

An aerial photograph of a large, multi-level highway interchange in an urban area. The interchange features several curved ramps and multiple lanes of traffic. The surrounding city is densely packed with buildings, including several tall skyscrapers. The image is overlaid with a semi-transparent blue box at the top containing the title text.

# Privatization of Highway Infrastructure in Thailand

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Department of Highways

# Background of Infrastructure Development in Thailand

- For the last 30 years, Thailand has continuously invested in infrastructure projects at the average of 5%-6% of GDP annually.
- Investment amount during the 5<sup>th</sup> - 8<sup>th</sup> National Development Plan for infrastructure development

Unit : Mill.Bht

**5th Plan**  
**200,000**

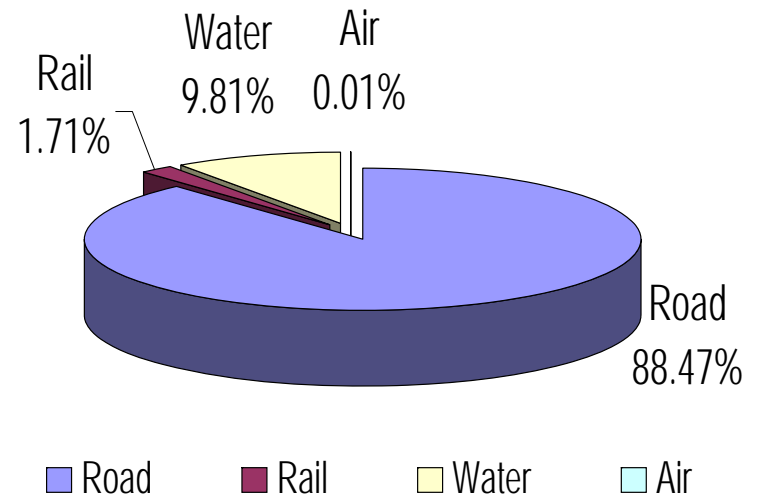
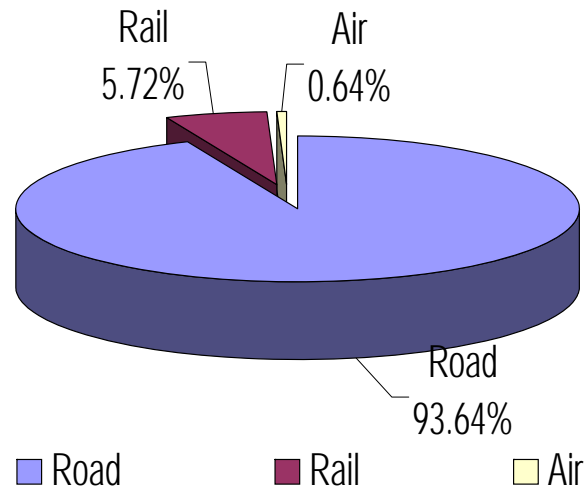
**6th Plan**  
**500,000**

