Introduction of Port Development Plan

Presented by

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OUTLINE

- PAT Profile & Performance
- PAT Challenges & Opportunities
- PAT Port Development Policies
- PAT Latest Port Projects Updates

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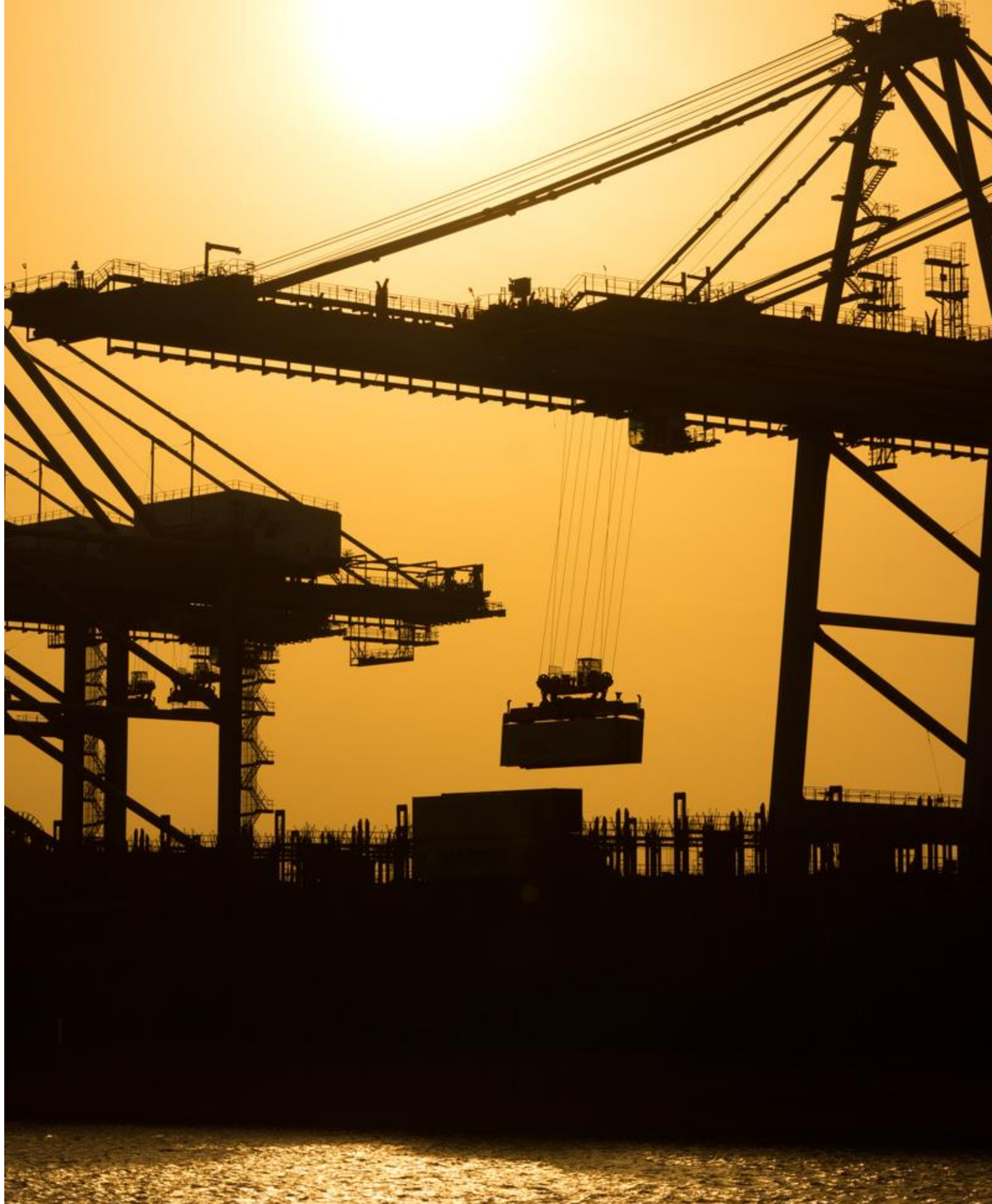
PROFILE & PERFORMANCE



WORLD

"Developing the modern Port, Linking Waterway Transport to the Centralized Logistics of Distributing Goods and Services"

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CONNECTED WAY

"Establishing Management Efficiency, Developing of Port Area, Service System and Working Methods for Organizational Sustainable Development

Mission

- **Expand the port service and business** related to waterway logistics both at domestic and ASEAN levels.
- **Develop and manage all resources** in the Organization to achieve highest capacity and performance.
- **Increase the ability to manage** and uplift the port’s service standard with a view to achieve modernity, good governance and world-class standard.

Being a State Enterprise, ***PAT*** plays a significant role on industrial, economic and trade development of Thailand

PAT is responsible for the managements of 5 key Ports

MAIN PORTS :
Bangkok Port and Laem Chabang Port

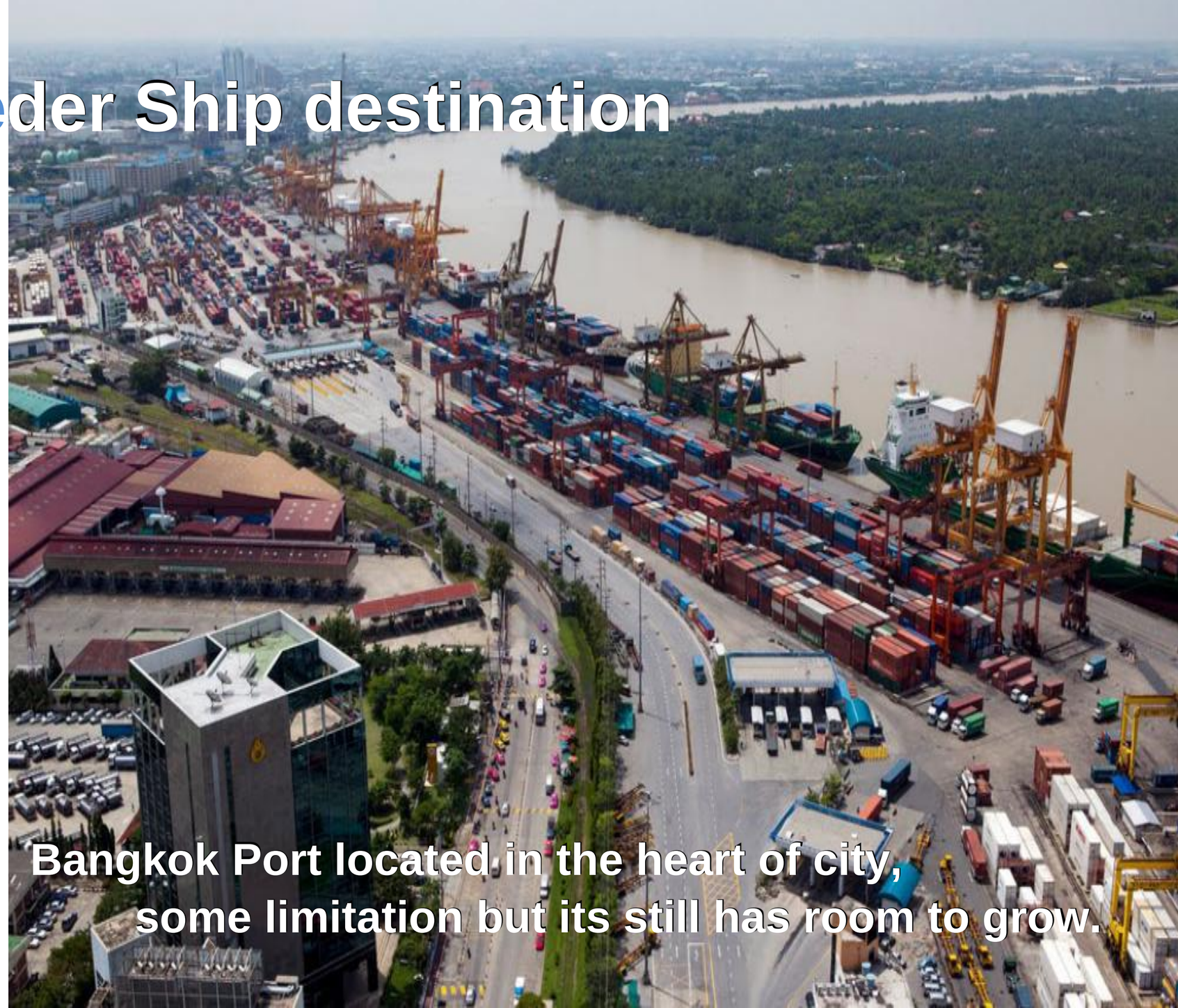
REGIONAL PORTS :
Chiang Saen Commercial Port, Chiang Khong Port and Ranong Port

Bangkok Port, Feeder Ship destination

- Located on the left side of the Chao Phraya River
- Total area 930 acres
- West Quay : Multipurpose terminal
- East Quay : Container terminal
- **Capacity : 1.5 million T.E.U.s**
- **Port city: Limited of land use**
- **River Port: Draft Restriction**

Limited maximum size of vessels

- 12,000 DWT
- 172 meters in length
- 8.2 meters in draught



Bangkok Port located in the heart of city, some limitation but its still has room to grow.

