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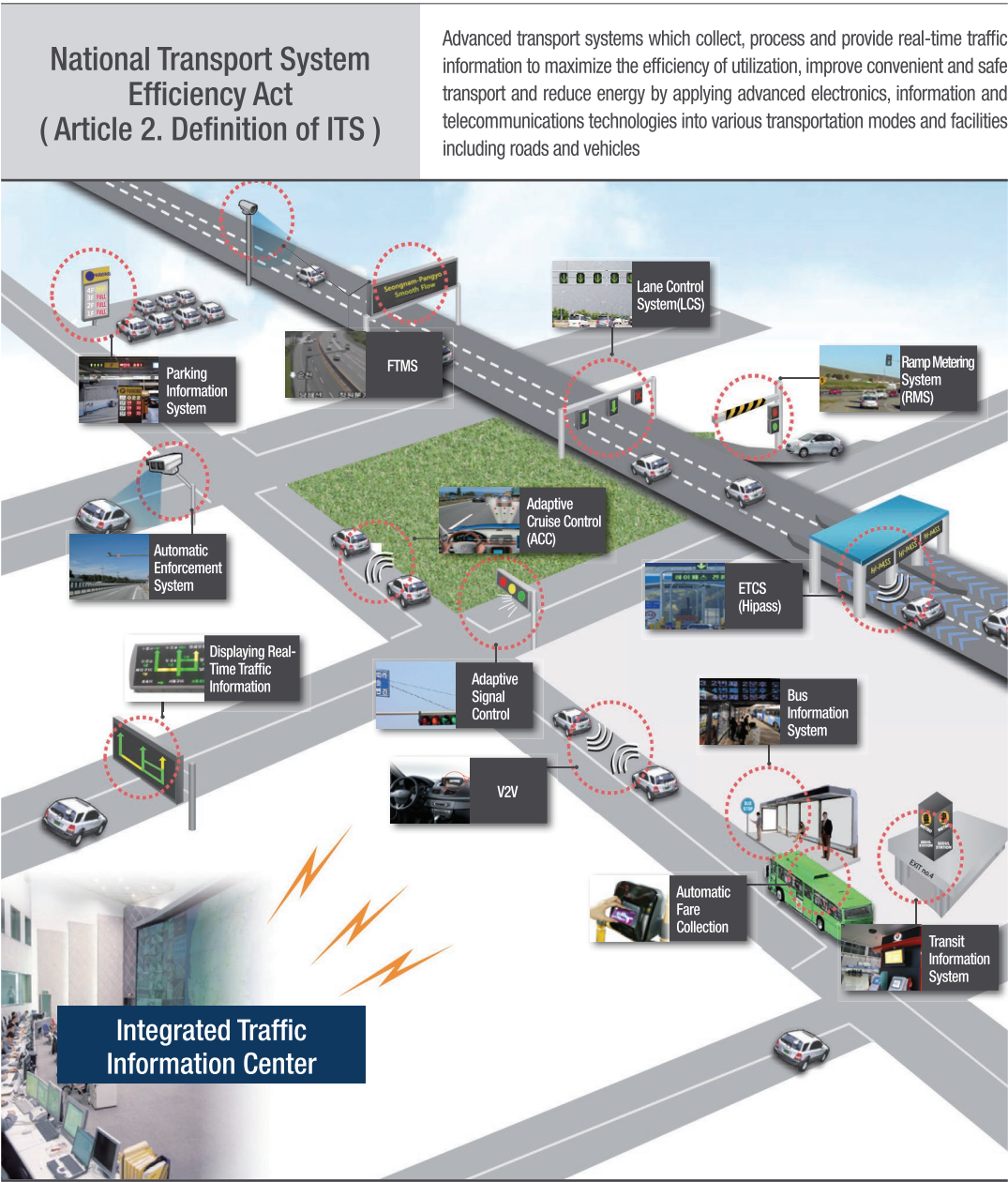


Best Partner for Achieving Your Better Transport

Intelligent Transport Systems in Korea

Best Partner for
Your Better Transport

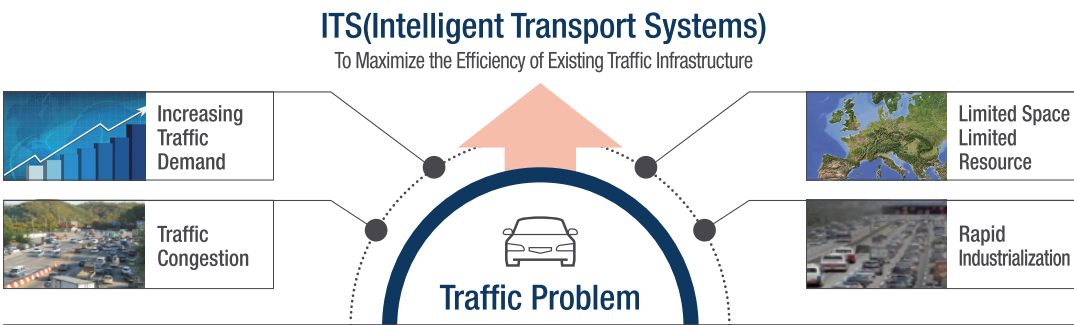
ITS Definition
What are Intelligent Transport Systems (ITS)?



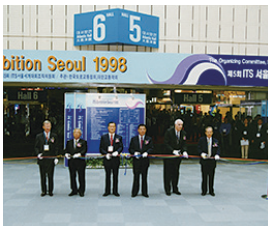
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ITS History and Current Status

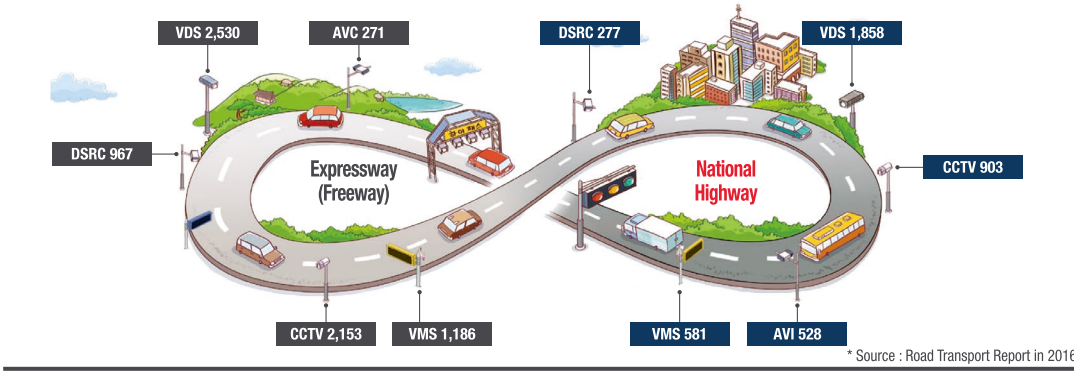
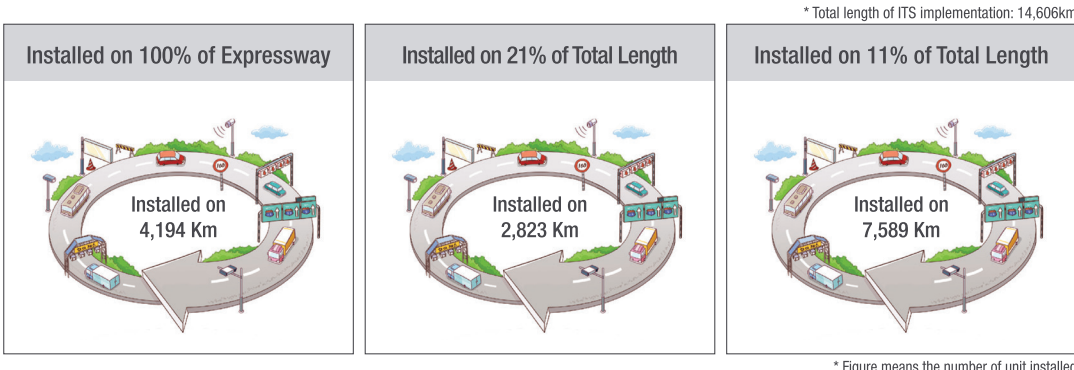


Milestones of ITS in Korea

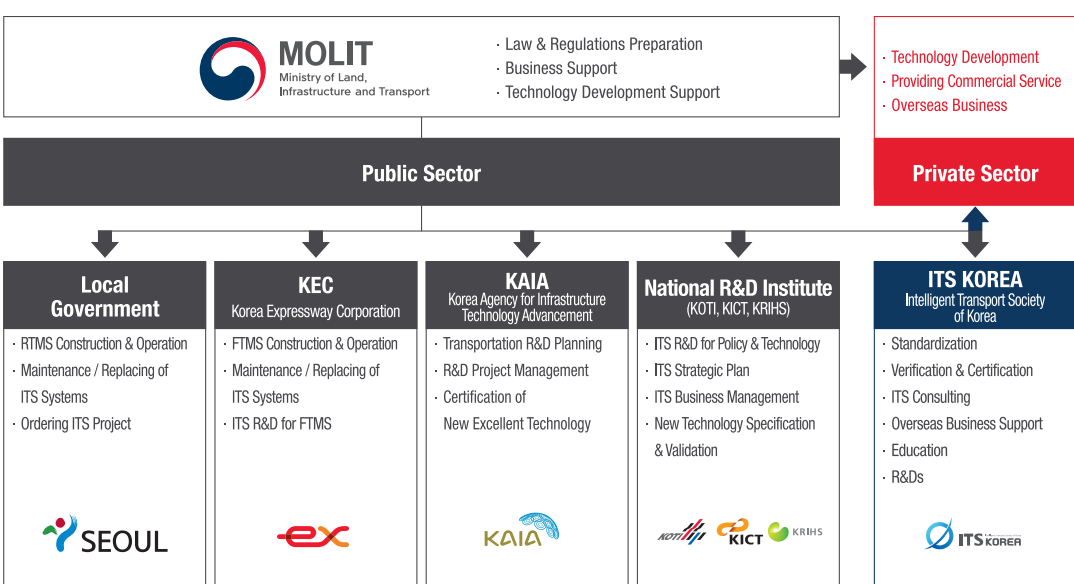


1993~1998	Stage 1 (Introduction of ITS) <ul style="list-style-type: none">*1993 Review of ITS by the Presidential SOC Investment Plan Group*1994 FTMS Pilot Project (Gyeongbu Expressway)*1997 Establish 1st National ITS Master Plan*1998 ITS Pilot Project(Gwacheon)*1998 Hold the 5th ITS World Congress in Seoul
1999~2004	Stage 2 (Laying Legal Foundation & System) <ul style="list-style-type: none">*1999 Enactment of the Transport System Efficiency Act*1999 Development ITS Architecture*2001 Establish 2nd National ITS Master Plan*2001 Hi-pass(ETCS) Pilot Project*2002 National ITS Standardization Plan Established*2003 Project on Establishing ITS Model City(Jeonju, Daejeon, Jeju)*2004 ITS Implementation on Seoul Urban Expressway
2005~2010	Stage 3 (Growth & Expansion) <ul style="list-style-type: none">*2005 Bus Information System(BIS) Pilot Project(Suwon-Sadang)*2006 Five ITS Centers of Regional Administration Established*2007 Nationwide Expansion of Hi-pass(ETC)*2009 Revision of National Transport System Efficiency Act*2009 Deployment of ATMS by Local Governments*2010 Host 17th ITS World Congress in Busan
2011~Present	Stage 4 (Next Generation of ITS) <ul style="list-style-type: none">*2012 54 Traffic Information Centers (including BIS centers) in Operation*2012 Establishment of ITS Master Plan for Vehicles and Roads 2020*2013 Research on Introduction Plan for C-ITS*2014 SMART Highway Project*2014 Private-Public Cooperation in Traffic Information(MOU)*2016 C-ITS Pre-Deployment Project*2016 R&D on Cooperative Automated Driving Highway System (C-AHS)

ITS Operation Status in Korea



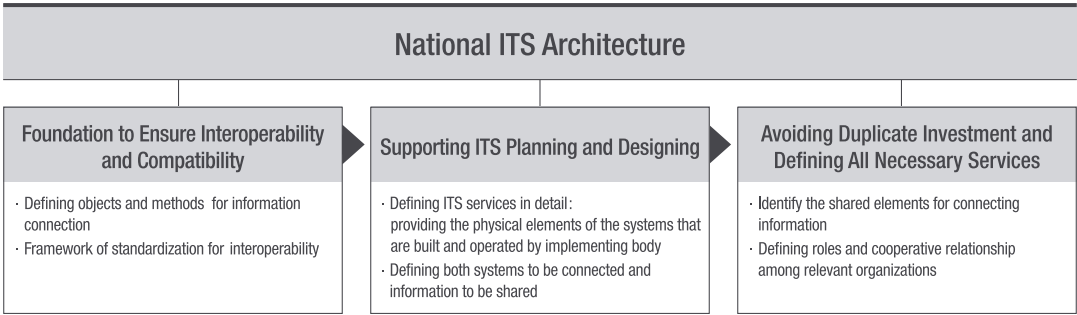
ITS Organizations in Korea











ITS Architecture

Definition	Necessity of ITS Architecture
National ITS architecture is the blueprint providing the overall frame at the national level, by defining the functionality of the system and the flow of information, along with configuring the main body to ensure interoperability and compatibility	In cases where stakeholders are deploying ITS systems without connection, overall ITS installations and operations at a national level are inefficient and lacking in operability. Therefore, national ITS Architecture should be established to provide the whole framework for consistent and organized ITS implementation

