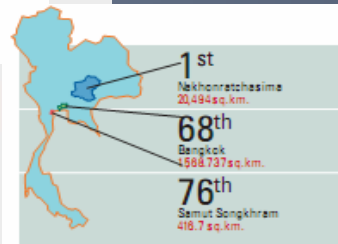
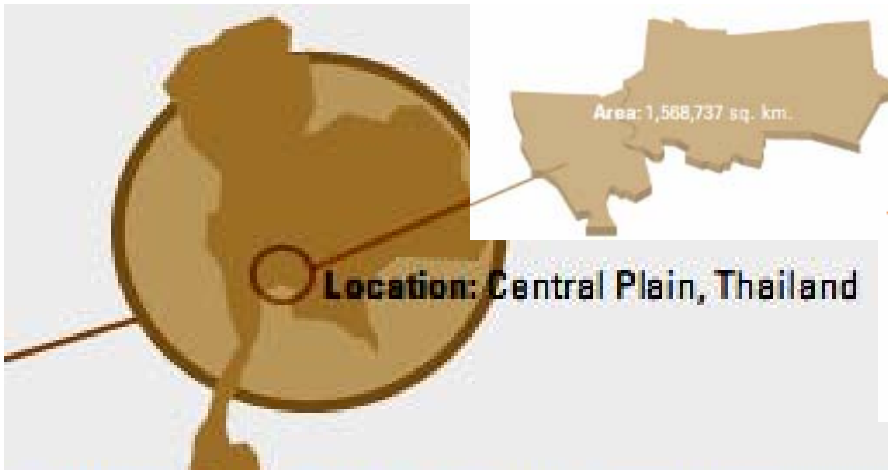


# **PUBLIC AND PRIVATE PARTNERSHIP IN BANGKOK**



**Prakob Chirakiti, Ph.D.  
Deputy Governor of Bangkok**

# Quick Facts about Bangkok



## Overview

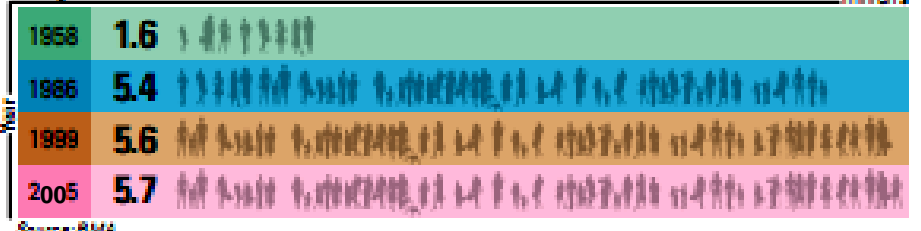
Bangkok is located in the central part of the country in the low-flat plain of the Chao Phraya River, which is the most important river of the country and can be considered to be the main artery of the nation.

## QUICK FACTS *about* BANGKOK

<b>Location:</b>	Central Plain, Thailand
<b>Time Zone:</b>	GMT + 7
<b>Established:</b>	A.D.1782
<b>Area:</b>	1,568.737 sq. km.
<b>Population:</b>	5,658,953 (2005)
<b>Population Density:</b>	4,051 persons/sq. km. (2005)
<b>No. of Districts:</b>	50 districts
<b>Country-City Dialing Code:</b>	66-2
<b>Ethnic Mix:</b>	80% Thai, 10% Chinese, 10% Others
<b>Religions:</b>	95% Buddhist, 5% Muslim, with the remainder being a mix of Christians, Hindus and Sikhs
<b>Electricity:</b>	220 volts AC, 50Hz; two-pin plugs are standard
<b>Average January Temp:</b>	26°C (79°F)
<b>Average July Temp:</b>	29°C (84°F)
<b>Annual Rainfall:</b>	1,500 mm. (58.5 inches) (2005)
<b>Administration:</b>	Special Administration Zone
<b>Head of City:</b>	Governor (Elected)



