METRO DEVELOPMENT IN ATHENS

PRESENTATION AT THE INTERNATIONAL RAIL FORUM 2008
Madrid, November 13th, 2008

George Yannis
Chairman of ATTIKO METRO S.A.
ATTIKO METRO S.A. (AM)  
A SUCCESS STORY

• Attiko Metro S.A is owned at 100% by the Greek State and is responsible for the construction of the metro system in Athens and Thessaloniki.

• The operation is managed by Attiko Metro Operating Company (AMEL), a subsidiary of Attiko Metro.

• Athens Metro construction:
  – 36 km under design and construction

• Operation: Service and Rolling stock
• Accessibility: Transfer stations, PSN facilities
• Archaeology
• Culture
ATHENS METRO
LINE 1/ 1926-1957

✓ 26 km long
✓ 24 stations
✓ 3.1 km of underground line
✓ In operation since 1869
✓ 450,000 passengers/day
ATHENS METRO
BASE PROJECT/ 2000

<table>
<thead>
<tr>
<th>BASE PROJECT</th>
<th>LENGTH (km)</th>
<th>STATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 2: Sepolia – Dafni</td>
<td>9.2</td>
<td>12</td>
</tr>
<tr>
<td>Line 3: Monastiraki – Ethniki Amyna</td>
<td>8.4</td>
<td>8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>17.6</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>
# ATHENS METRO
EXTENSIONS PHASE A/ 2004

<table>
<thead>
<tr>
<th>Line</th>
<th>Stations</th>
<th>Project Cost (mil. €)</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Sepolia – Ag.Antonios</td>
<td>1.4</td>
<td>106</td>
</tr>
<tr>
<td>2</td>
<td>Dafni – Ag.Dimitrios</td>
<td>1.2</td>
<td>118</td>
</tr>
<tr>
<td>3</td>
<td>Ethniki Amyna – Plakentia</td>
<td>5.9</td>
<td>335</td>
</tr>
<tr>
<td>3</td>
<td>Plakentia – New Airport*</td>
<td>20.7</td>
<td>52</td>
</tr>
</tbody>
</table>

**EXTENSIONS PHASE A (2004)**

<table>
<thead>
<tr>
<th>Line Length (Km)</th>
<th>Stations</th>
<th>Project Cost (mil. €)</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.2</td>
<td>5</td>
<td>611</td>
<td></td>
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</table>
ATHENS METRO
EXTENSIONS PHASE A/ 2007

<table>
<thead>
<tr>
<th>Line Length</th>
<th>Station</th>
<th>Cost (mil. €)</th>
<th>Project Completion</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 3</td>
<td>Monastiraki-Egaleo</td>
<td>4.3</td>
<td>3</td>
<td>400</td>
</tr>
</tbody>
</table>
# ATHENS METRO

**EXTENSIONS PHASE B/ 2010**

*under construction*

<table>
<thead>
<tr>
<th>PROJECTS</th>
<th>Line Length (Km)</th>
<th>Stations</th>
<th>Cost (mil. €)</th>
<th>Project Completion</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 2</td>
<td>8.5</td>
<td>10</td>
<td>833</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line 2</td>
<td>5.5</td>
<td>4</td>
<td>400</td>
<td>2009</td>
<td>Cohesion Fund</td>
</tr>
<tr>
<td>Line 2</td>
<td>1.5</td>
<td>2</td>
<td>125</td>
<td>2009</td>
<td>C SF – RAPUD</td>
</tr>
<tr>
<td>Line 3</td>
<td>1.5</td>
<td>1</td>
<td>121</td>
<td>2009</td>
<td>C SF – RAPUD</td>
</tr>
<tr>
<td>Line 3</td>
<td>3</td>
<td></td>
<td>87</td>
<td>2008-2009</td>
<td>C SF – RAPUD</td>
</tr>
<tr>
<td>Line 3</td>
<td>Eleonas Depot</td>
<td></td>
<td>100</td>
<td>2009</td>
<td>C SF – RAPUD</td>
</tr>
</tbody>
</table>
ATHENS METRO
EXTENSIONS UNDER CONSTRUCTION