Roles of National ITS Architecture

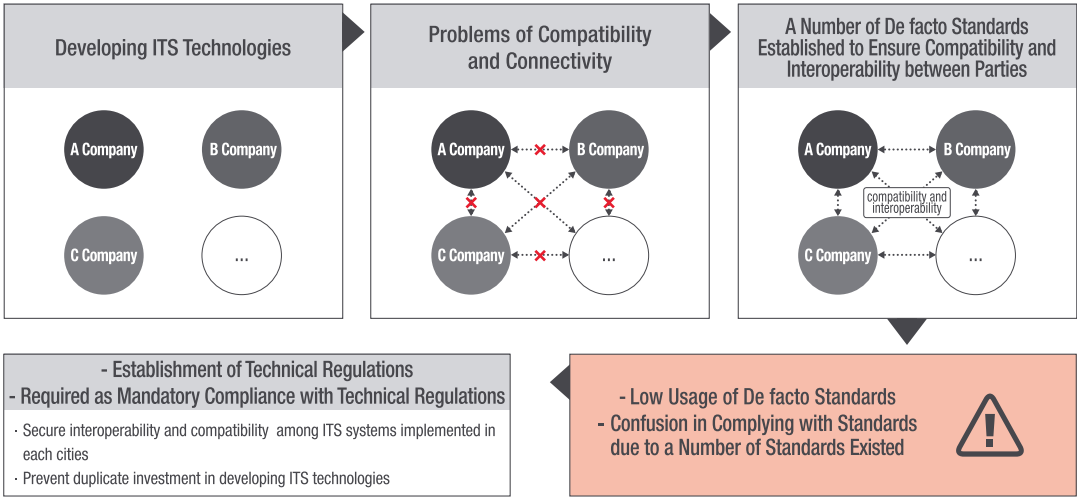


Korean ITS Architecture Categorizes ITS Services into 7 Main Services

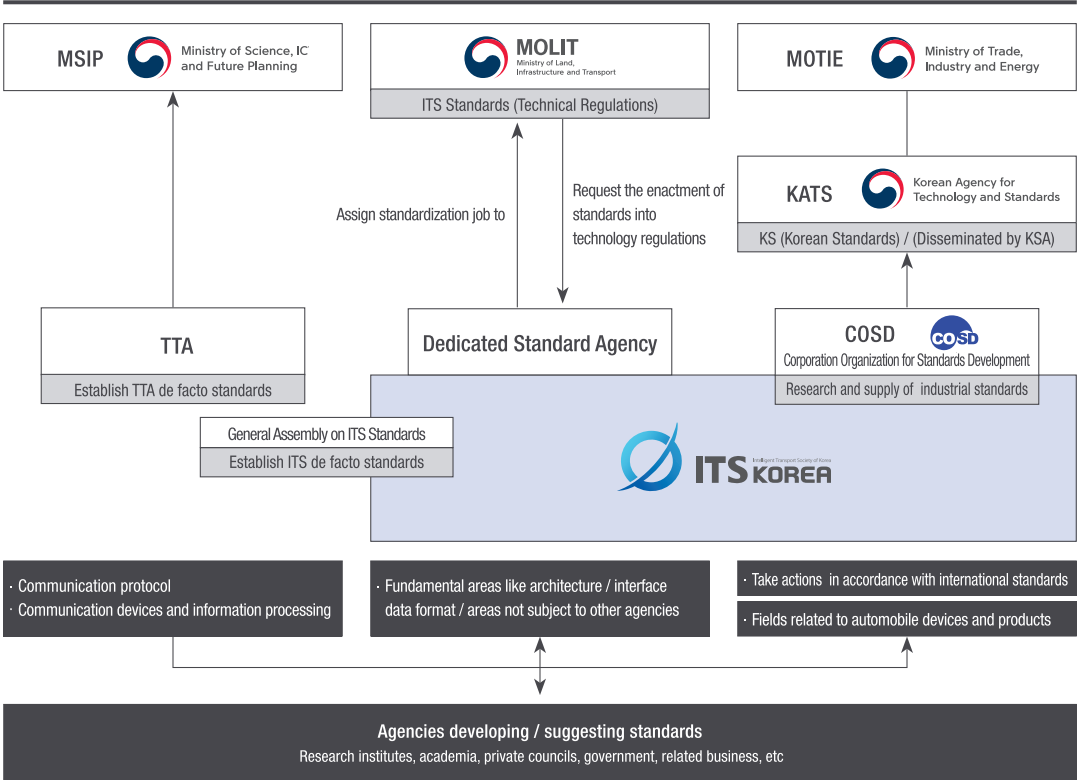
 Korean ITS	Public Sector Traffic Management <ul style="list-style-type: none">· Traffic control & providing traffic information· Manage traffic incidents· Real-time adaptive signal control· Automatic enforcement 	Public Sector Public Transportation · Provide Bus Information <ul style="list-style-type: none">· Manage bus operation· BRT system· Bus priority signal 	Public Sector Traffic Information Center <ul style="list-style-type: none">· Integrate and manage ITS· Monitoring real-time traffic condition· Provide traffic Information (VMS, Internet, App)· Exchange traffic information with related centers 
Public Sector Electronic Payment <ul style="list-style-type: none">· Hi-Pass(ETCS) ETCS : Electronic Toll Collection System· AFC for public transportation AFC : Automatic Fare Collection 	Public Sector/Private Sector Intelligent Vehicle & Road <ul style="list-style-type: none">· C-ITS· Autonomous driving & road 	Private Sector Commercial Vehicle Operations <ul style="list-style-type: none">· Manage freight vehicle· Manage hazardous materials 	Private Sector Traveler Information <ul style="list-style-type: none">· Car navigation 

ITS Standards

Background and Objectives of Establishing Standards (Technical Regulations)



Organizations Related to ITS Standardization



National Transport Efficiency Act | Stating Mandatory Compliance with Standards (Technical Regulations)

Category	Existing Contents	Revised Contents			
Mandatory Compliance with Standards	The act states the technical regulations should be observed	· Revised as stating not only mandatory compliance but also requiring the submission of the certificate of standard observance to complete the ITS project			
Verification on Compliance with Standards	Stated the conformance test should be executed according to “ITS Work Manual”	· While performing the project, it is required to check if the standards are complied with. Confirmation of their compliance may be requested to the Ministry of Land, Infrastructure and Transport			
Dedicated Agency for Standardization	The agency shall survey trends for standards and develop / disseminate standards	· Different standardization agencies may be designated for land / sea / air transportation for ITS development in respective fields · The agencies shall perform additional functions; confirmation / verification of compliance with standards, distribution, support for the use of standards			
Certification System	Category	Common Features	Difference		
			Time	Execution Body	Scope
	Verification of compliance with standards	Confirmation of all matters subject to ITS standards	Before inspection of completion (mandatory)	Project executor	All verification
	Certification of standards		Before sale / delivery of products / equipment	Project executor or others	Sampling










ITS Standards

ITS Technical Regulation	No of Publication	Title
	2016 - 206	The Basic Traffic Information Exchange I
	2016 - 186	The Public Transport(BUS) Information Exchange
	2016 - 207	The Basic Traffic Information Exchange II
	2013 - 251	ETCS Information Exchange by DSRC [RSE-OBU]
	2016 - 208	The Basic Traffic Information Exchange IV

ITS Administrative Rules	No of Publication	Title
	2015 - 755	ITS Standard Node&Link Management Guideline
	2015 - 756	ITS Standard Node&Link Development Criteria
	2013 - 252	BIS / BMS Data Management Guideline
	2013 - 256	OBU Certification System Guideline for ETCS

Achievement of ITS

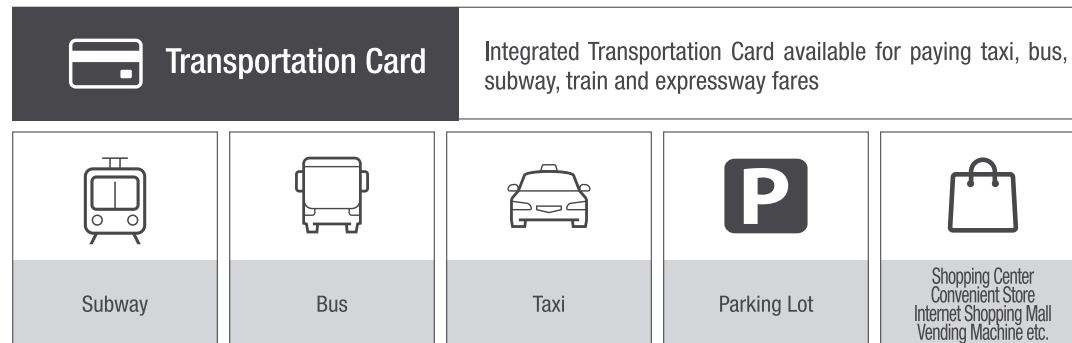
Strengthening Traffic Competitiveness and Reducing Social Costs

\$11.8 billion worth of social benefits per year (congestion · accident · logistical cost)	High benefit-cost ratio
 Increase travel speed by 15~20% 	 Use only 1% of road construction costs to reduce 20% of traffic jams B/C for ITS deployment by each city: 2.2~6.2
Effect on Hipass Tollgate passing time : 14 sec. -> 2 sec. reduced(Improvement of 85.7%) Social benefit : USD 9.6 M/year	Seoul 2.27, Daejeon 5.2, Ulsan 4.64, Suwon 2.39, Jeonju 2.9, Jeju 6.2
Growth of private traffic information	Reducing greenhouse gas & oil consumption
Provide national ITS data to private sector for free, so help ITS services of private sector to enhanced and expand	Reducing greenhouse gas & oil consumption based on decrement of traffic congestion and idling
    	Per 1,000km of road covered with ITS ▶ annually 19,000 tons reduced Through Hi-Pass(ETCS) service ▶ annually 2.3 tons reduced 

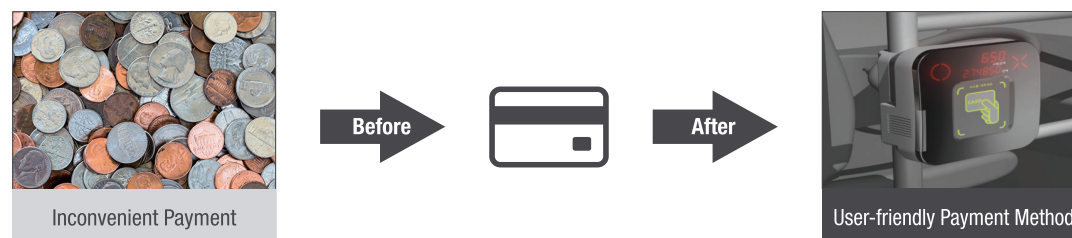
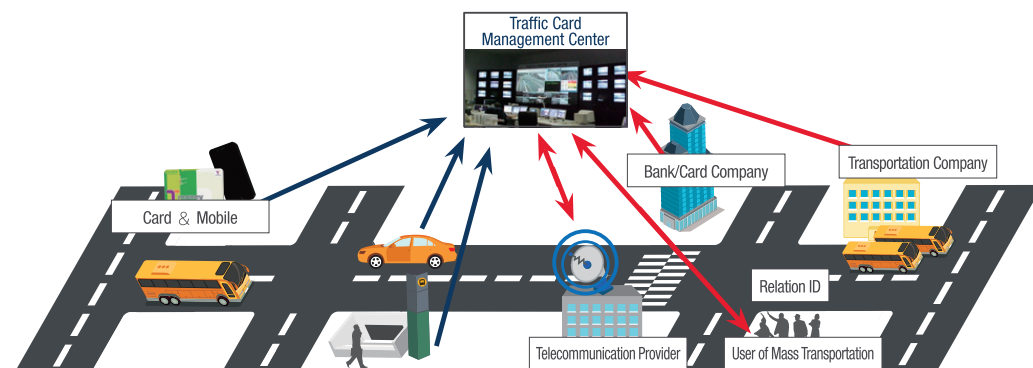


