

Introduction

Czech- Korea ITS  
forum

Korean ITS

Ministry of Land, Infrastructure, and Transport

2015. 5



**MOLIT**

Ministry of Land, Infrastructure and Transport

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**1. ITS Overview**

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# ITS Overview

## Background of ITS

✓ Sharp growth in automobiles

✓ Limited road construction due to lack of urban spaces

➔ **Causing serious transport problems such as traffic congestion, accidents, air pollution**



**Resolving transport problems by introducing ITS**

- To employ advanced IT into transport operation and management
- To Maximize efficiency of existing transport system



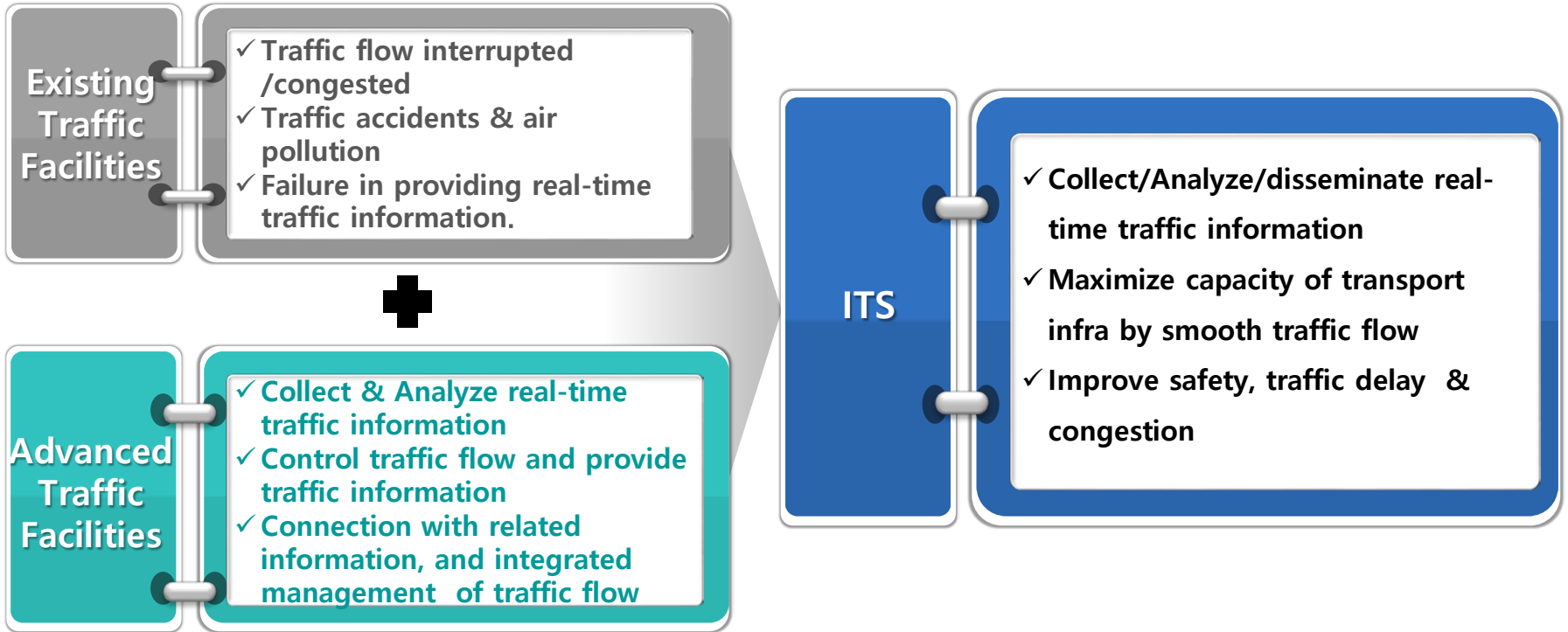
# ITS Overview

## Chronology of ITS in Korea



# ITS Overview

## Definition of ITS



# ITS Overview

## The effects of the ITS

Create annual \$10.7 billion worth  
Social benefits



Increase travel speed by 15~20%

Low cost makes huge effects



Use only 1% of road construction cost  
to reduce 20% of traffic jam

High B/C ratio of ITS deployment

B/C for ITS deployment  
by each city : 2.2~6.2



Seoul 2.27, Daejeon 5.2, Ulsan 4.64, Suwon 2.39, Jeonju 2.9, Jeju 6.2

Eco-friendly technologies

Reducing Greenhouse Gas & Oil Consumption

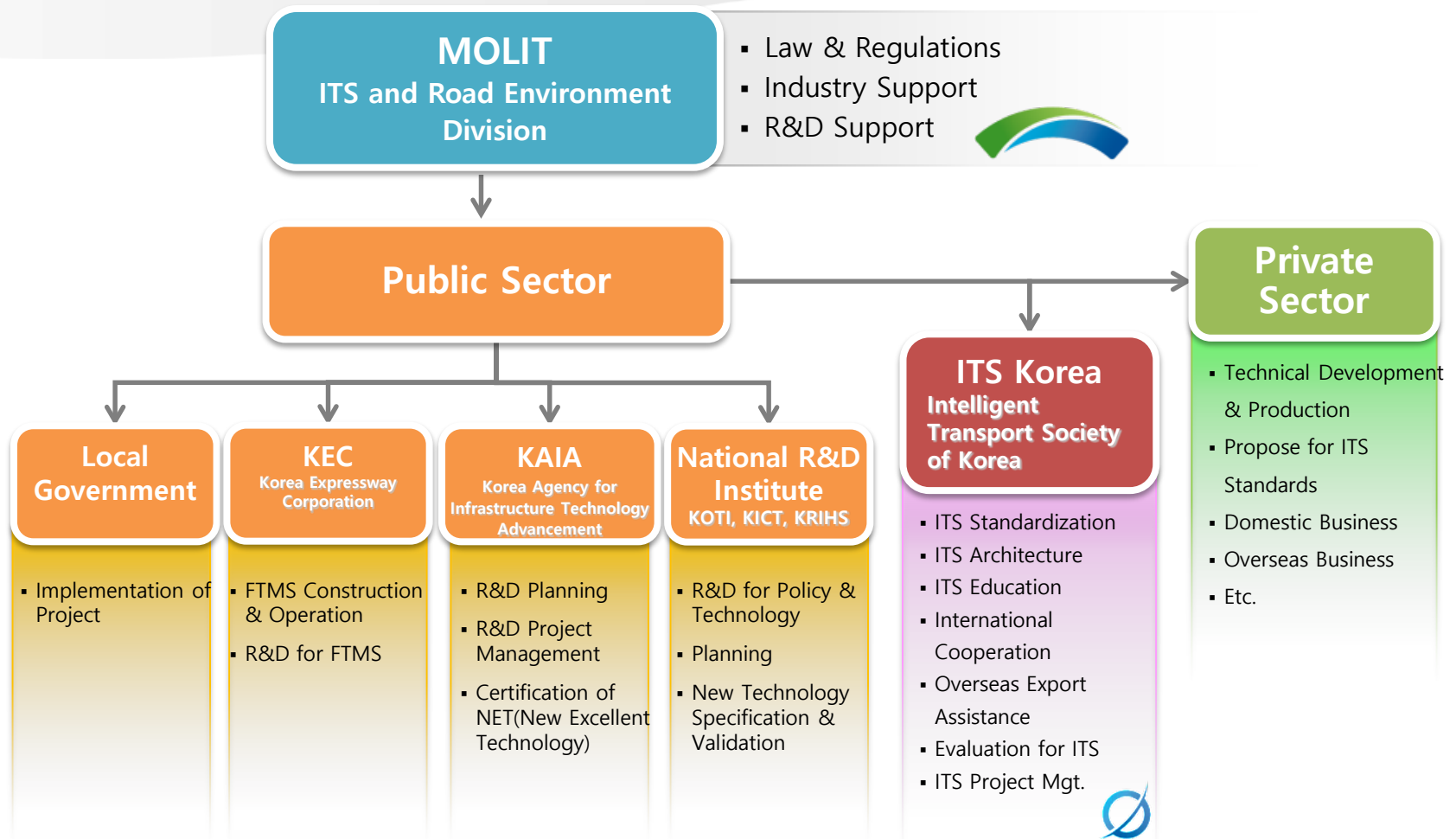
Per 1,000km of road covered with ITS  
annually 19,000 tons reduced

