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CONSULTANTS**

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**Royal  
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*Enhancing Society Together*

# Port investment in ASEAN

10<sup>th</sup> Philippine Ports and Shipping  
Conference

Mr Victor Wai, CFA  
[Victor.Wai@rhdhv.com](mailto:Victor.Wai@rhdhv.com)  
20<sup>th</sup> February 2019

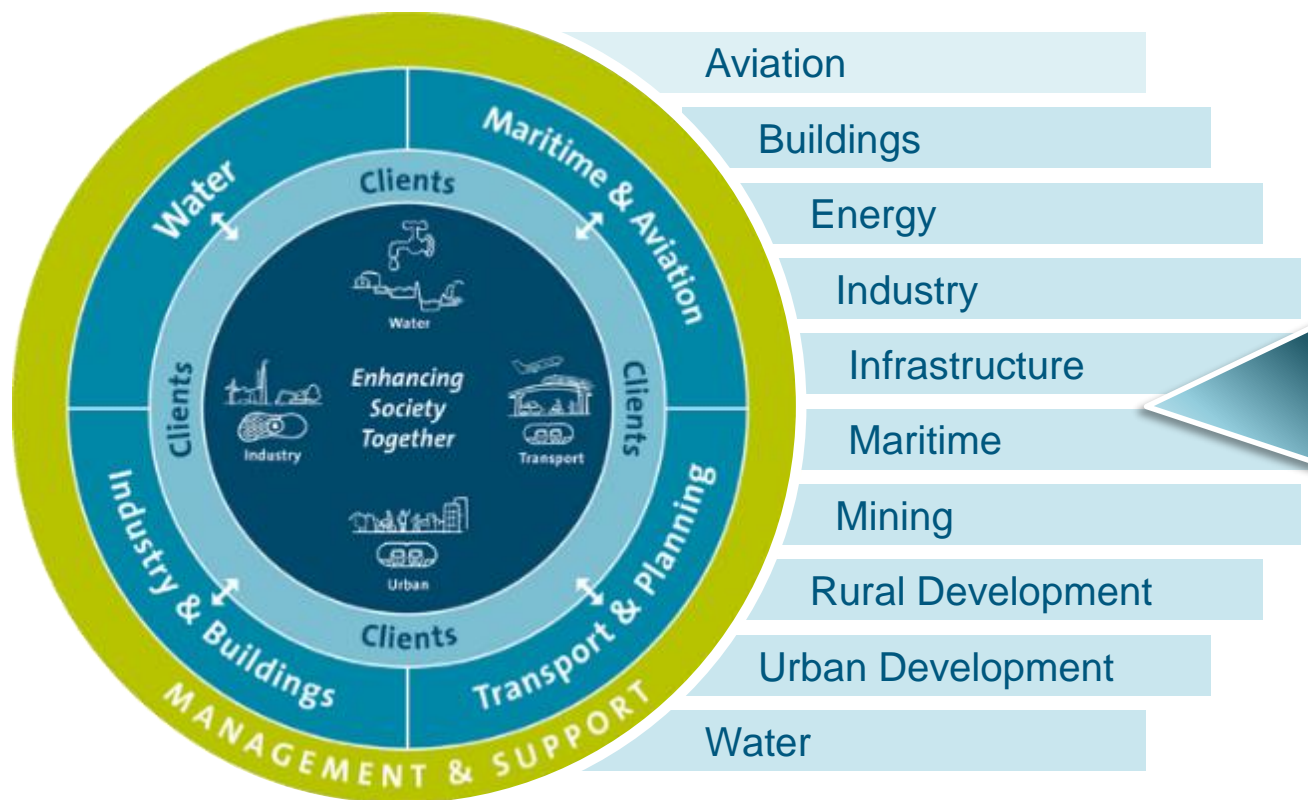


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- Expertise and experience of 6,000 colleagues in some 150 countries
- Top 50 engineering companies worldwide, Top 3 in Maritime Sector
- Leadership in sustainability and innovation
- Combining global expertise with local knowledge to deliver a multidisciplinary range of consultancy services for the entire living environment.
- For about 140 years, we have successfully been delivering projects which contribute to improving living circumstances around the world

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**Ocean Shipping Consultants:**  
 Consultants in shipping and port economics



**First Marine International:**  
 Specialists in shipping, shipbuilding, ship repair and marine equipment



**RHDHV Maritime Engineering:**  
 Specialists in the planning and design of marine facilities, ports and terminals



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**Our Global Locations** – “OSC has offices strategically located to support our connectivity to the maritime market.”