Major ITS Services in Korea

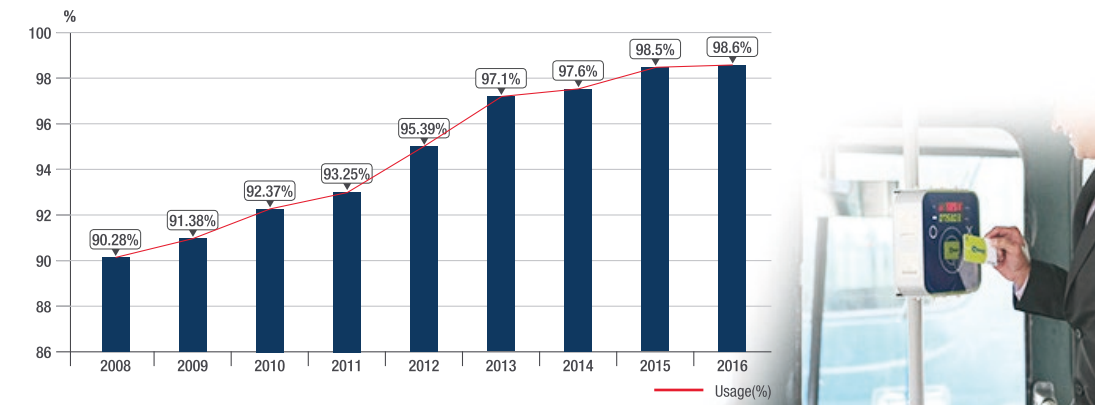
AFC - Automatic Fare Collection



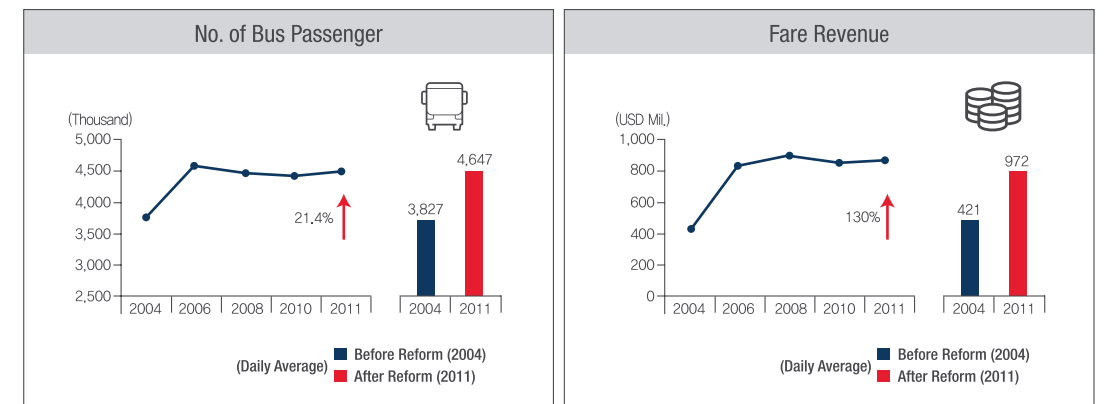
Improve Convenience of Public Transport by Using an Electronic Transport Card to Pay Fares



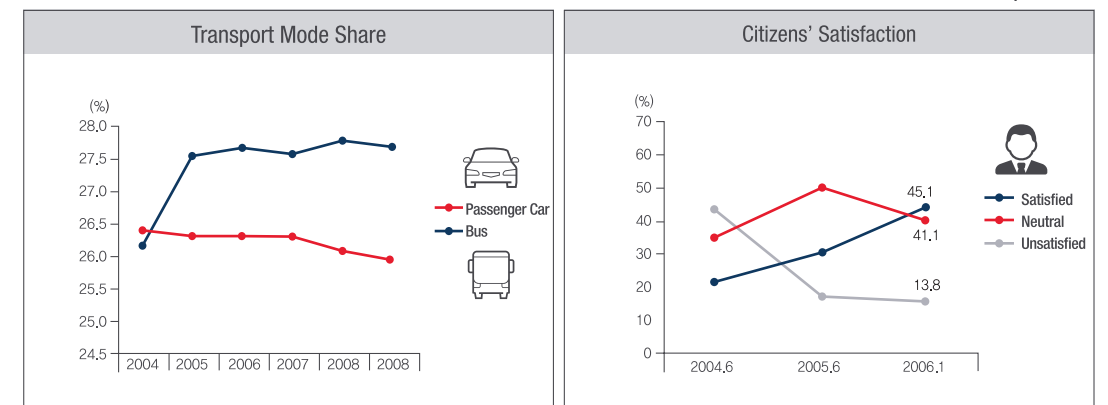
Card Usage Rate in Seoul : 98.6% of Bus Passengers, 100% of Subway (2016)



Bus Company - Securing Transparent Fare Management and Increasing Profit



* Reform refers to Seoul's reform on Bus System in 2014



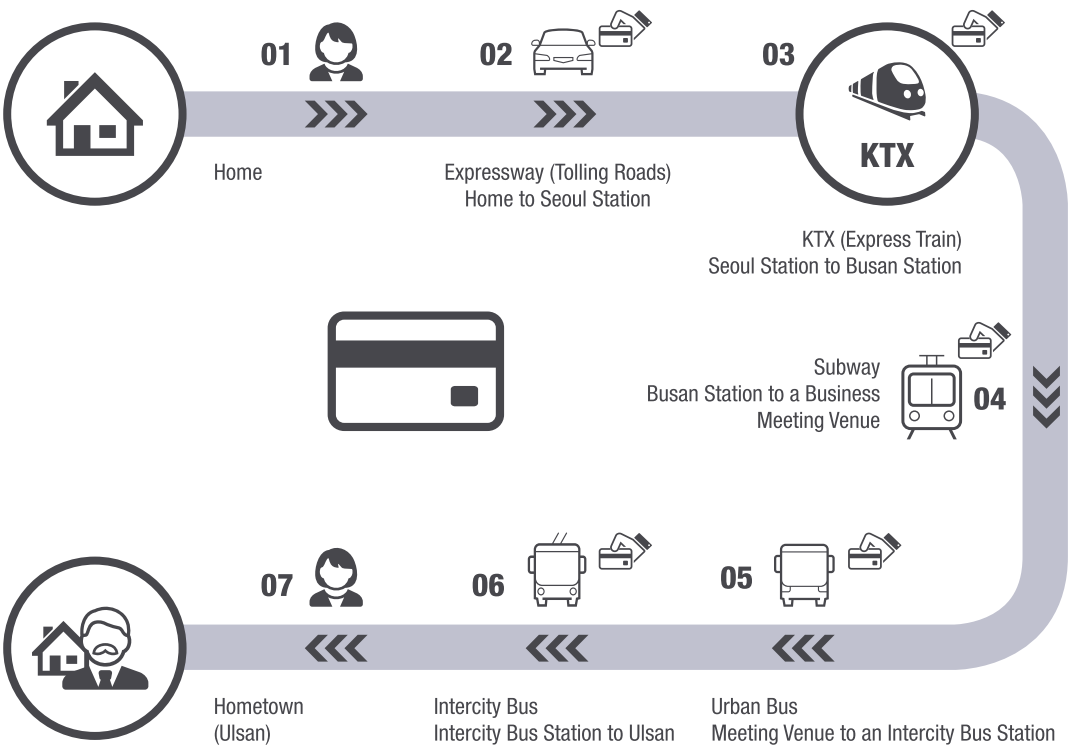
* Source : Seoul Metropolitan City

One Card All Pass

- One Card All Pass ; an integrated card for not only taxi, bus, and subway fares, but also train expressway tolls and even parking systems was developed and introduced in 2014
- The first electronic payment system for public transportation was introduced in 1996, Seoul, Korea
- Based on the reform of the Seoul bus system in 2004, with just one transportation card, users can pay for most public transportation modes including taxis, buses and the subway
- Over 95% of bus passengers and 100% of subway passengers in Seoul use this transportation card

The Way to Go to my Hometown

Mr Kim, living in Seoul, is planning to visit his hometown, Ulsan, and meet his parents after his business trip to Busan
Let's follow Mr Kim's trip with an integrated transportation card

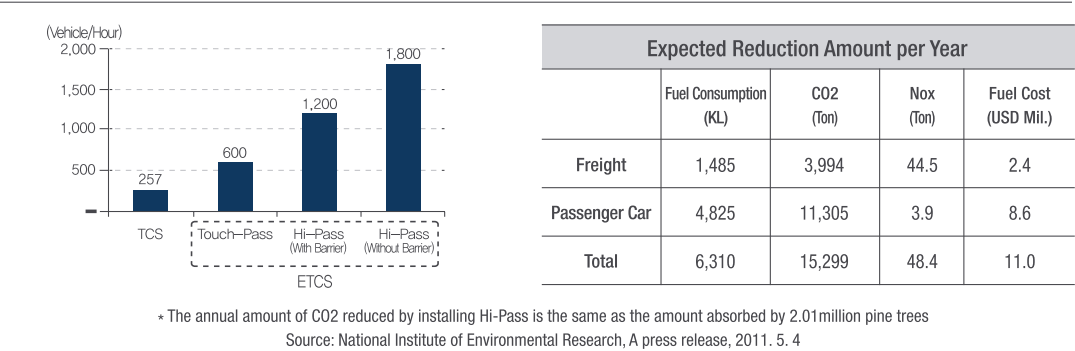
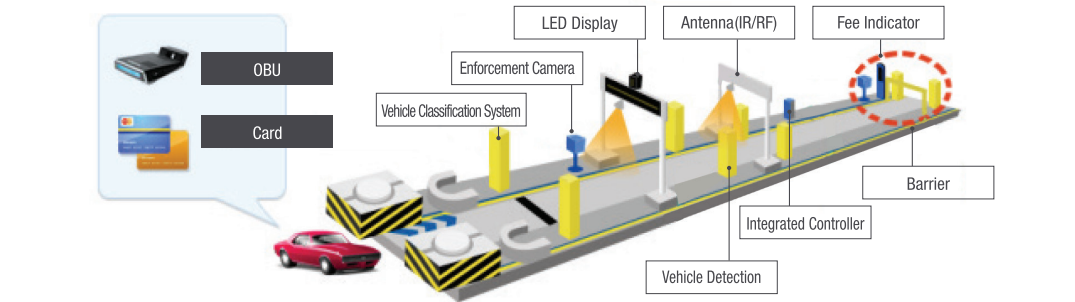
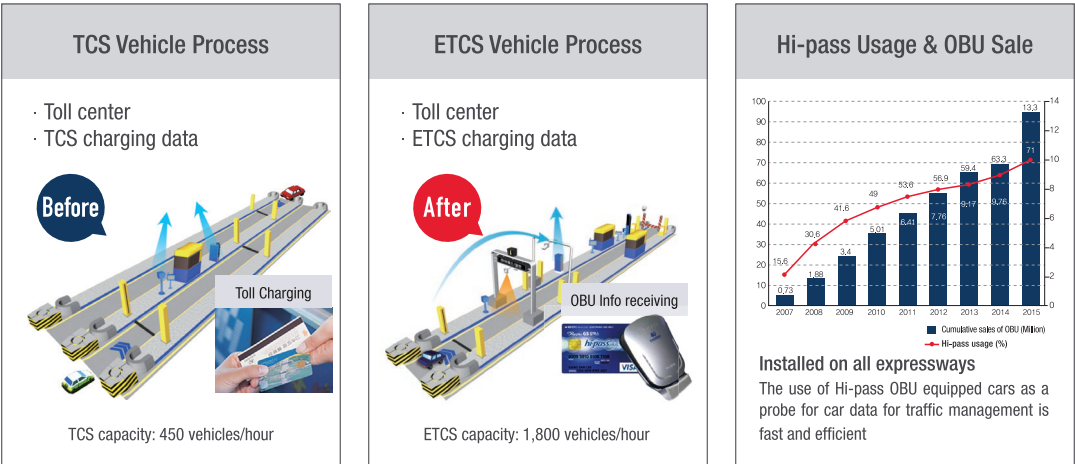


Cooperation (MOU)	Transport Modes	Transport Facilities
<div>· Central & Local Governments</div> <div>· Transport Corporations</div> <div>· Card Companies</div>	<div>· Urban Bus</div> <div>· Railway (Express Rail)</div> <div>· Regional Bus (Express Bus)</div> <div>· Subway</div> <div>· Airport</div> <div>· Public Bicycles</div>	<div>· Expressways (Tolling Roads)</div> <div>· Public Parking Lots</div>

ETCS

Electronic Toll Collection System

- Non-Stop payment at tollgate by communication between OBU and antenna
- Automatic fare deduction from inserted smart card in OBU
- No. of toll plaza : 335ea
- No. of OBU distributed : 14.7 Mil , Usage rate : 75% (As of July, 2016)



