AWARDS
Pietro Elisei

ISOCARP Vice President Communication and Marketing
2015, ISOCARP AWARDS FOR EXCELLENCE

The Ghent Canal Zone Project – a successful spatial, environmental and economic development process in an industrialized urban area.
CONTENT AND CONTEXT OF THE PROJECT

10,000 ha
300 companies
61,000 jobs
CONTENT AND CONTEXT OF THE PROJECT

Willem I - kanaal '90: the Ghent Canal - hoe bloeiende haven met 61.000 jobs verzoenen met 40.000 omwonenden?
CONTENT AND CONTEXT OF THE PROJECT
CONTENT AND CONTEXT OF THE PROJECT
RESULTS

1. transparency, stability and legal certainty for all stakeholders involved
2. a network to discuss problems and further development
3. planning strategy linked to/ rooted in socio-economic problems
4. 80 projects for realization
5. innovation: made-to-measure solutions for specific problems: buffering linking areas (buffering-recreation for inhabitants and workers-foothpads and cycling paths), experimental intelligent truck lock,....
RESULTS

4. sustainability
only 1/3 of the produced energy operates on fossil fuel!

5. resilience

8. regeneration

f.e. retrofitting waste mountain into a solar plant in co-production with inhabitants
The diagram illustrates the distribution of energy sources, with the following data:

- **Combustion of Biomass**: 216 MW (22%)
- **Wind Turbines**: 43 MW (4%)
- **Combined Heat and Power**: 35 MW (4%)
- **Solar Energy**: 23 MW (2%)
- **Combustion of Blast Furnace Gas**: 357 MW (37%)
EXPECTATIONS AND FUTURE PROJECTS

- A new sea lock and further economic expansion
- On going reconstruction of the R4 ring motorway
- On going development of the buffering linking areas
- On going realization of the actions to increase the quality of life in the surrounding villages
- More renewable energy production
- Development of the new open space project Moervaart valley
CONCLUSIONS

- Ghent Canal Zone Project: example of integrative regional development

- During the next 15 years the further realisation of the Strategic Development Plan will lead to the Ghent Terneuzen Canal Zone as one of the most sustainable and the best supported and managed cross-bordered port areas in Europe
REFERENCES

The Ghent Canal Zone Project

www.gentsekanaalzone.be
info@gentsekanaalzone
Planning for Green Eco-Districts in the City of Beijing:
Carbon Accounting Standards and Tool for Statutory Zoning Plans

Dr. Stanley Yip
Centre of Urban Planning and Design, Peking University
Beijing, China
PROJECT BACKGROUND AND OBJECTIVES

- In support of the planning and development of 14 Green Eco-Districts in the City of Beijing
- Set out the carbon emission accounting protocol, describe the methodology, the toolbox, database, calculations and evaluation performance indicators.
PROJECT BACKGROUND AND OBJECTIVES

Enable the assessment of carbon emissions performance objectively and scientifically.

<table>
<thead>
<tr>
<th>Categories</th>
<th>No.</th>
<th>Key Performance Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use Planning</td>
<td>1</td>
<td>Land parcel sizes</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Accessibility to public facilities</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Percentages of mixed uses</td>
</tr>
<tr>
<td>Transportation</td>
<td>4</td>
<td>Densities of pedestrian and cycling routes</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Land parcel permeability</td>
</tr>
<tr>
<td>Public Transit</td>
<td>6</td>
<td>Public transit nodes employment provision</td>
</tr>
<tr>
<td>Resources Utilization</td>
<td>7</td>
<td>Percentage of Green Buildings</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Renewable energy utilization rate</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Non-residential building energy saving standard</td>
</tr>
<tr>
<td>Water Resources</td>
<td>10</td>
<td>Non-portable water utilization rate</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Rain water infiltration rate</td>
</tr>
<tr>
<td>Ecology, Landscape and Environment</td>
<td>12</td>
<td>Green roof coverage</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Breezeway design</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Landscape design for rain water retention</td>
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<tr>
<td></td>
<td>15</td>
<td>Rain water harvest building design</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Accessibility to public open space</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>Percentage of urban forest</td>
</tr>
</tbody>
</table>
1. The carbon accounting tool for district plans:

