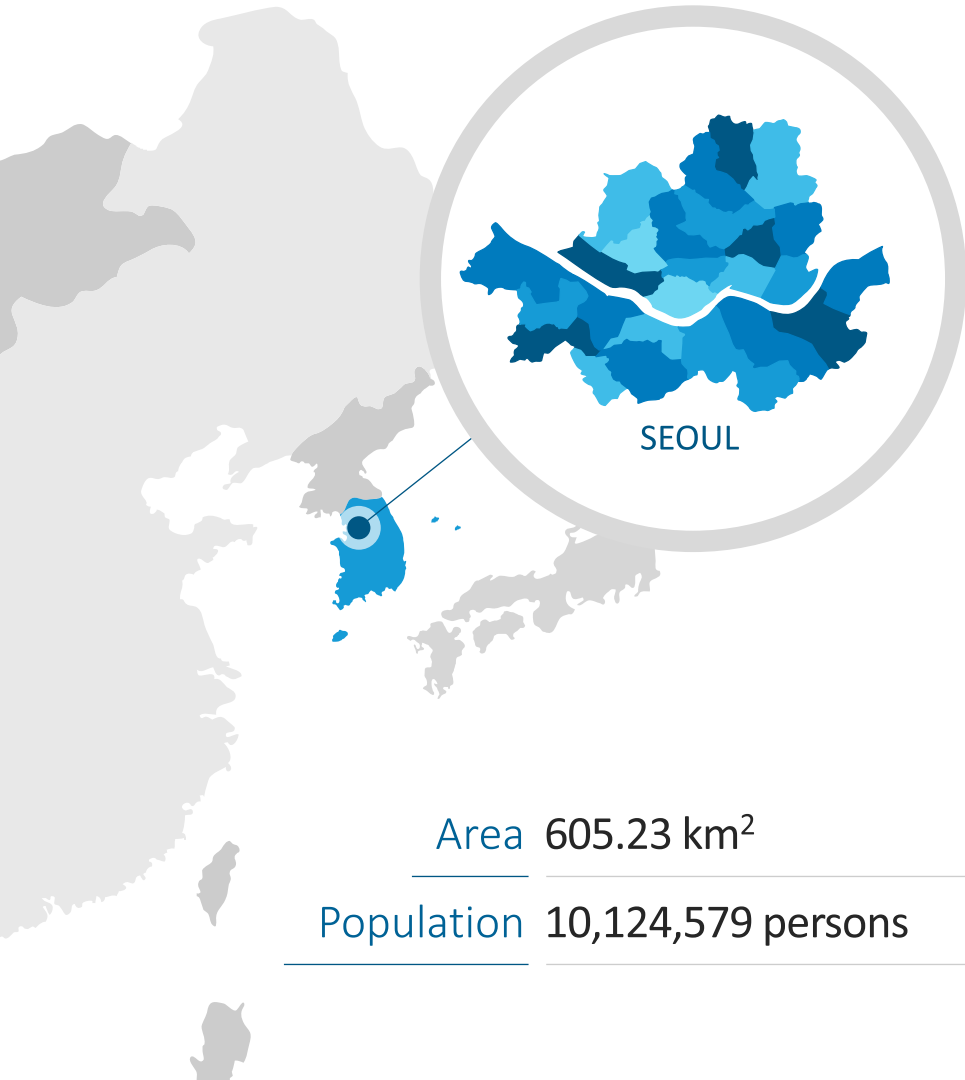SEOUL METROPOLITAN GOVERNMENT

I·SEOUL·U

SMART SAFETY CITY SEOUL

Introduction of Seoul

SEOUL

Area 605.23 km^2

Population 10,124,579 persons

Status on Infrastructures

Road

Length : 8,243km Area : 85.1Km^2

Road Facility

1160 facilities (503 bridges, 44 tunnels)

