



From serving to driving Indonesia's growth Delivering lasting transformation at IPC

Institut Teknologi Bandung - FTSL,
Bandung, 28 Agustus 2014



Energizing Trade. Energizing Indonesia.

R.J. LINO
President Director
PT. Pelabuhan Indonesia II (Persero)

Persatuan Indonesia dan integrasi ekonomi yang utuh dari negeri kepulauan ini hanya dapat dicapai melalui reformasi logistik maritim yang menyeluruh, tanpa reformasi tersebut, Indonesia hanyalah kumpulan pulau-pulau, bukan negara kepulauan.



Jika pelabuhan di Indonesia (21 Pelabuhan) service level-nya ditingkatkan sama dengan “average ASEAN”, pertumbuhan ekonomi Indonesia bertambah 0,31% dan apabila sama dengan “Singapura” maka pertumbuhan ekonomi Indonesia bertambah 0,78% .

Source: Oxford Economic



Biaya Angkutan Laut

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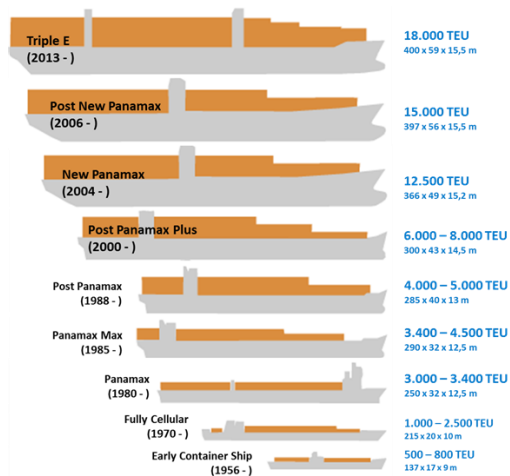
1/10 Biaya Angkutan Darat

HARGA BBM KAPAL DUNIA MENINGKAT 600 % DALAM 5 TAHUN TERAKHIR, NAMUN FREIGHT CONTAINER HARI INI LEBIH RENDAH DARI 5 TAHUN YANG LALU

60% shipping cost merupakan BBM cost

BBM KAPAL DUNIA MENINGKAT 600% TETAPI *FREIGHT COST* TURUN

Ukuran kapal semakin besar s/d 18.000 TEUs



Slow Steaming 25 knots menjadi 15-10 knots



Route Planning (Pendulum)



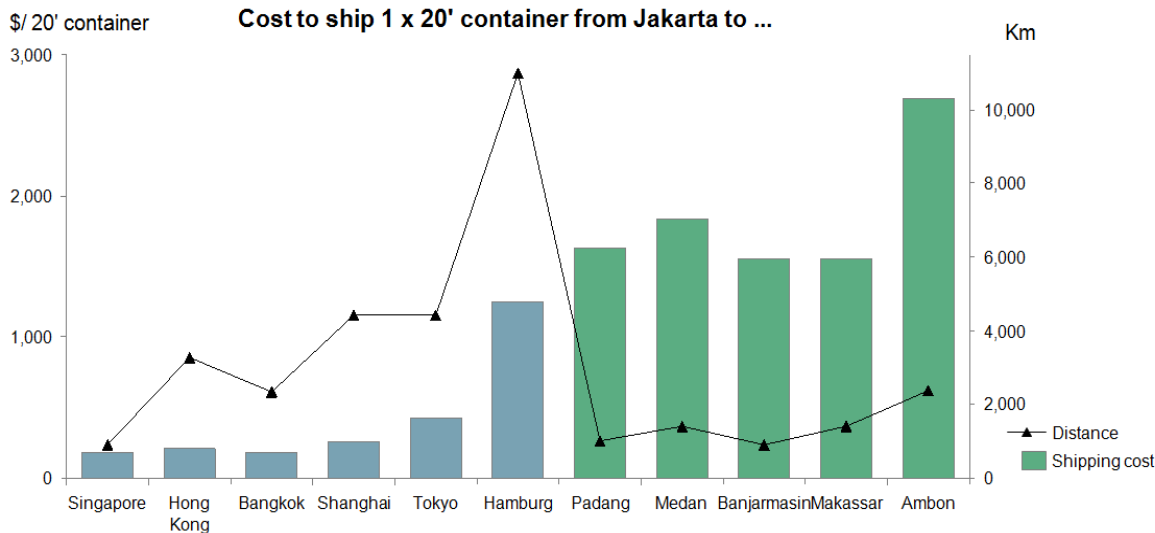
Produktivitas Pelabuhan yang Tinggi





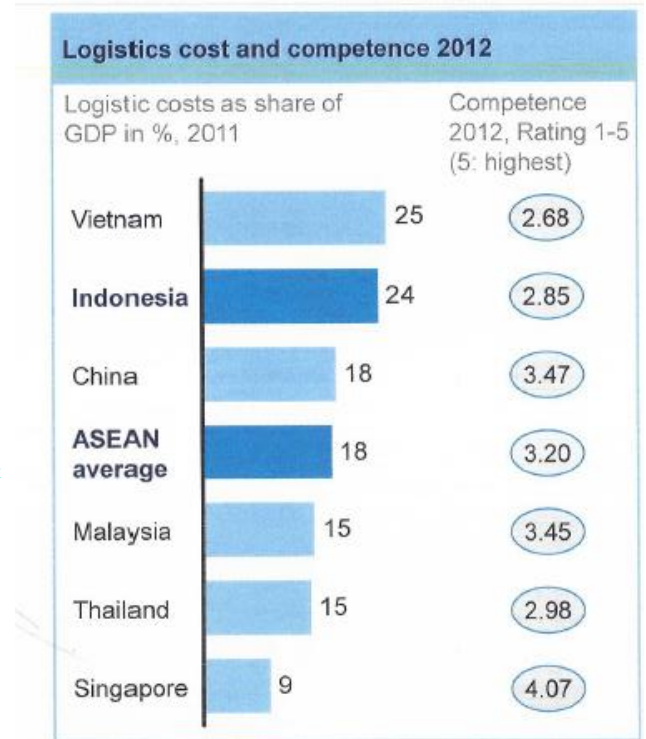
The challenge today

Logistic Cost yang tinggi untuk distribusi barang ke Indonesia Timur



Lebih murah pengiriman barang dari Jakarta ke Hamburg (11.000 km) daripada dari Jakarta ke Padang (1.000 km)

Source: Quotes from domestic logistic company, 2012



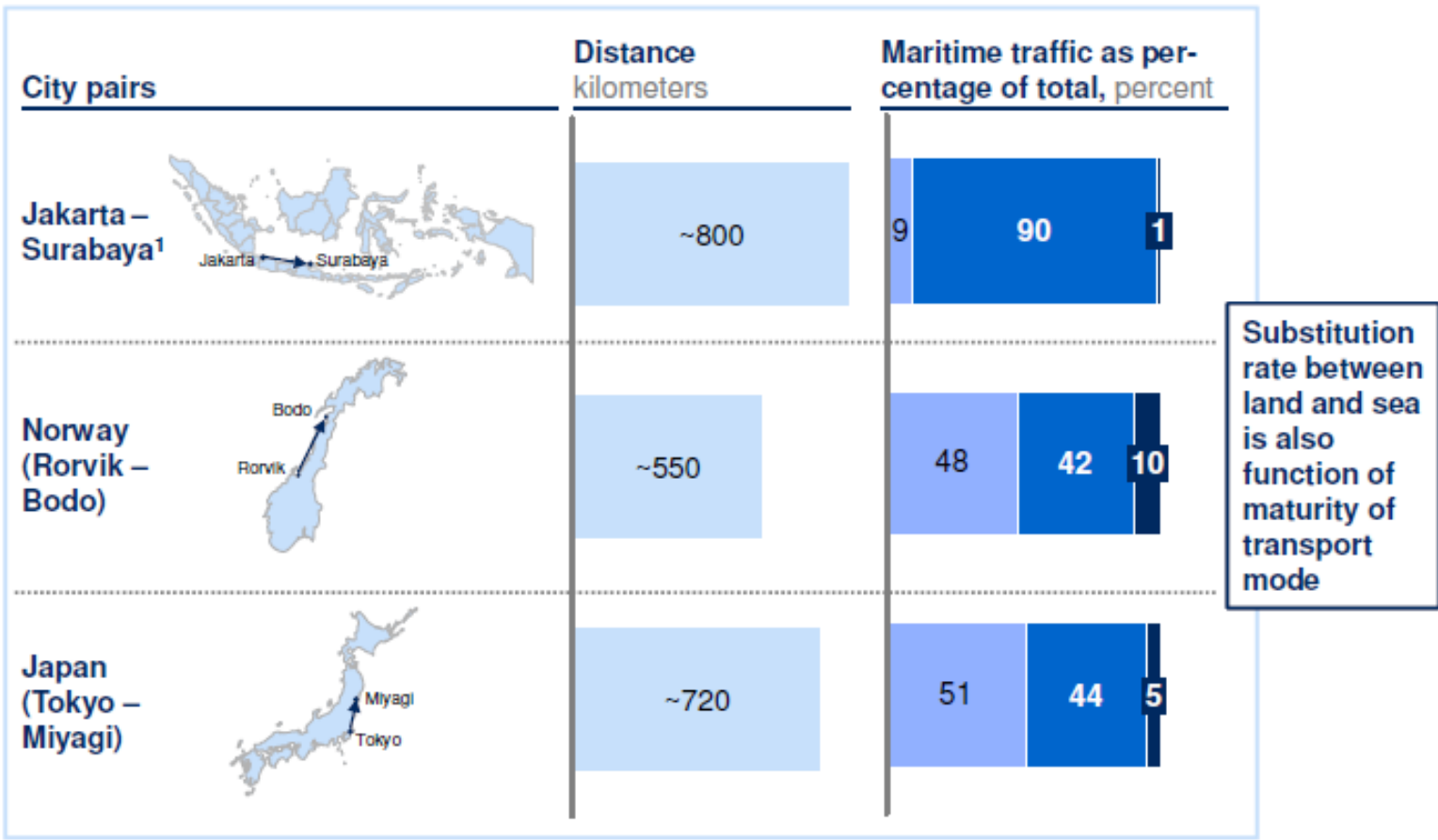
Source: McKinsey Study



The challenge today

Other coastal transport examples

Sea Road Rail



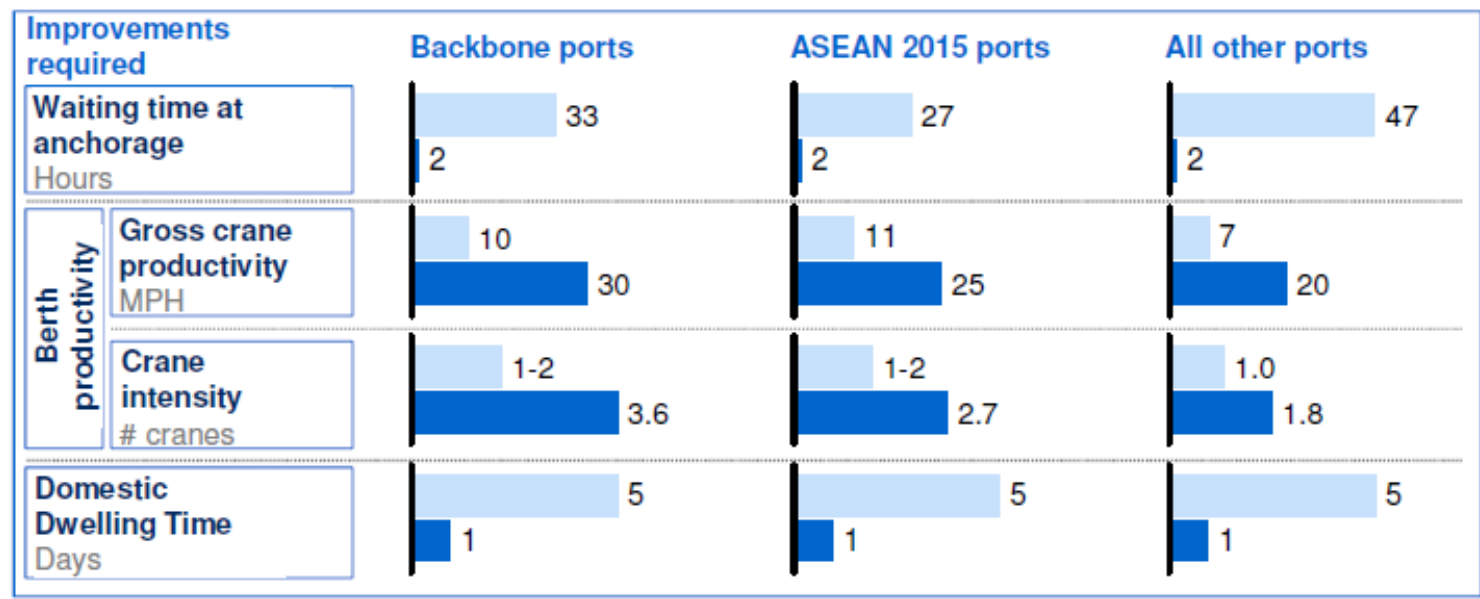
¹ Rail traffic derived from Railway MasterPlan, Maritime traffic derived from total container traffic assuming FCL (24T)

SOURCE: Indii, Konkurranselater i godstransport of intermodale transporter, Multimodal transport strategy: Java Corridor, MLIT



SECTOR REFORM

The domestic port sector aspiration should be to reach best practices on key performance metrics in successive waves



Wave prioritization to be done on Phase 2 by O&D across 3 categories of ports to ensure network costs progressively decrease over time until 2030

- Backbone: Jakarta, Surabaya, Medan, Makassar
- ASEAN 2015 ports¹
- Other Pelindo-owned terminals handling containers

¹ Sorong, Bitung, Banjarmasin, Pontianak, Palembang, Jayapura, Balikpapan, Semarang, Panjang
SOURCE: Pelindo I, II, III, IV; Team analysis



In addition, ASEAN 2015 vision creates a clear call to action, as it could dramatically shift the role of domestic Indonesia liners and manufacturing

ASEAN Vision for Maritime Transport targets improving performance and capacity in 47 regional ports



Designated Indonesia ports already have International calls and should improve International operations to comply with ASEAN 2015 vision