- Ocean Shipping Consultants Offices
- Royal HaskoningDHV Offices

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## Perspectives of port stakeholders

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### Port Authority

- Return on infrastructure
- Logistics cost for imports & exports



### Port Developer

- Pursue grand projects

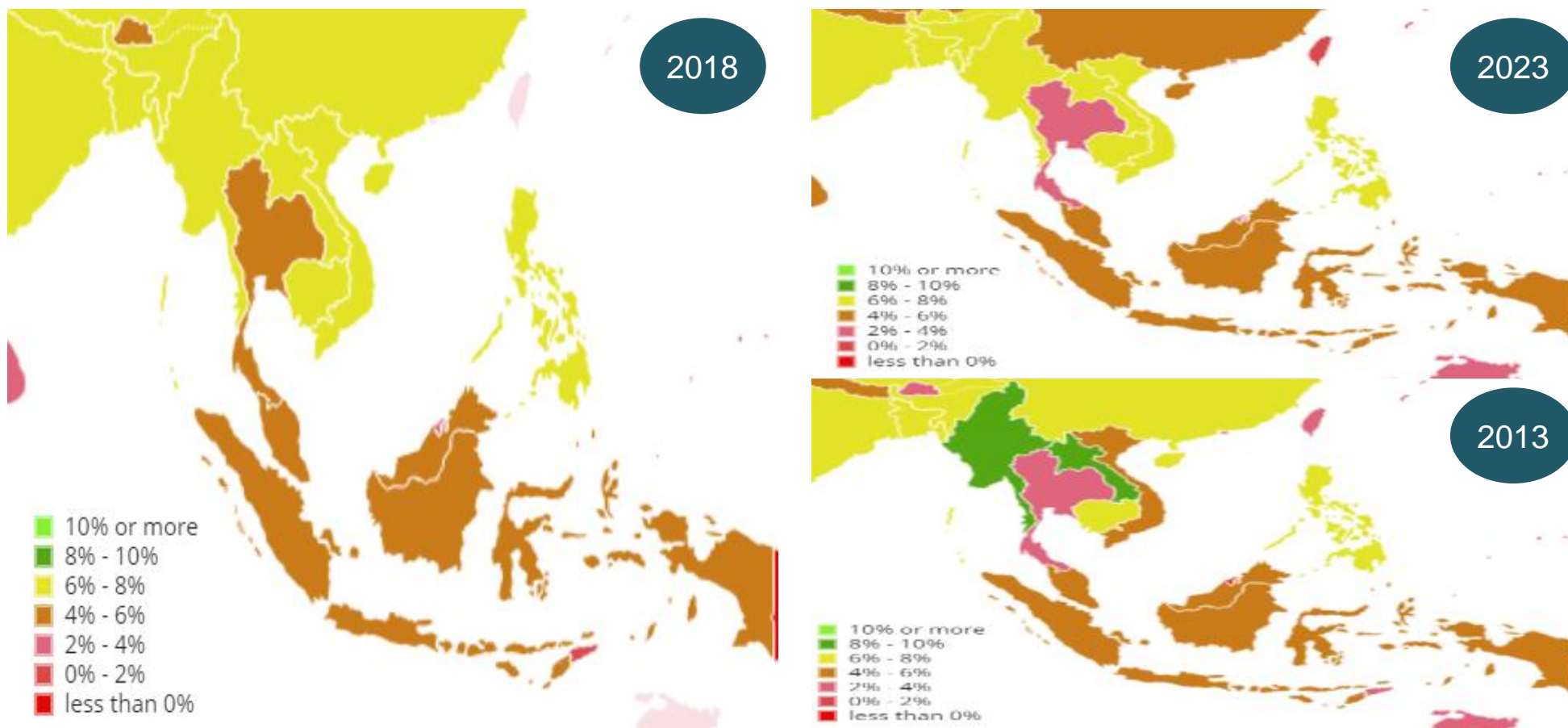


### Terminal operator/ investor

- Reputation
- Maximise shareholders' value

## IMF projects ASEAN to average 5% annual growth through 2023.

### Growth differential in ASEAN economies

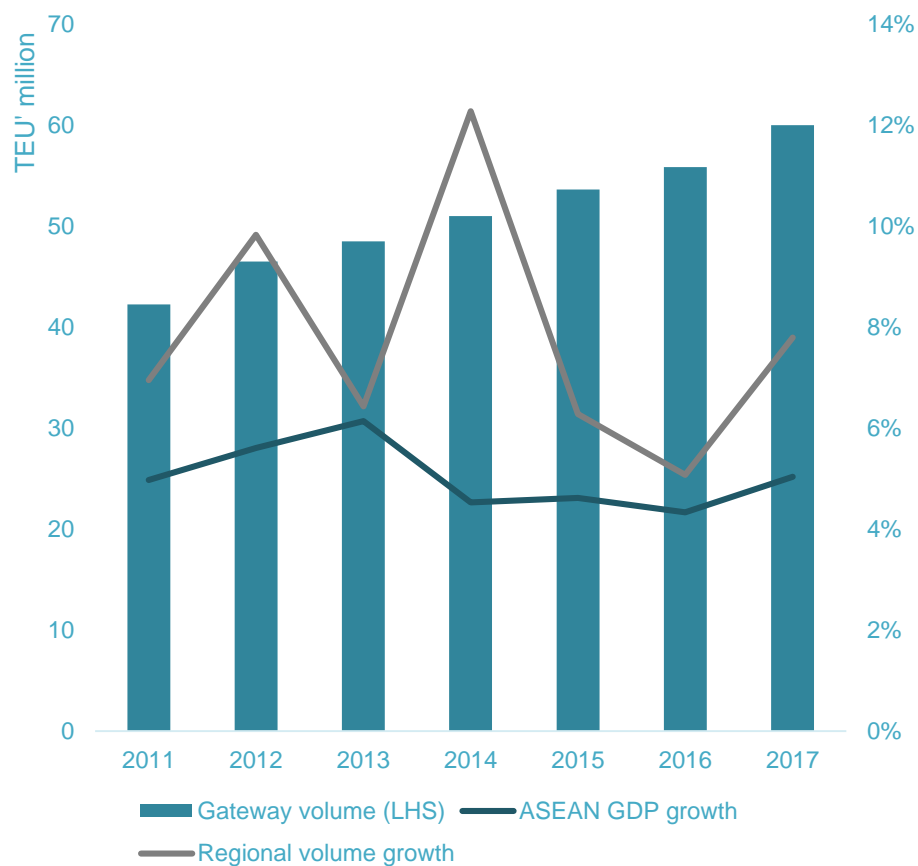


Source: IMF



## ASEAN has about 60m TEU of gateway volume. Container growth multiple is above the global average.

ASEAN container trade trends above GDP

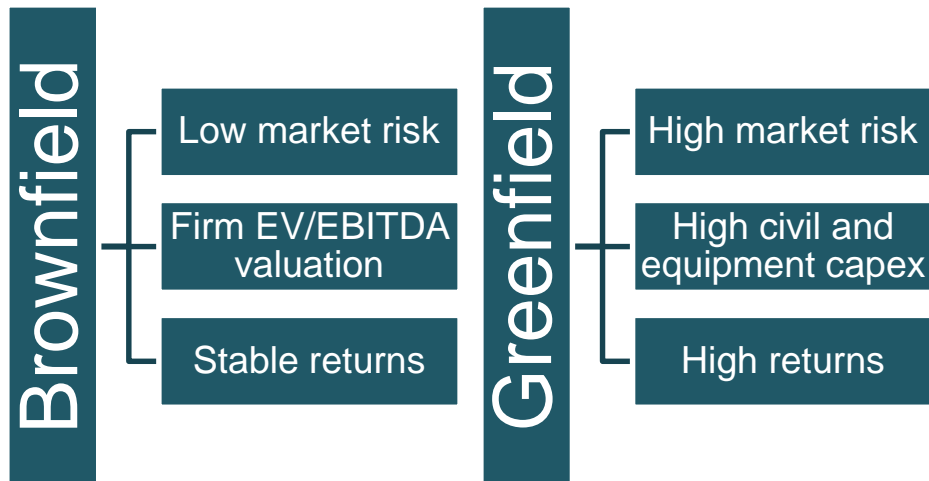


Source: Port authorities, UNCTAD, IMF

Container growth multiple per GDP growth

	2013	2015	2017		Remarks
Indonesia	0.50	0.63	2.18		- Substantial consumption - Port projects underway
Singapore	0.58	-3.86	2.47		- Stable economic climate - Dominant single operator
Malaysia	0.49	0.31	0.91		- Uncertain economic direction - Resilient gateway
Thailand	2.10	0.36	2.04		- Substantial consumption - Port projects underway
Vietnam	1.33	1.90	0.53		- Strong economic growth - Low container penetration
Philippines	0.46	2.77	1.13		- Remittance economy - Dominant single operator
Myanmar	2.32	2.17	0.61		- Rosy economic prospect - Draft restriction
Brunei	1.32	0.00	0.00		- Dependent on oil-based revenue
Cambodia	0.35	2.08	2.94		- Substantial economic growth - New port project underway
<b>ASEAN</b>	<b>1.05</b>	<b>1.36</b>	<b>1.55</b>		- Multiple above global average 1.2x

