



The First Korean Driverless HRT & LRT System  
Operation & Maintenance Company

# NEO TRANS

## MANAGEMENT PHILOSOPHY

Operation Company for “Shinbundang **DXLINE**”  
Heavy Rail Transit and “YongIn EverLine” Light Rail Transit!  
**NEO TRANS** provides fast and safe customer service.

# Remarkable Changes Start with **NEO TRANS**

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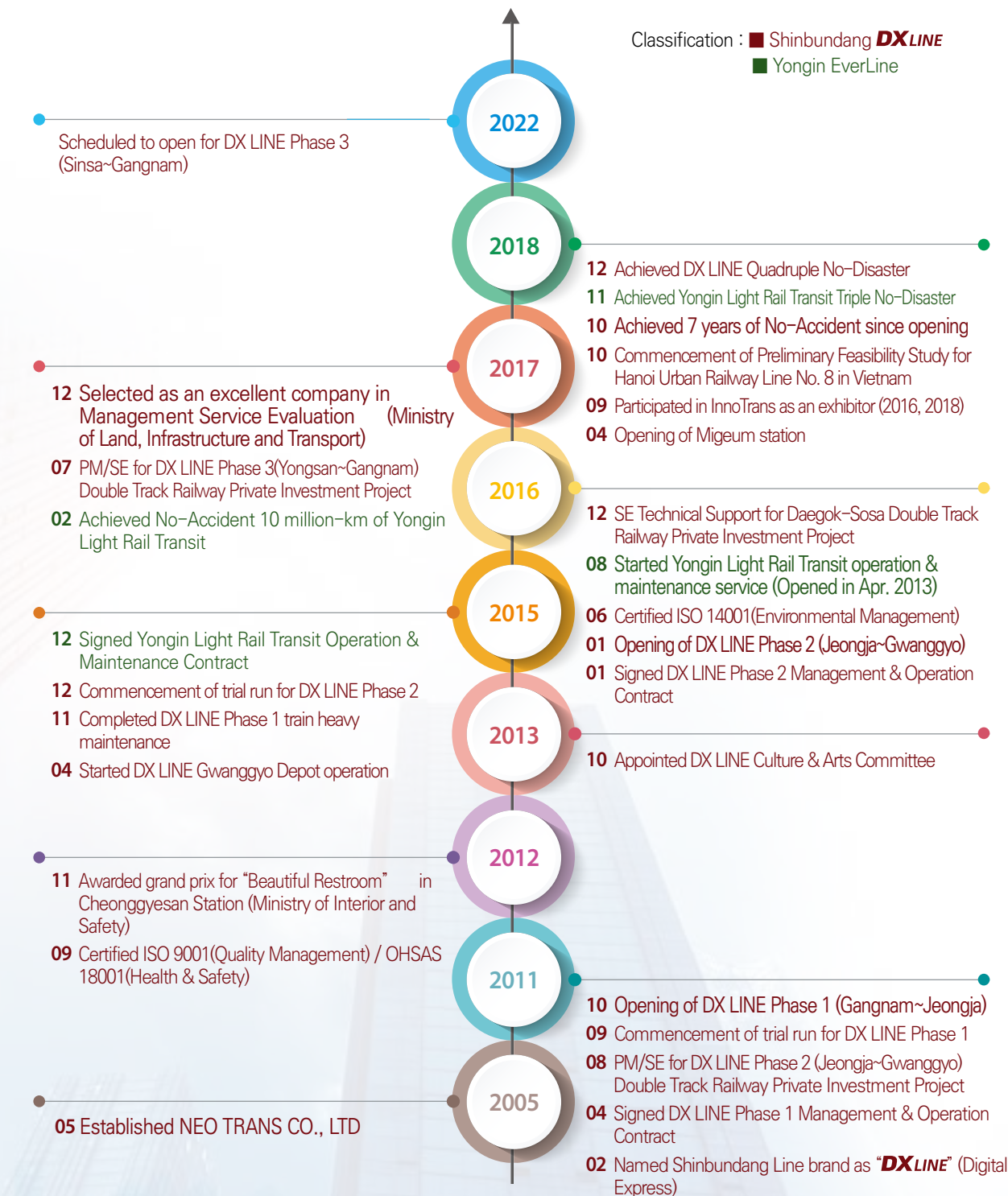
**NEO TRANS** creates valuable time for customers.

