



14th Intermodal **AFRICA** 2015

TRANSNET



delivering freight reliably



Deploying best operational methods in improving port capacity for an improved economy

- Zeph Ndlovu, General Manager: Risk and Corporate Affairs
26 November 2015

CONTENTS



Transnet SOC Ltd

- **Transnet Port Terminals**

Port's Impact on the Supply Chain

- **Pricing Debate**

Derived Impact/Port Productivity

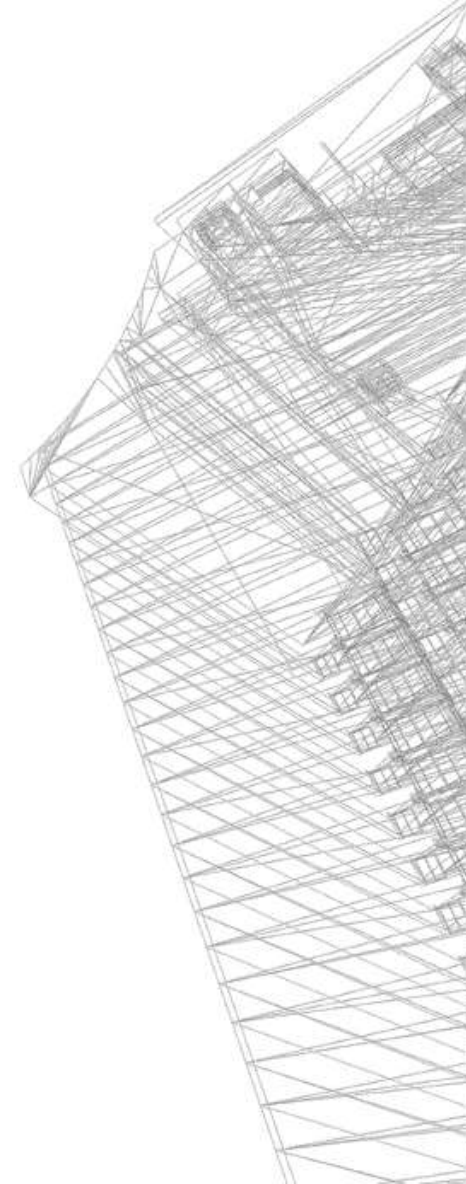
- **Performance Improvement**

Port Capacity

- **Market Demand Strategy**

Transnet's Regional Integration Strategy

- **Transnet International Holdings**



Transnet Shareholding and Stakeholder Environment



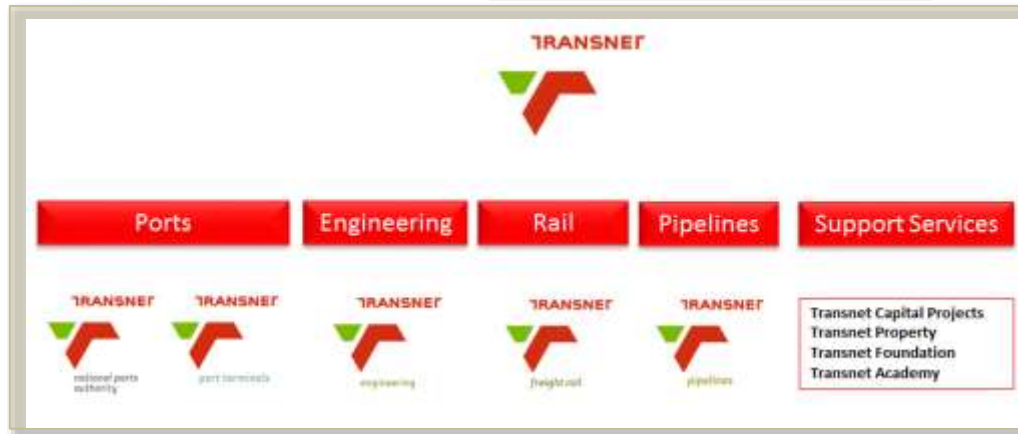
Governance

As a State Owned Company Transnet is subjected to governance by various departments



Transnet

State Owned Company Limited
5 Operating Divisions
4 Support Service Businesses



Key Customers

Alignment and collaboration on growth and expansion plans. Implementation of Performance Standards.



