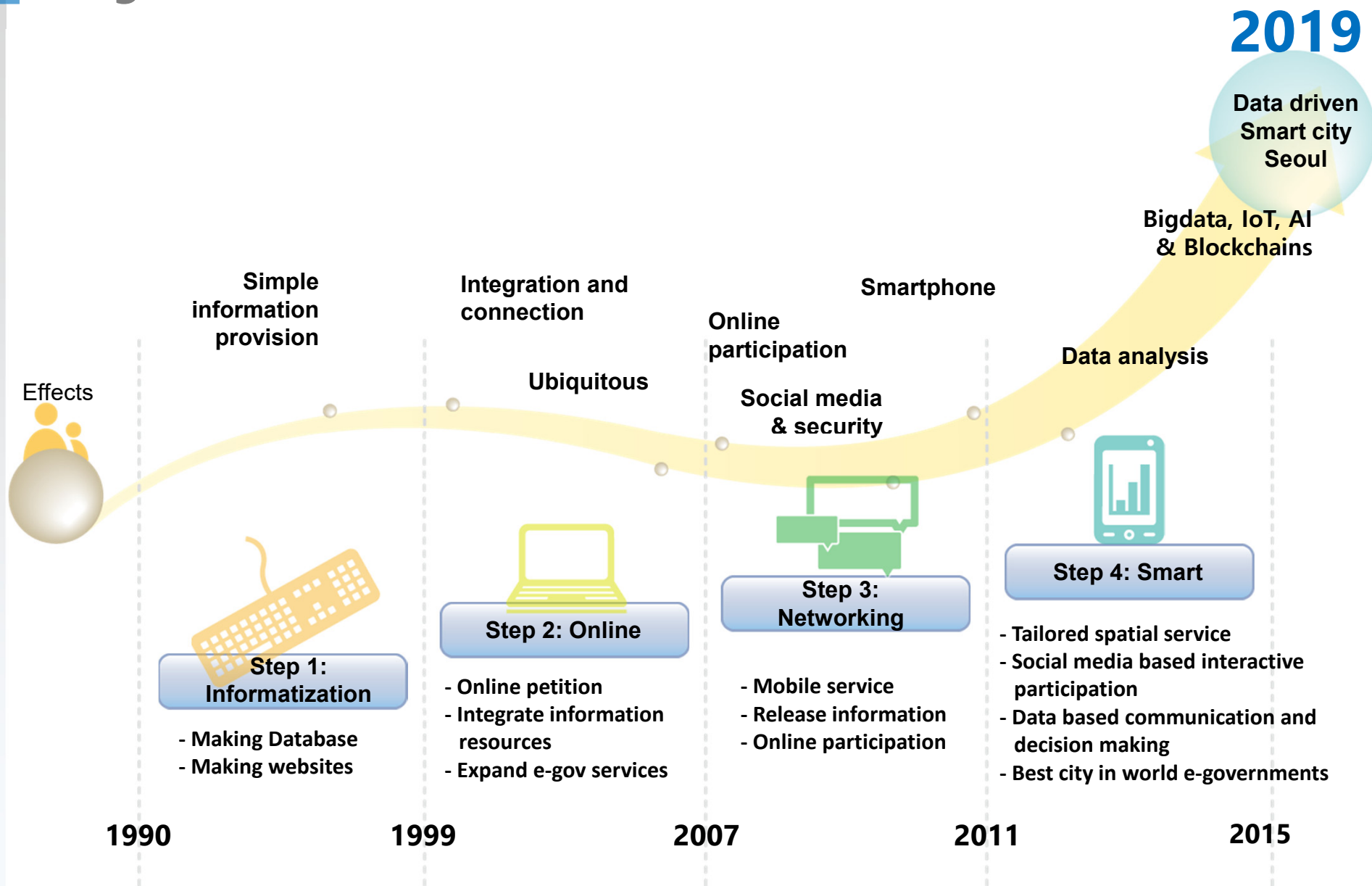
Annual city
budget **27.5** Billion USD

Annual budget of
smart city bureau **121** Million USD

Governance System of Smart Seoul



Progress of Seoul eGovernment



u-Seoul Net is a comprehensive service network

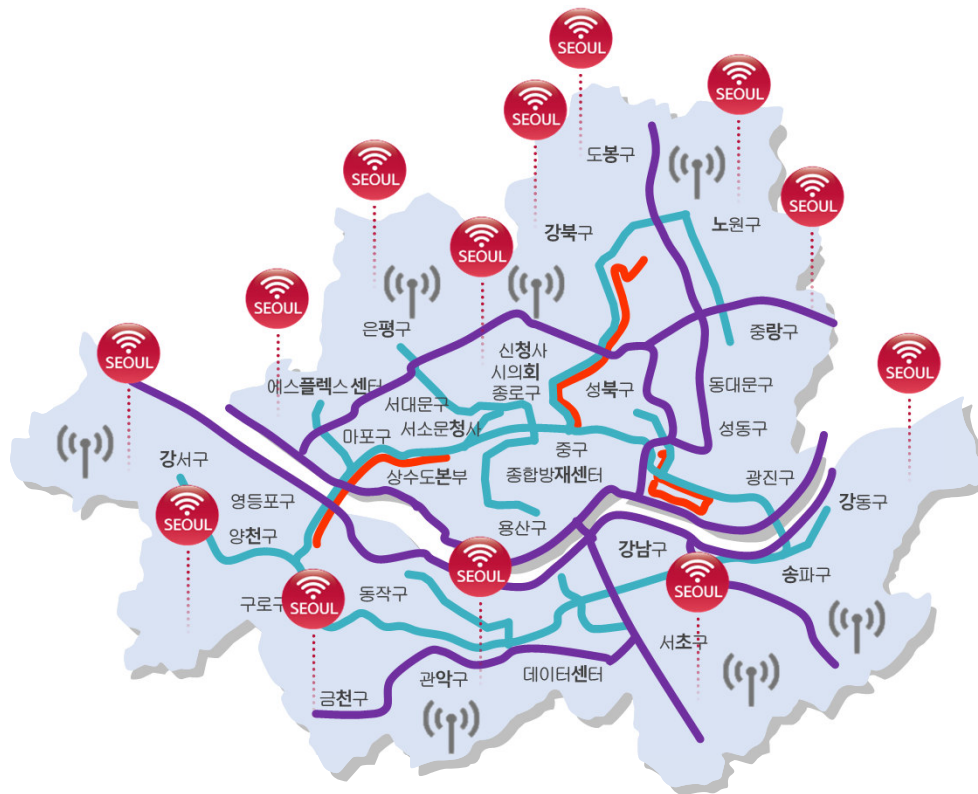
[illegible]

- 1 stage Integrate and connect the existing municipal broadband networks (2,883 km)
 - 2 stage Establish new networks (1,354 kilometers)



The World Class ICT Infrastructure- Public WIFI

Free public **WIFI** 3,958 Areas (as of 2019) 11,666 Access points (As of 2019)



Public WiFi will be available
at anytime from anywhere in Seoul

- Finish Installing 23,750 APs by 2022, covering 100% of the city's citizen life zones



Tourist places, parks, open markets, public transportation, etc

Ensuring citizens' right to access to information



Every Seoul city officials can access to administrative information and documents and share them with their colleagues

I·SEOUL·U

서울특별시 행정포털

통합검색



업무공지

정보공유

시정뉴스

커뮤니티

원순씨의생각



봄 하면 떠오르는 것

봄이 오면 시골에서 자라던 때가 생각납니다. 겨우내 아무 것도 없던 산과 들에서 전쟁하듯 생명이 일어나는 것

2019-03-18

이벤트/퀴즈/설문

서울의 공공시설 회원증을 하나로!
서울시민카드
개편 이벤트 (~10.
회원 500명 추첨 영화관람권

사업무공지

부서업무공지

노조

시구업무공지

후생복지

- [일회용품 없는 회의 다과 주문] 행복한베이커리&카페 찾아가는 케이터링(10명~350명 가능)
- ★☆제2차 서울시도시건축정책포럼(2019.10.30. 수)이 개최됩니다.☆☆
- [긴급] 송장 공유(삼덕회계법인 사칭) 등 해킹 메일 주의!!!

