

# Glocal University 30 Korea National University of Transportation · Chungbuk National University, Spreading K-global education model

글로벌대학30 : 국립한국교통대 · 충북대, K-철도 글로벌 교육모델 전파 확산



Hyuk-jin Kang

Korea National University of Transportation

강혁진

국립한국교통대학교

## 약력

- 국립한국교통대 기획처장
- 글로벌대학30 사업추진단장

Glocal University 30

Korea National University of Transportation · Chungbuk National University

# Spreading K- global railway education model



**KOREA NATIONAL UNIVERSITY  
OF TRANSPORTATION**

Prof. Hyukjin Kang Dean of University Planning, Director of Glocal University 30 Project Division of  
Korea National University of Transportation [hkang@ut.ac.kr](mailto:hkang@ut.ac.kr)

# 01. Glocal University : Maximizing innovation through university merge, reaching out to the world together with the region

## Background and purpose of promotion

Need for fostering specialized talents in the regions through selection and concentration and joint response to key industrial sectors

### Chungcheongbuk-do

- Promoting policies centered on new growth industries such as semiconductors, secondary batteries, bio-future mobility : '21 Regional Gross Domestic Product 70.1 trillion, 3.6% compared to the entire country, 6.4% growth rate compared to 2020 (4.2%)

### Chungbuk National University

- As the only national comprehensive university in Chungbuk, it is necessary to operate departments that cover everything from basics to application.
- As a relatively small national university, it has limited investment in specialized fields (9th place in total number of students among KNU10) 9th place, university budget 8th place)

### Korea National University of Transportation

- employment environment for local industries and direct impact of school-age population decline
- The integration of the two universities will develop into a global research-oriented university and a specialized university in future-oriented regional key industries.

Training of advanced personnel in key industries in the Chungbuk region : 1,000 people

Entering the top 100 in QS evaluation as a global research-oriented university

The merge of CBNU and KNUT will create a specialized university in regional industry and the research oriented University

Chungbuk National University

+

Korea National University of Transportation

=

Integrated Global University

Global research-oriented university  
+  
University specializing in regional key industries

- Specialized education research focusing on future-oriented engineering
- Unit and basic studies-centered education research

- Fostering convergent talents in specialized fields
- Future response technology research and development

- Key industries : semiconductors, secondary batteries, bio, future mobility
- Future New Industries : ICT Convergence Solar Power, Small Business, CCU Advanced Agriculture Circular Economy

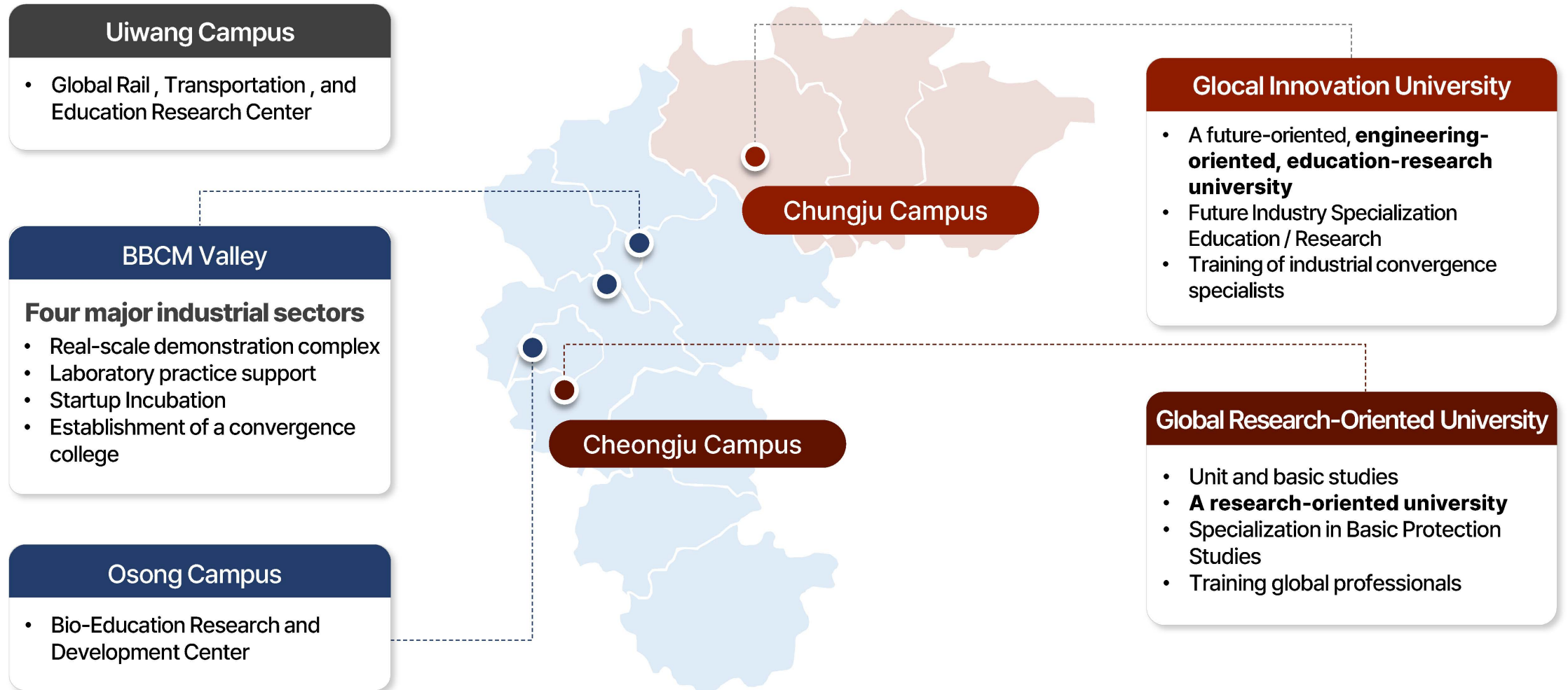
four major ( Bio, secondary batteries, semiconductors, future mobility )

