

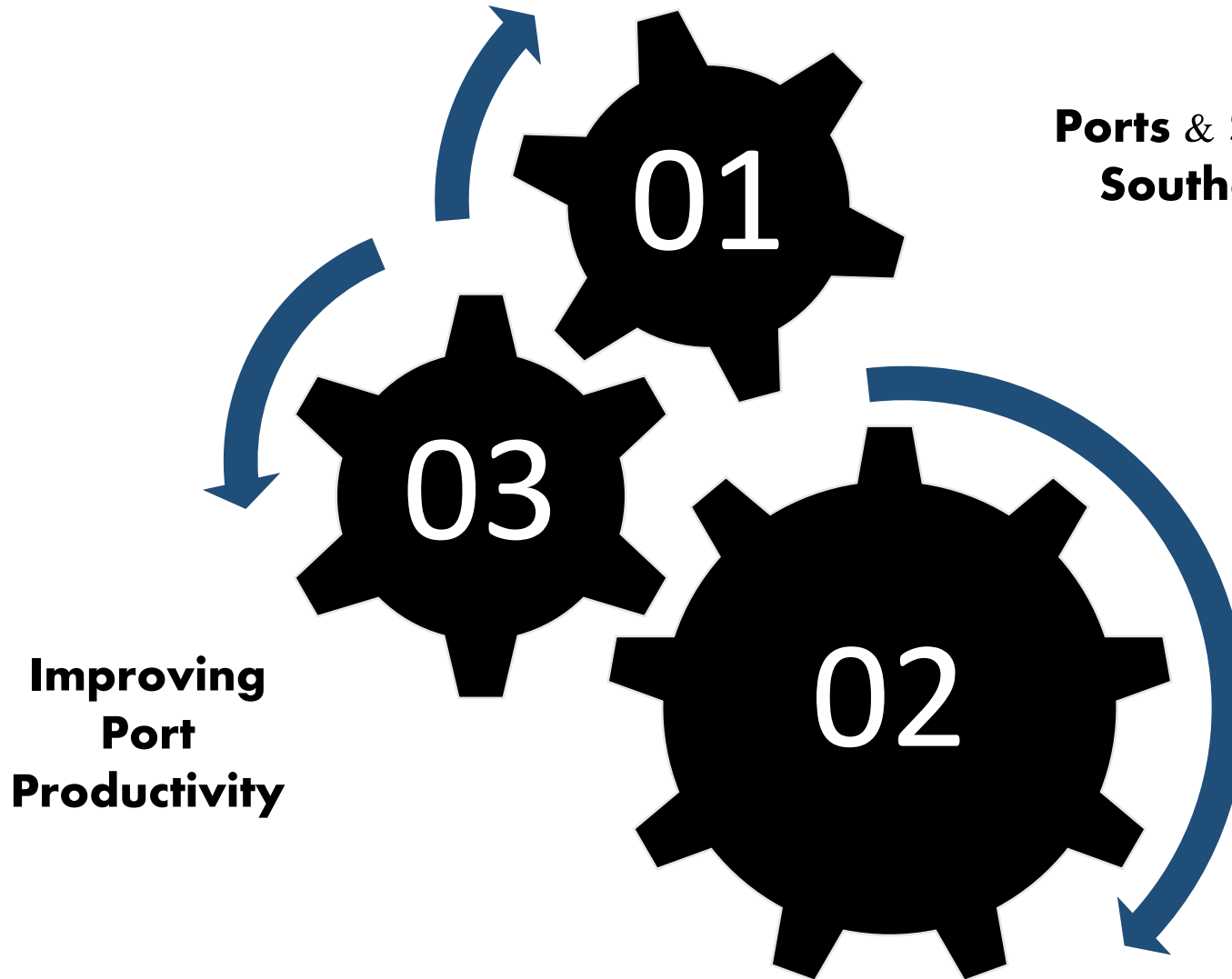
6TH SOUTHEAST ASIA PORT EXPANSION
SUMMIT

SUSTAINABLE PORTS DEVELOPMENT IN SOUTHEAST ASIA

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17th ASEAN Port & Shipping Exhibition & Conference
10th – 12th September 2019

PRESENTATION OUTLINE

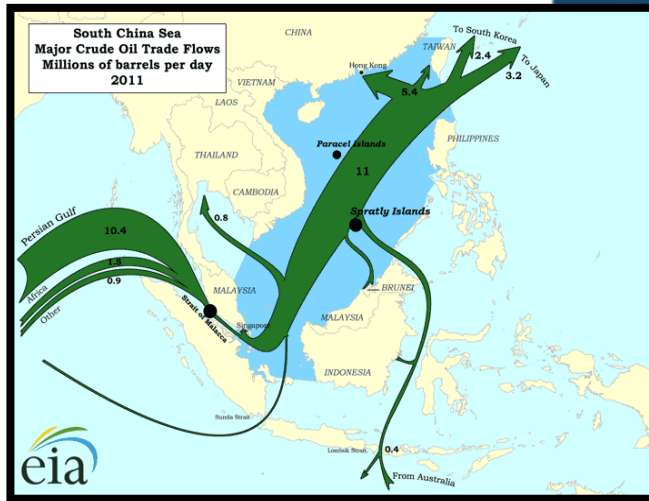


Ports & Shipping in Southeast Asia

Sustainable Issues in Ports Development

- **Tracking & measuring port performance for strategic planning & decision making**
- **Challenges & opportunities of digitalisation – Technological advances but uncertainty on safety, security & seafarer**
- **Commitment to reduced greenhouse gas emissions, protecting the marine environment & life below water**

SHIPPING IN SOUTHEAST ASIA



- **Growing Seaborne Trade** - Total volumes reaches 10.7 billion tons, nearly half passed through Southeast Asia
- **Growth in world fleet capacity** – Shipping accounts for 90% of transported goods & 3% of total global **CO2-emissions**, rise to 15% if left unchecked.

