

Shifting from Road to Rail for Green Growth

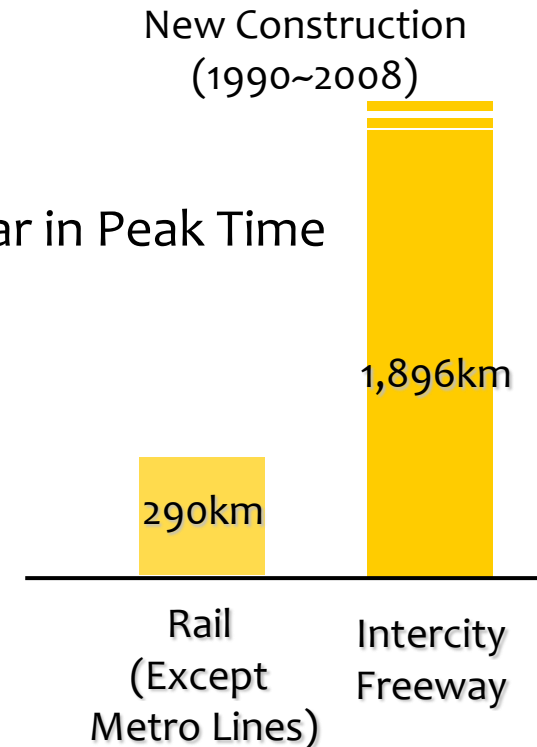
Jaehyun Park, Ph.D.

Current Statues of Railroad

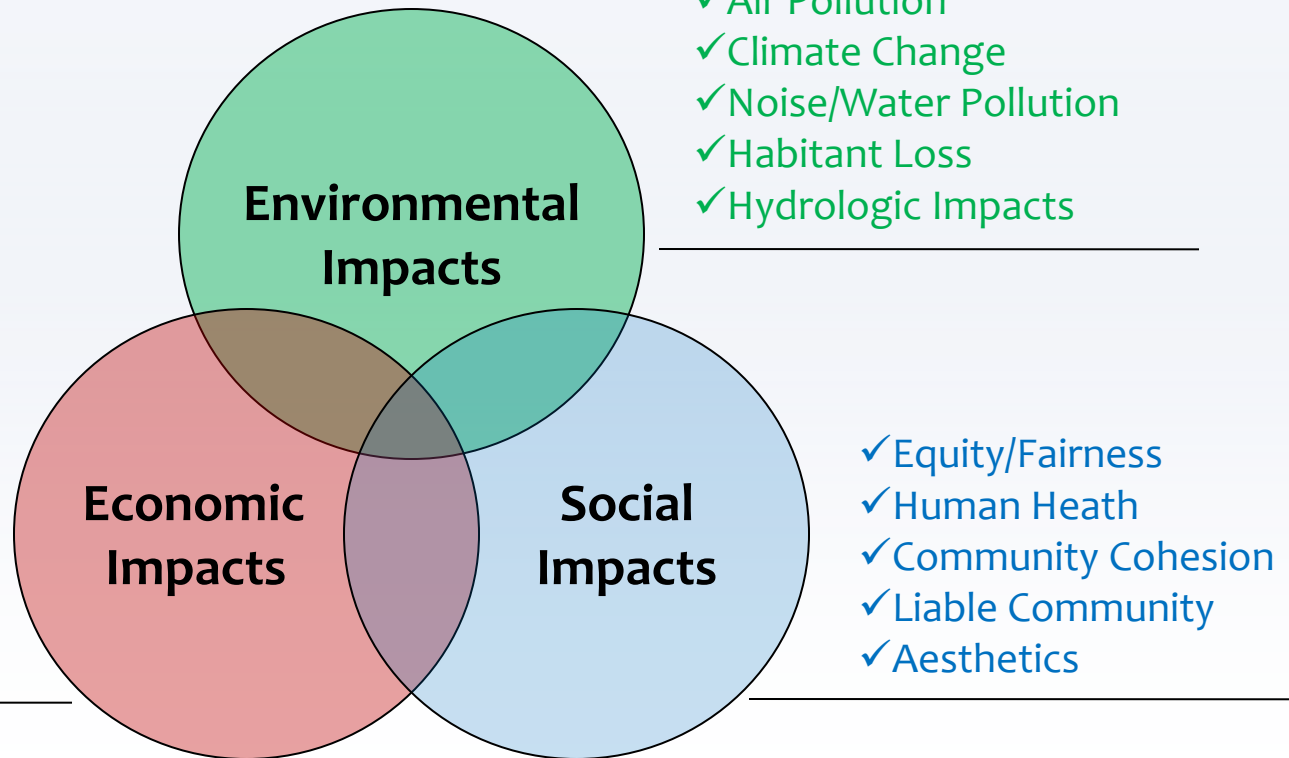
- Car-oriented Transport System
 - Investment for Rail is only 1/3 of for Freeways Past Decades