Region-Industry-Academic-Research Union  
Ecosystem QUAD-HELIX HUB PLATFORM

Global Competitiveness-Based Regional National University, a hub for mutual development

## 02. Purpose of merge and specialization plan

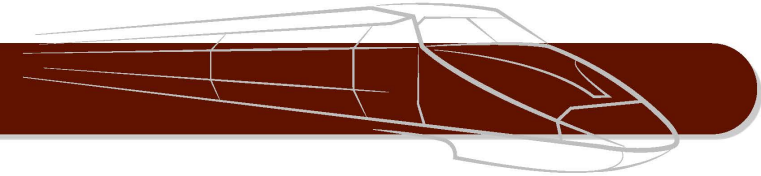
### University Merge | Specialization Plan for Each Campus



# 03. Basic plan for specialization of Uiwang Campus

## Uiwang Campus : Global Railway Education and Research Center

Future Mobility (M): Railways, etc.



World Top 10 Railway E&R Campus

1

Establishment of a demand-oriented undergraduate and graduate school linked education system

2

: Railroad Specialization Major  
( 25~35 student-centered specialized majors )

Leap forward to become a railway research -centered university in cooperation with Region Industry Academic Research Cooperation

3

: Korea Railroad Research Institute + Korea Railroad Corporation / Korea National Rail Network / Industry + Gyeonggi-do · Uiwang-si

Spreading K- Railway higher education

4

Increase in cutting -edge fields and transfer of faculty related to Chungju (planned to request expansion of integrated linkage facilities)

5

Promoting advanced technology in the transportation(mobility) field (participation of faculty members from the Graduate School of Transportation)

6

Railway University Support Policy

Designation of World Class college

Designation of a global specialized department / International joint degree program required

Specialization in cooperation between universities and research institutes , and specialization in cooperation between research institutes

Cooperation of AI Mobility Research Center (linked to Chungju)

Multi-majoring (integrated major, etc.) required

# 04. Spreading K-Global Railway Education Model

## Background

### Necessity

The railway and transportation sector is a key industry with increasing interdependence between countries worldwide, and the integrated university expands opportunities for global higher education exports, academic exchanges, and building global leadership.

### Responding to the domestic higher education crisis



- The decline in the school-age population weakens the higher education system and threatens the sustainability of universities.
- Reduction in research and development (R&D) personnel leads to slowdown in technological innovation in the railway and transportation sectors

### Need for improved transport infrastructure in developing countries



- The railway and transportation sectors are the basic infrastructure for national growth, and developing countries urgently need to train specialized personnel to improve infrastructure in related fields.  
→ **Leading the expansion of the global transportation system, it is time to expand transportation-specific education**

### Strengthening the Global Role of the Korean University



- It is necessary to support the development of friendly talents in developing countries by utilizing Korea's advanced railway technology and education system.
- Need to promote Korean companies' entry into global markets and technology exports

### Attracting international students and creating a multicultural environment



- Stabilizing tuition revenue by attracting overseas students
- Strengthening excellent research personnel  
→ **Possibility of expansion by building a global network campus**

### Departmental Infrastructure

The Uiwang Campus of the Integrated University has departments covering all areas of the railway field.