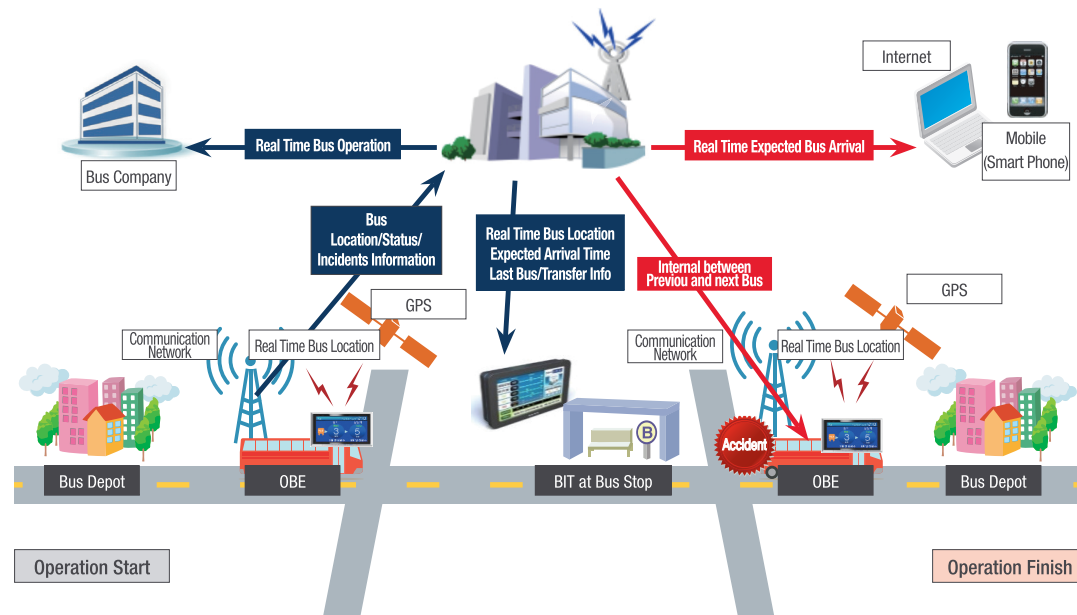
BIMS

Bus Information Management System

- Advanced Public Transportation System to increase its modal share of public transportation by providing real-time bus arrival time, bus's current location, and incident information to the public based on collected data
- Real-time bus arrival time provided through smartphone, BIT at bus stop and in subway station
- Arrival time of adjacent subway, transfer and incident information, bus routes, last bus/transfer information etc. (news and city affairs) provided
- Interval among buses and over-speed driving monitored

BIMS

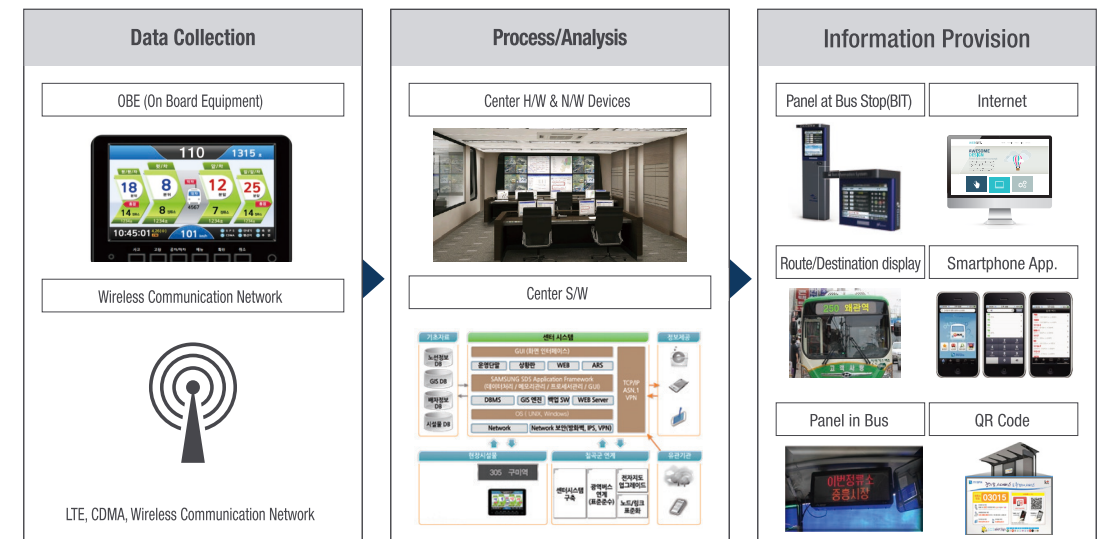
Efficient bus operation and management to improve the bus user's convenience



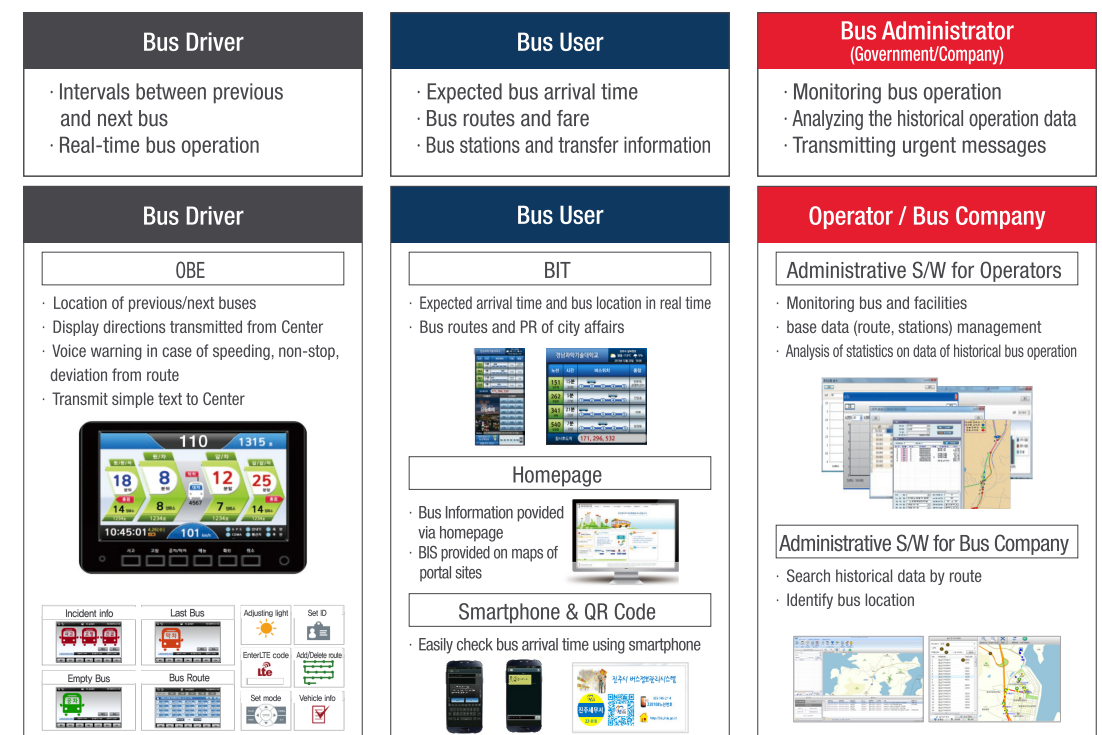
Benefits

- Improve the quality of public transportation by securing punctuality of bus operation
- Increase users' convenience by fast provision of accurate bus operation info.
- Encourage and increase bus usage with high quality BIS
- Effective bus operation management and monitoring by public organization and bus company

Process



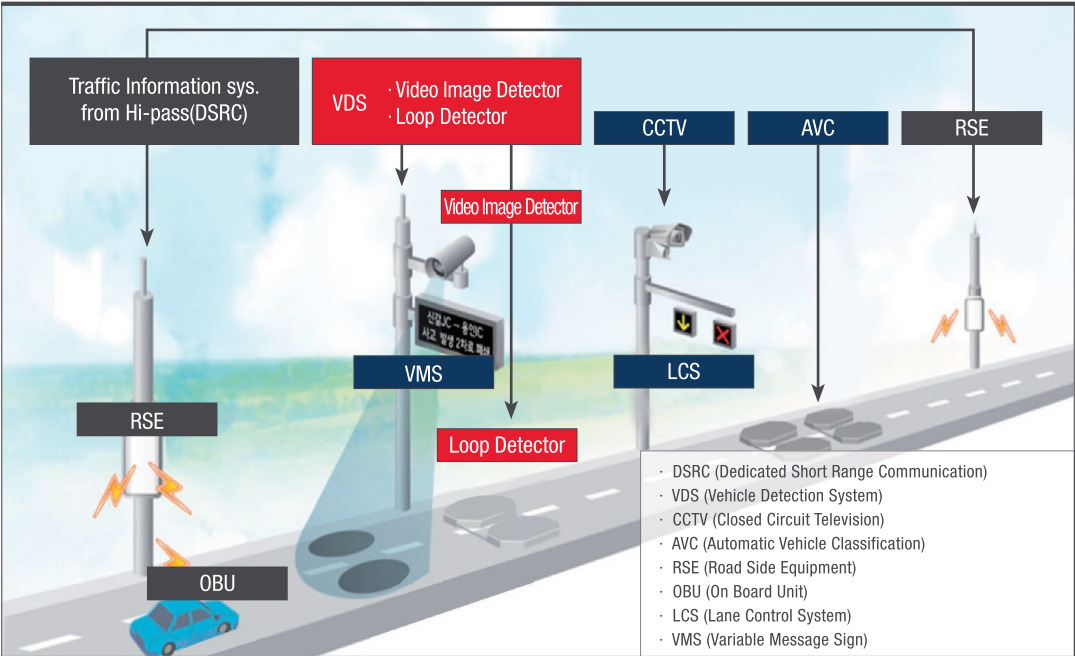
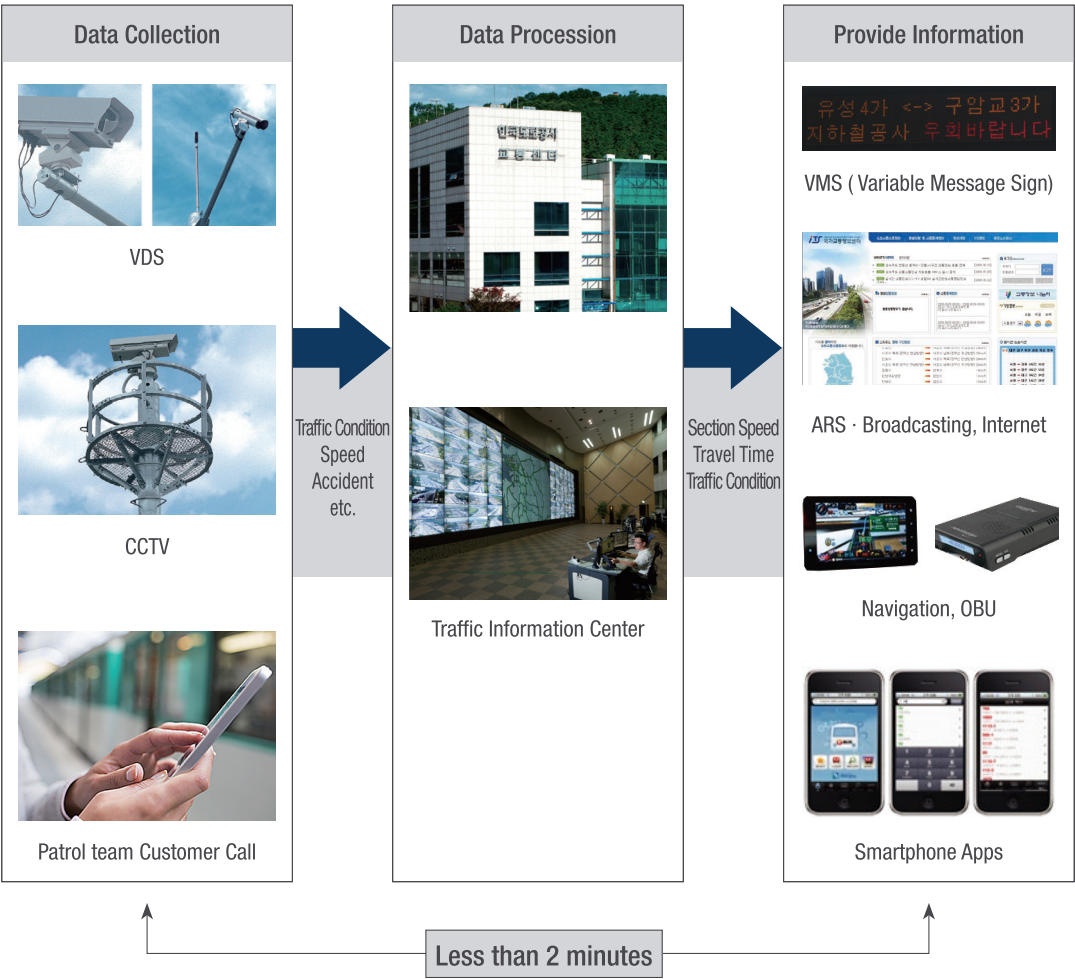
Information Provided



