Songdo IBD: A Case Study

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World at the Crossroads

- As of 2007, 51% world population lives in urban areas
- The rate of urban growth in Asia specifically is unprecedented
  - Asia 1950: 17%
  - Asia 2008: 33%
  - Asia 2050: 66%
- Multinational corporations expanding global operations
- Land & natural resources becoming increasingly scarce
- Time to create a new urban model

Source: 2007 UN Population Division
Gale International is working around the globe leading the development of sustainable cities of the future.
Songdo IBD: One of the world’s largest masterplan cities...

...and designed to be one of the world’s greenest cities.
Songdo IBD: City-Scale Master Planning
Songdo IBD

INCHEON PROVINCE | SOUTH KOREA

• International city on 1,500 acres of reclaimed waterfront

• Master Plan

<table>
<thead>
<tr>
<th>Category</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Space</td>
<td>40 M SF</td>
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<tr>
<td>Residential</td>
<td>35 M SF</td>
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<tr>
<td>Retail</td>
<td>10 M SF</td>
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<tr>
<td>Hotel</td>
<td>5 M SF</td>
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<tr>
<td>Civic Space</td>
<td>10 M SF</td>
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</tbody>
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• LEED-ND pilot program; designed to be one of the world’s greenest cities
Cities of Synergy
High Quality Urban Environments
Songdo IBD Case Study: LEED

Songdo IBD is targeting LEED-ND certification.

More than 80% of the built square footage is targeting LEED certification.

Songdo IBD will be one of the world's greenest cities.
Songdo IBD Case Study: NEAAT

Otis Gen2 elevator systems, with gearless magnet motors, reduce energy usage by up to 50 percent.

Stormwater tank collects rooftop rainwater and re-uses water for site irrigation.

Plumbing fixtures in office portion of building save over 40% water compared to an internationally recognized baseline.

Building automation system allows for tenants to monitor their electricity consumption.
Songdo IBD Case Study: Open & Green Space

40% of Songdo IBD is open space, more than 600 acres.

Over 95% of all parking is located underground.

A 100-acre Central Park is enhances the quality of life.

Green roofs are used on most buildings in Songdo.
Incheon International Airport is just a 15-minute drive away.

Extensive bicycle path network exists throughout the city.

Bicycle racks are located on every block.

Extension of Incheon subway line throughout Songdo IBD.
Songdo IBD Case Study: Water

Stormwater pollution prevention plans will be implemented on each block.

Saltwater canals save millions of liters of freshwater.

Native plantings reduce irrigation demand.

City greywater system provides reclaimed water for many uses.
Songdo IBD Case Study: Energy Use

- Buildings are designed to exceed ASHRAE 90.1 energy standards.
- Modern HVAC systems reduce energy consumption.
- Lighting control systems save electricity.
- Building envelopes are energy efficient.
Songdo IBD: One of the world’s largest masterplan cities...

...and designed to be one of the world’s greenest cities.
Meixi Lake | Hunan Province, China
Meixi Lake

HUNAN PROVINCE | CHINA

- State-of-the-art ecological city
- 140 MSF mixed-use development
  - Business District
  - Convention Center
  - Residences
  - Shops
  - Schools
  - Healthcare Facilities
- 300,000 permanent residents
- 500-acre lake
Meixi Lake Masterplan
Thank You