Royal HaskoningDHV
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Port Development and Masterplanning

8th Philippine Ports and Shipping 12-13 February 2015

Herman Pals – Project Manager and Technical Director

Royal HaskoningDHV Singapore

Contents of Presentation

Introduction to Royal HaskoningDHV

Part 1: Port Development in Philippines

Part 2: Integrated Port Master Planning Approach

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Company Profile Royal HaskoningDHV

- Global consultancy, engineering and project management service provider, established in 1881
- Top 10 of independently owned, non-listed companies
- More than 7,000 experienced and diverse team members dedicated to their profession

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A global player

- Consultants
- Architects &
- Engineers

- Over 100 offices worldwide

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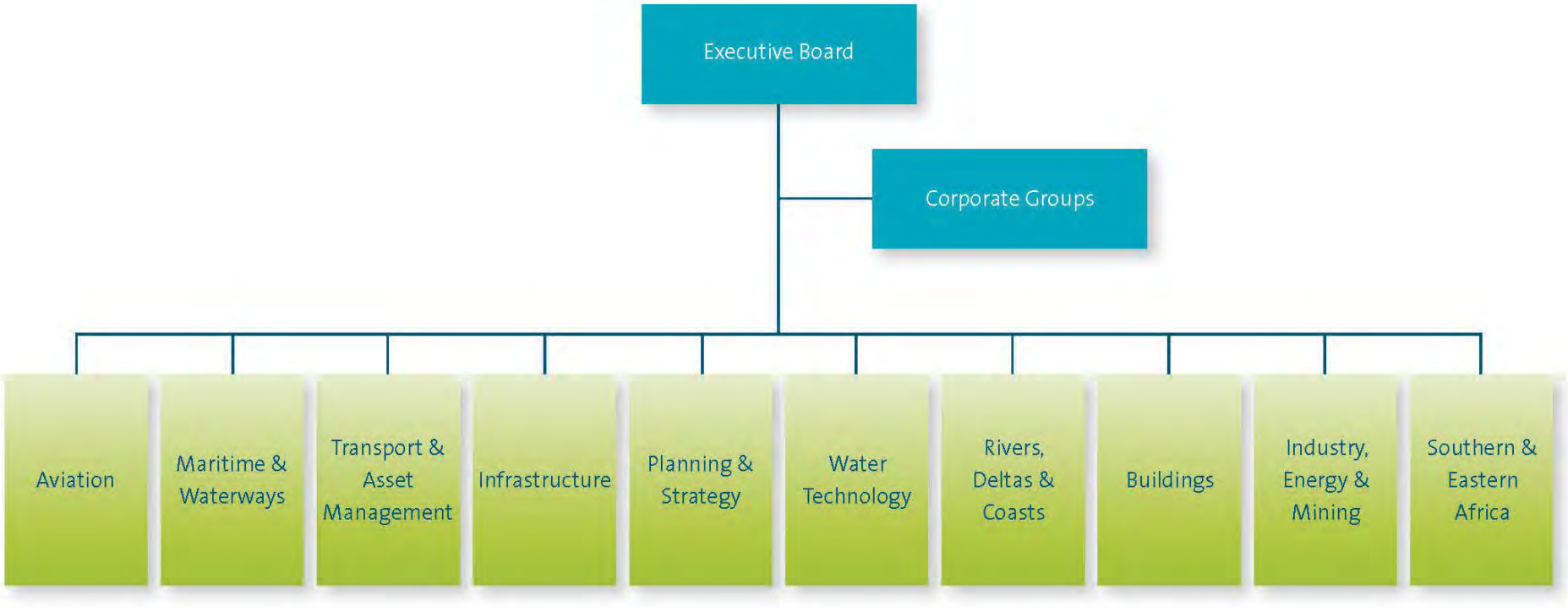
Our organisation



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Royal HaskoningDHV in South East Asia

- Over 700 professionals in the region
- Perfect balance and combination of local professionals and international quality

