



# Structuring Valuable Port PPPs for Strategic Business Growth

20<sup>th</sup> Intermodal Africa

28 November 2018

Accra, Ghana



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### Director Projects MTBS

Highly involved in West Africa:

- Port of Takoradi Dry Bulk Transaction (Ghana, 2018)
- Boankra Inland Port Transaction (Ghana, 2018)
- ECOWAS Masterplan (ECOWAS, 2018)
- Port of Takoradi Feasibility Studies (Ghana, 2018)
- Tomaro Island Due Diligence (Nigeria, 2018)
- Private Sector M&A (West Africa, 2018)
- Liberia Dry Port (Liberia, 2017)



# Agenda

## Introduction to MTBS

PPPs: preparation, structuring, execution

Scope for new PPPs in West Africa

Case studies and success stories

# MTBS is a global leader in port transaction advisory services

MTBS, independently based in Rotterdam, has a unique value proposition

MTBS specializes in ports and terminals, and provides leading expertise in the areas of **strategy**, **valuation**, **transactions** and **finance**. The firm combines its market sector knowledge and state-of-the-art financial competences into one value proposition:

*“4P: innovative solutions for Port Public Private Partnerships”.*

## Strategy

- Value & Business Strategy
- Port Sector Reform
- Port Policy
- Public Private Partnerships
- Institutional & Regulatory Change
- Organizational Reform & Alignment

## Financing

- Financial Structuring
- Project Finance
- Due Diligence
- Procurement of Finance
- Investment / Divestment
- Merger & Acquisition



## Valuation

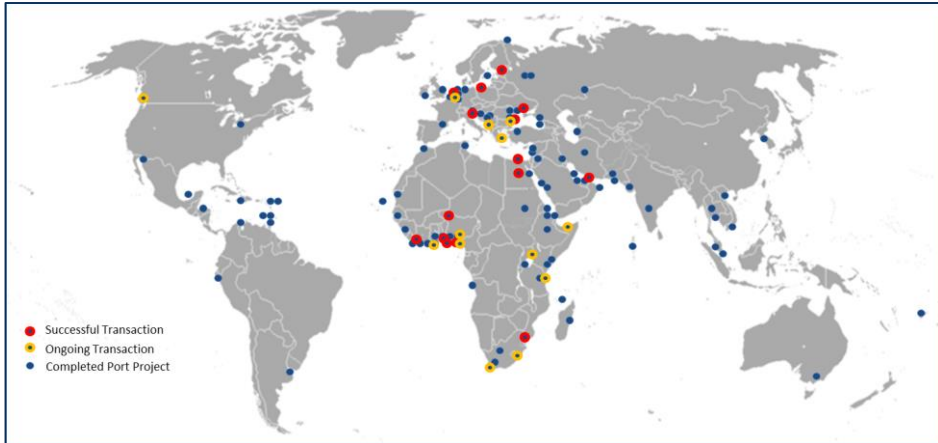
- Value Creation & Protection
- Financial Modeling and Analysis
- Feasibility
- Project Structuring & Packaging
- Business Case
- Risk Valuation, Allocation, Mitigation

## Transaction

- Transaction Strategy
- Transaction Management
- Documentation & Contracts
- Tendering & negotiated Solutions
- Financial Solutions
- Legal Solutions

# MTBS is a global leader in port transaction advisory services

## MTBS's experience in the Port & Infrastructure Sector



## MTBS's Clients in the Port & Infrastructure Sector



## MTBS provides port finance and PPP training solutions

Now also available in Asia		Upgraded Course Materials & New Case Studies
<b>PORT INVESTMENTS &amp; PPP COURSE</b> <b>SINGAPORE</b> Port PPP Strategies   Business Case Analysis   Port Infrastructure Funding Concession Contracts   Competitive PPP Contract Awarding   Case Studies 8-10 March 2016	<b>PORT &amp; TERMINAL CONCESSIONING COURSE</b> <b>DUBAI</b> PPP Contracts   Competitive Bidding   Procurement Strategies Concession Contract Terms   Default & Breach Case Studies   Guest Speakers 8 & 9 March 2017 Millennium Plaza, Sheikh Zayed Road, Dubai	<b>PORT INVESTMENTS &amp; PPP COURSE</b> <b>LONDON</b> Port PPP Strategies   Business Case Analysis   Port Infrastructure Funding Concession Contracts   Competitive PPP Contract Awarding   Case Studies 24-26 June 2015 De Vere Venues West One, Central London
Organised by: <b>Port Finance INTERNATIONAL</b> Hosted by: <b>mtbs</b>	Organised by: <b>Port Finance INTERNATIONAL</b> Hosted by: <b>mtbs</b>	Organised by: <b>Port Finance INTERNATIONAL</b> Hosted by: <b>mtbs</b>
<a href="mailto:elisa@portfinanceinternational.com">elisa@portfinanceinternational.com</a>   <a href="http://www.portfinanceinternational.com">www.portfinanceinternational.com</a>	<a href="mailto:sally@portfinanceinternational.com">sally@portfinanceinternational.com</a>   <a href="http://www.portfinanceinternational.com">www.portfinanceinternational.com</a>	<a href="mailto:sally@portfinanceinternational.com">sally@portfinanceinternational.com</a>   <a href="http://www.portfinanceinternational.com">www.portfinanceinternational.com</a>

# How do we unlock value?

Focusing on tailored PPPs and competitive tenders

$$NPV(i, N) = \sum_{t=0}^N \frac{FCF_{t,g}}{(1+i)^t}$$

Free Cash Flows

Growth

De-Risking

# Value Optimisation: Tailored PPP & Competitive Tender

Use of standard PPPs & tender procedures not a guarantee for success

**Three critical issues** need to be addressed, in order to ensure **Value Optimisation**:

**1. No one-size-fits-all**

Each PPP Contract is a unique arrangement, tailored to the risk management capabilities of the Grantor and the Concessionaire