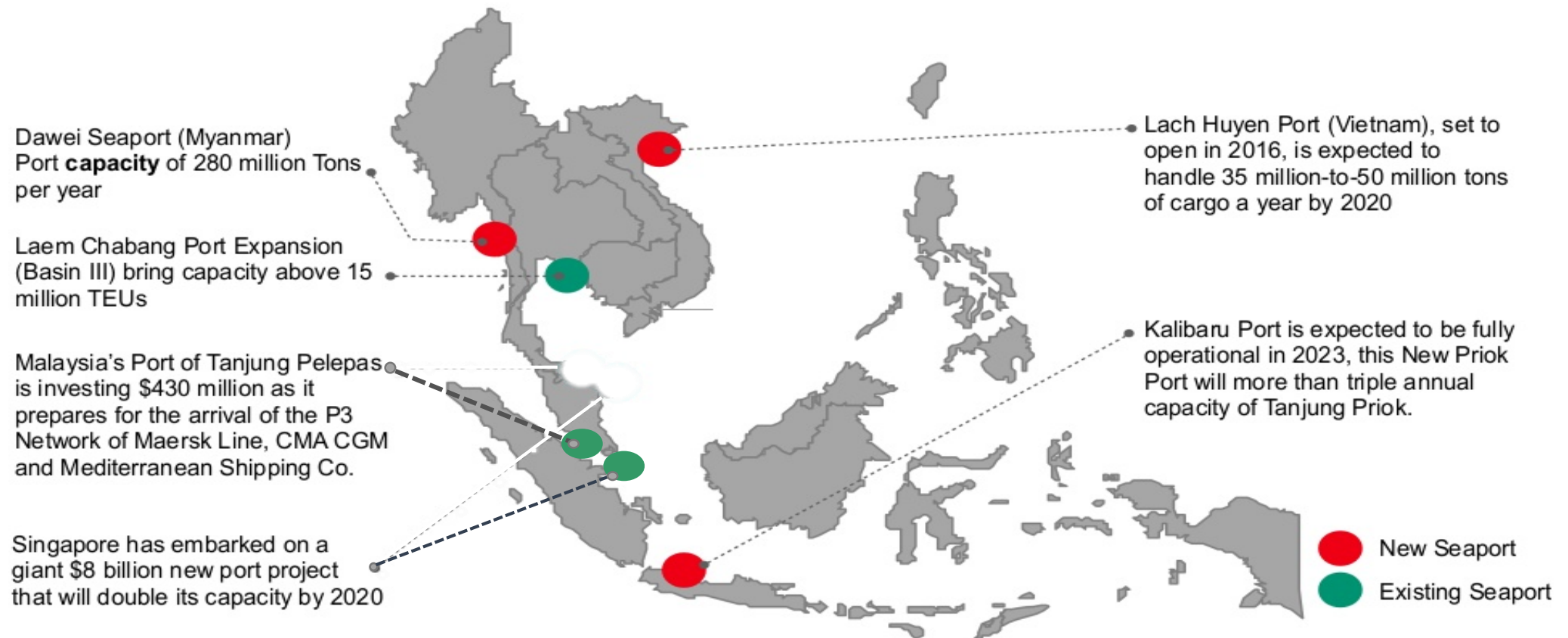
GROWING CHALLENGES FOR PORTS IN SOUTHEAST ASIA

- **Growing Seaborne Trade & World Fleet Capacity** heightened the requirement for ASEAN ports to adapt
- Sustainable Development Issues on ASEAN Ports
 - Tracking & measuring **port performance**
 - Challenges & opportunities of **digitalisation (IR 4.0)**
 - Commitment to **The Paris Agreement & The 2030 Agenda for Sustainable Development**



DEEP SEAPORTS INVESTMENT

The upcoming ASEAN Connectivity Plan and ASEAN One Market in 2015 are creating a sense of urgency in the need to improve the logistics sector



