

Introduction to the Operation of National Transport Information Center (NTIC)

In March 2025



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operation



General Status

- 01 Foundation and Main function
- 02 History of NTIC

01

Foundation and main functions

Foundation

- National Transport System Efficiency Act •


Article 34

Establishment of Headquarters for Special Transport Measures


Article 90

Establishment, etc. of National Intelligent Transport System Information Center

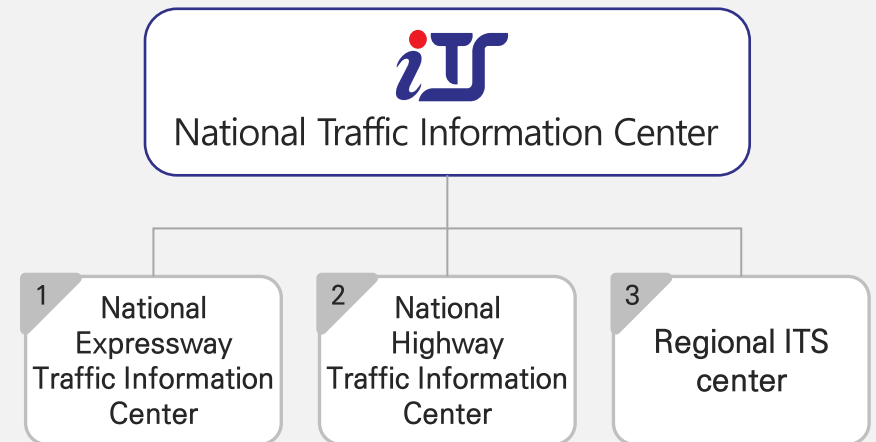
Main functions and tasks

01 Real-time connection, integration and provision of traffic information at national level 

02 Standard node link establishment & management 

03 Operation of headquarters for special transport measures (including national holidays, large-scale accident, wind/flood hazards, heavy snowfall, etc.) 

Hierarchy chart



iTS History of NTIC

- 1995 • Establishment of general construction/transport situation room
- Collection/provision of national highway traffic information
- 1333 traffic information call service
- 2004 • Establishment of national expressway bypass traffic information
- Internet traffic information service
- 2005 • Establishment/operation of integrated nationwide traffic information system.
- 2008 • Renamed to [National Traffic Information Center]
- Establishment of CCTV video data sharing system
- 2009 • Establishment of video conference system between agencies for special traffic measures
- 2010 • Establishment of mobile web service system
- National expressway and national highway CCTV data provision service
- 2011 • Establishment of mobile smartphone service
- Establishment of mobile CCTV data provision system
- 2012 • Relocation of NTIC (Gwacheon → Sejong on Dec. 10, 2012)
- Open platform service improvement
- 2014 • Establishment of a system to collection traffic data from private sectors
- 2016 • Integration of websites of the NTIC and regional agencies
- Development and provision of traffic statistical information content
- 2017 • Establishment of national highway bypass information provision service
- Remodeling of the situation room
- 2018 • Provision of 119 emergency information to drivers' navigators
- 2020 • Advancement of operating system
- Establishment of integrated management system about incidents/disasters
- 2021 • Development and provision of emergency push service for navigation companies

Center facilities

- | | |
|--------------------|--|
| Center facility 01 | Operation board
(70 inches DLP 12 sides) |
| Center facility 02 | 33 desks for staff |
| Center facility 03 | Systems for traffic information connection and providing public services |

A total of **392 systems**

Employees

- Project management : 7 persons
(Korea Expressway Corporation)
- Operation/maintenance : 13 persons

A total of **20 people**





Roles of NTIC

- 01 Nation-wide integrated traffic information connection management
- 02 Traffic monitoring and public service provision
- 03 Standard node link establishment & management
- 04 Headquarters for special and emergency traffic measures

Traffic information collection (Road management agencies, etc)

Road management agencies



(Public/Private) expressway, national highway, local roads, town roads

Private traffic information companies



Train, airplane and bus



Traffic data
CCTV



Traffic data

CCTV

Integration·processing of traffic data



National Transport Information Center

Integrated nation-wide traffic information
Processing standard node link traffic information

Integrated traffic data

Traffic data provision (to the public and relevant agencies)