**2. Project Bankability**

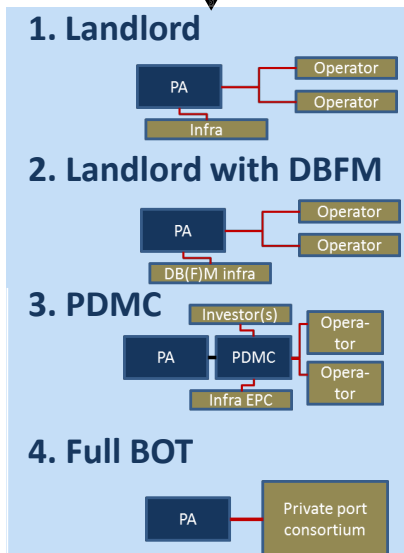
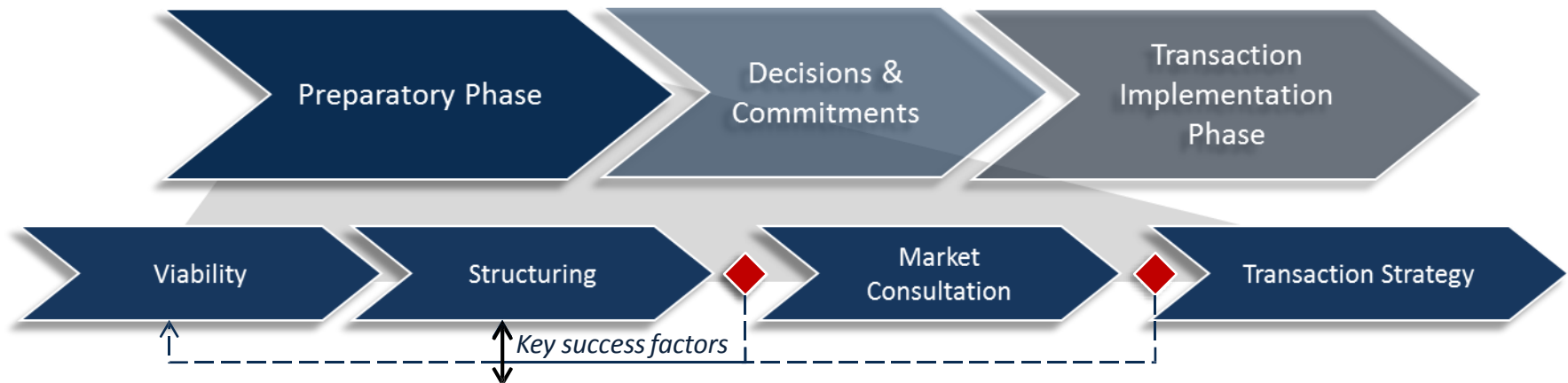
A feasible PPP project is not always bankable!  
Early awareness and value engineering is required

**3. Assess market interest in an early stage of a competitive tender**

Requirements of potential co-investors should be assessed prior to the start of a transaction

# Value Optimisation: Tailored PPP & Competitive Tender

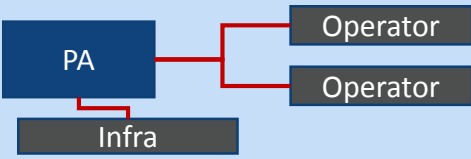
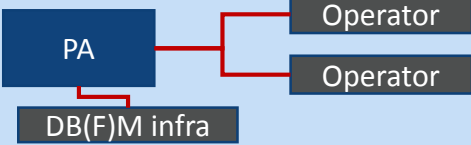
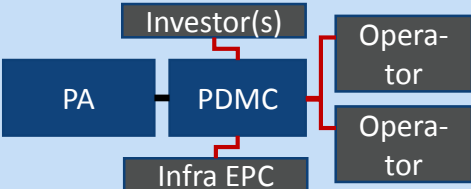
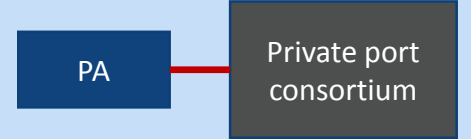
Tailoring of the optimal PPP structure is an important step in transaction preparation



- Allocate risk to the party best able to carry it!
- The better the risk allocation, the more value there is to share



# Choosing the optimal port management model

Structure	Characteristics	Examples
<p><b>1. Landlord</b></p>  <pre> graph TD     PA[PA] --- Infra[Infra]     PA --- O1[Operator]     PA --- O2[Operator]         </pre>	<ul style="list-style-type: none"> <li>PA acts as traditional landlord</li> <li>Substantial investments and financing is required, but only for base infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Rotterdam, Antwerp, Hamburg</li> <li>Best practice port reform in African ports</li> </ul>
<p><b>2. Landlord with DB(F)M</b></p>  <pre> graph TD     PA[PA] --- DBFM[DB(F)M infra]     PA --- O1[Operator]     PA --- O2[Operator]         </pre>	<ul style="list-style-type: none"> <li>PA acts as traditional landlord</li> <li>Construction contract is tendered out as a DB(F)M, which implies that construction and maintenance (and financing) is the full responsibility of the infrastructure contractors</li> </ul>	<ul style="list-style-type: none"> <li>No DBFM contract in ports up to date: currently under implementation in a North American port</li> <li>For Rotterdam MV2 it was concluded to apply DBM</li> </ul>
<p><b>3. PDMC</b></p>  <pre> graph TD     PA[PA] --- Investor[Investor(s)]     PA --- InfraEPC[Infra EPC]     PDMC[PDMC] --- Investor     PDMC --- InfraEPC     PDMC --- O1[Operator]     PDMC --- O2[Operator]         </pre>	<ul style="list-style-type: none"> <li>PA enters into Master Concession with PDMC (PA as co-shareholder)</li> <li>PDMC tenders individual terminal concessions and the construction contract</li> <li>PDMC attracts investors and arranges debt financing for investments (based on securities from anchor clients)</li> </ul>	<ul style="list-style-type: none"> <li>Busan, S-Korea – Hyundai, Bouygues, BusanPA, Macquarie, Kukje, KCTC</li> <li>Maputo, Mozambique – CFM, DP World, Grindrod</li> <li>Durban, South-Africa</li> <li>Ibom Deep-Sea Port, Nigeria</li> </ul>
<p><b>4. Full BOT concession tender</b></p>  <pre> graph TD     PA[PA] --- Consortium[Private port consortium]         </pre>	<ul style="list-style-type: none"> <li>Private consortium is responsible for port development and investments</li> <li>Appetite restricted by size of the investments</li> <li>Limited control PA</li> </ul>	<ul style="list-style-type: none"> <li>Monrovia, Liberia – APMT</li> <li>Mersin, Turkey – PSA &amp; Afken</li> </ul>