**7th Plan**  
**825,000**

**8th Plan (3 years)**  
**887,159**

# Passenger Transport

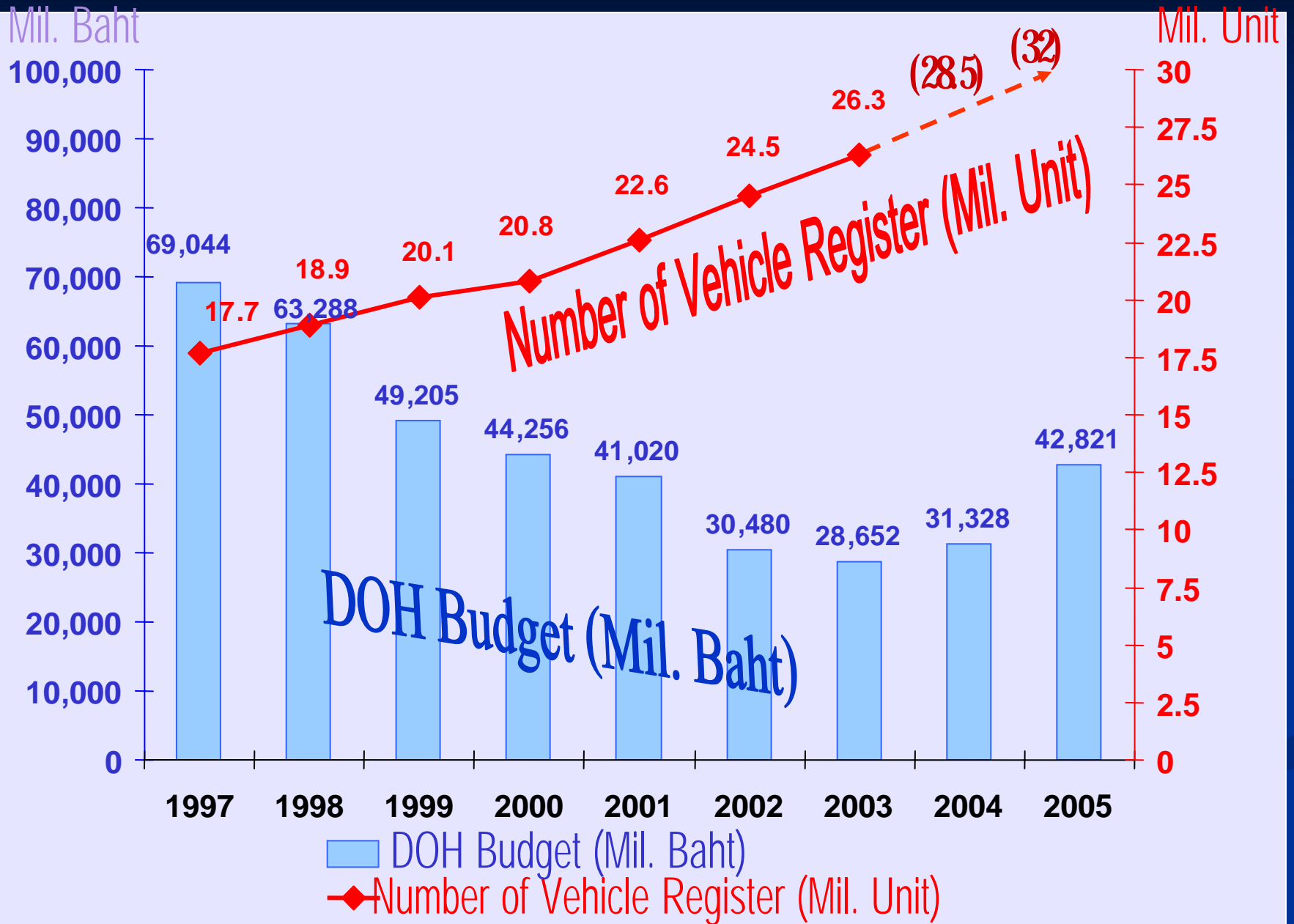
# Freight Transport



# **Financing Scheme on Infrastructure Development**

- Government Budget
- External Loan
- Private Participation

# DOH Budget VS Registered Vehicles



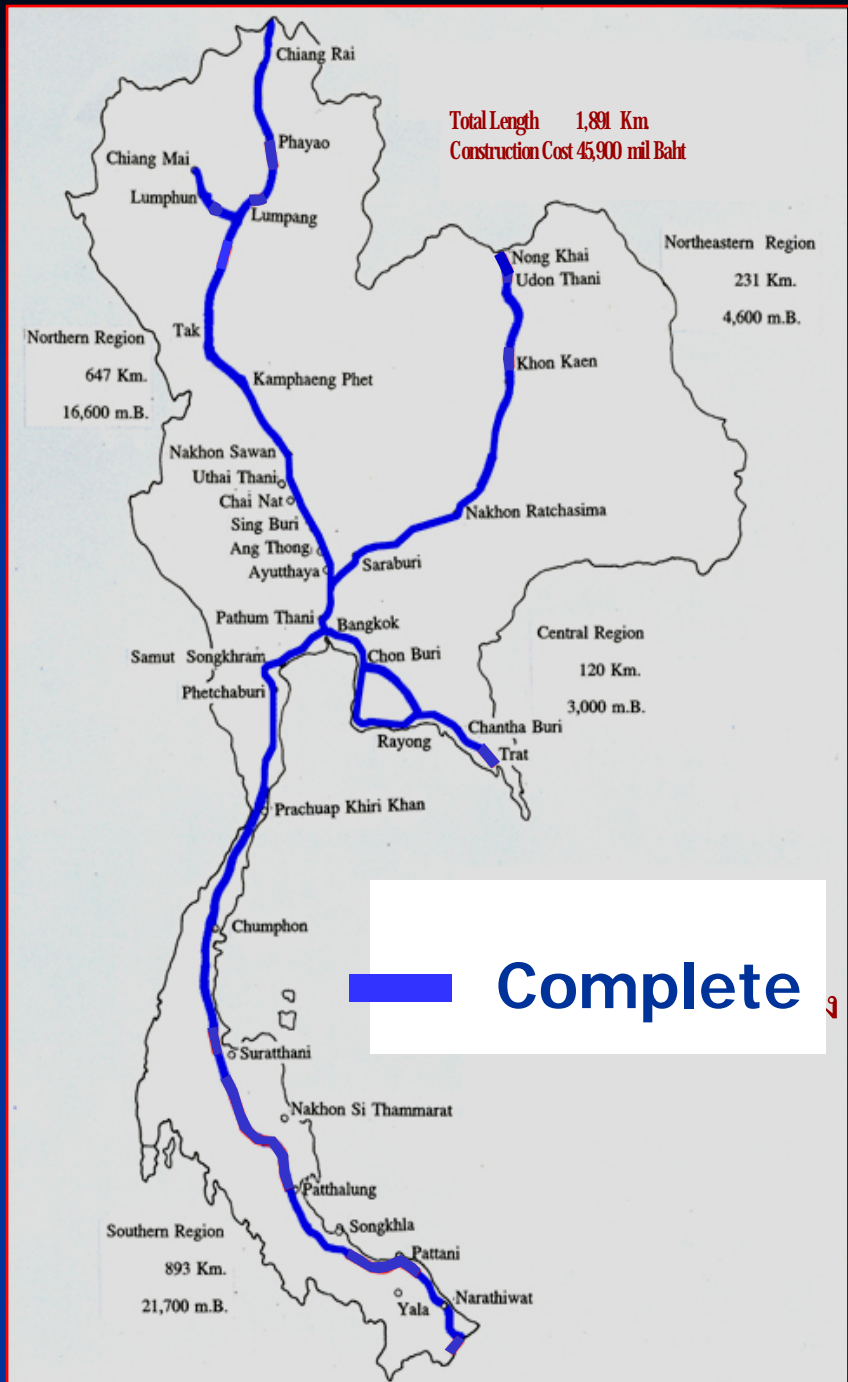
# Examples (Government budget)

## 4-lane Phase I

Length: 1,891 kms.

Construction cost: 45,900 MB

(1,148 M\$US)





**BEFORE**

**A. TAK BAI - A. SUNGAI KOLOK**



**AFTER**

# Examples (Government budget)

## 4-lane Phase II

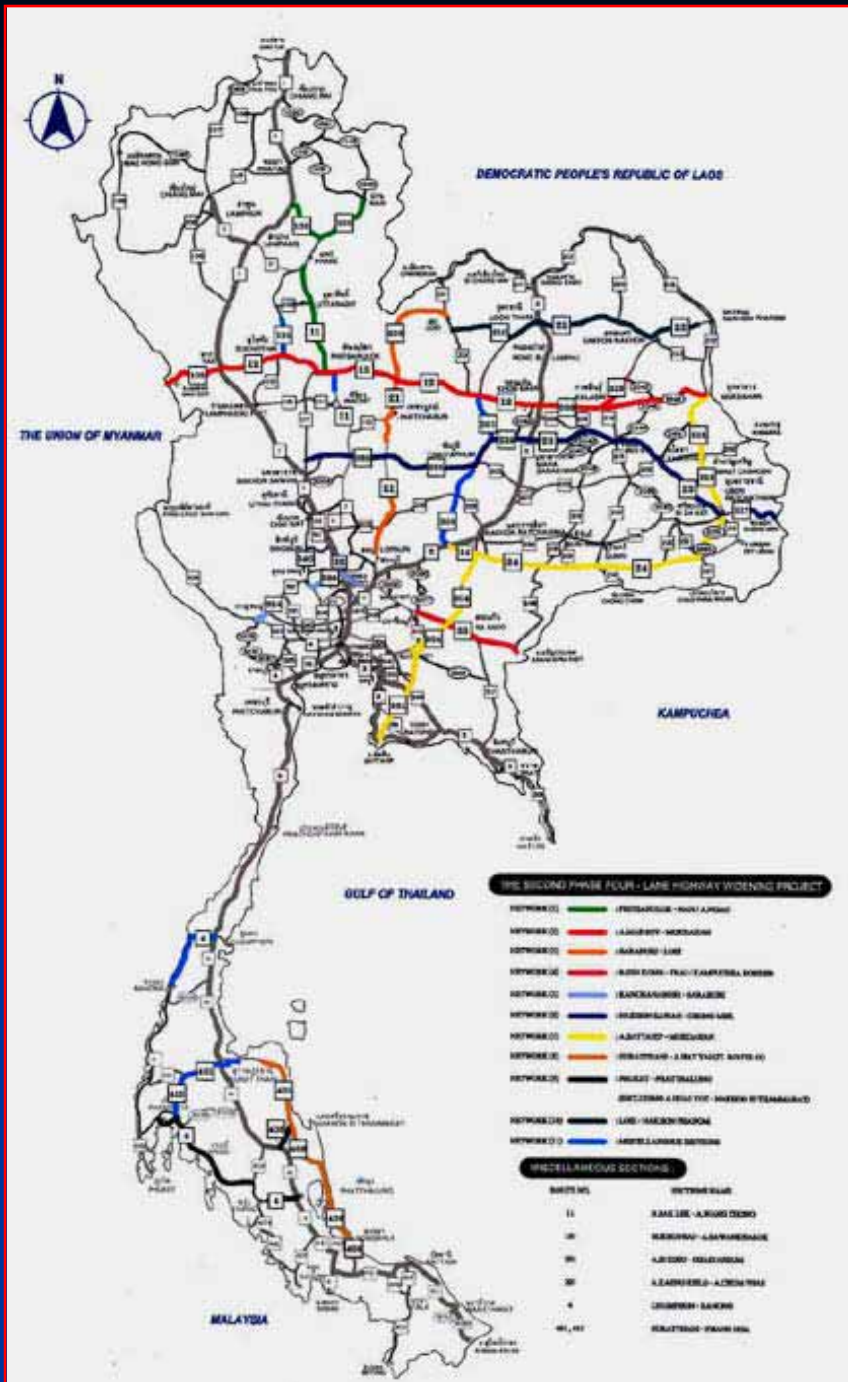
Length: 4,366 kms.

