



East Asia Railway Community and Railway Cooperation between Russia and Korea

2019. 8. 30.

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Inter-Korean summit, Panmunjom Declaration and inter-Korean railway

According to Panmunjom Declaration announced at the historic inter-Korean summit (27th April 2018),

An agreement was made on Donghae Line railway, Gyeongui Line railway and roads project,
creating a momentum to materialize New Economic Initiative of the Korean Peninsula.

In particular, there was an announcement saying

“(we) agreed to take practical measures to connect and modernize primarily Donghae Line railway,
Gyeongui Line railway and roads to utilize them.”



Groundbreaking Ceremony for Railways & Roads

동, 서해선북남철도, 도로연결 및 현대화착공식 2018. 12. 26.



East Asia Railway Community



On the back of President's Moon's Liberation Day address and key note speech at UN General Assembly on 09. 26 on East Asia Railway community, South-North rail project begins accelerating

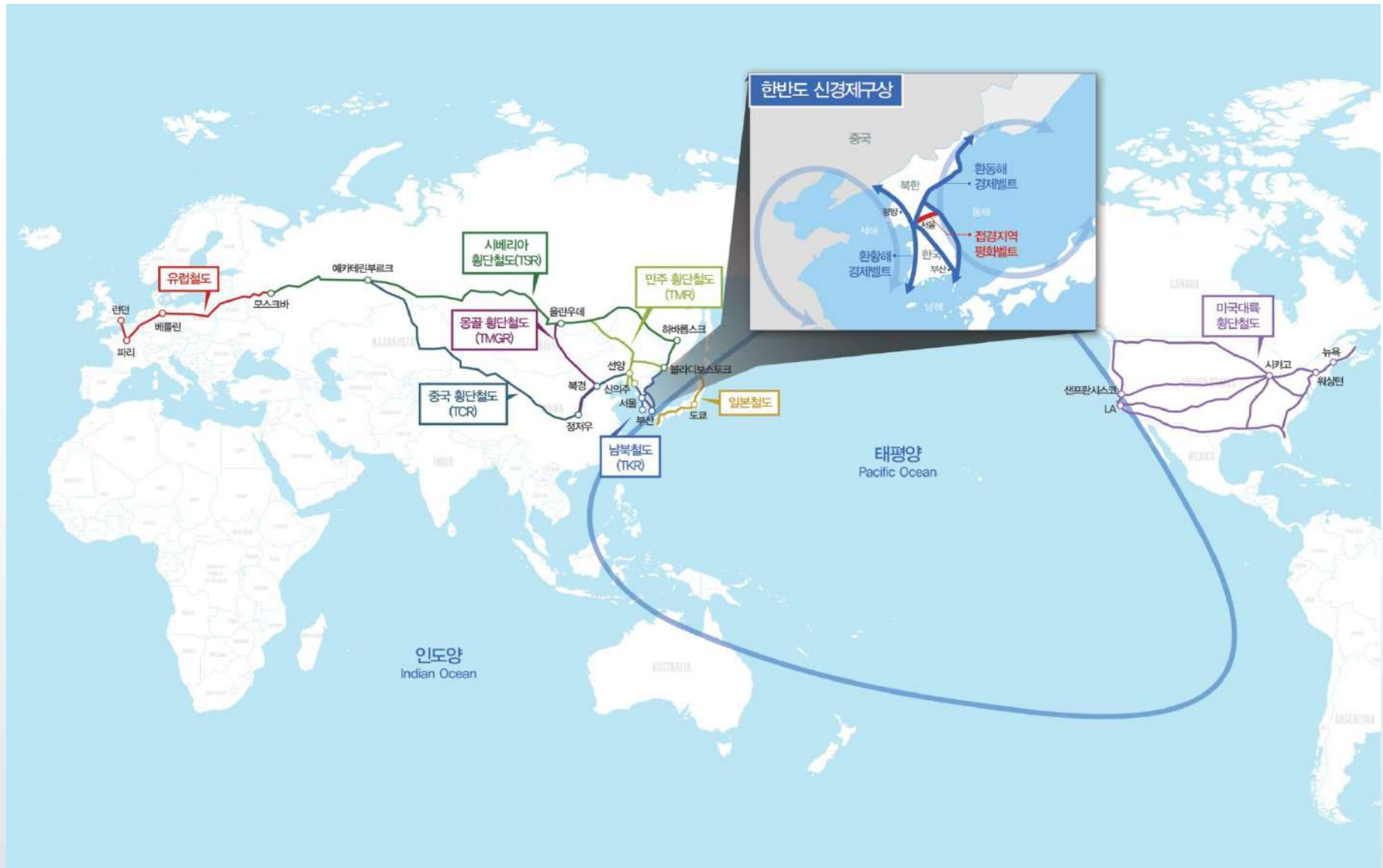


This community will play the role as the energy community and economic community which will further serve as the start point toward the multilateral peacetime security body as well as the main artery or mutual prosperity in Northeast Asia