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LAEMCHAPANG PORT
the deep sea port, gateway of SE Asia

- Located in the eastern part of Thailand with total areas 2,500 acres.

- **Basin 1**
  - Capacity 4.3 millions T.E.U.s
  - 11 Berths A0-A5 and B1-B5
  - Leased out to private companies to manage and operate

- **Basin 2**
  - Capacity 6.8 millions T.E.U.s
  - 7 Berths, 4 Quaysides;C3,C0, C1-C2
  - While D1-D3 expected to be operations within 2015

- **Capacity 11.1 millions T.E.U.s** when Basin 1 and Basin 2 are fully operated

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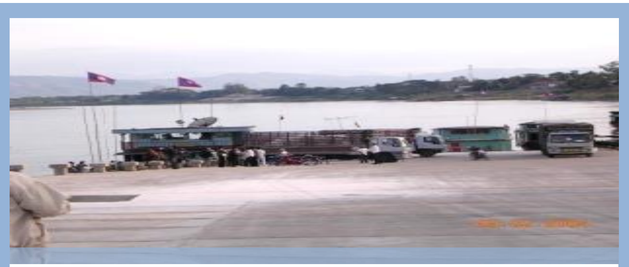
Regional Ports

Chiang Saen Commercial Port

- Situated alongside the Mekong River in the northern part of Thailand
- Comprised of **2 pontoons**, which is 12 m. and 50 m. with a roofed gangway of 630 m.
- The pontoons can accommodate **4 barges**
- **2 Quayside terminal** can accommodate **2 cargo ships**



Chiang Khong Port

- Adjacent to the Mekong River , opposite to **Lao PDR** (Houay Xai District of Bokeo Province)
- Enhancing the efficiency of import-export services and **promoting border trade** between Lao PDR and Thailand
- **22 × 208 m.** quayside terminal
- Accommodate 3-5 motor vessels of **up to 80-150 gross tonnage**

Ranong Port

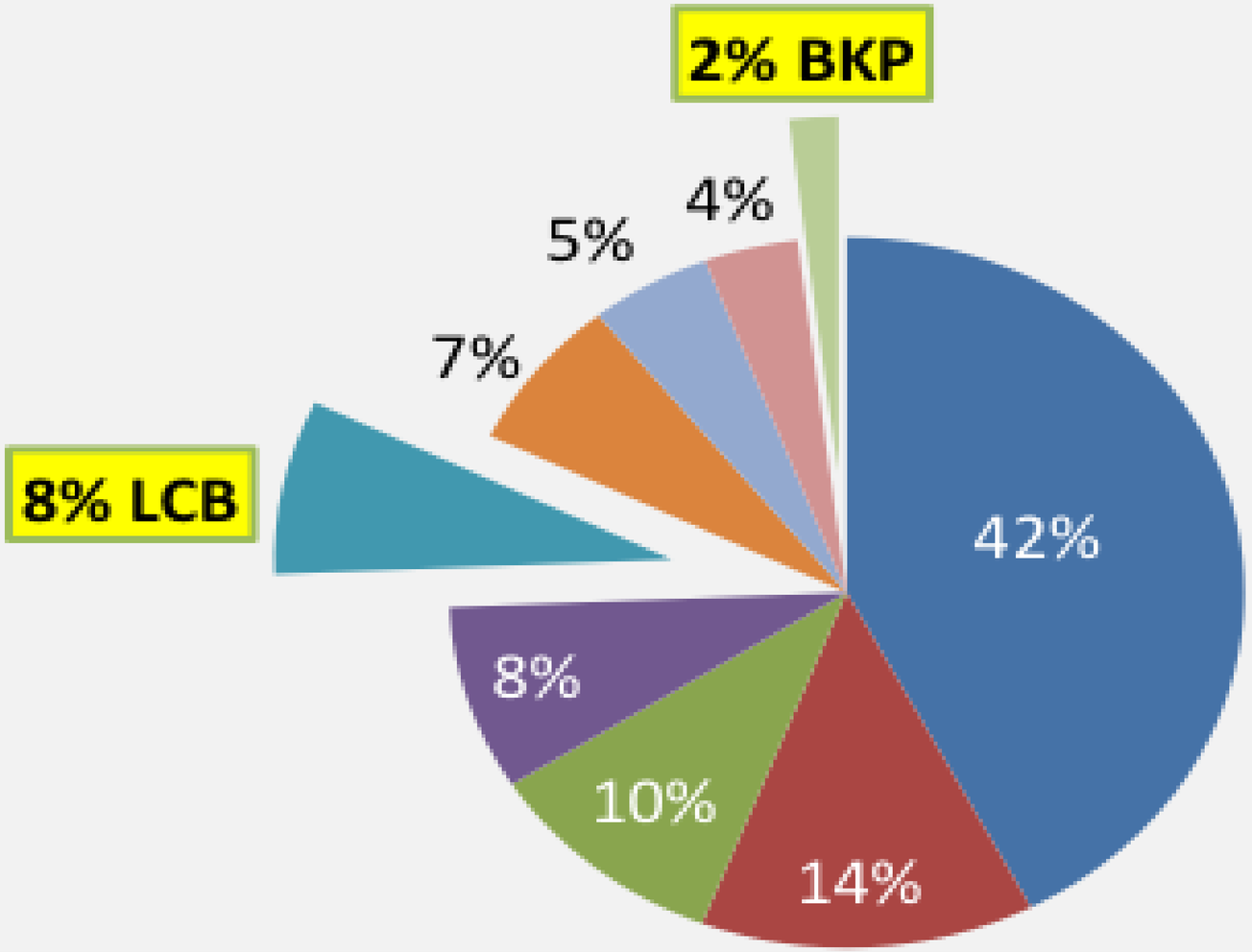
- Consist of 2 berth
- Multi purpose berth with a 26 134 m., Accommodate 2 barges with maximum loading of 500 gross tonnage
- The container berth with 30 150 m., Accommodate one cargo vessel of 12,000 DWT

ASEAN Ports Ranking 2013

2013	2012	2011	Port	Country	TEUs 2013	TEUs 2012	TEUs 2011
2	2	2	Singapore	Singapore	32.20	31.65	29.94
12	12	13	Klang	Malaysia	10.35	10.00	9.60
20	18	17	TanjungPelepas	Malaysia	7.60	7.70	7.52
22	20	23	TanjungPriok	Indonesia	6.4	6.20	5.65
23	23	22	LaemChabang	Thailand	5.97	5.93	5.66
24	25	26	Ho Chi Minh	Vietnam	5.3	5.06	4.81
36	36	35	Manila	Philippines	3.77	3.71	3.46
46	45	47	Tanjung Perak	Indonesia	2.9	2.85	2.64
88	94	86	Bangkok	Thailand	1.51	1.27	1.45

In 2013, Laem Chabang Port ranking is at 23th and Bangkok Port ranking at 88th had risen up from 94th rank in the previous year.