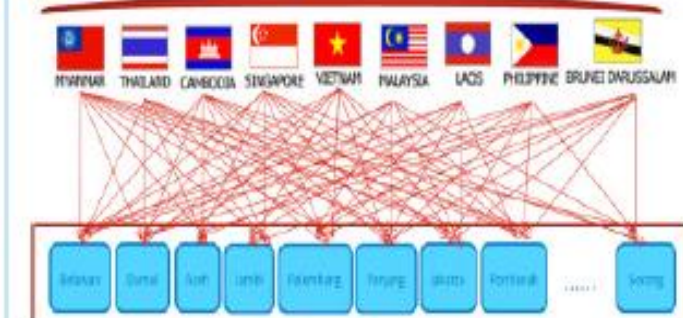
ASEAN single market 2015 will promote more point to point lanes in the region

Two main objectives are set to establish efficient and reliable routes

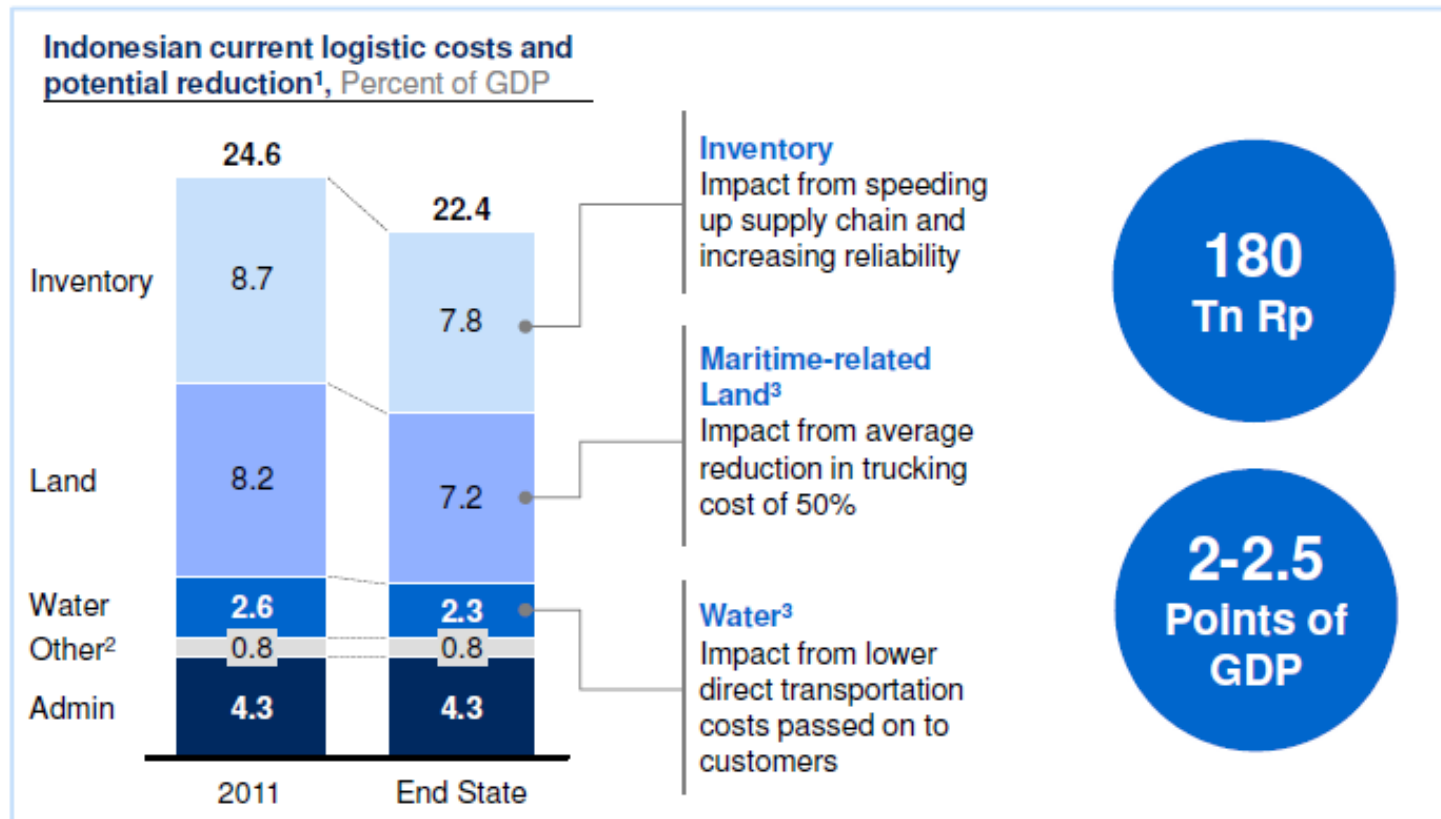
- Connect mainland and archipelagic Southeast Asia with efficient and reliable shipping routes
- Strengthen linkages with global and regional truck routes and domestic shipping routes



Potential risk that manufacturing moves outside Indonesia, bypassing domestic liners and moving directly to Indonesia market via liberated secondary markets



Overcoming these challenges and transforming the Maritime network has the potential to drive significant GDP impact of 180 Tn Rp, or 2-2.5% GDP



¹ Savings assigned to each category based on weighted average of savings contribution to GDP of signature products on an overall GDP impact of 2.26%; ² Air, Rail, and Services; ³ Warehousing and administration saving allocated to Land and water proportionally

SOURCE: State of Logistics Indonesia 2013, Team analysis



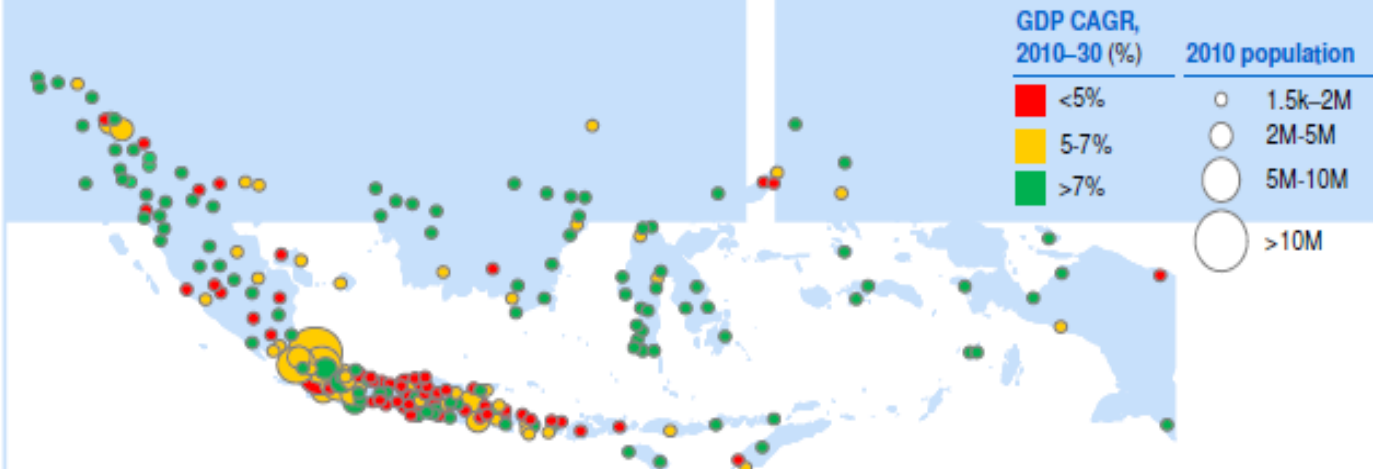
Indonesia's archipelago creates both unique logistical challenges, but also an opportunity for maritime transport

Indonesia has the most complicated topography of large countries ...

- 17,500 islands
- More than 21,500 km of inland waterways
- Terrain ranging from tropical forests to mangrove swamps and mountains and to wetlands

... representing unique challenges to meet 7% GDP growth target

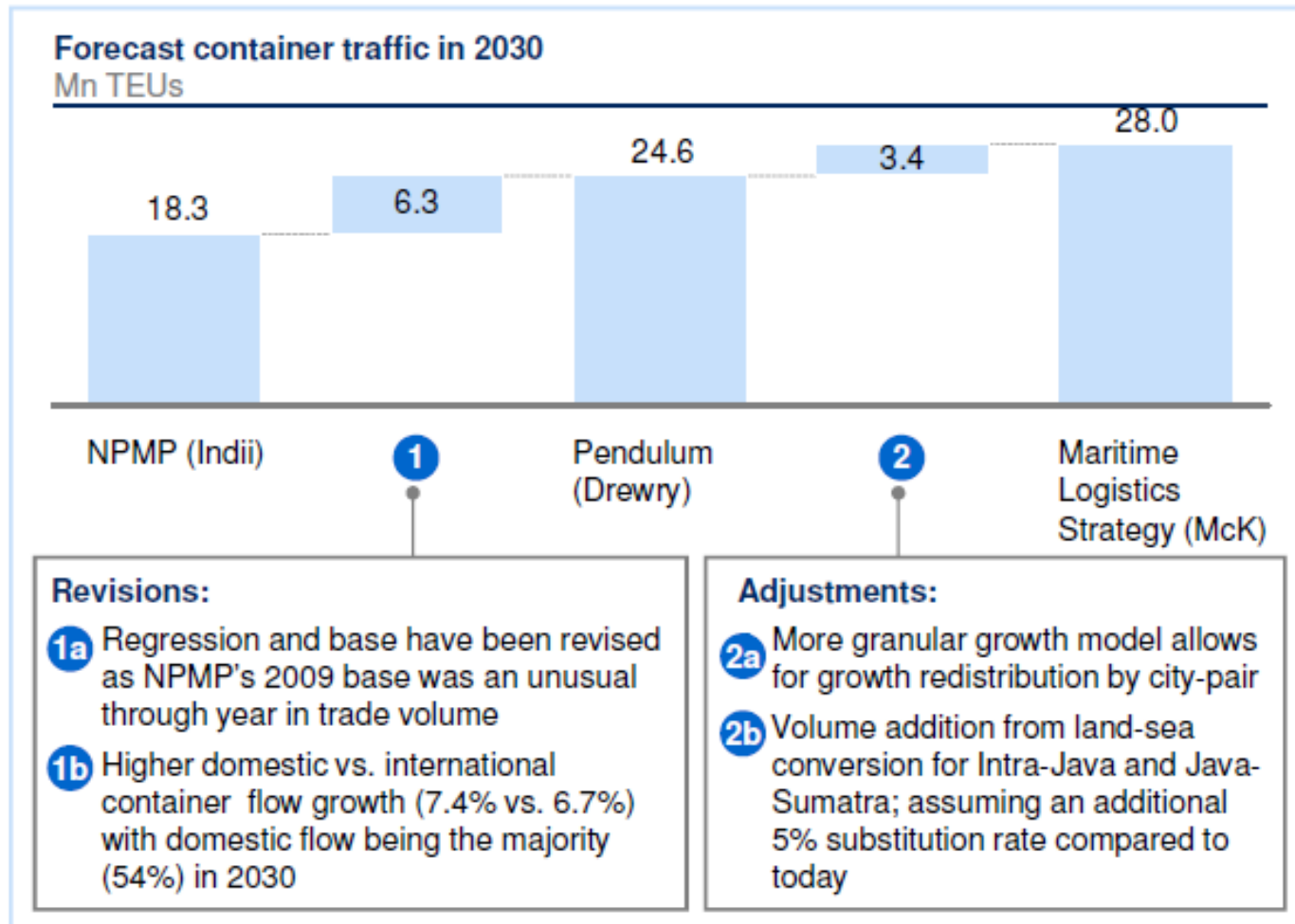
- Productivity growth must exceed by 60% rate achieved from 2000 to 2010
- Logistics costs, of 24.5% of GDP must decrease significantly
- Significant growth will come outside Java



Development of **domestic maritime system** is a key priority to meet the country's growth objectives

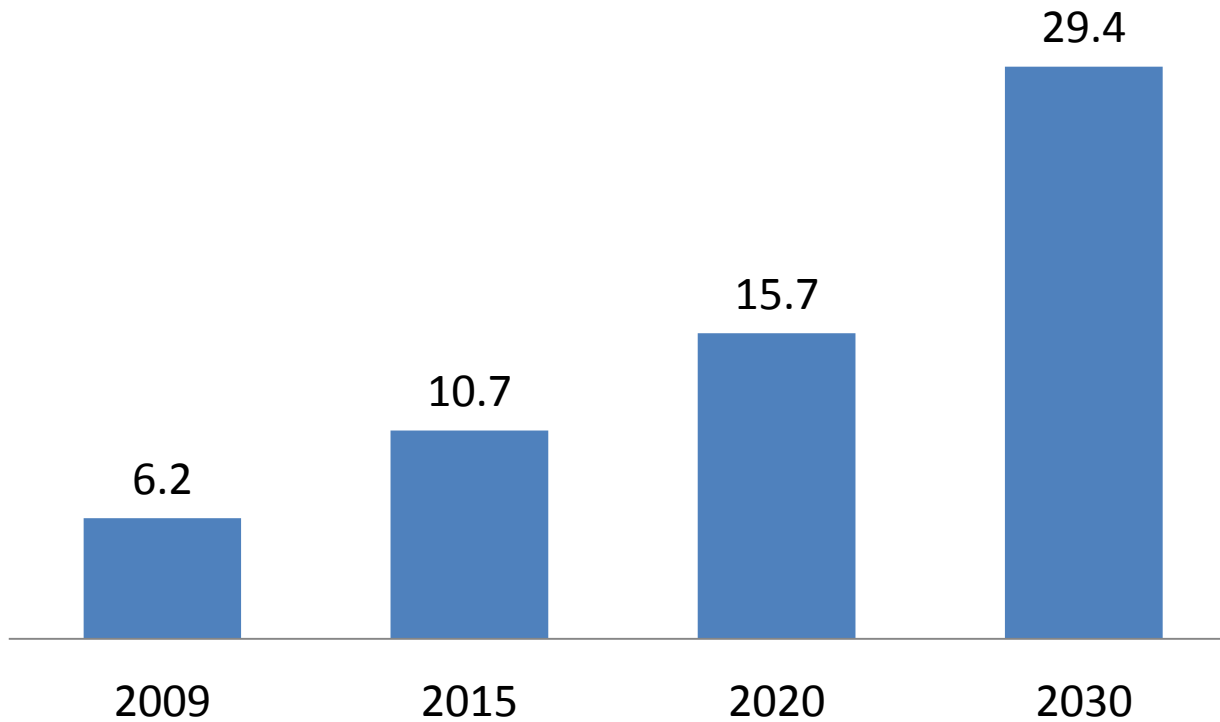


2030 volume forecast (domestic container traffic) is largely consistent across the different studies done to date, taking into account adjustments



2030 Volume Forecast (International Container Traffic)

■ In million teus





IPC Performance

New Identity

IPC



Energizing Trade. Energizing Indonesia.