Subway

10 lines/328 stations 351.5km/7,240,000 passengers per day

Buildings

610,000 units

Seoul's Past and Present

1950-1953

2019
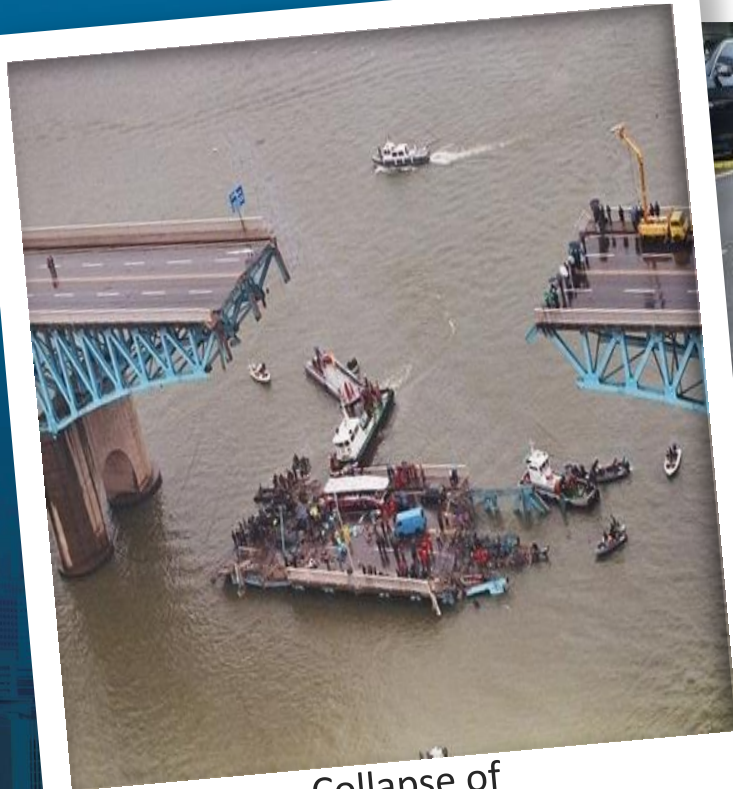
50 years

GNP of 82 USD with the outbreak of
the Korean War

Smart and sustainable city with
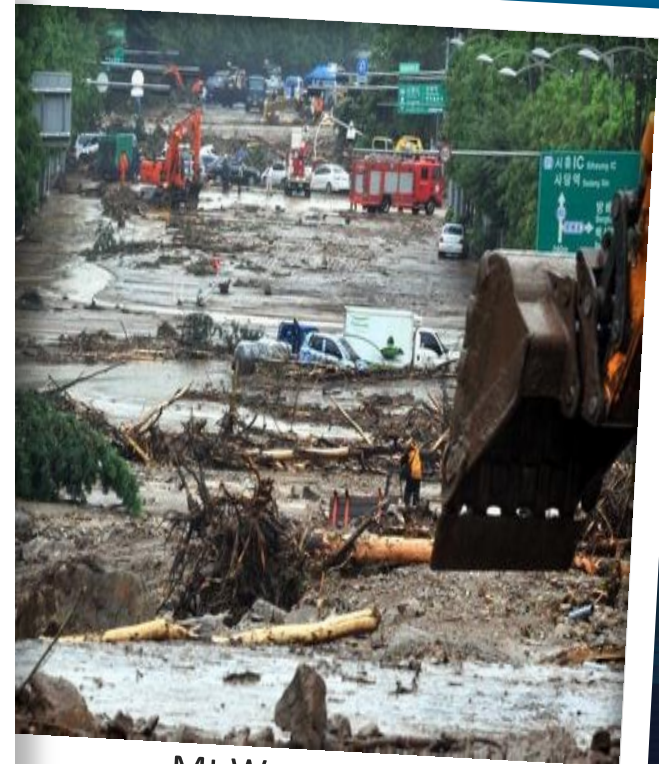a population of 10 million people

Examples of Disaster

Collapse of
Seongsu Bridge (1994.10)

Sinkholes (2010~)

Mt.Woomyeon
Landslide (2011.7)

Smart Safety City Seoul

Take Disaster Prevention Measures Through IoT and Big-data Analysis

Big-data Analysis of
Infrastructures

Smart Infrastructure
Management

Using Smart Technology to
Enhance Safety

Smart Flood
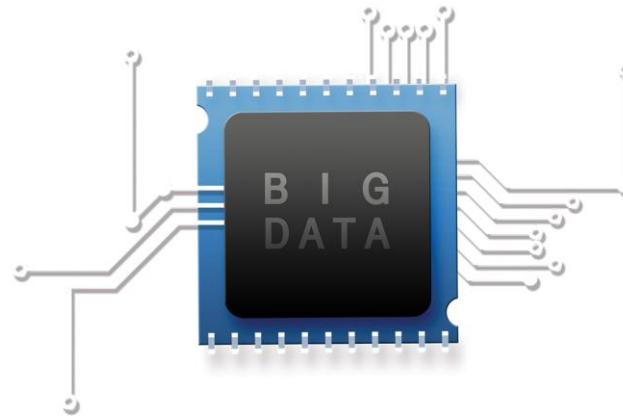Prevention

Big-data Analysis of Aging Infrastructure

Identify Risk Factors & Ensure Resilient and Sustainable Urban Infrastructure

Data Collection

Collect data to analyze functionality, maintenance cost, and remaining life of the facility