Construction cost: 103,300 MB

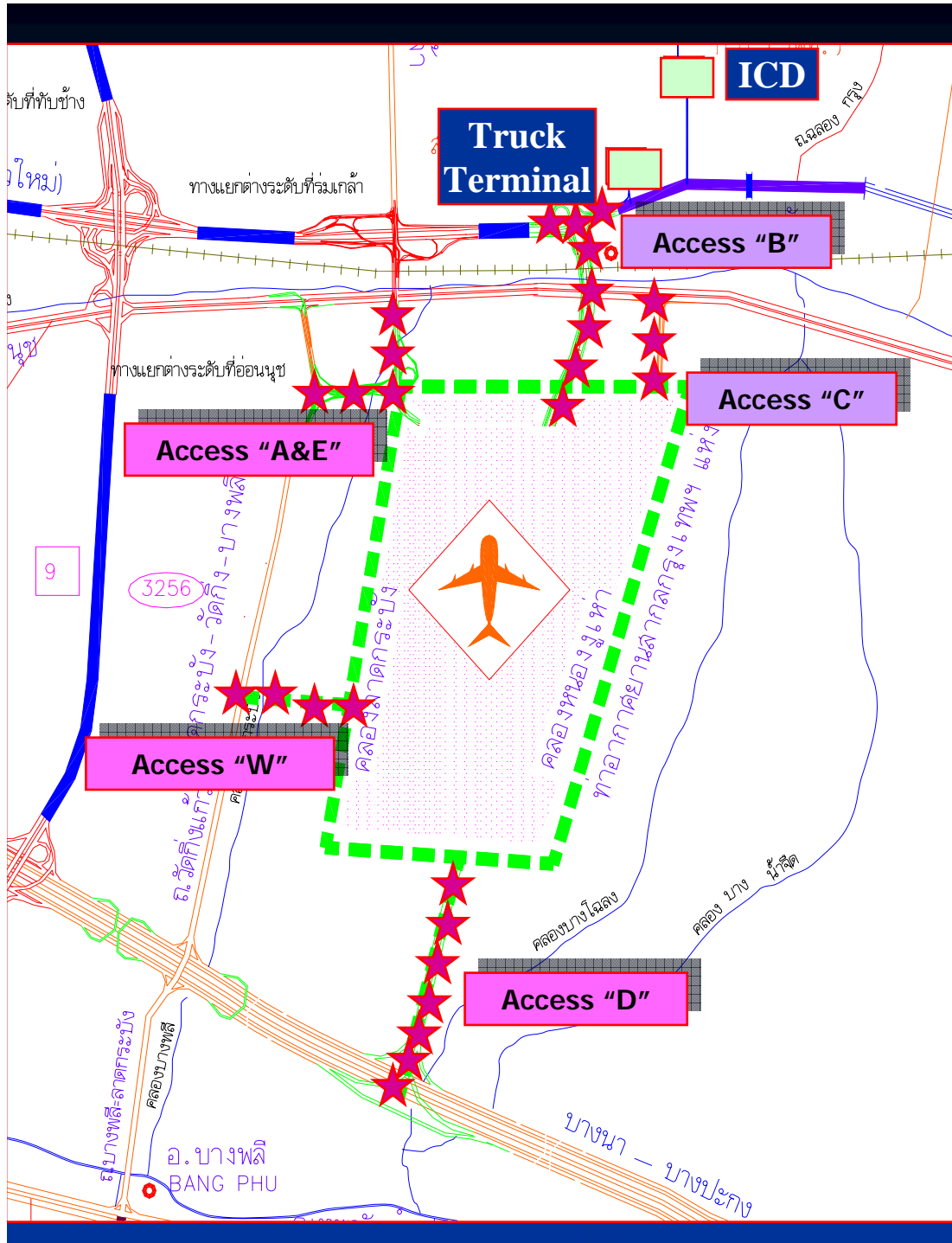
(2,583M\$US)

Complete: 1,235 kms.

Underconstruction: 653 kms.







## Examples (Government budget)

### Access Roads to Suvarnabhumi Airport

Construction cost: 6,600 MB.  
(165M\$US)

Land cost: 3,600 MB.  
(90 M\$US)

Completed: Access B, C, D, W

# Examples (External loan)

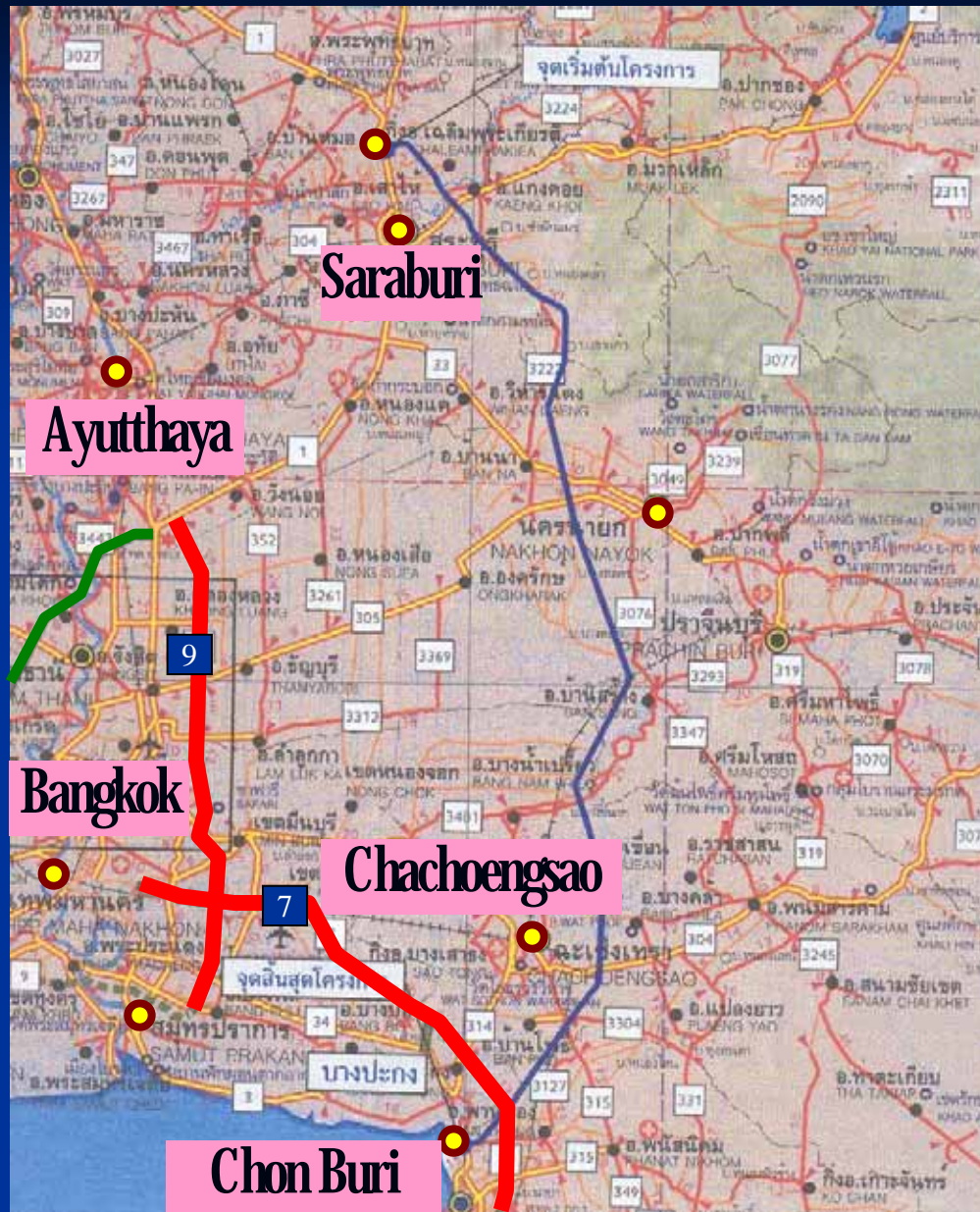
## Two motorway projects

Route No.7:

Bangkok-Chon Buri, 82 kms.

Route No.9:

Outer Bangkok Ring Road  
(Eastern portion), 64 kms.