**Activity Data x Emission Factors (AD x EF)**

9 modules
- Emissions
- Sequestration
- Neutralization
Main Features of the Project

New Buildings Carbon Emission Accounting

1. Carbon emissions originated from building energy usage

- Building Gross Floor Area
- Energy Usage Structure
  - Electricity
  - Heating
  - Lighting, etc.
- Renewable Energy Usage
  - Distributed energy systems
  - Building integrated energy systems

2. A Step-by-Step Calculation Guideline for Planners in the Carbon Accounting Standards

(Example of the Building Carbon Emission Module)
## 3. Key Performance Indicators for Assessment of Planning Options

<table>
<thead>
<tr>
<th>Modules</th>
<th>KPI for Assessment of Impacts</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Building</strong></td>
<td>New Building Total Emissions</td>
<td>tCO₂/Year</td>
</tr>
<tr>
<td></td>
<td>Unite GFA Emissions</td>
<td>kgCO₂/m²•Year</td>
</tr>
<tr>
<td><strong>Existing Building</strong></td>
<td>Existing Building Total Emissions</td>
<td>tCO₂/Year</td>
</tr>
<tr>
<td></td>
<td>Unite GFA Emissions</td>
<td>kgCO₂/m²•Year</td>
</tr>
<tr>
<td><strong>Transport</strong></td>
<td>Transport Total Emissions</td>
<td>tCO₂/Year</td>
</tr>
<tr>
<td></td>
<td>Unit Trip Distance Emissions</td>
<td>kgCO₂/km•Year</td>
</tr>
<tr>
<td><strong>Industry</strong></td>
<td>Industry Total Emissions</td>
<td>tCO₂/Year</td>
</tr>
<tr>
<td></td>
<td>Unit Industrial Product Emissions</td>
<td>tCO₂/10000Dollar•Year</td>
</tr>
<tr>
<td><strong>Water Resources</strong></td>
<td>Water Resource Total Emissions</td>
<td>tCO₂/Year</td>
</tr>
<tr>
<td></td>
<td>Unit Development Area Water Resources Emissions</td>
<td>tCO₂/ha•Year</td>
</tr>
<tr>
<td><strong>Waste</strong></td>
<td>Waste Total Emissions</td>
<td>tCO₂/Year</td>
</tr>
<tr>
<td></td>
<td>Unit Development Area Waste Emissions</td>
<td>tCO₂/ha•Year</td>
</tr>
<tr>
<td><strong>Street Facilities</strong></td>
<td>Street Facilities Total Emissions</td>
<td>tCO₂/Year</td>
</tr>
<tr>
<td></td>
<td>Unit Street Area Emissions</td>
<td>tCO₂/ha•Year</td>
</tr>
<tr>
<td><strong>Green Open Space</strong></td>
<td>Green Open Space Carbon Sequestrations</td>
<td>tCO₂/Year</td>
</tr>
<tr>
<td></td>
<td>Unit Green Open space Area Carbon Sequestration</td>
<td>tCO₂/ha•Year</td>
</tr>
<tr>
<td><strong>Renewable Energy</strong></td>
<td>Renewal Energy Emission Neutral Impact</td>
<td>tCO₂/Year</td>
</tr>
<tr>
<td></td>
<td>Unit Development Area Emission Neutral Impact</td>
<td>tCO₂/ha•Year</td>
</tr>
</tbody>
</table>
APPLICATION OF THE TOOL TO CURRENT AND FUTURE STATUTORY PLANS

Carbon Accounting Standards and Tool Applications at Statutory Plan Making and Development Control processes

- Preparation of different low carbon planning options
- Propose statutory zoning plans
- Approval of plans by local authority
- Incorporate low carbon ecological KPI into plans
- Beijing Planning Commission
- Low carbon ecological KPI as conditions
- Local Planning Authority and land Resources Authority
- Carbon Accounting Standards and Tool Application
- Assessment of impacts of low carbon and ecological planning measures
- Beijing Land Bank Centre
- Carbon Accounting Standards and Tool Application
- Assessment of impacts of low carbon and ecological planning measures
- Local Planning Authority and Other departments
- Plan Making
- Implementation and development Control
- Land Lease Conditions
- Planning Permits and Approvals for land parcel
- Land Tendering
- Planning Permits Issuance
- Land lease condition
- Land lease condition
APPLICATION:

New Capital Steel Comprehensive Urban Development District:

Regenerating an Disused Steel Work Site to a Green Eco-District in Beijing
PROJECT APPLICATION:

13 Key Planning Criteria for Zoning Plans

- Building Energy Saving
  - Residential Buildings
  - Commercial Buildings

- Energy
  - Usage Level of Renewable Energy

- Water Resources
  - Water Saving
  - Non-portable water Usage
  - Rain Water Harvesting

- Waste
  - Waste Classification
  - Zero Waste to Land Fill
  - Waste to Energy

- Green Building
  - Green Building Certification

- Transpo rt
  - Green Transport
  - Accessibility of Transit Stops

Assessment Area (Phase I of Plan): 334 ha
Total Building Gross Floor Area: 5.06 million sq. m.
APPLICATION:

- Hot water
- Electricity
- Heating
- Cooling
- Residential Buildings
- Commercial Buildings
- Urban Farms
- Geothermal Facilities
- Public Open Space
- District Cooling Heating Facilities
- Public Open Space

Diagram:
- Waste to Energy
- Solar Electricity
- Water Heat Pump
- Centralized Geothermal Heat
- Ground Heat Pump
- Waste water heat pump
- Solar Hot Water
APPLICATION:

Use of large roof area of industrial building for solar panels
Impact Assessment and Results of Carbon Accounting Standards Application

**Business As Usual Scenario:** 1.008 million tCO₂/Year

- New Building: 80.9%
- Transport: 14.5%
- Waste: 3.2%
- Water Resources: 1.2%
- Street Facilities: 0.2%

**Low Carbon Scenario:** 696,000 tCO₂/Year

- New Building: 82.1%
- Transport: 15.7%
- Waste: 0.5%
- Water Resources: 1.5%
- Street Facilities: 0.1%
Summary: innovation and Originality

- The use of Carbon Accounting Standards and Tool for City of Beijing Green Eco-District statutory zoning plan.

- The tool and the applications are the first of its kind in the local planning practices in China.

- The use of quantitative tool in development control to assess objectively the impacts of climate change measures and ecological planning criteria is pioneering.
2015, ISOCARP AWARDS FOR EXCELLENCE

LUHE CITY CENTER, NANJING, CHINA

Dhiru A. Thadani, AIA, APA, FCNU, ISOCARP
2013 NUPB PROPOSED EXTENSION PLAN OF NANJING
North of the Yangtze River
2013 UPAT PROPOSED POLYCENTRIC DEVELOPMENT ALTERNATIVE PLAN
2013 UPAT PROPOSED
GREEN CORRIDORS BETWEEN
POLYCENTRIC NODES
Nanjing Urban Planning Bureau Staff Coloring Existing Water Bodies
六合中心区范围（352公顷）
LUHE CITY CENTRE SITE 352 HECTARES
LUHE CITY CENTER SITE
352 HECTARES
Environmental Analysis

The site is bounded by the Chuhe River on the west and a canal on the north. A Confucius Temple and School complex is located in central Luhe to the northwest and a government center to the west. The primary landscape feature is the Lingyan Mountain located less than 2 km to the south-east.

Environment Analysis

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基地西侧有滁河流经，北侧有运河通过。文庙及教育设施位于地块西北侧，六合区政府位于地块西侧。最重要的自然景观——灵岩山位于基地东南方向2千米内。
Central Square

The heart of the project is expressed as a large public space which serves to organize and orient the development.

中央广场

设计方案的“心脏”为一个大型公共空间，用以组织与引导发展。
East – West Spine

A new bridge connects the site to the western waterfront.

东西向“脊柱”

新建的大桥将基地与西侧滨水区域相连接。
North – South Spine

The existing bridge over the canal is expanded to form the primary north-south arterial connector.