Market Share in ASEAN Ports 2013

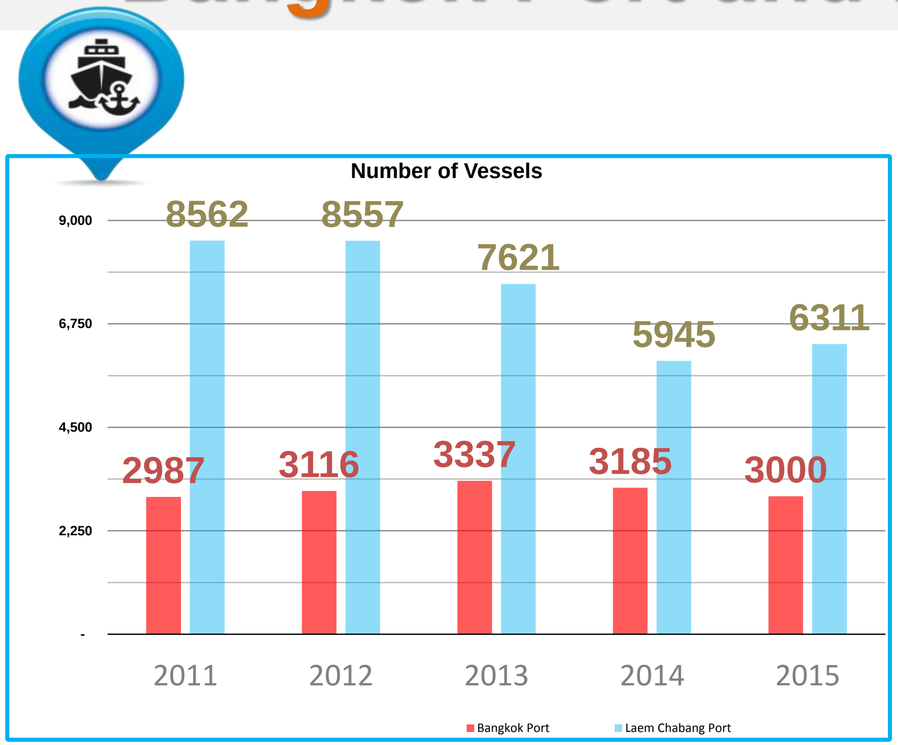


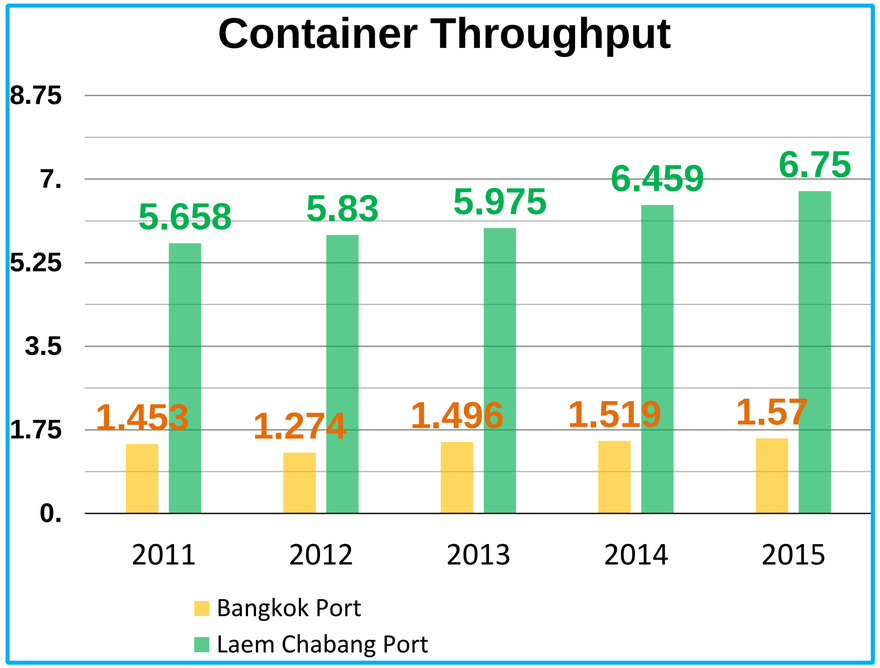
- Singapore
- Klang
- Tanjung Pelepas
- Tanjung Priok
- Laem Chabang
- Ho Chi Minh City
- Manila
- Tanjung Perak
- Bangkok

Since 2009 **LCB has been growing strongly at 7%** a year on average and gained more market share in ASEAN Ports which is **increasing by 6% to 8%** While **BKP also continuing growth** and gained the **market share about 2%**

VESSEL AND CONTAINER THROUGHPUT
Bangkok Port and Laem Chabang Port 2011 - 2015

*fiscal year





In 2015, PAT reached the highest number of containers cargo
Bangkok Port **1.559 mil TEU.** and Laem Chabang Port **6.78 mil TEU.**

CARGO VOLUMES (mil. Ton)
Bangkok Port and Laem Chabang Port 2011 - 2015

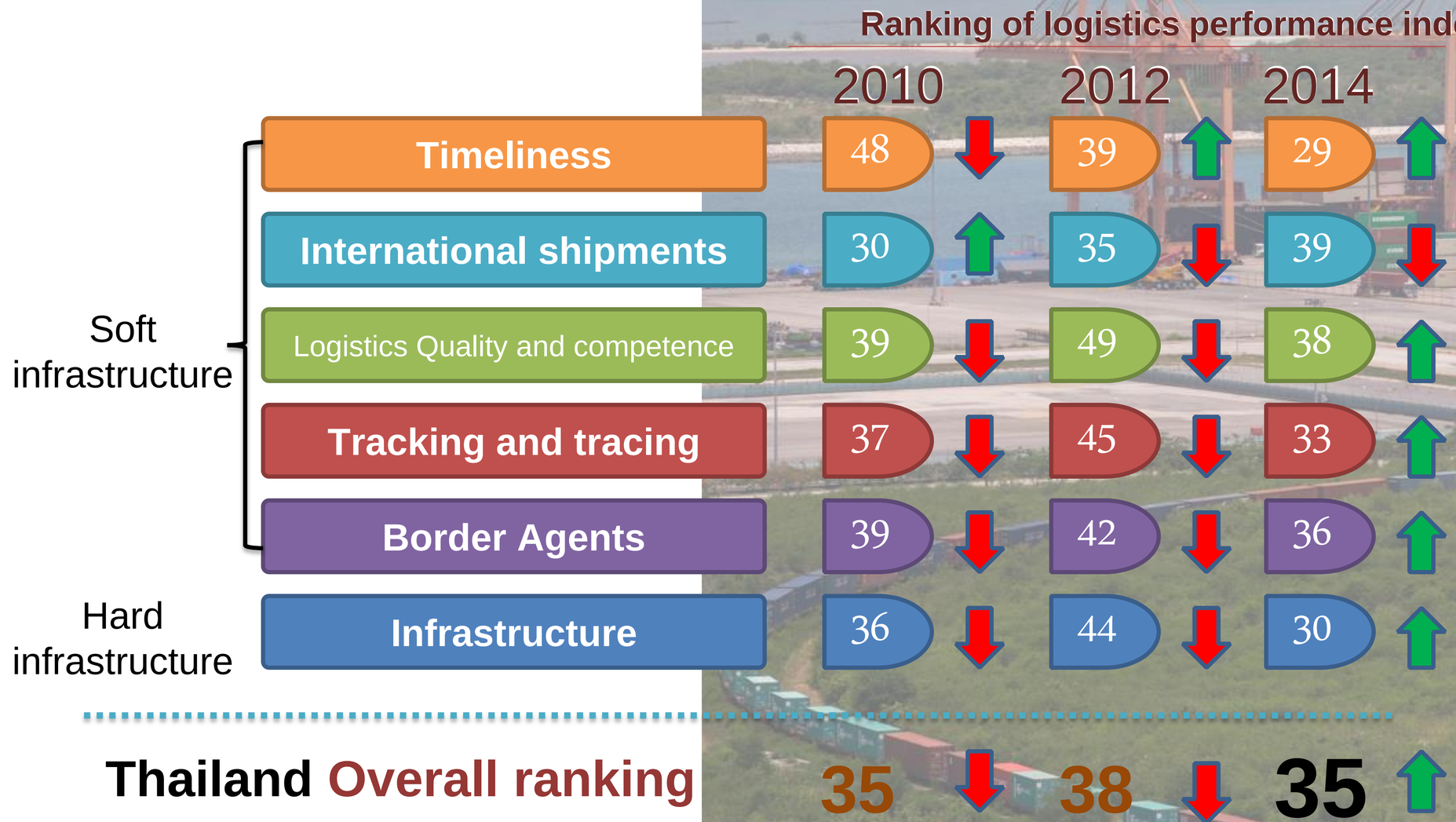
In 2014 , Total cargo volumes 124 mil. tons passed through in Thailand. Almost 80% of total cargo through Laem Chabang Port and Bangkok Port.