Data Analysis

Estimate the best time for construction, renovation, and general maintenance and the costs

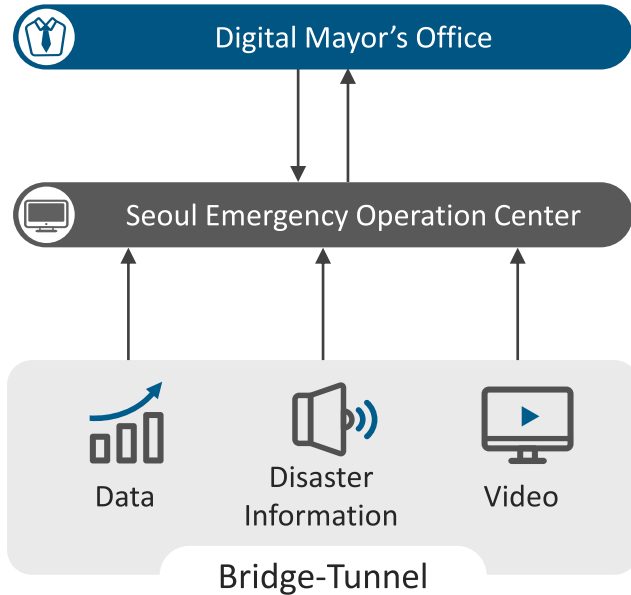## Comprehensive Management

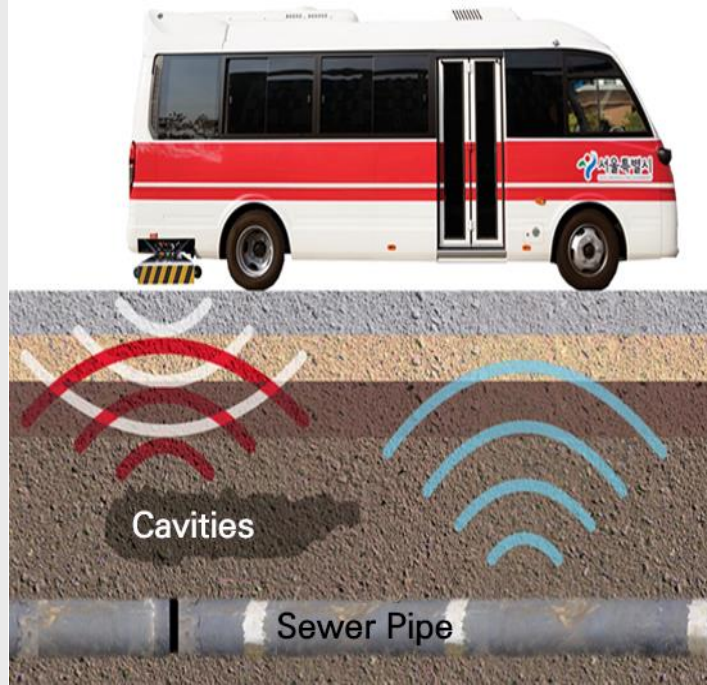Ensure the effective distribution of resources through mid-to-long term management plans

Smart Infrastructure

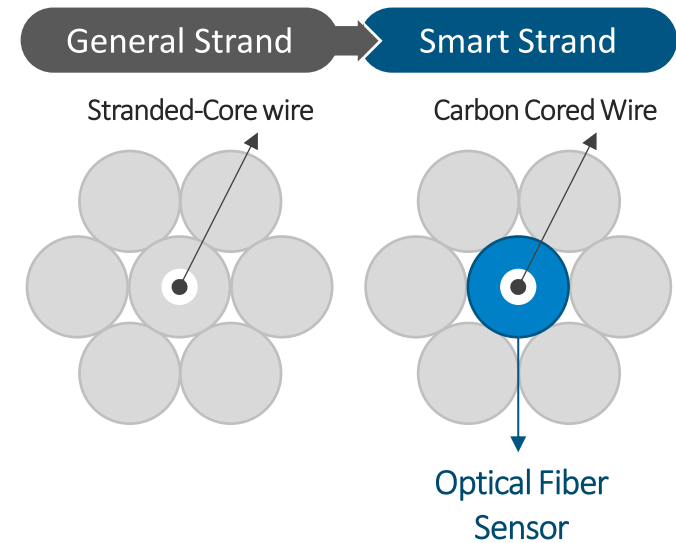## Manage Road Facilities Effectively Through AI-based Smart Technology