<b>Railway College</b>	Department of Railway Management and Logistics, Department of AI and Data Engineering(major in Artificial Intelligence, Major in Data Science), Department of Railway Operation System Engineering, Department of Railway Vehicle System Engineering, Department of Railway Infrastructure Engineering, Department of Railway Electrical Information Engineering, College of Liberal Arts, Railway University
------------------------	---

<b>Graduate School of Transportation</b>	Department of Transportation Policy, Department of Transportation Systems Engineering, Department of SMART Railway Systems, Department of Transportation Policy and Systems Engineering
--	---

# 04. Spreading K-Global Railway Education Model

## Background

**Campus Capacity** The higher capabilities in research, employment, and admission result.

**Research funding** The research conducted at Uiwang Campus over the past five years is worth approximately **30,000 million won**.  
- Railway College : 210 projects, total research expenses 16,655 million won  
- Transportation Graduate School : 197 projects, total research expenses 14,266 million

**Employment rate** The railway university department has shown a high average of over **70%** over the past five years, and in particular, the employment field has excellent quality.  
- Graduates who are employed in the railway field are employed by Korea Railroad Corporation, Korea Rail Network and local urban transportation corporations.

**Research Results** A total of **533 cases**, including **18 Scopus, 127 SCIE**, etc.  
- Achieving high-level research results through organic collaboration with major institutions such as Korean Rail Research Institute, Rotem, Korea Transport Research Institute, etc.

**Entrance Exam Results** For Butterfly Talent Selection, maintain **level 3-4**, for regular admission, maintain **level 2**, and for general admission, maintain **level 80~90% of Korean SAT**

**International demand** Demand for improved transport infrastructure and training of professionals continues to grow in developing countries.

**Egypt** Uiwang Campus is supporting the establishment of the Egyptian University of Transport and providing specialized technical education and policy advice related to the construction of railway and transport infrastructure → This cooperation is being carried out through close collaboration with the Egyptian government, the World Bank, KOICA, etc., and will become a successful case of improving transport infrastructure in developing countries.

**Vietnam** Large-scale railway manpower training is necessary to promote the inter-Vietnam high-speed railway project, and the Korean government is requested to train approximately 14,000 railway experts.

**Kazakhstan** Activating joint research and academic exchanges with major universities, and opening.

**Other countries** Establishing a foundation for spreading the educational model.

The establishment and operation of the K- Transportation International Education Center is significantly strengthening the internationalization capacity of the Uiwang Campus and playing a pivotal role in expanding the export of the K- Transportation Education model by leading global education and research.

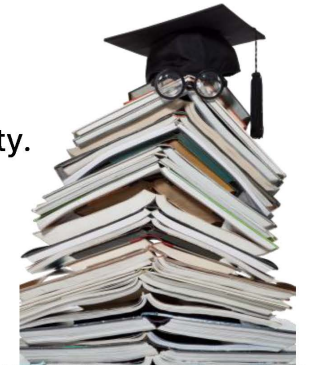
→ **Spreading across all academic fields, not just the transportation field.**

# 04. Spreading K-Global Railway Education Model

## Goals and objectives

### Qualitative result

- Discovery of K- Transport International Cooperation Universities and Institutions.
- Establishment of an educational operation system for the target country's transportation university.
  - Establishment of a curriculum for the target country's transportation university
  - Provision of a list of practical training equipment for the target country's transportation university and budget calculation
- Consultation with relevant countries and related organizations.