## Population

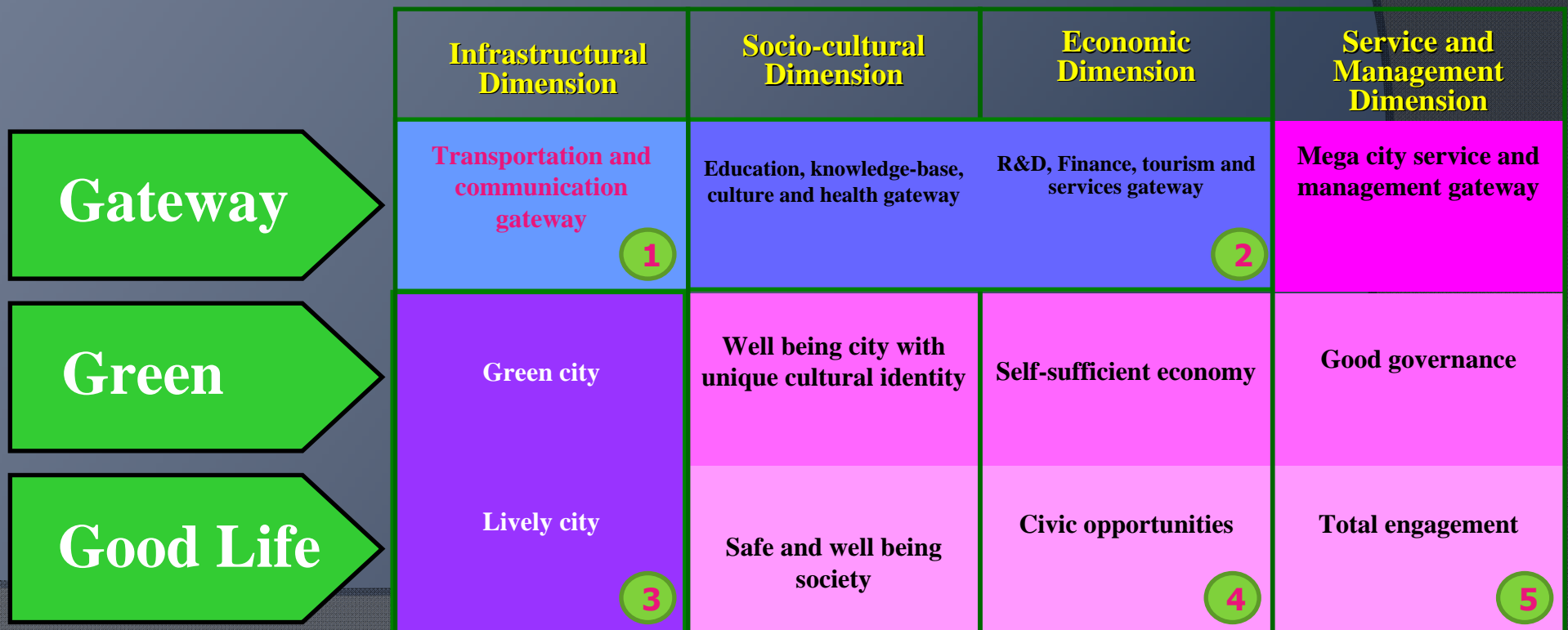


Registered population in 2008 was 5.7 million  
 Total population ~10 million

# Driving a Sustainable Development to Low Carbon Society

## Performance Plan of Bangkok Metropolitan Administration 2009-2012 (Bangkok 2020)

### Conceptual Framework for Identifying Main Strategies



# Urban Development Challenges

## Water Pollution



## Solid Waste



## Air Pollution

- Dramatic increase in urban growth
- Rapid population growth accepting huge migration into the city
- Improper urban planning policy for infrastructure and public services.