# Examples (Private participation)



**Din Daeng - Anusornsrathani  
Tollway**

**Length 22 kms.**

# Build-Operate-Transfer (BOT)

**BUILD**

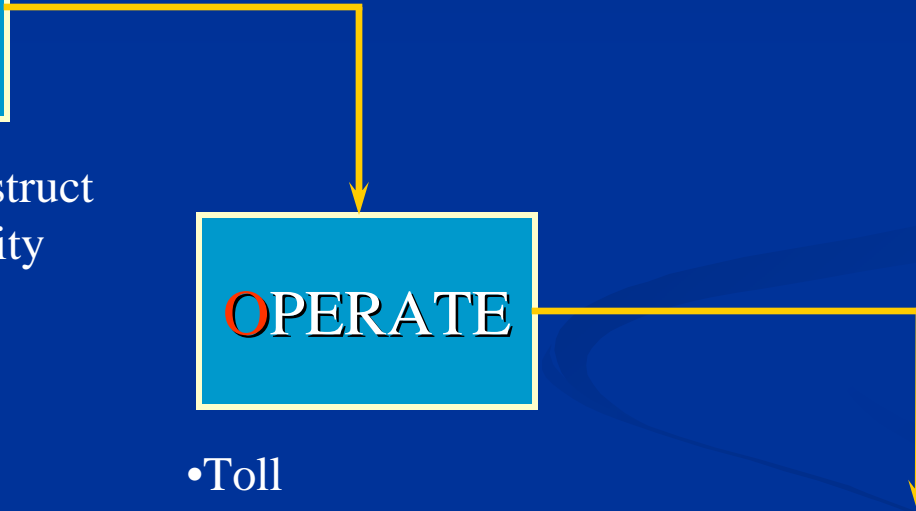
- Private sector construct infrastructure facility

**OPERATE**

- Toll
- Concession period

**TRANSFER**

- Transfer to government

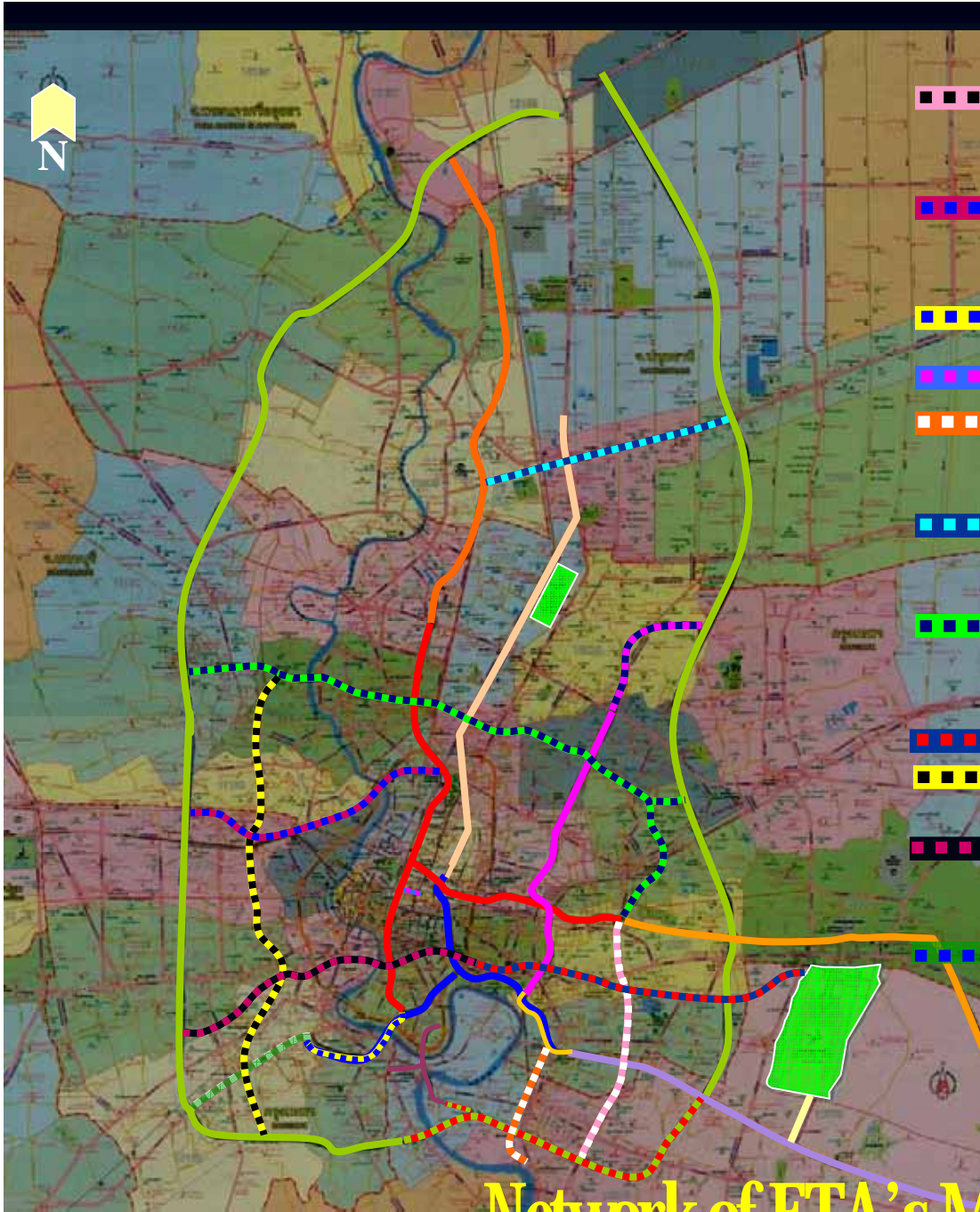


# Step for Privatization of the Project

1. Feasibility Study & Environmental Impact Assessment Study (Ministry, Department)
2. Project Approval for Privatization (Cabinet)
3. Selection of the Concessionaire (Special Task Group)
4. Final Approval of the Concessionaire (Cabinet)
5. Implementation & Operation of the Project by the Concessionaire

# Experiences in Thailand

- **Expressway and Rapid Transit Authority of Thailand (ETA)**
  - The Second Stage Expressway System (SES)
- **Department of Highways (DOH)**
  - The Don Muang Tollway (DMT)



- 1. Srinakarin-Bangra-Samut Prakarn Expressway Project (138 km)
- 2. Si Rat-Western Outer Bangkok Ring Road Expressway Project (17.0 km)
- 3. Si Rat-Dao Kanong Expressway Project (61 km)
- 4. CD-ROAD (20 km)
- 5. Third Stage Expressway System Project (Southern: S2 Section) (7.8 km)
- 6. Bangpoo-Tanyaburi-Outer Bangkok Ring Road Expressway Project (13.5 km)
- 7. Third Stage Expressway System Project (Northern section) (39.7 km)
- 8. Suvarnabhumi Expressway Project (M1 Section) (22.5 km)
- 9. Fifth Stage Expressway System Project (28.3 km)
- 10. Rama 4-Taksin - Outer Bangkok Ring Road Expressway Project (20.6 km)
- 11. Dao Kanong-Outer Bangkok Ring Road Expressway Project (8.8 km)