East Asia Railway Community is intended to bind East Asia with rail network and allow Korean Peninsula to bridge the continent to the ocean, thereby growing together for peaceful and prosperous Korean Peninsula as well as East Asia.

East Asia Railway Community Scheme



Surroundings of East Asia

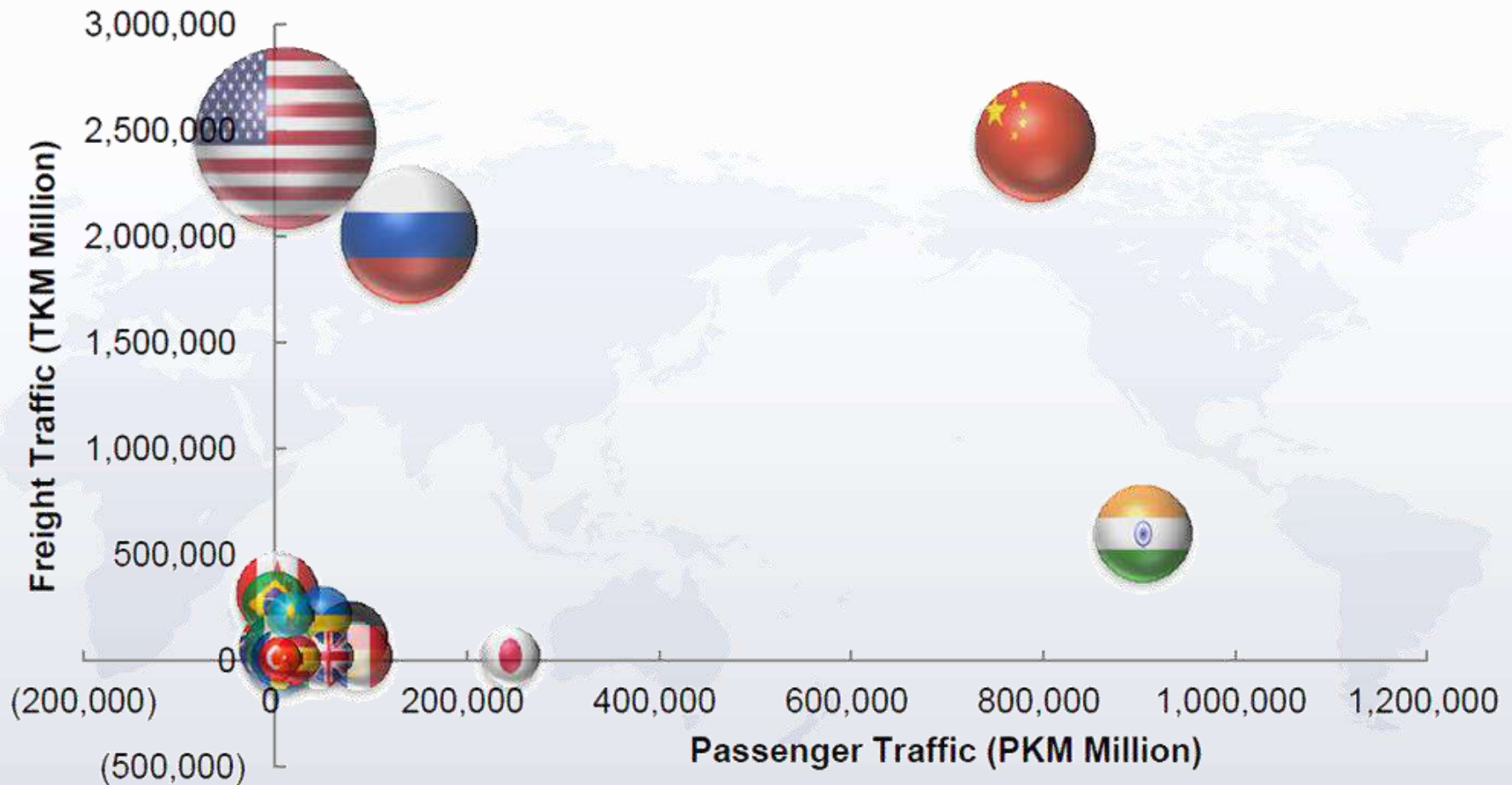
Korea entering into a trillion-dollar trade era has recorded the trade volume with East Asian countries including USA, China, Japan and Russia accounting for more than 50% of the total.

