

# Korean Policy & Plan on Future ITS

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Hyun Suk (Sue) PARK

General Manager, International Cooperation Team  
ITS Korea

# 01. ITS in Korea

## Introduction of Korean ITS Service

### Traffic Management

- Traffic control & providing traffic information
- Manage traffic incidents
- Real-time adaptive control
- Automatic enforcement



### Traffic Information Center

- Integrated management ITS
- Monitoring real-time traffic condition and Providing traffic information (VMS, Internet, App)
- Exchange traffic information with related centers



### Intelligent Vehicle & Road

- C-ITS
- Autonomous driving & road
- Adaptive Cruise Control(ACC)



### Commercial Vehicle Operations

- Manage freight vehicle
- Manage hazardous materials



### Public Transportation Provide Bus Information

- Manage bus operation
- BRT system
- Bus priority signal



### Traveler Information

- Car navigation
- Provision of traffic information for drivers



### Electronic Payment

- Electronic Toll Collection System
- Automatic Fare Collection System for public transportation

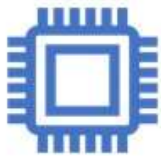
# 02. Policy for Future Mobility

## (1) Korean New Deal Policy Overview

### “Paradigm shift to leap forward into a pace-setting economic model”

From a chasing economy to a leading low-carbon economy with an inclusive society

#### Digital New Deal



- Strengthen D.N.A ecosystem
- Digitalization of education infra
- Promotion of 'Un-tact' industry
- **SOC digitalization**
  - Invest 13.9B USD / Create 193K jobs until 2025
  - Invest 3.4B USD for ITS & C-ITS

\* US\$1=KRW 1,129.0

#### Green New Deal



- Green convergence of urban & space & living infra
- Expansion of Low-carbon & dispersion energy
- Green industry innovation

#### Invest 160 trillion KRW\* until 2025

\* About 141.7 billion USD



[Investment by program] (Billion USD)



[Job creation by program] (10,000 Jobs)

# 02. Policy for Future Mobility

## (1) Korean New Deal Policy\_Digital SOC

### ➤➤ Digitalization of the Social Overhead Capital(SOC)

- SOC(Social Overhead Capital) + Advanced Technology = Implementation of Public Safety and Convenience

: Monitoring and simulating in real-time, collecting and utilizing big data by combining IoT Sensor, AI and In-Depth Analysis

#### 1. Real-time Monitoring & Digital Twin

• IoT : Internet of Things



# 02. Policy for Future Mobility

## (1) Korean New Deal Policy\_Digital SOC

### ➡ Digitalization of the Social Overhead Capital(SOC)

- SOC(Social Overhead Capital) + Advanced Technology = Implementation of Public Safety and Convenience

: Building a more secure transportation network by introducing **advanced and smart digital operation systems** at airports, railways and roads.

