Thailand’s Transport Infrastructure Development Strategy 2015-2022

Arkhom Termpittayapaisith
Minister of Transport
Japan, November 2015
Today’s Topic

- Overview of Thailand Infrastructure
- Transport Infrastructure Development & Action Plan
- Thailand-Japan Railway Cooperation
  - Container Freight Train Trial
- Public Private Partnership in Transport Infrastructure Development
- Dawei Project
Thailand’s infrastructure still needs further development and improvement in order to boost the nation’s competitiveness hence, more investment will unavoidably be required in the future.

Overall Competitiveness Ranking 2003 - 2015

Transport Infrastructure Statistics

- **Road**
  - National Highway
  - Motorway & Expressway
  - Rural road
  - Local road
  - Total km: 61,747 km, 47,916 km

- **Water**
  - Total International Deep Sea Port
  - Laem Chabang Port
  - MTEU/year: 6

- **Rail**
  - Single Track
  - Double and Third Track
  - Total km: 3,685 km, 385 km

- **Air**
  - Airports
  - Suvarnabhum Airport
  - Don Mueang Airport
  - Phuket Airport
  - Chiang Mai Airport
  - Passengers/year: 36

Infrastructure Development Target

- Reduce logistics costs to be lower than 15.0% of GDP
- Increase the proportion of the Rail transport to 5.0%
- Increase the proportion of the renewable and the alternative energy consumption to the final energy consumption to be at least 19.0%
- Reduce energy import by at least 3.0%
- Interconnect regional supply chains that can facilitate economic development over a period of time
- Increase in Thailand’s cross-border trade and direct investment with neighboring countries to reach 15 percent and 10 percent per annual respectively
“Thailand Transport Infrastructure Development Strategy 2015-2022” as a development framework of Thailand over the next 8 years as well as to efficiently monitor the implementation of the projects.

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<tbody>
<tr>
<td><strong>1.1 Tracking &amp; Facilities Improvement</strong></td>
<td><strong>2.1 Implementation of 10 Metro Lines</strong></td>
<td><strong>3.1 Accessibility to Agricultural &amp; Tourist Areas</strong></td>
<td><strong>4.1 Inland Port Development</strong></td>
<td><strong>5.1 Airport Capacity Expansion</strong></td>
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<tr>
<td><strong>1.2 Dual Track Development</strong></td>
<td><strong>2.2 Construction of Roads &amp; Bridges</strong></td>
<td><strong>3.2 Connectivity between Hub &amp; Key Production Bases</strong></td>
<td><strong>4.2 Coastal Port Development</strong></td>
<td><strong>5.2 Enhancement in Air Traffic Management Capability</strong></td>
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<td><strong>2.3 Procurement of 3,183 NGV Buses and Depots</strong></td>
<td><strong>3.3 Connectivity between Gateways</strong></td>
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<td><strong>5.3 Increased Fleet Utilization</strong></td>
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<td><strong>3.4 Promoting Seamless Multi-Modal Transport</strong></td>
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<td><strong>5.4 Air Transport Industrial Park</strong></td>
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<td><strong>5.5 Human Resource Development</strong></td>
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20 Transport Infrastructure Investment Projects

Air Transport
1. Suvarnabhumi Airport Phase II (51,607 Million Baht)

Dual Track (Meter gauge)
1) Jira Junction – Khon Kaen (26,004 Million Baht)
2) Mab Kabao-Jira Junction (29,853 Million Baht)
3) Nakhon Pathom-Hua Hin (20,036 Million Baht)
4) Prachuab Kiirikan-Chumphon (17,290 Million Baht)
5) Lop Buri-Pak Nam Pho (24,840 Million Baht)

Motorway
1. Pattaya – Mab Taphut (20,200 Million Baht)
2. Bang Pa In- Saraburi-Nakhon Ratchasima (84,600 Million Baht)
3. Bang Yai-Ban Pong-Kanchanaburi (55,620 Million Baht)

Dual Track (Standard gauge)
1. Bangkok- Nong Khai, Kaeng Koi-Mab Taphut (369,148 Million Baht)
2. Bangkok- Phitsanulok-Chiang Mai (449,473 Million Baht)
3. Bangkok-Hua Hin (94,673 Million Baht)
4. Bangkok-Ra Yong (152,528 Million Baht)

Mass Rapid Transit
1. Orange Line: Thailand Cultural Ctr-Minburi (110,116 Million Baht)
2. Pink Line: Kae Rai-Minburi (56,690 Million Baht)
3. Yellow: Lad Prao - Sam Rong (54,644 Million Baht)
4. Red Line: Bang Sue-Phyathai-Makkasan-Hua Mak & Bang Sue-Hua Lam Phong (44,157 Million Baht)
5. Purple Line: Tao Poon-Ratburana (131,004 Million Baht)

Maritime Transport
1. Coastal port development (Terminal A), Laem Chabang Port (1,864 Million Baht)
2. Single Rail Transfer Operator (SRTO) Phase 1, Laem Chabang Port (2,031 Million Baht)