FTMS

Freeway (Expressway) Traffic Management System

ITS system to operate and manage the traffic flow on the expressway



Category	Definition	Relevant Systems														
		VDS / AVC	CCTV	VMS	DSRC	En-force-ment Device	RMS	LCS	Hi pass	WIM	Incident Detection System	Tunnel Wireless Communication	RWIS	Business Center	Transfer in rest area	Center System
Basic Section	Major areas where traffic data should be collected	○	○	○	○	○	—	○	—	—	—	—	○	—	—	○
Tunnel / Bridge	Tunnel and Bridge located in basic section	○	○	○	○	○	—	○	—	—	○	○	○	—	—	○
Rest Area	Rest areas located in basic section	—	—	○	—	—	—	—	—	—	—	—	—	○	○	—
Toll Gate	Setting toll at entrance / exit of expressway	—	○	○	○	—	—	—	○	○	—	—	—	—	—	○
Ramp	Exiting and entering on main expressway lane	—	—	○	—	—	○	—	—	—	—	—	—	—	—	○
Traffic Center	Operation and management of expressway	—	—	—	—	—	—	—	—	—	—	—	—	—	—	○

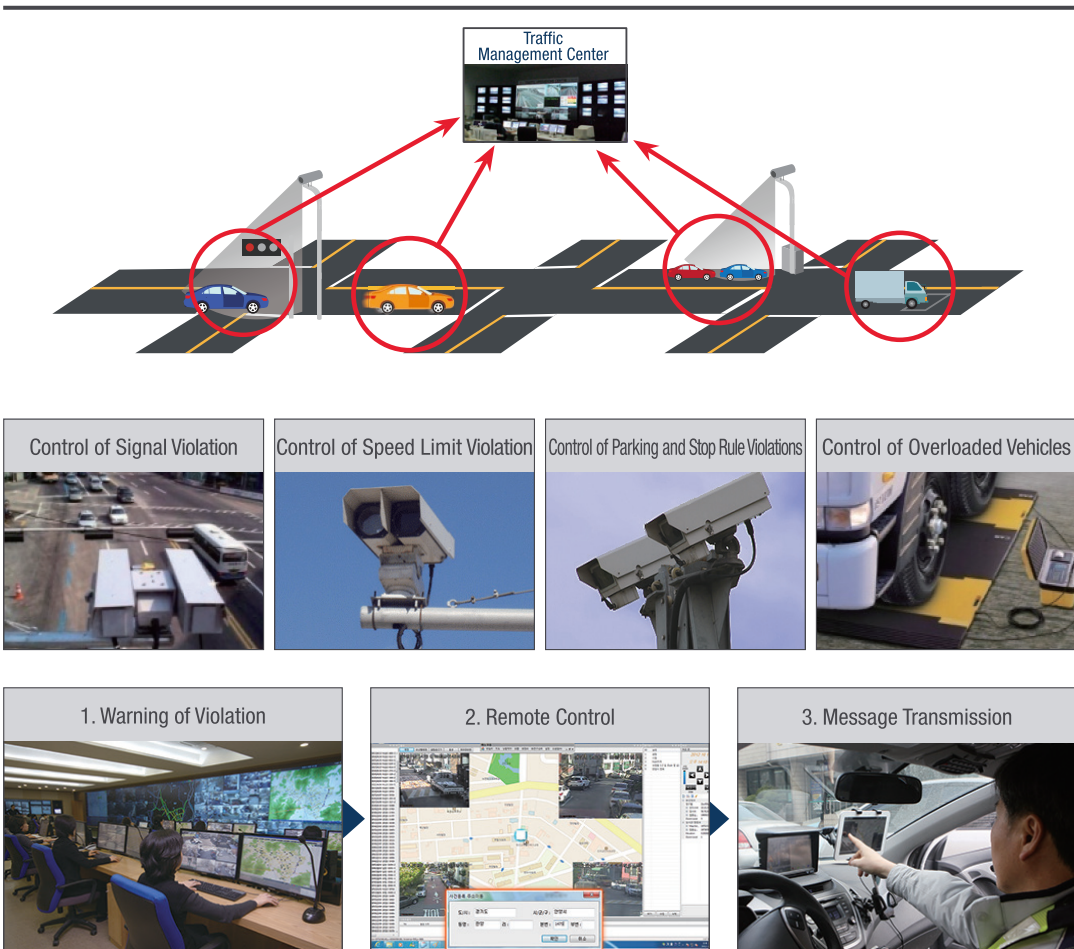
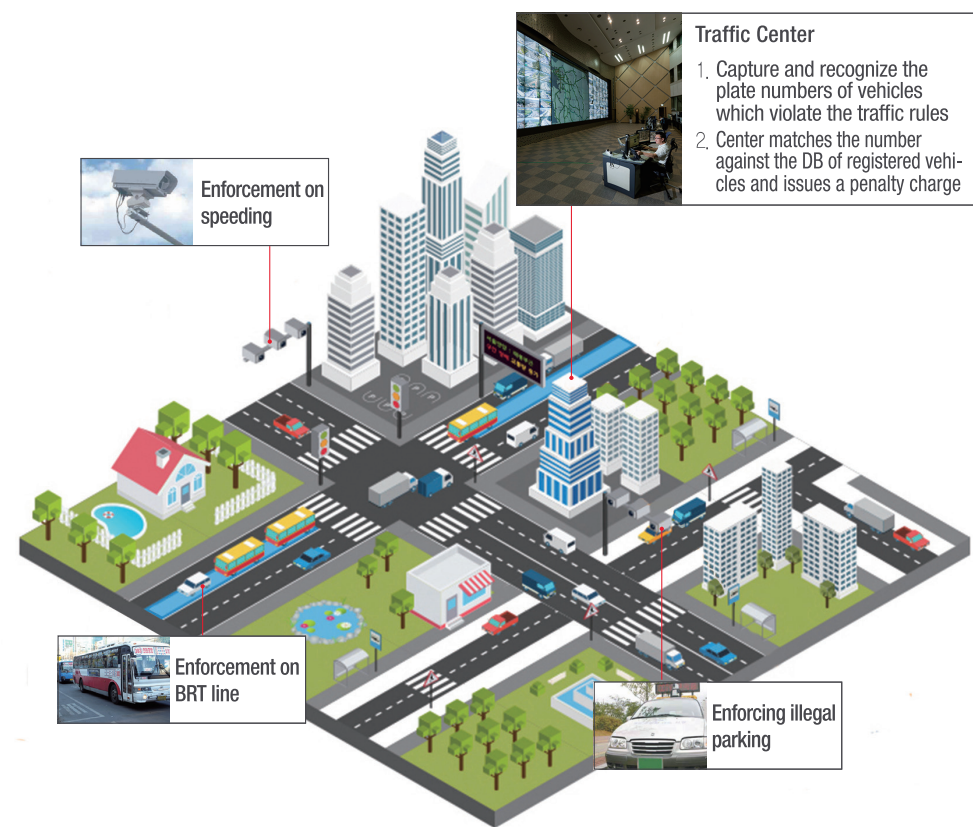
ATES

Automatic Traffic Enforcement System

Automatic Enforcement for speeding, signal violations, illegal parking

Effects

- Reduce traffic accidents and inconvenience caused by vehicles breaking the rules
- Promote safe bus driving by enforcing the vehicles running on BRT line
- Reduce accidents and smooth traffic flow by enforcing illegal parked cars
- Prevent accidents caused by speeding in advance by installing ATES in areas prone to accident or speeding



Case) Illegal parking enforcement system : Capacity improvement



WIM

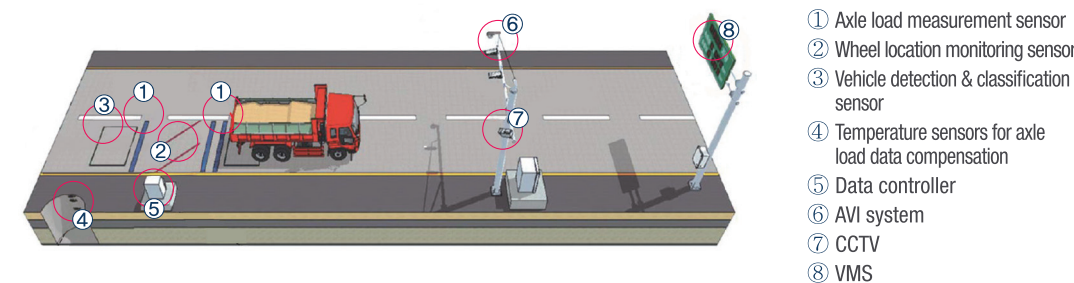
Weigh In Motion

The goal of WIM is to protect roadway structures and increase traffic safety by measuring the height and weight of freight vehicles and enforcing the violation in cases where the freight vehicle is overloaded

Damage Caused by Overloading (Cracks on road, collapse of bridge)



High Speed WIM



Recognition of Vehicle Plate Numbers

② Camera

③ Variable Message Sign

① High Speed WIM

Seoul 00 가 1234
Axle1 Axle2 Axle3 Axle4 Axle5 Axle6
6.1 8.3 8.5 2.3 13.5 12.8

서울 00 가 1234
Max Axle-Weight 13.5t

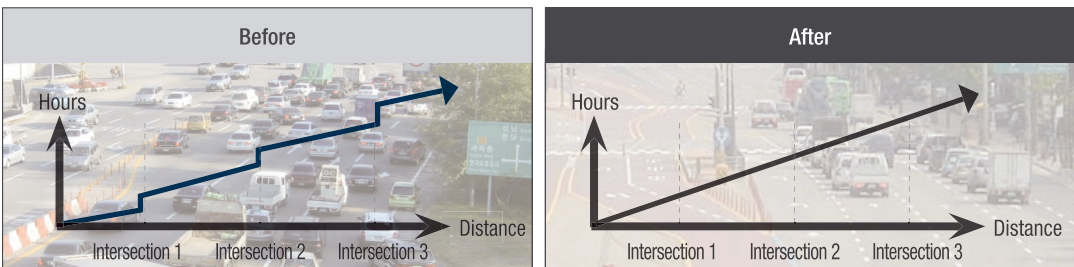
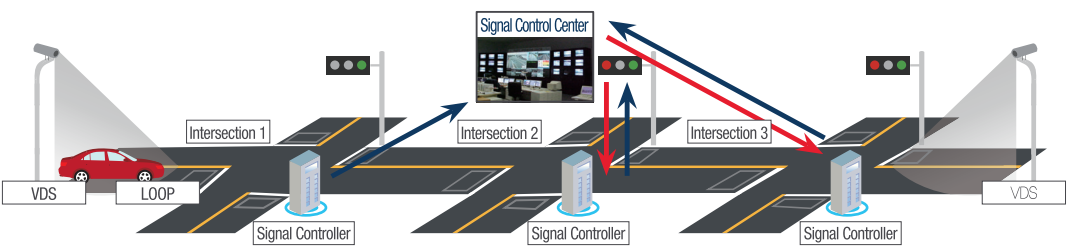
Display on VMS

ATSCS

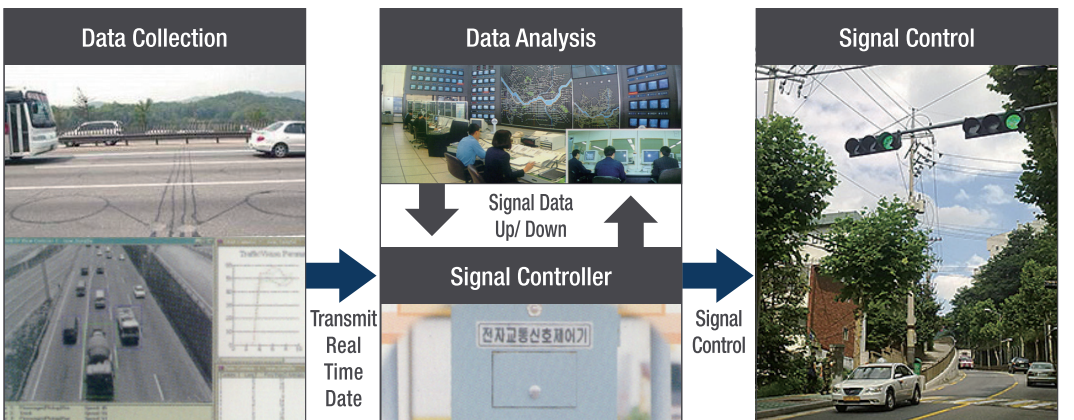
Advanced Traffic Signal Control System

Both Pre-timed Controls (TOD Operation) and Adaptive Traffic Signal Controls are used