# Value Optimisation: Tailored PPP & Competitive Tender

Bankability: early awareness is critical

**Feasibility** does not always imply **Bankability!!**

**Exemplary, non-Bankable Project:**

**Healthy Return:**

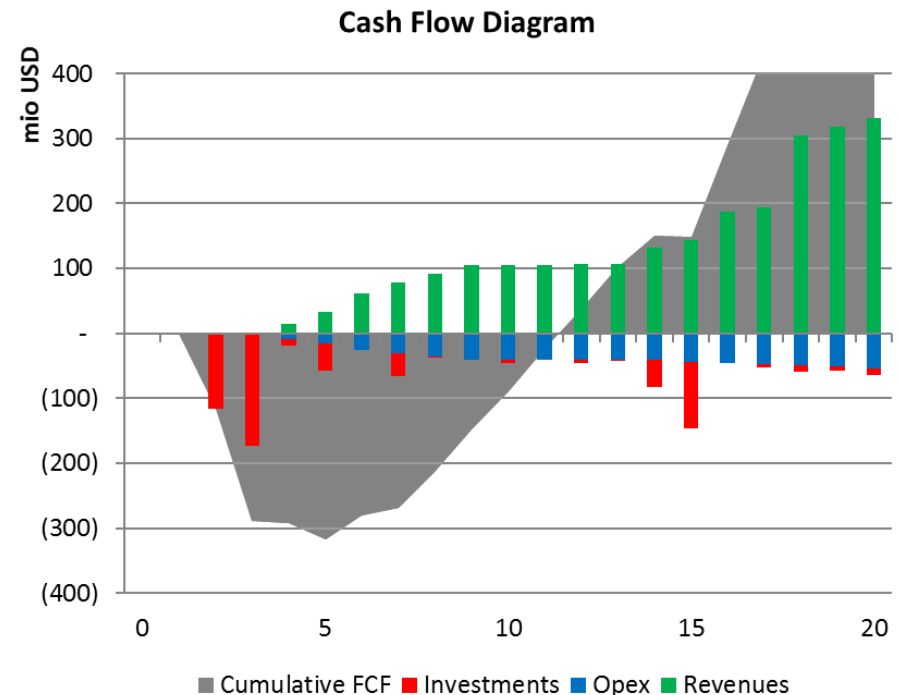
- IRR at 19%
- Project NPV of 300m USD

**However:**

- First positive cash flow: year 6
- Pay-back period: >10 years

**Project not Bankable:**

- Loans often have a tenor of <15 years
- Lenders often require a DSCR of > 1.3



# Value Optimisation: Tailored PPP & Competitive Tender

Bankability: early awareness is critical

**Critical Questions regarding Bankability need to be asked in each phase:**

## Strategy Phase:

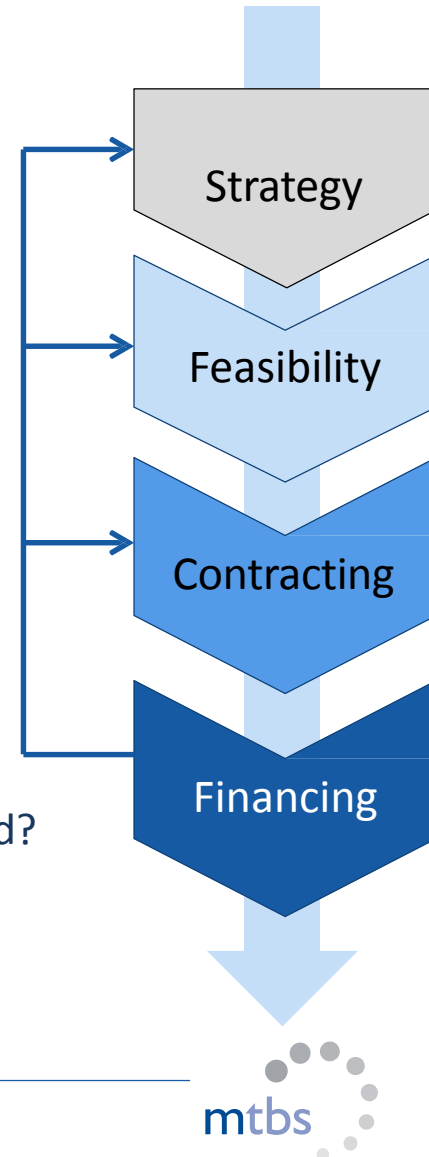
- Demand/Supply development: tailored to the market?
- Long-term development plan: sufficiently flexible?