Total investment
1.796 Trillion Baht
Projects approved from Cabinet and bidding in 2015

Dual track
1) Jira Junction - Khon Kaen Section

Motorway
2) Pattaya - Mab Ta Phut
3) Bang Pa In - Saraburi - Nakhon Ratchasima

4) Coastal port development (Terminal A), Laem Chabang Port
5) Single Rail Transfer Operator (SRTO) Phase 1, Laem Chabang Port
6) Suvarnabhumi Airport Phase II
Projects bidding in 2016-2017

Dual track (Metre Gauge)
1. Mab Kabao - Jira Junction section
2. Nakhon Pathom - Hua Hin section
3. Prachuab Kirikan - Chumpon section

Dual track (Standard gauge)
4. Nong Khai-Khon Kaen-Nakhon Ratchasima-Kaeng Koi-Chachoengsao-Sriracha-Mab Taphut
5. Bangkok-Phitsanulok-Chiang Mai
6. Bangkok-Hua Hin
7. Bangkok-Rayong

Mass Rapid Transit
8. Orange Line: Thailand Cultural Center-Min Buri
9. Pink Line: Kae Rai-Min Buri
10. Yellow Line: Lad Praow-Sam Rong
11. Purple Line: Tao Poon-Ratburana
13. Single Rail Transfer Operator (SRTO) Phase 1, Laem Chabang Port
14. Motorway: Bang Yai-Ban Pong- Kanchanaburi
### Thailand-Japan Railway Cooperation

<table>
<thead>
<tr>
<th>Route</th>
<th>Distance (km.)</th>
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<tbody>
<tr>
<td>1. Bangkok – Kanchanaburi</td>
<td>180</td>
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<tr>
<td>2. Bangkok - Aranyaprathed</td>
<td>255</td>
</tr>
<tr>
<td>3. Bangkok – Laem Chabang</td>
<td>139</td>
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1,2,3 : Thai & Japan will consider the type of gauge to accommodate speed of **100-120 km/h**

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<tr>
<th>Route</th>
<th>Distance (km.)</th>
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<tbody>
<tr>
<td>4. Bangkok – Chiang Mai</td>
<td>672</td>
</tr>
<tr>
<td>- Dual track&lt;br&gt;- Standard Gauge&lt;br&gt;- Speed &gt;200 km/h</td>
<td></td>
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เส้นทางฉะเชิงเทรา - แหลมฉบัง ใช้ทางรถไฟร่วมกับจีน

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<thead>
<tr>
<th>Route</th>
<th>Distance (Km.)</th>
<th>Status</th>
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<tbody>
<tr>
<td>Tak - Phitsanulok - Phetchabun - Khon Kaen - Roi Ed - Mukdahan</td>
<td>718</td>
<td>Requesting budget for Feasibility Study</td>
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Lower East-West Corridor

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<tr>
<th>Route</th>
<th>Distance (km)</th>
<th>Progress</th>
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<tbody>
<tr>
<td>Bangkok – Kanchanaburi</td>
<td>180</td>
<td>Conducting Feasibility Study by State Railway of Thailand (SRT)</td>
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<tr>
<td>Bangkok – Aranyaprathed</td>
<td>255</td>
<td></td>
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<tr>
<td>Bangkok – Laem Chabang</td>
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<tr>
<td>Total</td>
<td>574</td>
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The feasibility study to improve the efficiency of railway freight services, based on MOC between Thailand & Japan.

**Purposes:**
- Construction of domestic railway container transport network by small container (12 feet container)
- Construction of IT system for management of rail freight transport

**5 Container Wagons:**
- 4 Wagons-40 ft Container
  - 1 Wagon-12 ft Container

**Transport Goods:**
General consumers products & machinery/ automobile spare parts
- Responsible agent: State Railway of Thailand & Study Team of Ministry of Land, Infrastructure and Transport
- Ceremony Plan of Trial Run: The last week of January 2016
- Route: Laem Chabang Port/ Lat Krabang ICD – Aranyaprathet (Klong Luk)
- Schedule of Trial: October 2015- March 2016
## Public Private Partnership (PPP) in Transport Infrastructure Development

<table>
<thead>
<tr>
<th>Projects</th>
<th>Civil works</th>
<th>System works &amp; Rolling stock</th>
<th>Operation &amp; Maintenance</th>
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<tbody>
<tr>
<td>Motorway</td>
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<tr>
<td>1. Bang Pa In-Nakhon Ratchasima</td>
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<tr>
<td>2. Bang Yai-Ban Pong-Kanchanaburi</td>
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<tr>
<td>3. Pattaya-Map Taphut</td>
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<tr>
<td>Airport Rail Link (Extension)</td>
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<tr>
<td>4. Don Muang-Bang Sue-Phyathai</td>
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<tr>
<td>5. Dual Track : Bangkok-Hua Hin</td>
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<tr>
<td>6. Dual Track : Bangkok-Ra Yong</td>
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<tr>
<td>7. MRT: Orange Line</td>
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<td>8. MRT: Purple Line</td>
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<td>9. MRT: Pink Line</td>
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<tr>
<td>10. MRT: Yellow Line</td>
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Motorway: Bang Pa In–Saraburi-Nakhon Ratchasima