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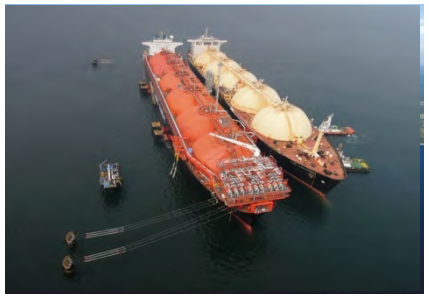
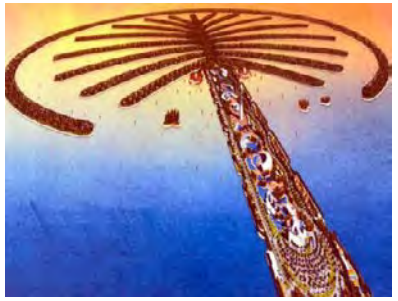
RHDHV Maritime & Waterways







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RHDHV Maritime & Waterways

Active in all Maritime Sectors

- Container Terminals
- Roll-on Roll-off
- Liquid and Dry Bulk
- LNG Terminals
- Shipyards and Dockyards
- Naval Basis
- Cruise Terminals and Marinas

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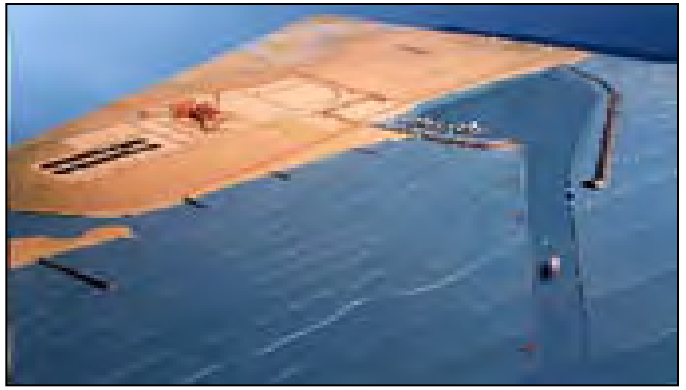
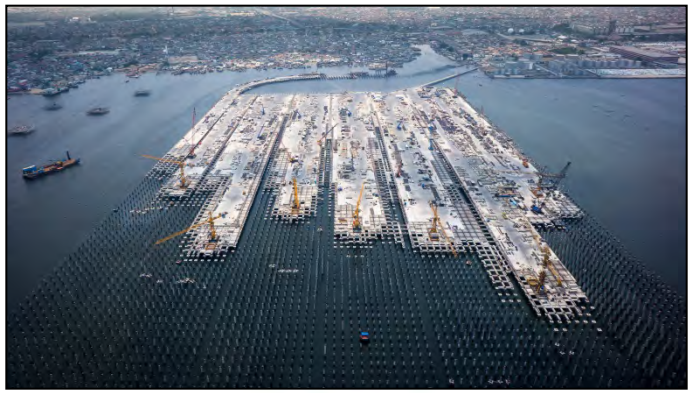
RHDHV Maritime & Waterways

Involvement in all aspects of port development projects

- ✓ Identification
- ✓ (Port) Master Planning
- ✓ Feasibility Assessments
- ✓ Structural and M&E Design
- ✓ Construction Supervision
- ✓ Project Management Consultant
- ✓ Maintenance/Repairs/Upgrades





