Fundamentals in port infrastructure investments

21st Intermodal Africa 2019

20 March 2019 - Djibouti

Agenda

Introduction to MTBS

Problem identification

Value drivers for PPP projects

Case studies

Q&A

MTBS: Maritime & Transport Business Solutions

Specialised in port PPP projects, global portfolio (core market: EMEA)

Significant portfolio size

50 port projects per year

Diversified portfolio background

Broad client base

Strong home market

International focus

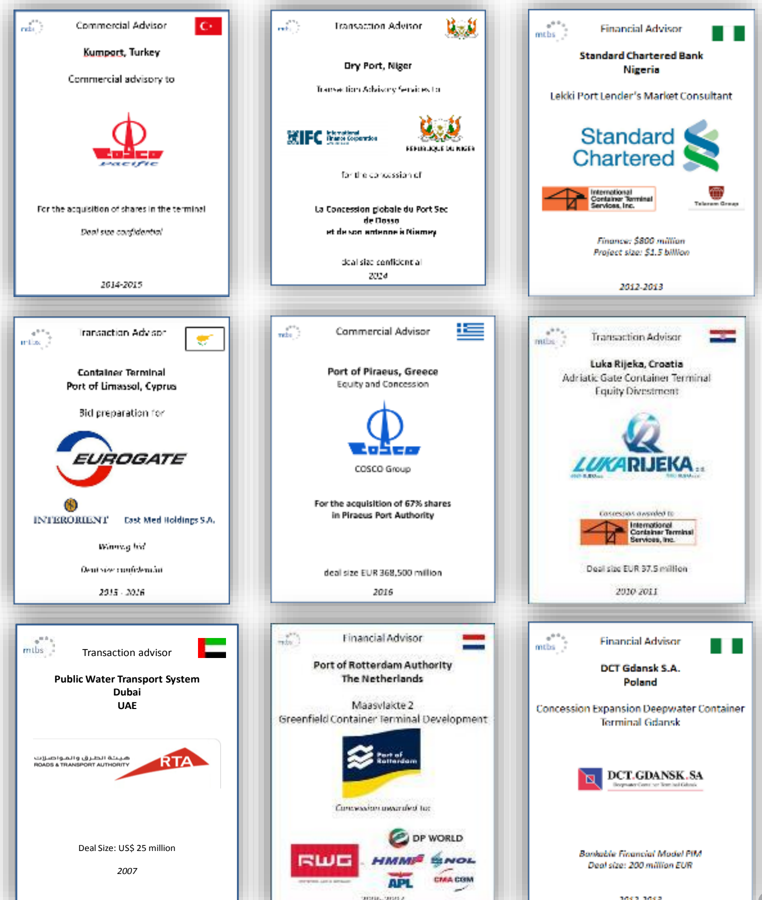
MTBS: Maritime & Transport Business Solutions

Global leader in port business (financial & strategic) advisory

MTBS' Characteristics

Knowledge leadership	Create & protect value	Realisation driven
State-of-the-art techniques	Quality profits	Focus on client context
Vast international experience	Entrepreneurial business solutions	Implementable project deliverables

Transactions



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MTBS: Maritime & Transport Business Solutions