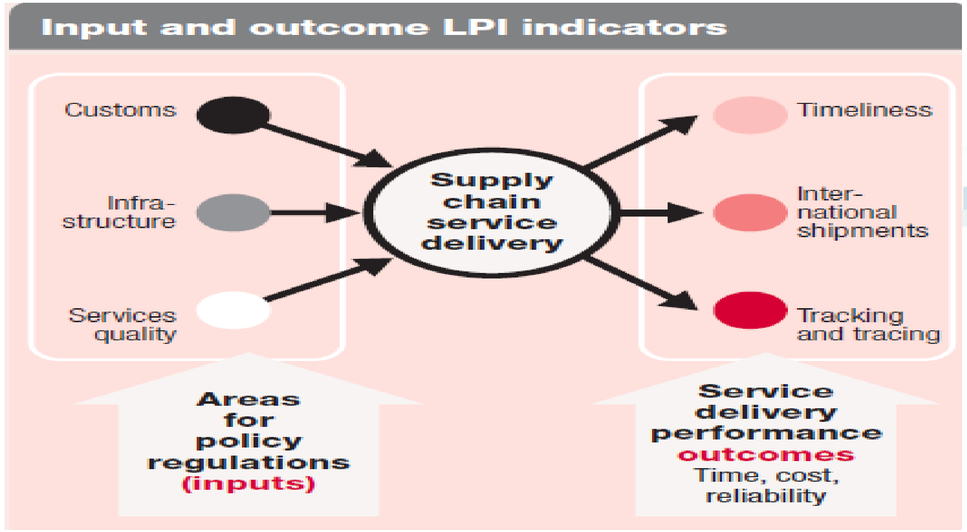
*fiscal year

Port	2012	2013	2014	2015
Laem Chabang Port	**65.227**	**66.917**	**72.264**	**73.451**
% Change	7.45%	2.59%	7.99%	***1.64%***
Bangkok Port	**17.923**	**21.207**	**21.422**	**21.848**
% Change	-4.06%	18.32%	1.01%	***1.98%***

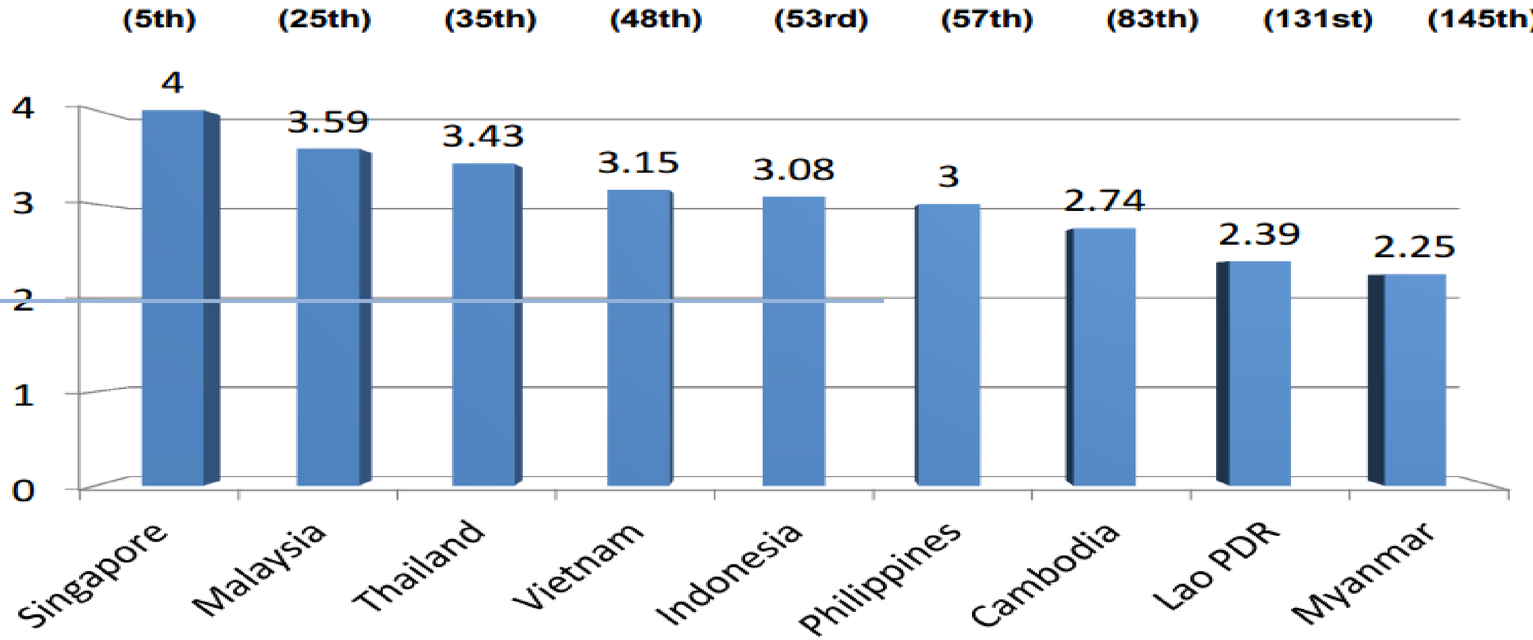
PAT Challenges & Opportunities

Public and Customer Perception *Improved*





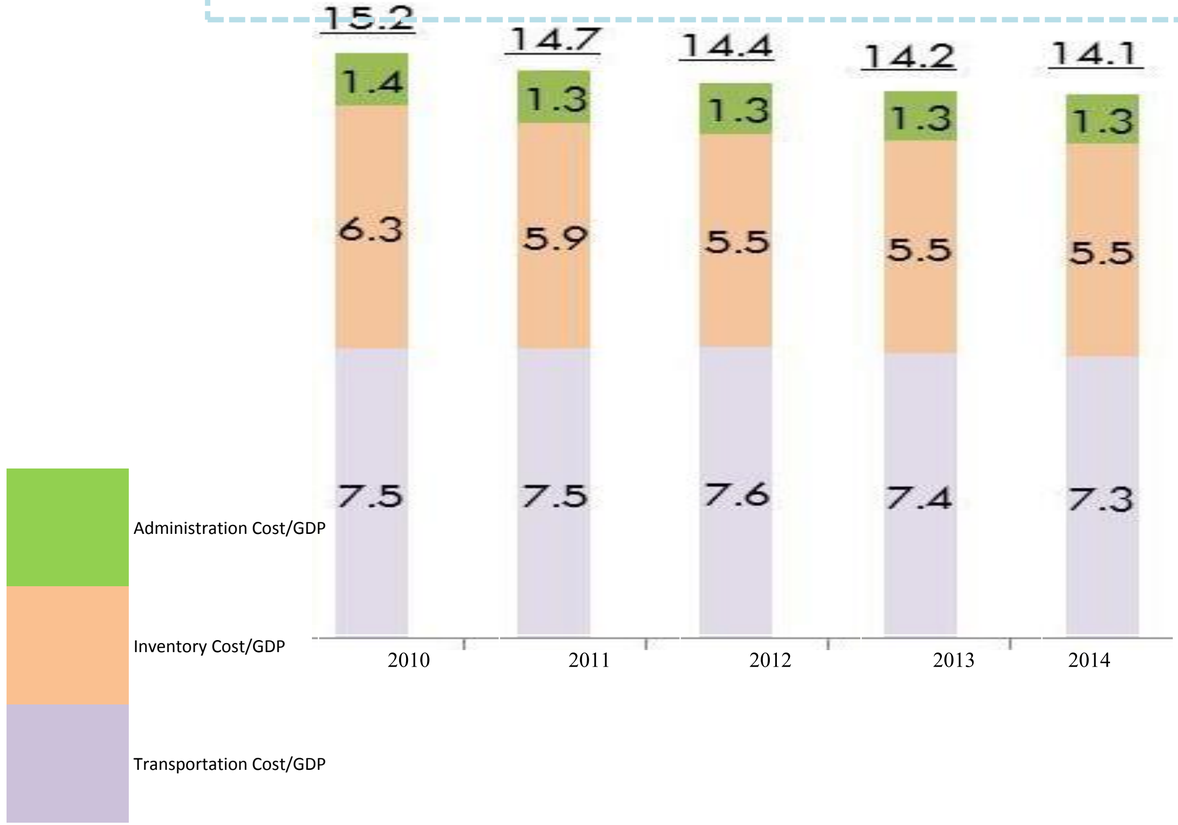
Logistics Performance Index Ranking of ASEAN