Through Hi-Pass(ETCS) service,  
annually 2.3 tons reduced



# ITS Overview

## Creation of Relevant Bodies



# FTMS : Freeway Traffic Management System



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# ITS Service Area

## Overview

- ◆ ITS services driven by public sector including central and local government are well developed
- ◆ Integration of ITS installed nationwide, Standardization for interoperability and compatibility
- ◆ Expand ITS nationwide, Advance quality of ITS
- ◆ *Services like ATMS, ATIS, UTCS, BIS/BMS, EFCs reached world class technologies*



# ITS Service Area

## ATMS (Advanced Traffic Management System)



Loop detector



ITS Center

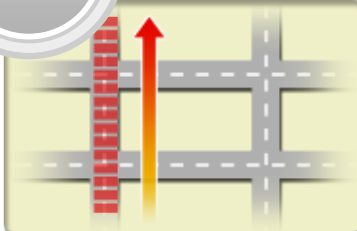


Video detector

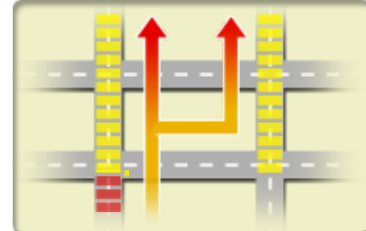


AVI (Automatic Vehicle Identification)

VMS (Variable Message Sign)



Concentration of traffic on major roads



Dispersion of traffic to alternate roads / routes  
→ Reduced congestion & delays

# ITS Service Area

## Dissemination of traffic information by ATMS

### Text type VMS



### Diagram type VMS



### Navigation



### Smartphone

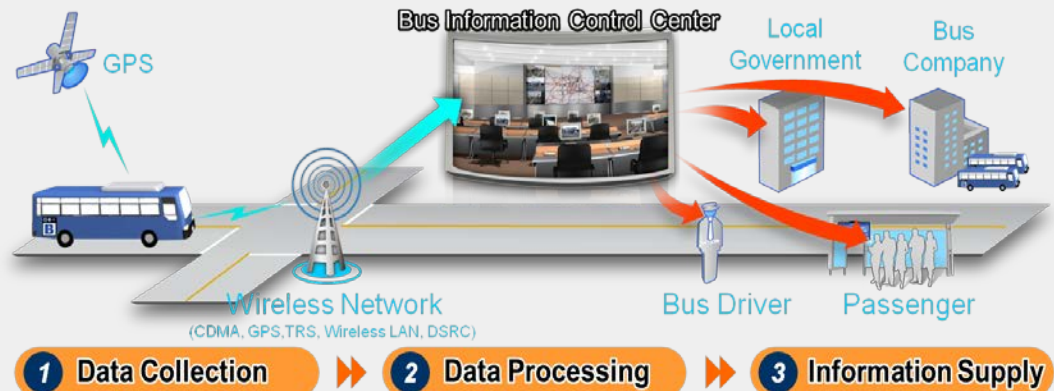
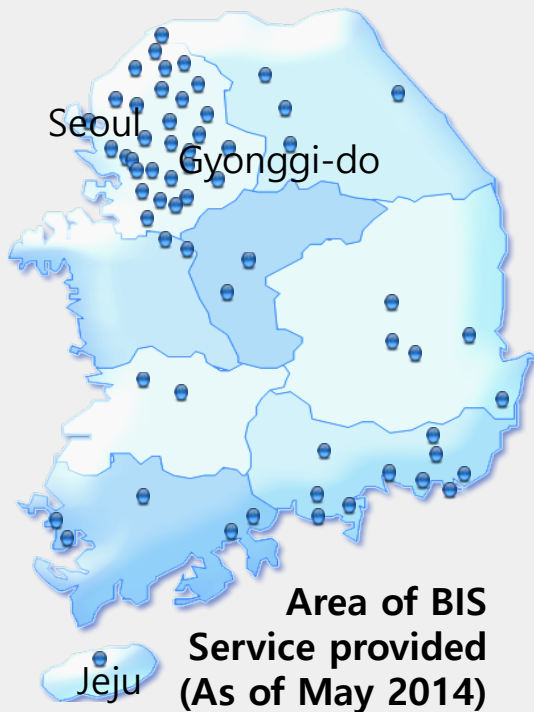