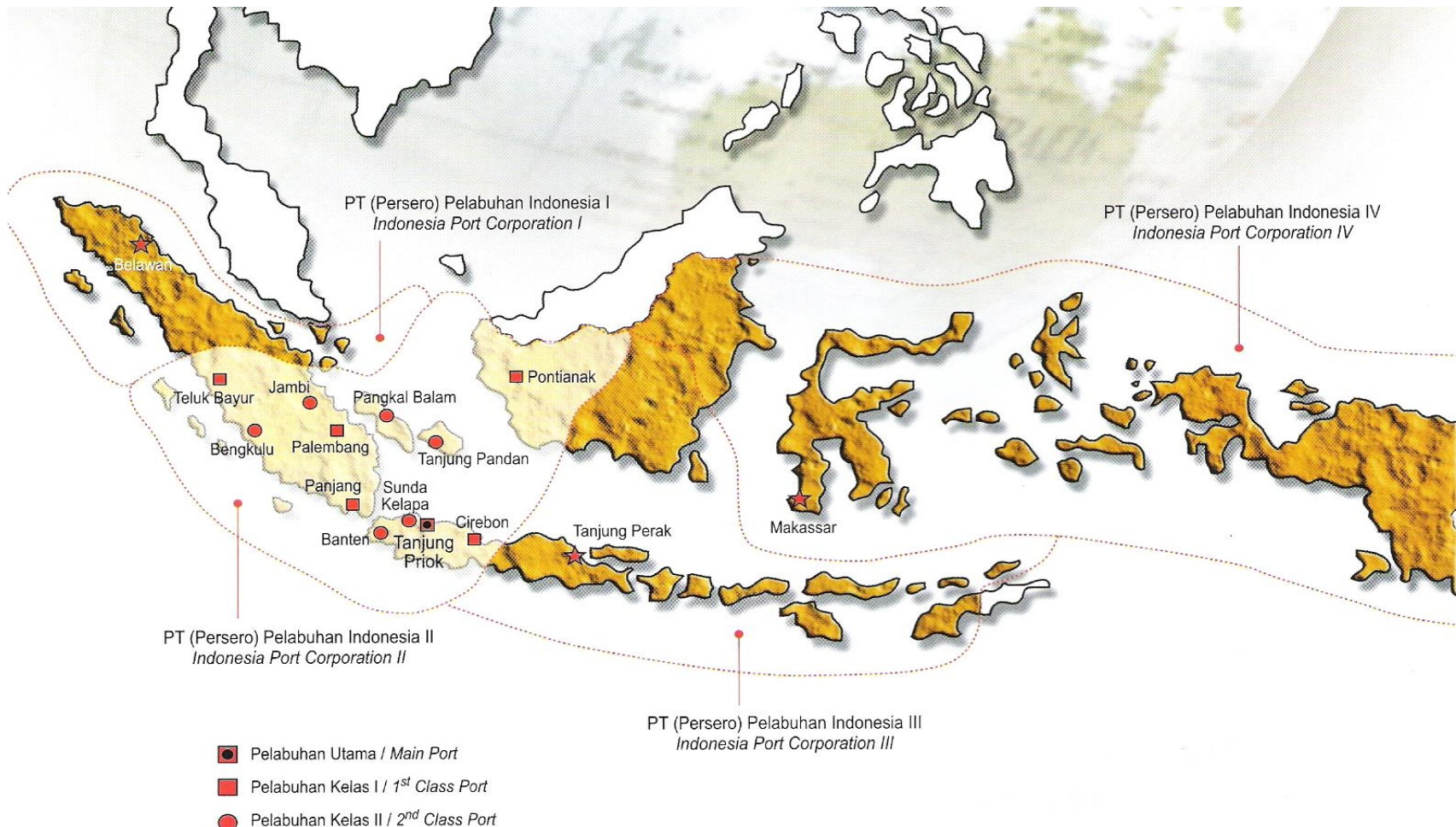
The creation of our new logo symbolizes change, strength, optimism and agility.
It becomes a symbol of pride within the organization for everyone to stand behind

As we take the company forward



INDONESIA PORT CORPORATION II / IPC

To be the preferred partner for reliable, best in class port & logistics services by creating an **exciting enterprise for our people** and contributing to national growth

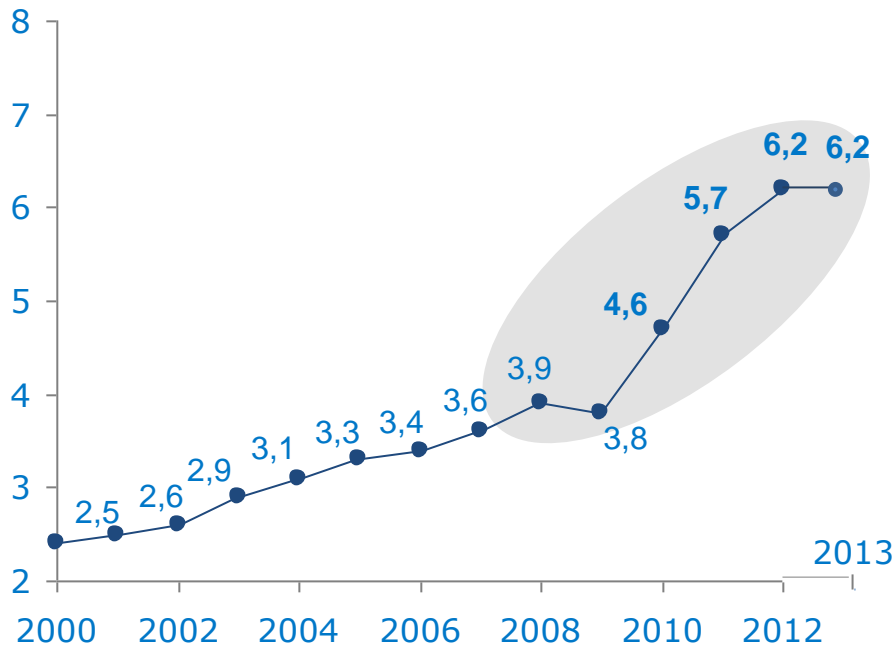




IPC Performance

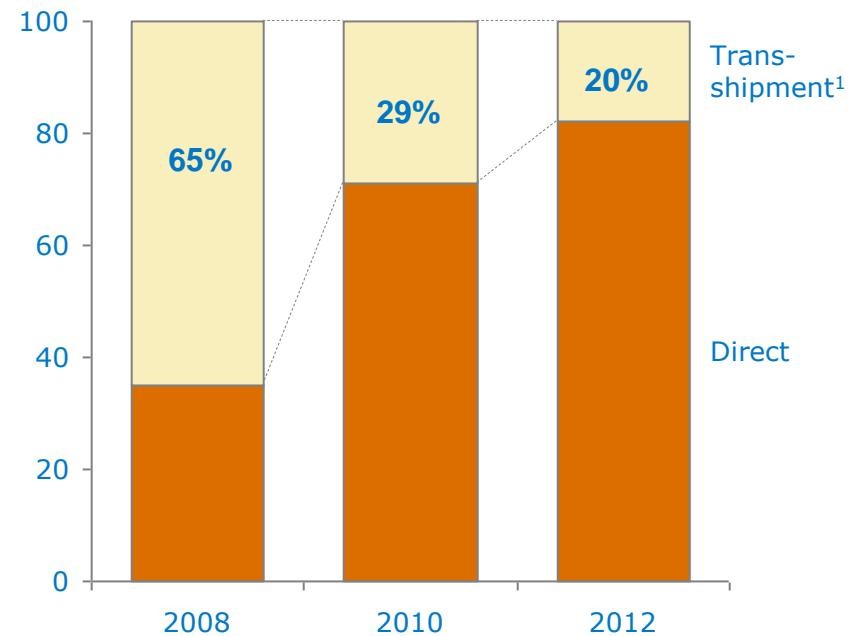
Trafik Petikemas Pelabuhan Tanjung Priok

Container traffic at Tanjung Priok (TEUs)



Tanjung Priok is becoming the direct destination port

Container traffic at Tanjung Priok (Percentage)

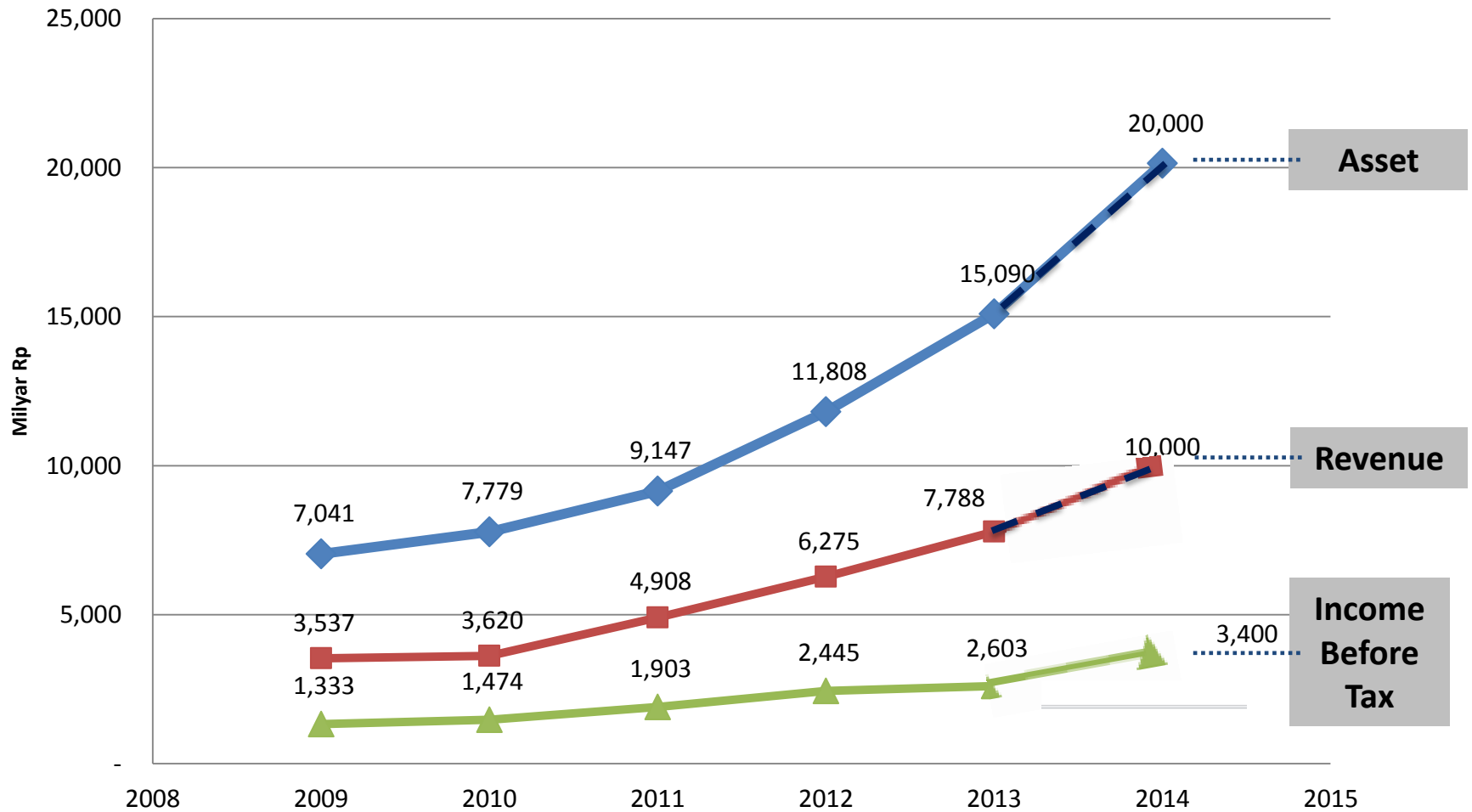


1. From Singapore, Tanjung Pelepas, and Port Klang
Source: IPC



IPC Performance

Financial Performance





***Human Capacity Development Programme
Grooming of Talent***

Human Capital Development Program

Master Program - Overseas

Region	University	People
Europe	Erasmus, KLU, IHE-DELFT, NMU, WMU, ITMMA	83
UK	Plymouth, Liverpool, Southampton, Newcastle	28
China	Shanghai Maritime Univ. Renmin Univ.	13
Australia	Victoria, Wollongong, Melbourne	3
USA	Oregon St Univ. Illinois inst. Tech. South Florida Univ.	6
TOTAL		133

Executive MBA - Overseas

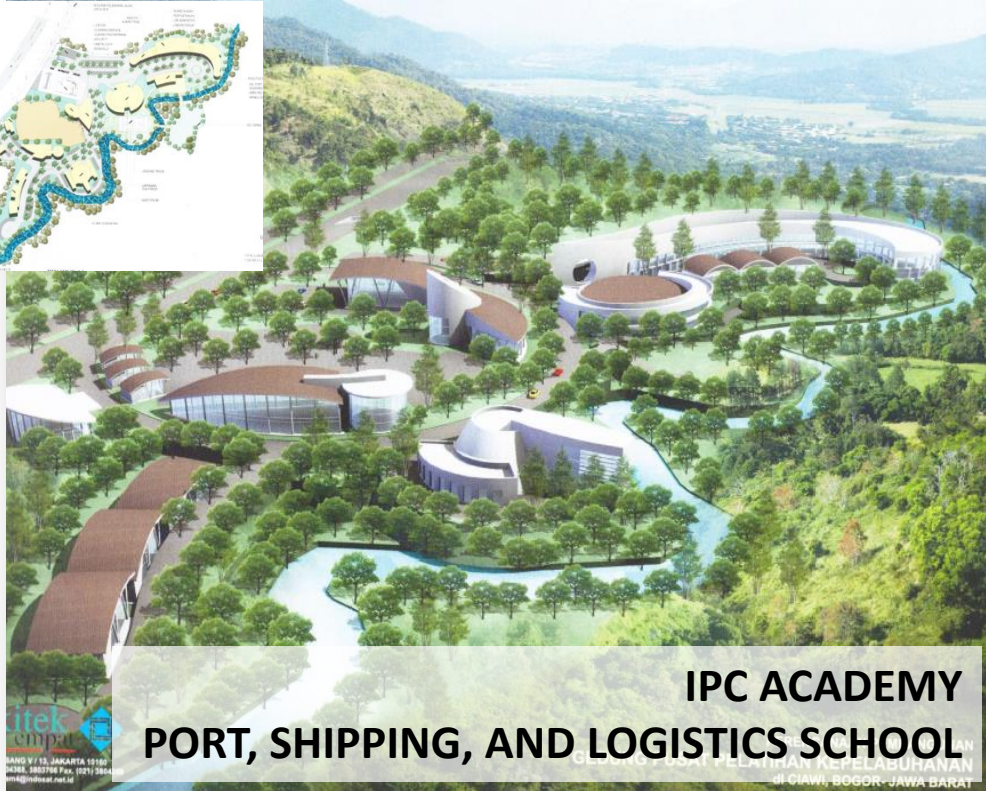
Program	University	People
EMBA – Inhouse	IPC - Kuhne Logistic University	34
EMBA – Asia Pasific	National University of Singapore (entry 2013)	2
EMBA – Overseas	National University of Singapore – UCLA (entry 2013)	1
EMBA – Overseas	IMD Business School Switzerland (entry 2013)	2
TOTAL		39

Next One Year Master Program - Overseas

Top 50 universities (Europe, UK, US) : 35 people



Human Capital Development Program



IPC ACADEMY PORT, SHIPPING, AND LOGISTICS SCHOOL



PORT TRAINING CENTER IPC

Center Of Excellence

DIDIRIKAN PADA 1976 DENGAN NAMA PERTAMA KALI "PUSAT LATIHAN TENAGA KERJA KEPELABUHAN INDONESIA", WAHANA PEMBINAAN DAN PENDIDIKAN SUMBER DAYA MANUSIA BIDANG KEPELABUHAN INI MENUNJUKKAN KEMAJUAN CUKUP PESAT. KINI LEMBAGA TERSEBUT BERNAMA PUSAT PELATIHAN KEPELABUHAN (PPK) ATAU PORT TRAINING CENTER (PTC).