This is the region where global passenger and freight demand is concentrated.

Combined GDP of 6 Northeast Asian countries + USA reaches 40% of the global total and also 40% in terms of Railway length.

Demand of Transport Logistics in Asia-Pacific Market

International Demand of Cargo and Passenger Transport by Railway (2015), UIC



New Economic Initiative of the Korean Peninsula



Korean East Sea Rim Economic Bloc : Donghae Line

**: Connecting 150 million People through TKR - TSR/TMR,
Mass Economic bloc with GDP 2 trillion dollars**



Yellow Sea Rim Economic Bloc : Gyeonggeui Line

**: Connecting 600 million People through TKR - TCR,
Mass Economic bloc with GDP 6.7 trillion dollars**



Missing Link Axis in Border Area as Peace Belt

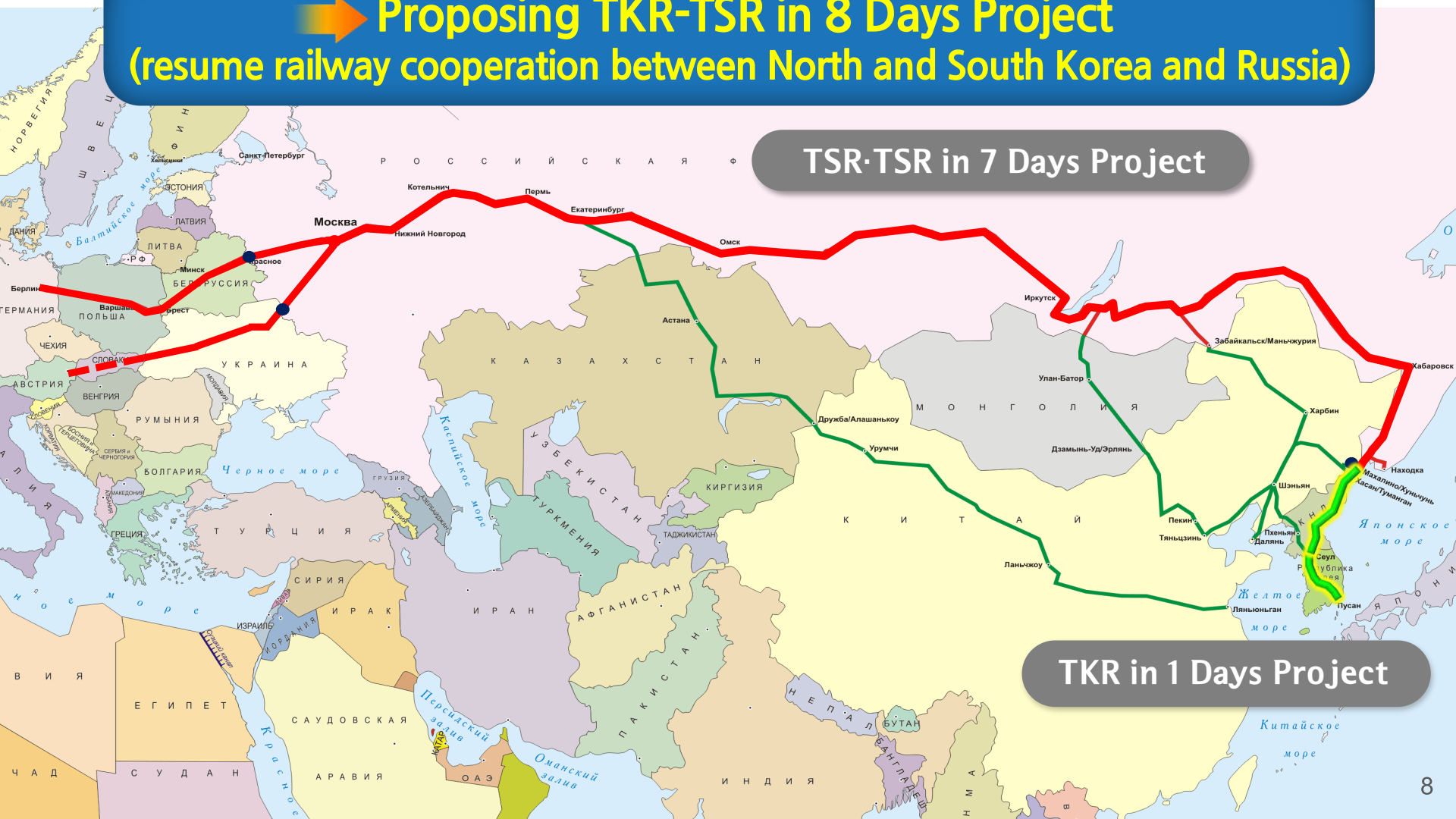


One Market

Connection between Russian Trans-Siberian Railway (TSR) and Trans-Korean Railway (TKR)