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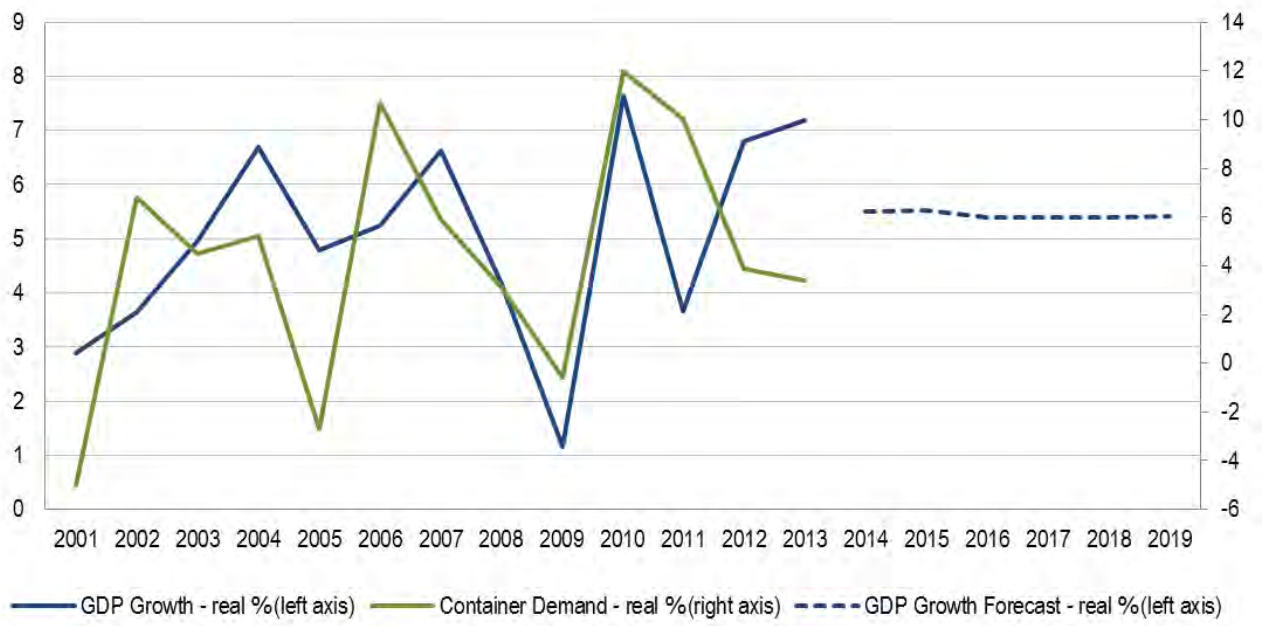
Port Development in Philippines

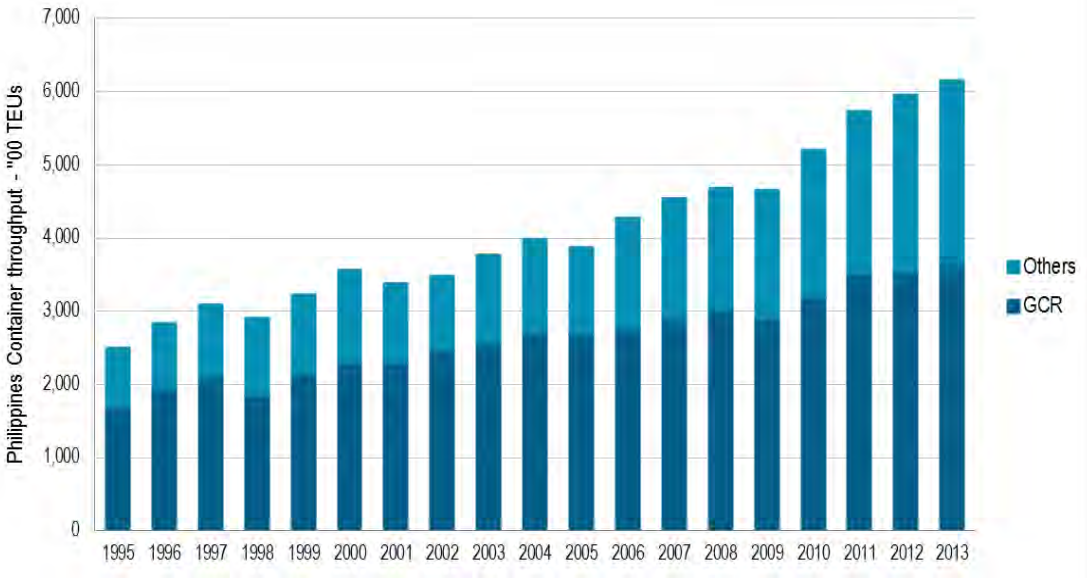
- After the economic uncertainties in 2008-2009, the economy of the Philippines is experiencing fairly good recovery.
- Outlook for the Philippines remains strong; growth rates may be slightly lower in the coming years, similar with other economies in the region.
- Container demand will also further grow in line with the economic development and ongoing containerisation of cargo