Traffic information to the public



internet Smartphone app




Variable Message Sign Navigating system

Traffic data to relevant agencies

The central government, road management agencies, regional traffic policy agencies, research institutes and private sector

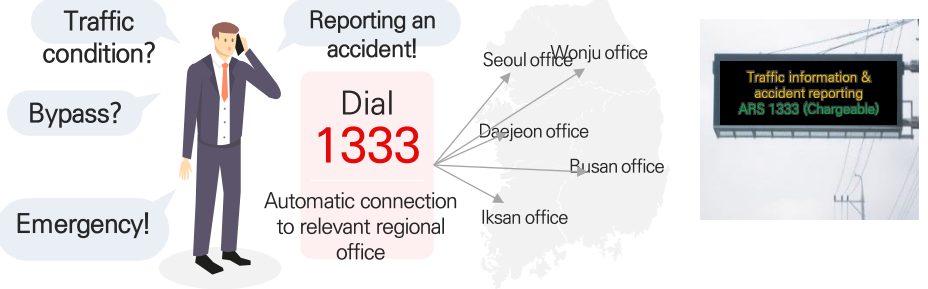
Traffic monitoring and public service provision

24-hour real time traffic monitoring



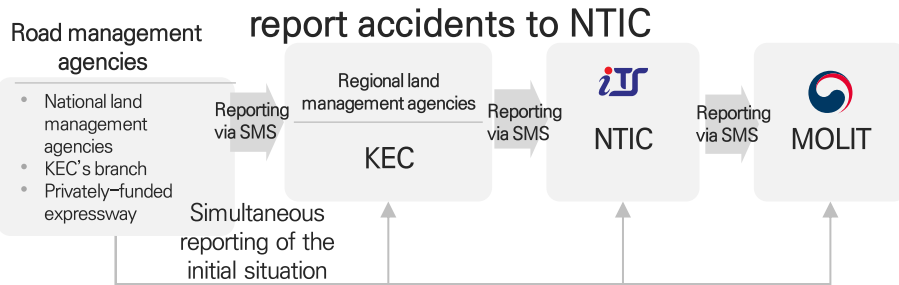
ARS traffic information service (1333)

Automatic connection to regional offices for traffic information and accident reporting

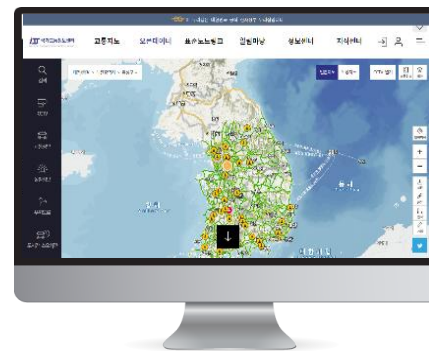


Reporting road condition & promotion via SMS

Road management agencies (such as national land management agencies, KEC's regional branches and privately-funded expressway organization)



National ITS website & smartphone app/web services



National ITS website



Smartphone app/web service

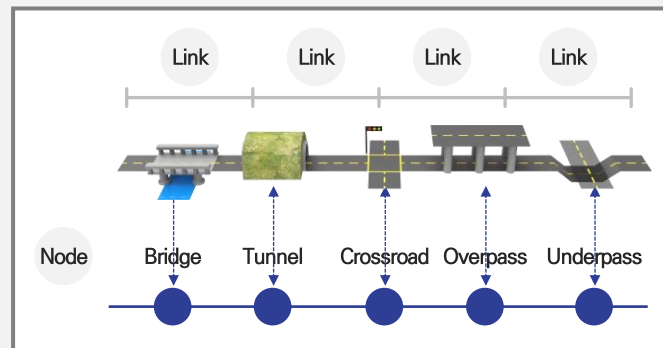
Standard node link establishment & management

- ✓ Electronic traffic maps that are established and managed by MOLIT to collect and provided traffic information. It is the basic unit of the national standard for exchanging traffic information.
(The current establishment rate is 100%)