PTC YANG MERUPAKAN LEMBAGA Diklat bidang kepelabuhanan pertama di Indonesia yang mendapatkan sertifikat ISO 9002 ini, dilengkapi dengan beragam fasilitas pembelajaran dan tenaga ahli pendidik dari berbagai disiplin ilmu kepelabuhanan.

Ini terkait dengan tanggung jawab PTC untuk meningkatkan kapasitas SDM IPC agar memiliki kompetensi sesuai standar internasional, sehingga dapat memberikan kontribusi maksimal bagi perusahaan.

"Kita saat ini sedang menghadapi era kompetitif, jika SDM terlambat disiapkan dan pelayanan tidak bagus, bukan tidak mungkin pelanggan meninggalkan kita ketika muncul pesaing," ujar Hendra Budhi, Kepala Unit PTC kepada IPC NEWS beberapa waktu lalu.

Mendorong Transformasi yang Excellence

Sebagai unit bisnis IPC, PTC dihadapkan tugas besar untuk dapat mendukung segala upaya perusahaan dalam bertransformasi. Tantangannya adalah peningkatan kapasitas SDM sehingga dapat memenuhi kualifikasi standar dunia.

Untuk menjawab tantangan tersebut, saat ini PTC mengintensifkan penerapan sistem *practical approach* yang merupakan pengajaran berbasis demonstrasi, simulasi,

Under Construction



Productivity & service improvement programme

Port of Tanjung Priok

Procurement new handling equipment and improvement of facilities



Port of Tanjung Priok



Port of Tanjung Priok



Port of Tanjung Priok





Hard infrastructure improvement

Case Study : Pengerukan alur pelabuhan Bengkulu



Kinerja	Sebelum 2011	Setelah 2011
Kedalaman Alur	-3.5 LWS	-12 LWS
Ukuran Kapal	Max 1.200 DWT	Max 30.000 DWT

Pelabuhan Bengkulu dari yang sebelumnya selalu mengalami **kerugian** menjadi **untung mencapai Rp 100 miliar (2012)**

TAHUN 2013 DIKERUK MENJADI -14 M LWS





Procurement new handling equipment

Port of Panjang



1 unit QCC Twin Lift
4 units Gantry Jib Crane
2 units Luving Crane



-  New Equipment
-  Existing Equipment



Procurement new handling equipment

Port of Pontianak



2 unit QCC Twin Lift
4 units RMGC
3 units Gantry Jib Crane



■ New Equipment
■ Existing Equipment



Procurement new handling equipment

Port of Palembang



2 unit QCC Twin Lift
4 units RMGC
4 units Gantry Jib Crane



■ New Equipment
■ Existing Equipment



Procurement new handling equipment

Port of Teluk Bayur

7 units Gantry Luffing Crane
3 units RTGC



- New Equipment
- Existing Equipment



Procurement new handling equipment

Port of Jambi



2 units Fixed Luffing Crane
3 units RMGC



Procurement new handling equipment

Port of Pangkal Balam

1 unit fix Jib Crane

1 unit platform fix jib crane



- New Equipment
- Existing Equipment



Procurement new handling equipment

Port of Ciwandan



4 units Gantry Luffing Crane



IPC programme & development

NewPriok Port development

NewPriok terminal development plan



NewPriok terminal development plan

Port Access Road Project



PILING OF CONTAINER YARD 1A



PILING OF CONTAINER YARD 1A



PILING OF CONTAINER YARD 1A



PILING OF CONTAINER YARD 1A



PILING OF CONTAINER YARD 1A



PILING OF CONTAINER YARD 1A



PILING OF CONTAINER YARD 1A



PILING OF CONTAINER YARD 1A



Break Water



Break Water





Rock & A-jack at Bojonegara



Break water





Tanjung Priok Car Terminal expansion

Tanjung Priok Car Terminal Development

PT. Indonesia Kendaraan Terminal



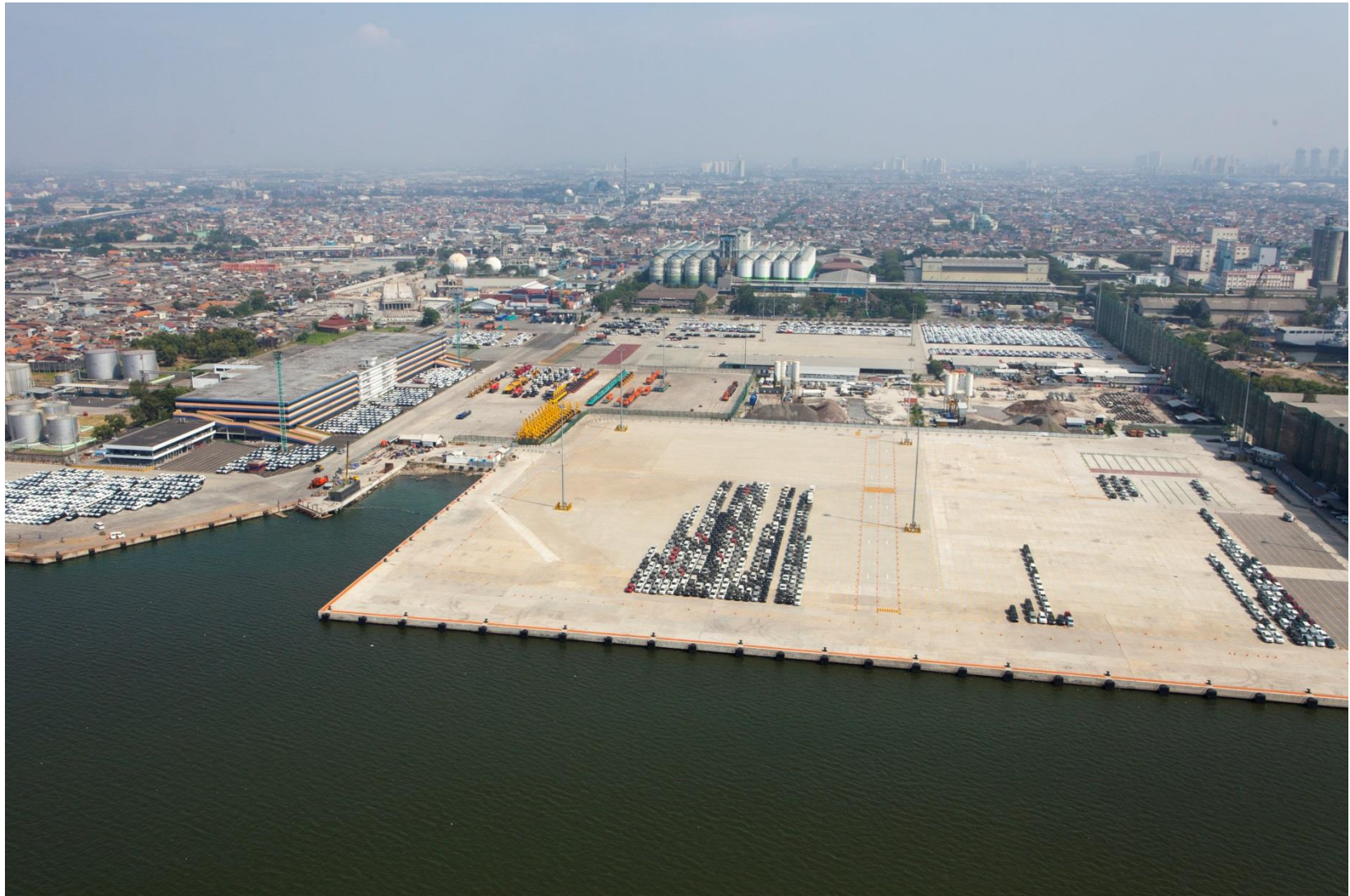
Kapasitas Lapangan yang semula
250.000 unit
dikembangkan menjadi
750.000 unit pada tahun 2014

-  **Area Eksisting**
-  **Area Pengembangan**



Tanjung Priok Car Terminal Development

PT. Indonesia Kendaraan Terminal



Indonesia logistics Community Service

INDONESIA Port Community System (PCS)

www.inaportnet.com

As a soft-infrastructure for Indonesian Port Community



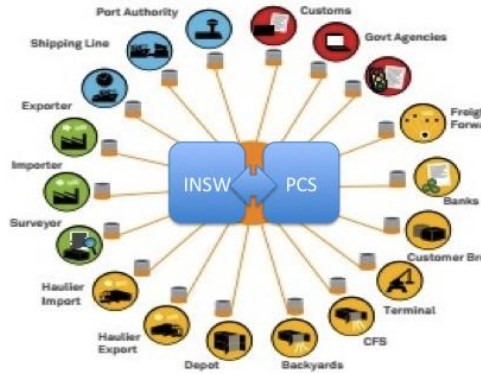
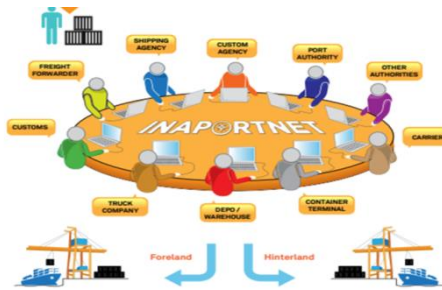
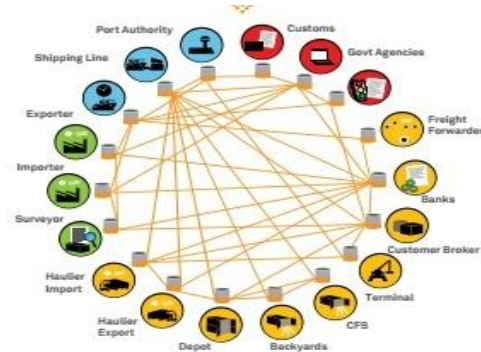
...visibility, trace-tracking of logistics value chain....

IMPLEMENTASI DI PELABUHAN TANJUNG PRIOK



PCS (PORT COMMUNITY SYSTEM) di DUNIA

Negara dengan performansi logistik hebat memiliki PCS, yang bersama NSW, mengintegrasikan B2B2G dan Intermoda melalui platform elektronik



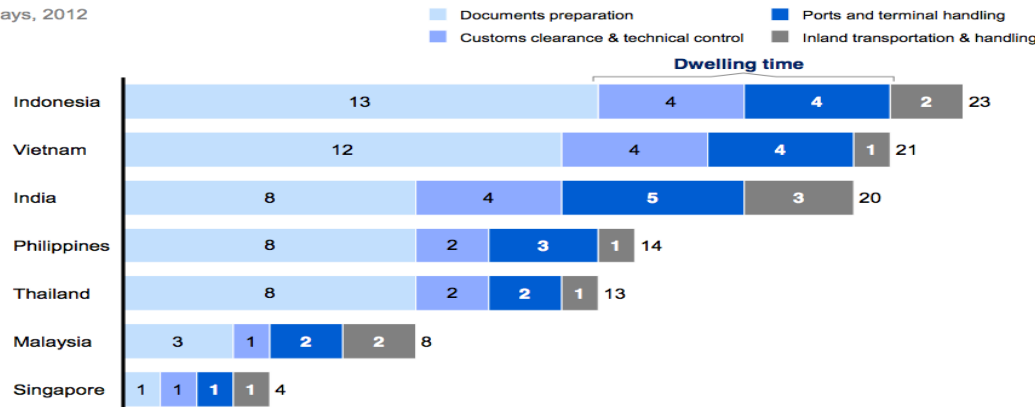
REF

France (soget.fr), Belanda (portbase.com), Malaysia (dagang.net), Korea (klnet.co.cr), Jepang (naccs.jp), Jerman (dakosy.de), Spanyol (portic.net), Singapura (por.net.com), Hongkong (tradelink), India (npa)

OPS

- Hubungkan Otoritas Pelabuhan, BeaCukai dan Terminal (Trade & Port & Logistics)
- Dioperasikan kemitraan public-private (PPP) dg operasi nasional atau multiport
- Semua PCS yang beroperasi terhubung dg BeaCukai (langsung/tidak)