Port Development in Philippines

- Philippines are mainly served by feeder traffic and Intra-Asia traffic. In general, consignment sizes for direct services are too small at this moment.

- Because of this, vessel sizes remain fairly small and there is less pressure to increase the water depth and have major port upgrades to allow larger vessels to call in the short term (compared to the trend of upscaling the vessels and ports as can be seen in other parts of the world).



- Container demand growth is strong both in Manila and outside
- Total Philippines port volume in 2013: 6.15m TEU
- Terminals in Greater Capital Region (GCR) handles 3.65m TEU equivalent to 59.4% of total demand
- The share of the GCR of total Philippines volumes has been decreasing
- Strong in-balance between full imports and full exports

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- Hinterland connections are congested. Focus on good traffic management is important to serve the hinterland and to reduce the costs of importing and exporting cargo.

- Long waiting times at certain ports, dwell time issues and out of balance full import and empty export of containers.

- “Archipelagic Character” of the country requires strong focus and dependency on sea transport and ports, both for domestic and international commerce. Challenges faced are very comparable with Indonesia in South East Asia.

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Port Development in Philippines

Philippines

Indonesia

Port Development in Philippines

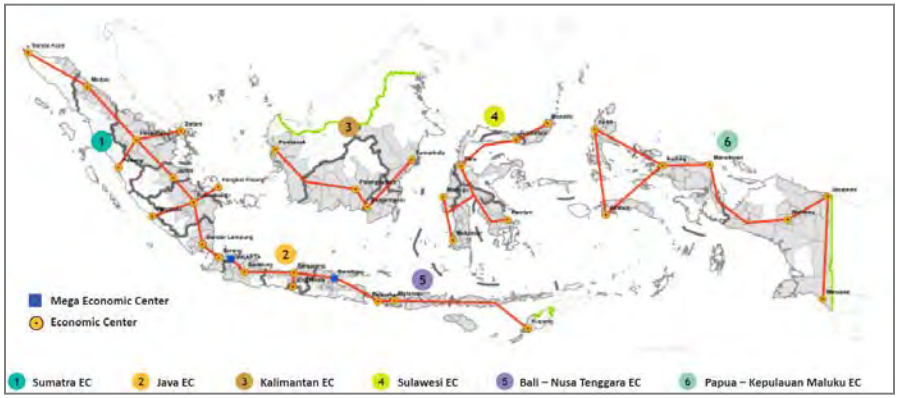
Philippines

Indonesia

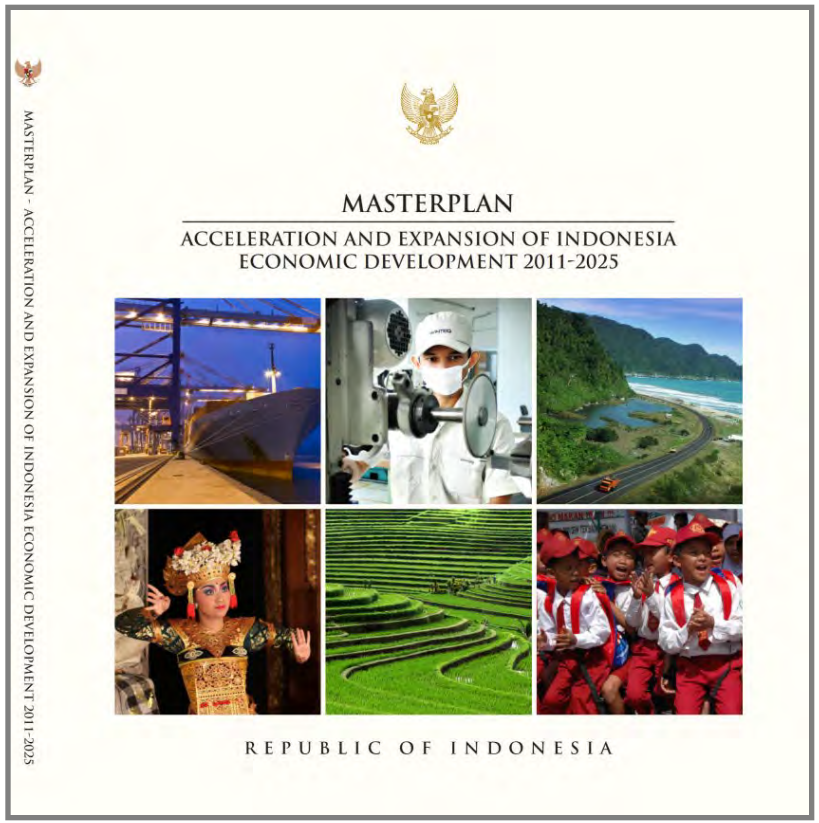
Port Development in Philippines

Philippines

Indonesia



Port Development in Indonesia



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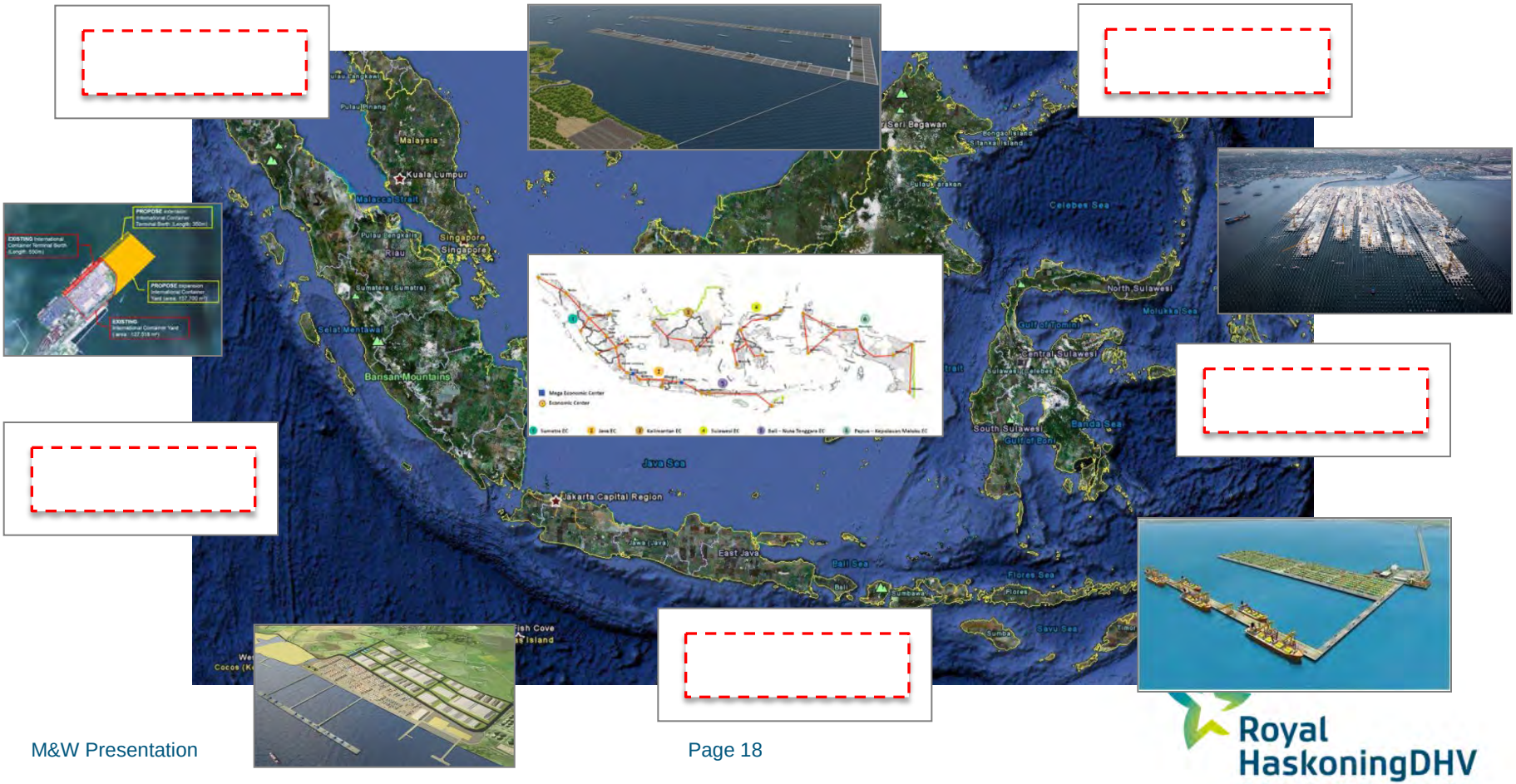
Port Development in Indonesia