## Portfolio expansion: Brownfield vs Greenfield



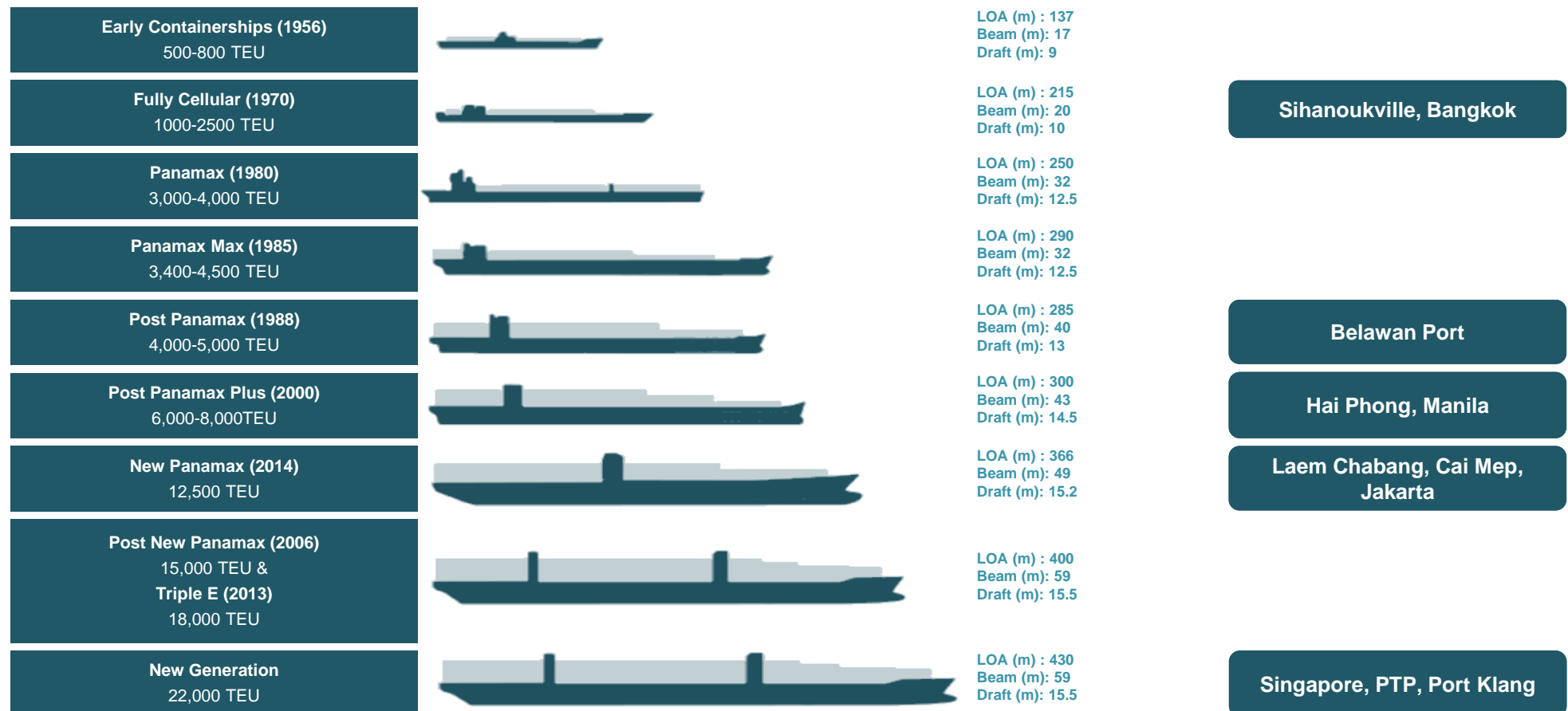
### Brownfield

- MIP, Myanmar
- TPS, Indonesia
- Belawan Port, Indonesia
- Westports CT10-19, Malaysia
- Vung Ang, Vietnam
- ECT, Sri Lanka

### Greenfield

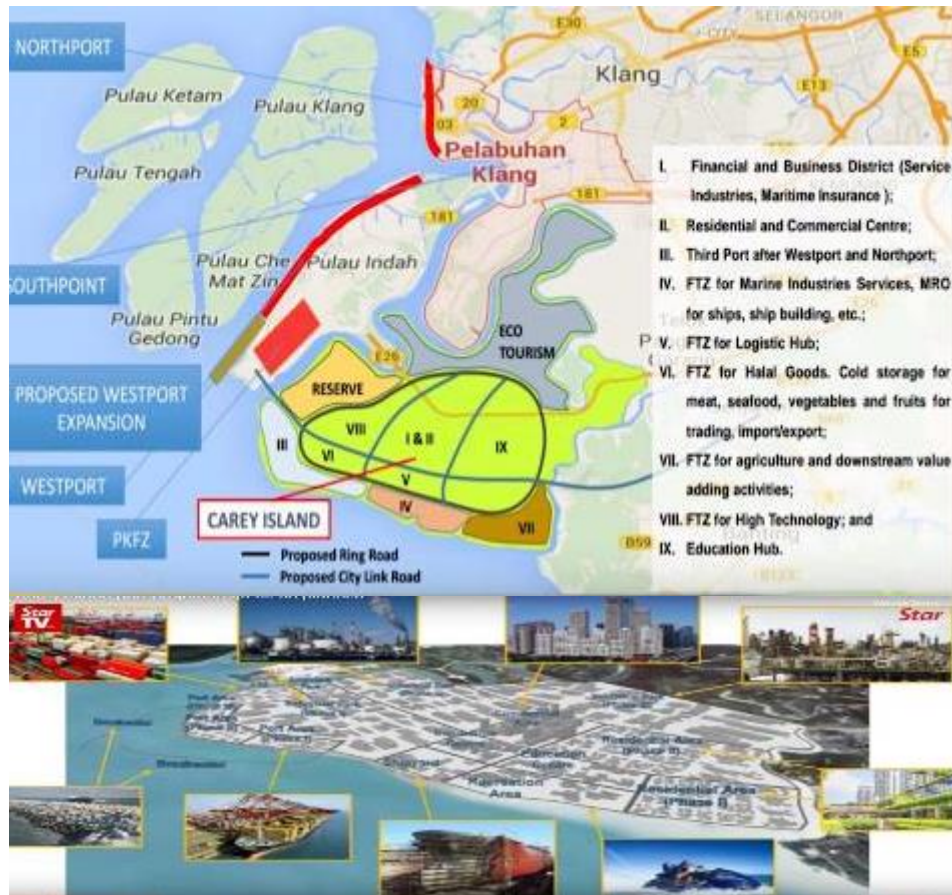
- Laem Chabang Phase 3, Thailand
- Gemalink, Vietnam
- Hai Phong, Vietnam
- Payra Port in Bangladesh
- Bay Terminal in Bangladesh
- Pulau Carey, Malaysia
- Kuala Tanjung, Indonesia