Days, 2012

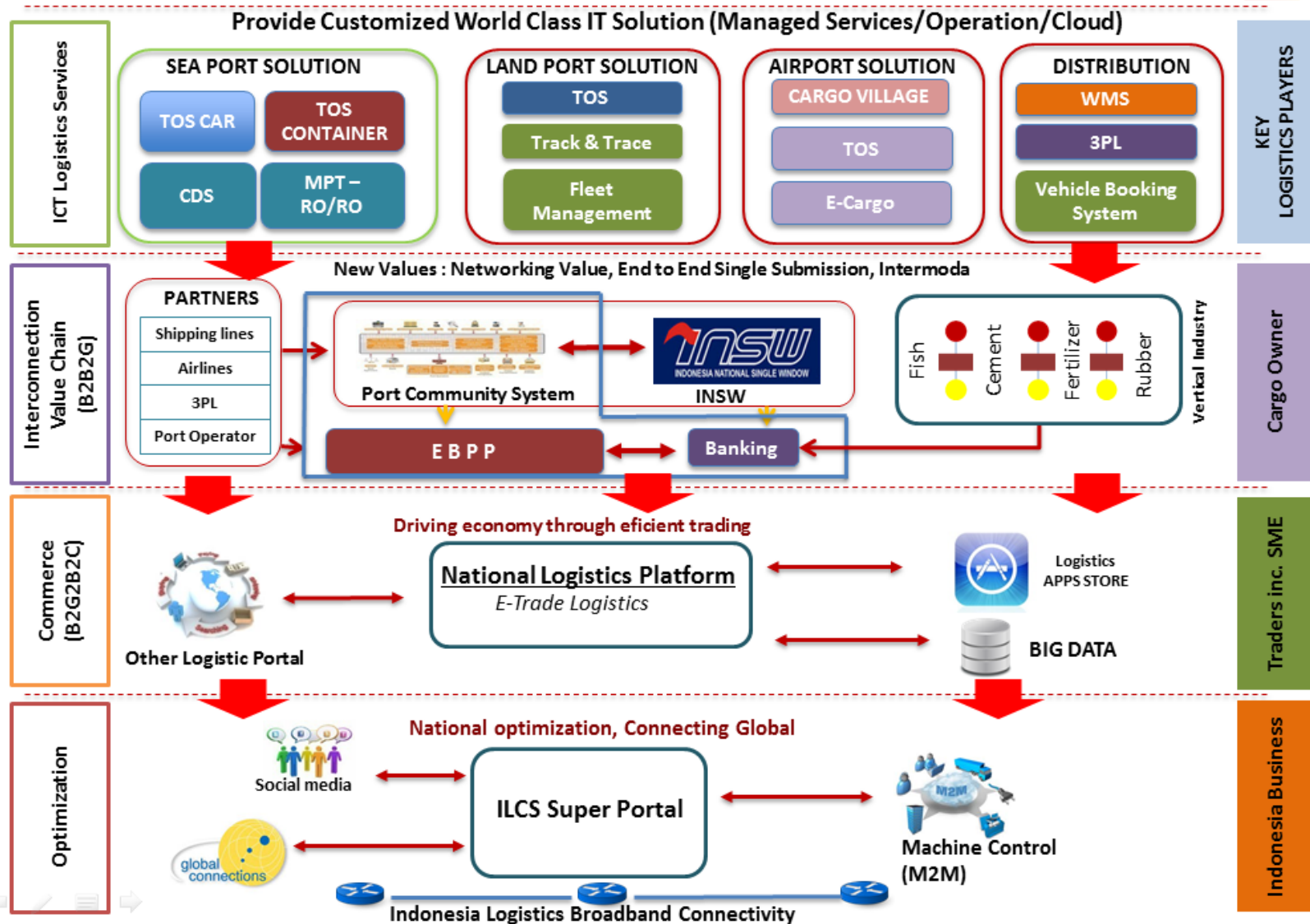


The duration of Import procedures

Nature of Import Procedures	Thailand		Indonesia	
	Duration (days)	US\$ Cost	Duration (days)	US\$ Cost
Documents preparation	8	135	13	210
Customs clearance and technical control	2	255	4	125
Ports and terminal handling	2	160	4	165
Inland transportation and handling	1	210	2	160
Totals	13	760	23	660

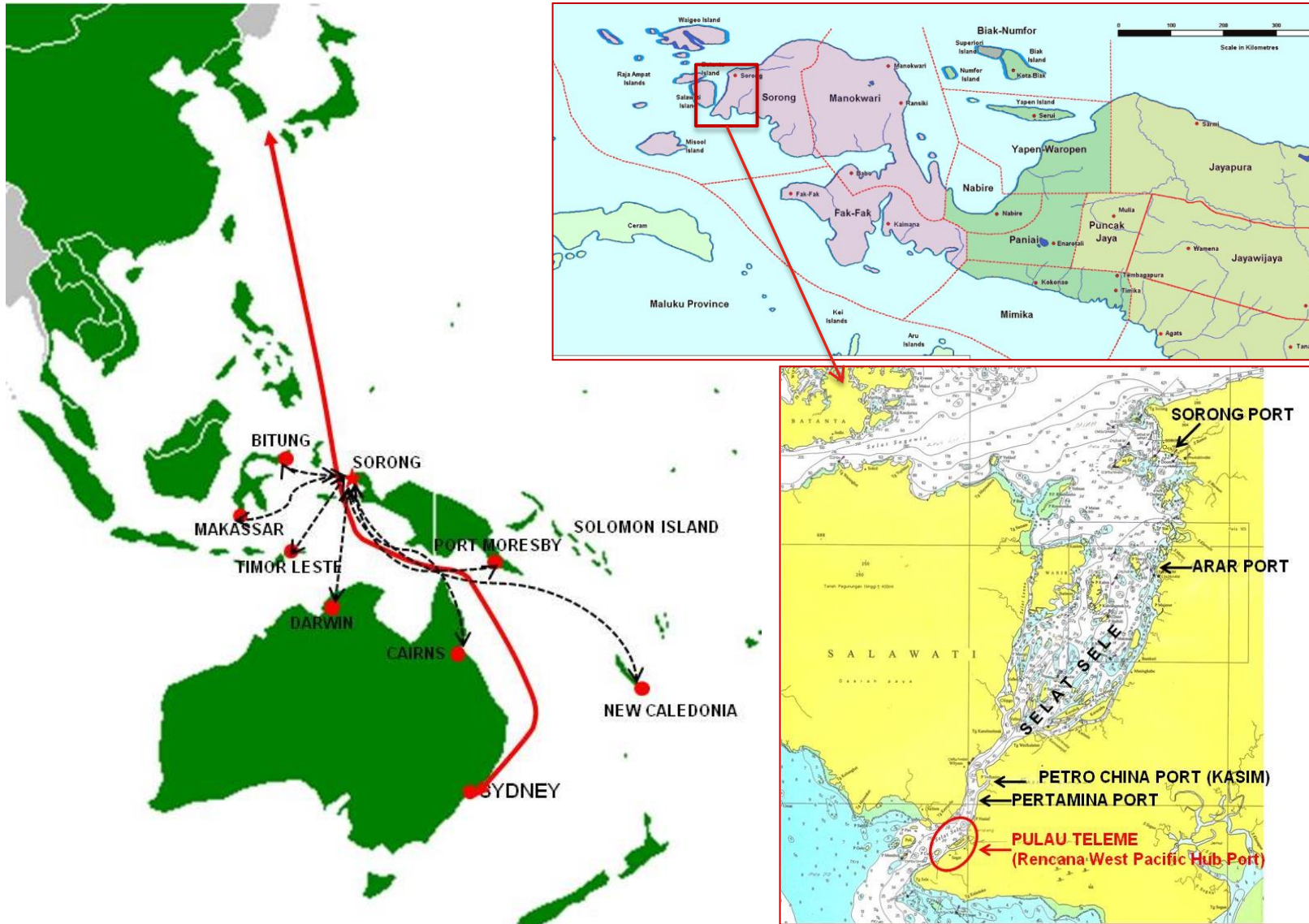
LPI Rank 2014 (53)

ILCS SERVICE MAP: 2013-2017



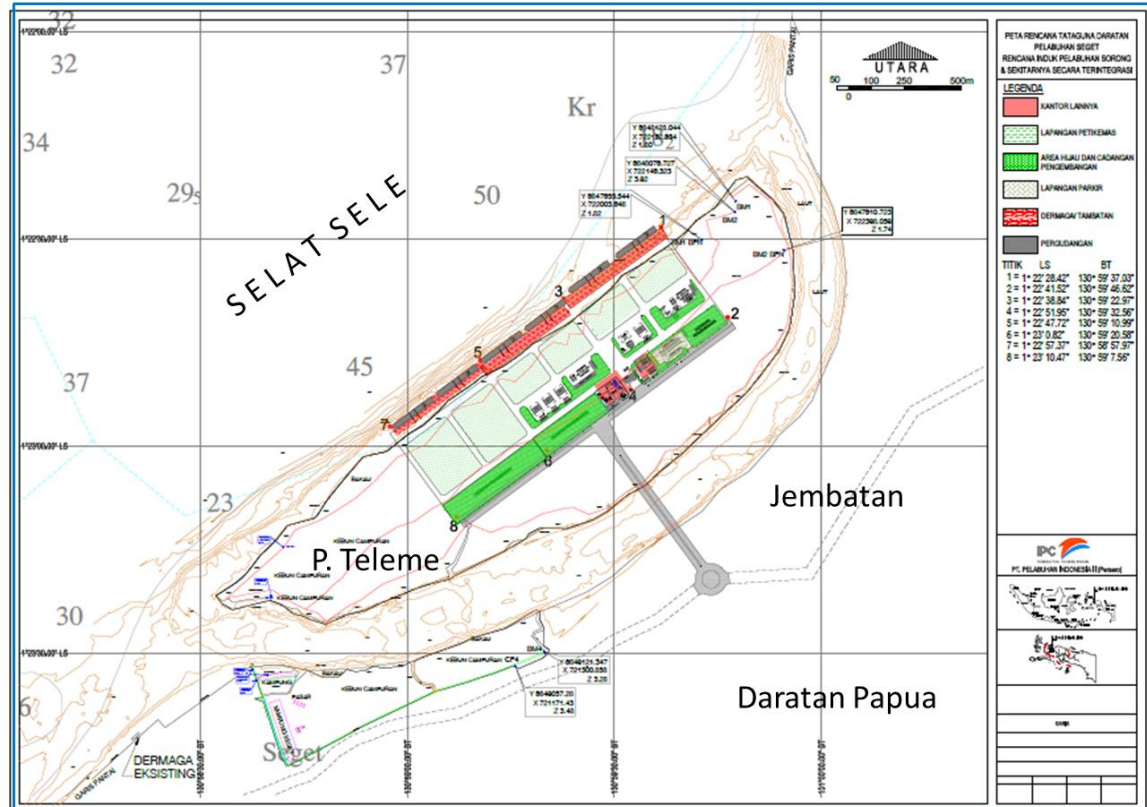
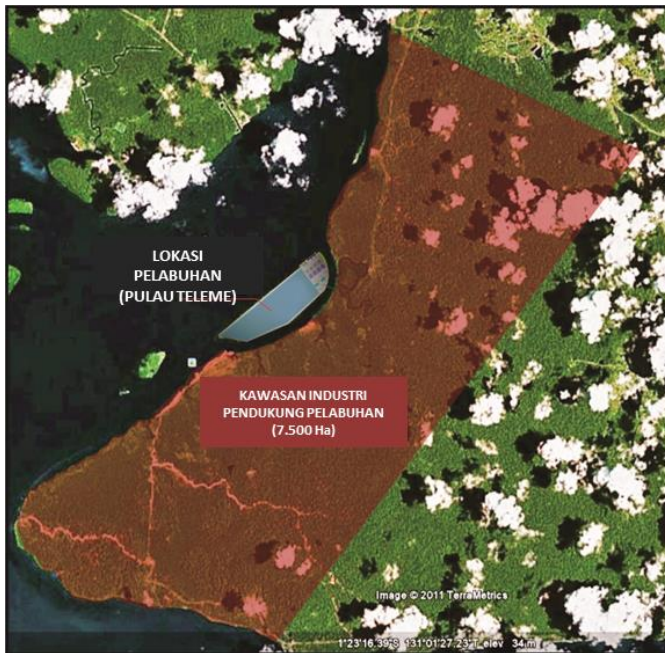
***SORONG – West Pacific Hub Port
Development project***

SORONG - West Pacific Hub Port development project



SORONG - West Pacific Hub Port development project

Rencana Peruntukan Daratan



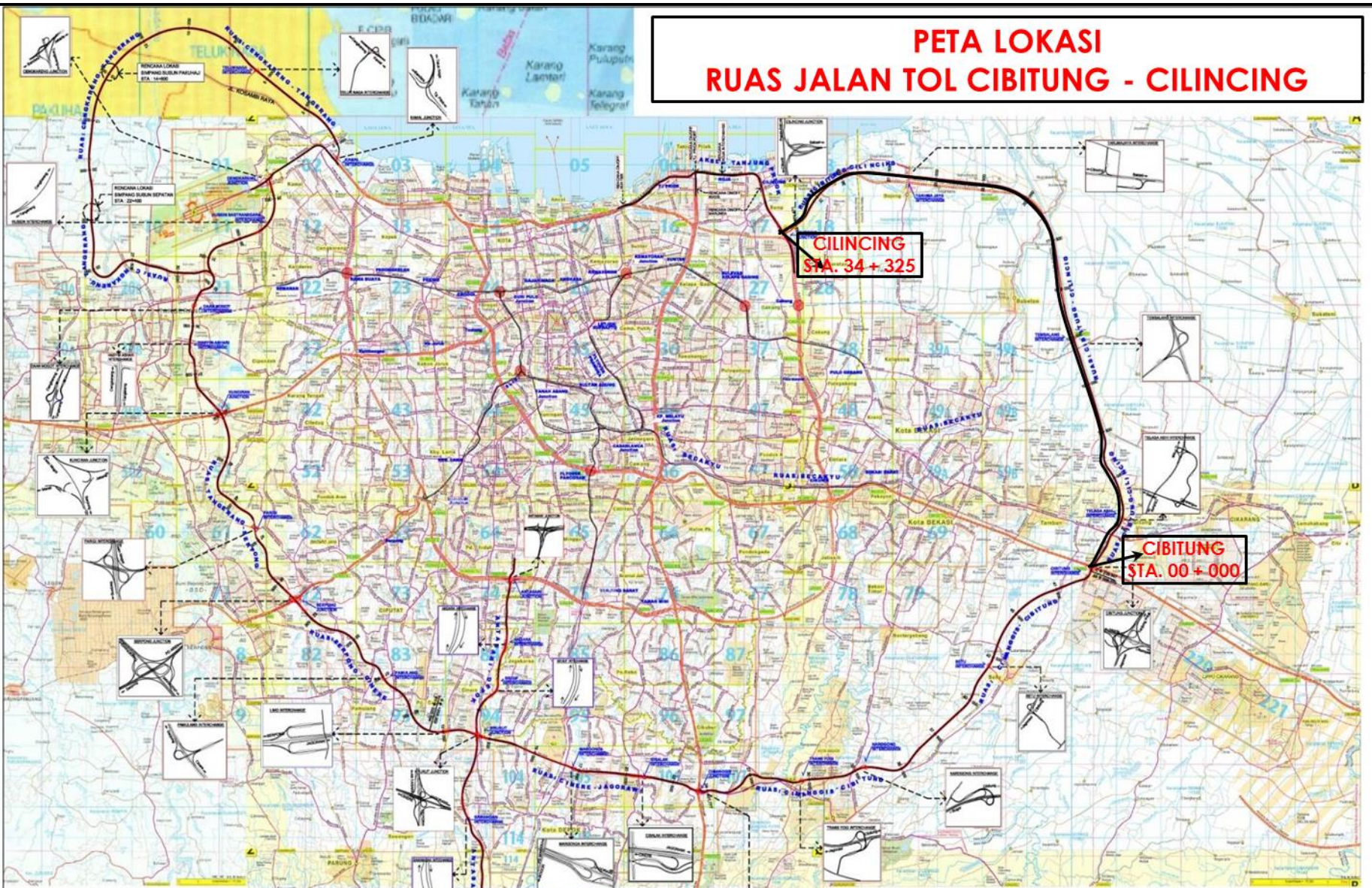
***KIJING – International Port in West Kalimantan
Development project***