Trans-Siberian in 7 Days Project + Trans-Korean in 1 Day Project

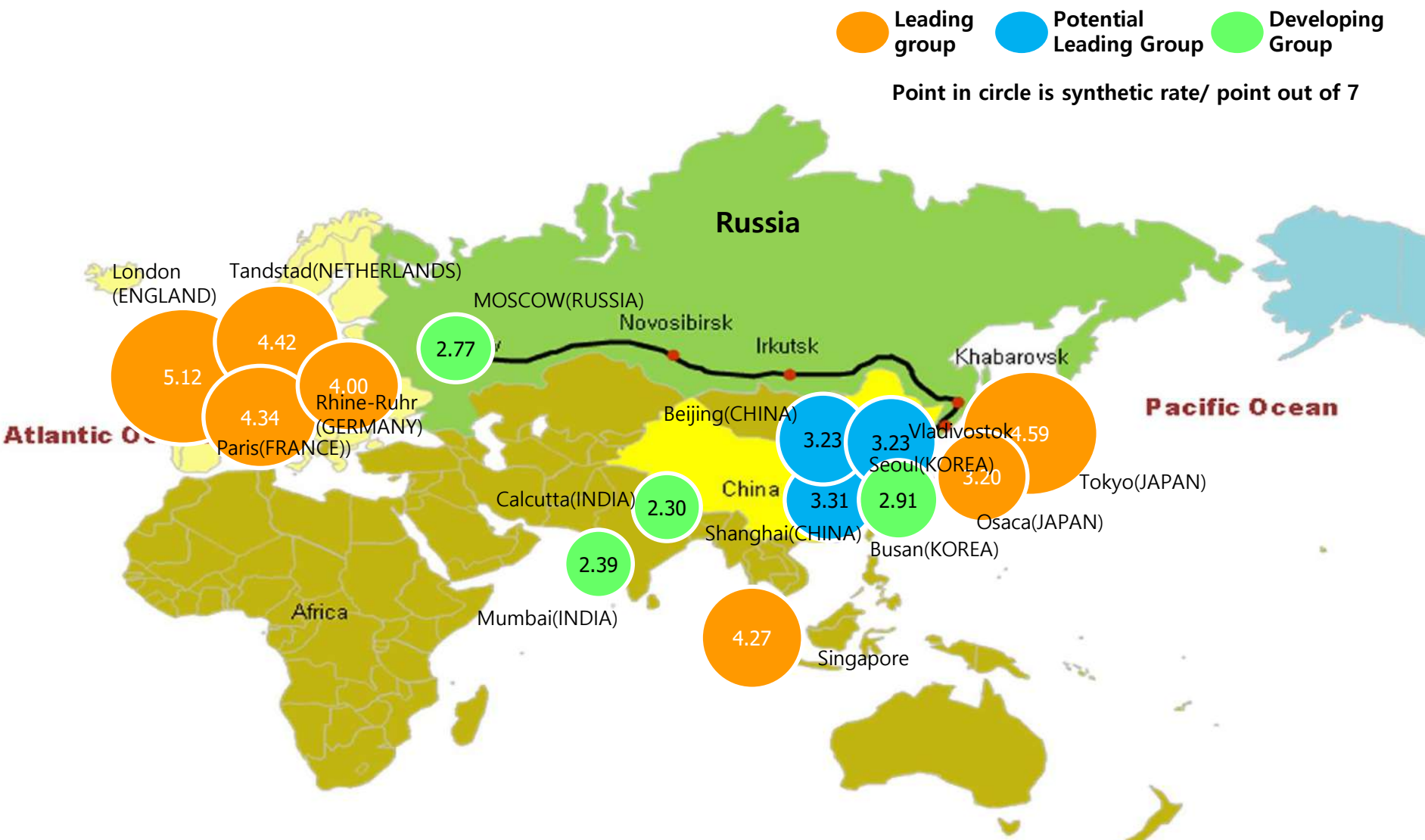
➔ Proposing TKR-TSR in 8 Days Project
(resume railway cooperation between North and South Korea and Russia)