Increase of Company Value / Human Resource Centered Management /  
Customer Centered Management / Sustainability Management /  
Company Fulfilling Social Responsibility



## Company History

**NEO TRANS** dreams changes and designs new future based on the best technology and reliability.



## BUSINESS FIELDS

**NEO TRANS** is always with you from operation and maintenance to R&D of railway.



### Railway Operation

- Driverless system operation
- Management & training of operation personnel (HR)
- Train service operation
- Station operation



### Construction & Maintenance

- Construction of driverless operation system
- Operation & maintenance of facilities
- Management of rolling stocks & depot
- Construction of integrated computer network



### Asset Development Business

- Digital advertisement system
- Operation of underground shopping center
- Cultural & convenient space
- Value-added telecommunications services



### Research & Development

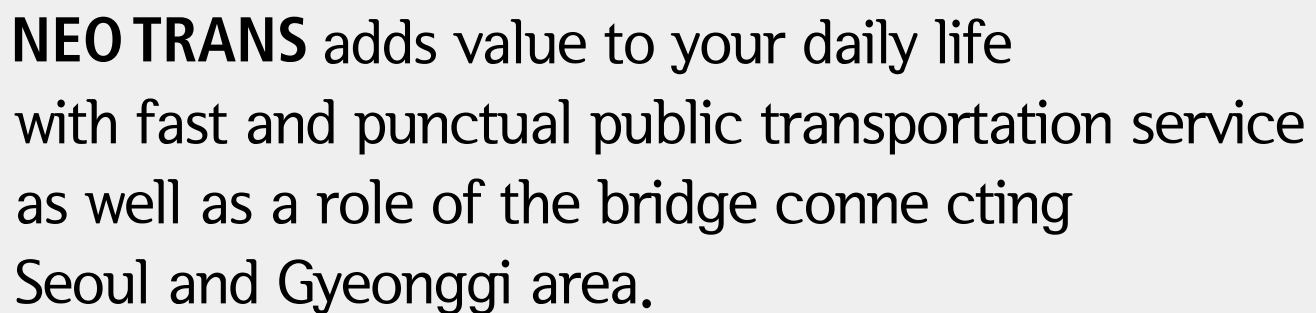
- National R&D
- Technology Services
- Technical asset configuration management
- Design of railway signaling/electricity system



### PM / SE

- Civil engineering/Construction/System
- Consulting for operation preparation
- Technical consulting for railway vehicle (metro, tram)
- Technical consulting for driverless operation & training
- Technical support for system integrated management





- Total Length : 31.29km
- Station : 13 Stations [Gangnam~Gwanggyo, 1 Train Depot]
- Operation Type : Driverless Heavy Rail Transit (Subway)
- Route Duration : Approx. 37 minutes
- Train Consist : 6-Car Train / Total 120 cars 20 trainsets
- Operation Speed : Max. 90km/h
- Power and Distribution : AC 25,000V

- Total Length : 18.14km
- Station : 15 Stations [Giheung~Jeondae, 1 Train Depot]
- Operation Type : Driverless Light Rail Transit (LRT)
- Route Duration : Approx. 30 minutes
- Train Consist : Single Car Train / Total 30 trains
- Operation Speed : Max. 80km/h
- Power and Distribution : DC 750V