**Total 180.1 km (Future Network)**

**Total 175.9 km (Existing Network)**

# Network of ETA's Master Plan

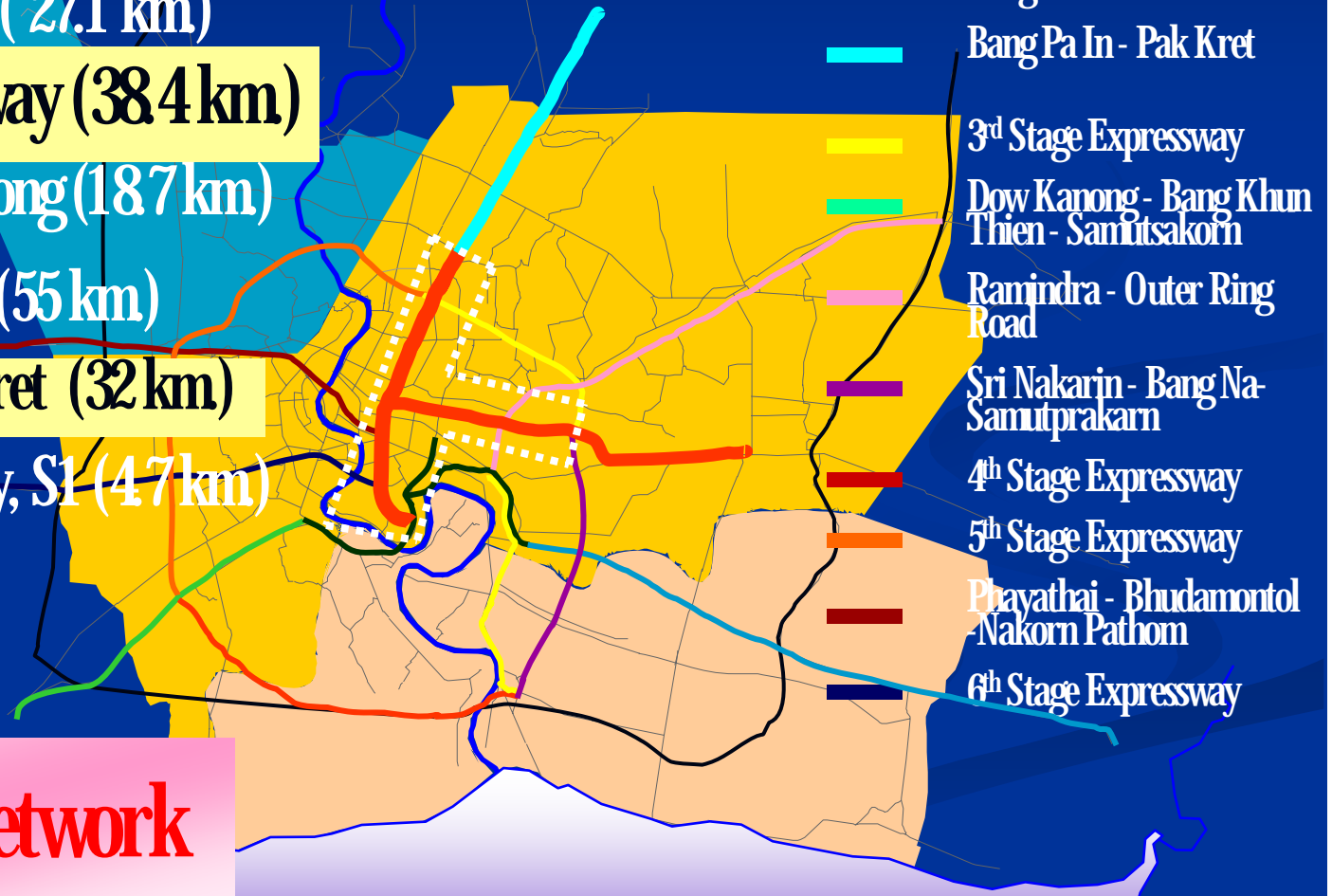
# I. ETA's Network

At present, 175.9 km of expressway network is in service.

- 1<sup>st</sup> stage expressway (27.1 km)
- 2<sup>nd</sup> stage expressway (38.4 km)
- Ramindra-Arg Narong (18.7 km)
- Bang Na-Chonburi (5.5 km)
- Bang Pa In - Pak Kret (3.2 km)
- 3<sup>rd</sup> stage expressway, S1 (4.7 km)

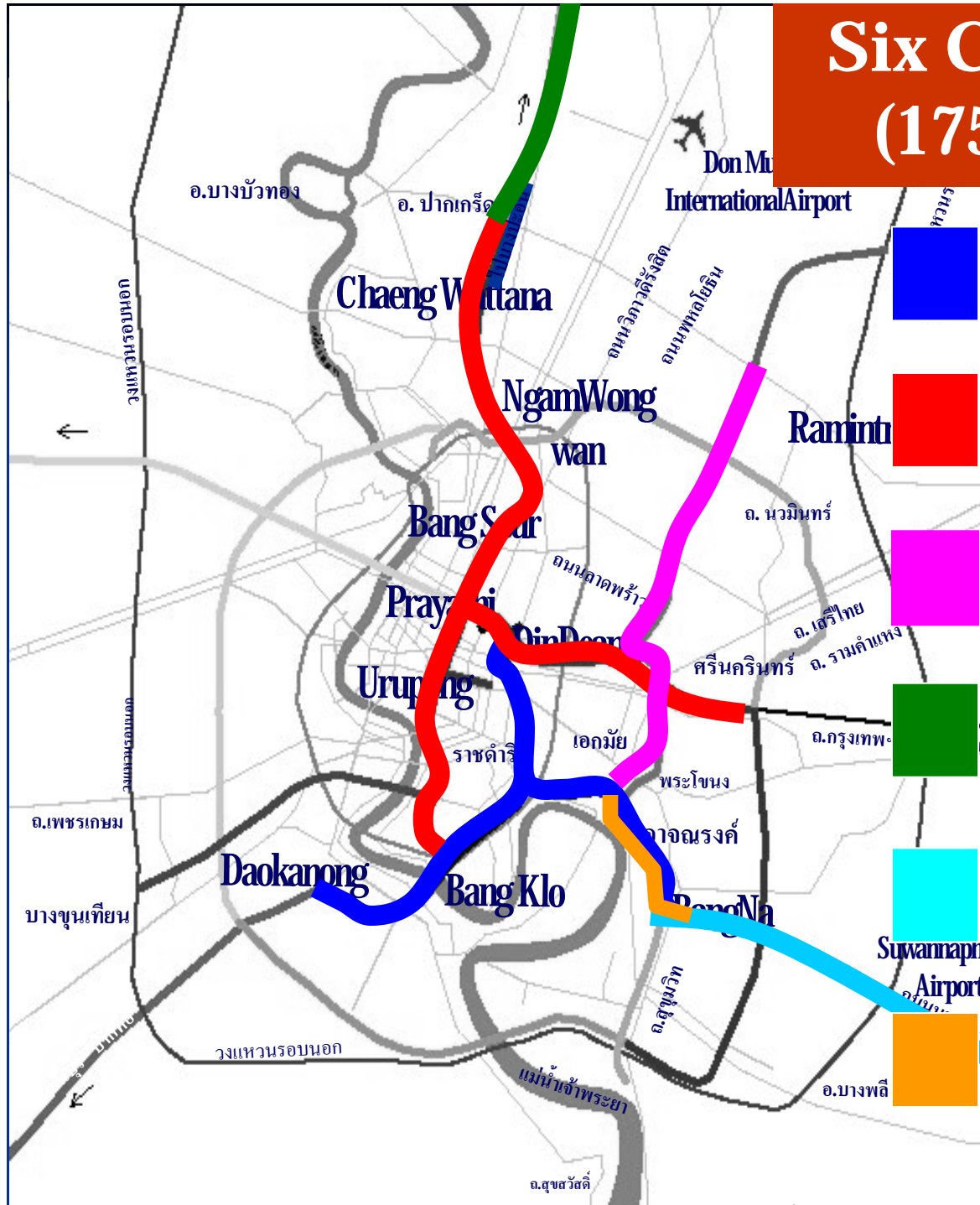
- 1<sup>st</sup> Stage Expressway
- 2<sup>nd</sup> Stage Expressway
- Ramindra - Arg Narong
- Bang Na - Chonburi
- Bang Pa In - Pak Kret
- 3<sup>rd</sup> Stage Expressway
- Dow Kanong - Bang Khun Thien - Samutsakorn
- Ramindra - Outer Ring Road
- Sri Nakhon - Bang Na - Samutprakarn
- 4<sup>th</sup> Stage Expressway
- 5<sup>th</sup> Stage Expressway
- Phayathai - Bhudamontol - Nakorn Pathom
- 6<sup>th</sup> Stage Expressway