A selection of our worldwide and diverse client base

Authorities		GTOs		Industrials	Governments	IFIs	Banks & Equity
شركة أبوظبي للموانئ ABU DHABI PORTS COMPANY	Port of Melbourne Corporation	招商局港口控股有限公司 CHINA MERCHANTS PORT HOLDINGS COMPANY LIMITED		FRIGO BALTIC	ACS Association of Caribbean States	European Bank for Reconstruction and Development	العربي anb
	Port of Rotterdam	COSCO SHIPPING	Marsa Maroc	EGA الإمارات العالمية للألمنيوم EMIRATES GLOBAL ALUMINIUM	ARUBA GOBIERNO	afd Agence Française de Développement	CITADEL CAPITAL القلعة
IPC	Port of Antwerp	DCT.GDANSK.SA	RENT A PORT	Grain Bulk Handlers Ltd	Government of the Netherlands	Emerging Africa Infrastructure Fund	Ecobank The Pan African Bank
	กรมเจ้าท่า	موانئ دبي العالمية DP WORLD	GRINDROD	Navigation Maritime Bulgare	CEDEAO ECOWAS	Caribbean Development Bank	Rand Merchant Bank
LUKA KOPER Port of Koper	Port Metro Vancouver	EUROGATE	PORTEK Knowledge & Solutions in Port Business	LAFARGE		African Development Bank Group	FMO Finance for Development
TRANSNET	LUKA RIJEKA	FORTH PORTS LIMITED	International Container Terminal Services, Inc.	GRIMALDI GROUP	Hellenic Republic Asset Development Fund	WORLD BANK GROUP	HSBC
	SILPORT Port of Sillamäe	GLOBAL Ports Holding	ARKAS	Boskalis	Republic of Bulgaria Ministry of Transport, Information and Communications	IFC International Finance Corporation	FBNCapital
TPA	Port of Tallinn	HHLA	Navigation Maritime Bulgare 1892 Varna	Oando	Republic of Croatia Ministry of Maritime Affairs, Transport and Infrastructure	ADB	Standard Chartered

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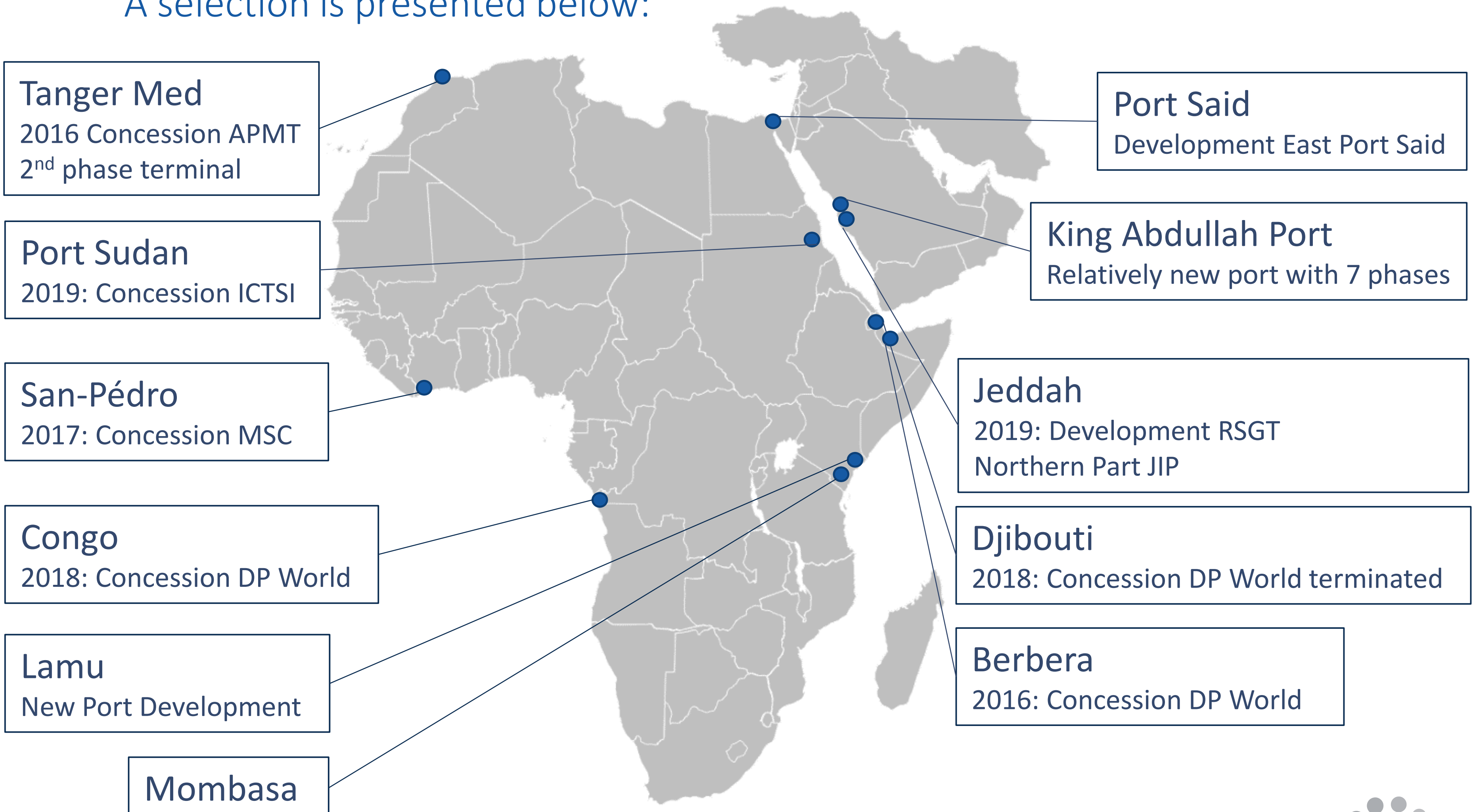
Quick Regional Port Scan