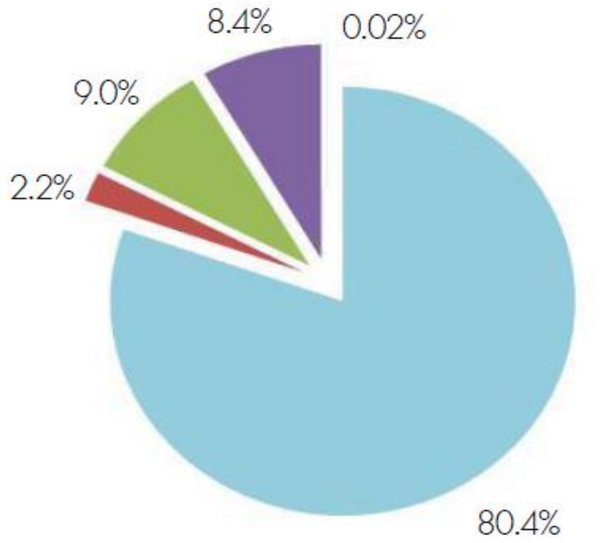


Note: NESDB refers to Office of the National Economic and Social Development Board

Problem of the Transport and Logistics System

- ***Cost of Logistics*** **is about 14.1% of GDP (2014)**
- ***Transport Cost*** **is the majority of Total Logistics Cost (7.3% of GDP)**
- **Ministry of Transport is responsible for freight costs**





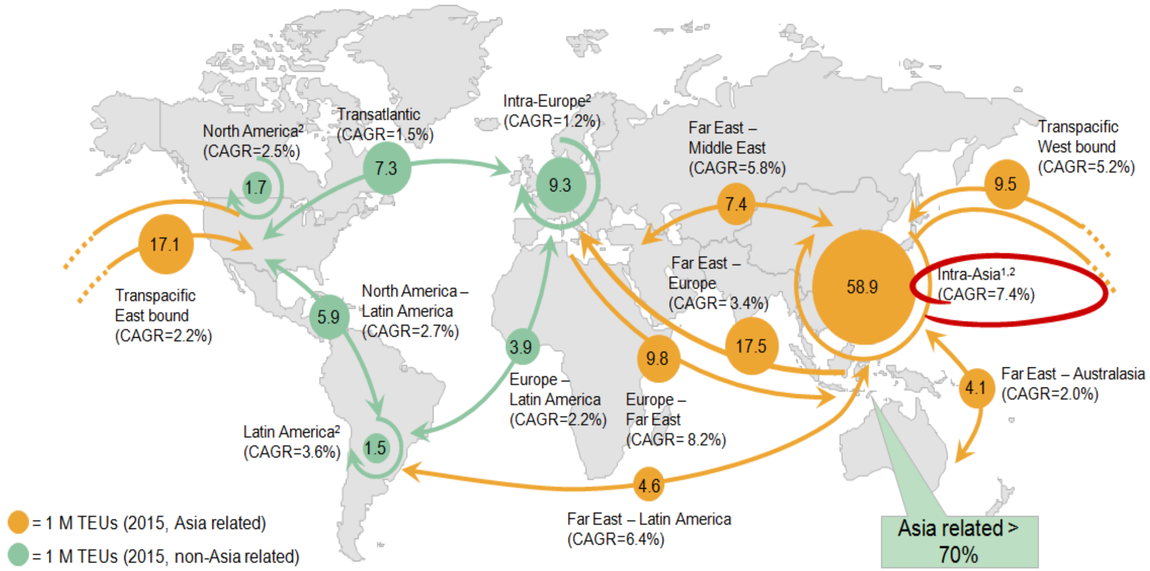
Domestic Transportation Mode

Transport costs (baht per tonne-km) (2013)

Road	2.12
Rail	0.95
Water	0.65
Air	10.0

Thailand an important link in ASEAN and global trade

Global container flows by main trades 2015 (mil.TEUs)



✦ Global container traffic led by **Intra-Asia container trades** which is still remaining the majority of growth.

✦ ASEAN cities are becoming the **world's hotspots** for businesses.

✦**Improving Transportation Logistics System** is a key to be ASEAN Supply Chain Connectivity Hub

✦ **Thailand has great potential** because of its geographical location link to ASEAN members.

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THAILAND : LOGISTICS GATEWAY FOR ASEAN

- International Freight Terminal
- Multi-modal Transshipment Hub
- Warehousing & Distribution
- LCL Consolidation Management

Air Port Suvarnab

Don Muang Air Port
Domestic

Map Ta Phut

Bangkok Port

Lat Krabang ICD

Chiangmai

LANDBRIDGE

Laos

Myanmar

Cambodia

Malaysia

Singapore

China

Truck Terminal

Laem Chabang Deep Sea Port

Nationwide
Distribution

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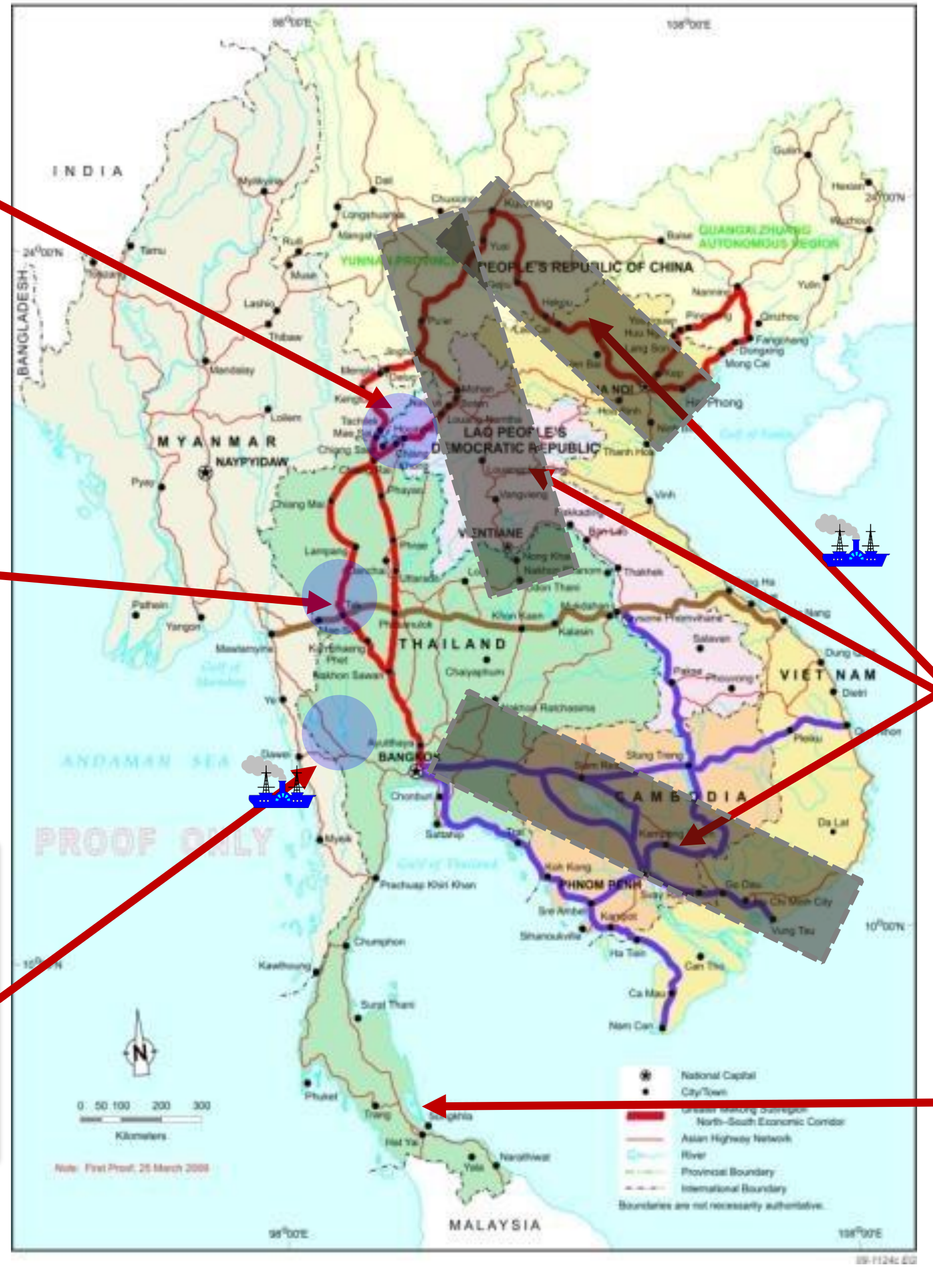
Infrastructure Development to Connect with Neighboring Countries

Trilateral Exchange in Traffic Right between Thailand – Laos PDR – China and 4th Mekong River Crossover Bridge

Border Economy Development

Deep Sea Port and Dawei Industrial Estate Development



✦Thai – Laos – China High-speed Train
✦Train connecting sub- region Singapore - Kunming

Hat Yai – Sadao Motorway

Infrastructure Development : Road and Bridge Projects

Ongoing

The 4th Mekong bridge (T-L-PRC)

- Under Construction, will be completed in 2013

Route No. 11 in Lao PDR 82 km.