## Feasibility phase

- Robustness of the business case: impact of sensitivities on DSCR?
- Cash flows in first years of operations: sufficient for Debt Service?
- Value engineering: optimal scope and phasing

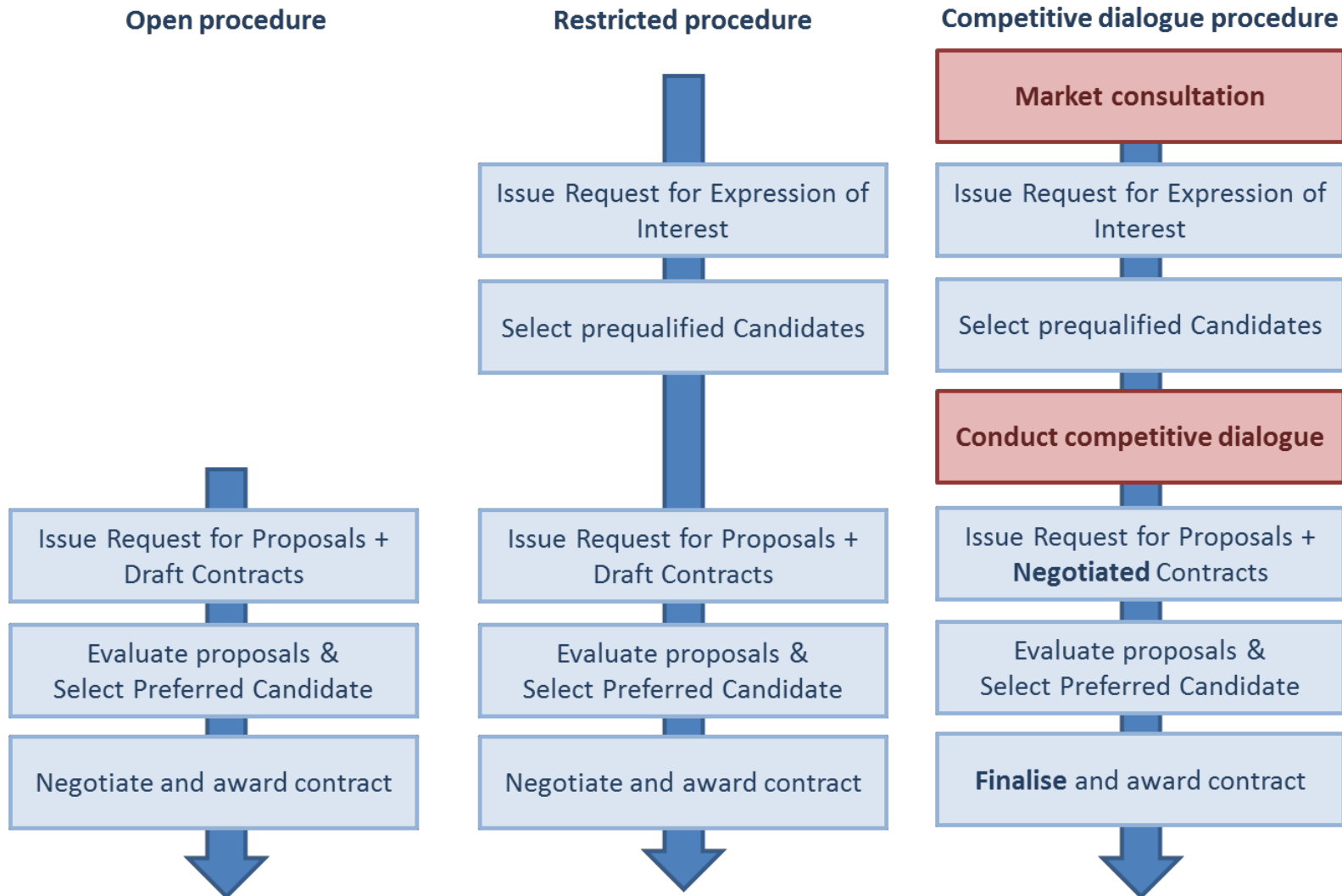
## Contracting phase

- What are the remaining risks for the Project? Can they be mitigated?
- What about Termination/Compensation Clauses?



# Value Optimisation: Tailored PPP & Competitive Tender

Market consultation and competitive tendering lead to optimal value creation

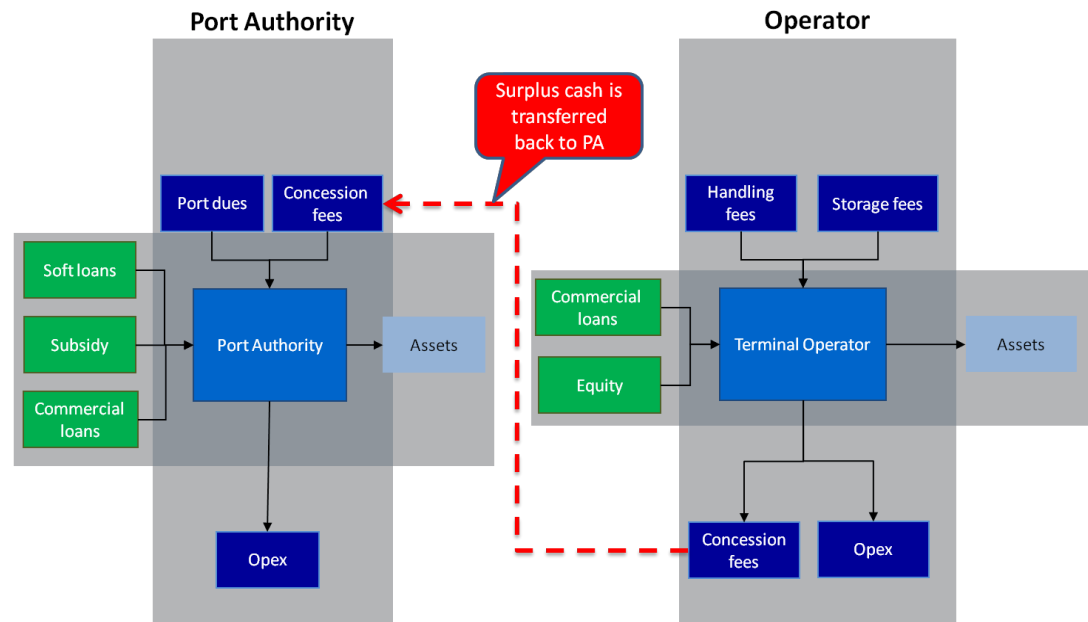


# Value Optimisation: Tailored PPP & Competitive Tender

The better the PPP structure, the more value there is to divide

## Value Drivers:

- Revenues & Revenue Growth (PxQ)
- Cost reductions (EBITDA)
- Investment planning (CAPEX)
- Financing (WACC)
- Guarantee structure