# ITS Service Area

## BIS (Bus Information System)

- ◆ Real-time Bus Arrival Time, Route Information, etc.
- ◆ Bus Information Terminal, Internet, Mobile
- ◆ BIS is operating in about 70 local governments and continue to expand





# ITS Service Area

## Provide Bus Information by Various Type

### Bus Information Terminal(BIT)



Bus Stop Name & ID  
Date, Time

Bus Arrival Information

Local Gov. PR

News

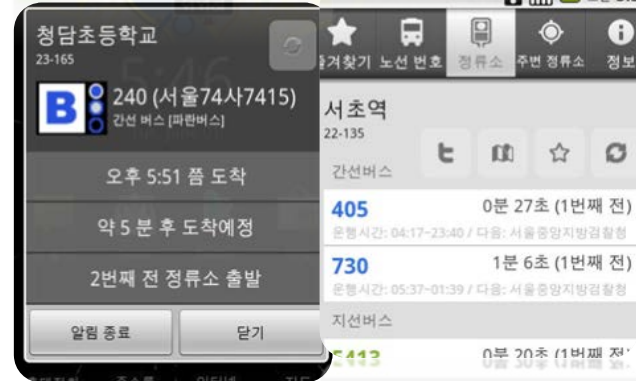
Card Balance Inquiry



### Smartphone



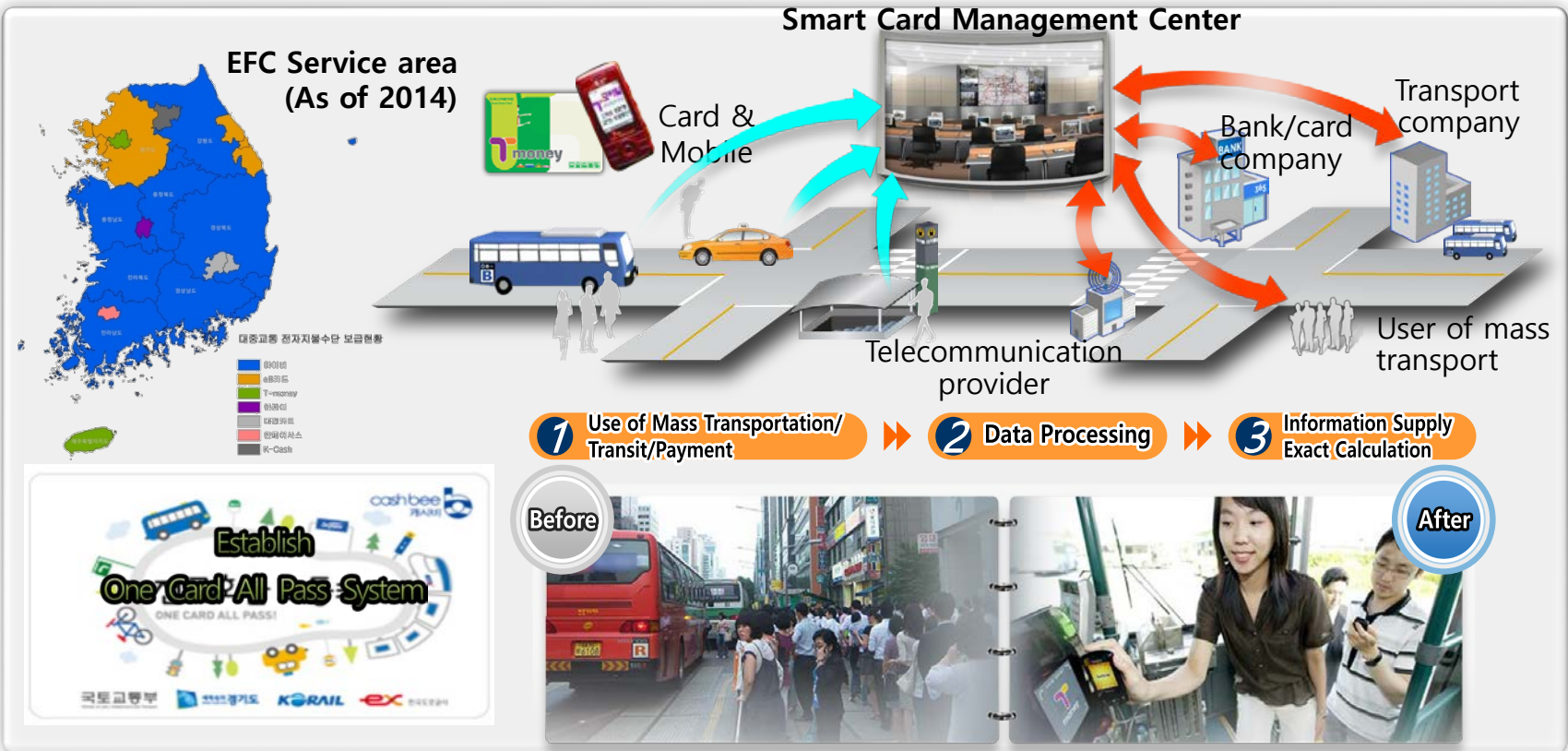
### Route Information Bus stop Information