- Based on the Masterplans, various projects have been initiated (Tanjung Priok (NK), Surabaya, Sorong, Makassar, Kuala Tanjung, Tanjung Carat, Bojonegara, etc, etc)



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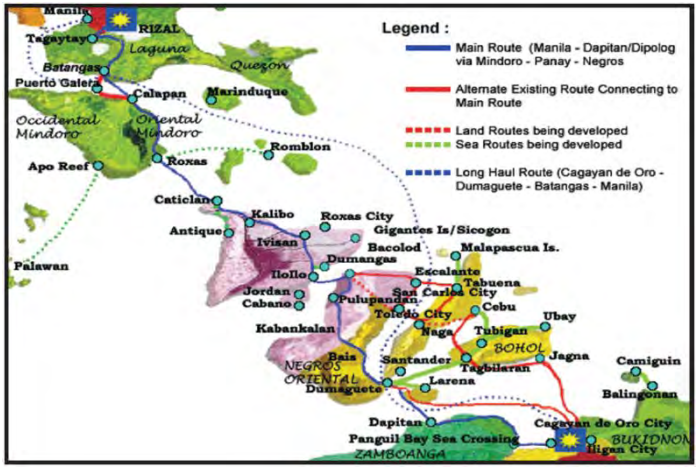
Port Development in Philippines

- Main ports and main regions of Luzon, Visayas and Mindanao under continuous development
- Slow move out of Manila to Subic and Batangas
- Hub-and-spoke system for larger ships with cargoes from smaller production centers by truck and small RoRo



Port Development in Philippines

- Various projects have been ongoing and are being planned to a certain extend, but still frustrations remain in terms of road connectivity, legislation and procedures, conflict of interest and perhaps a lack of an integrated approach …..

Port Development in Philippines

- Various projects have been ongoing and are being planned to a certain extend, but still frustrations remain in terms of road connectivity, legislation and procedures, conflict of interest and perhaps a lack of an integrated approach …..

- A first basis is formed by the **Arangkada Philippines Forum**, administered by the joint foreign chambers of the Philippines, with recommendations (and regular updates) for improvements, reforms and changes on Infrastructure, Logistics, Mining, Tourism, Governance, etc.