HAIDARI Station

HOLARGOS Station
## ATHENS METRO
### NEW EXTENSIONS (under tendering process)

<table>
<thead>
<tr>
<th>NEW EXTENSIONS (under tendering process)</th>
<th>length (km.)</th>
<th>STATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 3 Haidari – Piraeus</td>
<td>7.5</td>
<td>6</td>
</tr>
</tbody>
</table>

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![Map of Athens Metro showing new extensions](image)

**DIM.THEATRO**

**Kifissia**

**Athens S.I. Venizelos**

**Haidari**

**Piraeus**

**Ag.Dimitrios**

**Symaagma**

**Iteraziotissa**

**Neratziotissa**

**Douk Plakentias**

**Helliniko**
ATHENS METRO
FUTURE EXTENSIONS

<table>
<thead>
<tr>
<th>FUTURE EXTENSIONS</th>
<th>LENGTH (km)</th>
<th>STATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 4 Alsos Veikou – Panepistimio – Maroussi</td>
<td>20.9</td>
<td>20</td>
</tr>
</tbody>
</table>
Line 4: Funding the Project through the securitization of Attiki Odos future toll revenues is under consideration

Advantages of funding scheme:
- “Polluter pays principle” – “Dirty car” pays for “green Metro” as revenues raised from Attiki Odos are used to fund capital expenditure of Metro Line 4
- Readily available funding
- Value for money for the State
- No burden on public deficit.
<table>
<thead>
<tr>
<th>Description</th>
<th>Metro Underground Lines (km)</th>
<th>Metro Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Project (March 2004)</td>
<td>17.6</td>
<td>20</td>
</tr>
<tr>
<td>Olympic Games Extensions (2004)</td>
<td>8.5</td>
<td>4</td>
</tr>
<tr>
<td>Extension to Egaleo</td>
<td>4.3</td>
<td>3</td>
</tr>
<tr>
<td>In operation until the present date</td>
<td>30.4</td>
<td>27</td>
</tr>
<tr>
<td>Currently under Construction</td>
<td>8.5</td>
<td>10</td>
</tr>
<tr>
<td>Under the Tendering process</td>
<td>7.5</td>
<td>6</td>
</tr>
<tr>
<td>Metro Line to the Airport</td>
<td>20.7</td>
<td>4</td>
</tr>
<tr>
<td>Line 1 – ISAP</td>
<td>26</td>
<td>24</td>
</tr>
</tbody>
</table>

**ATHENS METRO - GRAND TOTAL**  
93.1  
71
SERVICE

- Attiko Metro serves 650,000 passengers / day (average number of passengers in the network in 2007)

- High level of service
  - High Standards in the provision of services to the Metro users (service availability, reliability, speed)
    - European Performance Satisfaction Index: 81.8/100
      - One of the highest indexes in Europe in “Trips Reliability and Precision”
    - Athens Metro comes first in Europe in the Citizens Satisfaction Index (CSI)
  - Cleanliness of Stations and Trains at high levels
  - Security and Safety in all areas of the METRO system
ROLLING STOCK

• Today 49 trains
  – 28 of first generation
    • Composition: 6 cars (in two tree-car units)
    • Doorways per car: 4 per side
    • Capacity: 1030 passengers/train (224 seats, 806 standees)
  – 21 of second generation (7 DC/AC, 14 DC)
    • Composition: 6 cars (in two tree-car units)
    • Doorways per car: 4 per side
    • Capacity:
      – DC/AC: 1030 passengers/train (158 seats, 868 standees)
      – DC : 1062 passengers/train (196 seats, 866 standees)

• Tender for the supply of 17 new 6-car trains (third generation)
  – equipped with state-of-the-art systems, shall be air-conditioned, environment-friendly, and properly equipped to ensure compatibility with all future technological upgradings in Athens Metro Lines 2 & 3.
TRANSFER STATIONS

- Park-and-ride
  - 2,090 parking spaces in operation
  - 8,780 parking spaces under design and construction