SUSTAINABLE ISSUES FACED BY SOUTHEAST ASIA PORTS



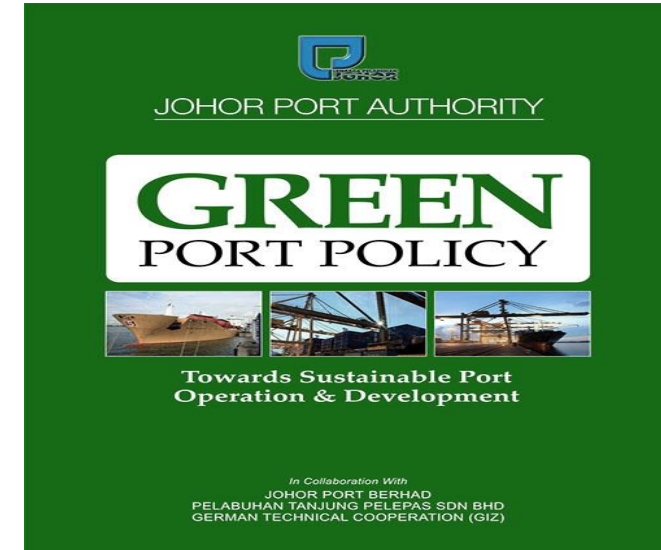
Tracking & Measuring Port Performance

For strategic planning & decision making -
Operational or financial indicators



Challenges & Opportunities of Digitalisation –

Technological advances but uncertainty on safety, security & seafarer



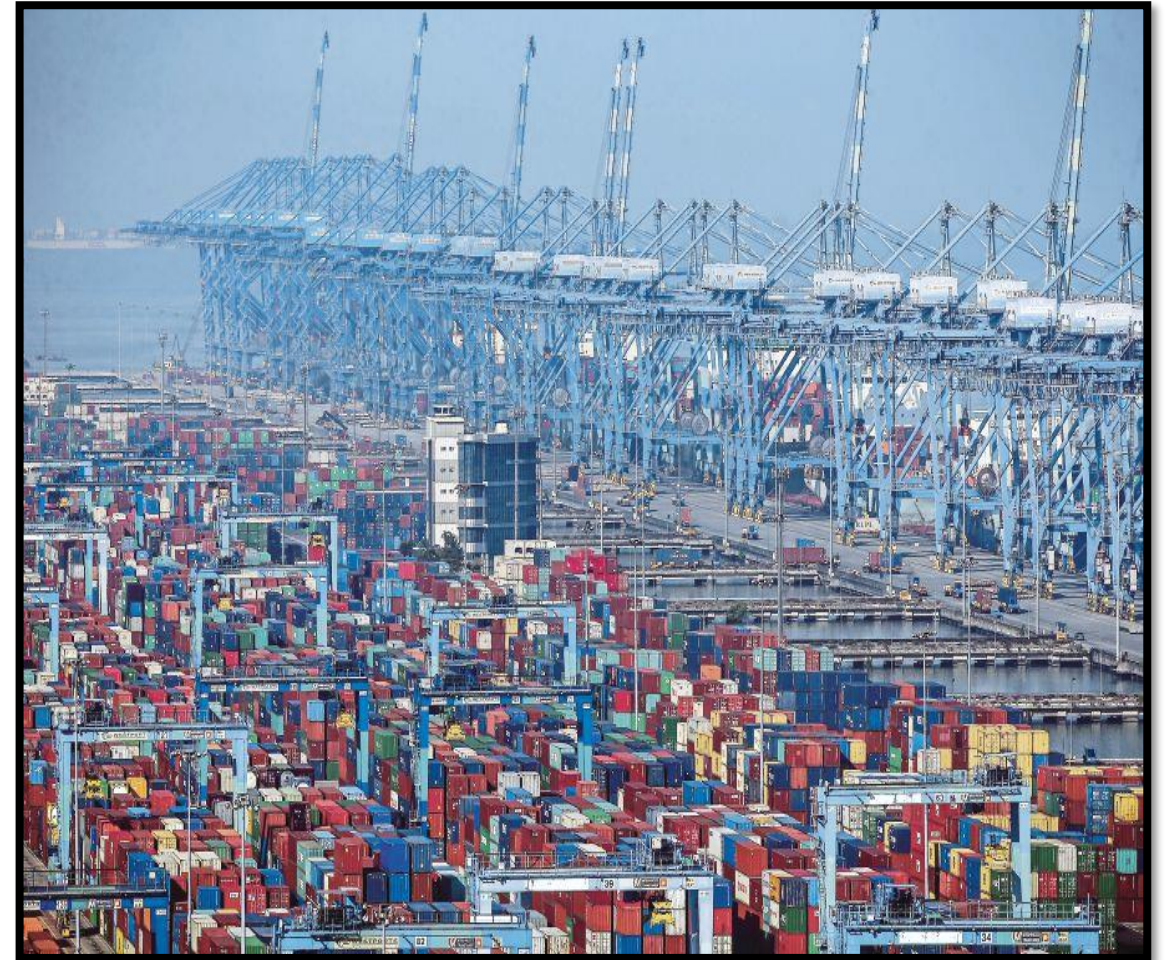
Commitment to Reduced Greenhouse Gas Emissions

- Protecting the marine environment & life below water

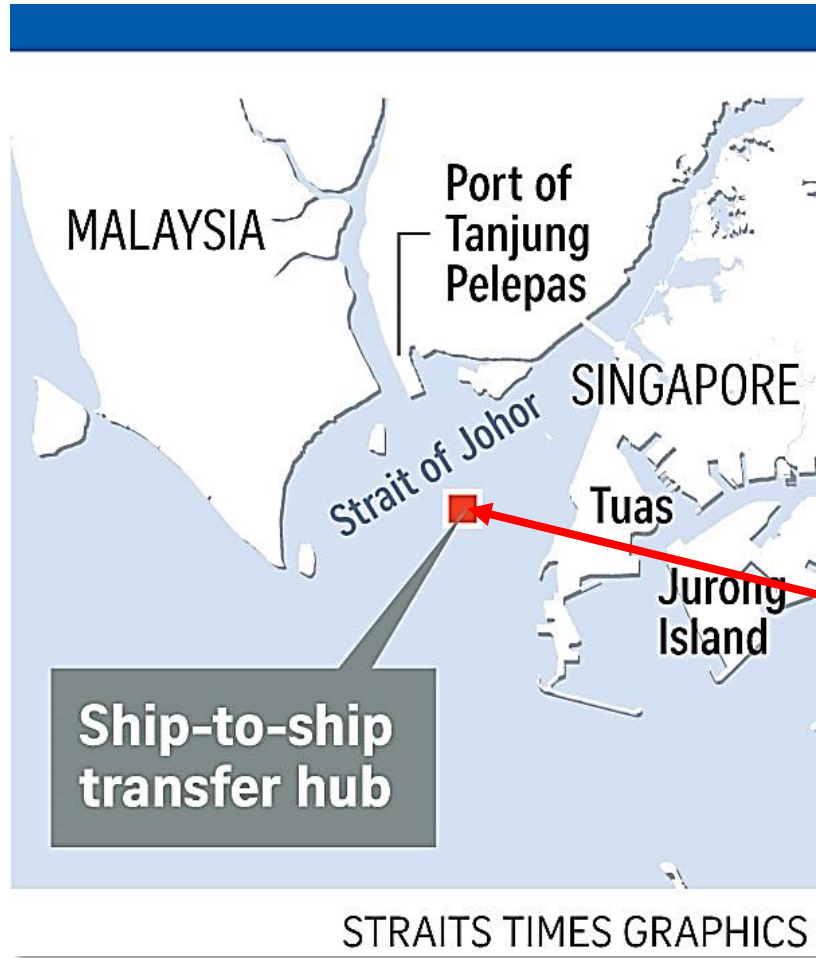
CURRENT PORT DEVELOPMENT IN SOUTHEAST ASIA

Country	Ports	Timeframe	Investment
Malaysia	Port Klang 3 rd Port	Planning	\$22 billion
	Westport Expansion	Phase II: 2030	\$2.3 billion
	Kuantan Port New Terminal	Phase 1B by June 2019	\$52 million
	Ship To Ship Transfer Hub	Planning	\$150 million
Indonesia	New Priok CT 2 & 3	2023	\$2.5 billion
	Makassar New Port	2018 - 2021	\$1.1 billion
Vietnam	Modern & Future Ports		\$2 billion
Singapore	Tuas	Phase II: 2027	\$1.1 billion
Thailand	Laem Chabang	Phase III: 2023	\$5 billion
	Map Ta Phut Industrial Port	Phase III: 2024	\$1.7 billion
Myanmar	Bay of Bengal		\$7.3 billion
	The Yangon Port	Near opening	\$227 million
Philippines	Davao Sasa Port		\$2.5 billion