해야할일

재실



복무결재



메모보고



공람대기



결재대기



발송대기



받은편지



e-호조



민원



시장요청사항



민원기한료

관심 시스템

복무관리

학습관리

법무행정

회의실예약

정보공개

e-인사마당

인재개발원

재정통합

비상대비

법률자문

전화번호부

근무평가

홈페이지등록

지식공유

시유재산

후생복지포털

PC정비센터

문자전송

우편물관리

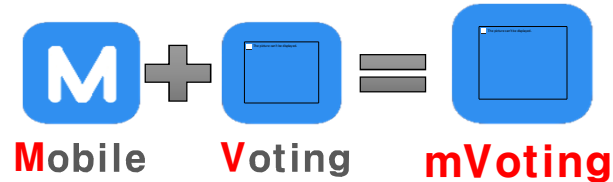
소방행정정보

- When logging in to the portal, city official check tailored information and tasks that are assigned for their roles and positions
- Search function for every administrative systems and city homepages
- Real time communication among city officials through email, messaging service, bulletin board, etc
- Receiving and approving document, writing memo, checking and answering to public requests

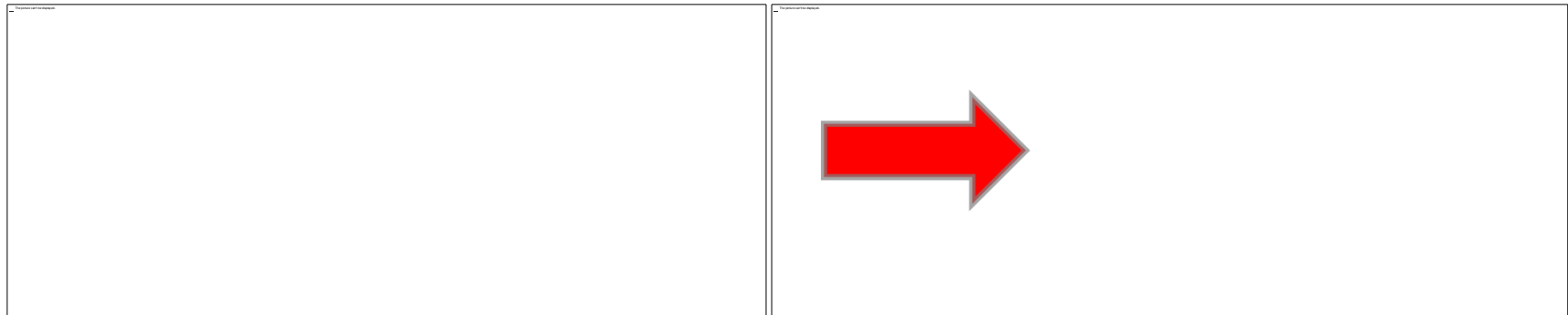


Creating a Smart City with Citizens, mVoting

mVoting



- Mobile voting to quickly and easily gather citizens' opinions and reflect them on policies
- Democratic decision-making which allows citizens to freely vote and participate

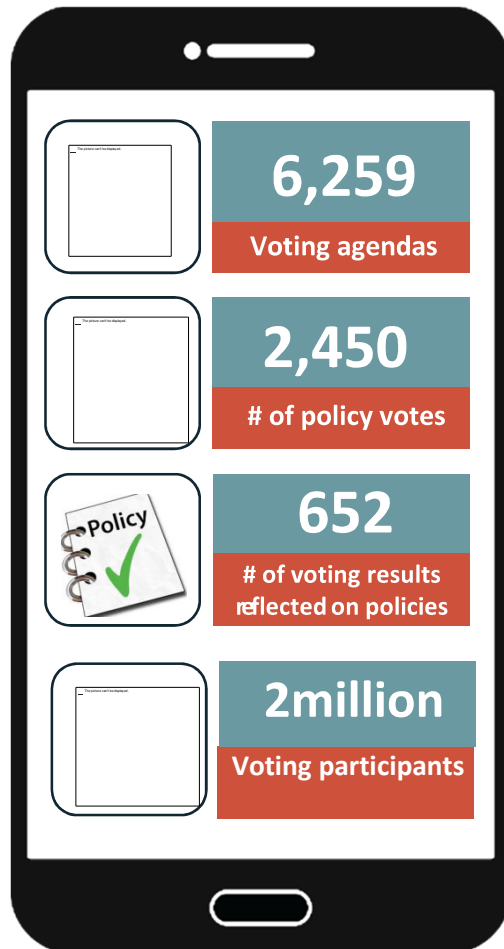


- ✓ 95% of Koreans have smartphones (Pew Research Center, US poll agency)
- ✓ Participate in voting with smartphones regardless of time and place
- ✓ An economical and convenient decision-making tool to save time, money, and effort



Creating a Smart City with Citizens, mVoting

Performance of mVoting (as of January 2019)



Policy Vote

- What kind of music would be good for subway transit?
- Choose the name of Mascot for the National Sports Festival in Seoul!
- What public artworks should be displayed at Seoul Plaza?