### 2. Smart Operation Technique



**[Smart Airport]**  
- Untact Biometric System



**[Smart Railway]**  
- Unmanned detection train

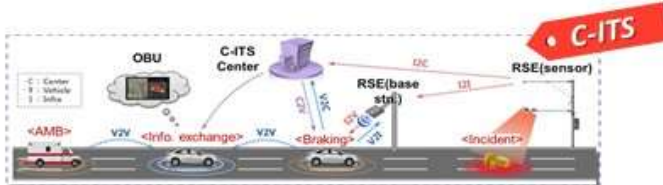


**[Smart Tolling System]**  
- Highway automatic toll payment

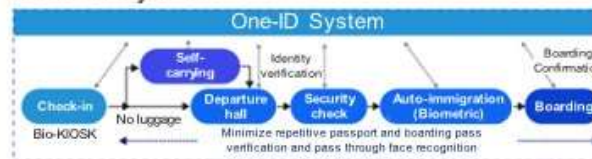


**[Advanced testbed for automated vehicles(K-city)]**

- Support for automated vehicles through C-ITS



- Simplified Check-in procedures through Untact biometric system



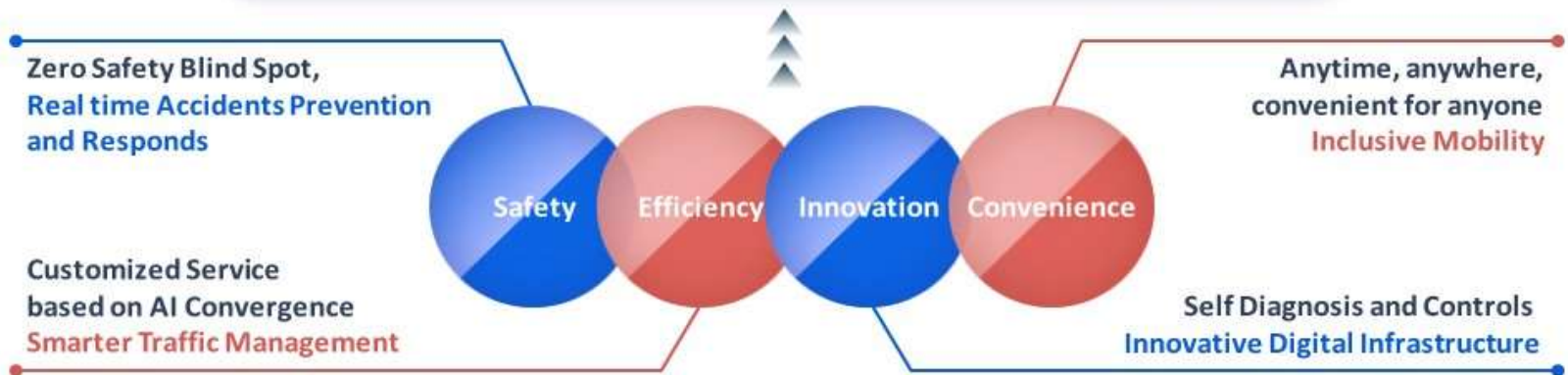
# 02. Policy for Future Mobility

(2) National ITS Master Plan 2030\_Vision and Goals

## “ DREAMS on ITS ”

Digital Road for Eco-friendly and Advanced, Mobility Service

Innovative Road & Competitive International Technologies  
By Implementing a Digital Road Network for Autonomous Vehicles and MaaS