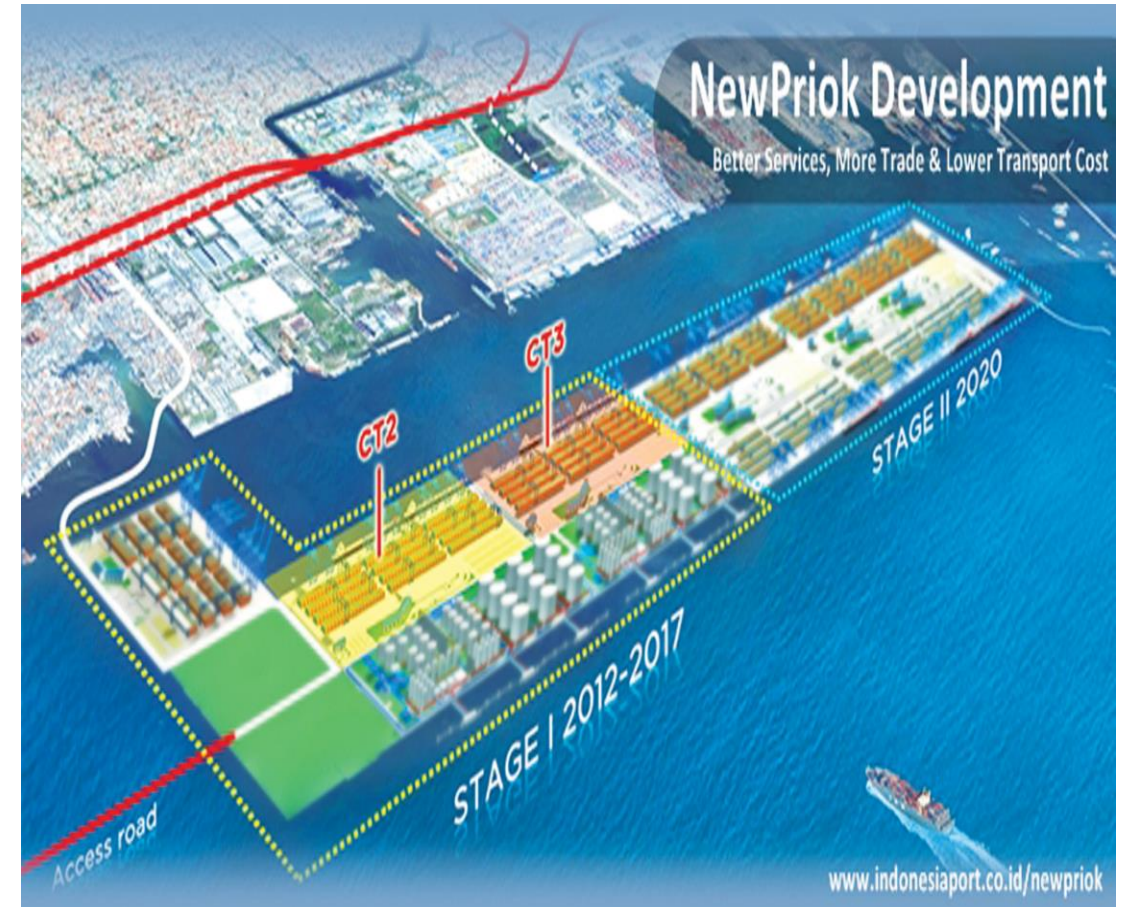
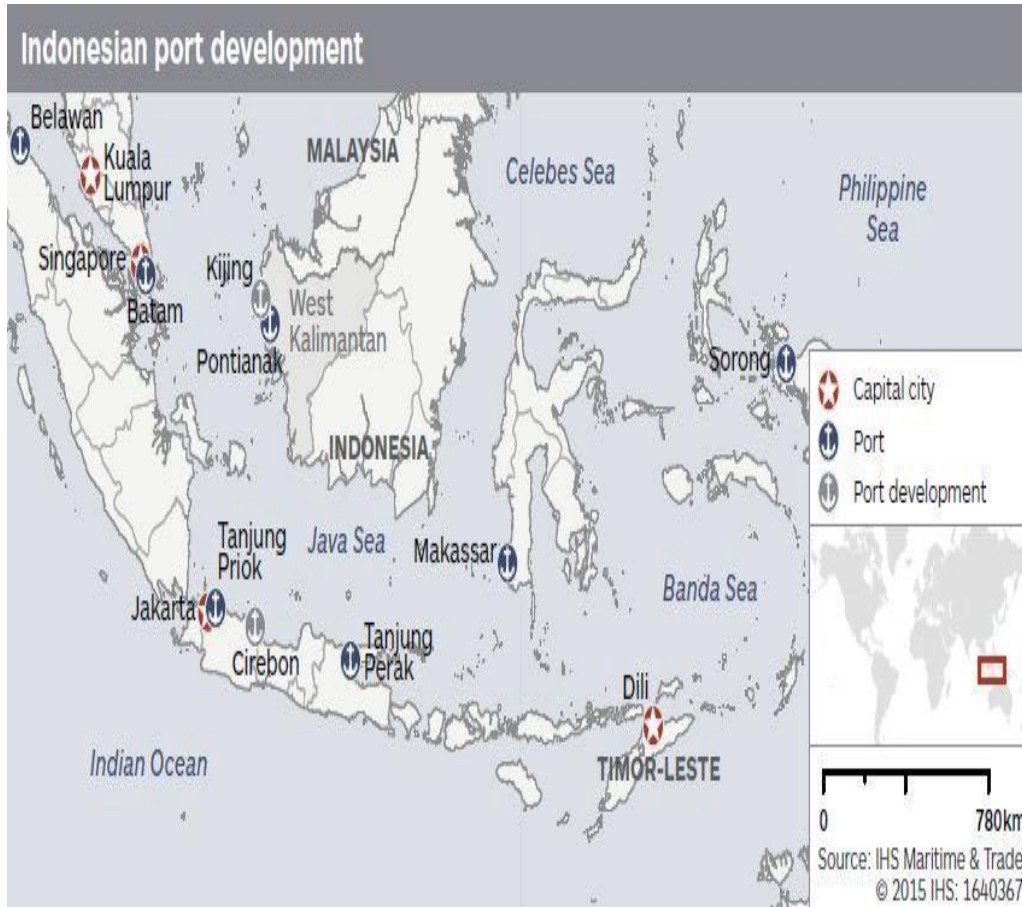
MALAYSIA'S PORT KLANG 3RD PORT