### Quantitative result

Detail	Target value					
	unit	2023	2024	2025	2026	2027
Establishment of the K-International Transportation Education Center	episode	-	1	-	-	-
Support for securing a budget for exporting transportation education systems	episode	-	1	-	-	-
Support for curriculum development	episode	-	-	1	-	-
Support for operation of education operation system	episode	-	-	-	1	1
Support for establishing an education system	episode	-	-	-	-	1

### Promotion contents ( Summary )

Roles of each thresholds in K-transportation education model

Promotion system for establishing railway and transportation universities in developing countries

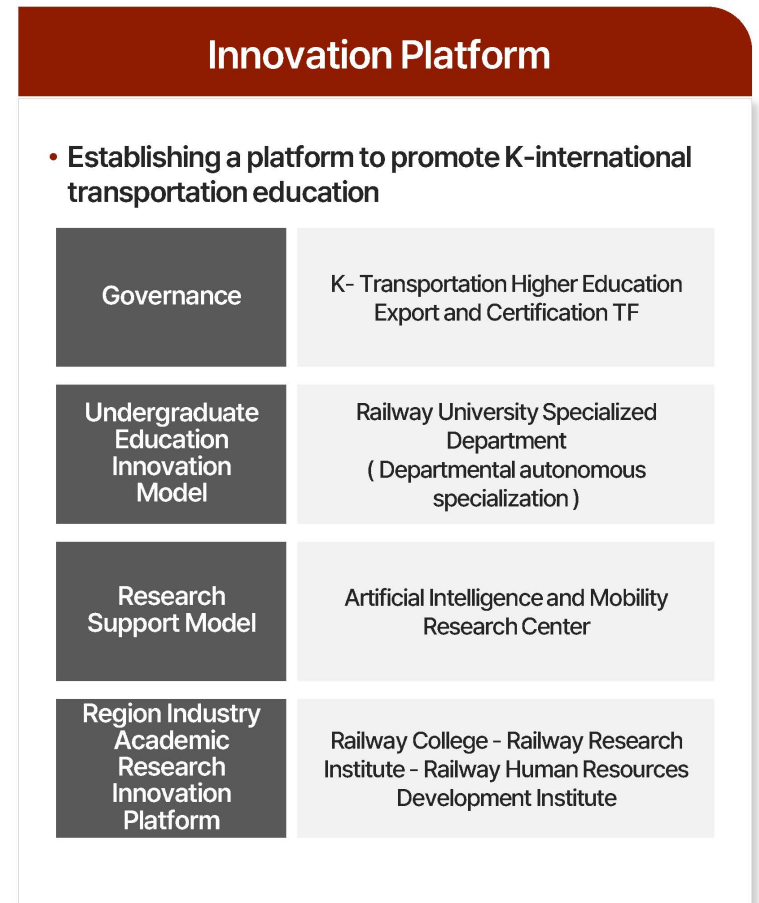
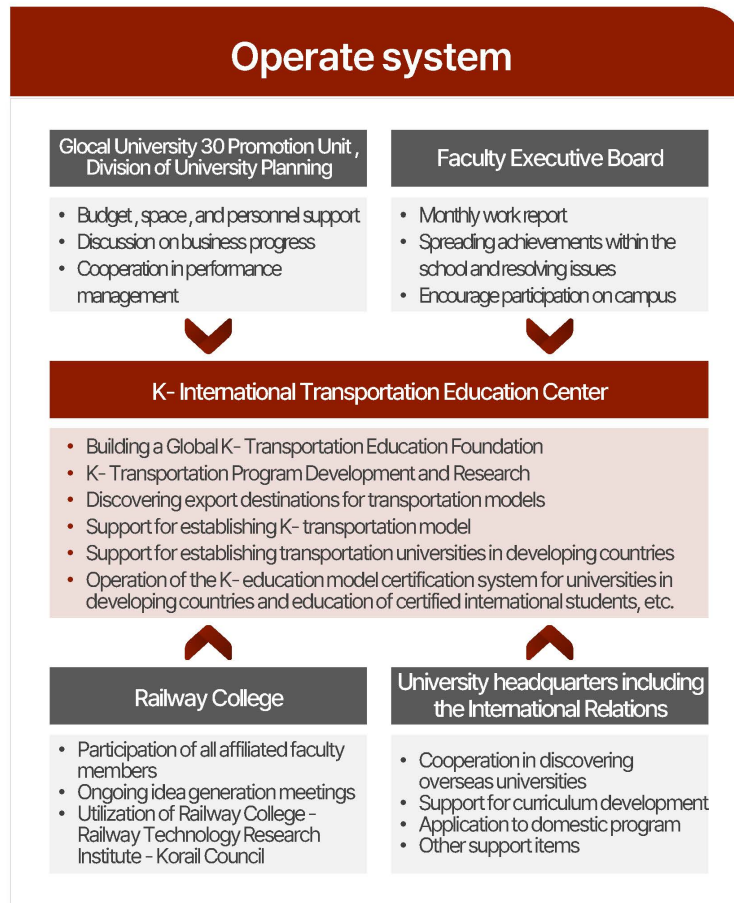
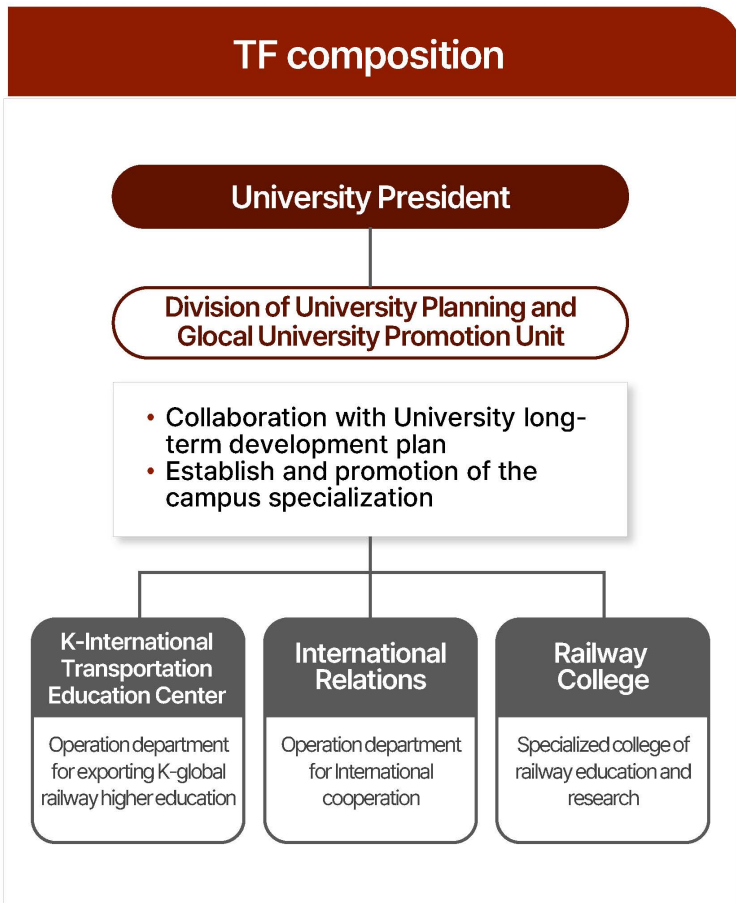
Establishment of a global transportation training center and expansion of international student recruitment at integrated universities