Expressway network





# Six Completed Projects (175.9 km. in length)



**1. Chaloem Maha Nakorn Expressway (FES) : 27.1 km.**

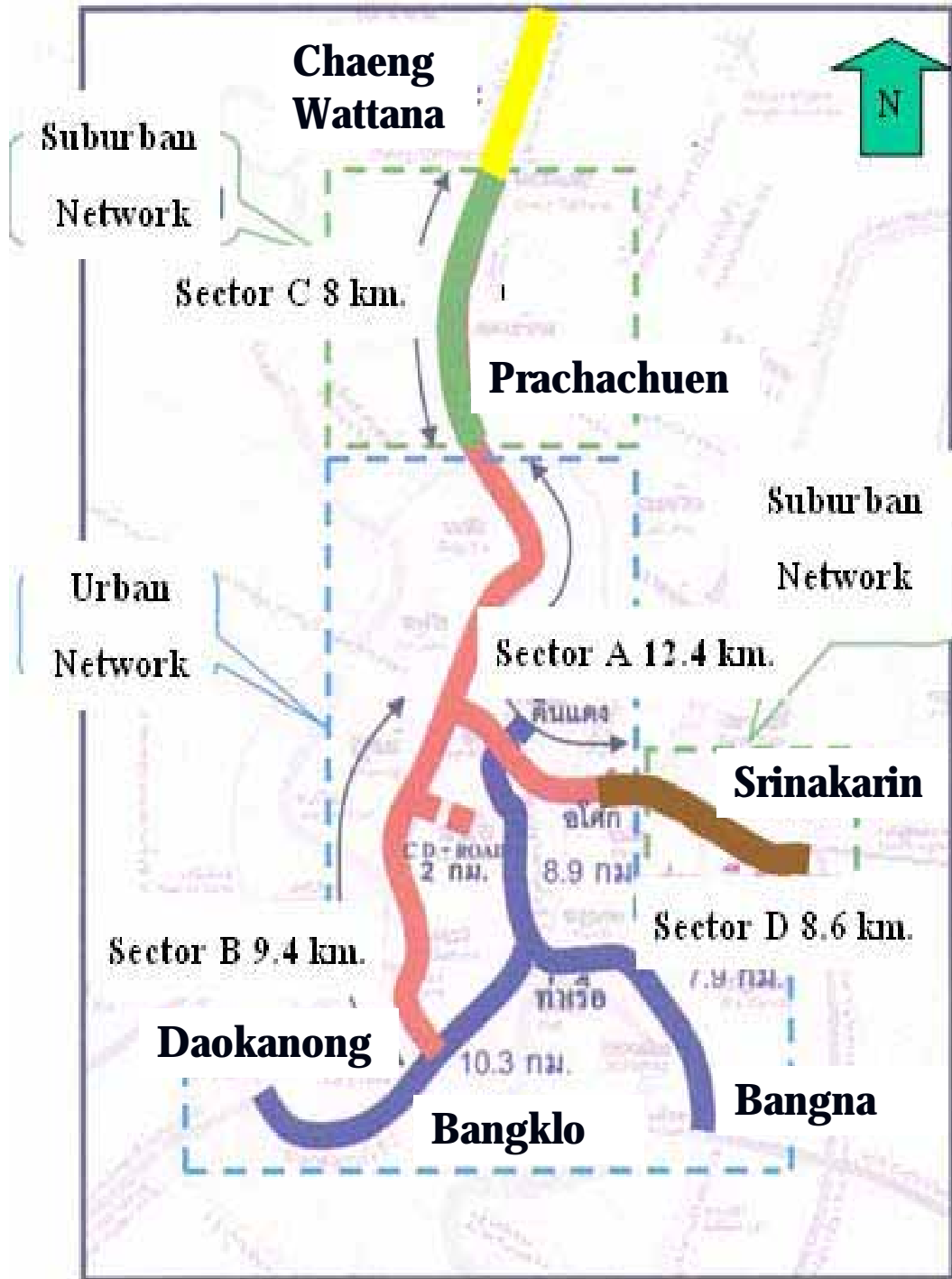
**2. Si Rat Expressway (SES) : 38.4 km.**

**3. Chalong Rat Expressway : 18.7 km.**

**4. Udon Rattaya Expressway : 32.0 km.**

**5. Burapha Withi Expressway : 55.0 km.**

**6. Third Stage Expressway Southern route Section S1: 4.7 km.**



## Map of Concessionaire Expressway Network

**SES sector A, B, C, D  
(38.4 kms.)**

**— : FES, 27.1kms.  
(non- concession)**

# Experiences in Thailand (ETA)

- **The Second Stage Expressway System (SES)**
  - TOR issued in 1987 by the Expressway and Rapid Transit Authority of Thailand (ETA), inviting private sector investment (design, build, and operate the SES).
  - In 1988, the BOT concession for the SES was granted to Bangkok Expressway Consortium, which later became the Bangkok Expressway Company Limited (BECL).

## ■ **The Second Stage Expressway System (SES)**

- The 30-year concession agreement was signed in October of 1988.
- 3-year for construction period.
- 27 years for operation.
- Open to traffic 1993 (Sector D in 2000).
- 31,300 MB Land cost (government).
- Construction cost is responsible by private sector





# Main Concessionaire Conditions

## The Relevant Proportions (Urban network) High Traffic Volume

	ETA's share of toll revenues (%)	BECL's share of toll revenues (%)
1. The first 9 years from Priority Component Opening Date(02/09/93 – 01/09/02)	40	60
2. The last 9 years of the Contract Period(1/03/11 – 28/02/20)	60	40
3. The period between 1 and 2 above(02/09/02 – 28/02/11)	50	50



# Main Concessionaire Conditions

## The Relevant Proportions (Suburban network) Low Traffic Volume

	<b>ETA's share of toll revenues (%)</b>	<b>BECL's share of toll revenues (%)</b>
<b>1. The first 9 years from Priority Component Opening Date(02/09/93 – 01/09/02)</b>	<b>0</b>	<b>100</b>
<b>2. The last 9 years of the Contract Period(1/03/11 – 28/02/20)</b>	<b>0</b>	<b>100</b>
<b>3. The period between 1 and 2 above (02/09/02 – 28/02/11)</b>	<b>0</b>	<b>100</b>

## II. Concession Highway of DOH [The Don Muang Tollway: DMT]

- 6-lane elevated road link between the central part of Bangkok and the Don Muang International Airport.
- Length 21.9 kms (sec 1: 15.4 kms, sec 2: 6.5 kms).
- Required a huge investment and with severe budgetary restraints.
- BOT scheme is the attractive means to develop the DMT projects.
- Government invest last portion: section 3 (7.3 kms, 3,940 MB)



# Don Muang Tollway Concession Road



Don Muang Tollway Concession Road to  
Don Muang International Airport



Toll Plaza of Don Muang Tollway  
Concession Road



Vipavadi Rangsit Road under the Don  
Muang Tollway Concession Road



Don Muang Tollway Concession Road (6 lanes)  
Vipavadi Rangsit Road under the Toll Road (10 lanes)



## ■ The Don Muang Tollway (DMT)

- August of 1989, the 25-year concession agreement was signed (DOH vs DMT).
- Don Muang Tollway Company Limited, comprising DYWIDAG (a German firm), Delta Construction (a Thai construction company) and GMI (a French contracting company) was chosen to build and operate the DMT project.
- In 1994, extension portion (+7 yr concession period).
- Open to traffic
  - Dec 1994 (1<sup>st</sup> portion)
  - Dec 1998 (2<sup>nd</sup> & 3<sup>rd</sup> portion).



HM King has named “**Uttara Phi Muk**”  
(= **Leading to the North**)

# Current Policy:

## *Thailand Partnership for Mega Project Development*

- **Expressway/Inter-City Motorway Projects**
  - High standard highway for sustainable development.
  - Require huge amount of fund.
  - Need partnership for development.