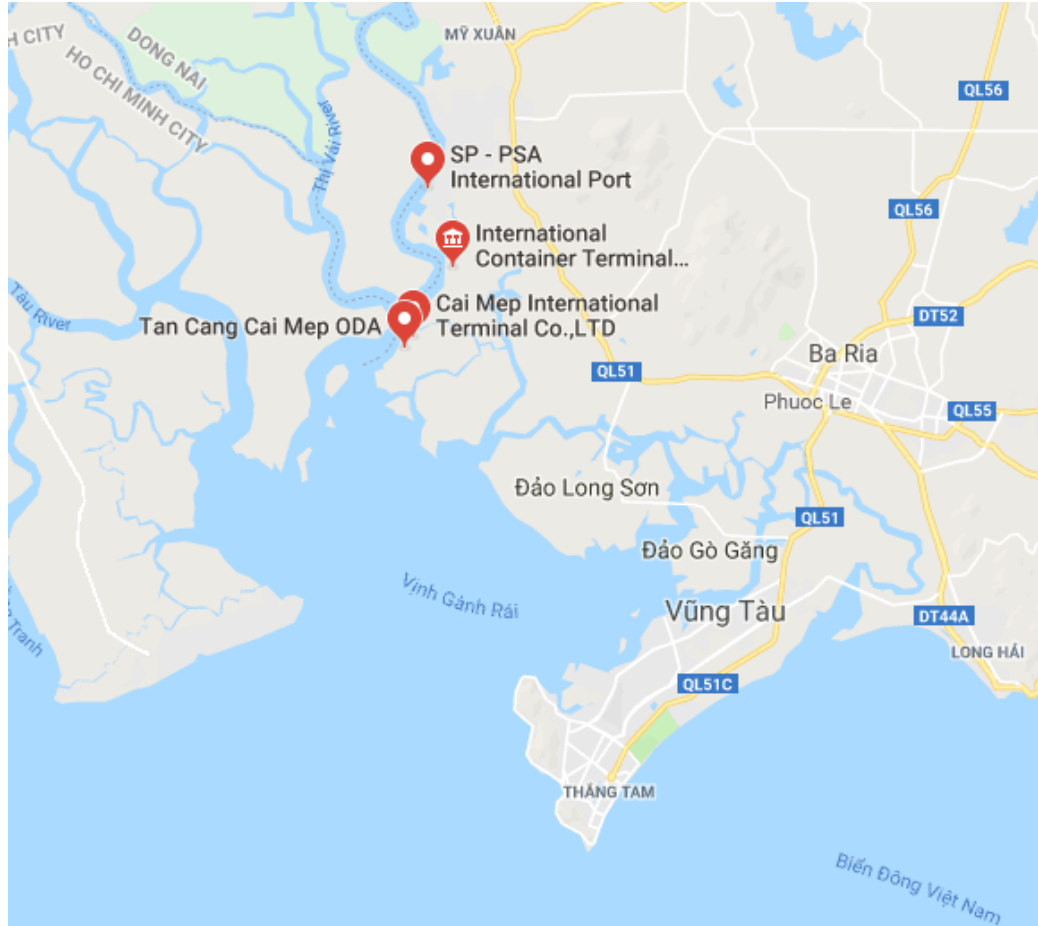
MALAYSIA'S DEDICATED SHIP-TO-SHIP TRANSFER HUB