# ITS Service Area

## EFCS (Electronic Fare Collection System) & Smart Card

- ◆ Improve convenience of public transport by using Electronic Transport Card to pay fare
- ◆ In Seoul, smart card use for Bus is about 99% and for subway is 100% (as of 2014)
- ◆ Upgrade Service by developing one integrated card available nationwide not only for public transportation bus also parking lot, expressway, etc.



# ITS Service Area

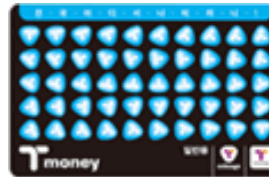
## Type of EFCS

### Electronic Fare Collection System



Source: Korea Smart Card Company (KSCC)

### Means of Paying

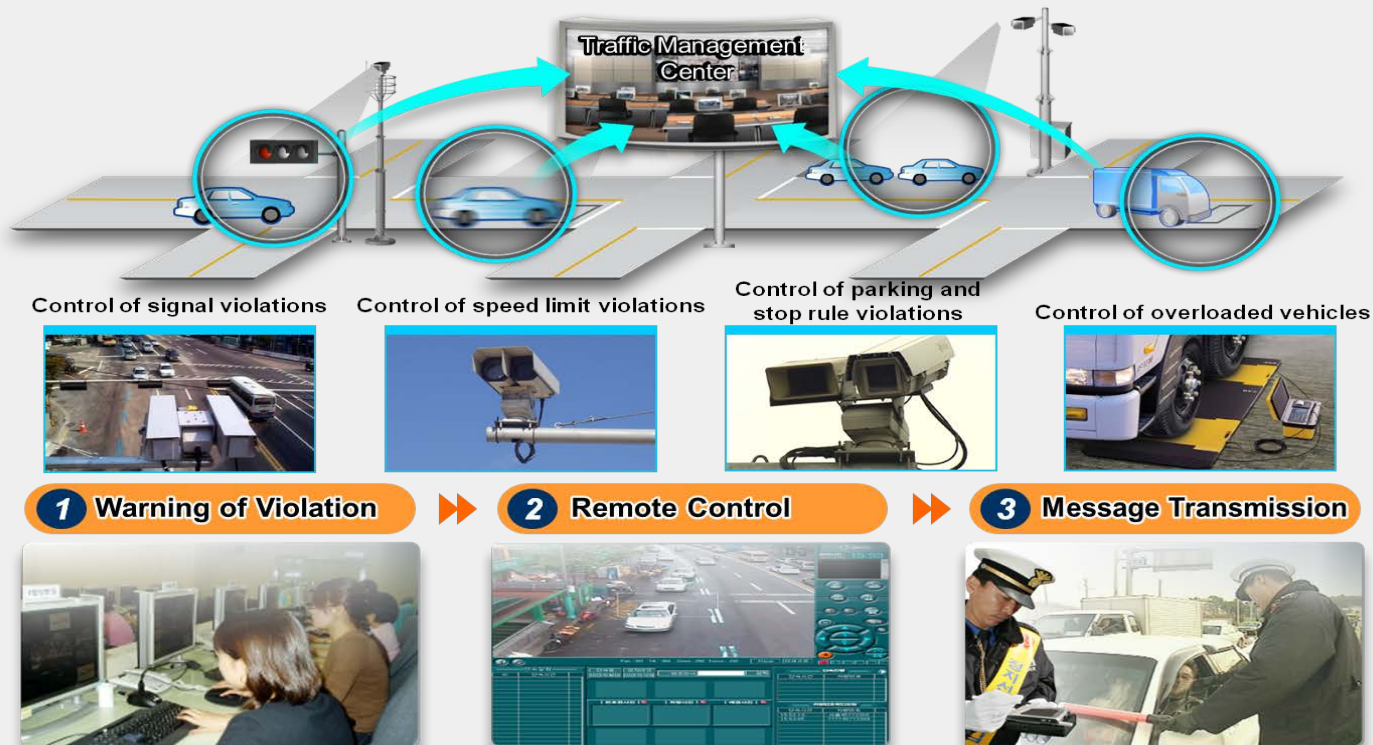




# ITS Service Area

## ATES (Automatic Traffic Enforcement System)

- ◆ Automatic Enforcement for speeding, signal violation, illegal parking and overloaded vehicles
- ◆ As of 2012, total 5,393 enforcement system are installed on the road in Korea (mainly 2,689 for speeding and 2,259 for multi-function)