TSR-TSR in 7 Days Project

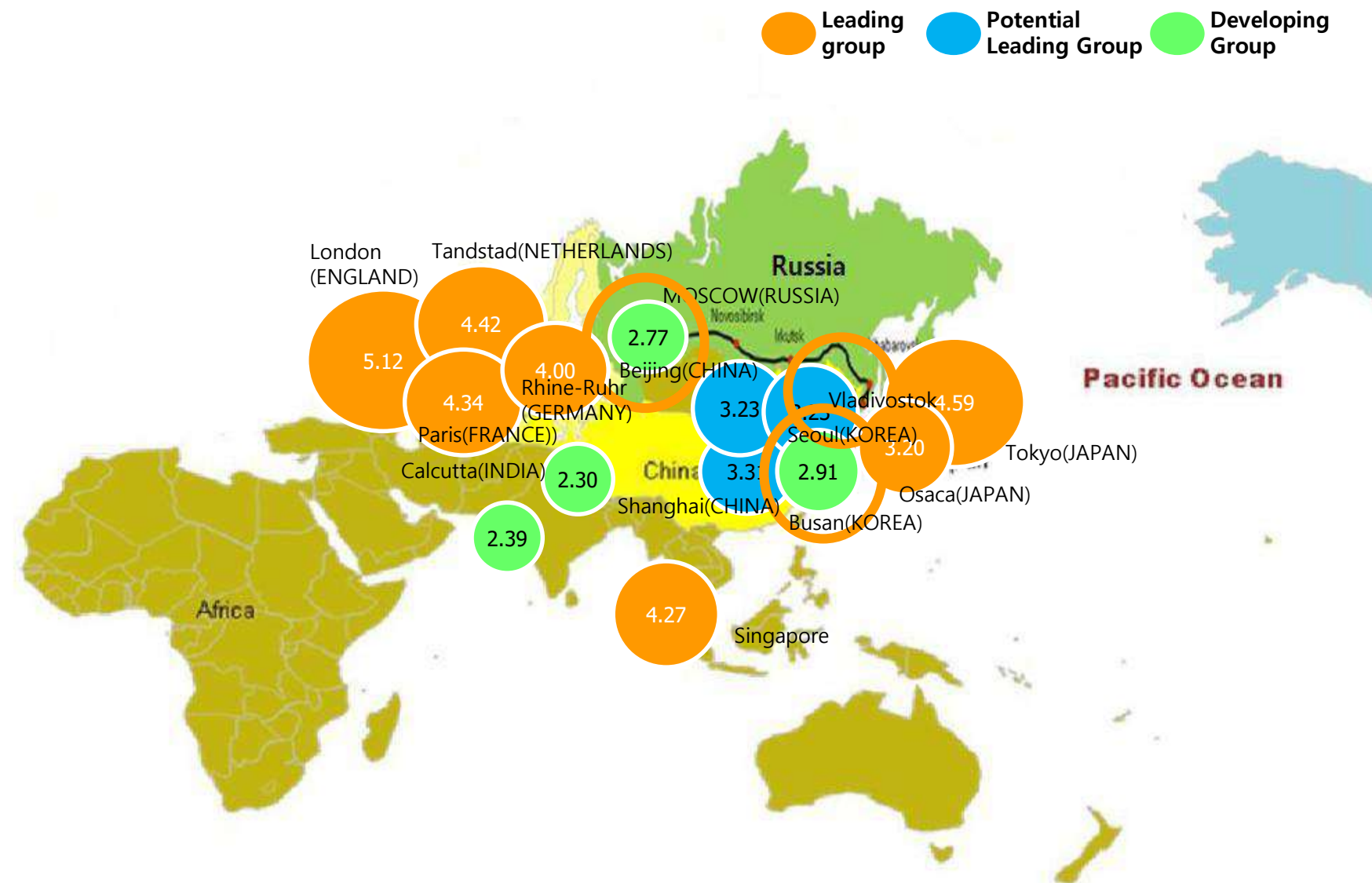
TKR in 1 Days Project

MCR Competitive power ranking



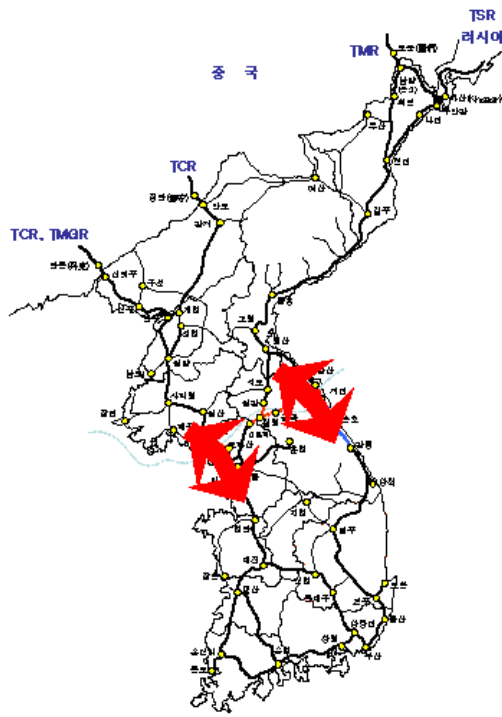
Mega-City Region(Before High Speed Railway)

MCR Competitive power ranking



Mega-City Region(after High Speed Railway)