There are many recent and ongoing developments taking place in the region. A selection is presented below:



A lack of port PPP projects

A selection of delayed or cancelled port PPP projects globally
In general, the lack of private involvement results in a lacking number of PPPs

Port of Mombasa: PPP implementation cancelled

Lamu Port: Significant delays during construction process

Durban Dig-Out Port: Project shelved until further notice

Surabaya Port: Contract renewal terms cancelled the PPP project

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Port PPP project: Laem Chabang Phase III

Specific focus on a recently failed port PPP project in Thailand

Port Authority Thailand

Transaction Advisor:
Roland Berger

- DBOM Project
- Plots F1 and F2
- 35-yr concession

Invitation to Tender:
November 2018

32 bid envelopes sold

1 unqualified bidder
in 2-month period for
document submission

	Basin I	Basin II	Basin III
Width (M.)	400	600	920
Length (M.)	3,600	3,900	4,500
Depth (M.)	-14	-16	-18.5
Break Water (M.)	1,300	1,700	950
Accommodate (DWT.)	50,000	80,000	100,000
Capacity (M.TEU)	4.3	6.8	7.0

Port PPP problems

The failures of port PPP projects are caused by poor risk allocation, improper requirement, criteria and procedures as well as difficulties in traffic forecasting

According to the World Bank Group: "project cancellation rates vary greatly among sectors – for instance, deals in transport (5.1%) and water (5.7%) have a much higher cancellation rate than those in the energy sector (2%)".

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Various innovative PPP structures are developed

Tailored PPPs consider market dynamics whereas the use of standard PPP structures and procedures do not guarantee success

- **No one-size-fits-all**
  - Each PPP Contract is a unique arrangement, tailored to the risk management capabilities of the Grantor and the Concessionaire

- **Risk-adjusted returns**
  - Focus on returns, without adjustment for risks, leads to sub-optimal PPP contract design

- **Assess market interest in an early stage**
  - Requirements of potential co-investors should be assessed prior to the start of a transaction

Respond to the relevant market dynamics, for example through market consultations among interested parties

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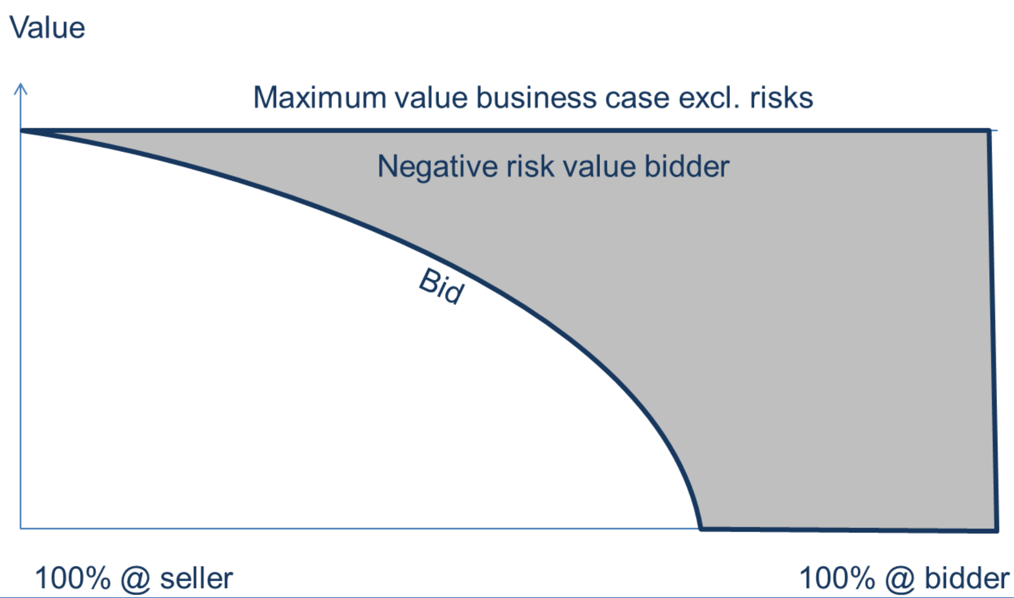
Successful PPPs allocate risks optimally