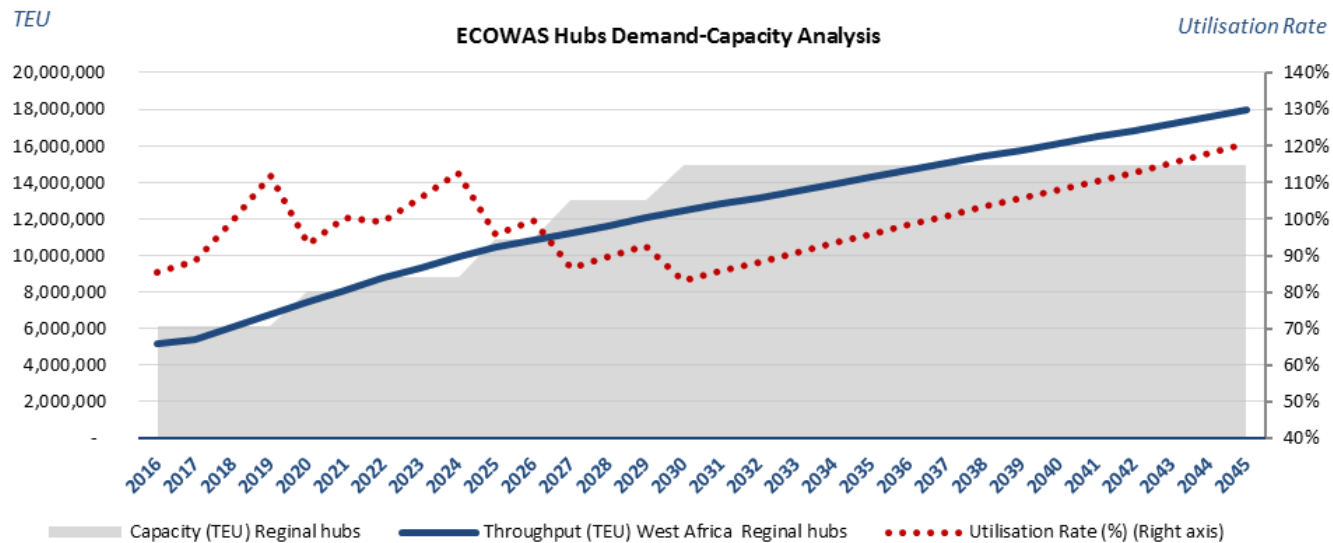


# Scope for new PPPs in West-Africa

Strong demand vs capacity shortage

## West Africa hub ports

- The collective utilisation rate of the six hubs will surpass 100% by the end of 2018
- Dakar, Cotonou and Tema are already handling more than their theoretical capacity and urgently require additional capacity
- Despite numerous capacity expansions, the collective utilisation rate never falls below 80%, which is considered the maximum threshold that triggers a capacity expansion



# Using PPPs to capture the next 30 years of port projects

There are 80 projects worth EUR 22 billion in the pipeline

- The regional Masterplan identifies **80 projects** in the pipeline (until 2045), with the **total public sector funding requirement** reaching **EUR 22 billion**
- Over half of the projects are built on **multimodal solutions**:
  - 31 railway projects;
  - 3 inland waterway projects; and,
  - 11 ICD projects.
- Major terminal projects include:
  - **Abidjan**: USD 500 M new container terminal (Bolloré and Maersk)
  - **Dakar**: greenfield development of Port du Futur (DPW)
  - **Boankra**: BOT inland port currently being tendered (relieving congestion in Tema and Takoradi and reducing transit time)
  - **Nigeria**: with Lagos at capacity, multiple deepsea projects are being launched including a greenfield project in **Ondo**
  - **Tema**: a GPHA-APMT-Bolloré JV is developing a new 3.5 million TEU terminal

# Case study and success story

## Port of Takoradi

- New port to replace the old port, able to accommodate larger vessels
- Captive market: export manganese and bauxite, import clincker
- Dedicated dry bulk terminal (800 m at -16.0 m C.D.)
- Landlord structure





# Case study: Takoradi Dry Bulk Terminal

## Lessons learned

- **Very close alignment:** between the Transaction Advisor and the PA – frequent visits to Ghana and permanent presence on the ground through reliable local partners
- **Strong business case:** asset was already under construction (no “white elephants”), and limited competition
- **Market appetite:** project was led by a renown transaction advisor, supported by the WB, targeted as a priority by the GoG, early private sector involvement
- **Constant stakeholder management:**  
Public authorities – GPHA – incumbents – transaction advisor – WB
- Be careful with **tied-support loans:** expensive infrastructure due to lack of competition



# Case study: Nigeria Port of Ondo

Ondo State provides solutions to key issues by providing new cargo handling capacity, a secure business climate and redistributing regional cargo flows

**Challenge is to facilitate growth in population:** 190 million, growing at rate of 2.8% (IMF);

## Identified Nigerian Port Sector Key Issues:

- **Institutional issues:** extra port capacity is needed through port sector investments;
- **Lagos handles >80% of (non-oil) cargo:** Lagos hinterland transport bottlenecks;
- **Port congestion:** need for adequate hinterland connections to lower congestion;
- **Security issues Delta State:** persisting criminality, local militant groups, offshore piracy and oil pipeline vandalism;