Bridge & Tunnel Monitoring Center

Digital Mayor's Office

Seoul Emergency Operation Center

Data

Disaster Information

Video

Bridge-Tunnel

AI-based Inspection of Underground Cavities

Cavities

Sewer Pipe

Remote Tendon Monitoring System

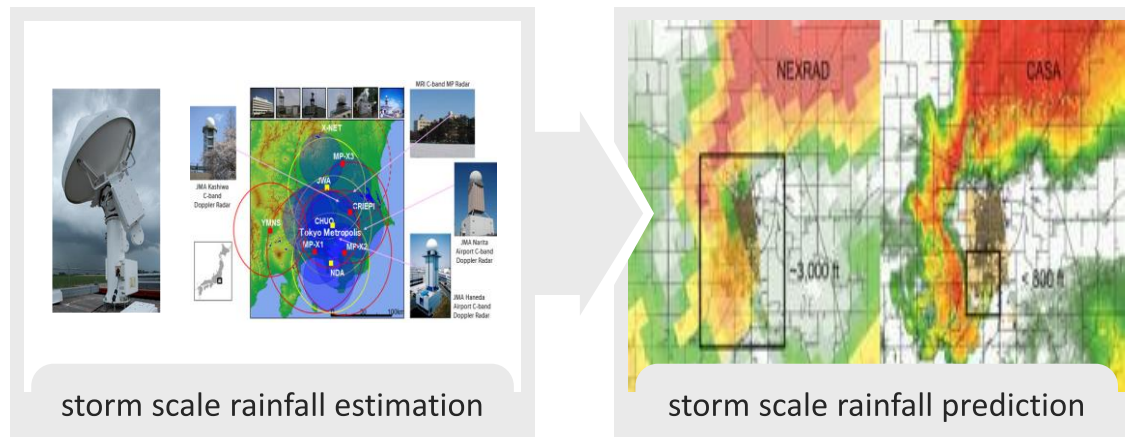General Strand → Smart Strand
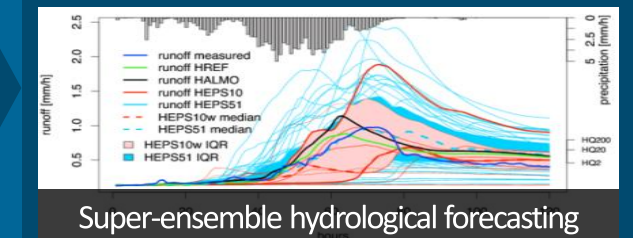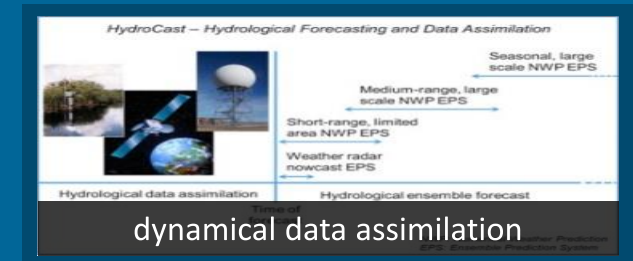
Stranded-Core wire

Carbon Cored Wire

Optical Fiber Sensor

Smart Flood Prevention System

Prepare For Heavy Rainfall & Minimize Flood Damage Through Sewage Treatment

storm scale rainfall estimation

storm scale rainfall prediction

Rain gauge

12 km
Model

4 km
High-precision
Floodgate radar

1 km
X-Net

multi-scale
Heavy rain

dynamical data assimilation

Super-ensemble hydrological forecasting

flood forecasting
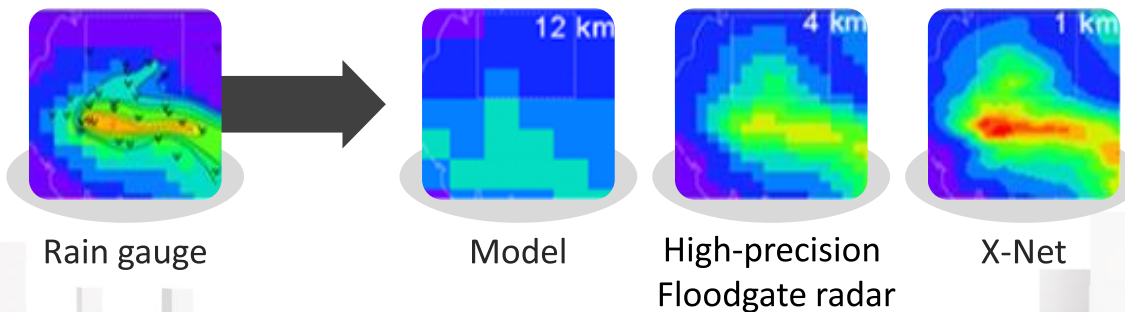
Seoul will continue
to work with cities
around the world
to make a safer place
for all.