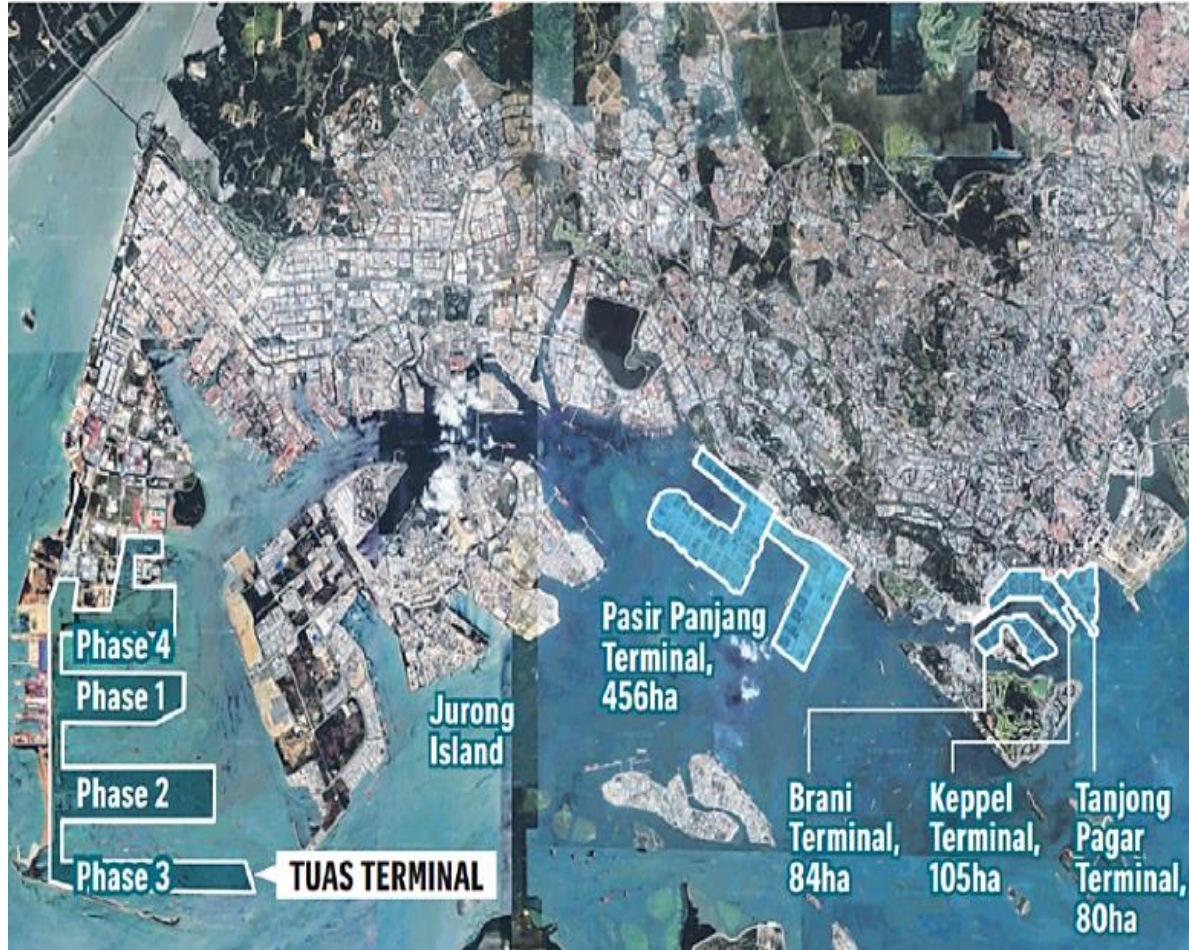
INDONESIA'S NEW PRIOK PORT



VIETNAM CAI MEP-THI VAI PORT



SINGAPORE'S TUAS MEGA PORT



THAILAND'S LAEM CHABANG DEEP SEA PORT



SUSTAINABLE ISSUES IN PORTS DEVELOPMENT

TRACKING & MEASURING OPERATIONAL PERFORMANCE



Entrance to Port:

- Pilot Waiting Time
- Voyage Productivity
- Vessel turnaround Time



Terminal:

- Crane Moves Per Hour
- Container Dwell Time

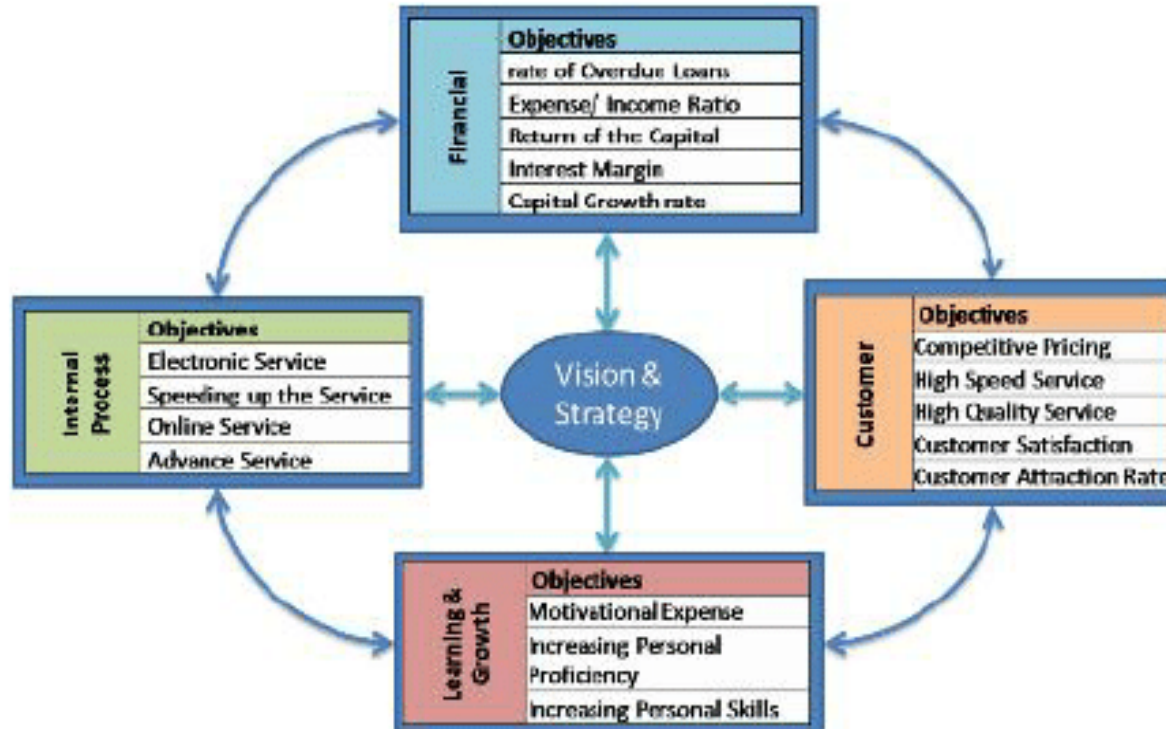


Yard & Gate:

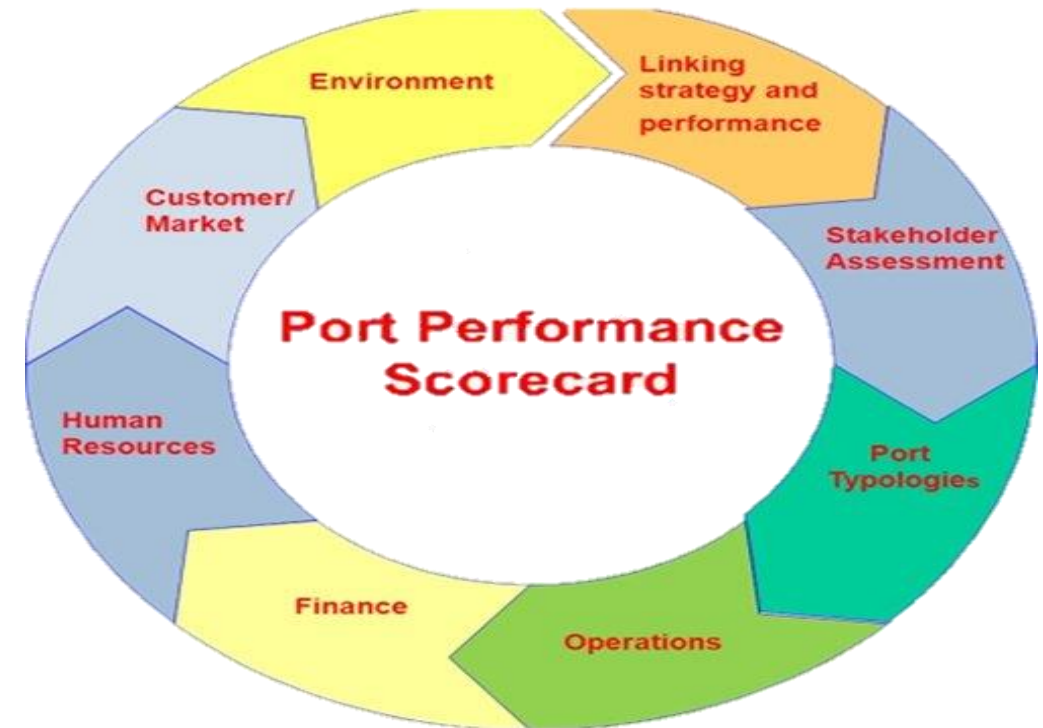
- Container Traffic
- Truck Visit Time

TRACKING & MEASURING PORT PERFORMANCE

“If you can't **measure** it
you can't **manage** it”
Peter Drucker

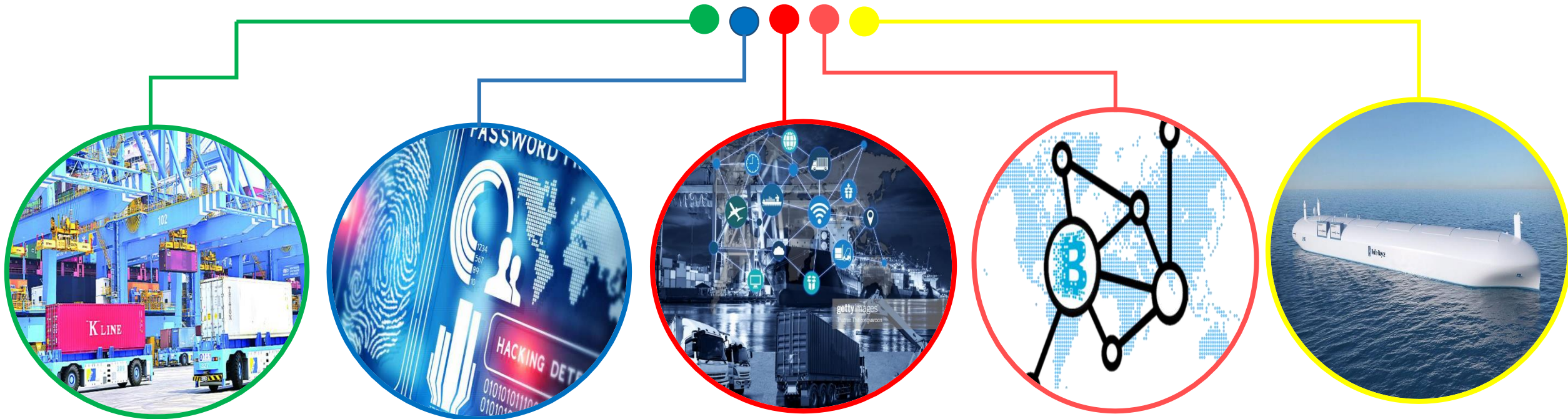


Source: Balanced Scorecard Institute



Source: UNCTAD

ADOPTING TECHNOLOGICAL EMERGENCE



Automated Container Terminal - Remotely controlled cranes, Automated ground vehicle & automated gate

Cybersecurity - Cyberattacks in navigation systems onboard & interference with port systems

Internet of Things – Harnessing data generated from satellite information & sensors

Use of Blockchain – Tracking cargo & record information from vessels

Autonomous Shipping & drones

COMMITMENT ON THE ENVIRONMENTAL ISSUES

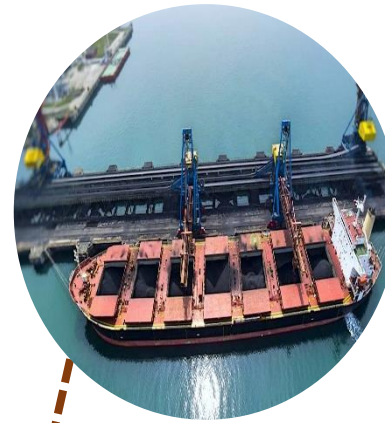
- IMO adopted an initial strategy on the **reduction of greenhouse gas emission** from ship in April 2018
- **Energy efficiency** measures have been legally binding in the maritime industry with the International Convention for the Prevention of Pollution from Ships.
- **Air Pollution** - IMO adopted the global limit of 0.5 per cent on sulphur in fuel oil by January 2020.
- **Ballast Water Management** – to prevent the risk of the introduction & proliferation of non-native species following the discharge of untreated ballast water from ships
- **Hazardous & noxious substances & marine litter**