Public Private Partnership and Private Sector Involvements



the strategies of BMA to approach and promote the urban development in Bangkok

# PUBLIC AND PRIVATE PARTNERSHIP IN TRANSPORT SECTOR



# Current PPP Projects in BMA

## ◎ BTS Sky Train in Bangkok

- Total Length - 23.1 km.
- Commencement of Service  
- December 1999
- Project Cost ~ 55 billion THB.
- Investor – Tanayong Group, KfW, Local Bank, IBRD (All Private)
- **Type of PPP**
  - **Facility – BTO**
  - **Rolling Stock, E&M – BOT**



# Current PPP Projects in BMA

## ❖ Bangkok Metro Subway

- Total Length - 20 km. underground
- Commencement of Service - August 2004
- Project Cost ~ 396.5 billion Yen
- Investor - MRTA (Public) thru JBIC Loan & MRTA Bond in Facility and BMCL (Private) in Rolling Stock, E&M, Train Operation
- *Type of PPP*
  - *Facility - BTO*
  - *Rolling Stock, E&M – BOT*



# Future PPP Projects in Thailand

- Airport Rail Link
- Purple Line of MRTA
- New Types of Public Transportation System such as BRT, LRT and New MRTA Lines

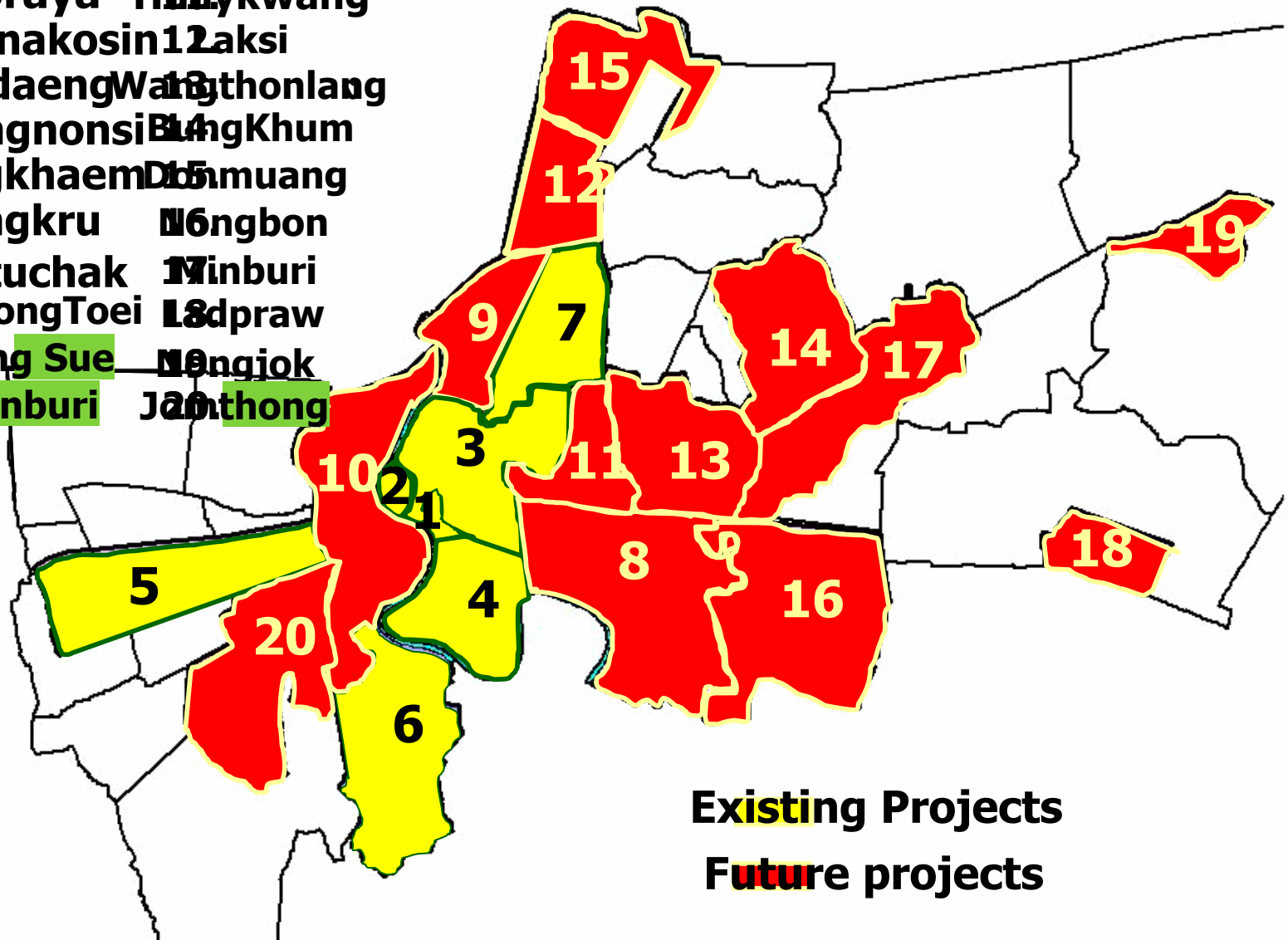


# PUBLIC AND PRIVATE PARTNERSHIP IN WASTEWATER TREATMENT

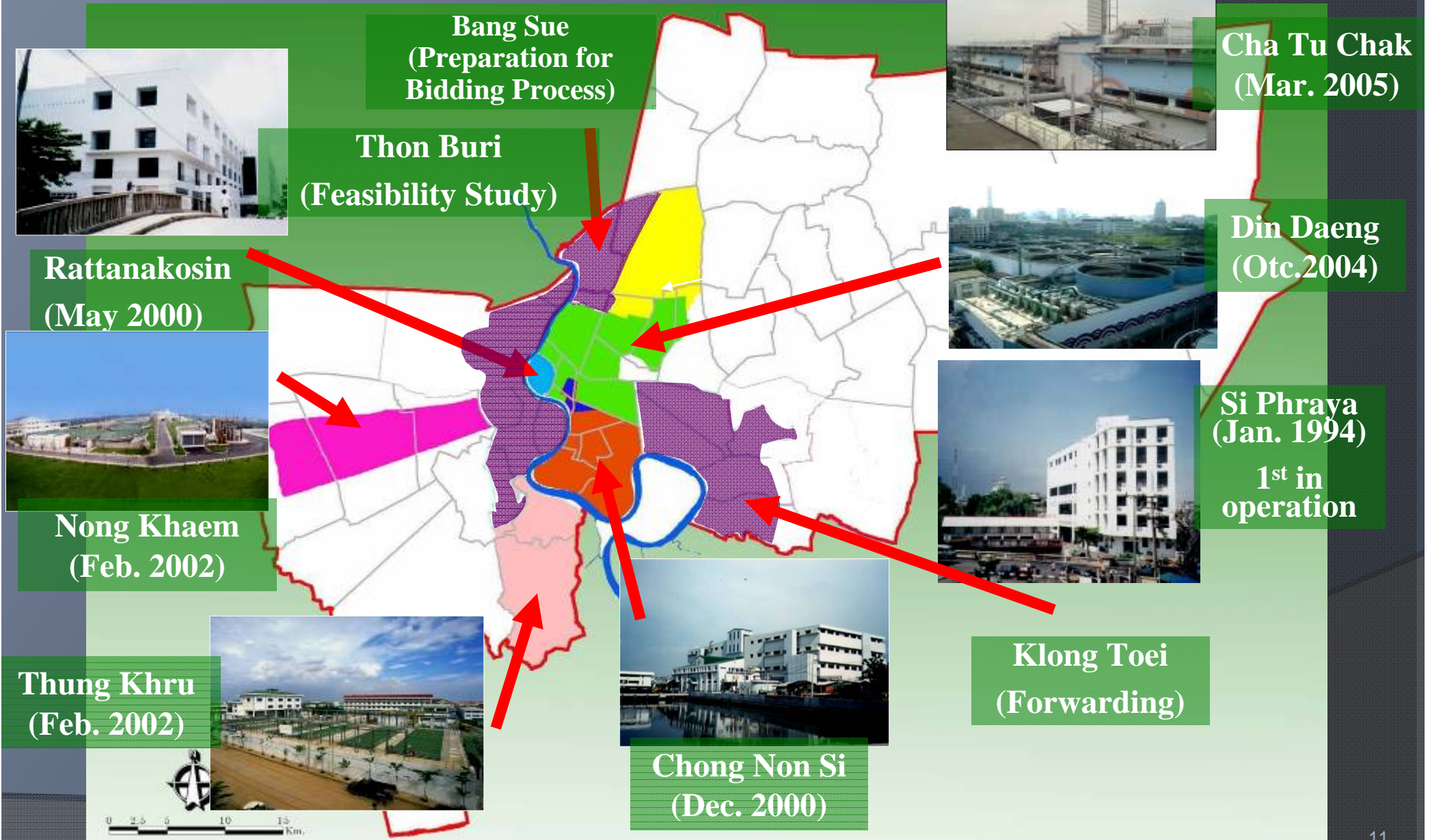


# Bangkok Wastewater Master Plan

- 1 Sipraya Huaykwang
- 2 Ratanakosin
- 3 Bindaeng Wang
- 4 Chongnonsi
- 5 Nongkhaem
- 6 Gongkru
- 7 Chatuchak
- 8 Long Toei
- 9 Bang Sue
- 10 Ponburi
- 11 Laksi
- 12 Bithonlang
- 13 Bang Khum
- 14 Dinmuang
- 15 Nongbon
- 16 Minburi
- 17 Sdpraw
- 18 Nongjok
- 19 Juthong



# Bangkok Wastewater Treatment Plant



# The Present Type of Procurement Processes In Bangkok WWTP

- **Conventional Procurement  
(Detail design and then Build)**
- **Design-Build-Operate-Maintenance  
(Turnkey Process)**

# 1. Conventional Procurement (Detail design and then Build)

## ***The Constrains***

- Long delay due to the two processes
- Two contracts signing with two party, first the consult and second the contractor  
(Twice Bidding and negotiation)
- Designer can not exactly identify the onsite problems during the construction, for example other underground facilities, soil and underground conditions, frequently delay due to design adjustment

## ***The Advantage***

- Fix and clear design and cost

## 2. Design-Build-Operate-Maintenance (Turnkey Process)

### ***The Constrains***

- Consult and contractor (One Bidding and negotiation)
- Probably unclear design and cost estimation
- High risk of over estimation or under estimation

### ***The Advantage***

- Designer can adjust the drawing in accordance with onsite facts and problems during the construction, for example other underground facilities, soil and underground conditions