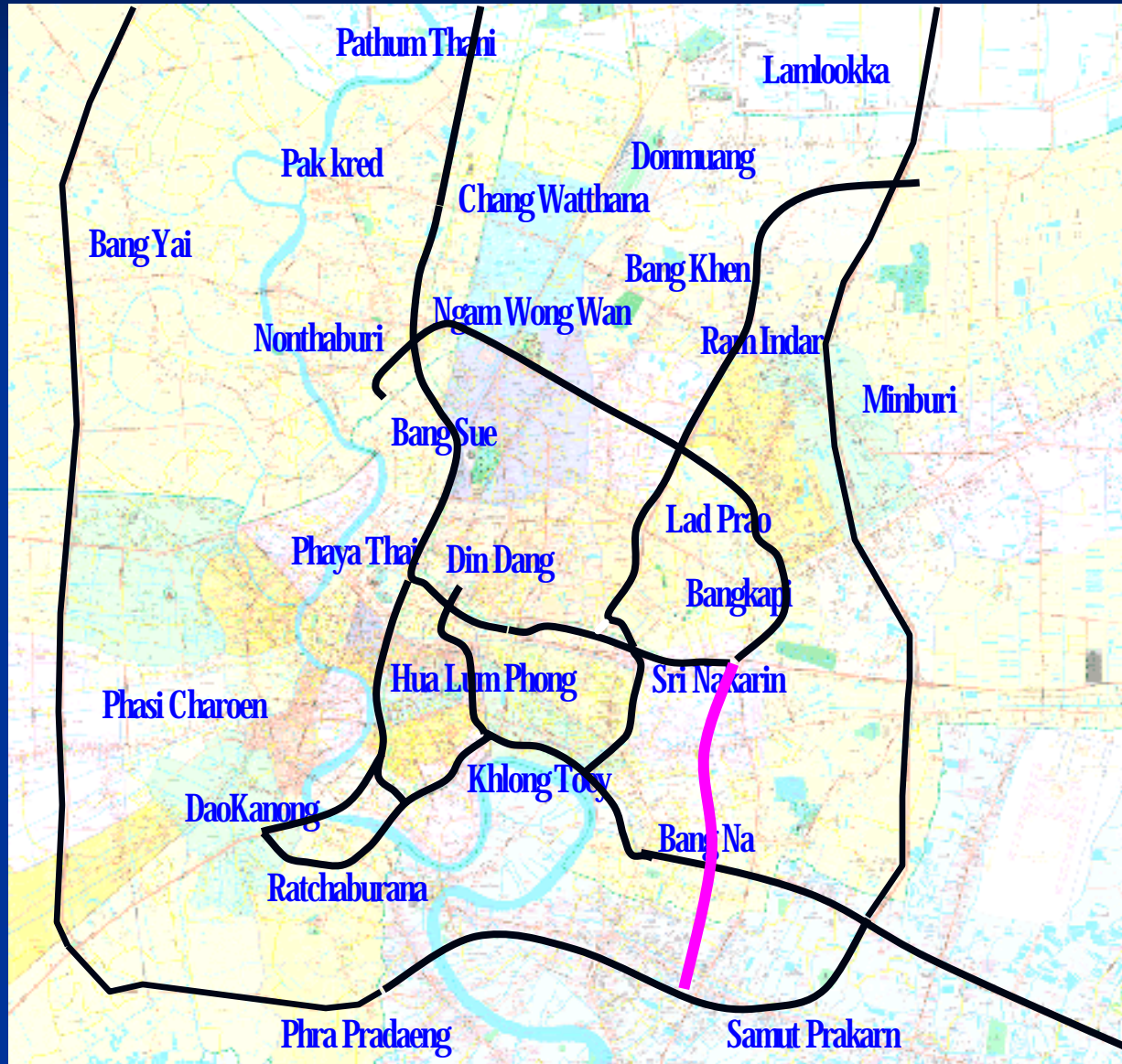
**ETA : 1 projects**

**DOH : 2 projects**



# Sri Nakarin-Bang Na-Sumut Prakarn Expressway:

13.8 km.



## Project Location

From Motorway No. 7 in the north, going south to Samut Prakarn

To be opened  
May 2009

# Inter-City Motorway Network Master Plan



**Cabinet Approved: 22 April 1997**

**20-Year Plan**

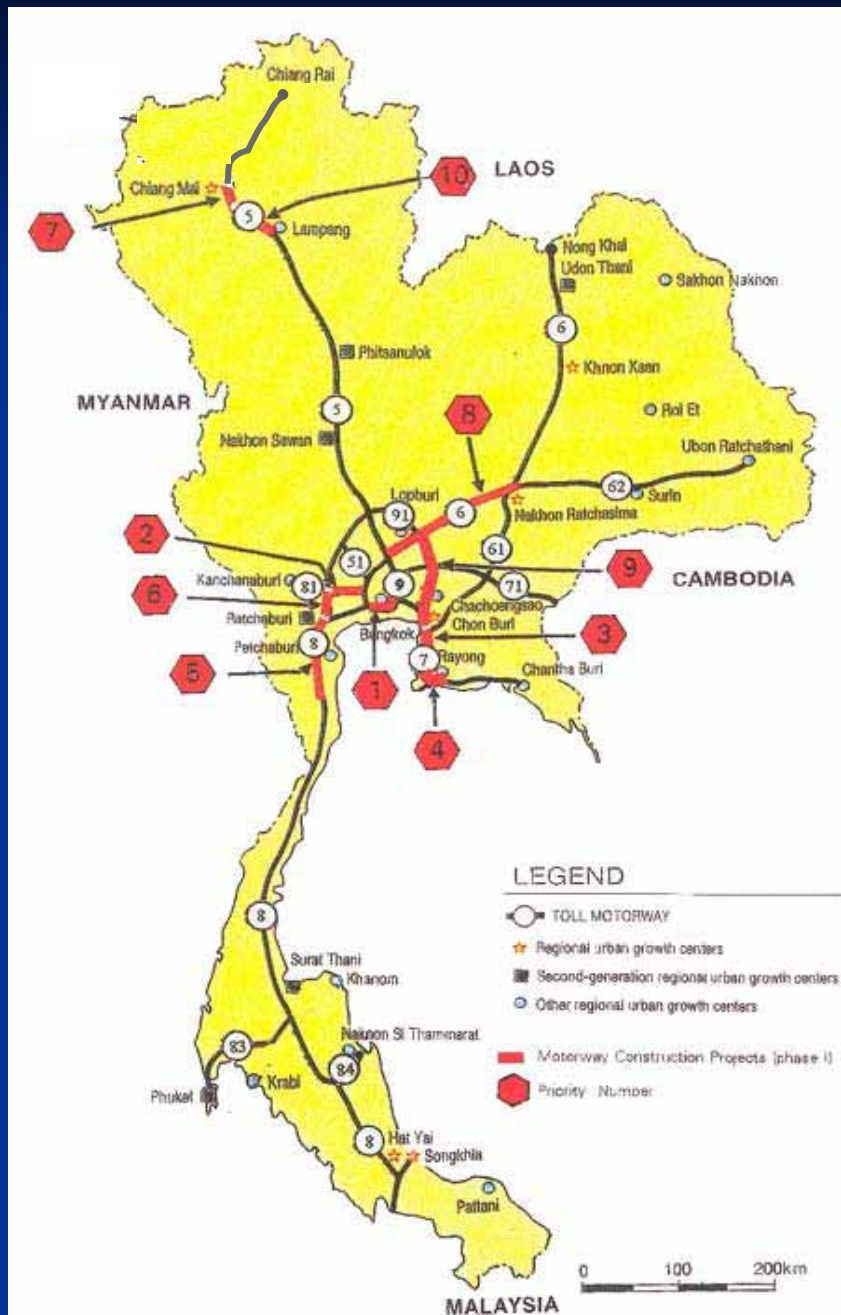
**13 Networks**

**Length 4,150 km.**

**Const. Cost 472,360 MB.**

**Land Acquisition 65,600 MB.**

# Initial Stage of Inter-City Motorway Development



**10 Projects**

**Length 692 km.**

**Const. Cost 128,666 MB.**

# Bang Pa In - Saraburi - Nakhon Ratchasima Inter-City Motorway

## Project Description

- New Alignment with Motorway Standard
- 4 Lanes with Fully Controlled Access
- Right of Ways : 70 Meters
- Length : 200 KM.