General (Citizen) Vote

- What's the best sightseeing spot in Seoul?
- What would you do first if you are Mayor of Seoul?



Opening the Era of Civic Participation, mVoting

Selection of Participatory Budget Projects using mVoting

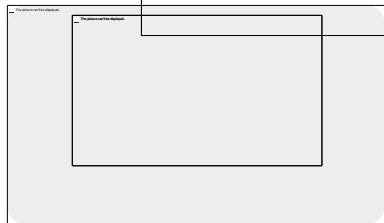
- Citizens select projects that will have a budget of \$70 mil. USD
 - Voting participants: 120,000 people
 - Voting results: Selection of 700 projects (e.g.: installation of intelligent CCTV cameras, expansion of free public WIFI and bike lanes, job training for immigrants, etc)

Operation of mVoting based on blockchain technology

- Provide transparent voting services that citizens can trust and participate in
 - Prevent fabrication of voting results through blockchains
 - Participants can check ballot results and verification process of the voting

Establishing a foundation for direct democracy by expanding the use of mVoting in local communities

- Use mVoting to resolve issues and make decisions in communities
 - Select the representative of apartments or revise rules for apt. management



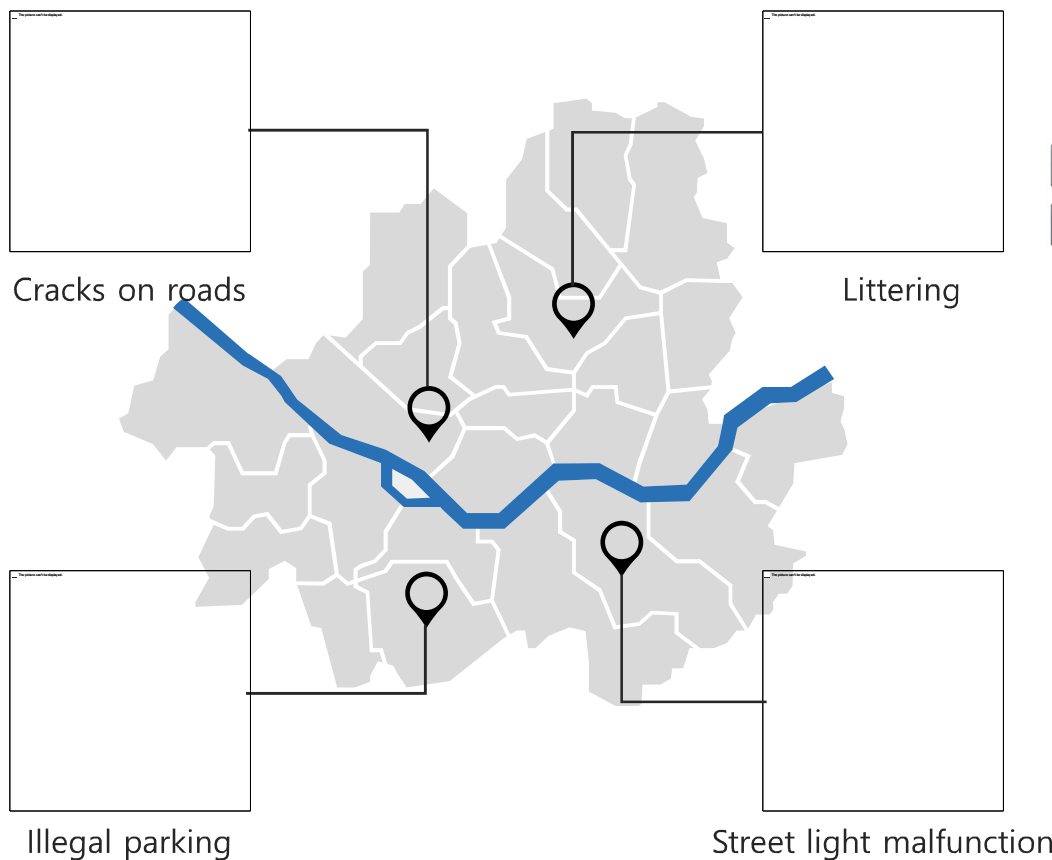


Seoul Smart Complaint Report



A civil complaint managing system that helps citizens to report the inconveniences in their daily lives with smartphone app or homepage