KIJING – International Port in West Kalimantan development project



Rencana akuisisi jalan Tol Cibitung - Cilincing

PETA LOKASI RUAS JALAN TOL CIBITUNG - CILINCING



RUAS TOL DILUAR JORR II

1. Akses Tanjung Priok
 2. Depok - Antasari
- ## RUAS DKI JAKARTA
1. Rawa Buaya - Sunter
 2. Tanah Abang - Ulujami
 3. Duri Pulo - Rampung Melayu
 4. Casablanca - Pasar Minggu
 5. Kemayoran - Kampung Melayu
 6. Sunter - Pulogebang

*Road & Highway Team
Berkah Nugroho
M. Nurul
Cahyo Nugroho
Agus Subagyo
Denny Ginting Rr
Edi Mulyana
Aur Ediana
Hilmi Rafi*

JALAN TOL JAKARTA OUTER RING ROAD II (JORR II)

Ruas Jalan Tol	KepMen 369/KPIS/M/2005, 18 Agustus 2005
Seksi WW1 = Kamal - Teluk Naga - Batu Ceper	Tol Tangerang/Merak - Tangerang - Teluk Naga - Sedyatmo
Seksi WW2 = Cengkareng - Batu ceper - Kunciran	Tol Tangerang/Merak - Tol Serpong
Seksi WW3 = Kunciran - Serpong	Tol Serpong - Cinere
Seksi SS1 = Serpong - Cinere	Tol Jagorawi - Cinere
Seksi SS2 = Cinere - Cimanggis (Jagorawi)	Tol Jagorawi - Tol Jakarta/Cikampek
Seksi EE1 = Cimanggis (Jagorawi) - Cibitung	Tol Cikarang - Tanjung Priok
Seksi EE2 = Cibitung - Cilincing	

Connecting port and logistic park and industrial area





Cibitung - Cilincing Toll Road ("CTR") 34.8 Km
*konstruksi terhambat pembebasan lahan
(tanggung jawab pemerintah)

Tj Priok Access Toll Road ("TPA TR")
*Tahap Konstruksi (Selesai 2015)

Kalibaru South Access ("SA") 3.2 Km
*Tahap Konstruksi (Selesai 2015)

Marunda East Access ("EA") 5 Km
*Tahap Pre-FS (akan dibangun bila kapasitas jalan khusus "SA" terlampaui)

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Image © 2014 TerraMetrics



IPC finance 3 major maritime studies

Indonesia Maritime Strategy Reform



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Improving National Freight Logistics



THE WORLD BANK | BANK DUNIA
Sharing Development Solutions
for an Emerging Indonesia



Port Development Priority Projects and Financing Strategy

Indonesia Maritime Strategy Reform





Supply chain flow review

IMPACT ON GDP

We assessed the potential impact by looking at key signature products, covering all regions and maritime transportation modes



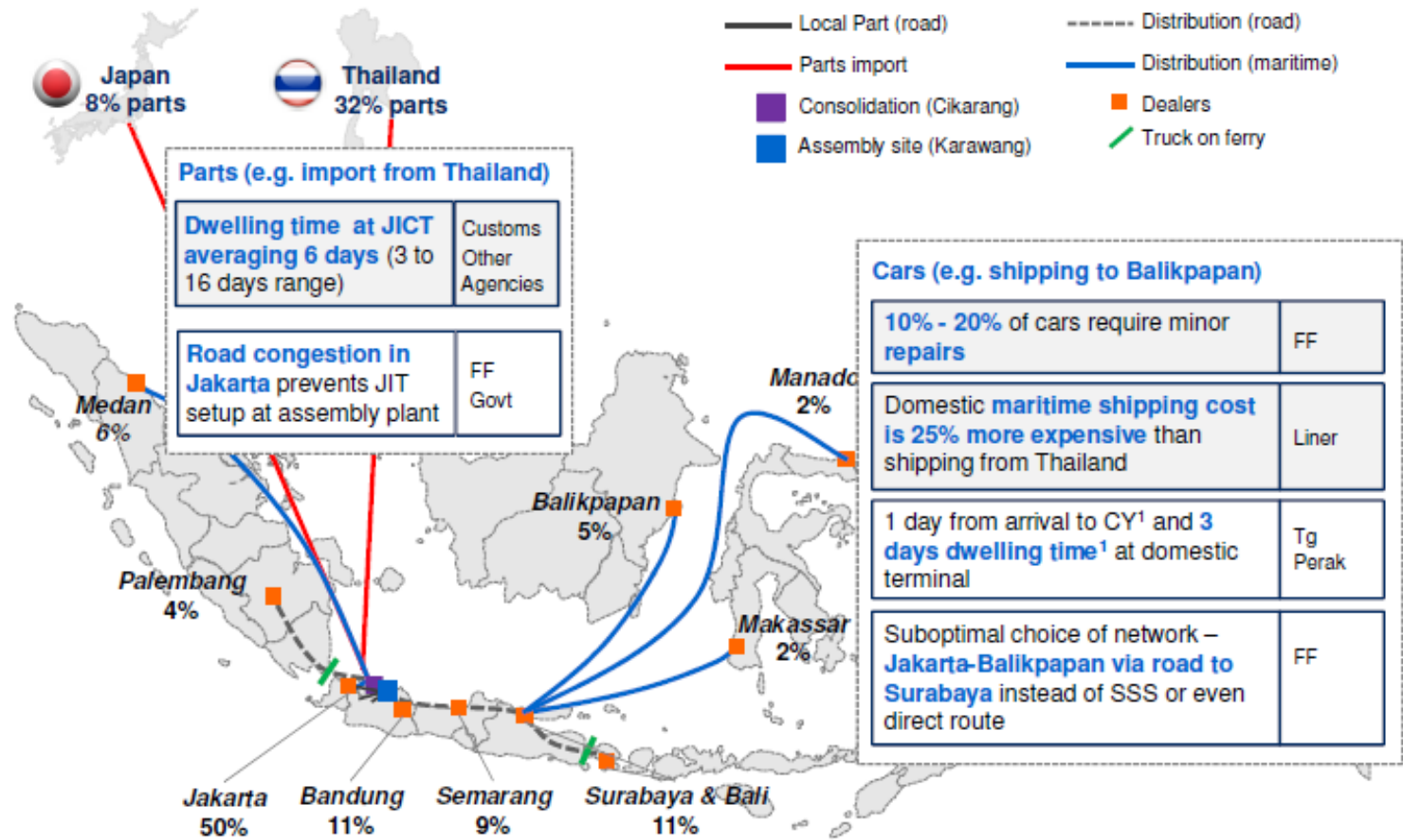
1 Scale up to sub-industries based on GDP categories

2 Allocation to manufacturing category of textile, consumer electronics, and wood products based on the weighted average of their GDP contribution



SUPPLY CHAIN FLOWS – AUTOMOTIVE EXAMPLE

For example, issues identified in the supply chain of large car OEM were import dwelling time, high repair rate and domestic cost of sea voyage



SOURCE: Expert interviews, Team analysis



SUPPLY CHAIN FLOWS – SUMMARY

Overall, while similar symptoms emerged during our diagnostic, root causes significantly differed from product to product

Common symptoms contribute to most savings potential across products

- Suboptimal **choice of logistics route** – e.g. Jakarta to Balikpapan by truck+sea instead of direct sea
- Long time spent by vessels at ports, driven by low port productivity (7-11 GMPH) and high waiting time at anchorage (27-47h)³

- **High dwelling time** – e.g. average of 6 days for cars at Tg Priok (2013)

- High **direct cost of sea transportation** – e.g. Surabaya – Balikpapan 25% more expensive than Bangkok - Jakarta

- High **direct cost of land transportation** as % of GDP – 1.8x as large as Thailand

- **Land congestion** – e.g. 17 hours drive from Tangerang to Tg Priok



However, root causes differ – dwelling time is driven by different forces depending on the signature product

Key steps and observations during import process

Who	Key steps and observations during import process	Product Category
Liners	<p><i>Submit manifest to customs</i></p> <ul style="list-style-type: none"> ▪ Delays in manifest submission may result in document disputes 	Paper
Liners / Shippers	<p><i>Acquire permit from related agencies</i></p> <ul style="list-style-type: none"> ▪ Challenge to receive approvals from all agencies on time to submit PIB 	TV, Import food, Cars
Shipper	<p><i>Submit import documents (PIB¹)</i></p> <ul style="list-style-type: none"> ▪ Delay submission of PIB to keep cargo at CY longer (cheaper than warehouse) 	Small Textile
Customs	<p><i>Review PIB and issue permit (SPPB²)</i></p> <ul style="list-style-type: none"> ▪ Systematic downgrade of some raw material, even if the 	Paper
Shipper	<p><i>Move cargo out of port</i></p> <ul style="list-style-type: none"> ▪ Customers have 3 more days to move cargo after SPPB is issued 	Small Textile

1 Pemberitahuan Impor Barang (Import declaration); 2 Surat Persetujuan Pengeluaran Barang (Letter of approval for cargo release)

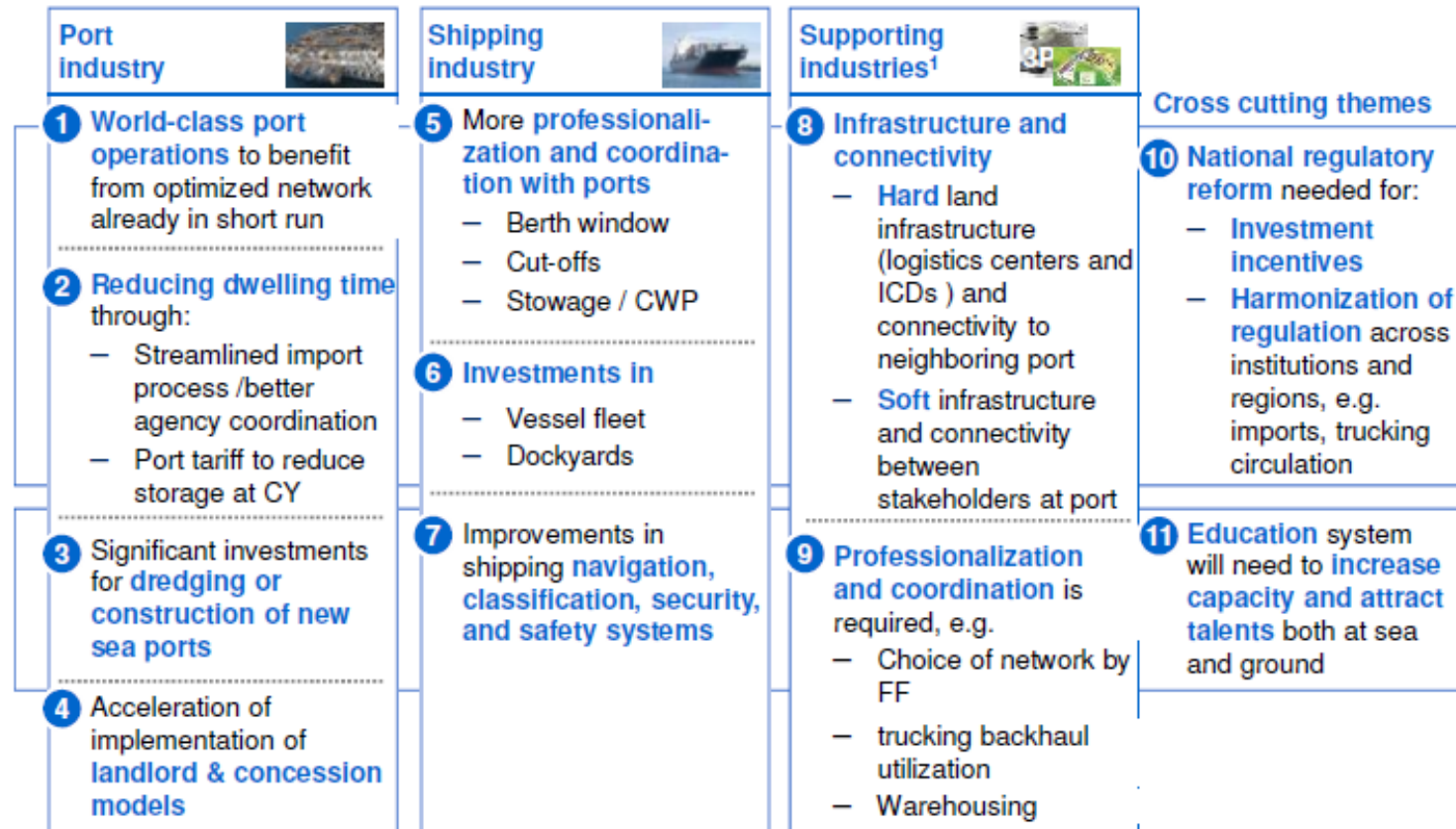
3 Range between lowest and highest average performance at main, Asean 2015 and secondary ports

