Maritime Connectivity: The Role of IPC in Maritime Logistic & Connectivity

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Chapter 1
Indonesia Logistic Profile
Indonesia Logistics Challenge 2017

Indonesia Logistics Performance Index is ranked **63rd in the world** and **4th among ASEAN**. With a value of **LPI score 2.98**

Indonesia Logistics Cost is **26% of GDP**. The biggest component of this logistic cost is **Inventory cost**. This is due to the lack of integration between ports and industries.

### Indonesia LPI Score & Rank

- **Sing**: 4.14 (5th)
- **Malay**: 3.43 (32nd)
- **Thai**: 3.26 (45th)
- **Ind**: 2.98 (63rd)
- **Viet**: 2.98 (64th)
- **Phil**: 2.86 (71st)

### Indonesia Logistic Percentage per Component

- **GDP**: 26%
- **Inventory**: 8.7%
- **Land**: 8.2%
- **Water**: 6.3%
- **Admin**: 4.3%
- **Other**: 0.8%
**Integrated Port Network as Indonesia Logistic Challenge Solution**

**Port Network**
Port Network is a solution to improve connectivity among ports in Indonesia. This solution is in line with government programs called Sea Toll Program.

**Integrated Port**
Integrated port is a solution to improve connectivity between port & industrial area. This is in line with government programs to improve local welfare and reduce unemployment rate.
Implementation of Integrated Port Network

Commercial Ports in Indonesia operated by 4 Companies (Pelindo I, Pelindo II, Pelindo III and Pelindo IV) act as a landlord and Port Operator.

- **Tj. Priok Port**: SUPER HUB - As the main gateway of international cargo
- **6 Other Ports**: As the international gateway

- **Main route of National Connectivity**
- **Supporting route of National Connectivity**
- **Main route of international Connectivity**
High Level Roadmap of Integrated Port Network

1. Improvement of Main connectivity in 7 hub ports
2. Improvement of loop connectivity (7 hub ports to feeder port)
3. Improvement of industrial area infrastructure
4. Improvement of connectivity between industrial area & Port
5. Creating “intermodal information platform” to improve logistic chain visibility

PHASE I
Port Network

PHASE II
Integrated Port

Creating “intermodal information platform” to improve logistic chain visibility

Efficiency Improvement by minimize administration process

Integrated Port Network
**PHASE I**

- **Standardization** of Infrastructure, Operation, finance, commercial & Human resources in **port area**
- Maximize **IT utilization**
- Investment in **Ship & Dockyard Area**
- Improvement of **shipping network, shipping navigation, security**, and safety system
- **Professionalization & Coordination** among ports (Berth Window)

**PHASE II**

- **Standardization** of Infrastructure, Operation, finance, commercial & Human resources in **Industrial area**
- **Collaboration** among industry especially cold chain & energy/petroleum industry
- Maximize **IT utilization**
- Improvement of commercial aspect by attracting **foreign investment**

**PHASE III**

- **Total Supply chain to reduce national logistic cost**
- Creating “**intermodal information platform**” to improve logistic chain visibility
- **Harmonization regulation** among Supply Chain stakeholders (Government, port, industrial area, etc)
Chapter 2
IPC Evolving Role to Improve Logistic Cost
IPC Profile

Vision: “To Become a World Class Port, Excellent in Operation and Services”

**SHIP SERVICE**
- Anchorage Service
- Mooring Service
- Pilotage Service

**CARGO SERVICE**
- Public Berth
- Storage Warehouse

**OTHER SERVICES**
- Port Equipment maintenance Services
- Land rental, Buildings, Water and Electricity

**IPC BRANCHES**
- Port of Jambi
- Port of Palembang
- Port of Pangkal Balam
- Port of Tanjung Pandan
- Port of Teluk Bayur
- Port of Bengkulu
- Port of Panjang
- Port of Banten
- Port of Sunda Kelapa
- Port of Pontianak
- Port of Cirebon
- Port of Tanjung Priok

**IPC SUBSIDARIES**
1. KSO Terminal Petikemas Koja (TPK Koja)
2. PT Jakarta International Container Terminal (JICT)
3. PT Rumah Sakit Pelabuhan (RSP)
4. PT EDI Indonesia (EDII)
5. PT Multi Terminal Indonesia (MTI)
6. PT Integrasi Logistik Cipta Solusi (ILCS)
7. PT Indonesia Kendaraan Terminal (IKT)
8. PT Jasa Peralatan Pelabuhan Indonesia (JPPI)
9. PT Pengembang Pelabuhan Indonesia (PPI)
10. PT Energi Pelabuhan Indonesia (EPI).
IPC Roadmap To Become World Class Port

To **maximize stakeholders value** on sustainability basis in order to improve the national economy