## Current Status

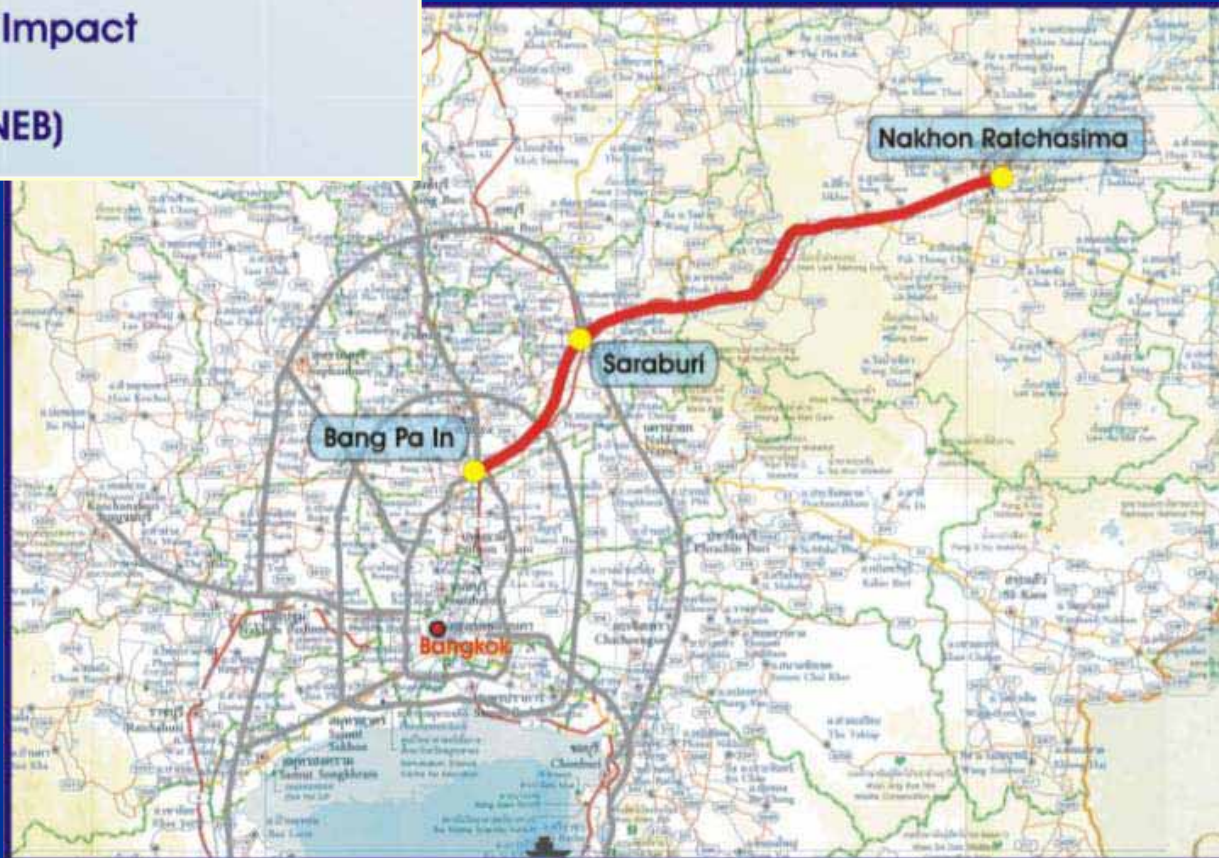
- Feasibility Study was completed
- Under Processes of Environmental Impact Assessment (EIA) Approval from The National Environment Board (NEB)

**Construction cost: 25,600 MB**  
**Land Cost: 3,940 MB**

**EIRR: 34.70%**

**B/C: 6.9**

**FIRR: 15.80%**



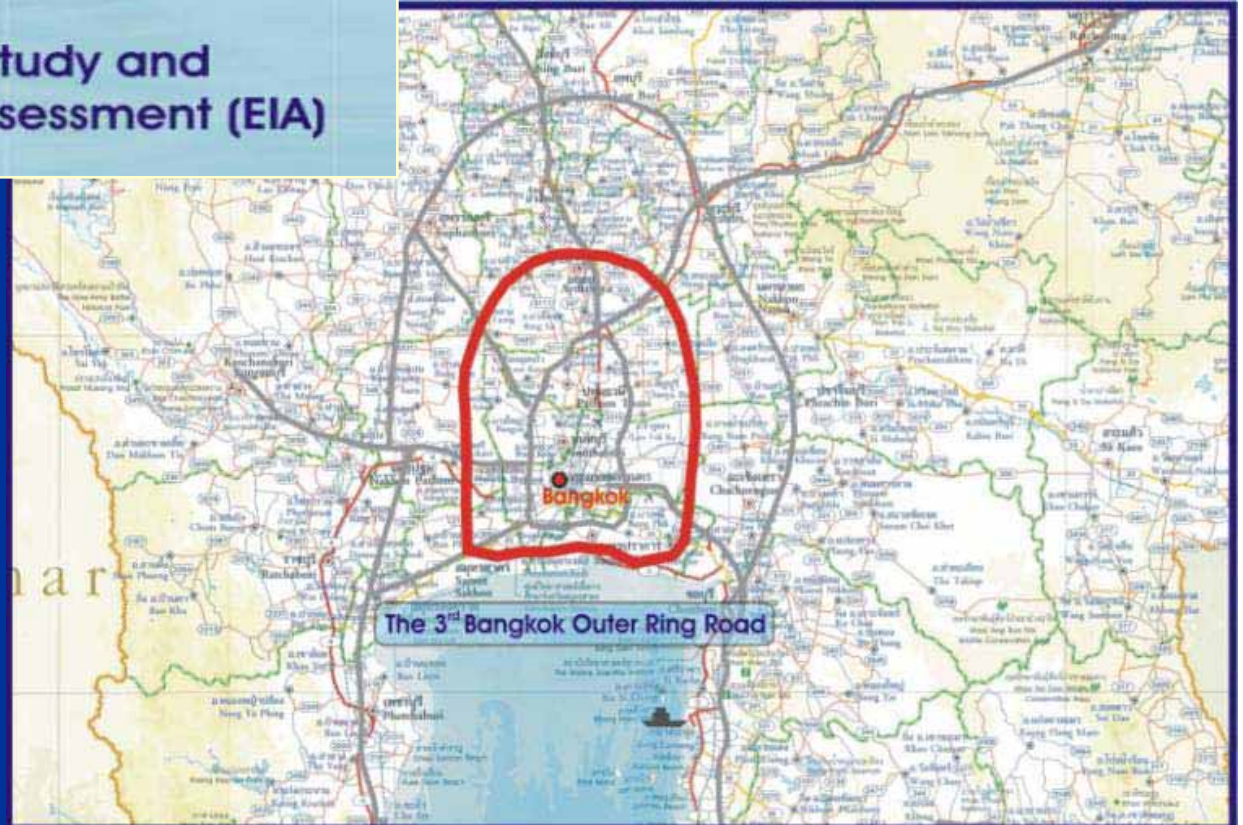
# The 3<sup>rd</sup> Bangkok Outer Ring Road

## Project Description

- New Alignment with Motorway Standard
- 6 Lanes with Fully Controlled Access
- Right of Ways : 70 Meters
- Length : 250 KM.

## Current Status

- Preparing for Feasibility Study and Environmental Impact Assessment (EIA)



# Required Proposal Component

- Experience / Expertise / Financial Status
- Analysis / Assessment of Existing situation and future demand
- Technical / implementation approach & methodology and standard
- Economic & financial return
- Financial proposal, term & condition of payment
- Value & benefit to Thailand & people
- Operation model
- Key milestones for development & project implementation
- Critical success and failure / risk assessment for implementation
- Obligation of the implementation partner



# Bidding Process and Schedule

- Invitation to submit proposals issued on 26 January 2006
- Proposals to be submitted by 31 May 2006
- Government appointed panel to finalize selection of successful bidder by end of July 2006

*Thank You*

