

KICTEP
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Korea
Institute of
Construction &
Transportation technology
Evaluation and
Planning

www.kictep.re.kr/eng

Introduction



Korea Institute of Construction and Transportation Technology Evaluation and Planning (KICTEP, hereafter) is a governmental organization affiliated with the Ministry of Land, Transport and Maritime Affairs (MLTM). Main functions of KICTEP are management of R&D projects and certification of new-technology in order to promote technical excellence in the construction and transportation field.

The main tasks of KICTEP are :

- Establishment of R&D strategy by demand survey and technology forecasting
- Management of R&D projects by monitoring researches in progress
- Dissemination and implementation of R&D outcomes by organizing Technology Fairs, issuing KICTEP catalogs, and managing database of intellectual properties
- Development and improvement of policies to establish foundations for R&D activities in the construction and transportation field
- Evaluation and certification in new-technologies, green technologies of construction & transportation field, and transportation card system

With steady investments in R&D, Korea's construction & transportation technology has grown considerably with such major successful outcomes as shown in Korea-adapted Express Train(430km/h), High Speed Urban Maglev(200km/h), Reverse Osmosis Membrane for desalination plant(the world's 3rd) and High Speed Tilt & Steerable Bogie(200km/h).

KICTEP has released a long-term strategic plan in 2010, called "Land, Transport and Maritime R&D Strategy" which defines the direction to stimulate R&D activities for "green growth" and generate distinguished results with the action plans including international cooperation. We welcome your interests and participations in our R&D projects in the near future.