# 04. Spreading K-Global Railway Education Model

## Goals and objectives

**Propulsion system**

Establish a promotion system to make this not only a representative model for our university's



# 04. Spreading K-Global Railway Education Model

## Promotion Roadmap (Building - Execution - Achieving Results)

### Performance and Plans

#### Building up phase ('23~'24)

- Establishment of K- International Transportation Education Center
  - Physical space , regulations , recruitment, etc.
- Expanding the network, including discovering target countries
- Development of educational models, etc.
- Production of promotional videos, etc.

#### Execution phase ('25~'26)

- Continuous development of education models
- Exporting education models to developing countries
- Development of a **curriculum accreditation model** \*
- Discussion and application of accreditation models with universities in developing countries
- Spread to other departments within the university

#### Performance achievement stage ('27~)

- Attracting transfer students from K-transport accreditation universities
- Generating revenues related to higher education exports (ensuring sustainability)
- Expansion of applicable universities

### \* Curriculum Accreditation Model

#### Step 1

#### Development of a characterization-based accreditation system

- Development of higher education accreditation model (2+2, 3+1, 3+2 Undergraduate-graduate linked)
  - \* After completing the accredited program for a specific period, transfer or joint degree with our school is pursued.
- Development of a higher education accreditation ( management ) system ( application – approval – maintenance method )

#### Step 2

#### Overseas universities and higher education export agreements and implementation

- Export of pilot modules → Advancement of higher education accreditation system through verification → Activation of domestic short- term and medium -term training programs

#### Step 3

#### Spreading beyond railway fields

- Establishing a representative model of higher education export in Korea








# 04. Spreading K-Global Railway Education Model

## Progress details

**Building up phase 1.**

### Discovery of target countries and establishment of networks for disseminating the educational model.

2024 is the Building up phase of the K- Railway education model dissemination project, and the initial foundation for the project to disseminate the education model will be laid through active consultations with countries such as Egypt