### Need Port Investments and New Capacity



### Extreme Road Congestion in the Lagos Area



### Delta State Pipeline Vandalism



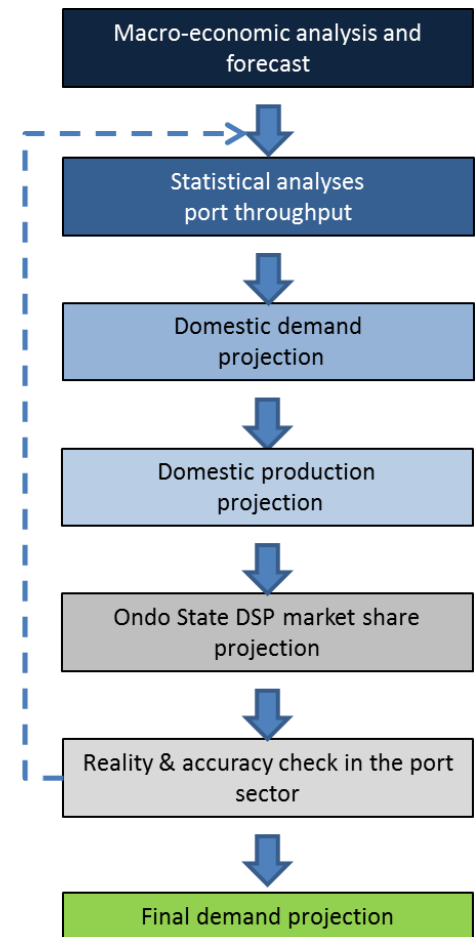
**A nation wide masterplan is required to streamline developments**

# Demand Assessment

Through macro-economic analysis and domestic demand analysis the cargo forecast for the new port has been made

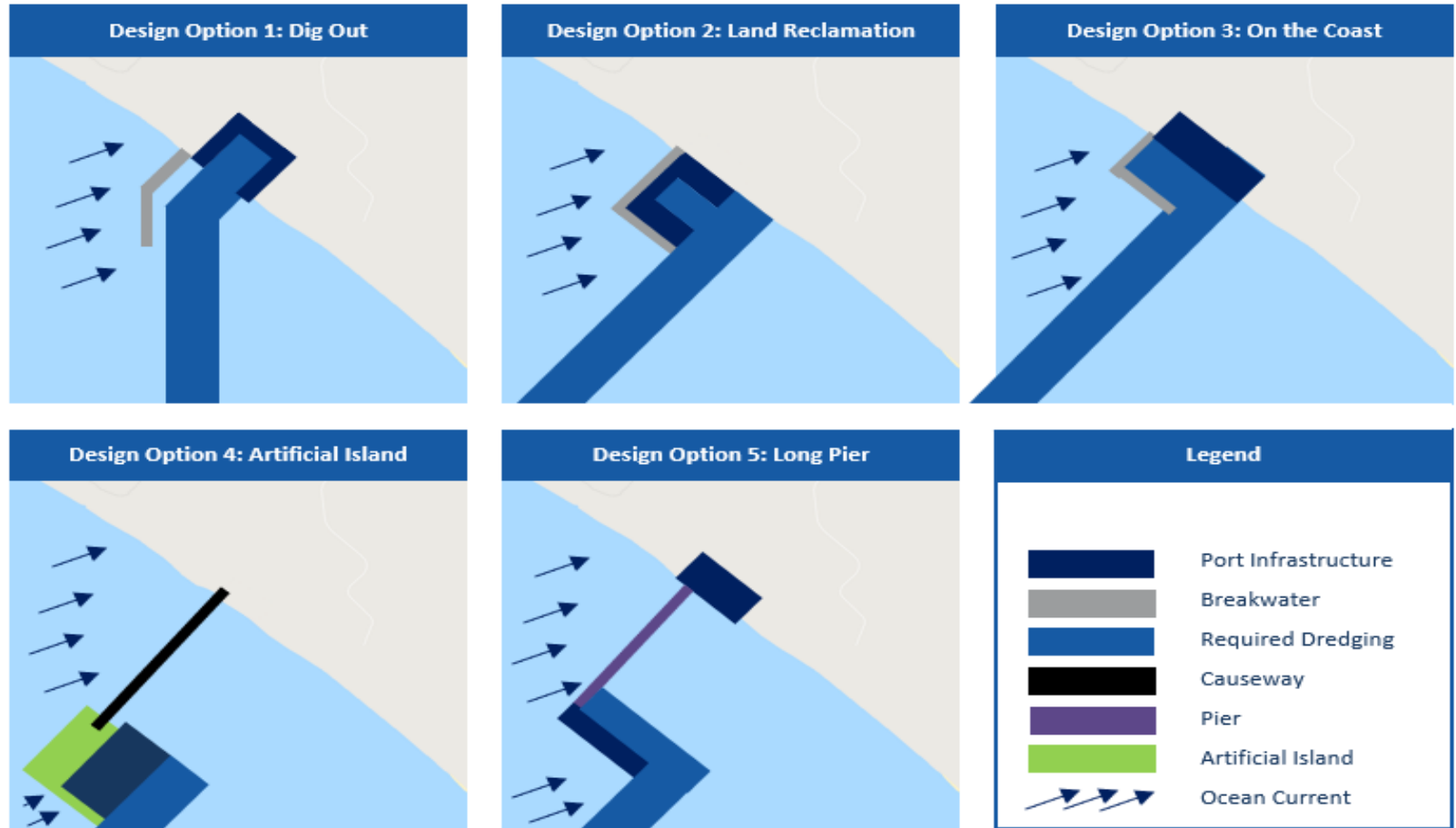
1. Special target segments have been identified, that can start-up fast and offer opportunities for niche markets:
  - A. **Containers:** 8% of national demand and overflow port once Lagos port cluster (incl. Lekki) is saturated;
  - B. **Offshore supply** basis for regional demand;
  - C. **RoRo and vehicles** traffic; Automotive industry will have ample space for development options (subject to tax regime).
  - D. Supporting exports of Dry Bulk like **cement** and Liquid Bulks and **bitumen**.
  - E. **General cargo** import and exports;

