Transportation Research in Korea: Organizations, Processes, and Outputs

Youngseong Harry KOO, P.E, PMP
Director, R&D planning division
KICTEP, South Korea
CONTENTS

1. Introduction of KICTEP
2. Goal of Transportation Research of Korean Gov.
3. Transportation Related Organization
4. Decision procedure of Government Projects
5. Introduction of Transportation related Institutes
6. Transportation Research Database-LandMarK
7. Other Resources
Introduction of KICTEP

- **Overview**
  - Public agency under Ministry of Land, Transport and Maritime Affairs (MLTM) of Korean Government
  - Established in 2003

- **Budget**
  - Total USD 548 million including 368 million in Transportation and Construction (FY 2012)

- **Role**
  - Specialized in R&D management: Planning, Progress monitoring and Performance management
  - New excellent technology (NET) Certification introduced
**Organization**

- **Board of Directors**
  - President
  - Auditor
  - Advisor
  - Internal Audit

- **General Management Department**
  - Planning & Budget Division
  - Administration & IT Division
  - R&D Project Support Team

- **Industry Promotion Department**
  - R&D Planning Division
  - R&BD Implementation Division
  - Technology Certification Center

- **Construction R&D Department**
  - Urban Planning & Architecture Division
  - SOC & Plant Division

- **Transportation R&D Department**
  - Railroad Division
  - Aviation & Logistics Division

* 84 personnel
Introduction of KICTEP (cont’d)
Most of Transportation Research in Korea funded by Government

Goal of Transportation Research

- Strengthen national economic growth and global competitiveness through improved efficiency of transportation system
- Innovate transportation policies and technologies
- Upgrade people’s quality of life toward better safety, mobility, environment and security

Ultimate goal of national R&D is to improve public welfare and to provide better infrastructure for national economy
Transportation Related Organization : Government

- Ministry of Land, Transportation and Maritime Affairs (MLTM)
  - [http://www.mltm.go.kr](http://www.mltm.go.kr)
  - Annual budget (FY2012): approx. USD 300 mil. in Transportation sector

- Ministry of Knowledge Economy (MKE)
  - [http://www.mke.go.kr](http://www.mke.go.kr)
  - Annual budget (FY2012): USD 92 million in Transportation and logistic sector

- Local Government (MPO)
  - Metropolitan Transportation Authority in Seoul Metropolitan area
  - [http://mta.go.kr](http://mta.go.kr)
  - Other 5 metropolitan cities invested large proportion of their budget on Department of Transportation
Transportation Related Organization: Research Institutes

- Institutes under Korean Government
  - KICTEP
  - KOTI (The Korea Transport Institute)
  - KRIHS (Korea Research Institute for Human Settlements)
  - KICT (Korea Institute of Construction Technologies)
  - KRRI (Korea Railroad Research Institute)
  - KMI (Korea Maritime Institute)

- Institutes under Local Government
  - Seoul Development Institute
  - [http://www.sdi.re.kr](http://www.sdi.re.kr)
  - Other 5 metropolitan cities have Department of Transportation
## Role of Main Research Institutes

### Institutes under Korean Government

<table>
<thead>
<tr>
<th>Institute</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research Administration</strong></td>
<td></td>
</tr>
<tr>
<td>KICTEP</td>
<td>Research Programming and Management</td>
</tr>
<tr>
<td><strong>Research Conducting</strong></td>
<td></td>
</tr>
<tr>
<td>KOTI</td>
<td>Road, Rail, Aviation, Urban Transport and Logistics (Policy, Planning and Technology)</td>
</tr>
<tr>
<td>KRIHS</td>
<td>Land, Housing and Infrastructure (Policy and Planning)</td>
</tr>
<tr>
<td>KICT</td>
<td>Construction and Water Resource (Technology)</td>
</tr>
<tr>
<td>KRRI</td>
<td>Rail (Technology)</td>
</tr>
<tr>
<td>KMI</td>
<td>Maritime and Seaport</td>
</tr>
</tbody>
</table>

### Institutes under Local Government

- The Seoul Institute, Busan Development Institute and et all
Planning of Transportation R&D by the following stream

Stream A

NSTC  
(National Science and Technology Commission)

Ministries

MLTM

KICTEP

Research Institutes

Universities

Private Sector

President committee
- Budget Approval

MLTM, MKE and others

National R&D administration
- Planning & distribution
- Evaluation
- After-management

Conducting bodies
Planning of Transportation Projects mainly focused on Policy and Strategy by the following stream:

Stream B

- Prime Minister Office
- MKE

Research Councils

- Prime Minister Office - National Research Council for Economics, Humanities and Social Sciences (NRCS)
- MKE - Korea Research Council for Industrial Science & Technology (ISTK)

Government Funded Research Institutes

- NRCS: KOTI, KRIHS, KMI
- ISTK: KICT, KRRI
Introduction of KOTI

Overview

- Focused on Transportation Policy and Transportation System Engineering
- Established in 1985
- 268 Researcher on Highway, Railway, Logistics, Aviation and others related to Transportation
- Website: http://english.koti.re.kr (In Eng.)