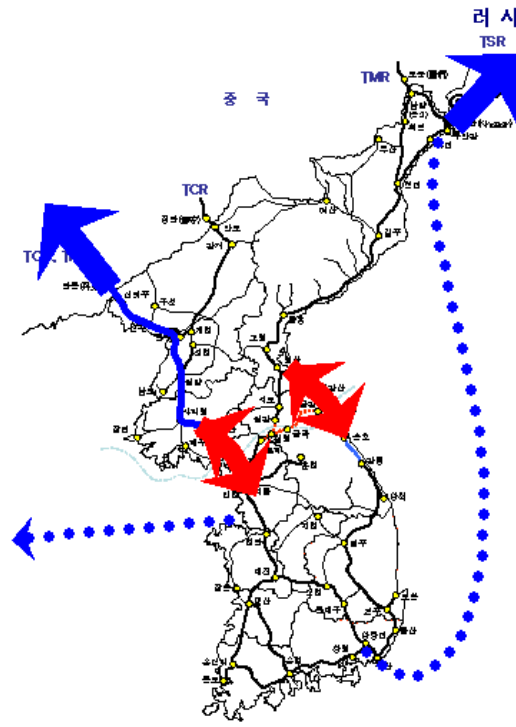
Stage-by-stage Roadmap for Trans-Korean Railway



1st stage
Connecting railway

Minimum reconstruction of
North and South Korean railway

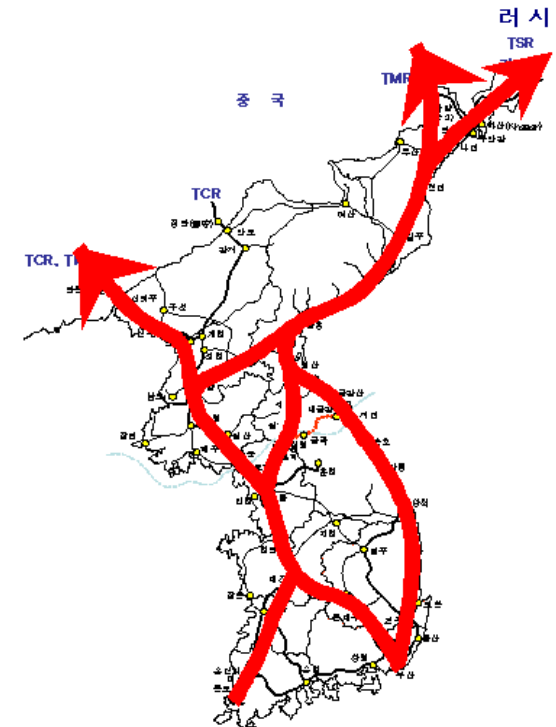
**Profit making/re-investment
through logistics business**



2nd stage
Reconstruction North Korean railway

Modernization of North Korean railway
as an improvement

**Expansion of logistic business
/ creating international
consortium**



3rd stage
Modernization of North Korean railway

Modernization of North Korean railway
as new construction

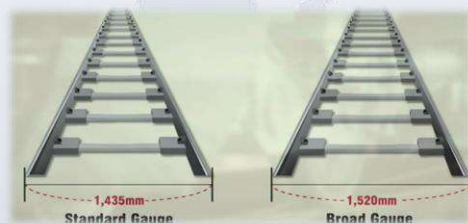
**Completion
of Eurasia Land Bridge**

※ Depending on the pace of opening of North Korea, 2nd and 3rd stage can be promoted in parallel

Innovative R&D Cooperation Programs

Freight Vehicle for Trans-continental Railways

- Eurasia railway operation technology by connecting Asia and Europe
 - Reacting to increasing demand in volume between Korea and north-eastern countries
 - Development of universal coupler, breaking system, gauge changing bogie
 - Time saving high efficient and high capacity transshipment technology
 - Joint research with JSC-VNIIZHT from April 2018



Gauge Change Bogie



Universal Coupler



Breaking System for Long Train

The Foldable Container

- New concept of container folded to reduce volume by 1/4
- Solution to cargo imbalance between Europe and Asia when TKR-TSR is connected
- In progress of pilot operation since July 2019