SOURCE: Maritime Logistics Study Phase 1



A number of key short and long term reform themes

As a result, a number of key short and long terms reform themes



¹ Trucking, Logistics centers/ICD, FF and 3PL, Education
SOURCE: Team analysis



Key reforms need to be synchronized to ensure measurable improvements by 2030

improvements by 2030

		2016 "Capture quick wins"	2020 "Make deep change happen"	2030 "Prevail, become regional leader"
Port Industry reform	Port infrastructure	<ul style="list-style-type: none"> Plan for investments in all ports and update NPMP 	<ul style="list-style-type: none"> Execute port capacity extension at all ports, in line with 2020 traffic projections 	<ul style="list-style-type: none"> Execute port capacity extension at all ports to meet 2030 demand
	Port Ops	<ul style="list-style-type: none"> Roll out operations improvements at priority ports 	<ul style="list-style-type: none"> Ensure implementation of new Shipping Law prescription 	<ul style="list-style-type: none"> Ensure continuous improvement of operations at all ports to reach best-in-class performance
	Regulation	<ul style="list-style-type: none"> Revise tariff structure to discourage storage at ports 		
	Tariffs			
Shipping Industry reform	Fleet	<ul style="list-style-type: none"> Introduce 3,000TEU vessels 	<ul style="list-style-type: none"> Introduce 5,000TEU vessels 	<ul style="list-style-type: none"> Introduce 10,000TEU vessels
	Liner Ops	<ul style="list-style-type: none"> Implement Operations "quick wins", i.e. fixed berth window 	<ul style="list-style-type: none"> Apply regulatory support changes 	<ul style="list-style-type: none"> Reach ops best practices
	Dockyard	<ul style="list-style-type: none"> Increase dockyard capacity to cover repair of current fleet 	<ul style="list-style-type: none"> Increase dockyard capacity 	<ul style="list-style-type: none"> Invest in new dockyard capacity for 10,000TEU vessels repair
Supporting Industries reform	Logistics centers	<ul style="list-style-type: none"> Plan for new logistics centers around Indonesia and enhance connectivity to existing centers 	<ul style="list-style-type: none"> Develop new logistics centers to meet 2020 demand 	<ul style="list-style-type: none"> Develop new logistics centers in line with 2030 demand projections and develop/enhance connectivity
	Connectivity		<ul style="list-style-type: none"> Ensure robust process for trucking regulation harmonization 	
	Support Ops	<ul style="list-style-type: none"> Enhance coordination and professionalization of supporting services at priority ports 	<ul style="list-style-type: none"> First graduation of students at pilot universities and sailors at vocational schools 	<ul style="list-style-type: none"> Fully scaled education program in place for all professions in logistics industry
	Regulation			
	Education			



The cost-optimized 2030 network developed in Phase 1 underlined the need for 21 port cities to significantly increase capacity and accommodate (post) panamax vessels



- **Dredge ports and access to ports** to host 12.5 meter draft (5,000TEU) or 15.2 meter (10,000TEU)
- **Build new sea ports** if existing ones cannot structurally increase draft (such as Belawan, Palembang)

1 Kuala Tanjung; 2 Teluk Bayur; 3 Currently containers in Pekan Baru
SOURCE: Team analysis

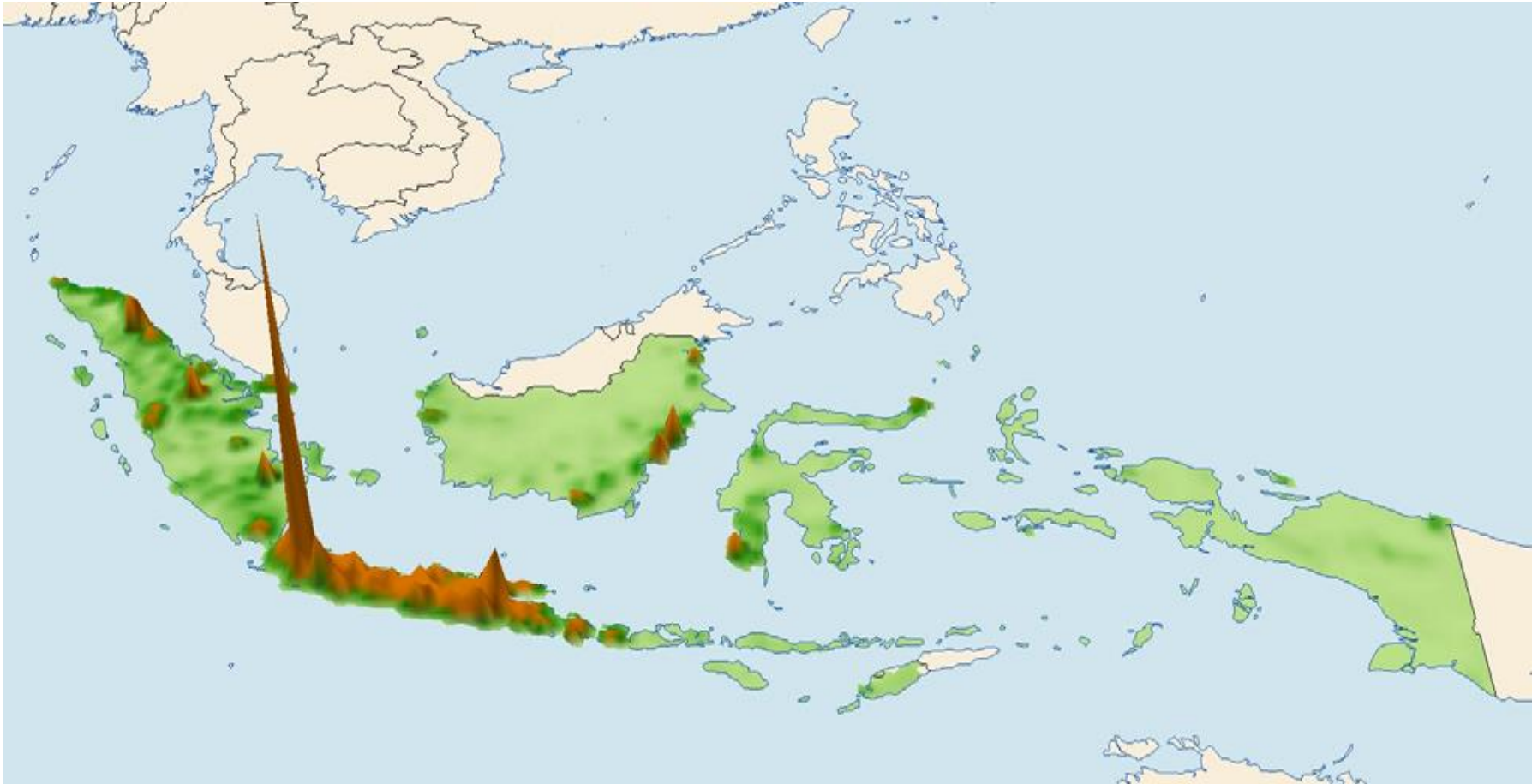


*Reducing Domestic Logistic Cost through
Pendulum Nusantara*

Background

1. Pertumbuhan ekonomi Indonesia yang tidak merata

Distribution Map of Economic Growth in Indonesia

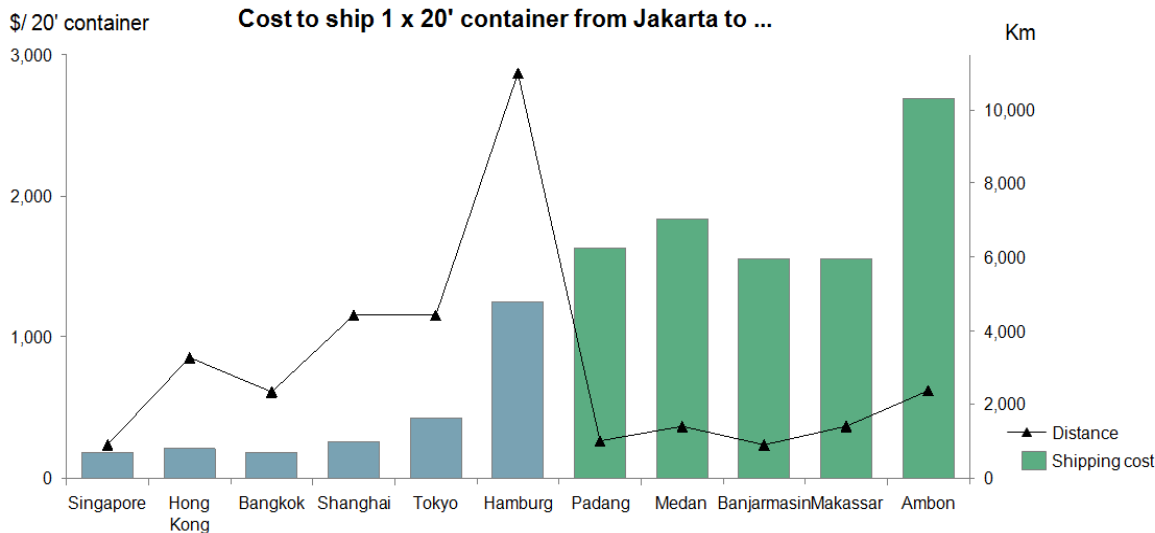


Source : World Bank

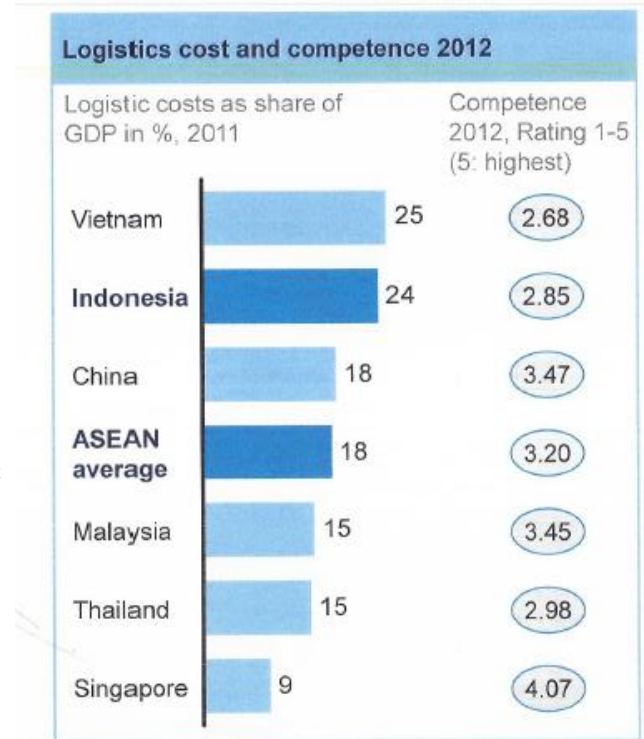


Background

2. Logistics Cost yang tinggi untuk distribusi barang ke Indonesia Timur



Lebih murah pengiriman barang dari Jakarta ke Hamburg (11.000 km) daripada dari Jakarta ke Padang (1.000 km)



Source: Quotes from domestic logistic company, 2012

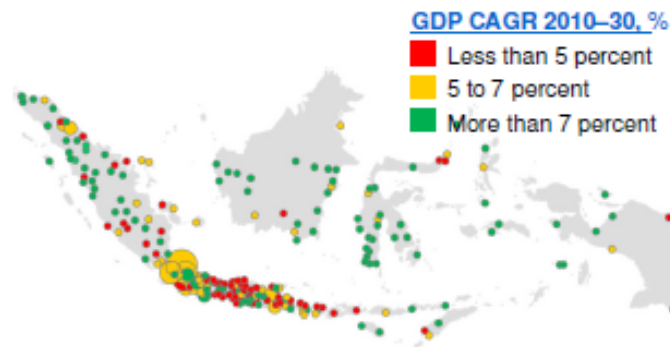
Source: McKinsey Study



While growth projections outside java justify developing ports in these regions, concentrating all international traffic in 2 gateways will not resolve Indonesia's competitiveness issues

Growth in economies outside of Java calls for development of ports

- >80% of international traffic in 2009 was handled by ports in Java with Jakarta and Surabaya as the main gateways
- Growth is expected outside of Java



- Domestic ports need to be developed to accommodate higher volume of traffic and reduce cost of logistics through performance

However, limiting international traffic to just two gateways will be counterproductive

- MP3EI's two-gateway concept was conceived to protect the country from ASEAN 2015 Economic Community's point-to-point threat¹