Shift in risk allocation between the Grantor and the Concessionaire should lead to a shift in distribution of returns

Risk-Adjusted returns often neglected

- **Grantors push away risks**: Concession Grantors are often interested to allocate a share of the risk to the concessionaire
- **While maintaining the same return requirement**: Concession Grantors expect a similar return for a Project with lower overall risk

Risk allocation is the primary determinant for the required return of a project



Why port PPP implementation?

Two main historical reasons for using PPPs in the port sector

Risk management	Reduce burden on public budgets
Private parties are better positioned to handle risks, for example: • market risks • operational risks • construction risks	Affordability issues of Developing Economies are often one of the main reasons for insufficient infrastructure supply

These two main arguments result in a tendency to shift a large degree of risks and investments to the private side

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Evolution of port PPP structures

Wide range of options available: ports have evolved from traditional public ports to fully private ports

2000 | **2010** | **2020**

Landlord model

Investments:
- Public: regulation, infrastr.
- Private: superstructure, equipment, labour

→ Balanced allocation of risk

Examples:
- Rotterdam, Netherlands
- Singapore
- Antwerp, Belgium
- New York, USA
- Tanger-Med, Morocco

BOT model

Investments:
- Public: potentially regulation
- Private: all investments

→ 100% private

Examples:
- Monrovia, Liberia
- Mersin, Turkey,
- London Gateway, UK

DBFM model

- Base infrastr. Investment through contract

→ PA bears market risk, life cycle optimisation

Examples:
- Anaklia
- Maputo Access Channel, Mozambique

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What determines value?

Three main factors: starting free cash flows, growth and risk

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

Free Cash Flows

Growth

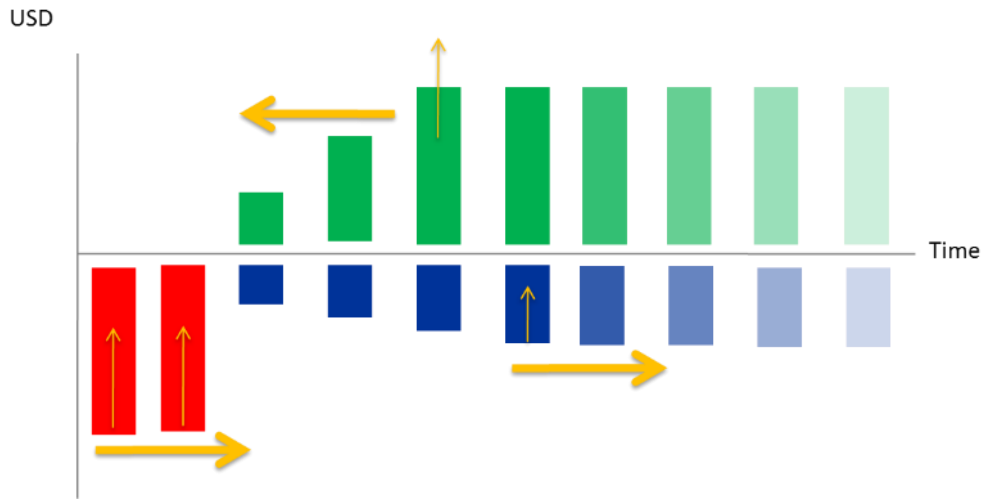
Risk

Value maximisation

1 Free cash flow management

Value maximisation is used to maximise starting cash flows:

- To limit the total investment costs for the first phase(s)
- To limit the total construction period for the first phase(s): to ensure earliest revenue generation



PPP implementation can assist with the optimisation of free cash flows, by ensuring that the party responsible for construction has sufficient incentives to minimise costs.