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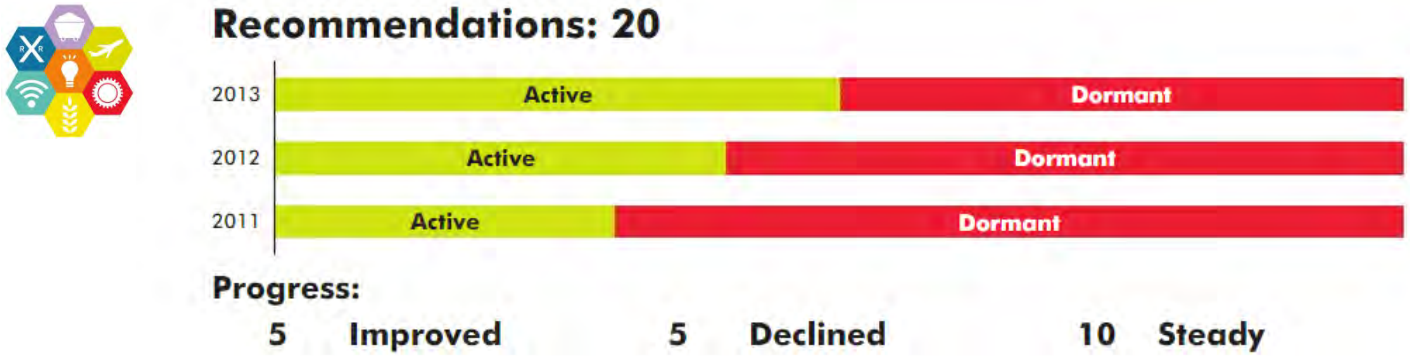
Port Development in Philippines

- Typical recommendations from **Arangkada Philippines Forum** (latest update 2014) on port development…..



- Further develop the National Capital Region (NCR) and Central Luzon Master Plan
- Shift international container shipment from Manila to Batangas and Subic
- Identification and further development of the Hub-and-Spoke system with major ports for larger ships and connecting/supporting infrastructure
- And in general, the need for an integral/intermodal transport study

Port Development in Philippines

- A lot of pieces of the puzzle are there and have been discussed extensively:
  - Congested ports in Manila and restrictions to further develop
  - Congested roads and other problems with hinterland connections
  - To a certain extend: depth issues and limitations in ports
  - Too slow movement out of Manila, frustrations about high road transportation costs
  - But what about waiting time, dwell time, etc?
  - A hub-and-spoke system exists, but does it function in an optimum way?
  - Identification of market: consumption centres and production areas
  - Certain legislation could be improved, perhaps change in constitutional settings?
  - Where are the weakest links in the system?

- So clearly development of the ports need to go hand-in-hand with many other developments and changes. An integrated approach is needed, which need to be set in an **Integrated / Intermodal Masterplan**

Port Development in Philippines

- Focusing on the hub-and-spoke system and more specific, on the international and domestic sea transport system, port projects are needed, whether new or upgrades
  - how to further develop a port once identified?
  - what is the ‘best’ location for this port?
  - what is the real market/demand/production?
  - who will finance the port development and infrastructure?
  - how to make it a profitable and competitive port?
  - and last but not least: how to attract investors and customers for the port?

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Need for integrated Port Master Planning Approach

for the development of each port

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Port Master Planning Approach – main steps

1. Review of Existing Situation
2. Market Assessment
3. Port User Requirements
4. Location Study
5. Conceptual Port Design
6. Preliminary Design of Key items
7. Environmental and Social Impact Assessment
8. Implementation
9. Cost Estimate and Financial Analysis
10. Institutional Setting and Business Models
11. Strategic Action Plan / Bankable Document

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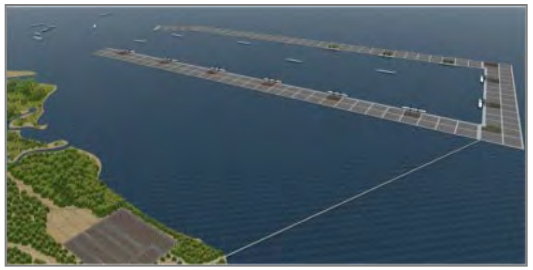
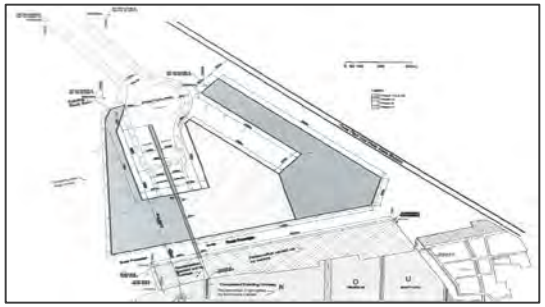
Few examples of RHDHV Port Masterplan projects in the SEA region

