SESSION THREE
The City: Energy, the Environment and Resilience

Dr Liu Thai Ker
Chairman
Centre for Liveable Cities
Ideas for Cities In the Future
Singapore Perspective

Institute of Policy Studies
Shangri-La Hotel, Singapore
3 July, 2015
- My Career Path

Singapore as my Urban Laboratory
R&D Fundamental of Urban Planning

Search | Consolidate | Refine | Reflect | Document

65 | 69 | 8 | 9 | 0 | 1

CA, CEO HDB | CP, CEO URA

Snr. Director RSP

Over 50 Cities

Chairman CLC
Key Words

- Singapore
  @50 – Next 50
  What Lies Ahead? By 2065?

- Singapore
  Resource, Climate, Sea Levels
  How do we cope?

- Cities
  Growing Population, Environment & Ecology Challenges
  Can New Technologies, Car-Less City
  Virtual Infrastructure Help?

- Issues
  Economy → Population → Sustainability
  → Intelligent Planning → Technology → Better World
Urban Development in a Nutshell

- Physical Results
- Concrete + Steel
- Translation
- Plans on Paper
- Ecology
- Etc
- Engineering
- Technology
- Sieve
- Implementation
- Planning
- Urban Design
- Physical

Make or Break
City in Future!

Citizen's Activities

Results
Concrete + Steel

Translation
Plans on Paper

Dimensions
Ideas + Data
To be Tested

Idea Need
Physical Body To Reside In
20 Years To be Proven
1. Sieving Ideas

- Fundamental Human Needs, Not Changed for Centuries
  Make Long Term Urban Plan for Fundamental Needs
  To Look to Future, Know First Our Past & Present

- Create Urban System and Sub-Systems
  Understand Internal Logic Among Parts
  Like Human Body

- Healthy Body (System) is Beautiful Regardless of Clothes
  Beautiful Clothes (Image) Enhance Healthy Body
2. Technology

- Great Need to Pursue Good Design
  Dangerous to Depend on Technology to Solve Urban Ills

- Technology is Tonic + Vitamin for Body
  Technology Enhances, but not Replace Good Design

- The More Intelligent the Plan or Design
  The Less Dependent on Technology
  The More Effective can Technology Enhance Them
3. Intelligent Planning

Set Vision

Theories
- Sieve
- Vision Strategy Policies
- Citizens’ Wishes & Needs

Quantify Urban Components
- Population
  - Density
  - Land
  - Family of Cities

Urban Prototypes
- Assess Planning Approach
- Urban Structure with Quantity

Create Plan

Master Plan
- Macro Environment

Detail Plans
- Local Environment

Urban Design
- Urban Image
  - Architecture
  - Built Env

Implement Plan
- Legislation
- Enforcement
- Implementation

Education Social Value
- Supporting Activities
- Special Facilities

Public-Private Partnership
4. Intelligent Implementation

Walkability Low Carbon

Supply New Land For Commerce Ind. Housing

Public Housing Policy

Clear Land

New Town Plans

UD ED Reg

Public Housing

Home Ownership For All

Vision Strategies Policies

Master Plan Macro Env

Detailed Plan Micro Env

Urban Design

Legislation

Develop -ment

Infra MP

Detailed Infra Plan

Eng Design

Promotion

Embrace Value, Science & Art

Ensure Functional City

Enhance Economic Developments
Intelligent Approach

VALUE
HUMANIST HEART

SCIENCE
SCIENTIST HEAD

ART
ARTIST EYE

Intelligent Practice

♦ Far to Near  ♦ Function to Image  ♦ Conserve to Develop
♦ Big to Small  ♦ Health to Beauty  ♦ Cake to Icing
Singapore Master Plan 1991

3.2 - 5.5 Million, by 2091
Annually 25,000 Planned, 104,000 Actual

Source: ura.gov.sg
<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Rank</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Quality of Living Ranking</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Asia 11&lt;sup&gt;th&lt;/sup&gt; World</td>
<td>Mercer Survey, June 2010</td>
</tr>
<tr>
<td>2010</td>
<td>Happiest Place in Asia</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Asia</td>
<td>The Straits Times, Jan 2010</td>
</tr>
<tr>
<td>2011</td>
<td>Greenest City in Asia</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; Asia</td>
<td>Siemens Asian Green City Index Report, 2011</td>
</tr>
</tbody>
</table>
● Population Growth is Unstoppable

Source: Singapore – Department of Statistics & World Bank
Other Countries – World Bank
Singapore 2065

The More Limited the Land
The More Long Term

10 Million
Embrace All Above & More Principles
+
Policy Support
Education, Economic
Between Us and a Better World

- Politics & Human Frailty
- Allure of Sexy Sound Bites
- Blind Faith in Technology
- Knowledge & Skills On Fundamentals
- Underrate Intelligent Design
<table>
<thead>
<tr>
<th></th>
<th>Design</th>
<th>Technology</th>
<th>Ecology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past</td>
<td>Good</td>
<td>Low</td>
<td>Good</td>
</tr>
<tr>
<td>Present</td>
<td>Poorer</td>
<td>Good</td>
<td>Poorer</td>
</tr>
<tr>
<td>Future</td>
<td>Better</td>
<td>Better</td>
<td>Good</td>
</tr>
</tbody>
</table>