



The development of High-speed Freight Train System in Korea

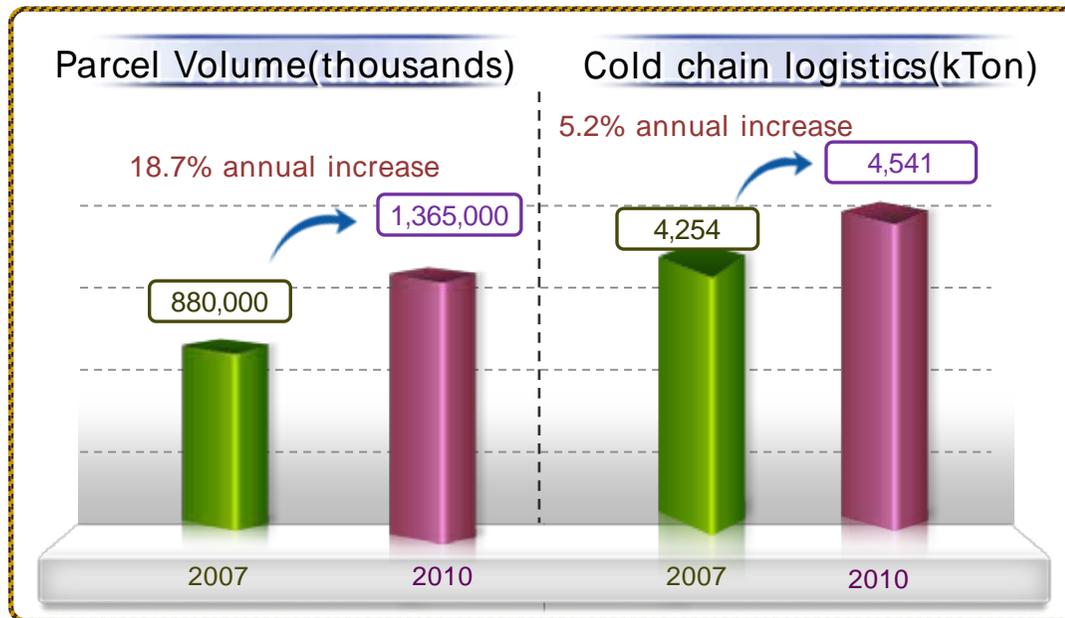
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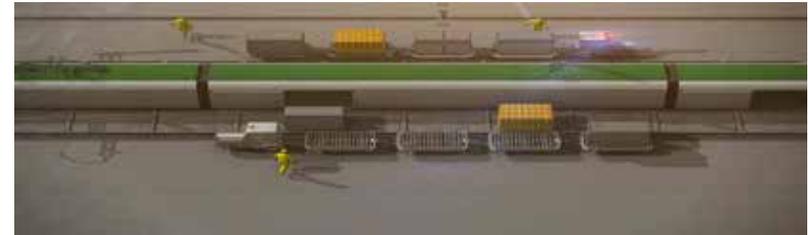
- Decrease continuously railway logistics -> deficit operation
46,806kTon(2008) → 40,309kTon(2012)
- Low operation speed of freight train service (Max. 90km/h)
- Delivery fees due to continuous rising of gas price
- Environmental issues: CO2 and GHG emission
- Air Cargo 5.2 % , Parcel delivery 18%, Fresh goods 5.2% (annual average)
- KTX parcel express service in great demand
- High tech. industrial complex connect to KTX line



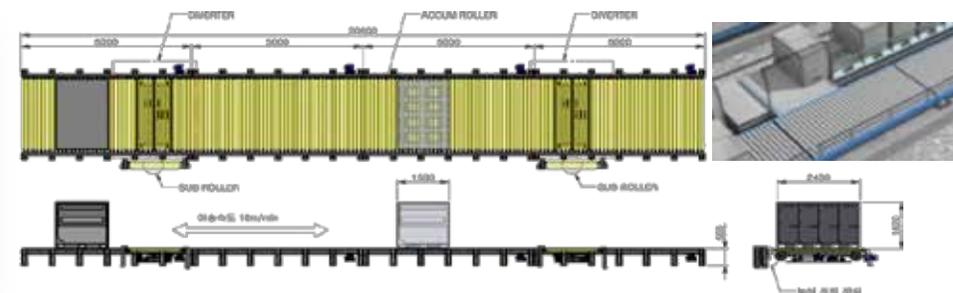
TGV La Poste



Euro CAREX Network

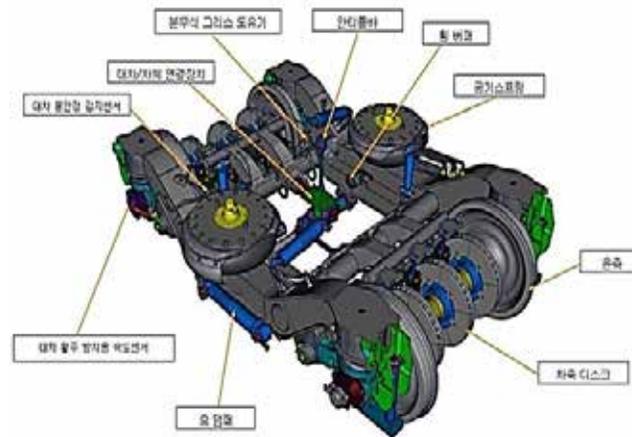


Classification	High-speed freight train service
Max. operating speed	300km/h
Operation Method	Only for Freight/Fixed Train Set (10 vehicles) Centralized power system with electric motors
Connection method	Integrated Conveyance System including other modes(Airport, Subway etc.)
Trans shipment facility	Automated Rail Port System (Platform, Terminal, Control center)
Trans shipment equipment	Automated Fast Conveyor/Diverter System (Geared-Motor)