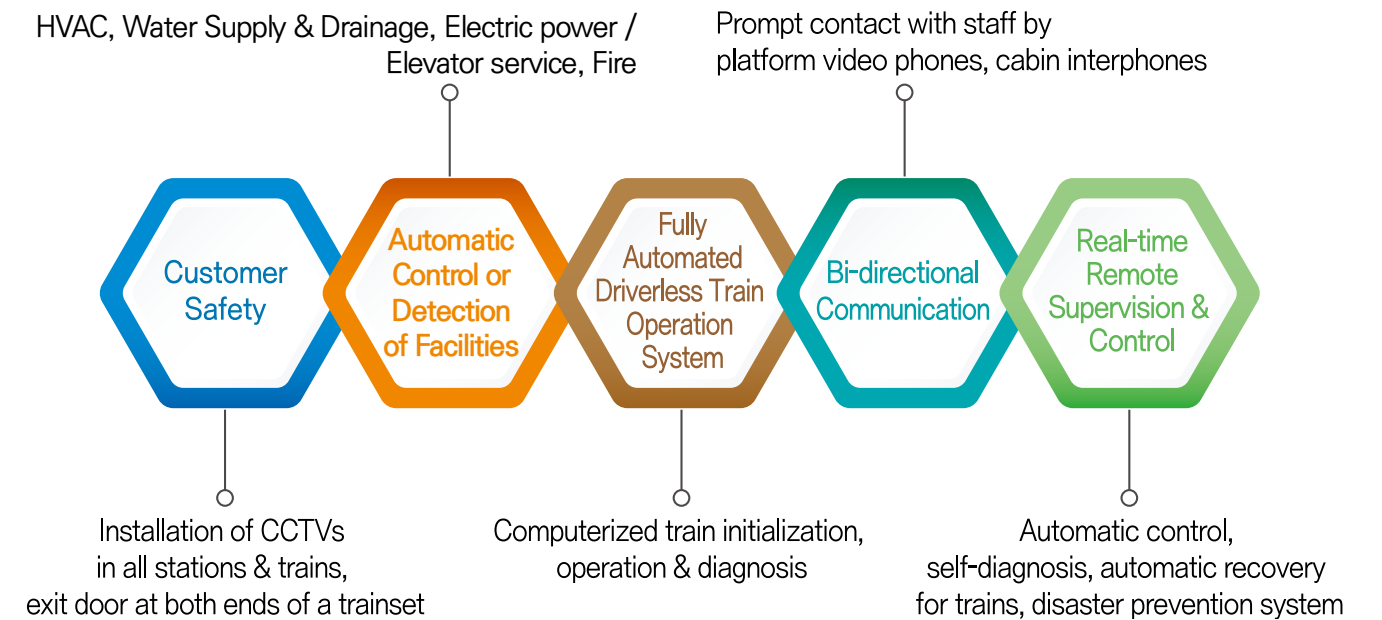




## DRIVERLESS OPERATION SYSTEM



Safe train operation under any circumstances by the total automatic response system (Fail safety system with multiple redundancy)



**The First Driverless Heavy Rail Transit (HRT) Operation System in Korea!**

**NEO TRANS** constructs and operates the best driverless operation system with advanced technology and operation knowhow.



### Status of NEO TRANS Driverless Operation [for Public Transportation]

- Driverless HRT Operation Company : 5<sup>th</sup> in the world, 2nd in Asia [DX LINE, 2011]
- Simultaneous Operation Company of Driverless Heavy & Light Rail Transit : 5<sup>th</sup> in the world (Aug. 2016) [NEO TRANS : DX LINE (HRT) & Yongin EverLine (LRT)]