## Vessel upsize on main the Europe – Far East trade route



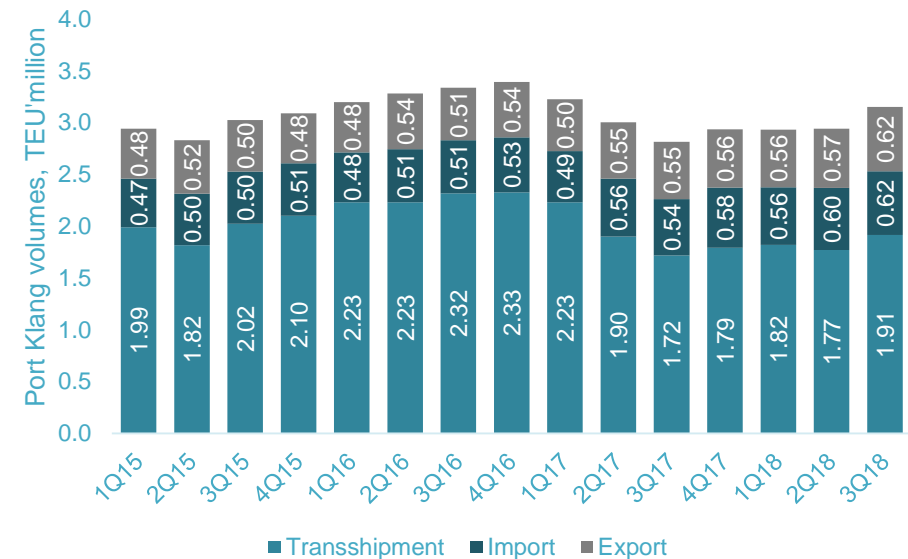
# Careful planning to ensure Carey Island's commercial success

## Concept of Pulau Carey by 2030



Source: The Star Malaysia

## Port Klang annual volume ~ 13 MTEU



Capacity → 66 MTEU

Current volume → 13 MTEU

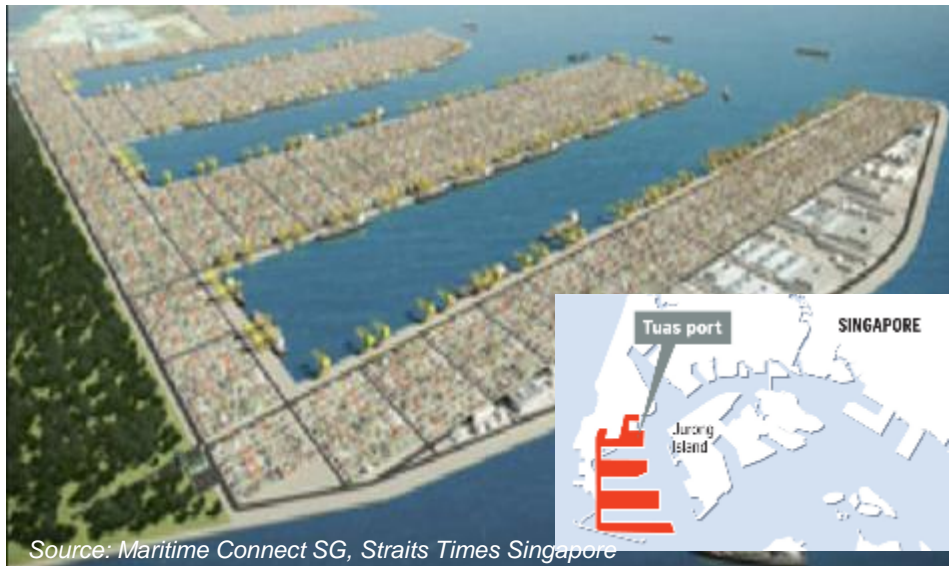
Target utilization level 75% → 49.5 MTEU

Terminal operator payback → 20 years

Implied growth rate? **7.2%**

## Singapore rationalizes land space, serving future big ships at Tuas mega port.

Artist impression of Tuas mega port, 65MTEU capacity



Source: Maritime Connect SG, Straits Times Singapore

## SINGAPORE'S TUAS MEGA-PORT: PLAIN SAILING AHEAD?

*The Lion City hopes a new multibillion-dollar facility will help keep it the world's largest transshipment hub. But there's a rising tide of pretenders to its crown*

(SCMP)

### PREFERRED PORT OF CALL

This is another exciting milestone for CMA CGM as part of the group's continuing efforts to make Singapore our main hub in the region, while reiterating the importance of Singapore to our global strategy.

MR JEAN-YVES DUVAL, senior vice-president of Asia at CMA CGM Asia regional office.