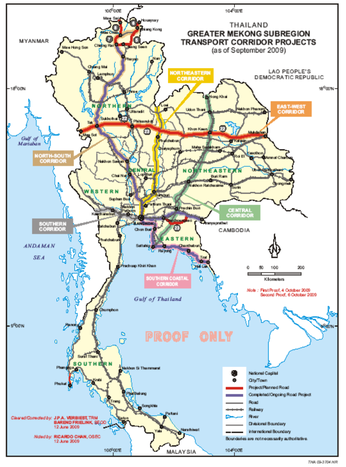
- Under construction, will be completed in 2014

Western side of EWEC in Myanmar

- Rehabilitation of 18 km. Road (Myawaddy-Kawkariek)
- New construction of 28 km. road (Myawaddy-Kawkariek/mountainous area section)
- Rehabilitation of 1st Mae Sai bridge

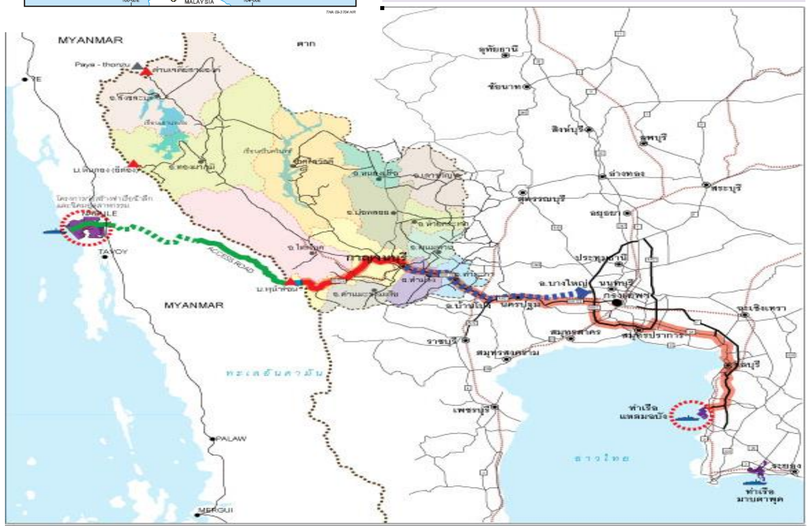
Future

- Poo Doo – Pak Lai route (L)
- Ban Hwouk – Maung Kob (L)
- Road link new border crossing points at Aranyaprathet (C)



Parts of Economic Corridors in Thailand

- Expansion of 2-lane to 4 lane highways
- Maintenance



- Infrastructure linking Dawei (M)
  - Motorway Bang Yai-Kanchanaburi 97 km. : Details design complete. Searching for fund.
  - Kanchanaburi-Border 70 km. Preparing for F/S and Detail Design.

PAT Port Development Policies

Development is tend to have vertical integration.

‘**Shipping lines** have become integrated with other parts of the transport chain,

For ports, it has become increasingly important to be integrated in these supply chains in order to be competitive.’

PAT Key challenge is…. *to be **hub** of waterway transport and logistics **linking** the Thai economy to **ASEAN**.*

expansion, better services, more efficiency and effective

Meet customer service requirements

- ✦ Flexibility in operational and expand new port services
- ✦ Port efficiently accommodate variety of vessels sizes
- ✦ Creating innovative door-to-door service

Port Performance Improvement

- ✦ Crane productivity, reliable berth windows and turnaround time
- ✦ Enhancing port capacity, modernize administrative management

Develop connectivity in transport and logistic systems

- ✦ Reaching into the hinterland

Response to ASEAN Strategy in Transport Network

- ✦ Increase port network, hinterland connectivity
- ✦ Extending cooperation and business partners

Optimize the use of assets

- ✦ Increase productivity to use of assets and utilization improvement

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Strategic Plan for the fiscal year 2015-2019

Strategy 2: Expanding port services and new business to ASEAN.

Strategy 3: **Extending cooperation** and increasing domestic and international business partners, particularly in ASEAN

Strategy 4: **Establishing business unit** or subsidiary to support business activities in domestic and foreign countries.

Strategy 5: **Business development** and asset utilization improvement

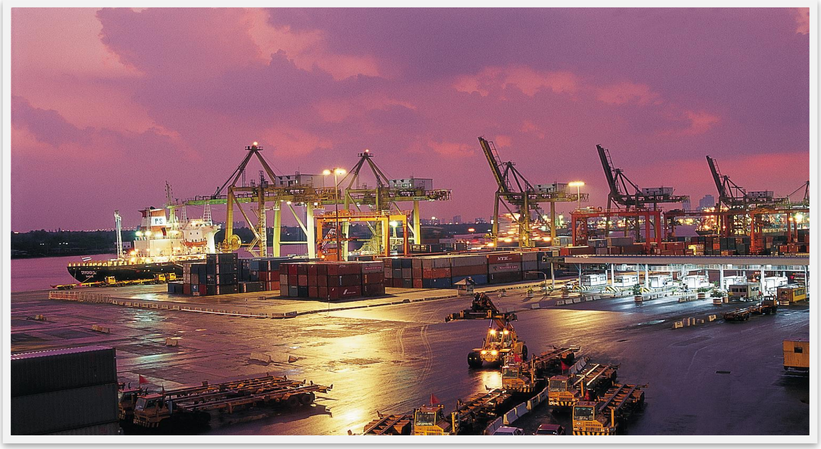
Strategy 6: **Developing Information** and Communications Technology (ICT) Management.

Strategy 7: **Developing Human Resources** Management.

Strategy 8: **Enhancing capacity** in modernizing administrative management.

Strategy 9: **Improving port's standard** to the world class level and maintaining good governance.

PAT Latest Port Projects Updates

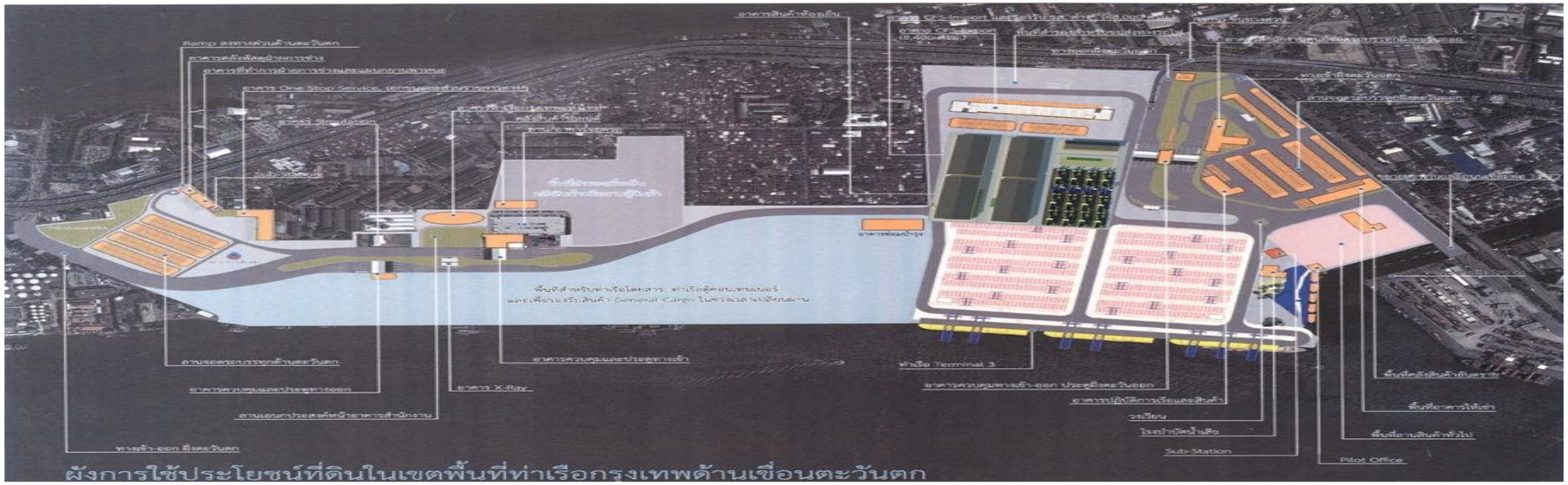


Main Projects at Bangkok Port

Investment programme continued in development plan

Coastal Terminal Development (Berth 20G)