Cargo segment	2026	2030	2040
Containers (TEU)	254,200	379,900	1,800,000
NC General Cargo (tons)	240,700	981,200	1,000,000
Vehicles (units)	154,600	178,300	245,400
Cement (tons)	450,000	1,500,000	1,500,000
Bitumen (tons)	375,000	1,250,000	1,250,000



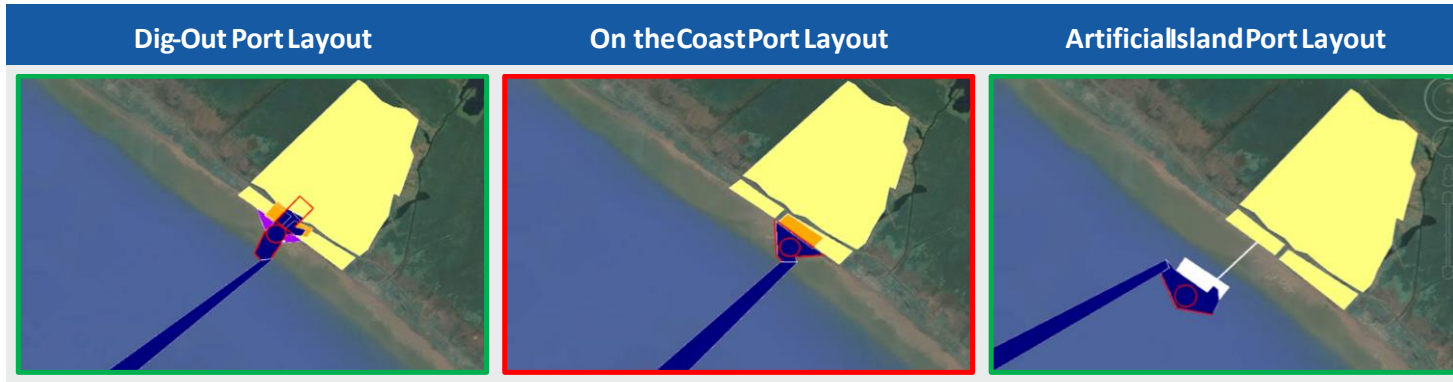
# Approach to select the best Port Type

Dig out, “on the coast”, artificial islands



# Preferred Port Layout

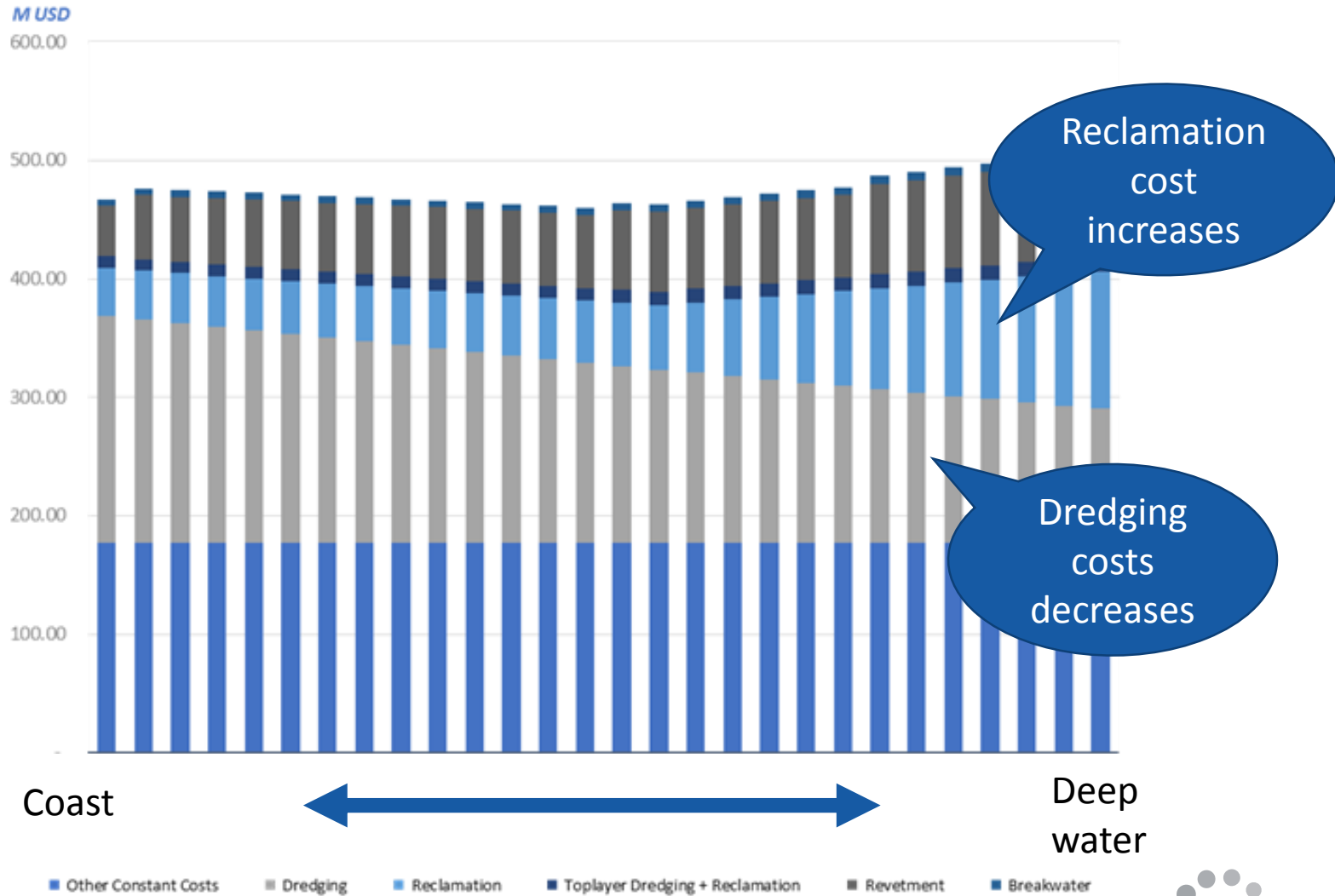
The Artificial Island is preferred above the Dig Out port