※ Daily complaint report: 1,600



1. **Register Report Location**
Need location information agreement in case of finding the report location
2. **Upload photo/Video**
Three photos or one video file can be uploaded
3. **Write the details**
4. **Send to report**



Sharing of Open Data, Open Data Plaza

Seoul Open Data PLAZA

(<http://data.seoul.go.kr>, may, 2017)

Open **4,700 dataset in 10 areas** such as general administration, culture & tourism, public health, and environment

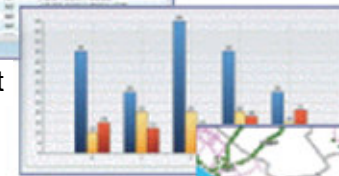
Average 670 thousand use daily

Provide data in various forms such as **open API, LOD, chart, map & file**

The screenshot shows the Seoul Open Data Plaza website. At the top, there's a navigation bar with '서울 열린데이터 광장' (Seoul Open Data Plaza) and 'SEOUL OPEN DATA PLAZA'. Below this, there are tabs for '오픈데이터' (Open Data), '데이터서비스' (Data Service), and '참여 · 소통' (Participation & Communication). The main content area is divided into several sections: '활용 갤러리' (Usage Gallery) with a '시민여러분이 만든 다양한 사례를 공유해주세요' (Please share various cases created by citizens) prompt; a search bar for '열린데이터를 검색하세요'; a grid of icons representing different data categories like '일반행정' (General Administration), '문화관광' (Culture & Tourism), '환경' (Environment), '보건' (Health), '산업경제' (Industry & Economy), '도시관리' (City Management), '복지' (Welfare), '교통' (Transportation), '안전' (Safety), and '교육' (Education); a '인기검색어' (Popular Search Terms) list with items like '음식점', '지하철', '범죄', '유통인구', '병원정보', and '상수도'; and a '시각화 서비스' (Visualization Service) section with four data visualizations: '통근 통학시 교통수단 ...' (Commute/Commute School Transportation ...), '한국사학사 연구 사례 1' (Korean History Research Case 1), '지하철 호선별 이용객 변화' (Subway Line별 Passenger Change), and '서울시 예산 변화 (기...' (Seoul City Budget Change (Y...)).

This is a screenshot of a data spreadsheet showing a table with multiple columns and rows of data, likely representing a dataset from the Seoul Open Data Plaza.

Spreadsheet



Chart



Map

Service forms

Sheet Open API
Chart시각화 Map File
Link LOD



Sharing of Open Data, Open Data Plaza



184 apps
developed by citizens



Roommate
matching app



T Map Seoul public
parking lot
information



Life commodity
index app



Where's City
bikes?