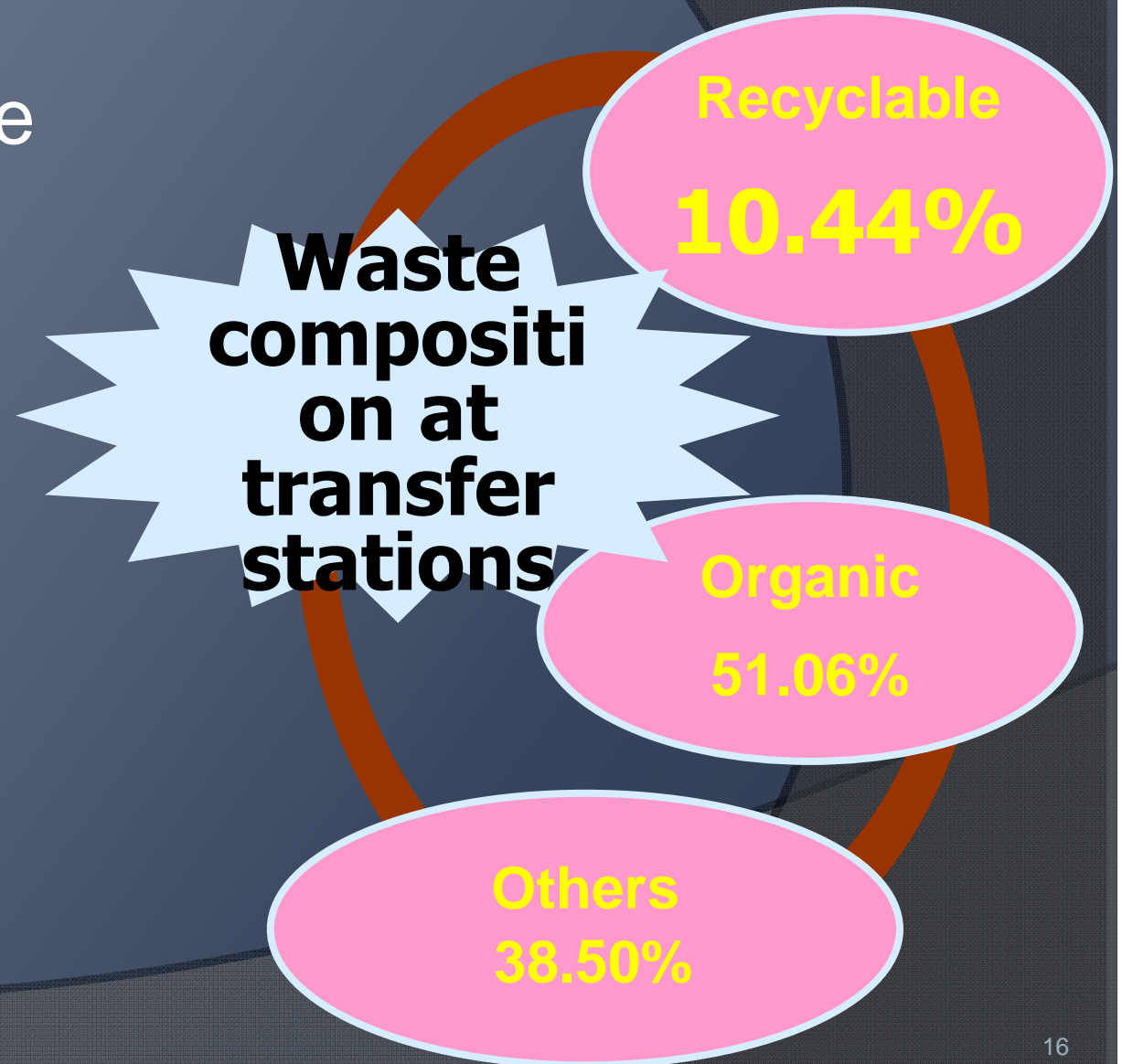
# PUBLIC AND PRIVATE PARTNERSHIP IN SOLID WASTE MANAGEMENT



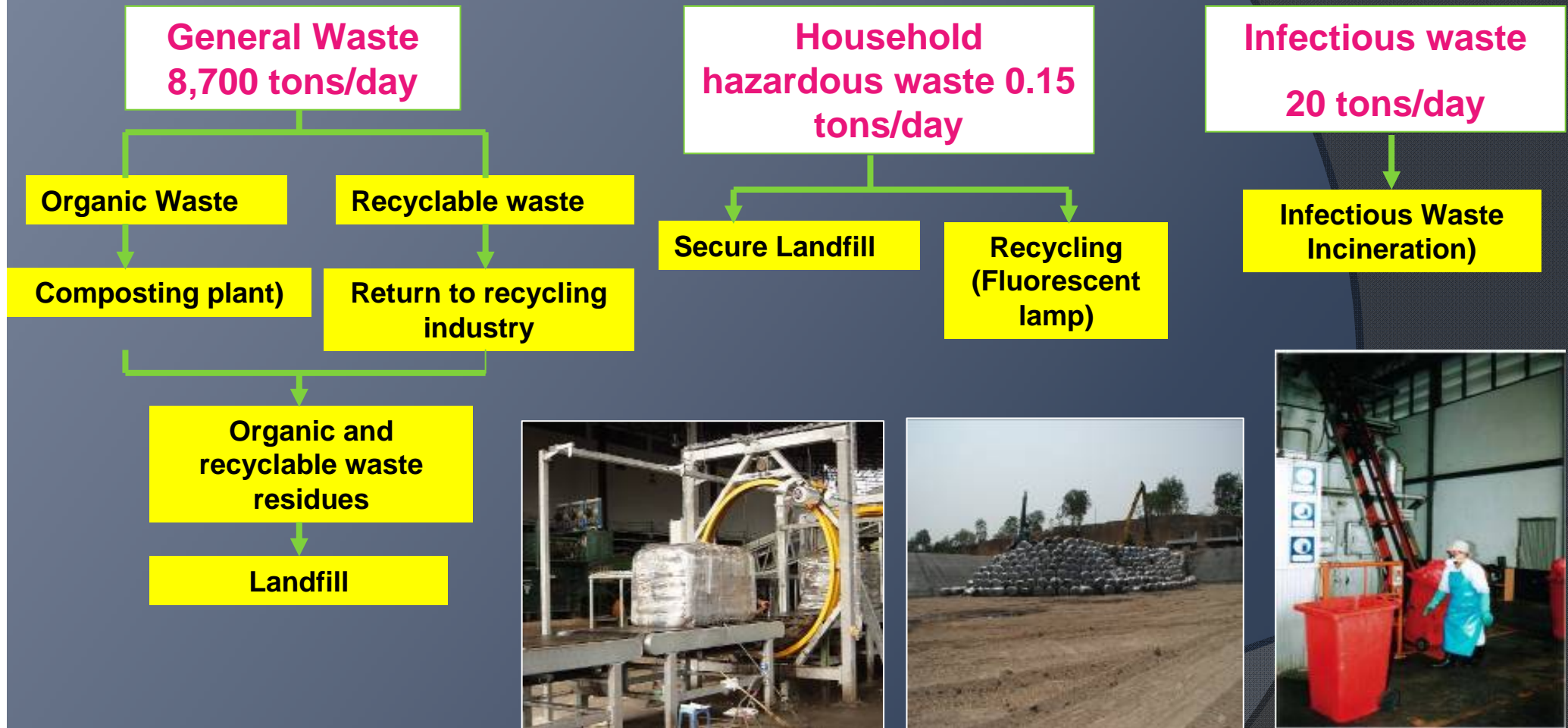
# Solid wastes Management in Bangkok

Waste generation rate  
~ 1 kg/person/day

Collected waste  
~ 8,700 tons/day



# Solid Waste Treatment and Disposal



**Total cost of SWM is 4,000 Million Baht**

# Sanitary Landfill Project

- Solid waste : 7,700 tons/day
- Contract period : 10 years
- Service Fee : 418 - 512 Baht/ton  
(~12 – 15 US\$/ton)
- Type of PPP – Build own operate



# **Problems Encountered from PPP Projects**

- **Lack of Sufficient Fund**
- **Difficulties in Implementation from Restriction in Regulation**
- **Project Risk**
- **Support from Public Sector**
- **Responsibility of Private Sector**

# How to Solve Problems Encountered from PPP Projects

- **Government or Public Sector Provide Some Shares in Project Investment Fund or Prepare Supporting Loan**
- **Relief Some Restrict Regulations**
- **Provide Tax Exemption Support**
- **Provide Subsidy During Operation**

# How to Make PPP More Effective

- **Win – Win Project**
- **Model Should be Flexible.**
- **Increase Transparency and Equity.**
- **Integrate Eco-efficiency and Sustainable Concept.**
- **Promote Physical and Non-Physical Measures.**

**THANK YOU**