Key achievements	 <b>Kazakhstan</b>	<ul style="list-style-type: none"> <li>• Consultation for international joint research support and development of short-term training programs                             <ul style="list-style-type: none"> <li>① ALT (Academy of Logistics and Transport) _January , September 2024</li> <li>② KBTU (Kazakh-British Technical University) _September 2024</li> <li>③ Kazakhstan NRF International Joint Research Proposal Submission and Review in Progress</li> </ul> </li> </ul>	 <b>Vietnam</b>	<ul style="list-style-type: none"> <li>• Discussion on the Vietnamese government's North-South high-speed railway project to train large-scale railway personnel                             <ul style="list-style-type: none"> <li>- Request for training of 14,000 railway experts in operation , maintenance and regulation</li> <li>- MOU signing and joint degree program discussion with Vietnam University of Transport Science and Technology, etc. _April 2025</li> <li>- Participation in Vietnam Railway Professional Training Master Plan Service _June~December 2025</li> </ul> </li> </ul>	
	 <b>Uzbekistan</b>	<ul style="list-style-type: none"> <li>• Discussion on international cooperation with Tashkent Transport University, Uzbekistan _ February 2024</li> </ul>	<b>Overview of Vietnam's High-Speed Rail Project</b>		<ul style="list-style-type: none"> <li>• (Route) 1,541km long high-speed railway connecting Hanoi and Ho Chi Minh City</li> <li>• (Speed) Up to 350 km/h</li> <li>• (Budget) About 97 trillion won (Human Resources Development Sector : 540 billion won)</li> <li>• (Schedule) Construction to begin in 2027 , completion target in 2035 , training of personnel starting in 2026</li> </ul>
	 <b>Philippines</b>	<ul style="list-style-type: none"> <li>• Discussion of the Philippine Railway Manpower Training Project with the Office of the President of the Philippines _April 2024</li> </ul>			
	 <b>Egypt</b>	<ul style="list-style-type: none"> <li>• Support for the establishment of the Egyptian National University of Transport and establishment of a foundation for exporting K-transportation higher education                             <ul style="list-style-type: none"> <li>① Provision of materials for approval of establishment by the Egyptian Ministry of Education and conclusion of cooperation agreement , ② Provision of materials for establishment of university such as curriculum and practical training equipment , ③ Continuous consultation with Egypt MOT for K- transportation international cooperation and KOICA projects , ④ Establishment of Working Group for establishment of Egyptian National University of Transport in the first half of 2025 , ⑤ Submission and approval</li> </ul> </li> </ul>			
	<b>Overview of the Egyptian Transport University Establishment Project</b>		<ul style="list-style-type: none"> <li>• (Related organizations) Egyptian Ministry of Transport , Embassy of Korea in Egypt , World Bank KGGTF, KOICA, KMOU</li> <li>• (Establishment Unit) Railway University , Maritime University , Engineering University</li> <li>• (Site) 30,000m<sup>2</sup> of MOT -owned land near Nasr City Station</li> <li>• (Schedule) Construction is scheduled to begin in 2026 , with completion targeted for 2028.</li> </ul>	 <b>Mongolia</b>	<ul style="list-style-type: none"> <li>• Discussion on Mongolian University of Science and Technology for K- Transportation Higher Education Export                             <ul style="list-style-type: none"> <li>- NRF International Cooperation Leading University Proposal and Discussion on Establishing Joint Degree Program _April 2025</li> </ul> </li> </ul>
	<b>Overview of the Egyptian Transport University Establishment Project</b>			 <b>etc</b>	<ul style="list-style-type: none"> <li>• Preparations for a new leap forward                             <ul style="list-style-type: none"> <li>- Reconstructing the network of transportation presidents' associations that was suspended due to COVID19 and the Russian War ( restoring about 20 schools )</li> </ul> </li> </ul>


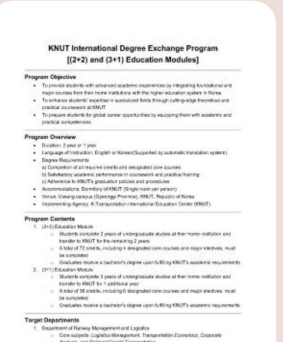
# 04. Spreading K-Global Railway Education Model

## Progress details

### Building up phase 2.

#### Development of a program to expand K- transportation and secure academic transfer resources.

Development of educational content and customized curriculum tailored to the needs of trainees and local teachers in target countries through research and analysis of specialized educational programs related to railways