Human Resources



Vessel Operations



Cargo Operations



Finance



**IMPROVING
PORT
PRODUCTIVITY**

Environment



Gender



IMPROVING PORT PRODUCTIVITY

Table 4.2 Port performance scorecard indicators				
Categories		Port entity indicators	Number values	Mean in percentage (2010–2017)
Finance	1	EBITDA/revenue (operating margin)	126	39,30
	2	Vessel dues/revenue	135	15,90
	3	Cargo dues/revenue	120	34,20
	4	Rents/revenue	117	10,10
	5	Labour/revenue	106	24,80
	6	Fees and the like/revenue	114	18,10
Human resources	7	Tons per employee	134	54 854
	8	Revenue per employee	128	\$235 471
	9	EBITDA per employee	107	\$119 711
	10	Labour costs per employee	89	\$42 515
	11	Training costs/wages	101	1,30
Gender	12	Female participation rate, global	54	15,70
	12,1	Female participation rate, management	53	30,90
	12,2	Female participation rate, operations	39	12,30
	12,3	Female participation rate, cargo handling	29	5,30
	12,4	Female participation rate, other employees	8	32,00
	12,5	Female participation rate, management plus operations	119	19,60
Vessel operations	13	Average waiting time	129	15 hours
	14	Average gross tonnage per vessel	165	17 114
	15,1	Oil tanker arrivals, average	28	10,80
	15,2	Bulk carrier arrivals, average	28	11,20
	15,3	Container ship arrivals, average	28	40,30
	15,4	Cruise ship arrivals, average	29	1,80
	15,5	General cargo ship arrivals, average	28	16,50
	15,6	Other ship arrivals, average	27	19,10
Cargo operations	16	Average tonnage per arrival (all)	156	6 993
	17	Tons per working hour, dry or solid bulk	91	402
	18	Boxes per hour, containers	120	29
	19	TEU dwell time, in days	73	6
	20	Tons per hour, liquid bulk	46	299
	21	Tons per hectare (all)	130	131 553
	22	Tons per berth metre (all)	143	4 257
	23	Total passengers on ferries	18	811 744
	24	Total passengers on cruise ships	20	89 929
Environment	25	Investment in environmental projects/total CAPEX	10	0,90
	26	Environmental expenditures/revenue	17	0,30

Source: UNCTAD, 2016.

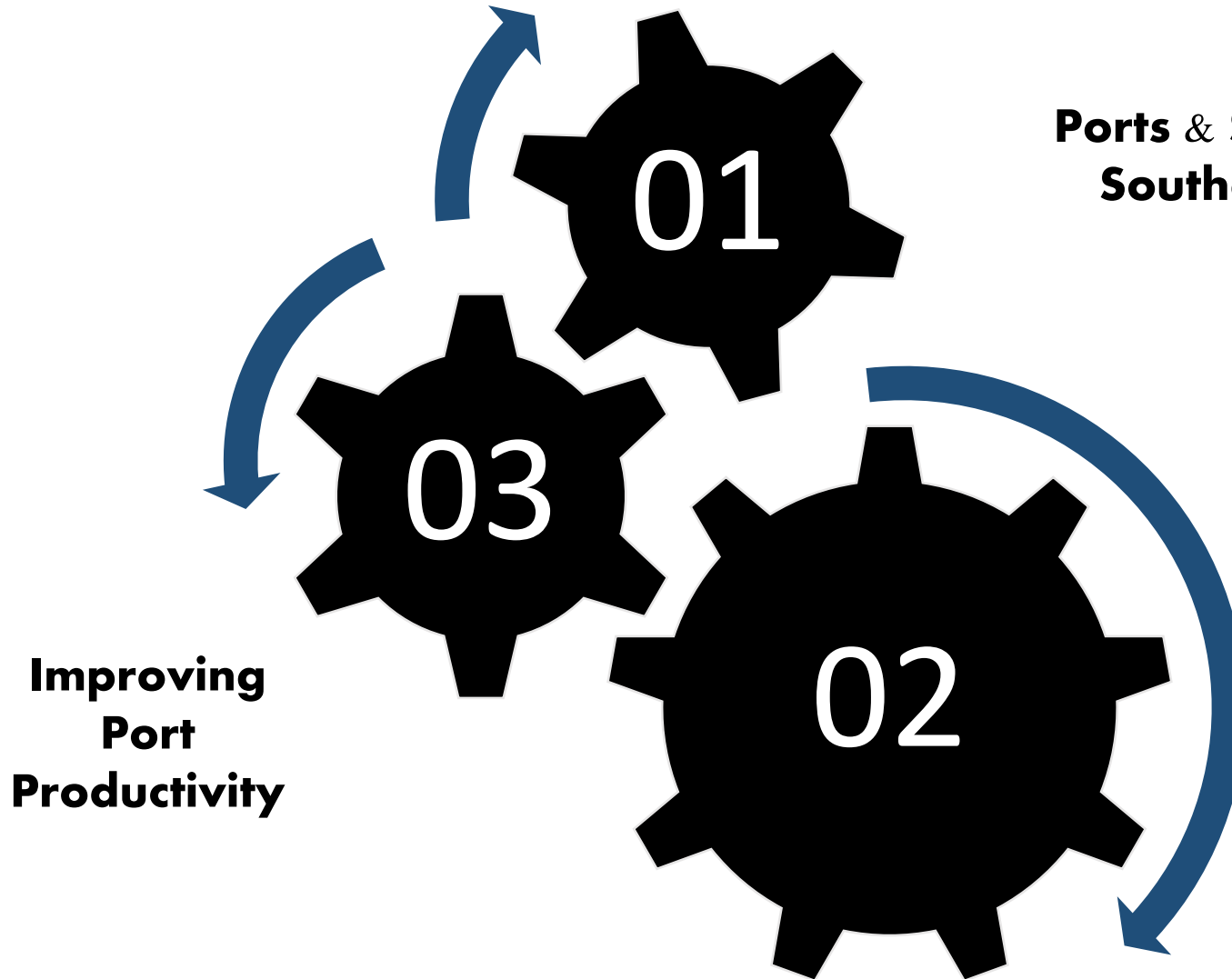
Note: Number of values is a product of ports providing data for the variable by the number of years reporting.

Abbreviations: CAPEX, capital expenditure; EBITDA, earnings before interest, taxes, depreciation and amortization.

CRITICAL SUCCESS FACTORS FOR SUSTAINABLE PORTS DEVELOPMENT



CONCLUSION



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Thank You

FOR YOUR TIME

CDR ANG CHIN HUP (R)
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PORT EXPANSION SUMMIT