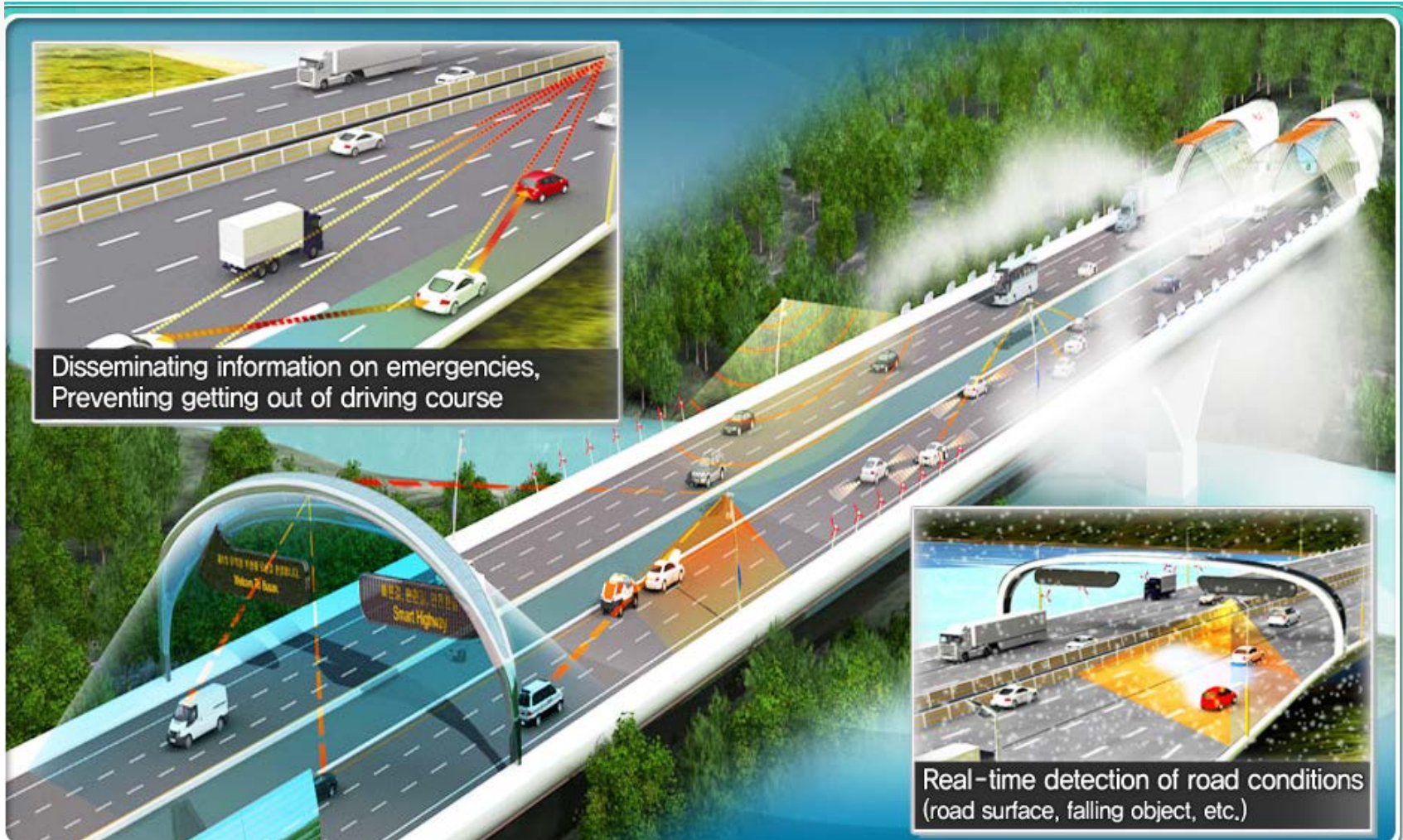
Source: Keon-a





# ITS Service Area

## SMART Highway Project



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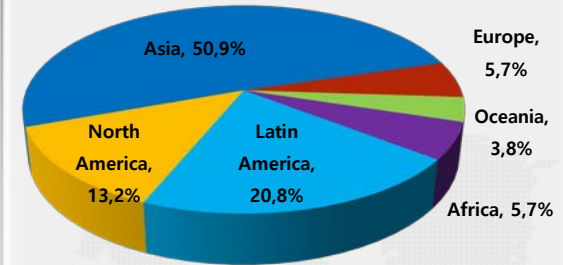
**3. International Cooperation**