- Inefficiently Competitive Rail Service
 - Travel Time, Accessibility, Frequency, etc
 - Commuter Rail Takes 21% longer Time than Private car in Peak Time

- Deteriorated Freight Service
 - Rail: 417\$/9hr, Tractor-Trailer: 383\$/6hr
(between Seoul-Busan, 40ft Container)



Elements of EST

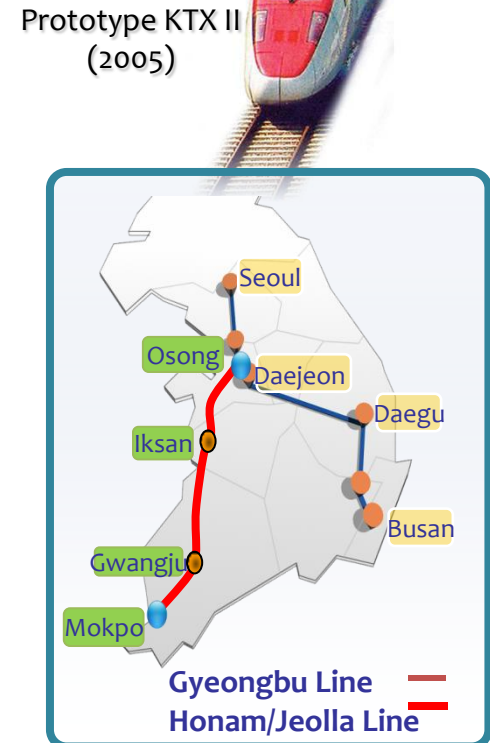
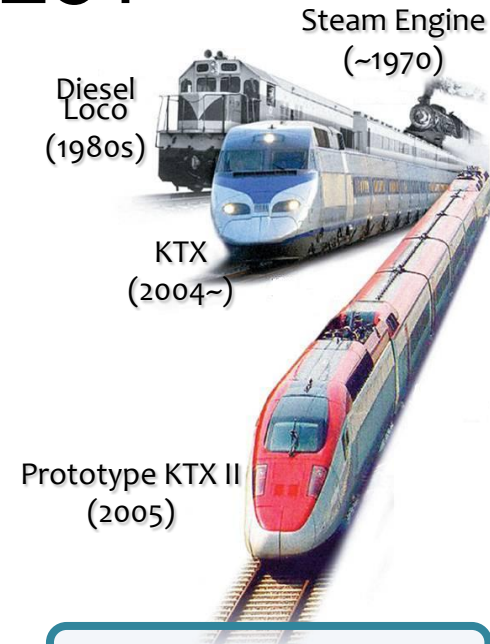


How to Make Sustainable..

- Make it Attractive
 - Safe, Comfortable, Less Expensive, Easy to Use...
- Make it Clean
 - Improve Energy Efficiency, Use Clean Energy, Reduce Pollution
- Make Competitive and Profitable
 - Improve Mobility, Speed, Accessibility & Intermodality
 - Lower Operating Cost, Maintenance-Free, Automation
- Shift to Green Modes
 - 1% Shift to Rail Brings 600M\$ of Energy Saving & 280M\$ of Saving by Reducing Congestion