ATSCS (Advanced Traffic Signal Control Systems)



Stream Diagram of ATSCS

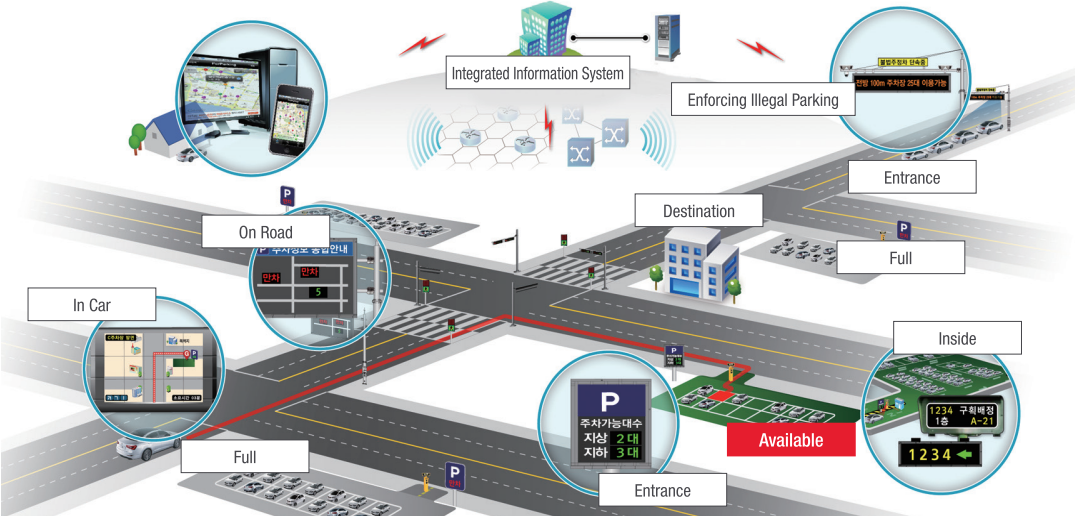


PIS

Parking Information System

Integrated parking guidance system to provide parking information based on detecting the available parking space in real time

System Overview



Wireless Loop Detector	Ultrasonic Detector	Image Analysis (Recognition of Vehicle Plate)	Image Analysis (Recognition of Space Occupancy)
Detection Area/1ea · 1 lot	Detection Area/1ea · 1 lot	Detection Area/1ea · 3 lots	Detection Area/1ea · 10-15 (maximum)
Strength · No impact by circumstances · Easy installation	Strength · High reliability · Inducing parking	Strength · Easy installation, security function included · Possible to set detection area	Strength · Easy installation, low cost · Possible to set detection area
Weakness · Counting error occurrence · High maintenance cost	Weakness · Sensitive to circumstances · Ineffective installation	Weakness · Sensitive to circumstances · High initial investment	Weakness · Sensitive to installed camera location

NTIC

National Traffic Information Center

National Traffic Information Center

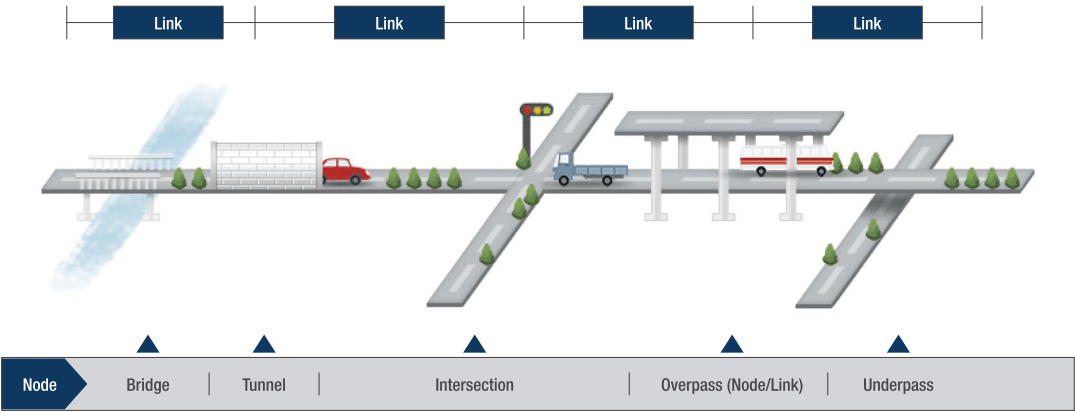
Based on National Transport System Efficiency Act (Article 90. The establishment of NTIC), the traffic data collected by local governments, regional administrations, Korea Expressway Corporation, Expressway concessionaries and private sectors are gathered and processed in NTIC. Subsequently, NTIC provides the refined traffic information back to these providers and the major national organizations including the National Emergency Management Agency and National Intelligence Service as well as private citizens

Main Roles and Responsibilities

- Connect/Integrated traffic data collected in real time from nationwide as a hub and provide integrated traffic information
- Operation of ITS standards management system
- Operation of task force team to manage the traffic for special occasions (national holidays, major accidents, typhoons, heavy snow)

Standardized Node / Link Management System

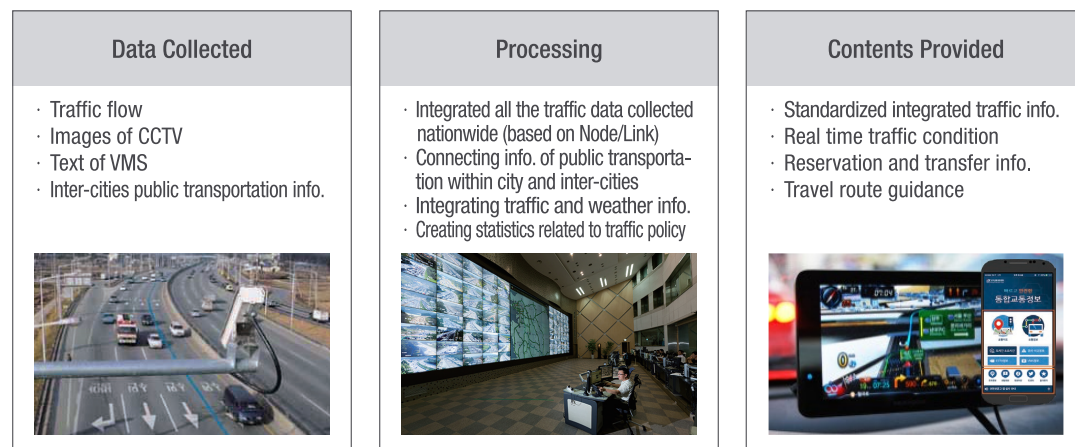
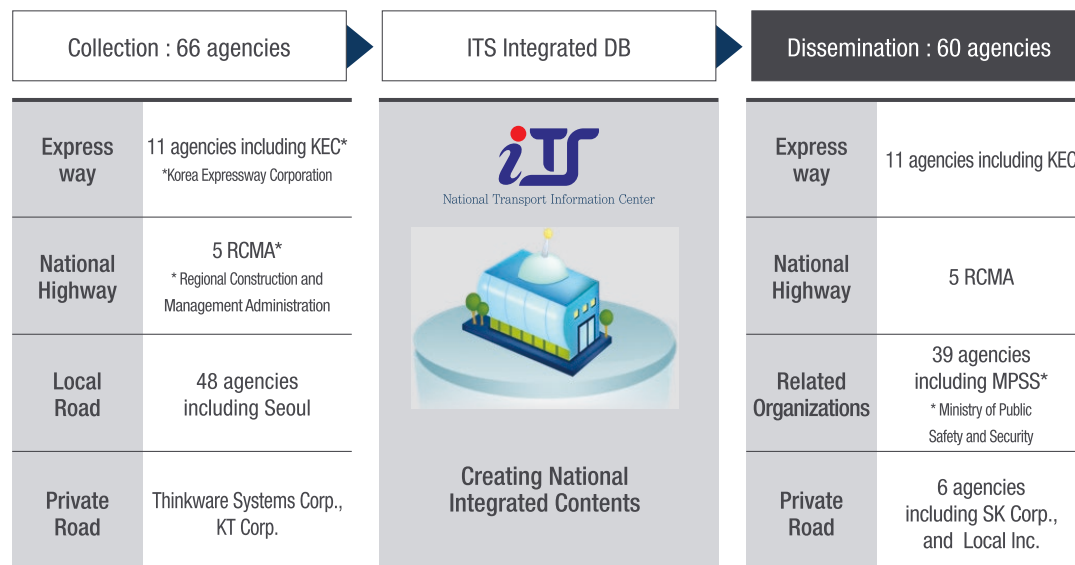
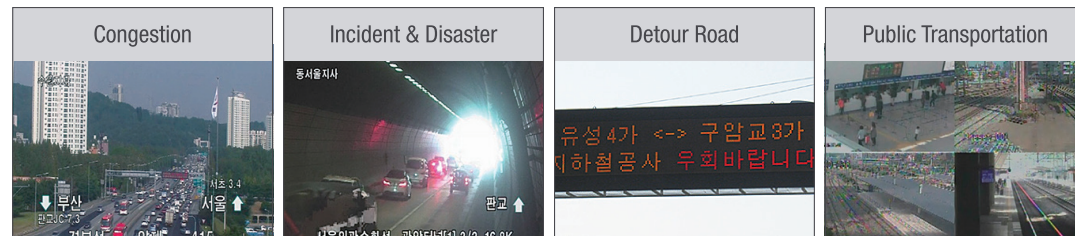
Node and Link, the units of electronic map, are systematically managed at the national level in NTIC so that it provides the unified conditions with various stakeholders like ITS operators and project contractors to efficiently connect the traffic data collected respectively



- Node : A point or specific spots where traffic flows are merged, diverged and changed on roads such as intersections, junctions or the entrance of tunnels
- Link : A linkage of nodes such as roads, bridges, overpasses, underpasses and tunnels

Latest ITS Trends and Policies

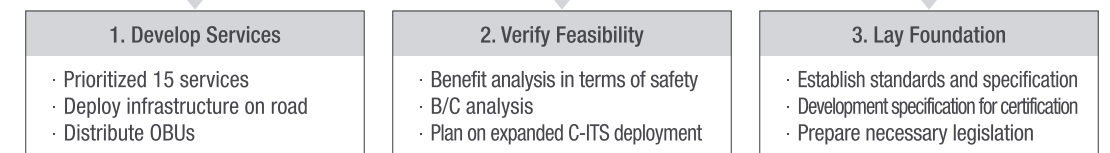
Real-Time Monitoring & Management 24 / 7



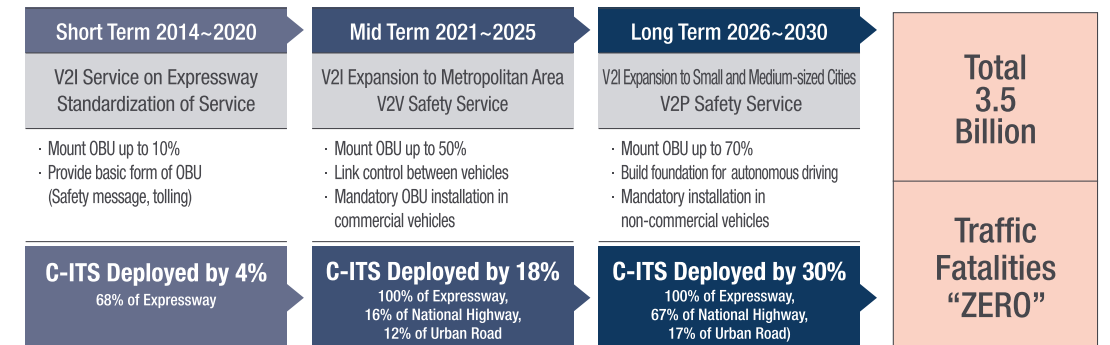
C-ITS (Cooperative ITS)

Overview of C-ITS Pre-Deployment Project

Object	Verifying technologies and services and laying the foundation for C-ITS deployment
Period	July 2014 ~ July 2017
Area	88km long on expressway near Sejong city and Daejeon city, national highway, and urban road
Scope of Project	

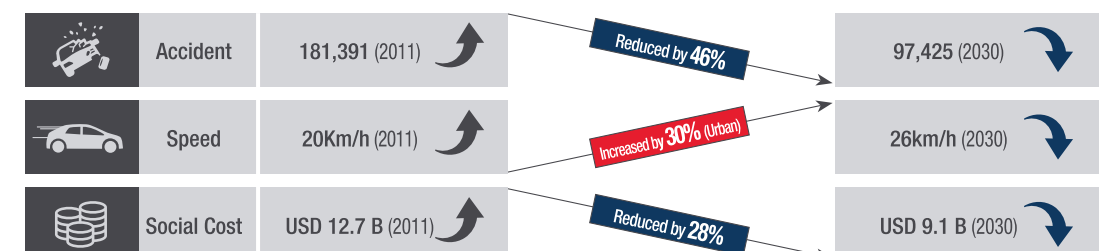


C-ITS Master Plan



Expected Effect

If C-ITS is deployed as a Master Plan, it is expected to provide numerous benefits, such as reducing accidents by 46%, social cost savings of 28%, and increasing speed by 30% by 2030