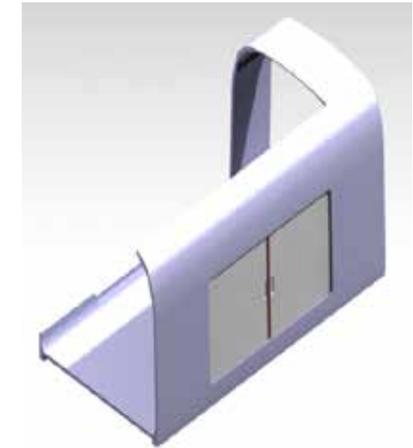


Rolling Stock Technology

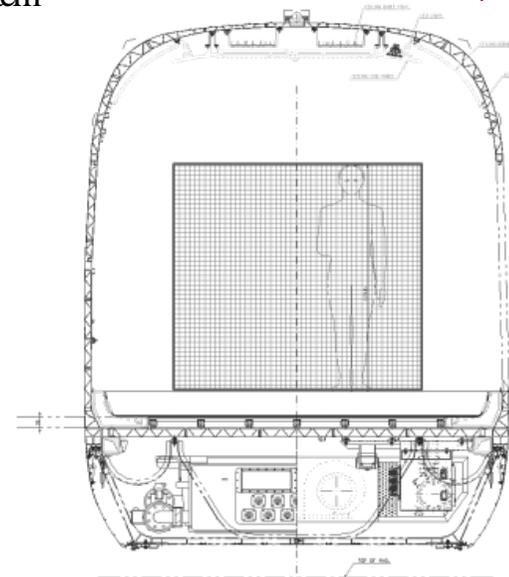
- 300km/h class high-speed cargo vehicle
- Large door for the use of high-speed cargo transportation
- Response for the fluctuating Load(15Ton)



| Bogie system



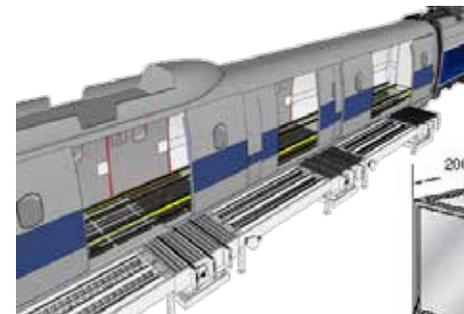
| Doorsystem



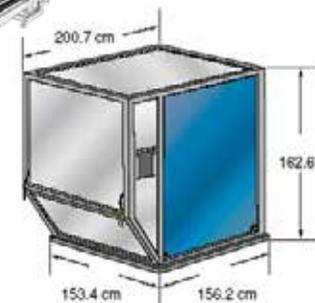
| Carbody

Logistics Technology

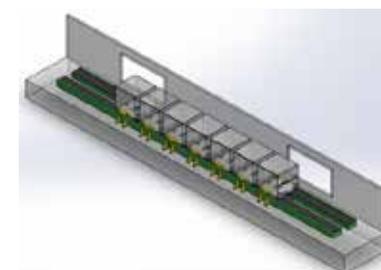
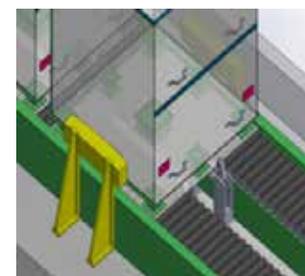
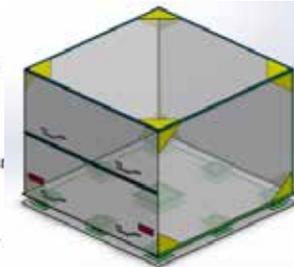
- Fast loading and transfer system
- ULD for intermodality with air cargo
- ULD-bed and ULD locking system on train
- Cargo loading arrangement/operation technique



| Loading/Unloading System



| ULD standard



| ULD-bed and ULD locking system

ü Safety, Security, Standards Requirements

- Meet the dangerous cargo protocols for air freight
- Make the standards on ULD (conformity with air standards)

ü Linking Terminals and Platforms with air cargo

- Design of train terminals within the airport infrastructures
- Technical solutions and dimensions for all functions: transshipment, storage, distribution

ü Collaboration effects.

- Overcome deficit operation of railway logistics service
- Strengthening of the hub-&-spoke system by centering the airports

Thank you for your attention !



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