Kakao subway



Seoul public
parking lot
information



Traffic
information CCTV



Seoul public
parking lot

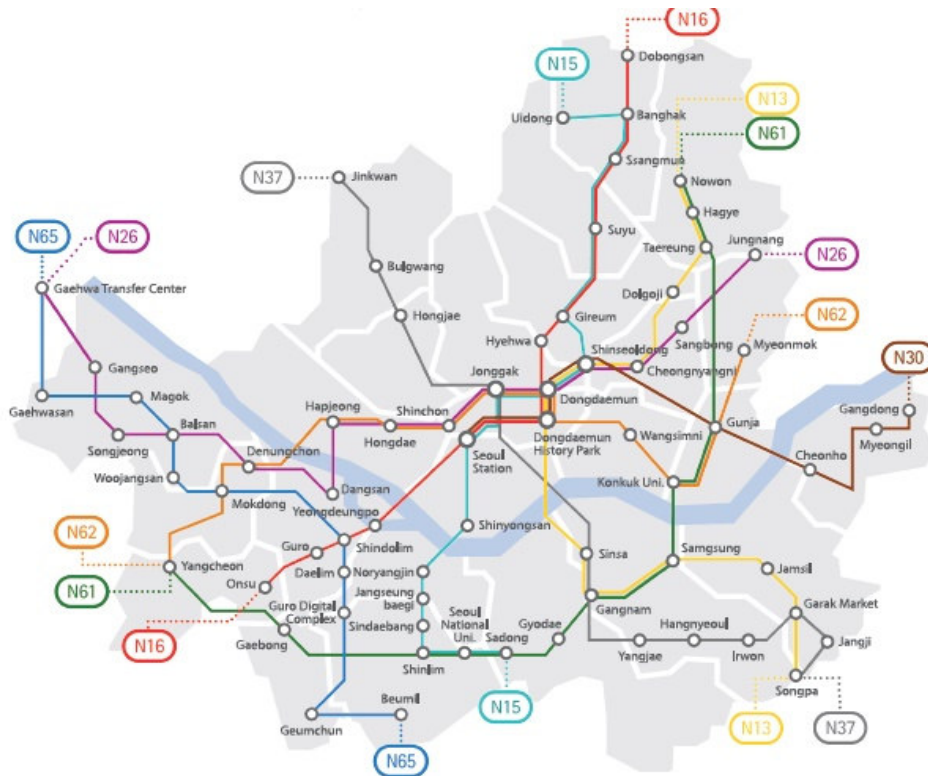


Traffic accident
prediction



Data Analysis and public-private cooperation

Design the best 9 night bus lines



I · SEOUL · U

The launch of Squirrel Bus

Short and customized bus routes during rush hours





The Commercial Area Analysis Service

Big data base for trade



Providing information related to the trade

Start-up risk index
Indices related to industry
Sales trend
Competition Status
Customer / Population Status
Hatch Features

Various information units





Real-time data sharing and analysis, Smart City Platform

Accessing city's real-time data of transportation, disaster, environment at a glance

→ Utilized as resource for policy making

290 systems, 1.6 million data, 1,200 CCTV, 210 visualization



Big data
storage

Virtual
Seoul

IoT
Urban data
Management
system

Citizen
opinions



IoT Based Urban Data Management Systems

City phenomenon data

- light intensity at night
- Temperature (cold wave)
- Fine dust



Citizen behavior data

- Floating population
- # of vehicle movement
- Citizens using public facilities



City Policy & service

- Ensuring the safety of citizens
- Installation of hot wire for icy road
- Fine dust reduction by facility

Installation of 50,000 sensors across the city

14,000 multi-function sensors and 36,000 area sensors

(Constant measurement of city phenomenon such as fine dust, noise, light pollution)

Application of multifunction sensors

- ① Fine dust
- ② Wind direction
- ③ Wind speed
- ④ Temperature
- ⑤ Humidity
- ⑥ Illumination
- ⑦ Noise
- ⑧ Vibration
- ⑨ Floating population
- ⑩ Ultraviolet ray



Acquiring Urban Data using IoT
(Urban&people& movement data)

Storing City Data

Implementation of IoT based urban data management system I

Disclosure of data generated from citizens and companies

Creating industrial ecosystem using urban data

Establishment of IoT Network

Establish exclusive IoT network based on high speed communication network of three telecom companies



Administrative Innovation using Artificial Intelligence

AI based Chatbot



Operation of
AI Chatbot

Trial application of chatbot to
120 call center(2018)



Voice aide

Improve the artificial intelligent chatbot
to voice counseling chatbot



Personal
assistant

AI administrative assistants

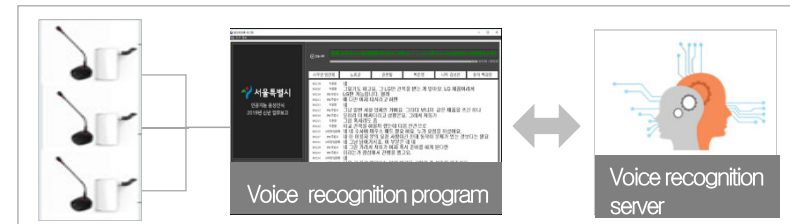
- Help city officials with simple and repetitive tasks (2021~2022)

A strategic plan for Artificial intelligence chatbot (2019~22)

- Expand the service from chatbot(text) to voicebot to AI robot service
- Apply chatbot in 5 areas which have possible effects

Minute taking service based on AI voice recognition

- Application of artificial intelligence technology to simple repetitive tasks
- Real-time conversion of meeting attendee's voice to text



- Improve voice recognition accuracy through machine learning
- Disclosure of AI voice recognition data in the area of public administration
→ Utilization by corporate research institutes
- Expand to artificial intelligence based interpretation (2019 ~ 20)

Future of Smart Seoul

A Smart City should support **the underprivileged group of people** such as the elderly and the handicapped to live in a smart way and realize **balanced regional development**