Indonesia – Kuala Tanjung
- Market Assessment
- Port Planning
- Preliminary Design
- Financial Analysis
- Strategic Action Plan



Indonesia – North Kalibaru
- Project implementation
- Construction Supervision

Indonesia – Marunda Center
- Port Planning
- Preliminary and Detailed Design
- Construction Supervision



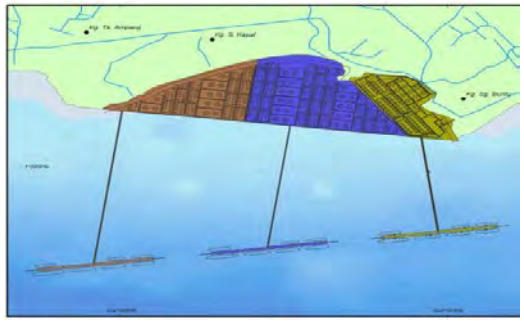
Indonesia – Lampung, Java
- Market Assessment
- Port Planning and Design
- Financial Analysis
- Economic feasibility

Indonesia – Surabaya
- Market Assessment
- Port Planning
- Preliminary Design
- Financial Analysis
- Economic Feasibility

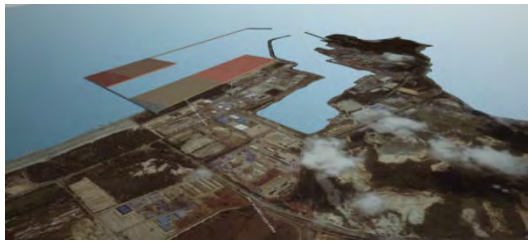
Few examples of RHDHV Port Masterplan projects in the SEA region

Vietnam- Bai Goc Seaport
- Market Assessment
- Port Planning
- Preliminary Design
- Financial Analysis
- Economic Feasibility

Malaysia- Pengerang Oil & Gas Complex
- Technical Feasibility study
- Port Planning
- Preliminary Design
- Cost Estimate



Malaysia- Kuantan Port
- Market Study Review
- Port Planning
- Preliminary Design
- Financial Analysis



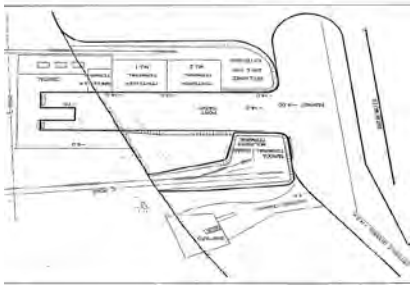
Vietnam- Nhon Hoi deep seaport
- Technical Feasibility
- Port Layout Options study
- Preliminary Designs
- Financial Analysis

Vietnam – Nam Du transhipment terminal
- Market Assessment
- Port Planning
- Preliminary Design
- Financial Analysis

Few examples of RHDHV Port Masterplan projects in the SEA region

Thailand – Laem Chabang

- Market Study
- Technical Feasibility study
- Port Planning
- Preliminary Design
- Financial Analysis



Myanmar- Superaxis Westport

- Market Study
- Technical Feasibility study
- Port Planning
- Preliminary Design
- Financial Analysis

Philippines – ……..

- Hopefully many more to further development Philippines!

Philippines – Manila Bay Masterplan

- Full integrated masterplan
- Preliminary Design
- Implementation Plan

THANK YOU FOR YOUR KIND ATTENTION

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