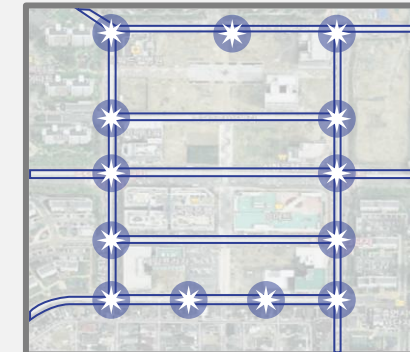
Actual roads



Basis for establishment



Standard node link



- ✓ Node: Roads that are defined by Road Act. They refer to points where traffic flow changes such as crossroads, junctions and tunnel entrances (206,086 nodes).
- ✓ Link: A road segment that connects a node to a node following the shape of roads (548,614 links and 213,394 km)

Headquarters for special transport measures

- 1 **Headquarters for the central government's special transport measures** (such as road, train and airplane) for national holidays
- 2 **Reporting and promotion of situation** to MOLIT and relevant agencies
- 3 **Video conference** between headquarters for special transport measures and affiliated organizations



Headquarters for emergency measures

- 1 **Headquarters for emergency measures** when a natural disaster such as earthquake, typhoon and heavy snowfalls or deadly traffic accident occurs
- 2 **Headquarters for temporary transportation measures** when a strike occurs in logistics, taxi or public bus area
- 3 Operation of the Ministry of Land, Infrastructure, and Transport countermeasures headquarters related to COVID – 19





Main Service

- 01 Traffic forecast service
- 02 Open API service
- 03 Incident notification service
- 04 CCTV web viewer system service

Introduction of traffic forecast service

For bypasses of heavily congested expressways during national holidays and weekends (49 sections including Yangjae-Anseong on Gyeongbu Expressway)



The improvement of traffic forecast algorithms and expansion of forecast service sections through research service (2022) (The addition of predictors including weather forecast / The Expansion of 6 Sections)



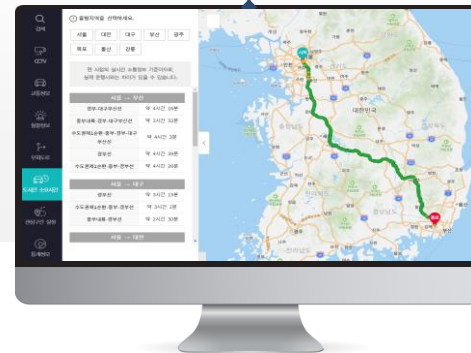
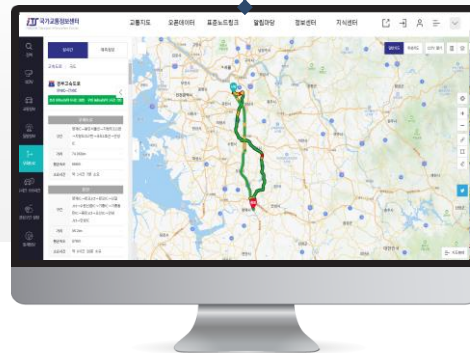
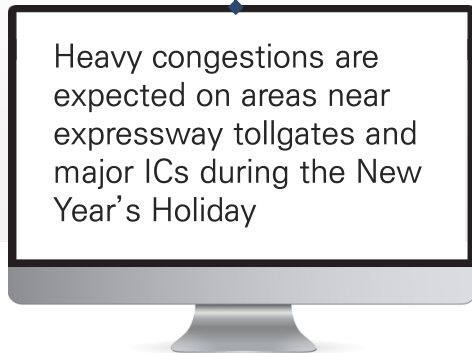
.. Traffic Forecast Service ..