CFS Export & Import



Coastal Terminal Development (Berth 20 G) at BKP

Thailand mode of transport

Transport Category	2009 (%)	2010 (%)	2011 (%)	2012 (%)	2013 (%)
Road	82.66	81.36	80.42	81.86	80.36
Rail	2.25	2.18	2.11	2.28	2.24
Domestic Waterway	8.11	9.32	9.28	9.12	8.99
Coastal	6.96	7.11	8.16	6.72	8.39
Aviation	0.02	0.02	0.03	0.02	0.02

- % shared by cargo throughput at coastal terminals in Thailand grew from 6.96% in 2009 to 8.39% in 2013.
- Highest Increasing

Nowadays, About 80% of transportation in Thailand dominated by road

Government policy on shift mode of transport from road to waterway and rail has been launched aiming to reduce logistics cost

Coastal Terminal Development (Berth 20 G) at BKP

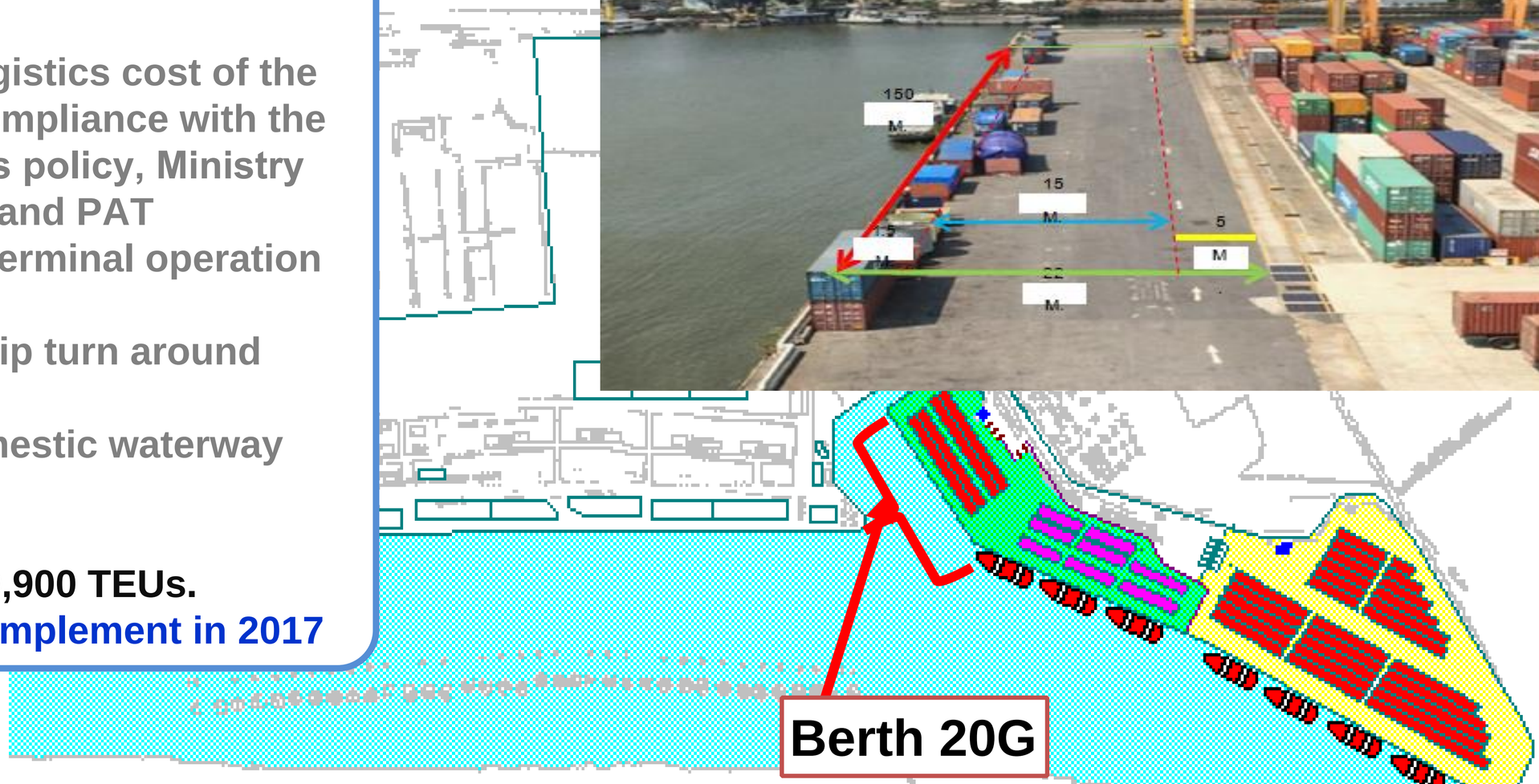
- Cover 3,225 M^2
- Located at East Quay, Terminal 2 (20G)

Purpose

- To reduce logistics cost of the country in compliance with the government's policy, Ministry of Transport and PAT
- To increase terminal operation capacity
- To reduce ship turn around time
- To serve domestic waterway transport

Capacity : 240,900 TEUs.

- **Expected to implement in 2017**

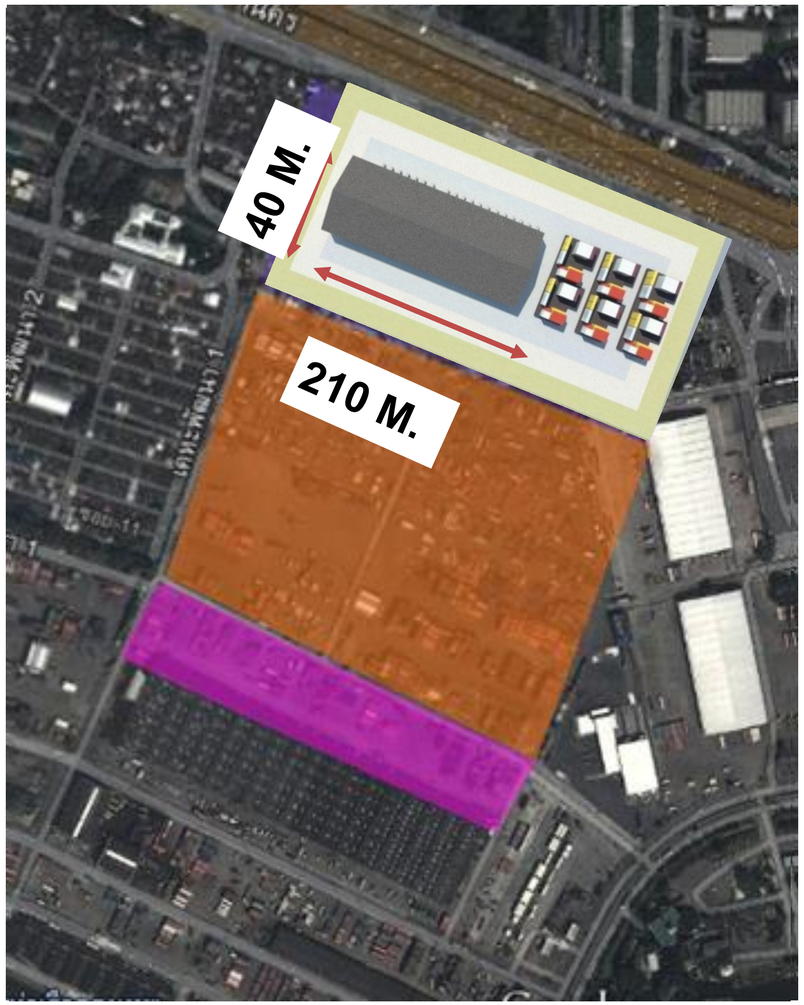


Establishment of Exported Container Freight Station (CFS) at BKP

Exported CFS project covers 45,000 M^2

Purpose

- To enhance asset utilization
- To reduce congestion and traffic around port
- To increase income in differential activities
- To satisfy customers need



Exported CFS:

- ✦ CFS building (8,400 M^2)
  - 24 Dock Levelers
  - 299 box/day
  - 107,640 T.E.U.s/year
- ✦ Container yard for LCL (36,000 M^2)
  - Capacity 300 T.E.U.s/GLS