南北向“脊柱”

现存的运河上方的桥将被拓宽，形成南北向主通道的链接体。
滁河上方新建的大桥（目前正在施工）将担负起连接南北与东西脊柱的重任。
Green Corridors

The primary arterial thoroughfares are enhanced with greenways. A ‘V- shaped’ green makes a view corridor to Lingyan Mountain.

绿色廊道

主要的景观大道由两侧的绿色空间提升了标志性与重要性，而东南方向的“V型”绿色空间则提供了看向灵岩山的视觉廊道。
The CBD Core

The CBD core is defined by the 3 primary arterials. The two yellow stars represent the tallest and most figural buildings within the development, both terminating vistas from the two north-south green corridors.

CBD 核心

核心的CBD由3条主道围合而成，两颗黄色的五角星代表了两座最高且具有比喻性的建筑，而这两幢建筑也是两条南北向绿色通道的标志性景观。
Encircling Boulevard

A tree-lined boulevard encircles the core, and links a series of small pocket parks and gardens that are planned within the development.

环形林荫大道

行道树分立两旁的林荫大道环绕着CBD核心区，并连接了一系列规划中将形成的袖珍公园与花园。
混合使用发展

由林荫大道围合的第一个环内是混合利用的建筑，这些建筑存在自身的功能活动，同时也为CBD核心区提供服务与支撑。
Low–Density Ring

Outside the tree-lined boulevard is a ring of low-density mixed-use buildings that front the water's edge and greenways surrounding the city center.

低密度发展环

在林荫大道外侧的环为低密度混合使用的建筑，这些建筑或滨水、或邻接绿色空间，环绕在中心区外围。
Connections
In addition to the 5 arterial connections that are planned, several local connections are proposed to the north, east, south, and west. Pedestrian walkways across the canal and river are also proposed.

联系
除了5条主要干道的连接以外，规划中还设置了东、西、南、北四个方向上的其他连接方式。此外，方案中还规划了跨越运河与滁河的人行通道。
绿色边界

发展建设区域被连续的绿地系统所围绕，而外围的绿地系统又与内部的绿色廊道相连接，从而不仅可作为休闲活动空间，同时也承担雨洪调节功能。
7种不同深浅的灰代表了对建筑所控制的不同高度，界定街道立面与街区边界建筑均在2-3层，并且沿街设有高度为5米的骑楼。

<table>
<thead>
<tr>
<th>高度范围</th>
<th>层数</th>
<th>建筑面积</th>
<th>地上建筑面积</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 12 m</td>
<td>2 fl</td>
<td>150,000 m²</td>
<td>300,000</td>
</tr>
<tr>
<td>12 - 24 m</td>
<td>5 fl</td>
<td>180,000 m²</td>
<td>900,000</td>
</tr>
<tr>
<td>33 m</td>
<td>8 fl</td>
<td>140,000 m²</td>
<td>1,120,000</td>
</tr>
<tr>
<td>50 m</td>
<td>12 fl</td>
<td>160,000 m²</td>
<td>1,920,000</td>
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<tr>
<td>75 m</td>
<td>20 fl</td>
<td>70,000 m²</td>
<td>1,400,000</td>
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<tr>
<td>100 m</td>
<td>25 fl</td>
<td>35,000 m²</td>
<td>875,000</td>
</tr>
<tr>
<td>180 m</td>
<td>45 fl</td>
<td>4,500 m²</td>
<td>202,500</td>
</tr>
</tbody>
</table>

该基地在可用于建设发展的140公顷土地上的净容积率为4.7,规划边界的308公顷土地的毛容积率为308公顷。
Network of public space
开放空间功能分区

The sequence of public spaces and parks link all areas of the development.

公共空间与公园序列连接了所有建设区域。
AWARDS
Jef Van den Broek

Chairman - Anniversary Celebration Committee
50 years ISOCARP
Sam Van Embden Award

Initiator and Co-founder of ISOCARP
First President ISOCARP
SVE Award
Category 1: a person for a lifetime achievement

Dhiru Thadani
SVE Award
Category 1: a person for a lifetime achievement

Dhiru Thadani
SVE Award: Category 2: an organization
UN HABITAT
SVE Award: Category 3: a city/region
Antwerp/Belgium: Parc Spoor-Noord