Multi Criteria Analysis	Dig-out	On the Coast	Artificial Island	Deep Sea Artificial Island
Land Availability	~	✓	✗	✗
Marine Conditions	✗	✗	~	✓
Hinterland Accessibility	✓	~	✗	✗
Estimated Development Costs	~	✓	~	✗
Future expansion	~	✗	✓	~
Operational	✓	~	~	~
River issue	✗	~	✓	✓
Encroachment	✗	✗	✓	✓
<b>MCA Score (Total Score = 10.0)</b>	<b>2.51</b>	<b>2.49</b>	<b>2.60</b>	<b>2.40</b>

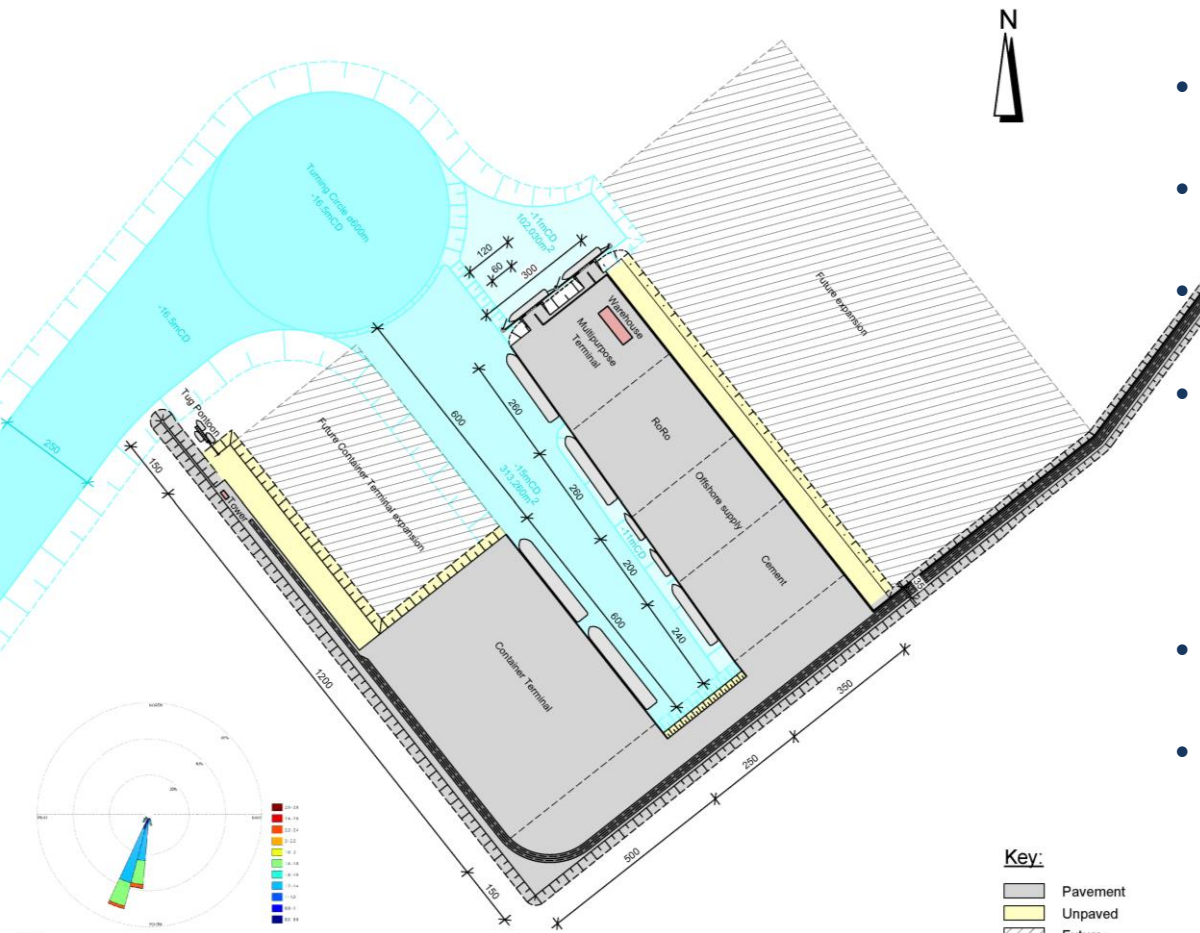
# Choosing optimal location for artificial island

Cost minimalization: dredging versus land reclamation



# Artificial Island Port – Single Basin (concept results)

The Artificial Island Port is connected through a causeway and threshold bridge.



## Phase 1 development

- **Container Terminal:** 2 berths (600m quay length);
- **General Cargo / Multipurpose Terminal:** 1 berth 260m;
- **Offshore terminal:** 200 m for 2 to 3 offshore vessels;
- **RoRo terminal:** 1 berth (260m) is envisaged in Phase 1 depending on lifting Nigerian import duties on cars. The free trade zone is used for automotive cluster;
- **Cement terminal:** 240m quay length for domestic exports
- **Bitumen berths:** For bitumen exports, 2 berths/jetties are foreseen, allowing for the berthing of 120-meter vessels.



# Recommendations for a successful transaction

- National Port Master Plan
- Transaction to be carried out by credible and fully authorized Concessioneing Authority.
- Competitive Dialogue Procedure creates most value: Early involvement of bidders
- Tender should be business case driven. Focus on long term value rather than closing the deal. Focus on Bankability
- Feasible Business Case for both PA and TO translated into valuable concession contract
- Value-engineering to further optimize the business case
- Concession contract: valuable, enforceable and bankable
- Transaction Preparation Phase is Crucial:
  - Transaction Structuring: Valuation, Risk Allocations, Value Engineering, Documentation
  - Transaction Management: First Time Right and Commit to Timelines



# Thank you

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