Establishment of Imported Container Freight Station (CFS) at BKP

Imported CFS project cover 92,000 M^2

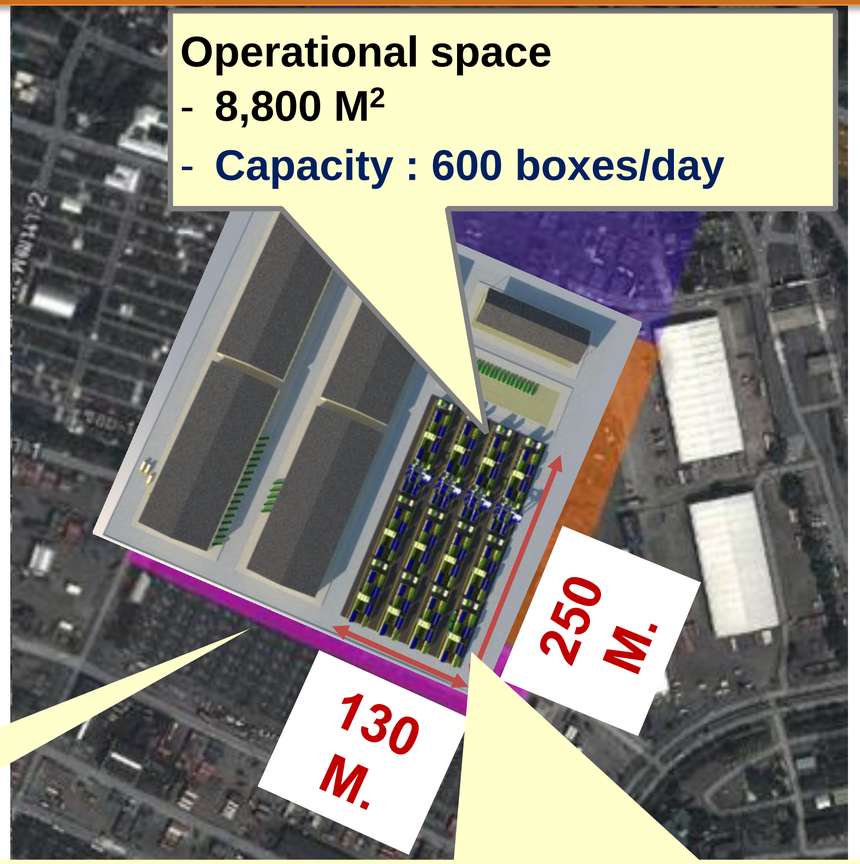
Purpose

-To reduce process on dispatching-receiving
-To enhance asset utilization
- To reduce congestion and traffic around port
- To increase income in differential activities
- To satisfy customers need

4 CFS will be constructed.

- ✦ Space of storage/ CFS -12,600 M^2
- ✦ Usable space : 19,404 M^2

Total space of storage of 4 CFS = 50,400 M^2



Container Yard for LCL: 32,500 M^2

- 4 RTG 6+1
- 4 Tracks
- 130 × 250Meter
- Capacity : 150,000 – 200,000 T.E.U.s / Year

Main Projects at Laem Chabang Port

Investment programme continued in development plan

Coastal Terminal (Terminal A)

Single Rail Transfer Operator (SRTO)

Development Project (Phase 3)

Coastal Terminal Development of Laem Chabang Port Project

Purpose

- To develop the coastal terminal for serving containers transported from/to LCP by coastal ship from southern port of Thailand or barge from inland waterway.
- To reduce the logistics cost of the country in compliance with the government's policy, Ministry of Transport and Port Authority of Thailand.
- To reduce traffic congestion and offer the port users a cost-effective mode of transport.

Coastal Terminal (Terminal A)

Location : At the End of Basin 1
Project Area : 17.5 acres
Length (Meter) : 150
Depth (Meter) : -10
Vessel Size (DWT) : 3,000
Capacity (Maximum) : 300,000 TEUs/year

Single Rail Transfer Operator Development Project

It would increase the handling capacity of rail transport in LCP from the existing of **500,000 to 2 million TEUs/year.**

Purpose

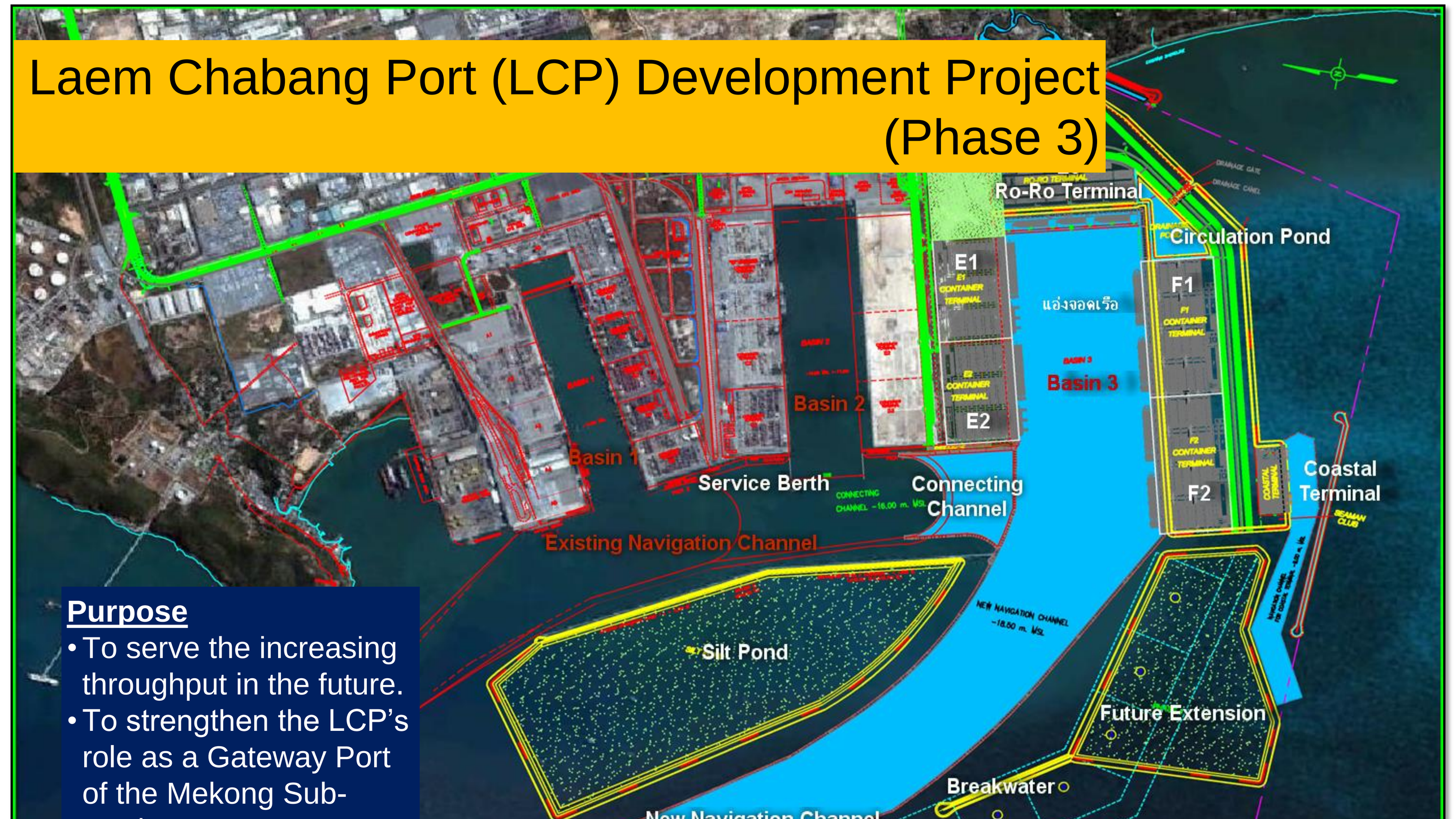
-To develop infrastructure and necessary facilities for **serving the discharging/loading containers transported by rail** within the port area. The project would largely help facilitate rail transfer in the future in response to the completion of double track construction project of State Railway Authority of Thailand (SRT).

- To **increase the efficiency of rail transfer** in LCP, and subsequently make the operation faster and safer.

- To **support the SRT's double tracking system** project linking from Chachoengsao Province to Laem Chabang Railway Station.

- To **reduce the logistics cost** of the country in compliance with the government's policy, Ministry of Transport and Port Authority of Thailand.

Laem Chabang Port (LCP) Development Project (Phase 3)



Purpose

- To serve the increasing throughput in the future.
- To strengthen the LCP's role as a Gateway Port of the Mekong Sub-

Laem Chabang Port (LCP) Development Project (Phase 3)

2011-2012

Feasibility study and Detail Design

2019 -2023

Construction

2025

Bidding for private sectors to participate in investing superstructures and operating terminals

Operation Year (The First Terminal) : **2025**

Thank you for your attention