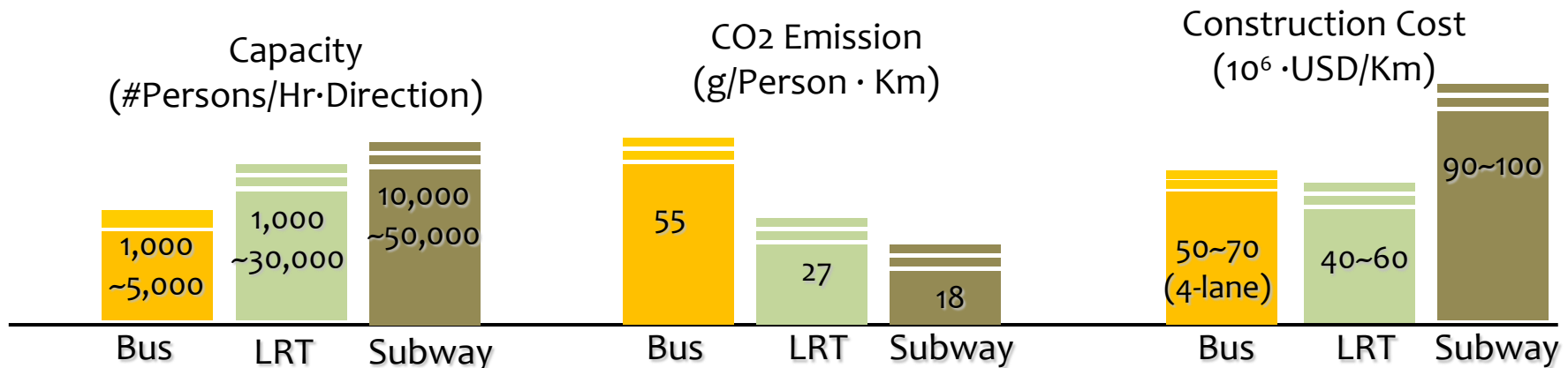
Movements toward EST

- High Speed Rail
 - Travel Time Reduction
 - From 4.5hrs to 2.2hrs between Seoul-Busan
 - # of Passenger Increase 16.9%, Since 2004
 - Revenue Growth of 22.4%
 - Shift to Railroad
 - Long Distance Express Bus Traffic Reduced by 20~30%
 - Airline Passengers on KTX Corridor Dropped by 24%
- ※ 7.7 M. Tons of CO₂ Reduction Last 6 Years,
which is Equivalent to Plant 1.5 Billion Pine Trees



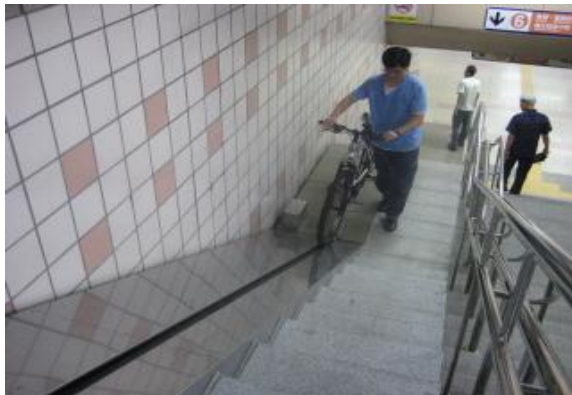
Movements toward EST (Cont')

- Provision of Advanced Rail Network
 - Nationwide : Refinement of Conventional Lines
 - Straighten Tracks, Tilting Train (18~21% of Travel Time Reduction)
 - Metropolitan Region : Non-stop, Faster, Higher Capacity Rail System
 - Deep Underground Rail (aliased as GTX) in Metropolitan Area
 - Intra-City : Sophisticated Urban Rail Transit Systems
 - LRT, BRT, Tram, PRT, etc



Movements toward EST (Cont')

- Enhancing Multimodality and Serviceability
 - Transit Mall, Bicycle Parking, Airport Rail
 - Accommodates Commercial, Cultural & Business Amenities
 - IT-based Information System & In-vehicle Internet Access
 - Combining Mobile Devices / Developing Profit Models for Providers
 - T-money
 - All-round Electronic Payment, Including Subway, Bus, Taxi, Toll and More



Movements toward EST (Cont')

- Revival of Rail Freight

- ➡ Raise Modal Share of Rail from Current 7.5% to 15% by 2012

- Modernize Logistics Facilities

- DST, Loading/Unloading System, Storage, etc

- Subsidiary for Logistics Cost of Freight Shifted from Road to Rail

- Subsidy = Logistics Cost (Rail – Road) + Time (Rail – Road)

- ex.) 47.3 USD/40-ft Container between Seoul-Busan (440km)

- ※ EU's 'Marco Polo' Program

- Expecting Total Reduction of 8.4 M Ton of GHG Emission (2003~2013)

	2003	2004	2005	2006
Subsidy (Million Euro)	13	20.4	21.4	18.9
Fright Traffic Shifted (Billion Ton·Km)	12.4	14.4	9.5	11.5

National Railroad Policy

- Increase of Investment on Railroad to Achieve ‘Modal Shift’
 - Raise the Railroad Share in SOC Account from 29.3% to 50% by 2020
 - Goal of Modal Share Change
 - Rail Passenger : 13.6% in 2001 > 15.6% in 2007 > 30% in 2020
 - Rail Freight : 7.6% in 2001 > 7.5% in 2007 > 20% in 2020
 - ※ Parallel with the Goal to Cut Down Transportation GHG Emission by 33~37% by 2020 BAU
- Cost down in Construction and Operation
 - Renewal of Design Specifications & Standards
 - More Efficient Construction Management, Tools & Materials
 - Maintenance in Automated & Simplified Way
 - Building Infrastructure in Closer Conjunction with Operational Schema

National Railroad Policy (Cont')

- Creation of Safe, Comfortable & Convenient Environment
 - Consideration for the Transportation Vulnerable
 - Strengthen Connection with the other Modes including Cyclists
 - Legislation to Enhance Safety on the Basis of Preventive Action Plan
- Promoting Rail Industries
 - Reorganizing Railroad Governance to Foster Rail Industries
 - Encouraging P-P Partnership in Building and Operating
 - Education and Distribution of Human Resources to Heighten Efficiencies
 - Supports for Advanced Rail Technologies

Perspectives

- The Railroad which:
 - Ties within 2-hours the Whole Land,
 - Plays a Role as Veins Helping Regional Development,
 - Pursues a Public Transport -Centric System,
 - Induces an Environmentally Sustainable Society, and
 - Pulls 'Green Growth' of the Country!