A growing independent international group
Imagine, design and develop efficient, harmonious and sustainable territories

Comprehensive assistance from design through to works implementation
- Engineering
- Project management
- Consultancy

Comprehensive services to guarantee success for the projects
- Turnkey projects
- PPP
- EPC
Artelia in Egypt

Artelia has been involved in 50 projects in Egypt since 1952, amongst them:

- Cairo Metro
  Lines 1, 2 & 3

- Gabal El Asfar wastewater treatment plant
  Phases 1 & 2

- New Assiut Dam & Hydropower plant
Grand Paris Express

Building the Paris Metropolis

2013-2030
An international consultation

- Building the Post-Kyoto Metropolis: L’Atelier du Grand Paris
- Outcome: major transportation project

- A suburb-to-suburb commuting solution
- A driver for economic, social and institutional development
Grand Paris Express

The largest European infrastructure in the last 10 years

- 200 Km of tracks (28 simultaneous tunnel boring machines)
- 72 new stations
- 7 technical centers
- 25 billion €
- 16 years

The Client

Société du Grand Paris is the State-owned entity created to manage the construction of the Program.
Building an International Metropolis
Centralized transportation networks
A gigantic construction project
## A high quality Metro

<table>
<thead>
<tr>
<th>Lines</th>
<th>Com. speed</th>
<th>Max. speed</th>
<th>Capacity</th>
<th>Passage frequency In rush hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paris traditional metro</td>
<td>21-27 km/h</td>
<td>70 km/h</td>
<td>600-700 trav./train</td>
<td>2 min.</td>
</tr>
<tr>
<td>Line 14</td>
<td>40 km/h</td>
<td>80 km/h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paris rapid Transit (RER A)</td>
<td>49 km/h</td>
<td>100 km/h</td>
<td>2 600 trav./train</td>
<td>2-10 min.</td>
</tr>
<tr>
<td>Line 15</td>
<td>55 km/h</td>
<td>110 km/h</td>
<td>1 000 trav./train</td>
<td>2 min.</td>
</tr>
<tr>
<td>Lines 16&amp;17</td>
<td>65 km/h</td>
<td>110 km/h</td>
<td>500 trav./train</td>
<td>3 min.</td>
</tr>
<tr>
<td>Line 18</td>
<td>65 km/h</td>
<td>100 km/h</td>
<td>300 trav./train</td>
<td>3 min.</td>
</tr>
</tbody>
</table>
Building an attractive network

- Providing a wide range of services
- Safe & accessible stations
- A living environment
From a regional to a national project

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2010</td>
<td>PROJECT FORMALLY LAUNCHED</td>
</tr>
<tr>
<td>August 2011</td>
<td>POLITICAL CONSENSUS ACHIEVED</td>
</tr>
<tr>
<td>March 2013</td>
<td>PROGRAM FUNDED AND PROGRAMMED</td>
</tr>
<tr>
<td>Sept. 2013</td>
<td>CREATION OF THE GAMO ENTITY</td>
</tr>
<tr>
<td>July 2014</td>
<td>GLOBAL TIMEFRAME ACCELERATION</td>
</tr>
<tr>
<td>June 2016</td>
<td>LAUNCH OF MAJOR CIVIL WORKS</td>
</tr>
<tr>
<td>March 2017</td>
<td>LAST DECLARATION OF PUBLIC UTILITY</td>
</tr>
<tr>
<td>Sept. 2017</td>
<td>PARIS IS AWARDED THE 2024 OLYMPIC GAMES</td>
</tr>
</tbody>
</table>
A creative financing model

- A single fund for the GPE
- Old and new formulas
- No impact on the National Budget
- From passengers to customers: a growing participation of the beneficiaries

29 MDS€
investis

26 MDS€ + 3 MDS€

LES RECETTES & LES SUBVENTIONS
Aujourd'hui, des recettes fiscales affectées par l'Etat à la Société du Grand Paris et des subventions (Etat, Union Européenne)

Plus de 500 M€/an

Demain, plus la mise en service, des recettes de péage et commerciales (publicité, commerces, valorisation numérique...)

Plus de 200 M€/an

L'EMPRUNT
Banques et marchés financiers

Remboursements
Building a sustainable & attractive international Metropolis

- Métropole du Grand Paris
- Reinforcing Intermodality
- Promoting a sustainable urban development

- Protecting Health & Environment
- Stimulating the Economy
- Improving the country’s influence
Upgrading land value around the Crêteil L’Echat station

A 22 000 m² mixed program

- 8 500 m² of housing
- 7 500 m² of students/tourism housing
- 6 000 m² of offices and coworking spaces
- 1 nursery
- 1 restaurant
- 190 public parking spots
Major Challenges

- A global vision
- Importance of Masterplanning
- Costs optimization
- « Oil stain » urbanization
- Institutional overlapping
Artelia assistance to the project

- Project Management
- Program Management
- Architecture
- Contract strategy
- Infrastructure design
- Sustainability
- Systems
- Intermodality
- Urban integration
Conclusion

- Efficiency through a global strategy
- Importance of Masterplanning
- Artelia can provide a support to plan & supervise sustainable urban & transport projects in Egypt