(Business Times Singapore)

### Cosco-PSA Terminal JV to Launch Two New Berths

(World Maritime News)



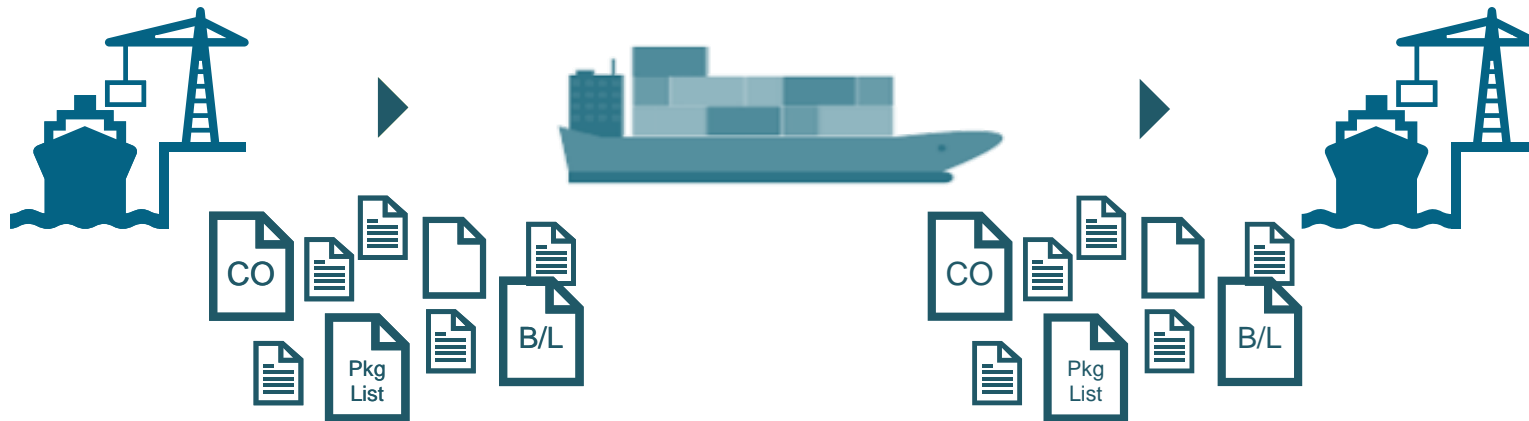
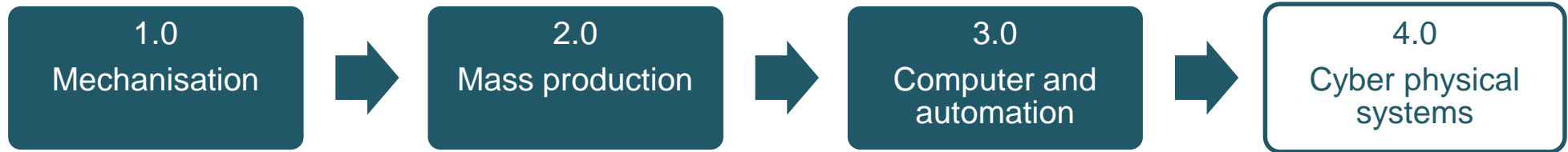
(Nikkei Asian Review)

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# Big ports place emphasis on digitization and automation. Industry 4.0 push in ASEAN, and the challenges



TradeLens

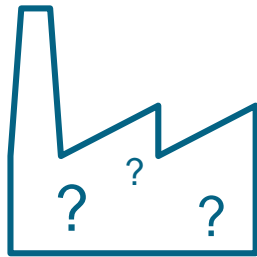
Global business shipping network



# Challenges and promises of digitisation

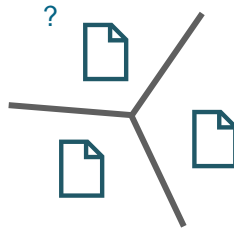
## Challenges

### Factory



Insufficient real time data

### Shipping



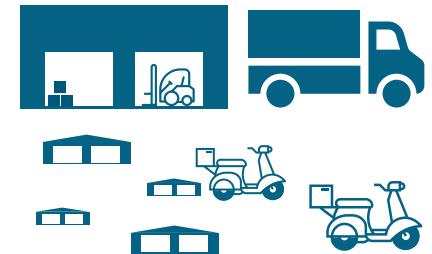
Implementation of common trade digitization platform (with Blockchain) challenging

### Port



Not all items can be tracked real time

### Urban logistics

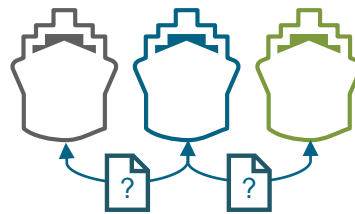


Lack of physical warehousing and traffic congestion

## Promises



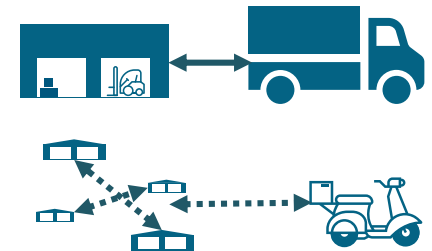
- Improved quality and production.
- Shortened lead-times