Major Services

15 services provided to achieve safer transportation

01


Probe Data Collection



Location based probe data collection (V2I)

02


Location Base Traveler Information Service



Location based traveler information service such as VMS(I2V)

05


RWIS (Road Weather Information System)



Microscopic road weather & surface condition information service via RSE

06

Work Zone Warning



Broadcasting work zone warning via I2V, V2V

09

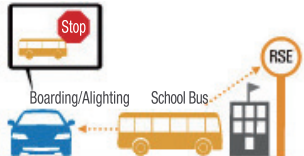
Bus Management



Fleets monitoring system via DSRC collecting locations and violating conditions

10


School Bus Warning



Broadcasting boarding or alighting condition from the school bus

13


FCW / EEBL



Warns a driver when the front vehicle makes hard breaking or stopping

14

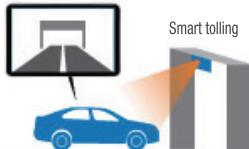
EV Approaching Warning



The emergency vehicle broadcasts its conditions for priority

03


Smart Tolling (Multi Lane Free Flow Tolling)



Multi lane free flow toll collection based on DSRC(WAVE)

04


Road Hazard Warning



Radar detector recognizes obstacles on the road then broadcasting warning messages via RSE

07


Red Light Violation Cars Warning



Detecting red light violation cars then broadcasting caution warning

08

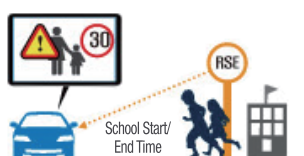
Right Turn Assist



Notifies a driver who is attempting to make a right turn when it is not safe to proceed

11


School Zone Safety



Alerting school zone and advising recommended speed

12

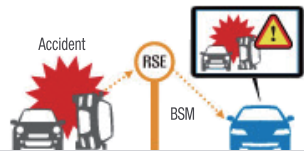
Pedestrian Warning



Warns a driver when pedestrians are near a crosswalk

15

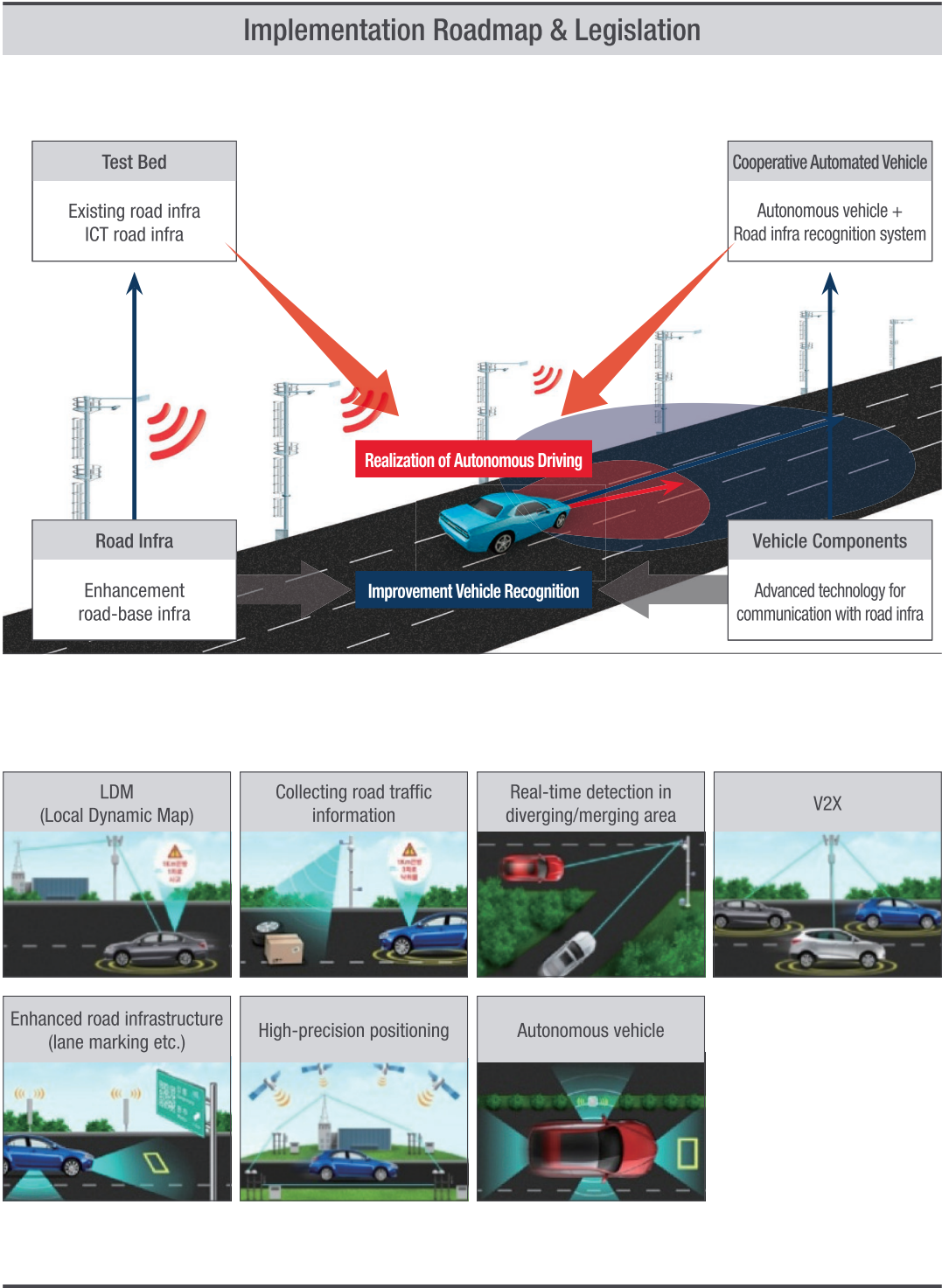
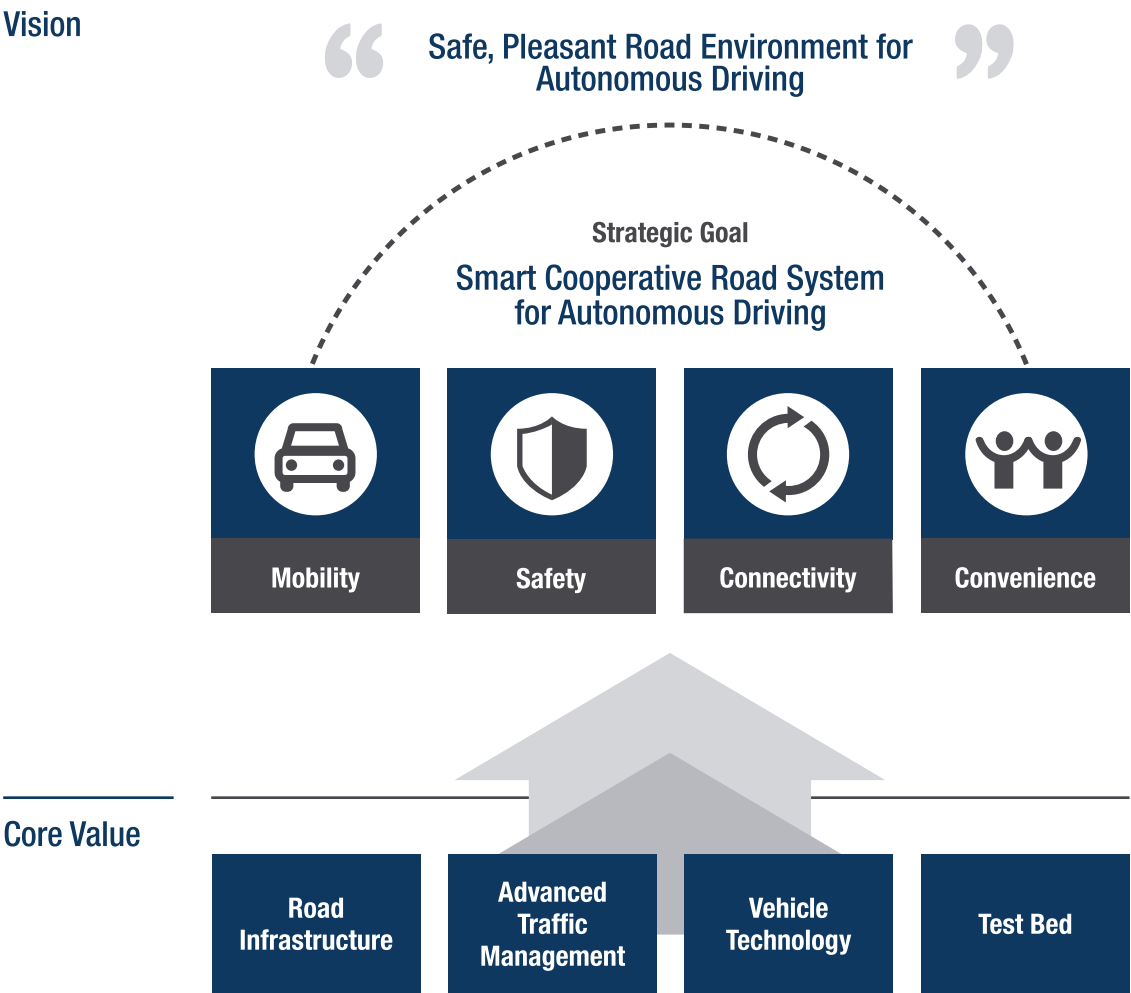
Emergency Warning



The broken car broadcasts its conditions to prevent secondary accidents

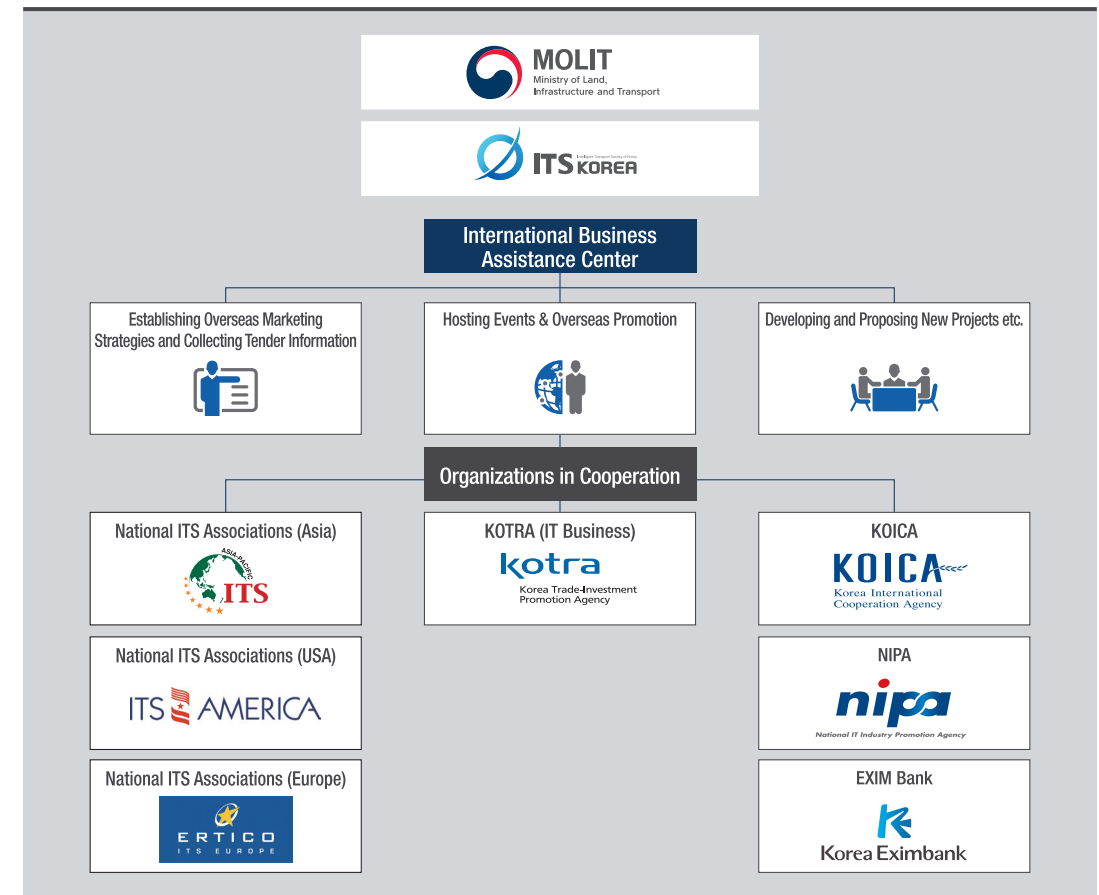
C-AHS

Project Title	Cooperative Automated Driving Highway System
Goal	Development of Road Infrastructure and Systems to Cooperate with Autonomous Vehicles for Safe and Efficient Autonomous Driving
Period	July 2015 ~ July 2020 (5 years)
Budget	31 Million USD (75% of government investment & 25% private investment)