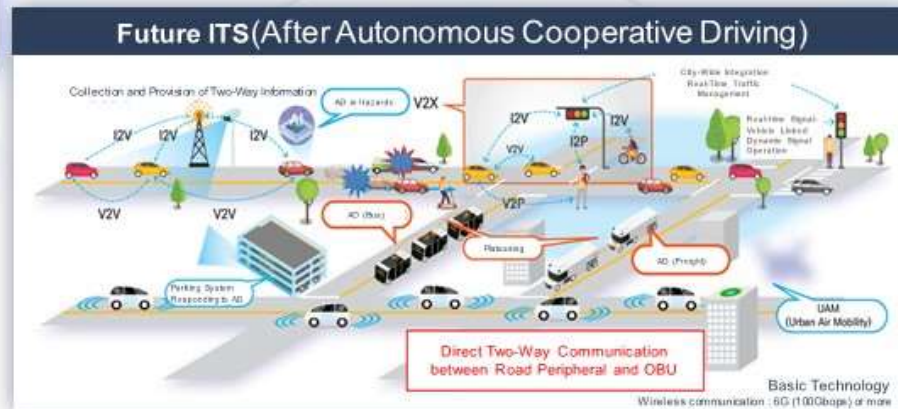


**Safe Road** without Blind spot / **Better Life Quality** based on New Values - Openness, Convergence, and Innovation

# 02. Policy for Future Mobility

## (3) ITS for Future Transportation Environment

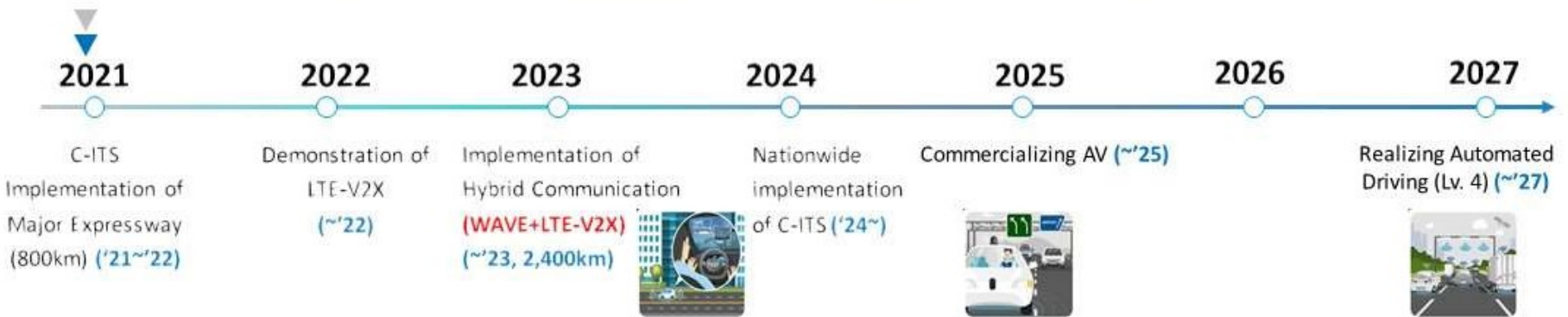
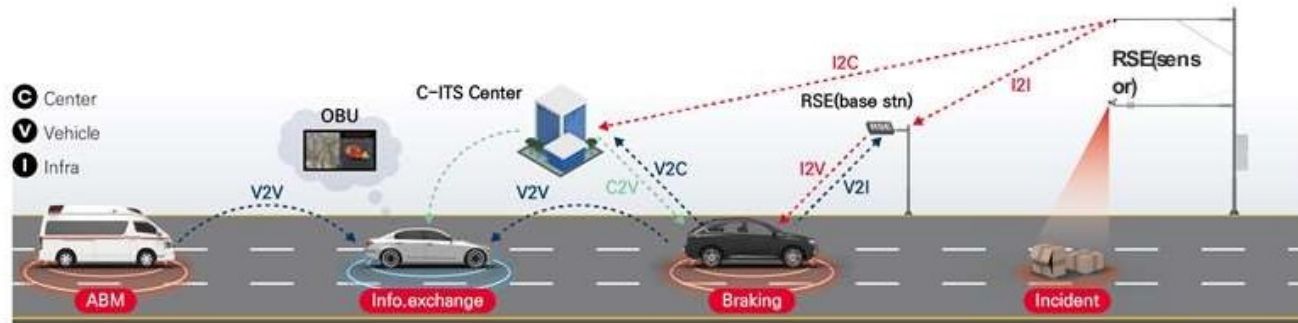
➤ Establish an integrated transportation system that responds to the changing digital transportation environment focused on ITS project.



# 02. Policy for Future Mobility

## (4) Implementation of C-ITS

- New Paradigm for ITS service on the open platform focusing on safety by V2V, V2I and V2P communication
- A system that provides accident-related information such as traffic conditions, sudden stop, and fallen objects to the driver in real time





# 02. Policy for Future Mobility

## (5) Pan-Government Cooperation on Cooperative Automated Driving

“ Realizing Fully Automated Driving(Level 4) by 2027 ”



### Overview

- ✓ Title : R&Ds on Innovative Automated Driving Technologies
- ✓ Period : '21 ~ '27 (Total 7 years)
- ✓ Budget : 1.5B USD

### 5 Strategic Area (84 projects)

- ① New vehicle convergence technology(MOTIE, MSIT)
- ② New ICT convergence technology(MSIT)
- ③ New road traffic convergence technology(MOLIT, KNPA)
- ④ Service creation(MOLIT, KNPA)
- ⑤ Establishment of industrial ecosystem(All)

**MOLIT** Conducting 22 National Projects related to Automated driving by 2027

# 02. Policy for Future Mobility

## (6) Expansion Plan for C-ITS Service

### ✓ Cooperation with Private company

- Due to difficulties in installing OBUs and RSUs as much as required
- Providing C-ITS Services by linking telecommunication/navigation company**
  - Data connection with private company(Kakaonavi, SK T-Map, One navi, etc.)