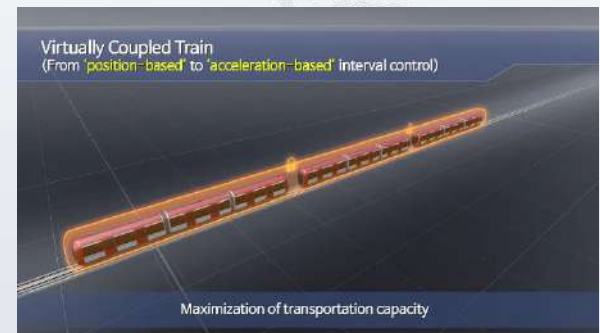
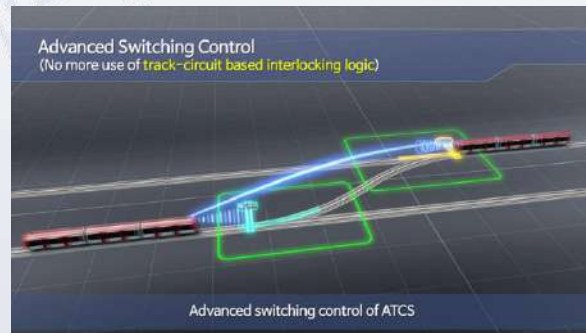
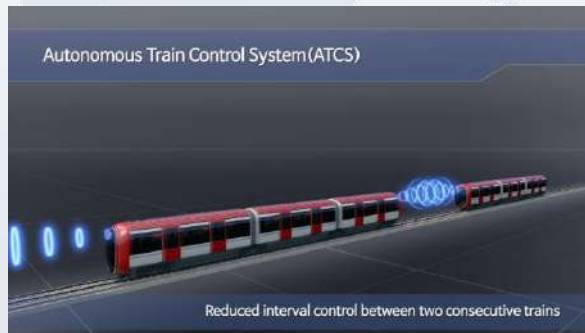
< Currently Used Empty Container >



< Foldable Empty Container >

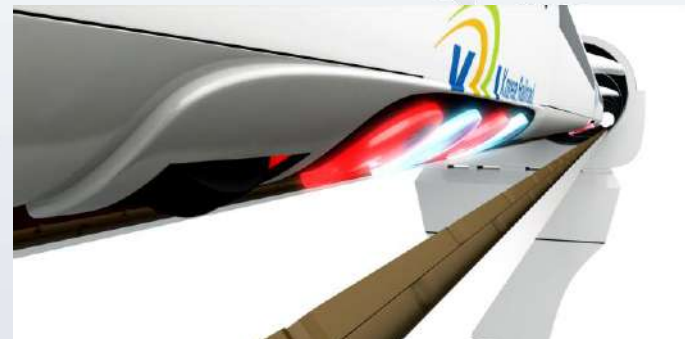
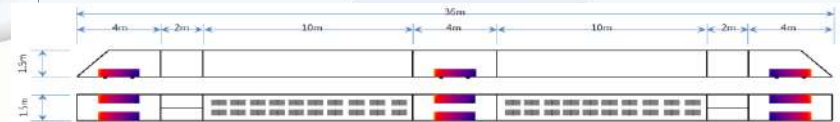
Train Autonomous Behavior Control

- Wireless communications between trains to achieve cost-efficient, high transport capacity, safety and improved service
 - Increase train interval headway up to 30%
 - Decrease installation cost up to 20%
 - Non-transfer, non-stop operation service by virtual coupling and separating of trains
- Awarded top 100 leading technology in 2025 Korea (Nov. 2017 by the Korean Academy of Science and Technology)



Hyper-Tube Express (HTX)

- New railway concept of 1200km/h running through partial vacuum tunnel
 - On demand & point to point transportation
 - World's first application of freezer separated high temperature superconductor
 - Signing MOU with 7 government funded institutes and universities (Jan. 2017)





Thank you



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