**CORPORATE MISSION**

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2016

**FIT IN INFRASTRUCTURE**

- Fine tuning in every area

2017

**ENHANCEMENT**

- Strengthening/enhancing business

2018

**ESTABLISHMENT**

- Establishment of performance

2019

**SUSTAINABLE**

- Sustainable superior performance

2020

**WORLD CLASS**

- World class performance
## IPC Initiative in Enhancement Year 2017

### PORT INFRASTRUCTURE & OPERATION

1. Optimize Equipment & berth Utility
2. Improvement terminal infrastructure
3. Implementation of 24/7 work patterns
4. Improvement of port security & safety
5. Dredging

**To improve Level of Services**

### IT – PORT DIGITALIZATION

1. Implementation of Terminal Operating System
2. Implementation of TPS Online
3. Implementation of Control Tower & Auto gate
4. Implementation of Auto tally
5. Implementation of CDM

**To Minimized administrative burden**

### INTEGRATED PORT

1. Construction of toll Road port - Industrial Area
2. Establish cooperation with industrial estate Company
3. Construction Industrial Area in Kijing & Sorong

**To improve hinterland connectivity**

### COLLABORATION AMONG PORTS

1. IPC Corporate university as the center of Human Resource development
2. Implementation of Inaportnet
3. Implementation of Integrated Billing System
4. Implementation of Berthing Window

**To improve connectivity among port**
IPC Initiative in Enhancement Year 2017

Port Infrastructure & Operation

**RESULT (PONTIANAK PORT AS EXAMPLE CASE)**

<table>
<thead>
<tr>
<th>Condition Before Transformation</th>
<th>Condition After Transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited CY Area</td>
<td>Increasing CY capacity from 4,500 TEUs to 6,000 TEUs</td>
</tr>
<tr>
<td>Dominated by Manual Process</td>
<td>Planning and control is done by Control Tower</td>
</tr>
<tr>
<td>Inefficient stripping/stuffing and unclear operational policy</td>
<td>Adding terminal marking and traffic sign</td>
</tr>
<tr>
<td>Ship Waiting time (≥ 7 days)</td>
<td>Separation between Container and Multipurpose Terminal activities</td>
</tr>
<tr>
<td>Bad indicator Performance of Pontianak Port</td>
<td></td>
</tr>
<tr>
<td>High cost for customer caused by cargo handling delay</td>
<td></td>
</tr>
</tbody>
</table>

**Consequences**

<table>
<thead>
<tr>
<th>Year</th>
<th>Container Throughput (TEUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>172892</td>
</tr>
<tr>
<td>2012</td>
<td>184557</td>
</tr>
<tr>
<td>2013</td>
<td>201527</td>
</tr>
<tr>
<td>2014</td>
<td>227130</td>
</tr>
<tr>
<td>2016</td>
<td>246618</td>
</tr>
</tbody>
</table>

**Container throughput is increasing for the past 6 years & Ship waiting time less than 0.5 Hours**
## IPC Initiative in Enhancement Year 2017

### IT – Port Digitalization

<table>
<thead>
<tr>
<th>IT ASPECT</th>
<th>BRANCH IMPLEMENTATION UNTILL 2017</th>
</tr>
</thead>
</table>
| Implementation of Terminal Operating System | 1. Tanjung Priok  
|                                   | 2. Palembang  
|                                   | 3. Panjang  
|                                   | 4. Pontianak  
|                                   | 5. Jambi  
| 6. Teluk Bayur  
| 7. Sunda Kelapa  
| 8. Bengkulu  
| 9. Tanjung Pandan |
| Implementation of TPS Online     | 1. Tanjung Priok  
|                                   | 2. Panjang  
|                                   | 3. Pontianak  
|                                   | 4. Palembang |
| Implementation of Control Tower & Auto gate | 1. Tanjung Priok  
|                                   | 2. Pontianak  
|                                   | 3. Teluk Bayur  
|                                   | 4. Palembang  
|                                   | 5. Panjang |
| Implementation of Auto tally     | 1. Panjang  
|                                   | 2. Tanjung Priok  
|                                   | 3. Pontianak |
| Implementation of CDM            | All Branches |

### Result of IT Optimization

#### Dwelling time 2017 (Days)

- 2013: 6.5
- 2014: 4.9
- 2015: 4.2
- 2016: 3.56
- 17-Feb: 3.2
- 17-Mar: 3.04

The result of collaboration among port and **optimization of IT** system in supply chain activities **Dwelling time is improving for the last 4 years**

Initiation of Smart Port 2020

Ideally, implementation of smart port, will be supported by the implementation of smart city (industrial location).

Smart Port, one which uses the full potential of an IoT network and smart data solutions means that a port must be able to identify and take advantage of new business models within the larger ecosystem using platform online.