Value maximisation

2 Market growth: focus on the correct market

Port Projects need to be built on a solid market potential:

- Without growth potential, construction of new facilities is hard to justify;
- Growth creates opportunities and ensures incentives for competition on service level and price level.

A correctly designed PPP structure can maximise the effect of growth opportunities, by allocating the market risk to the party that handles this risk best.

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Value maximisation

3 Risk management: focus on allocating the risk to the party that is best capable to handle the risk

The following risks are most significant for a port development project:

- Construction & development risks
- Market risks
- Operational risks
- Funding risks

AVOID BUILDING NEW TERMINALS IF IT RESULTS IN EMPTY TERMINALS IN THE SAME PORT

PPP contracts are used to allocate risks to the Grantor and Concessionaire.
PPP contracts are therefore the main tool to manage the risk of the project.


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Anaklia: DBFMOT

International practices

Anaklia Development Consortium (ADC) responsible for almost all aspects of the Anaklia Port development

- **Design of the port**
- **Funding of the investments**
- **Construction management**
- **Implementation of sub-concession agreements**
- **Operations at the berth**
- **Operations of the marine services**
- **Management of the port**

Anaklia Port is a showcase for best practice implementation of a fully private port, with a balanced PPP contract that provides the right incentives to the Concessionaire

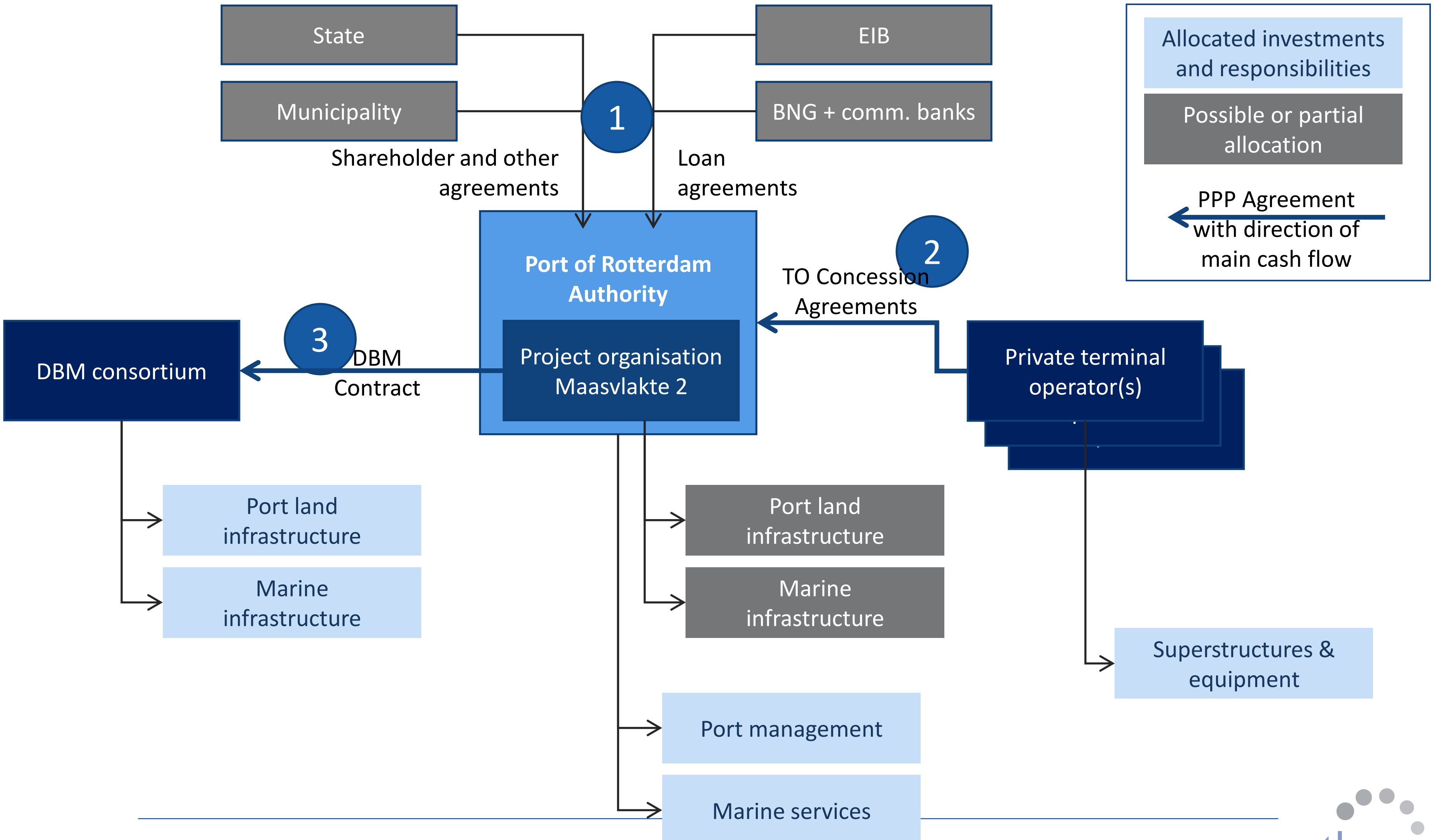
Anaklia: DBFMOT

International practices

- **Advantages:**
  - Optimal asset management
  - Easier to budget
- **Disadvantages:**
  - Higher costs
  - Strategic asset to private sector

Rotterdam MV2: DBM

International practices



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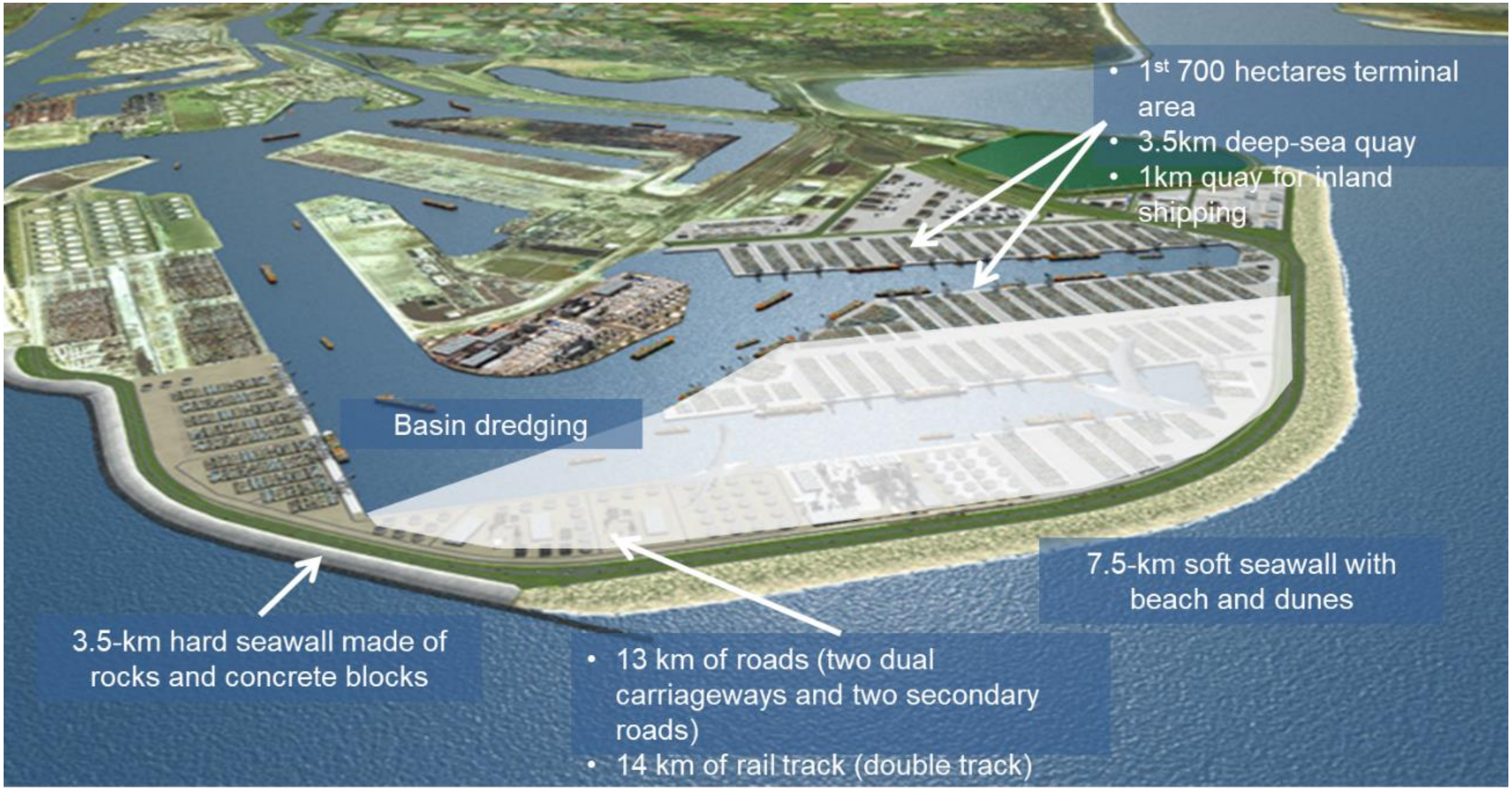
Rotterdam MV2: DBM