Private telecommunication company(SKT, KT, LGU+)



# 03. Law Revision for New Technology Adoption

## (1) Current Status of Legal Systems on ITS

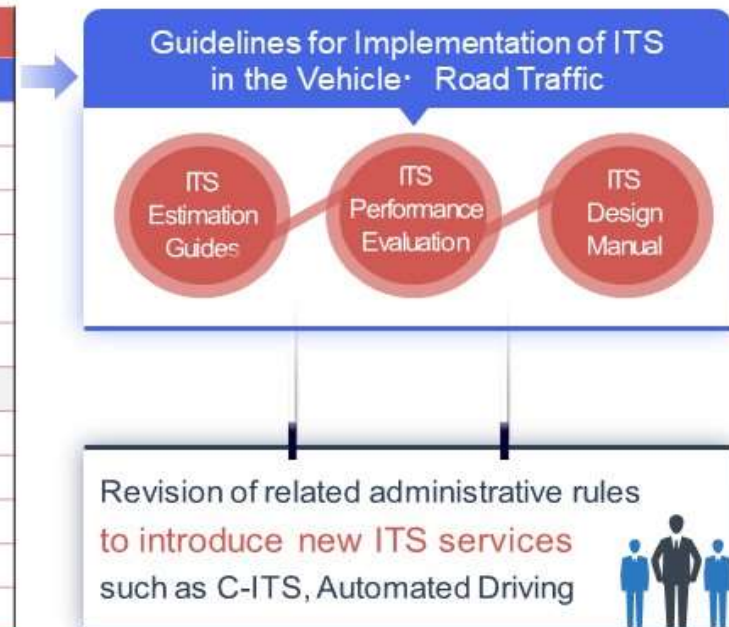
### ★ Comprehensive and Highest law dealing with Transportation

- In order to improve the efficiency, integration, and connectivity of the transportation system,
- Promote the convenience of people's lives and contribute to economic development