K- Transportation Teacher Training Program	K- Transportation Degree Exchange Program	Other programs
		<ul style="list-style-type: none"> <li>• <b>K- Transportation Excellent Undergraduate Graduate School Linkage Short-term Training Program</b> - Through a four- week intensive training and in-depth evaluation process utilizing the summer and winter vacation periods , prospective graduate students Learn Korea's advanced transportation system and railway technology in depth and develop research capabilities for graduate school advancement. Designed to be displayed</li> <li>• <b>K- Transportation Faculty Short-term Research Program</b> - Integrated learning of major fields of railway engineering</li> <li>• <b>K- Transportation MBA Short-term Research Program</b> - Overall understanding of transportation logistics systems and technological changes</li> </ul>

### Building up phase 3.

#### Various research results for the building up, etc.

<p><b>Uiwang Campus Specialization and Development Strategy</b></p>	<p>Establishment of development goals and implementation strategies for Uiwang Campus and preparation of specialization plans by field , ② Research and industry-academia cooperation specialization plans ( focused on promotion strategies ) , ③ Preparation of international cooperation specialization development strategies and implementation plans , performance management plans, etc.</p>	<p><b>Research on ways to attract high level foreign students</b></p>	<p>Analysis of the Egyptian railway construction market environment , analysis of the domestic railway market environment , railway industry research trends, etc.</p>
<p><b>Campus Space Innovation Research</b></p>	<p>In response to the growing demand for global education centered on K- transportation education exports, we have expanded classrooms , dormitories , and Quad Helix platform. Research on necessary required spaces for such as collaborative research</p>	<p><b>Promotional video</b></p>	<p>Production of promotional video for K- transportation education export ( Korean , English , Chinese )</p>

## 04. Spreading K-Global Railway Education Model

### Future tasks to be promoted

#### Promotion of special regulations for foreign students (Cooperation between the Ministry of Education , Ministry of Foreign Affairs , and Ministry of Justice)

- Currently, in order for international students to enroll in domestic universities, they must obtain a Level 3 score on the Test of Proficiency in Korean (TOPIK) and a Level 4 score by their graduation.
- Korea National University of Transportation exports accredited educational models such as the K- railway to universities in developing countries. If the target university's curriculum is managed by a certain accredit board, a new exception clause will be introduced to exempt students from the Korean language proficiency test when they come to study abroad at KNUT.
  - ※ Promoting performance management, including mandatory Korean language education in accreditation requirements
- In connection with K-foreign Student policy of Chungbuk province
  - ※ Chungcheongbuk-do Province's plan : Efforts to ease the standards for issuing regional visas to foreign students and the Korean language proficiency test (under discussion with the Ministry of Justice)
- Establishment of a pilot case for regulatory improvement through railway specialized education certification (using the Jeungpyeong Campus , linking with the Osong Railway Cluster)



#### Establishment of Ministry of Education accreditation standards (Promoting establishment of higher education model export standards)

- Government-level credibility in the accreditation of education models is required for activating the export of educational model.
- Establishment of a consultative body consisting of the Ministry of Education , Ministry of Foreign Affairs , and Ministry of Justice
  - Establishment and deliberation of accreditation standards for higher education models → granting of exceptions to Korean language proficiency requirements for the students from universities with accredited models



# 04. Spreading K-Global Railway Education Model

## Future tasks to be promoted

### Establishing Cooperation system

- Cooperation system with universities with higher education export projects → Derivation of common issues ( April '25 )  
→ Preparation of regulatory improvement request ( May )  
\* 9 universities from Glocal University Network



### Roadmap for promotion: Implementation stage tasks to be promoted

- Participation in Master Plan Project: Korea Railroad Corporation's Vietnam Railway Professional Training
- Participation in Egyptian transportation University establishment
- Additional development of various programs for K- Transportation higher education export
- Establishing a domestic and international cooperation system for K- transportation education
- Production of English, Russian, and Chinese version programs
- Booth display and program promotion (German InnoTrans, etc)



**Spreading K- global railway education model**

# Thank You.



**KOREA NATIONAL UNIVERSITY  
OF TRANSPORTATION**

Prof. Hyukjin Kang Dean of University Planning, Director of Global University 30 Project Division of  
Korea National University of Transportation [hkang@ut.ac.kr](mailto:hkang@ut.ac.kr)