- Potential reduction in middle men from Blockchain information sharing

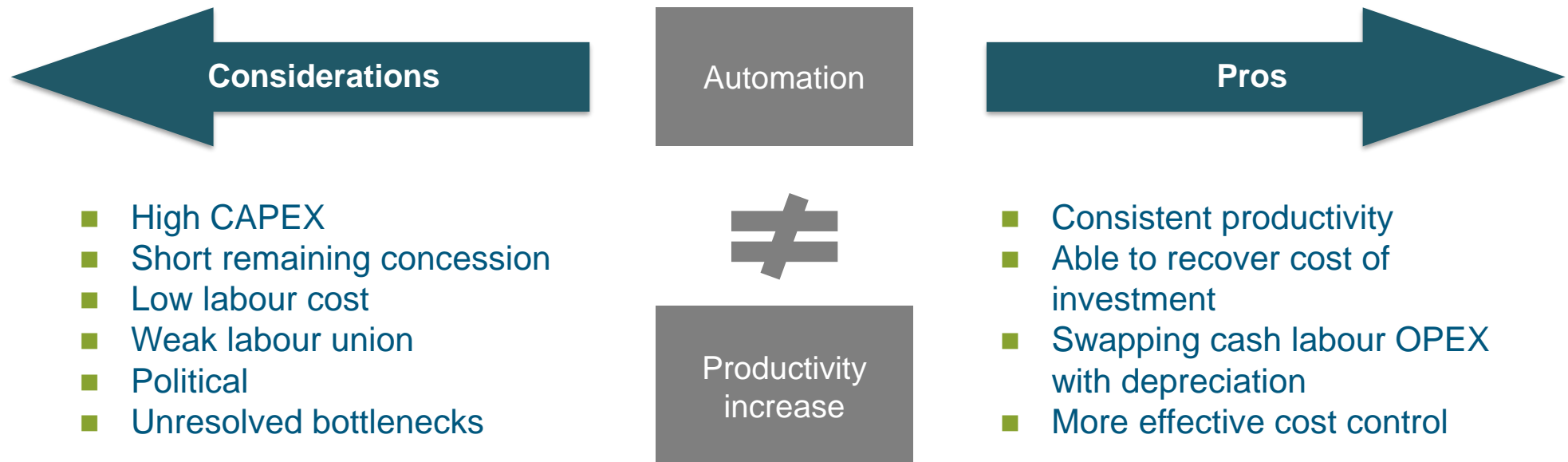


- Real-time tracking and optimization



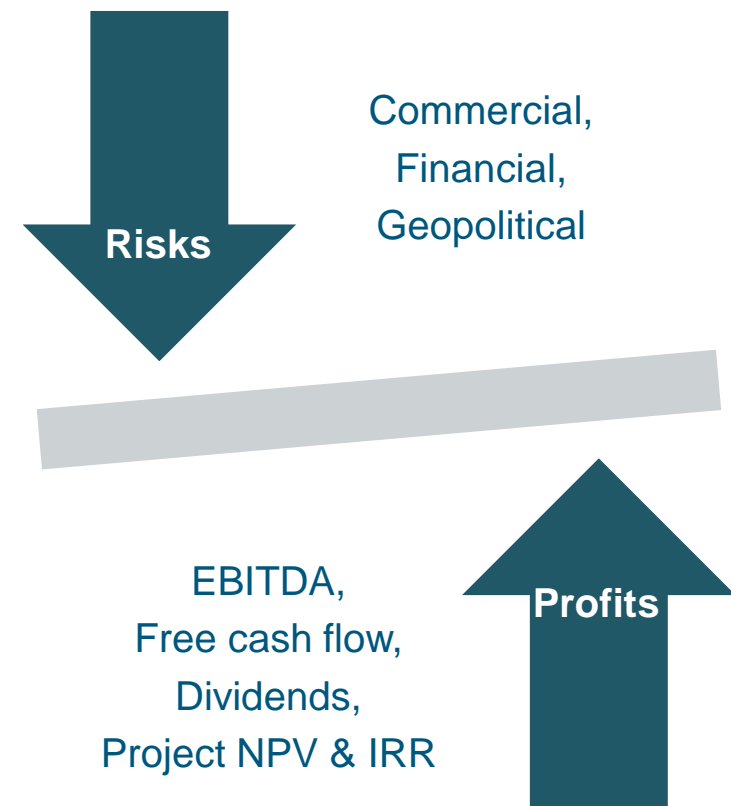
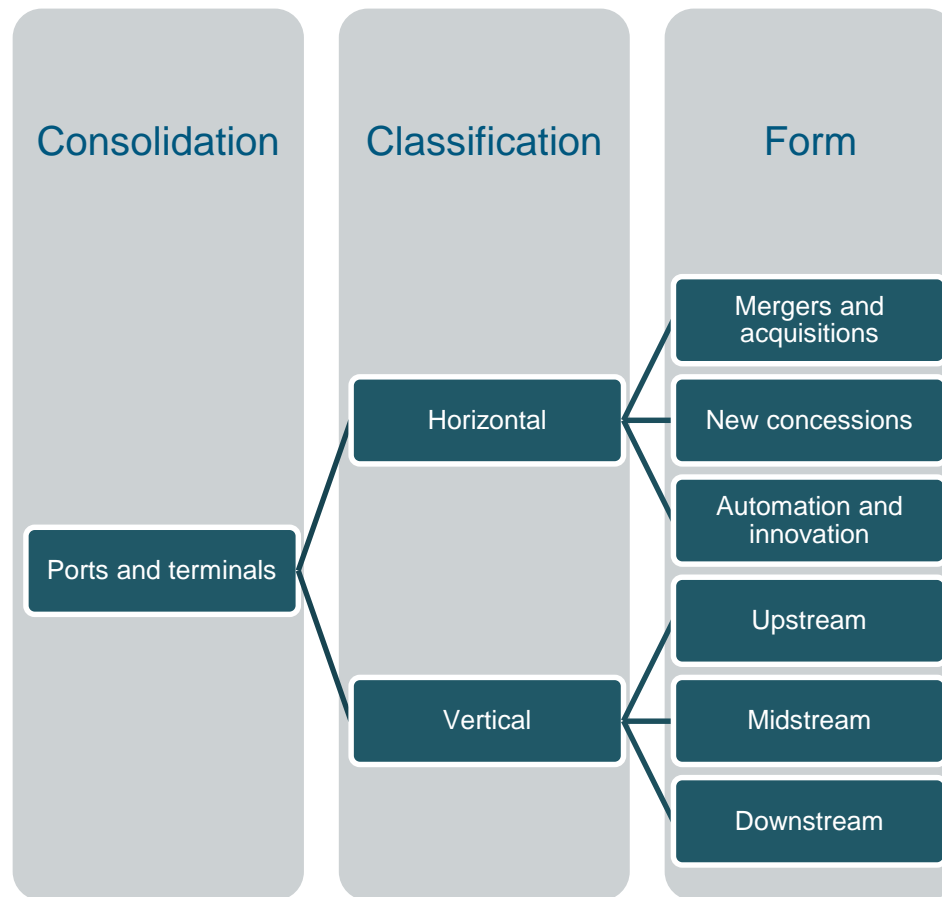
- On demand warehousing
- Certainty in delivery schedule