1. Remote Control Center
2. Smart Gate
3. AGV Dispatch
4. Integrated Port Information System
5. Connected Ship
6. Trade Facilitator
7. Port Alliance
8. Shore-based Power Supply
9. Empty Container Distribution Center
10. Smart Intermodal Transportation
11. Truck Uber
12. E-Logistics
13. Supply Chain Synergy
14. Supply Chain Visualization
15. Data Market
16. Cross Border E-Commerce
17. Cloud Stowage
18. One Stop Service
19. Logistics Finance
20. E-Channel
**Integrated Port**

**IPC Initiative in Enhancement Year 2017**

**Construction of toll Road port - Industrial Area**

**Establish cooperation with industrial estate Company**

### Result of Integrated Port

**Congestion in Tj. Priok Port (hours)**

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0.5</td>
</tr>
</tbody>
</table>

The existence of Tanjung Priok Access Toll reduce congestion in the area around Tanjung Priok up to 40%. Time to go to the harbor is also estimated to be reduced by half an hour.

But it’s not good enough, so IPC is aiming to reduce the congestion by constructing Cilincing-Cibitung toll road.

Source: Chairman of the Indonesian Toll Association (ATI)
Collaboration Among Ports

IPC Initiative in Enhancement Year 2017

IPC Corporate university as the center of Human Resource development

Implementation of Inaportnet

Implementation of Integrated Billing System

Improving the quality of human resources

Improving Document submission system

Improving Customer payment system

Result of Among Ports

Customer satisfaction index

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>3.9</td>
<td>4</td>
<td>4.15</td>
</tr>
</tbody>
</table>

The customer satisfaction score has increased significantly over the last 3 years. The Improvement of customer satisfaction scores is the result of increased port services in Indonesia by improving the quality of human resources, improving document management systems and payment systems.
Chapter 3
IPC Strategic Project & Opportunity Collaboration
IPC Strategic Project

Kalibaru Port Development

General Description

- **Location**: Tanjung Priok, Jakarta
- **Type**: Container and Liquid Bulk Terminal
- **Development Period**: 2012 – 2027
- **Investment**: Rp 36 Trillion

Current Progress

- Full Comercial operation for CT 1 on August 2016;
- Development Phase 1 (CT 2; CT 3; PT 1; PT 2)
- Dredging from -14 m LWS to -16 m LWS is completed
- Reviewing business partners for CT2 and CT3 terminals
- Common Gate Area has been completed

Investment Opportunities

- 32 Ha Reserved Area
- Terminal Operator Partner for PT1 & PT2
IPC Strategic Project

Kijing Deep Sea Port

General Description

- **Location:** West Kalimantan
- **Type:** Container, Bulk Multipurpose Terminal
- **Development Period:** 2017 - 2019
- **Investment:** Rp 5.1 Trillion

Current Progress

- ✔ Presidential Regulation on the Acceleration of Development and Operation of Kijing Terminal has been published
- ✔ On progress Land Acquisition Preparation:
  - a. Coordination meeting of the preparation team
  - b. Preparation of Preliminary Data Collection
  - c. Socialization
  - d. Public Consultation

Investment Opportunities

- Contractor (Container, Bulk, Multipurpose)
- Terminal Operator Partner (Container, Bulk, Multipurpose)
- Barging Operator
IPC Strategic Project

Kijing Special Economy Zone

General Description

- **Location**: West Kalimantan
- **Type**: Special Economy Zone
- **Development Period**: 2017 - 2019
- **Investment**: Rp 2.6 Trillion

Current Progress

- Coordination meeting of the preparation team
- Preparation of Preliminary Data Collection
- Socialization of Land Acquisition
- Public Consultation of Land Acquisition

Investment Opportunities

- Industrial Area
- Land Utilization
IPC Strategic Project

Sorong Port Development

General Description

- **Location:** Seget District, West Papua
- **Type:** Container Terminal
- **Development Period:** 2017 - 2019
- **Investment:** Rp 2.4 Trillion

Current Progress

On progress of IPC Proposal for the integrated Sorong Port Development addendum

Investment Opportunities

- Contractor
- Terminal Operator Partner
- Development Company Partner
- Investor for Industrial Zone (fishery, mining)
IPC Strategic Project

CBL CANAL

General Description

- **Location:** Cikarang-Bekasi, West Java
- **Type:** Canal
- **Total Area:** 200 Ha
- **Development Period:** 2017 - 2019
- **Investment:** Rp 5 Trillion

Current Progress

- A detailed review to follow up the recommendations of the PUPERA Ministry regarding the impact of inland waterways on channel function as flood control
- Field survey

Investment Opportunities

- Terminal Contractor
- Capital & Maintenance Dredging Works
- Barge Operator
- Terminal Operator
- Traffic/Navigational Equipment Provider
IPC Strategic Project

CILINCING – CIBITUNG TOLL ROAD

General Description

- **Location:** Jakarta & West Java
- **Type:** Toll Road
- **Development Period:** 2017 – 2019
- **Investment:** Rp 1.9 Trillion

Current Progress

- Land acquisition has been reach 41,92 Ha of required land total 222 ha
- The formulation of draft amendment BUJT-BPJT regarding land acquisition
- Discussion about re-alignment of trace JTCC with BPJT

Investment Opportunities

- Contractor
- Development Company Partner
Thank You