# International Cooperation

## Current status of ITS Export

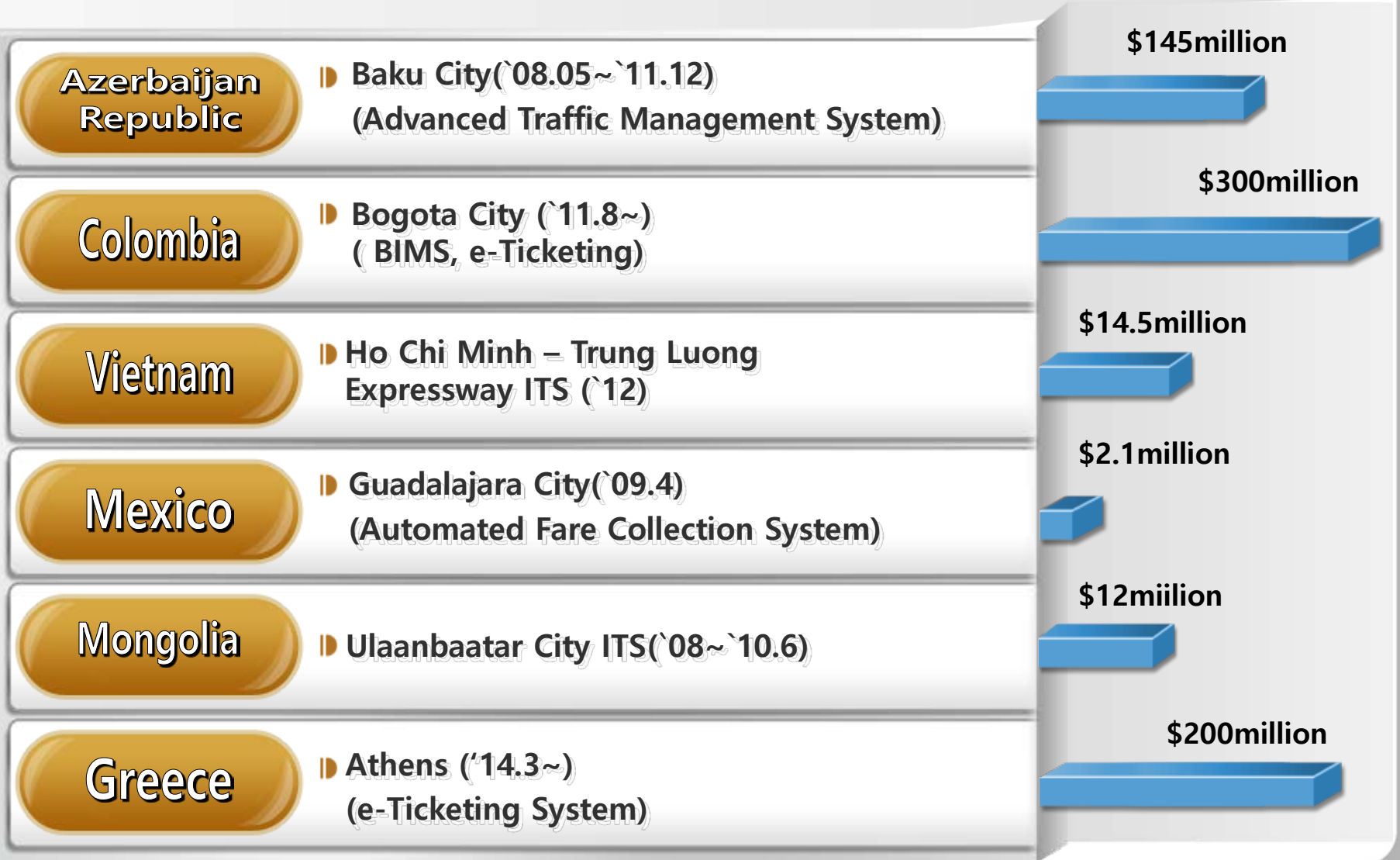
- ◆ Korea ITS exported to 32 countries since 2006
- ◆ As of May 2015, a total of 57 projects have been conducted including EFC (Electronic Fare Collection), ATE (Automatic Traffic Enforcement), AFC (Automatic Fare Collection for train), ATMS (Advanced Traffic Management System) and PIS (Parking Information System), WIM(Weigh In Motion)

Export by Continent  
(based on number of projects)





# International Cooperation



# International Cooperation

## Support for ITS services and Key technologies

- Consulting for ITS key technologies and the best services to each country
- Assisting briefing session for each country
- Sharing know-how and solution of Korea's ITS

## Reinforcement of Cooperation between government & private company

- Assisting high-level and working-level meetings to secure regular ITS cooperation channel
- Supporting for training professionals through ITS-related research and education programs
- Providing financial supports such as EDCF, etc.



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**ITS KOREA**  
Korea's Transport Information System

**Best Partner for Your Better Transport Systems**



# International Cooperation

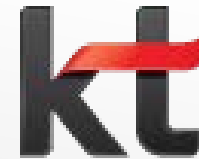
01 Korea Expressway Corporation(KEC)



02 ITS Korea



03 KT



04 Kyungbong



05 LG CNS



06 Metabuild



07 MORU Systems



08 SK C&C



09 S traffic



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**Thank you.**