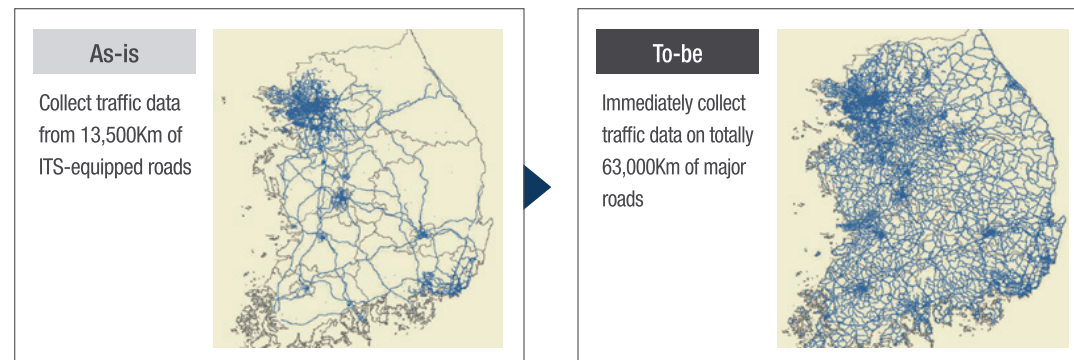
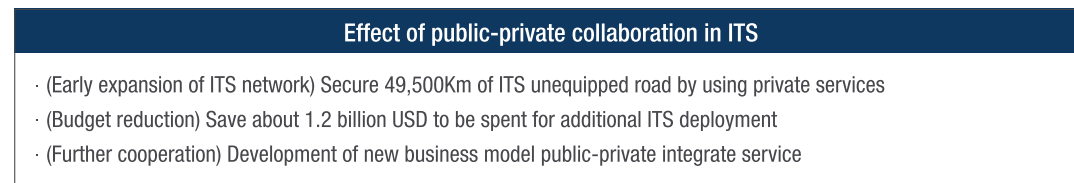
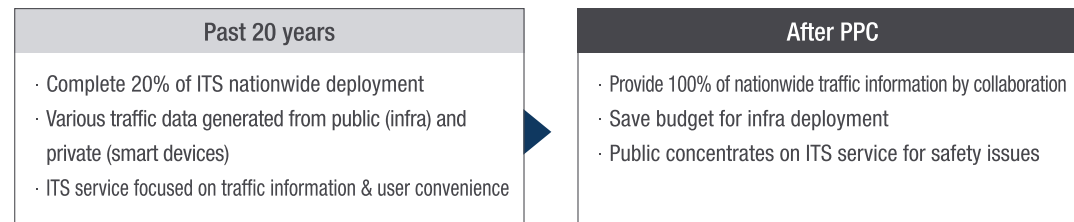


ITS International Cooperation and Overseas Business

International Business Assistance Center



Public-Private Cooperation on Traffic Information



Export Status of Korean ITS

Main Features

Korea ITS exported to 37 countries and achieved a value of USD 1.1 billion since 2006

· Source : Statistical survey done by ITS Korea

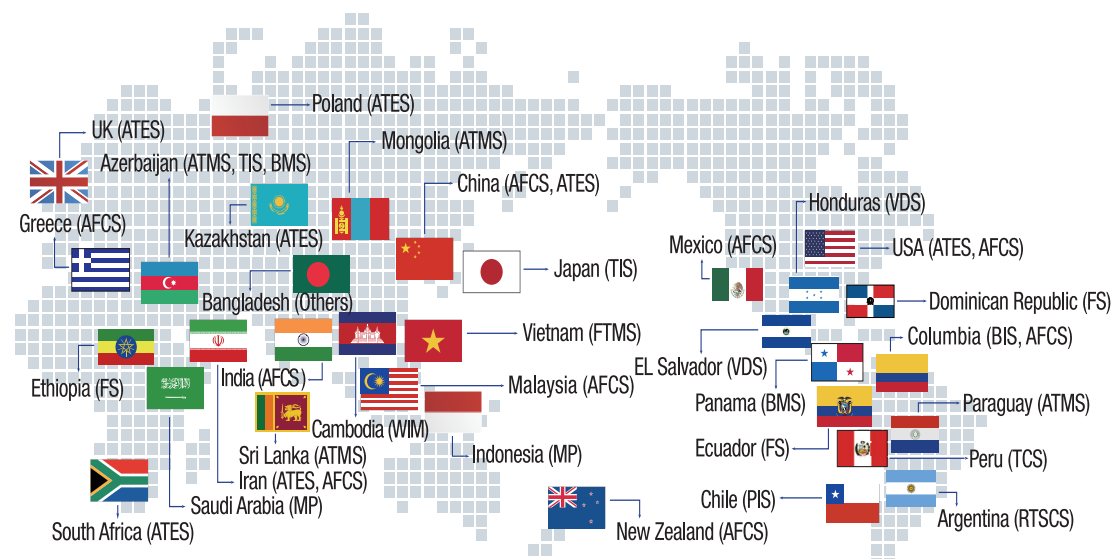
Having strength on Traffic Management (Traffic Center), Automatic Fare Collection (Transport Card), Public Transportation (Bus Information System)

- (Traffic Management) `08 Advanced Traffic Management System ITS system, Baku City, Azerbaijan Republic
- (AFC/Public Transportation) `11 e-Ticketing & Bus Information System, Bogota City, Columbia

Categorized by country, exports concentrate on developing countries in East South Asia and Latin America including Columbia, Azerbaijan, Vietnam, and Mongolia

AFCS : Automatic Fare Collection System
ATMS : Advanced Traffic Management System
PIS : Parking Information System
TIS : Traffic Information System
VDS : Vehicle Detection System
MP : Master Plan
ATES : Automatic Traffic Enforcement System

BMS : Bus Management System
FTMS : Freeway Traffic Management System
TCS : Toll Collection System
WIM : Weigh In Motion
FS : Feasibility Study
RTSCS : Responsive Traffic Signal Control System
BIS : Bus Information System



Representative Cases

Case 1 ITS in Bogota, Columbia

- Project : e-Ticketing and integrated BMS (Bus Management System) in Bogota
- Scope of work : Deploy e-Ticketing system and BMS for 40 BRT stations and 12,000 buses
- Contract time : FY 2011
- Contractor : LG CNS



Case 2 ITS in Baku, Azerbaijan

- Project : ITS Establishment in Baku City
- Scope of Work : Deploy Urban Traffic Management System and BIS (Bus Information System)
- Contract Time : FY 2008
- Contractor : SK C&C (Presently merged as SK Holdings)



Case 3 ITS in Medellin, Columbia

- Project : Establishment of Medellin ITS Master Plan
- Scope of Work : Support in drawing up ITS Master Plan and designing for Medellin using Korean ODA fund
- Contract Time : FY 2016
- Contractors : ITS Korea, KEC, Tracom

International Workshop for Capacity Building on ITS

Objectives

- To understand the concept, background and necessity of ITS introduction in Korea
- To learn Korean strategies including laws and policies to effectively deploy ITS in Korea nationwide
- To learn individual ITS services in aspects of technology – Advanced Traffic Management Systems, Bus Information System, and Electronic Toll Collection System etc.
- To learn the recent technological developments in ITS
- To exchange statistical facts and ideas on urgent issues facing each city and find customized solutions to deal with those problems
- To strengthen future cooperation in the ITS area

DETAILED PROGRAM SCHEDULE

Date / Time	Program Description
1 Day Arrival	
—	Move to KOICA
	Hotel check-in & free time
2 Day KOICA Orientation (OT Schedule can be subject to change)	
09:30~10:20	Introduction to KOICA & Program
10:20~10:50	Commemorative photo shoot
10:50~11:20	ICC (International Cooperation Center) tour
11:20~12:00	Homepage registration
12:00~13:20	Welcoming luncheon
13:20~14:30	Introduction to daily life in Korea
14:30~16:30	Training in basic Korean
16:30~17:30	Training on ODA or gender issues
3 Day Orientation / Lecture / Country Report	
08:30~09:00	Orientation
09:00~12:00	[Lecture 1] Current status of ITS in Korea
12:00~14:00	Lunch
14:00~16:00	Presentation on the country report (by each city)
16:00~17:00	Action plan methodology
4 Day Lectures	
09:00~12:00	[Lecture 2] National ITS policy & plan
12:00~14:00	Lunch
14:00~17:00	[Lecture 3] ITS standardization
17:00~18:00	Group discussion on Action plan
5 Day Lectures / Study Visit	
09:00~12:00	[Lecture 4] Transportation policy in Seoul city
12:00~13:00	Lunch

13:00~14:00	Move to TOPIS
14:00~16:00	[Study visit] Seoul TOPIS & hands-on experience of public transportation
16:00~17:00	Move to LG CNS
17:00~18:30	[Study Visit] LG CNS
18:30~19:30	Move back to KOICA
6 Day Field Trip	
08:00~11:30	Move to Daegu
11:30~13:00	Lunch
13:00~14:00	[Field trip] KIAP(Korea Intelligent Automotive Parts Promotion Institute) - Proving ground for driving
14:00~16:00	Move to Busan
16:00~17:00	[Field trip] : Busan traffic information center
17:00~18:00	Move to hotel and check in
18:00~	Dinner & free time
7 Day Field Trip	
10:00~12:00	[Field trip] Samwon FA – transportation card system and facilities
12:00~14:00	Lunch
14:00~18:00	Busan city tour
18:00~20:00	Move on to Gyeongju and dinner
8 Day Field Trip	
09:00~12:00	Gyeongju cultural experience
12:00~16:00	Lunch and return to KOICA
16:00~	Free time
9 Day Free Time	
10 Day Lectures / Study visit	
09:00~12:00	[Lecture 5] Introduction of ITS in expressway

12:00~13:00	Lunch
13:00~14:00	Move on to Anyang city
14:00~16:00	[Study visit] Anyang U-traffic center
16:00~17:00	Move to KOICA
11 Day Lectures	
09:00~12:00	[Lecture 6] Traffic signal management & control
12:00~14:00	Lunch
14:00~17:00	[Lecture 7] Traffic center system
17:00~18:00	Group work on Action plan
12 Day Lectures / Study Visit	
09:00~12:00	[Lecture 8] Weigh-in-motion system
12:00~13:30	Lunch
13:30~14:00	Move to Korea Expressway Corporation (KEC)
14:00~16:00	[Study visit] Smart Highway demonstration
16:00~16:30	Move to KOICA
13 Day Lectures	
09:00~12:00	[Lecture 9] Bus information system
12:00~14:00	Lunch
14:00~17:00	[Lecture 10] Electronic payment for public transportation
17:00~18:00	Group work on Action plan
14 Day Cultural Experience	
09:00~18:00	Seoul city tour
15 Day Free Time	
09:00~18:00	Free time
16 Day Lectures / Study Visit	
09:00~12:00	[Lecture 11] ITS communication and Network
12:00~13:30	Lunch
13:30~14:00	Move to Korea Expressway Corporation (KEC)
14:00~16:00	[Study visit] KEC traffic information center
16:00~16:30	Move to KOICA
16:30~18:00	Group work on Action plan
17 Day Lectures / Study Visit	
09:00~11:30	[Lecture 12] Traffic information and Big data
11:30~12:30	Lunch
12:30~14:30	Move to National Traffic Information Center (NTIC)
14:30~16:00	[Study visit] NTIC (National Traffic Information Center)
16:00~18:00	Move to KOICA
18 Day Lectures	
09:00~12:00	[Lecture 13] Parking information system
12:00~14:00	Lunch
14:00~17:00	[Lecture 14] ITS project process flow
17:00~18:00	Group work on Action plan
19 Day Lectures	

09:00~12:00	[Lecture 15] ITS performance evaluation
12:00~14:00	Lunch
14:00~16:00	Review and final check-up on Action plan
16:00~21:00	Farewell dinner - Seoul N Tower
20 Day Action Plan / Closing Ceremony / KOICA Evaluation	
09:00~12:00	Action plan presentation by each city and giving feedback
12:00~13:00	Lunch
13:00~14:00	Action plan presentation by each and giving feedback
14:00~14:30	Closing ceremony
14:30~16:00	KOICA evaluation
16:00~17:00	Departure orientation
21 Day Departure	