- Transfer to/from bus lines
  - 5 Bus Transfer Stations/Terminals: serving 30 terminal bus lines and 28 kiss-and-ride lines
  - Kiss-and-ride in all other Metro stations (> 100 bus lines)

- Metro – Tram interconnection in two strategically located Metro stations

- Pedestrian facilities in all stations entrances
PSN FACILITIES

- Athens Metro Stations and trains are absolutely PSNs-friendly

**For Semi-Ambulant Users:**
- Direction Stripes inside and outside the Stations
- etc.

**For Wheelchair Users:**
- PSN Equipped Lifts at All Stations
- Pre-recorded Announcements at the lift cabins
- etc.
Joint Effort Attiko Metro, Olympic Metro, Ministry of Culture
- Excellent cooperation with Ministry of Culture & Archaeological services

The biggest Excavation Project ever in Athens
- 70,000 sq.m. of archaeological investigations
- 30 centuries’ antiquities found

All periods of the city of Athens history
- From Neolithic period up to Modern era
ARCHAEOLOGIC WORK

Archaeological excavations at SYNTAGMA Station

Archaeological excavations at MONASTIRAKI Station
• 6 mini-museums
  – creation of special areas for the display of the most important archaeological finds
• Findings exposed are those found in the surrounding area

“Amalias” Shaft – Display of archaeological finds

SYNTAGMA Station – Display of archaeological finds
• 21 art works, in 14 metro stations
• Of world-wide famous as well as younger Greek artists
FUNDING

- Funding of completed and under design & construction projects
  - 50% from the European Union (CFS)
  - 50% Greek Funds
    - 25-35% EIB Loans
    - 15-25% National contribution
  - Cost of network in operation: 3.043 mil. €
    - Base project: 2.032 mil. €
  - Cost of network under construction: 833 mil. €

- Future projects
  - Search for new financial instruments
  - Earmarking the revenues raised from urban toll roads
PROJECT MANAGEMENT

- Integrated transportation planning
  - Careful and reliable planning well in advance, in order to identify, evaluate and finally select the most beneficial projects in respect of a well-coordinated Transportation Plan
- Detailed State-of-the-Art Design
  - AM tender projects based on General Final Design, in order to compromise between detailed description-design and the time required for design studies
- Efficient tendering in full adherence to EU and national legislation
  - In order to secure the necessary conditions for high level competition and equal opportunities for all bidders
- Close supervising using appropriate procedures
  - Optimum balance for: fast implementation, workload for Attiko Metro, responsibilities, risks and technical coordination of the projects.

Efficient administration passing successfully numerous external controls
EXTERNAL CONTROLS
ADHERENCE TO GREEK & EUROPEAN LEGISLATION

Successful and positive outcome in mandatory controls/checking performed by 15 National and European independent bodies:

<table>
<thead>
<tr>
<th><strong>European Authorities</strong></th>
<th><strong>Greek Authorities</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. European Commission</td>
<td>5. Greek Parliament</td>
</tr>
<tr>
<td>DG for Internal Market &amp; Services</td>
<td>6. Greek Civil Courts</td>
</tr>
<tr>
<td>2. European Commission</td>
<td>7. Council of State</td>
</tr>
<tr>
<td>DG REGIO</td>
<td>8. Court of Audit</td>
</tr>
<tr>
<td>3. European Court of Auditors</td>
<td>9. Managing Authorities of Operational Programs</td>
</tr>
<tr>
<td>4. EIB</td>
<td>10. Ministry of Economy – General Secretariat of Investments &amp; Development</td>
</tr>
<tr>
<td></td>
<td>11. State Committee of Fiscal Control</td>
</tr>
<tr>
<td></td>
<td>12. Revenue Office and Social Security Authorities</td>
</tr>
<tr>
<td></td>
<td>13. The Greek Ombudsman</td>
</tr>
<tr>
<td></td>
<td>14. Chartered Auditors</td>
</tr>
<tr>
<td></td>
<td>15. Independent Consultant of Infrastructural Quality Control</td>
</tr>
</tbody>
</table>
ATTIKO METRO S.A.
THE SUCCESS FACTORS

- The people
- The knowledge
- The procedures