International practices

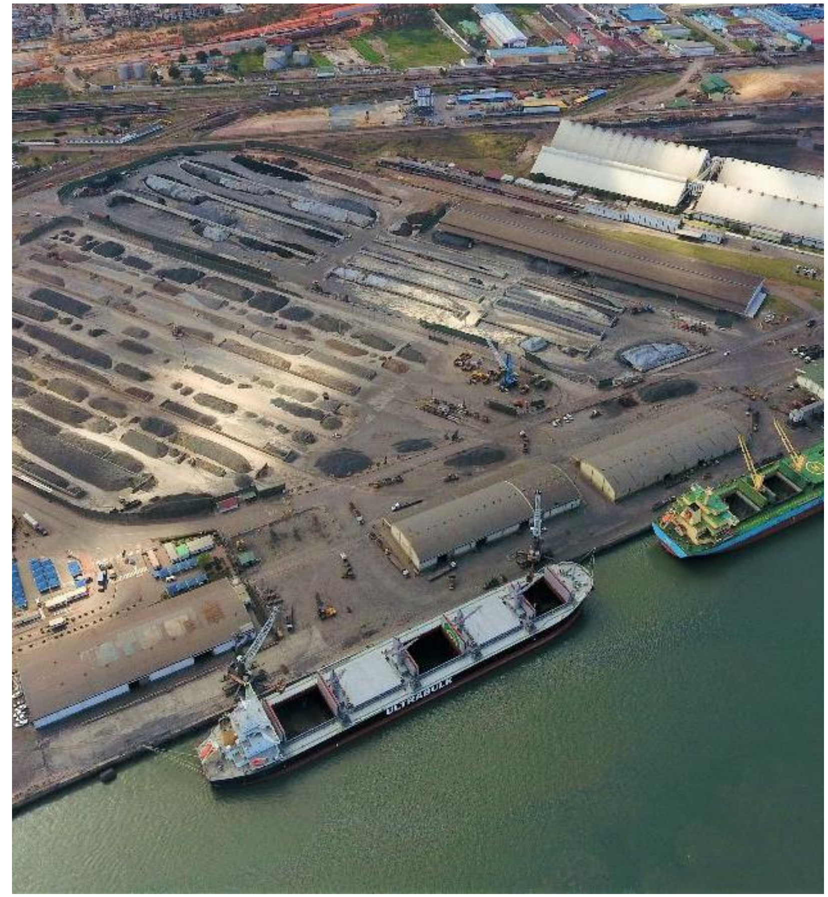


Maputo: PDMC

International practices

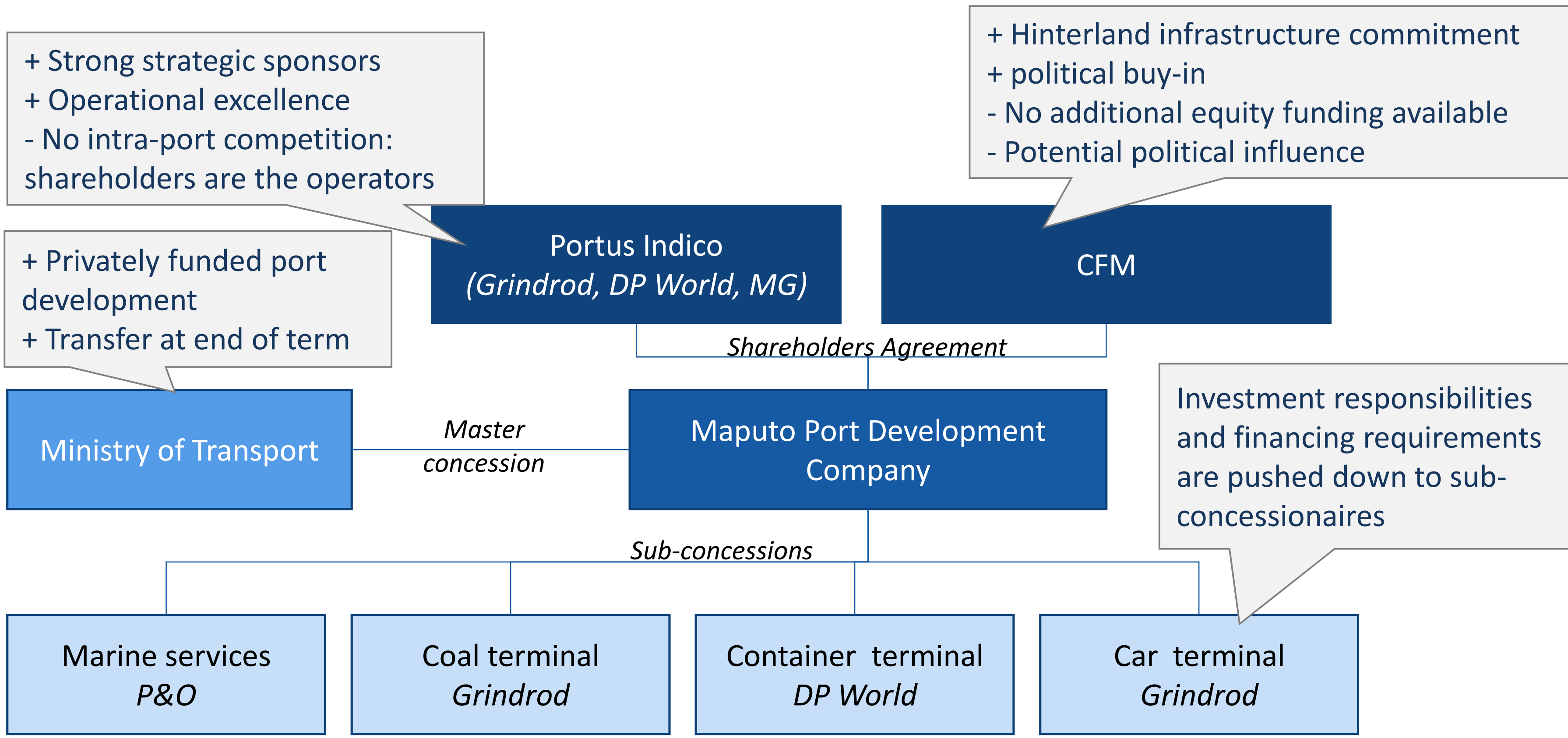
- **Maputo Port Development Company**
- **Master concession of 30 years**
- **Shareholders**
  - Private: Portus Indico (51%)
    - Portus Indico: Grindrod (48.5%), DP World (48.5%) and SARL (3%)
  - Public: and CFM (49%)
- **Brownfield port**

The private sector participation in a PDMC-like port PPP model resulted in strong operational performance



Maputo: PDMC

International practices



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Thank you

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