### Advantages of DX LINE's Driverless Operation System

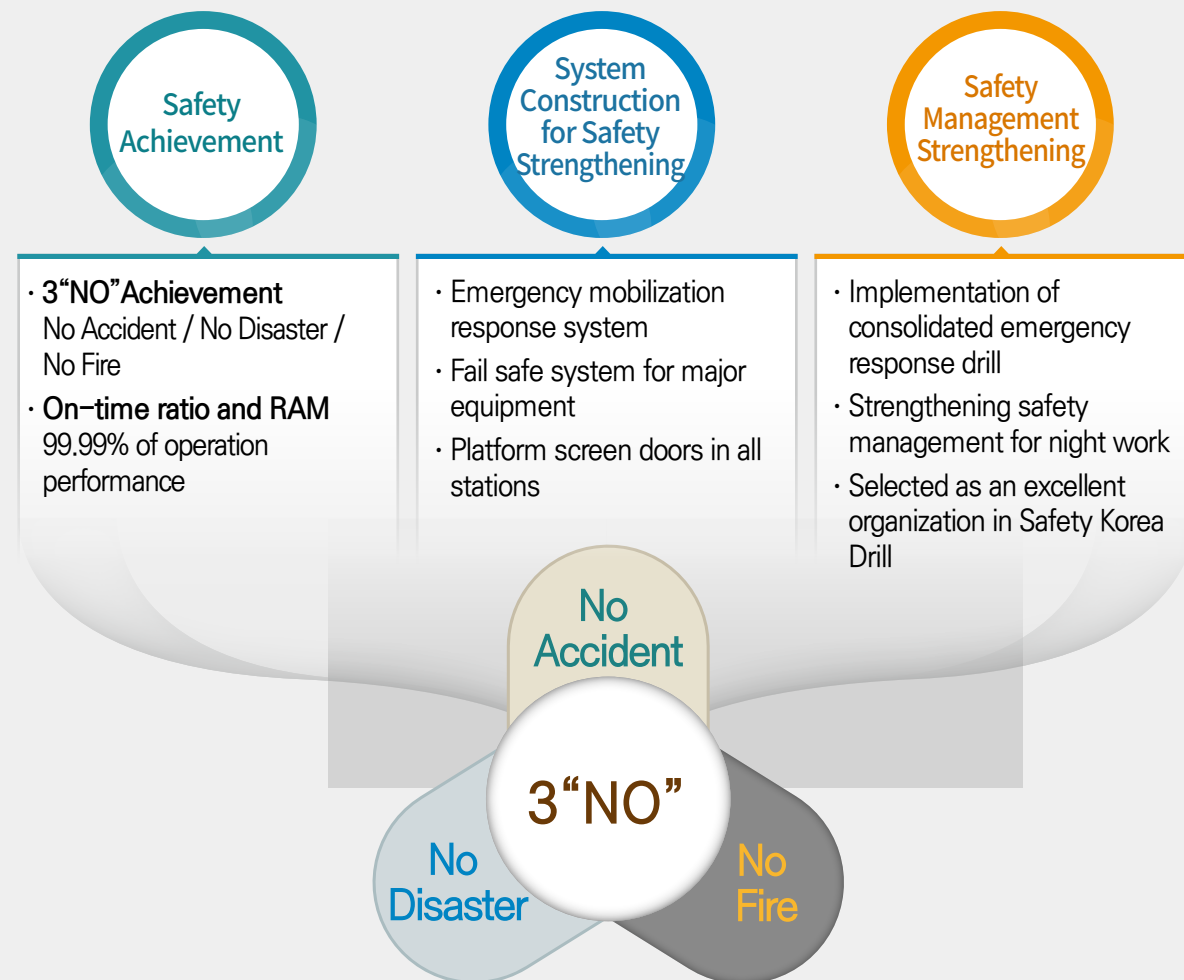
- 01** | Decrease of safety accidents by human errors
- 02** | Complete safety : Over 99.9% of DX LINE service/system availability
- 03** | Accurate service : Over 99.9% of on-time ratio and perfect precision stop
- 04** | Korea's best driverless operation system through continuous R&D



## SAFETY-FIRST MANAGEMENT SYSTEM

Seats may be yielded, but safety can never be yielded!  
**NEO TRANS** considers safety as the first priority!

Customer-Centered Safety First!  
**“No-Accident since opening”**



Certificate of No-Disaster



Grand Prix of Railway Safety Contest



Awarded as an excellent organization for disaster management

## Emergency Response Drill for **DX LINE**



Joint emergency response consolidated drill with related organizations



Train Derailment Restoration Drill

## Emergency Response Drill for **YongIn EverLine**



Train Derailment Restoration Drill



CPR Training



Switch Machine Manual Operation Drill

## Safety Facility



Emergency Shelter



Railway Police Center (Jeongja Station)



Safety Experience & Education Center



# Innovative technology and customer service!

**NEO TRANS** provides impressive customer service based on the globally verified driverless operation technology and operation knowhow.