- 9 Toll Plaza
- 10 Interchanges
- 1 Customer service
- 2 Service centers
- 5 Rest areas

- Distance 196 km. 4-6 lanes
- To relieve congestion on Highway no. 1&2
- To reduce transport costs & improve intercity expressway network
- Reduced average travel time 60 min/car
Motorway: Bang Yai – Ban Pong - Kanchanaburi

- Distance 96 km. 4-6 lanes
- To relieve traffic congestion on Highway no.4 (Phetkasem Rd) & Highway no.338 (Pin Klao-Nakhon Chaisri) connect to the South/West
- To reduce transport costs & improve intercity motorway network
- To reduce average travel time by 45 min/car
Motorway : Pattaya – Map Taphut

Rationale
• Expansion from highway no.7
• Improved motorway network connecting to Eastern Seaboard
• Distance 32 km, 4 lanes

- 5 Toll Plaza
- 3 Interchanges
- 1 Service centers
Airport Rail Link: Don Muang-Phyathai (21.8 km)
- Distance 222 km.
- EIA approved/ Cabinet to approve construction (October-January 2016)
- Land acquisition (January 2016-February 2017)
- Hire consultant for bidding (April-June 2017)
- Bidding (July-December 2017)
- Construction (January 2018-June 2020)
- Distance 221 km
- EIA approved/Cabinet approved PPP concept (October 2015 - February 2016)
- PPP Committee to approve (March – December 2016)
- PPP Selection for rolling stock & E&M (April – December 2017)
- Civil works bidding (April 2016 - June 2017)
MRT Orange Line: Thailand Cultural Centre - Minburi

Plan

- Land acquisition (March 2016 - April 2019)
- Bidding (April 2016 - March 2017)
Plan
- Land acquisition (August 2016-September 2019)
- Bidding (May 2016 - April 2017)
MRT Pink Line: Kae Rai-Min Buri

Plan
- Cabinet approve for construction (August 2015-March 2016)
- Land acquisition (May 2016 - June 2019)
- Bidding (April 2016-April 2017)
MRT Yellow Line: Lat Proaw-Sam Rong

Plan

- Cabinet approve for construction (August 2015 - March 2016)
- Land acquisition (April 2016 - June 2019)
- Bidding (April 2016 - April 2017)
DAWEI PROJECT FACT SHEET

At a glance

- **Location**
  - Tanawsri District
  - (160 km from Thai-Myanmar border)
  - 230 km from Kanchanaburi
  - 370 km from Bkk and 500 km from ESB

- **Area**
  - Total area: 205 sq km

- **Investment**
  - Total 250,000 mil. baht. (not include resettlement cost)

- **Concession**
  - 60 years + possible extension

- **Land Lease**
  - Up to 75 years

**Full Capacity of Dawei Port**

- 200 mil. Ton per year or 14 mil. TEU in the year 2037, compared to capacity of Laem Chabang port stage II which is 7.7 mil.TEU per year. (not include container ports D1, D2, D3)

- 100,000 DWT, compared to 80,000 of Laem Chabang port

- 25-40 meter-depth, compared to 14-16 meter-depth of Laem Chabang port

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**Background**

- **G-to-G MOU signed** on May 19th 2008
- **Italian-Thai Development Cooperation (ITD) and Myanmar Port Authority MOU signed** on June 12th 2008
- **Framework Agreement signed between ITD and Myanmar Port Authority on November 2nd 2010**
- **Project established as Special Economic Zone.**
- **ITD has been granted concession to develop the following:**
  - Cross Border Road and Rail link with Connecting Transmission Lines
  - **Deep Sea Port**
  - **Industrial Estate** – steel mill, oil refinery, petrochemical complex, fertilizer plant, power plant, other utility services.
  - **Utilities** i.e. water supply and treatment system, electricity (coal-fired and hydro power plant), telecommunication
  - **Township** for Residential and Commercial Development
Dawei Project

Thailand’s Support: Infrastructure

Progress and Way Forward

- The Cabinet resolution on 20/05/2012 giving a full support for the Dawei development project in Myanmar
- Mega infrastructure projects linking Dawei with Eastern Seaboard:
  - 4-6 lane Motorway from Thai-Myanmar border to BKK (169 km) and ESB.
  - [On 20/05/2012, the Cabinet agreed to proceed with Motorway #81 [Bangkok- Kanchanaburi] and scheduled to be completed in 2015]
  - [F/S and D/D are underway for Kanchanaburi-Thai-Myanmar border section 70 km.]
  - Double track railways linking Dawei-Bangkok
  - [Numtok-Three Pagoda Pass, 135 km. railway is under MOT Master Plan]
Questions and Answers

Thank you