Publication

- All research reports provided in Kor. (but Abstract in Eng. available) at http://english.koti.re.kr/board/publication/index.asp?code=regular&cate=22&mCode=040300
Introduction of KRIHS

Overview

- Focused on Strategic Planning of Transportation Infrastructure and System
- Established in 1978
- 300 Researchers including more than 30 specialists on Transportation
- Website: [http://www.krihs.re.kr/eng/](http://www.krihs.re.kr/eng/) (In Eng.)

Publication

- Annual reports, Technical papers, and other outputs provided at the website (mainly in Kor. but some in Eng.)
- Periodical publication ‘Space and Environment’ published in Eng. since 1993 and full text available at the website
Introduction of KICT

Overview

- Focused on Construction technologies regarding Highway research and Advanced Transportation research
- Established in 1983
- 903 Researchers including more than 200 specialists on Transportation
- Website: http://www.kict.re.kr/eng/ (In Eng.)

Publication

- Annual reports, Technical papers, and other outputs provided at http://www.codil.or.kr/ (only in Kor.)
- English abstract of major projects acquired upon request at inforsrv@kict.re.kr
Introduction of KRRI

Overview

- Focused on Railroad system including Vehicle & Track, Railway structure, Electric Power Supply, Rail Environments, Train controls & Communications, Vehicle Dynamics & Propulsion systems and Railway Transport & logistics
- Established in 1996
- 270 Researchers
- Website: http://www.krri.re.kr/krri_2008/index.html (In Eng.)

Publication

- Annual report: ‘KRRI Technical Papers-Abstracts ‘(In Eng.)
- Publications on other journals and conferences accessed at website
- For further information, go to http://library.krri.re.kr/ or contact at eknam@krri.re.kr
Other Resources: Transportation related societies

- **Korean Society of Transportation**
  - Since 1982
  - Website: [http://kor-kst.or.kr/](http://kor-kst.or.kr/)
  - Semiannual Meeting and Conference every year
  - Publications
    - International Journal of Sustainable Transportation (In *English*), since 2007, 6 issues per year, [http://www.tandfonline.com/loi/ujst20](http://www.tandfonline.com/loi/ujst20)
    - Journal of the Korean Society of Transportation (In *Korean*), since 1983, 6 issues per year

- **Korean Society of Civil Engineering**
  - Since 1952
  - Website: [http://www.ksce.or.kr/](http://www.ksce.or.kr/)
  - Semiannual Meeting and Conference every year
  - Publications
    - KSCE Journal of Civil Engineering (In *English*), since 1997, 7 issues per year, [http://www.ksce.or.kr/contents/journal](http://www.ksce.or.kr/contents/journal)
    - Journal of the Korean Society of Civil Engineering (In *Korean*), since 1981, 6 issues per year
Overview

- Online Resource Center for mostly Civil Projects including Transportation Research
- Funded by MLTM and Operated by KICTEP
- Starting from 2011
- Only Korean supported
- [http://www.landmark.re.kr](http://www.landmark.re.kr)

Roles

- Set up the online/offline resources R&D project planning researchers who requires to use as reference and share the knowledge
- Release the previous R&D reports under KICTEP supervision
- Establish or plan for R&D projects on Construction and Transportation Technologies, Policy, New Tech. etc.
[중국] 2011년 민간 발전 통계 보고서

국가 통계국 / 2012.09.03

[인도네시아] 세계적인, 겉장이 있는 활짝 있는 도시 창
[중국] 2011 북경시 건축업 발전 백서
[일본] 건설 산업의 재생과 발전을 위한 방향 2012
[미국] EVARO와 PLSO간 미국 93번고속도로에 대한 약
[핀란드] 인터파날 공법의 비중 보일 수함
[스페인] 건설회사의 확장과 경영학

Global Research Report

Digital Information Database

Global Issue and News

Emerging Technology

LandScope

Download

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)

LandMark

KICTEP TALK

Global Issue and News

Emerging Technology

LandScope

LandMark(_cont’d)
LandMarK (cont’d)

Support Menu

Global Issues & News
- Collects the global issues and news that related on Construction and Transportation Technologies, Policies, Industry, etc.

Global Reports
- Shows ‘Global Trends’ through collecting all kinds of reports (Technology/Industry/Policy) published in effective institutes or Univ. etc. in worldwide

Global DB
- For FREE (LANDMARK members only)
  - Online library Catalogue; EBSCO and Business Source Corporate (Industry Reports, etc.)

Land-Scope
- An analyzing tool that analyzes dissertation research/patents on Construction and Transportation technologies
  - * Compound word of LANDMARK + Microscope

Emerging Tech.
- Collects ‘Emerging Technologies’ on Construction and Transportation sector from effective institutes or Univ. in worldwide

KICTEP R&D Reports
- Collects Construction and Transportation R&D Projects Reports that performed in KICTEP

Detects Current Issues
- Understands Global Trends
- Collects related DB
- Analyze Information
- Refers Future Tech. & Current Tech. R&D Reports
Future Cooperation

- A big frog in a small pond

- Information sharing, the first step to the collaboration

- Issues to be addressed
  - Index or classification
  - Database system
  - Language
  - Operation and etc.
Questions or Comments?
Thank you