Traffic forecast

Expected time/route

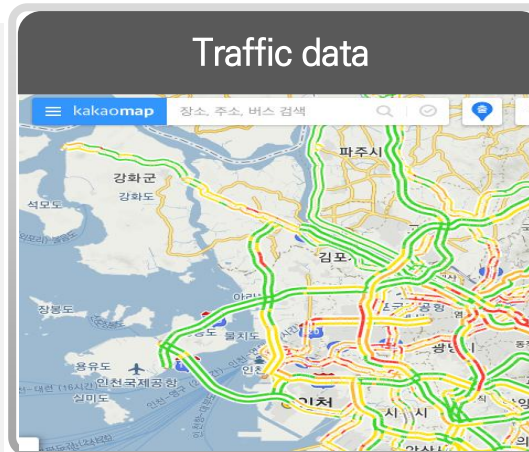
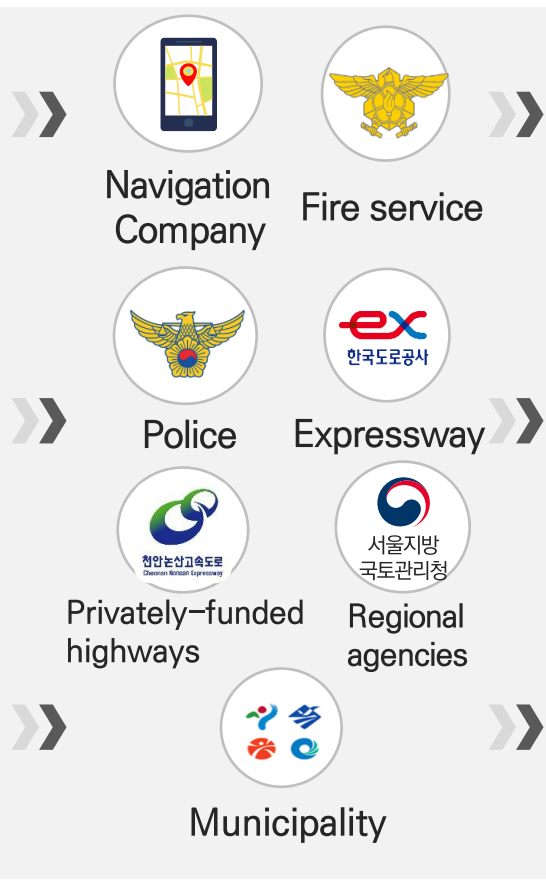
Expected driving time between two cities

