Seoul Metro line 9 O&M Contract
Veolia Transport

Veolia Transport is a leading operator of public transportation in Europe

- More than 3000 public clients
- 2007 annual turnover: €5.6 billion
- 82 000 employees
- Operations in 30 countries
- 2.7 billion passengers carried per year
- 30 319 road vehicles, 4 936 rail vehicles, 69 ferries

We operate and maintain urban, regional and national public transportation using all types of vehicle:
- bus, train, metro, LRT, ferry, taxi, etc.
10 years ago, SMG decided to go for the 9th line, south of the Han river
SMG decided to invite private partners for the new line: Why? Productivity, set benchmark for public operators

<table>
<thead>
<tr>
<th>Issues</th>
<th>Seoul Metro (1~4 Line)</th>
<th>SMRT (5~8 Line)</th>
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</thead>
<tbody>
<tr>
<td>• Operating manpower/Km</td>
<td>75 pax</td>
<td>44 pax</td>
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<tr>
<td>• Station work</td>
<td>Station resident system on 24-hour shifts</td>
<td></td>
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<tr>
<td>• Station master system</td>
<td>A station master assigned for each station</td>
<td></td>
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<tr>
<td>• Type of Working Schedule</td>
<td>24-hour shifts</td>
<td></td>
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<tr>
<td>• Driver’s working hours</td>
<td>4:40 ~ 5:00 Hours</td>
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Seoul Metropolitan Government’s decision  BTO Model

- Forming a consortium to respond to the very first public-private partnership metro project
- Investment scheme
  - SMG: infrastructure
  - Private consortium: financing of system, rolling stock, E&M, provision of O&M
BTO Contractual framework

Seoul Metropolitan Government

Implementation Agreement ➔ O&M contract approbation

Seoul Metro Line 9 (SPC)

CI (51%) ➔ F1 (49%)

EPC Contract ➔ O&M contract

Construction Committee
Project Manager

O&M Company
SOUTH LINK

Loan Agreement ➔ Lender

Seoul Metropolitan Government

Document: 06.12.2020 - commercial non contractuel - Veolia Environnement
Seoul Metro Line 9 Project Summary

Route (Phase I)
Gimpo Airport~Gangnam (25.5km, 25 stations & 1 Depot/Phase II-12km, 12 stations)

Details of Work Scope for private SPC
Design & Construction, E&M, Test & Commissioning, Operation & Maintenance

Budget
Approx. USD 4 Bil. Civil by SMG, USD 1 Bil. (E&M+O&M) by Private SPC

Construction Period
May 2006 ~ March 2009 (3 years)

Type of Project
Korea’s First Private Investment Project under BTO scheme (under 30 year concession agreement)
Route Map

**Phase 1**
- 25.5km 25 stations, 1 depot
- Opening: May 1, 2009

**Phase 2**
- Expected opening year: 2014
- 12.5km 12 stations
Traffic Forecast

Sizing factors

- Seoul’s the First East-West Subway line connecting residential and commercial district
- Public bus depot residing by 901 station accommodating over 2,000 inter-vicinity buses.
- Non-existence of duplicated bus route on ground
SouthLink9’s history

2005. 5. 16
SMG – Seoul Metro Line9 : Implementation Agreement

2007. 6. 29
SouthLink9 - Seoul Metro Line9 : O&M Agreement

2007. 6. 29
Veolia – Rotem : Shareholder Agreement and Cooperation Contract

80% 20%
SouthLink9
Basic Operation Plan

**Operation Intervals**: Peak Hour 4.5mn, Normal Hour 6mn (PH 3mn, NH 6mn in 2013)

**Fleet**: 96 Cars (4 Cars × 24 Train Sets)
- 156 Cars (6 Cars × 26 Train Sets) in 2011
- 216 Cars (6 Cars × 36 Train Sets) in 2013

**Operation Pattern**: Alternative Operation, Express and Normal

- **Express**: about 30mn, Stop at 9 Stations
- **Normal**: about 50mn, Stop at 25 Stations
VT’s innovations in Seoul’s landscape

1. Promoting the Improvement of Productivity

- Increasing of Driver’s Actual Working Time: 4h 30m → about 6h
- Decreasing the presence time and No overnight stays

- OCC Operation: Reduction of 30~40% in Work Force compared with existing operators

2. Optimization of Rolling Stock Inspection Period

- Usual Inspection: 3d → 6d
- Midterm Inspection: 2y → 4y
- Monthly Inspection: 2m → 3m
- Overhaul: 6y → 8y

Optimization of Rolling Stock Inspection Period
VT’s innovations in Seoul’s landscape

2 Customer-Oriented Station Operation System

- Mobile Station Supervisors
  - Fixed Station Officers
  - Mobile Station Officers
  - Mobile Station Supervisors

- Fixed Station Officers
  - Contingency plan of each Station
  - Additional Arrangement on Peak Time

- Mobile Station Officers
  - Support Fixed Station Officers
  - Additional Arrangement on Peak Time
  - Support in Case of Large Event etc

- Mobile Station Supervisors
  - Managing 25 Stations divided into 5 Groups
  - Support Main Stations and Management While moving in Station

- Security Staffs for Train & Station Safety
  - Patrol in the Station & Trains and Quick Moving in Case of Traffic Accident
  - Support with Quick Moving & Follow-up on Traffic Defect
VT’s innovations in Seoul’s landscape

- Expansion of Outsourcing
  - Maintenance divided by Critical System & Non-Critical System
    - Outsourcing Policy for Non-Critical System (elevators etc)
  - Outsourcing of Rolling Stocks’ Light and Heavy Overhaul Maintenance

- Human Resource Management on Base of performance and ability
  - Annual Salary Contract for All Staff
  - Simplification of Hierarchy
  - Promotion & Evaluation System on base of Performance
Metro 9

Customer-oriented

20 staff / Km

1 on 1 Express & All Stop

Promotion based on performance & seniority

At convenience store

Current operators

Production and staff-oriented

Over 50 staff / Km

All stop

Promotion based on seniority

Ticket booths with full staff
Conclusion: Why a private operator?

- Because competition creates incentives to performance & productivity
- To have a professional taking charge of the O&M risks
- To benefit from the diversity of expertise of a worldwide operator
- To ensure transparent relationships between the partners
- To control the evolution of costs and to have a long-term visibility on the required payments
- To improve the image and quality of service and to increase patronage
- To have targeted and responsive solutions to passengers’ needs and expectations