## Is automation the way forward for all ports and terminals?



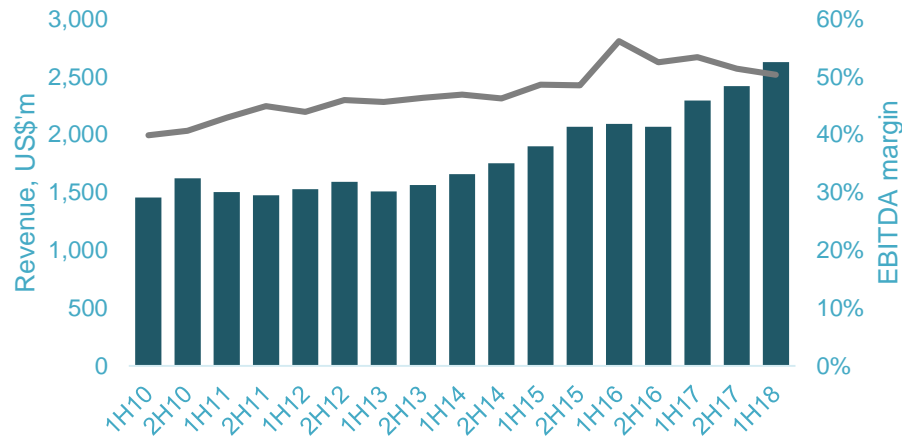


## Horizontal expansionist or vertical activist?



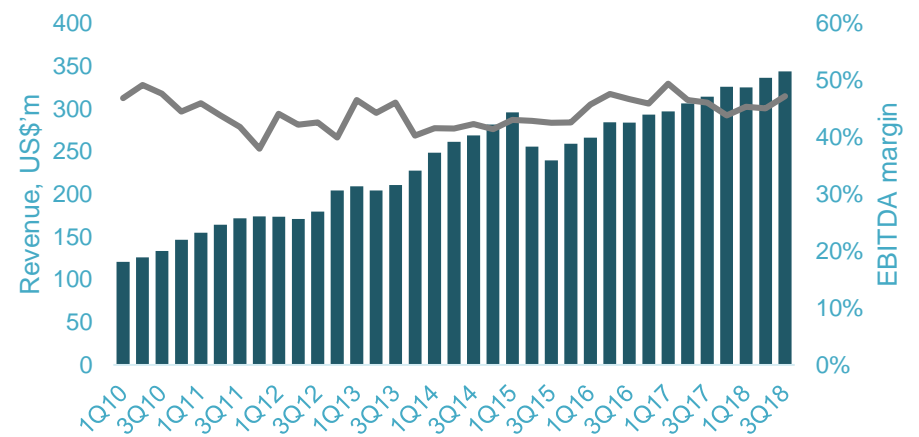
## Comparing DP World and home favourite ICTSI

Profitability of DP World, 1H10 – 1H18



Source: DP World

Profitability of ICTSI, 1Q10 – 3Q18



Source: ICTSI

	Market exposure		Nature		Revenue proportion		Market valuation		Share price (Capital gain)	
	Emerging	Developed	Gateway	T/S	Container	Home	2017 P/E	Current P/E	1-Yr	3-Yr
DPW	75%	25%	70%	30%	70%	~45%	19.6x	10.4x	-38.3%	-4.5%
ICTSI	95%	5%	~95%	<5%	100%	37%	28.1x	35.4x	+6.9%	+103%

- Emerging market gateway cargoes
- Focus on core operations

## On the back of declining profitability and increasing risks, what's next for existing terminal operators?

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- Alliances between terminal operators?
- More M&A between terminal operators?
- More JVs between terminal operators and shipping lines?
- Higher prices for terminal handling?
- Terminal operators live with higher risk and lower returns?
- Terminal operators don't invest?
- Port and terminal investors exit the industry?