Expected congestion section

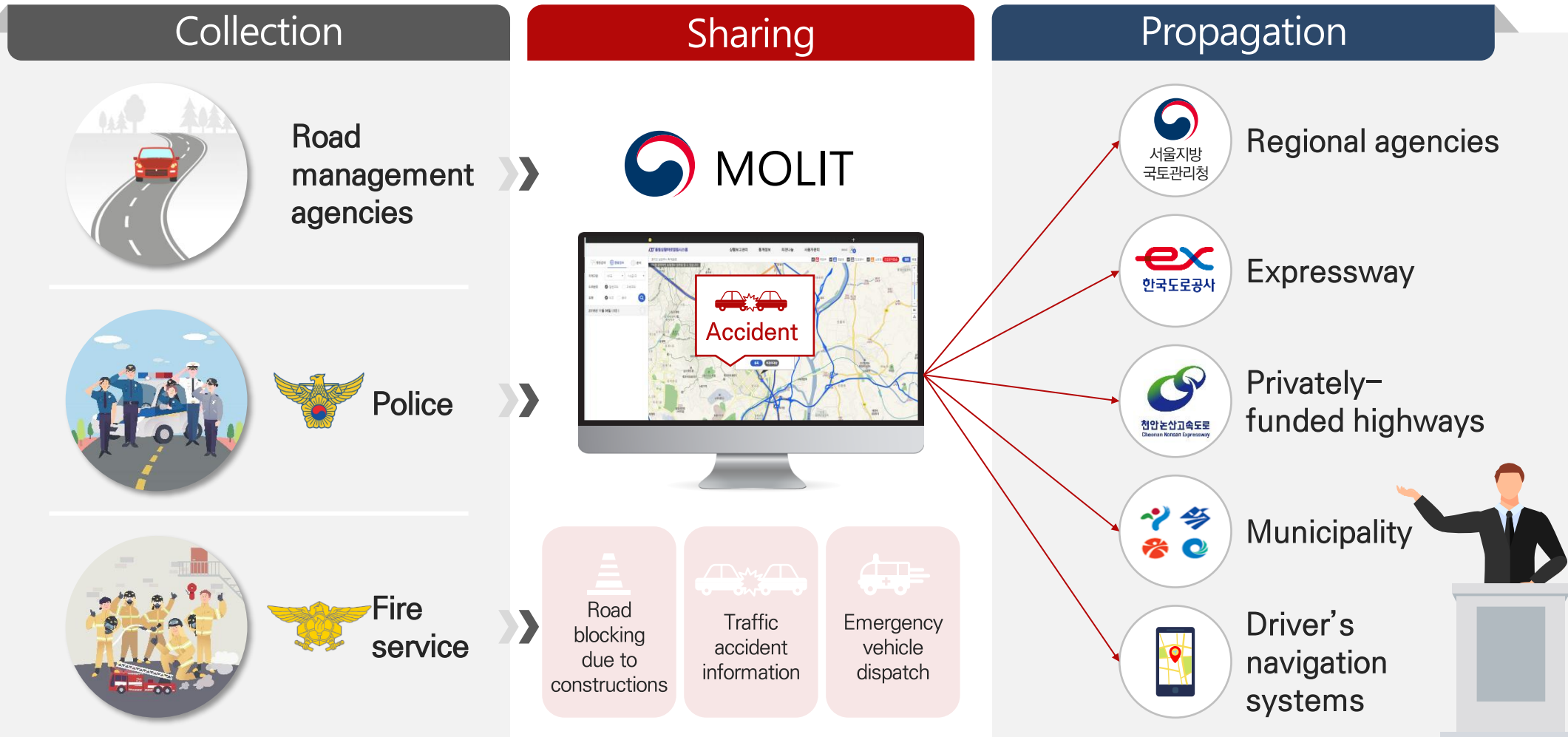


Provide various information related to traffic and safety to the public and private sector through opening information

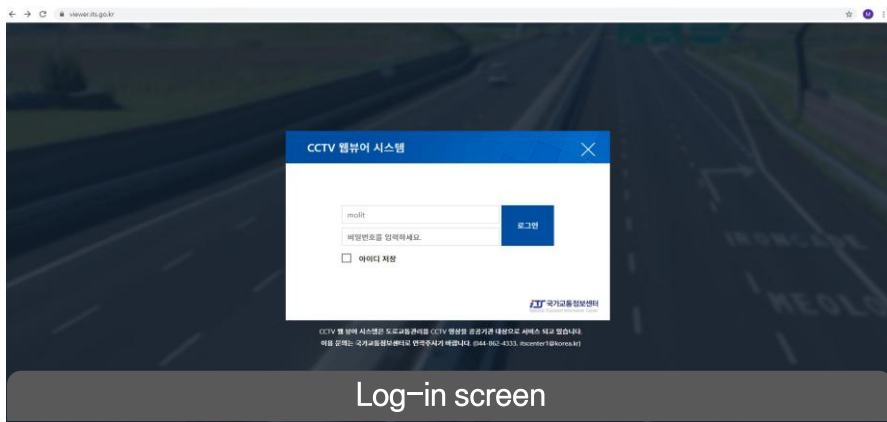
- 1 Traffic
- 2 Construction & incident
- 3 CCTV
- 4 Traffic forecast
- 5 VDS
- 6 VMS
- 7 Safe driving service
- 8 VSL
- 9 Weak section service
- 10 Standard Node link



Establishment of a cooperative system for rapid response to incidents



CCTV web viewer system homepage

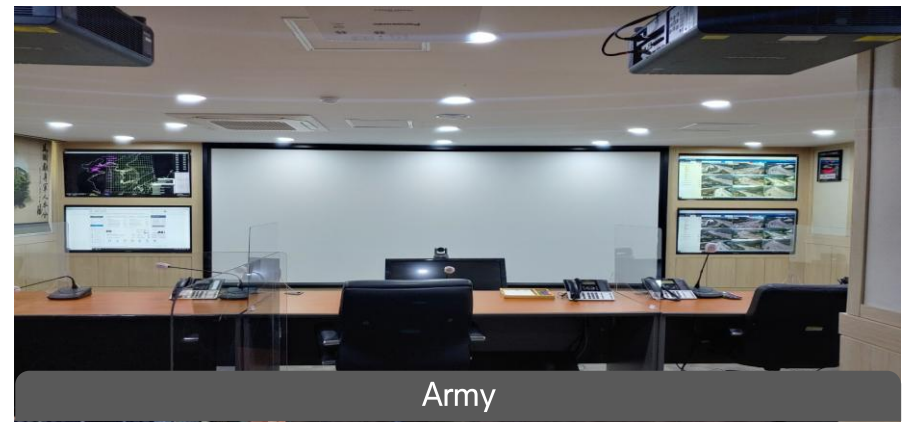


Log-in screen



Screen segmentation

CCTV web viewer system use cases



Army



Government office

Demonstration of situation room operation

IV

Operation of National Transport Information Center

“Thank You”