Organization Summary

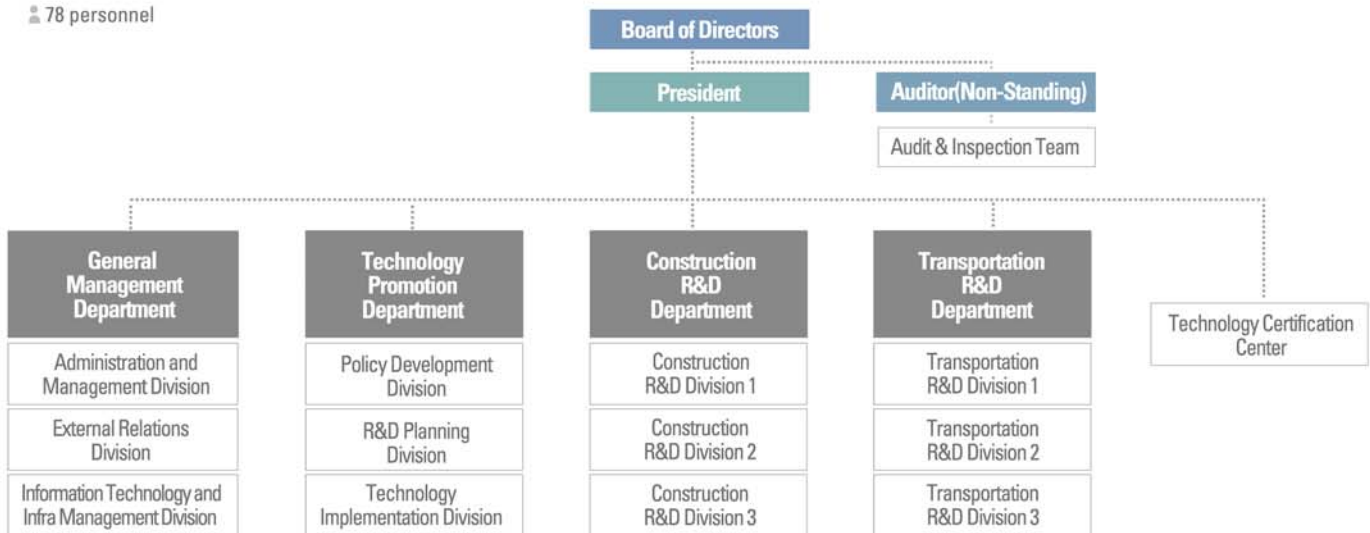


History



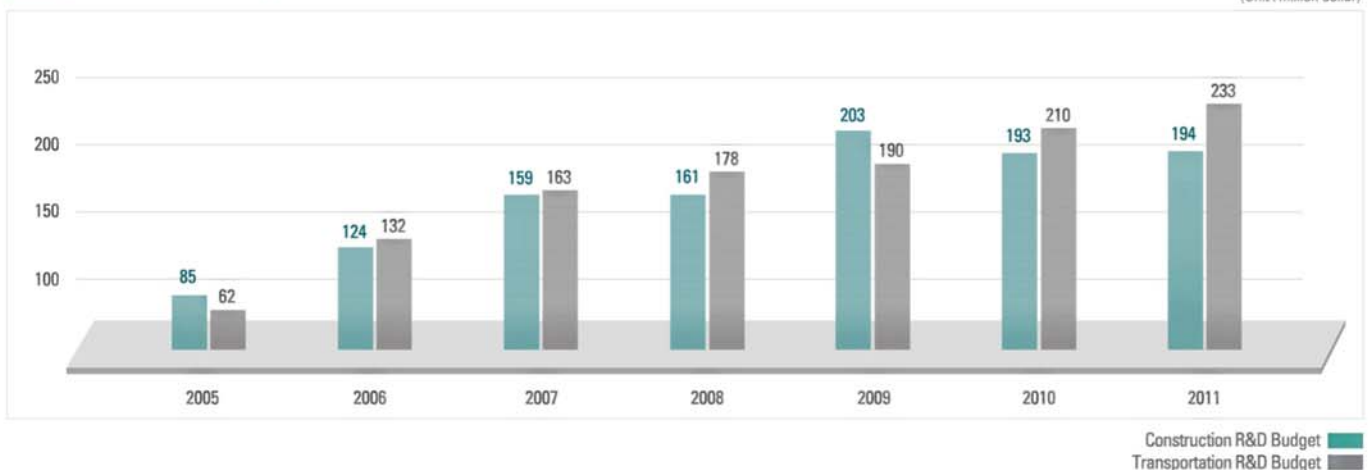
Organization

78 personnel



R&D Budget

(Unit : million dollar)



Construction R&D Program



Construction Technology Innovation

Objective

Development of technology for intelligent & advanced SOC facilities, disaster prevention and safety technology

Research Fields

Future roads, Next-generation bridges, Environment-friendly water resource systems, High performance construction materials, Countermeasures against natural disasters

Plant Technology Advancement

Objective

Development of enhanced plant technology in preparation for the energy and resource exhaustion

Research Fields

Seawater desalination plant, LNG plant, Environment-friendly power plant

High-tech Urban Development

Objective

Construction of environmental-friendly, sustainable metropolis and mixed-use space based on ubiquitous technology

Research Fields

U-Eco City, Mixed-use space, Urban regeneration, Intelligent geospatial information

R&D Policy and Infrastructure Development

Objective

Promotion of efficient construction and transportation R&D and commercialization of research outcomes

Research Fields

Policy development, Technology infrastructure and standardization, Corporate start-up

Regional Technology Innovation

Objective

Regionally specialized technology development based on local needs in preparation for climate changes and natural disasters

Research Fields

Development of locally specialized technologies for seven sections of South Korea

Transportation R&D Program



Transportation System Innovation

Objective

Development of road transportation technology for efficient traffic system and logistics technology for reducing logistics costs

Research Fields

ITS(Intelligent Transport Systems), Future transport and logistics systems

Railroad Technology Development

Objective

Development of domestic technology for high-speed and general railroad systems

Research Fields

High-Speed rail, General rail

Urban Railroad Technology Development

Objective

Development of urban railroad system for an advanced and highly efficient operation and service of urban rail transit

Research Fields

Urban maglev, Light rail transit

Air Transportation Advancement

Objective

Development of the technology for advanced airplane manufacturing and aviation safety systems

Research Fields

Aviation safety technology, Intelligent airport system, Air-cruise system

Major R&D Outcomes



HSB (High performance Steels for Bridges)

- Development of HSB 500/600MPa and its application to current domestic landmark bridges



Reverse Osmosis Membrane and High Pressure Pumping

- Development of 16inch reverse osmosis membrane and export to Australia
- Development of high capacity/pressure pump(4,546 ton/day) and export to Iran



Energy-saving and Environment-friendly Housing Technology

- Development of housing technology using geothermal energy and rainfall to reduce energy consumption and emissions costs by more than 40%~100%



Warm Asphalt Mixture using the Modifier (PG76-22)

- Success of 30% reduction of petroleum and 40% reduction of CO₂(300,000 ton/year) compared to the previous one



Korea-adapted Express Train (KTX - II)

- Development and commercialization of the world's 4th high-speed train with the maximum speed of 350km/h and its application to the current railway system of South Korea



Tilt and Steerable Bogie

- Development of Tilting Steerable Bogie and complement of test drives 120,000km achieving maximum speed of 220km/h



Urban Maglev

- Development of the world's 2nd urban maglev and its application to the Incheon Int'l Airport Circulation Line



Automatic Immigration System

- Development and commercialization of the most prompt immigration system in the world (30 minutes average as tested in Incheon Int'l Airport; 15 minutes faster than previous one)

New-Technology Evaluation



Evaluation of New-Technology in Construction & Transportation

■ Objective

Certification for the excellence of the construction & transportation technology which is developed or improved in South Korea to accelerate technology development and field application

■ Procedures

Application > Public Hearing > Technology Evaluation(1st) > Practical Application Inspection >
Technology Evaluation(2nd) > New-Technology Certification

■ **New-Technology Certification** 623 cases (April 2011 basis)

Evaluation of Green Technology

■ Objective

Certification for the green technology, green business and corporation which contribute to reduce greenhouse gases to facilitate the development and investment of green technology

■ Procedures

Application > Field Evaluation > Technology Evaluation > Green Technology Certification

■ **Green Technology Certification** 20 cases (April 2011 basis)

Evaluation of Transportation Card System

■ Objective

Certification for transportation card system(pre/post-paid transportation card and Security Authentication Module) to secure a single transportation card system compatible with all public transportation card system in any region of South Korea

■ Procedures

Application > Appropriateness Inspection > Test > Transportation Card System Certification

■ **Transportation Card System Certification** 18 cases (April 2011 basis)



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