## TECHNOLOGY



Repair Track in DX LINE Gwanggyo Depot

### Rolling Stock Maintenance

- Light and heavy maintenance
  - 1<sup>st</sup> phase 72 cars in 12 trainsets
  - 2<sup>nd</sup> phase 48 cars in 8 trainsets
- Real-time failure monitoring system
- Systematic management of rolling stock with RAM application

### Quality Control Process (Rolling Stock Heavy Maintenance)

- Entrance Inspection : Functional Check, bogie separation, rolling stock hoisting
- Exit Inspection : Rolling stock formation, function test
- Work by Process : Bogie, body, rotary machine, brake
- Depot/Main Line Commissioning Test : Propulsion, brake, acceleration/deceleration test
- Exit of Rolling Stock : Acceptance test, main line operation



Repair Track in Yongin EverLine Depot

### Train Depot [DX LINE]

- Facility Size : 125,125m<sup>2</sup>
- Main Facilities : 15 buildings including maintenance shop, main factory, car washer
- Track : 14 storage / 4 inspection / 3 cleaning / 1 test
- Storage / Inspection Capacity : 120 cars in 20 trainsets / 150 cars in 25 trainsets

### Train Depot [Yongin Light Rail Transit]

- Facility Size : 9,007m<sup>2</sup>
- Main Facilities : Maintenance shop, car washer
- Track : 1 storage / 4 inspection / 1 cleaning / 1 test
- Storage / Inspection Capacity : 30 cars in 30 trainsets / 5 cars in 5 trainsets

## OPERATION



Grand Prix for "Beautiful Restroom"

### Station Management

- Operation of Automatic Fair Collection system
- Operation of customer's convenient facilities
- Providing customer's convenience & information

### Customer Satisfaction Service

- Call center · Lost and found one-stop service
- Station · train passengers monitoring survey
- Customer satisfaction survey



Customer Satisfaction Management

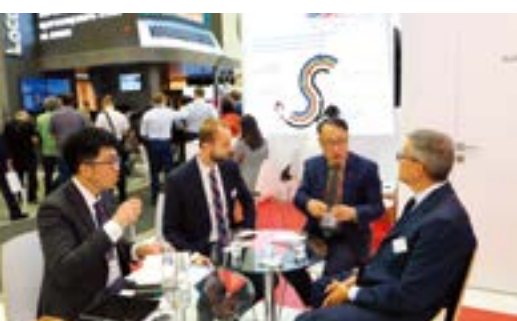
### Facilities Operation & Management

- Application of environmental design to all stations
- Grand Prix Winner "Beautiful Restroom" in Cheonggyesan Station
- Remote control system for AC & elevator facilities

### Air Quality Control

- Operation of multiple filtering system (train & station)
- Measuring management of the indoor air quality





We provide domestic & overseas services for railway project management and technical consulting, and have the technology for the best driverless operation system in Korea through continuous R&D.

A specialized company for driverless operation system construction, operation and project management, 「**NEO TRANS**」

## PM/SE



DX LINE(Yongsan~Gangnam) Double Track Railway Private Investment Project



Urban Railway No. 8, Hanoi, Vietnam

### Korea

- PM/SE for DX LINE Double Track Railway Private Investment Project
  - DX LINE section (Jeongja~Gwanggyo)
  - DX LINE section (Yongsan~Gangnam)
- SE Technical Support for Daegok~Sosa Line Double Track Railway Private Investment Project
  - RAM, system stability, process control
  - System integration performance, Suitability management for electronic devices
  - Interface

### Overseas

- Riyadh Metro, Saudi Arabia
  - Technical consulting for Line 4 and 6
  - Review & data research about process, trial run for each field
- Feasibility study on Urban Railway No. 8, Hanoi, Vietnam
  - System(electricity, communication, machine, rolling stock, inspection equipment), Train operation
- Education of DX LINE system, train operation
  - Egypt Railway School
  - Indonesia Railway School

## R&D

### National R&D

- Practical use of the wireless communication & control system for general & high-speed railways
- Train control system development for high speed railway supporting automatic operation
- IRU Localization & performance improvement for railway control device
  - ※IRU : Interface Relay Unit

### Technical Service & Self-Development

- Application of operation knowhow & provision of test bed
- Prevention of human error & development of S/W for operation efficiency
- Publication of glossary on CBTC (communication-based train control) for the first time in Korea

### Technological Assets

- Patent registration & application / Copyright and trademark registration / Deposit of technical data



Certificate of patent



Certification of copyright registration



Certificate of deposit of technical data for railway driverless operation



Glossary



## CULTURAL METRO RAIL

Happy encounter between nature & high tech,  
human & culture!