- This concept poses harm to domestic economy

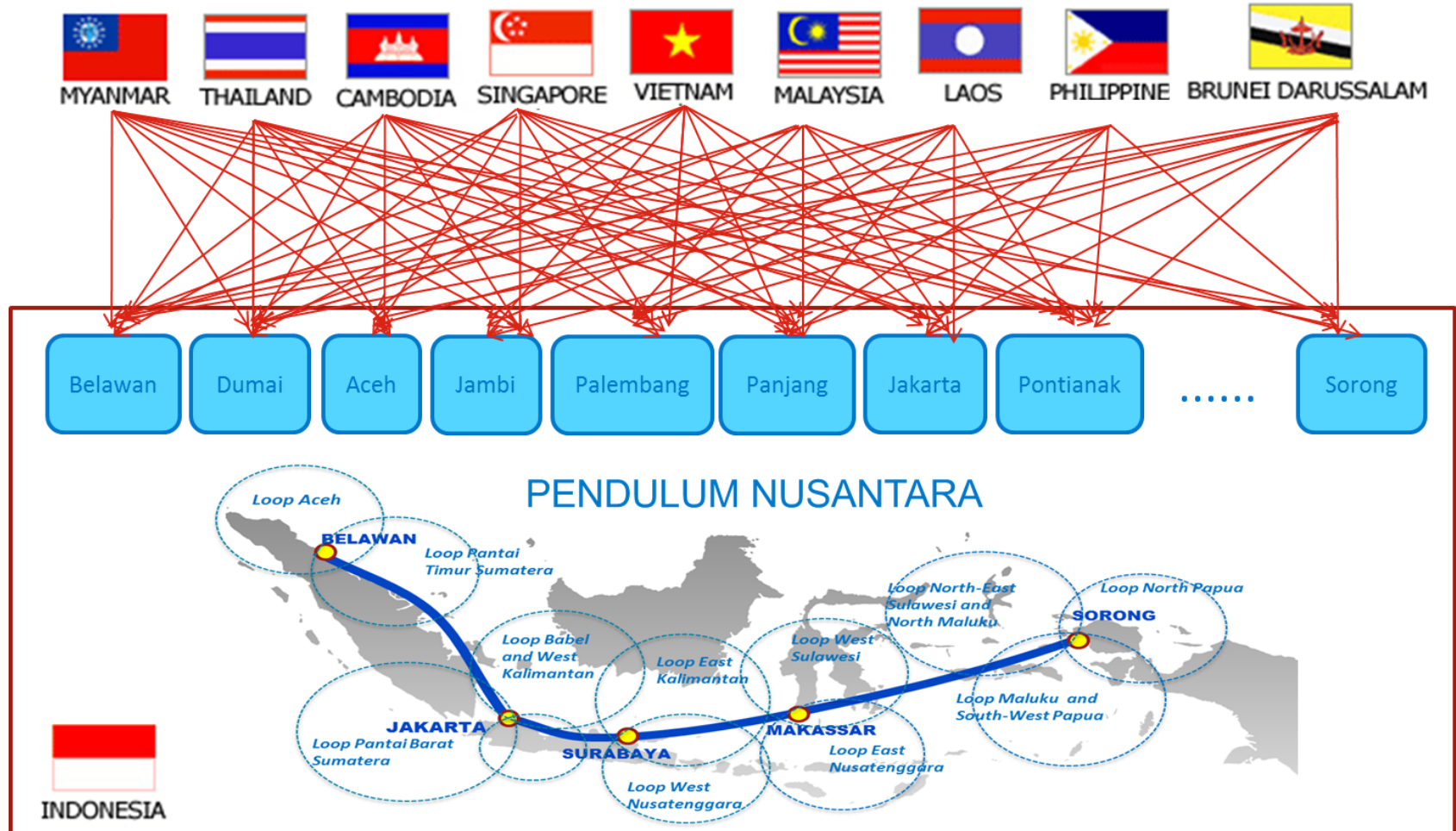
Purpose	Impact	Rationale
▪ Protect local industries	+	▪ Higher cost of import
▪ Protect domestic shipping	+	▪ Only 2 ports allowed for international
▪ Decrease cost of logistics	-	▪ Little incentive to improve ▪ Suboptimal choice of logistic routes
▪ Help Indonesian export industries	-	▪ Higher logistics cost for exports

¹ Intent is to keep international volume low by decreasing capacity available in all other ports. This will not violate ASEAN EC as no specificity is outlined on how countries have up to December 2015 to "meet the acceptable performance and capacity levels" on agreed-upon 47 ports

SOURCE: MP3EI, McKinsey Global Institute, Network 2030 model, KP3EI interview, team analysis

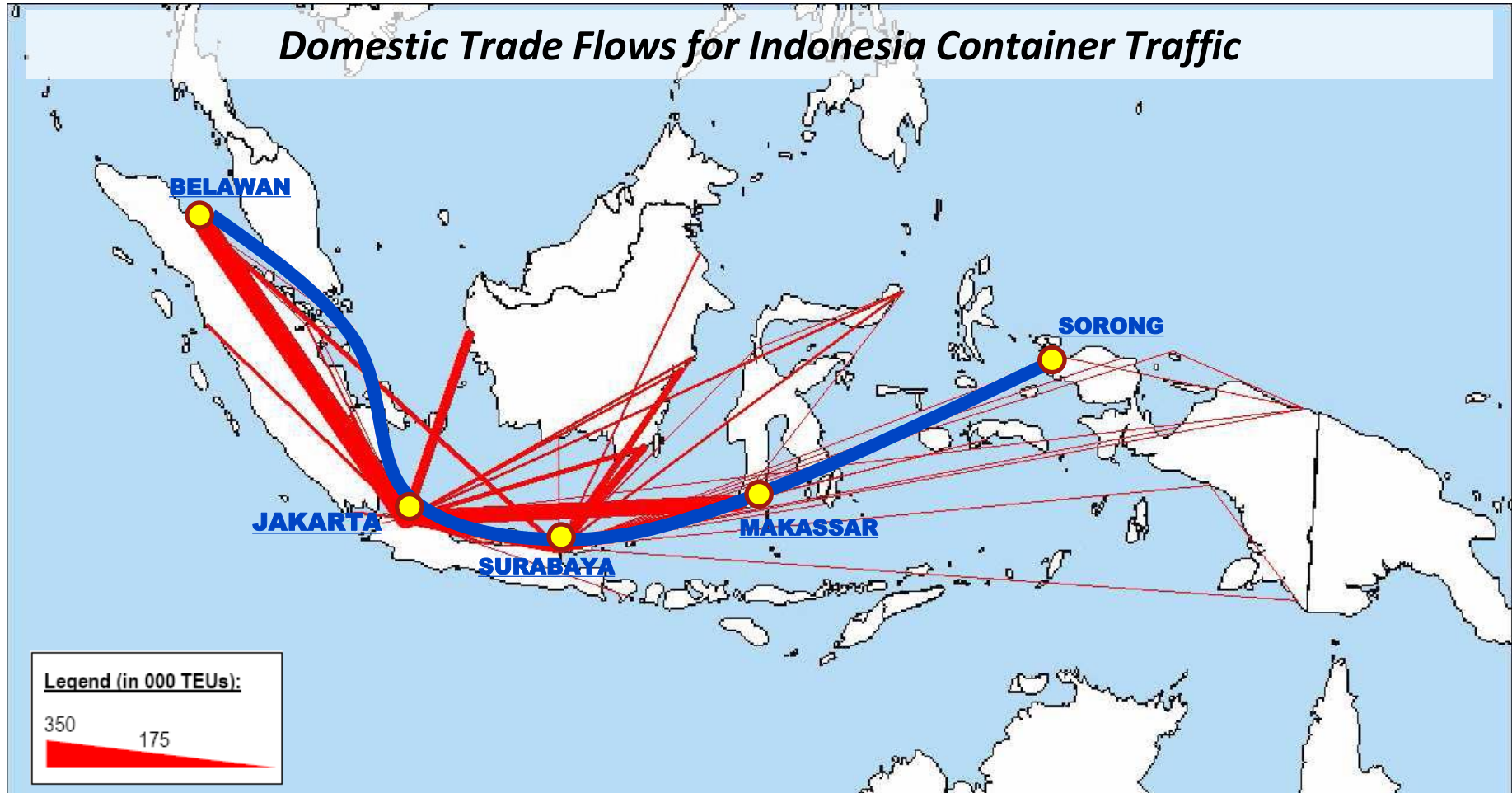
Background

3. Mempersiapkan diri dalam rangka menghadapi ASEAN Free Trade Area (AFTA) 2015



Pendulum Nusantara

Reducing logistics cost and boosting domestic trade

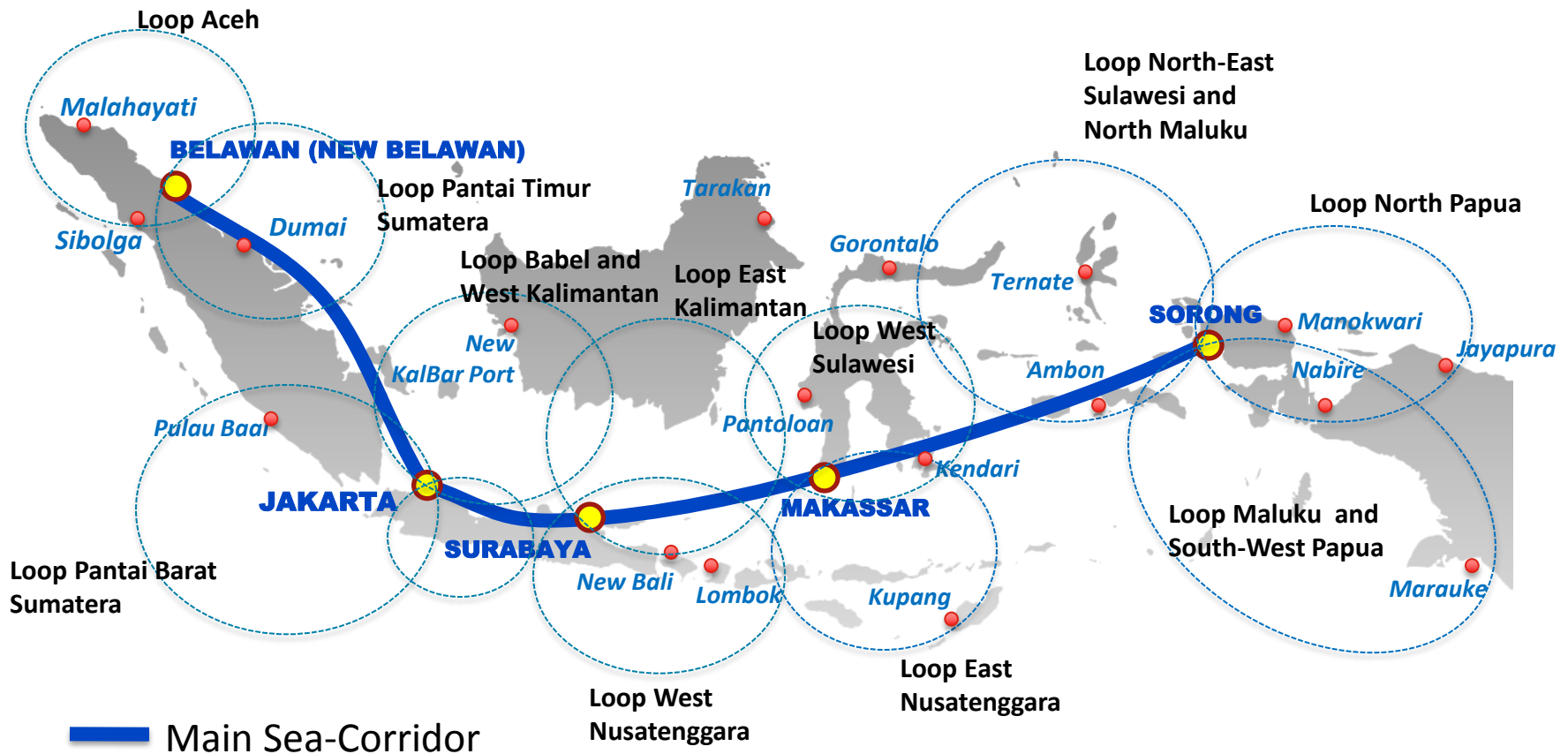


PELABUHAN YANG PERLU DIKEMBANGKAN: BELAWAN, JAKARTA, SURABAYA, MAKASSAR DAN SORONG



Pendulum Nusantara

Development Scheme of Pendulum Nusantara's Main and Sub Corridor



Sumber: IPC (2012)



NETWORK 2012 – OPTIMIZED

If these issues were addressed today, the domestic network in the country would be significantly consolidated and result in lower sea voyage costs

2012 current network is point to point with 4 major hubs



Optimized network based on port performance aspirations and cost-minimization has transshipments and features sub-hubs



5,000TEU   Major ports
 Major regional ports

	Current network	Improved handling & Cost optimization
Transshipments	0%	11%
Vessel utilization	41%	67%
Number of vessels	274	121
Avg vessel size, TEU	~700	~1,500
Cost per TEU, USD	366	191

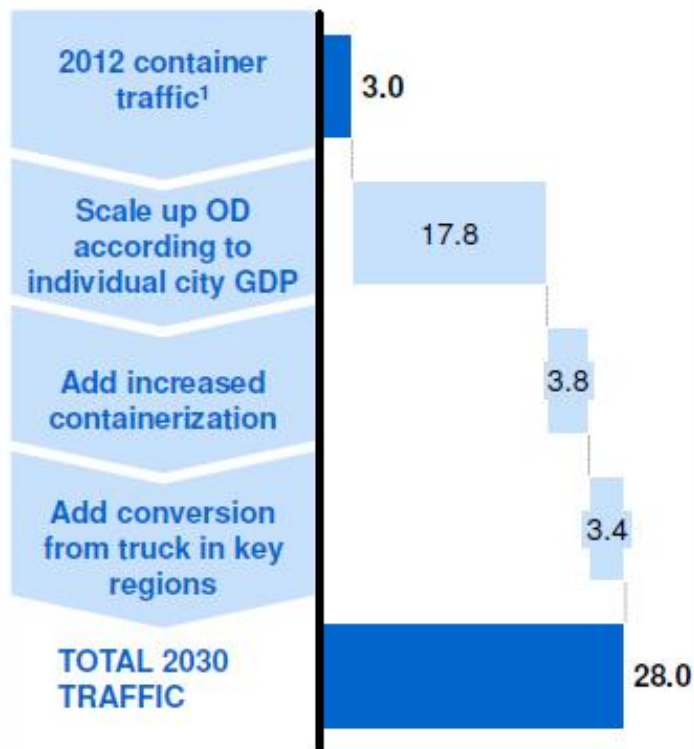
SOURCE: MOT, Tg Priok O&D, World Fleet Register Report, Network model output, Team analysis



NETWORK 2030

Looking forward, traffic will increase 9 times by 2030 to drive planned country growth, requiring investments in ports and container vessels

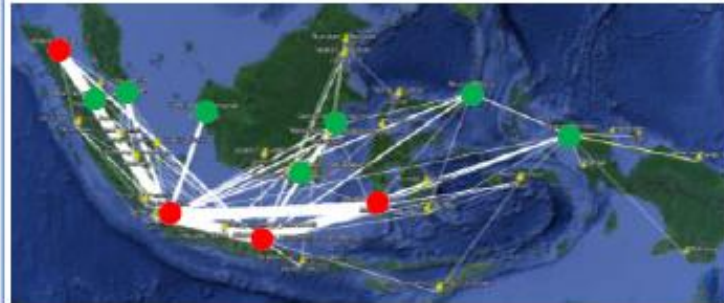
Container traffic will be multiplied by 9 by 2030 both through growth and substitution



¹ Based on traffic reported by liners, hence number of containers processed by ports is double this number

SOURCE: Business review on Domestic Container Main Sea Corridor, Drewry Maritime Advisor, 2012; IHS Global Insights, McKinsey Global Institute, Team analysis

Potential networks would feature loop services and further reduce costs by 11%



Loops (milk runs) 60%

Vessel utilization 63%

Number of vessels 162

Avg vessel size, TEU ~4,200

Cost per Teu, USD

176



Thank You