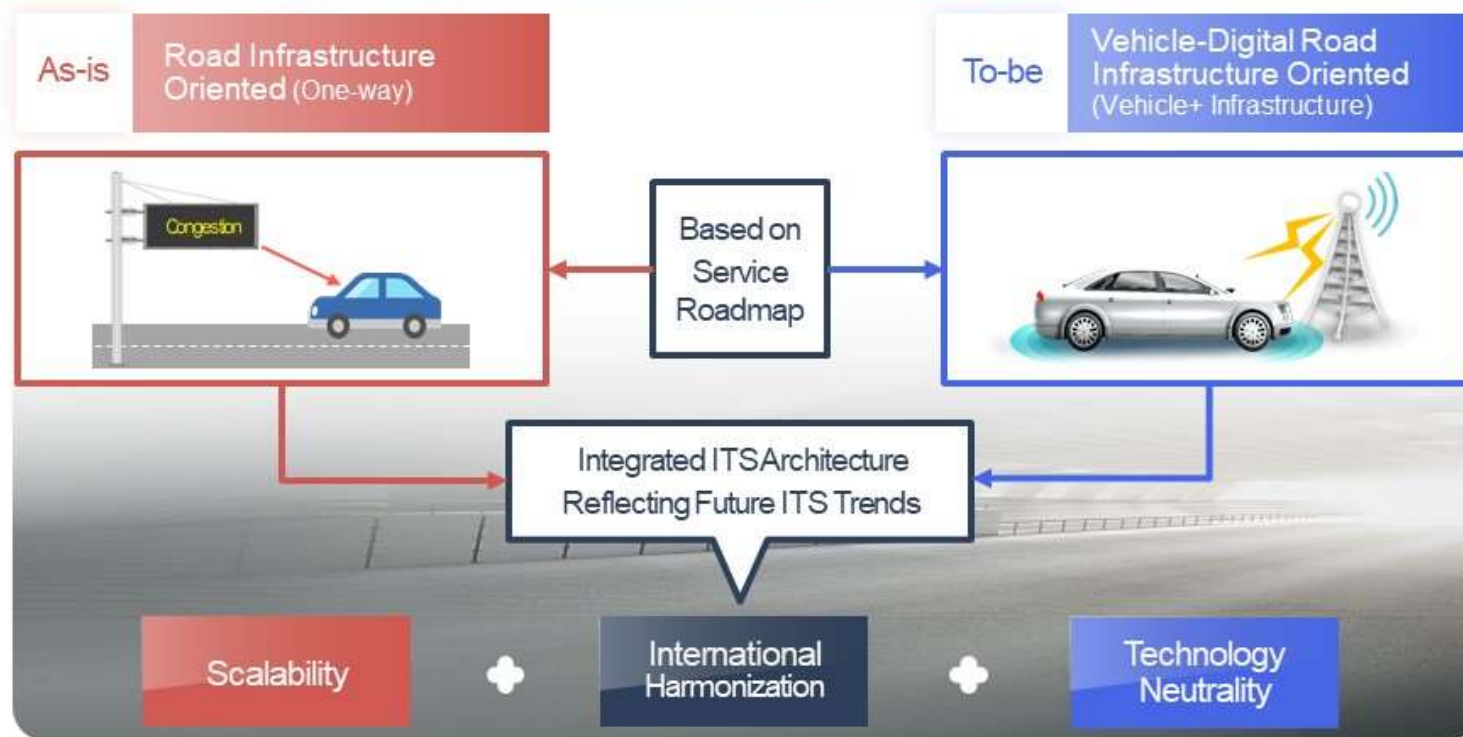
Administrative Rules
★ Guidelines for Implementation of ITS in the Vehicle-Road Traffic
★ Guideline of Establishing Standard Node/Link for the ITS
★ Criteria for Performance Evaluation for ITS in the Vehicle-Road Traffic
★ Criteria of Establishing Standard Node/Link for the ITS
Regulations on ITS Standardization and ITS Certification Affairs
Guidelines of Implementing ETCS OBU Certification System
Guidelines of Establishing and Managing Base Information of BIS
Technical Regulation
★ The Basis Traffic Information Exchange I
★ The Basis Traffic Information Exchange II
★ The Basis Traffic Information Exchange IV
The Public Transport(BUS) Information Exchange
ETCS Information Exchange by DSRC [RSE-OBU]

★ : Amending



# 03. Law Revision for New Technology Adoption

## (2) Revision of National ITS Architecture



Secure Interoperability and Compatibility for New Service Introduction and System Expansion

# 03. Law Revision for New Technology Adoption

## (3) ITS Standardization to Support Industry

As-is

Support the Industry Focused on Standards Of Traffic Information, BIS, and ETCS



To-be

Expand to New Services, Field Equipment and Standards for Testing

**Expanding International Standardization Activities**

- ISO/TC 204 CEN, IEEE, etc.

**Standards Maintenance, Development**

- Establishing standardization plan
- Developing new standards

**Standards Management**

- Introduction of Framework
  1. Standard
  2. Certification
  3. Evaluation

### Technical regulations

- Mandatory standards for ensuring compatibility at the national level (mandatory)
  - BIS Information Exchange
  - ETCS Information Exchange
  - Center→Center/Center→Infrastructure→Vehicles Information Exchange
  - Etc.

### Organizational Standards

- Specifications for promoting private ITS Projects\* (voluntary standards)
  - \* Projects : ITS system reference structures, interfaces, hardware requirements, and testing methods

**C-ITS  
CAV  
MaaS  
Smart City**

C-ITS service, V2X Information link, Testing method, etc.

Requirements for LDM

E-Call Interface, Data structure, etc.

Requirements for MaaS payment / settlement platform, etc.

# 03. CAV based Smart City

“Gangneung city, Integrated Smart City Realizing Automated Driving

2026 ITS World Congress Candidate City



## ITS Budget for Gangneung

✓ The largest ITS budget is invested in Gangneung among small medium cities in Korea



“BEYOND THE CITY, EVERYWHERE SMART MOBILITY”



C-ITS

MOBILITY

CAV

MaaS



\* US\$1=KRW 1,129.0

# THANK YOU

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