NEO TRANS provides a complex of cultural space which customers can use more conveniently and pleasantly through a new paradigm combining social contribution, culture, art and entertainment.



DX LINE Culture & Arts Committee

### Provision of attractions combining culture, art and entertainment

- Operation of DX LINE Culture & Arts Committee
  - Expert participation in performance, film, fine arts, music, dance and social contribution
- Implementation of various exhibition & cultural events
- Music concert, musical, entertainer invitation performance
- Application of environmental design with differentiated theme to stations



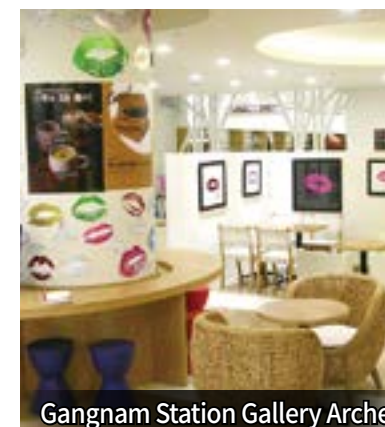
Entertainer Wrapping Train



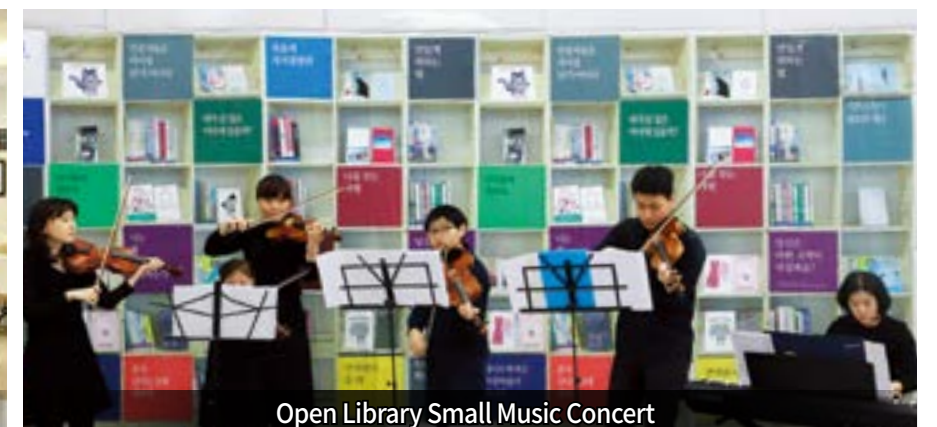
Afreeca TV linked Halloween Contest



Korean Women's 3-Cushion Billiard Championship



Gangnam Station Gallery Arche



Open Library Small Music Concert



## SOCIAL CONTRIBUTION

### Seed of sharing, and society living together!

We are actively putting the sharing into practice where the help is needed through constant support for the underprivileged.



Company Service Club Activity



Donation of Goods by Employees

#### Voluntary participation and support for the development of local community

- Support of job creation projects for the disabled & donation of Goods by Employees
- Manufacturing & delivery of kit for keeping warm for the underprivileged
- Support of children in vulnerable households
- Talent donation & support by service club



Support of Children



Support of Kit for Keeping Warm



Donations of "Love"



Talent Donation by Service Club

**NEO TRANS** jumps up to the best railway company in the world beyond Korea



# TOP & BEST NEO METRO



NEO TRANS CO., LTD

**DX**LINE YongIn EverLine

33, Daewangpangyo-ro 606beon-gil, Bundang-gu, Seongnam-si,  
Gyeonggi-do, Republic of Korea

Tel. +82-31-8018-7500 | <http://www.shinbundang.co.kr>