Industry Bodies

Partnering with groups or organisations that are affected by the activity of the port.



Employees

Transnet is highly unionised with 93% of employees being members of labour unions



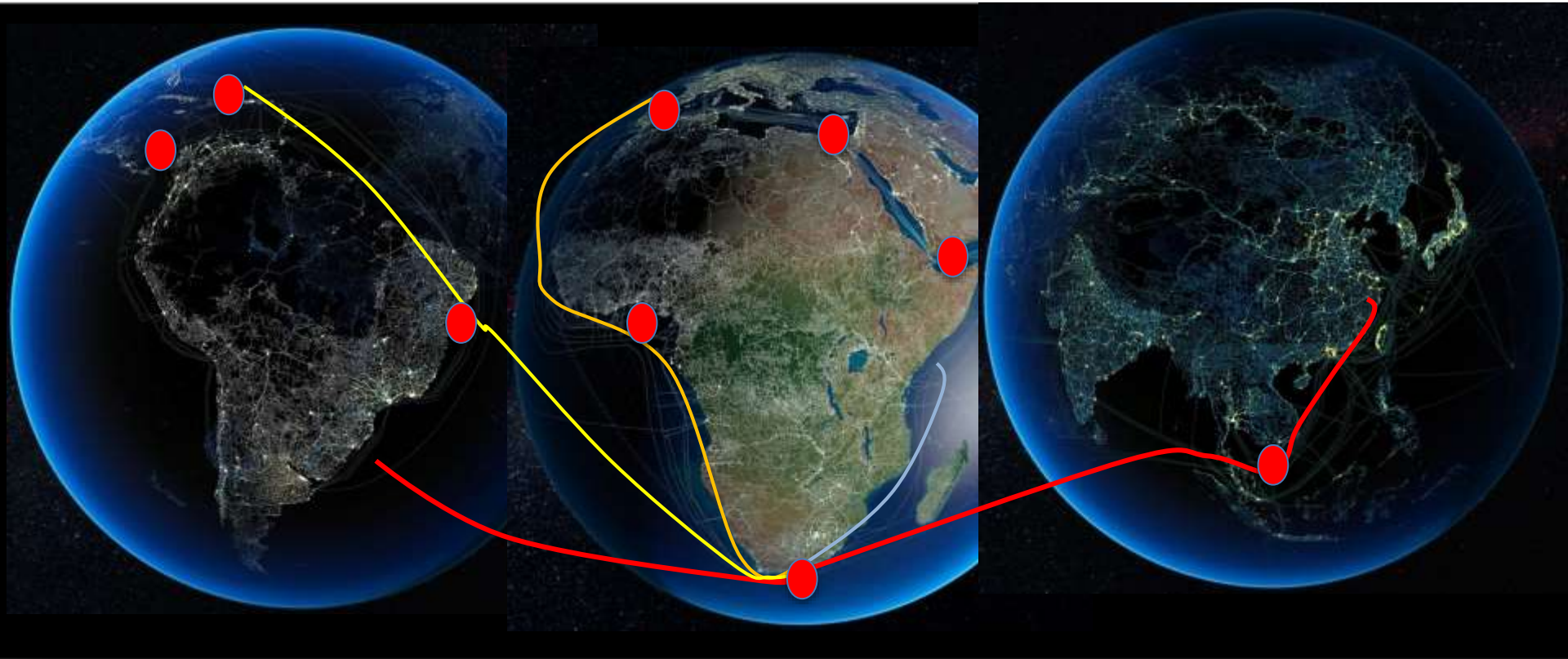
- Port Terminals plays a **strategic role in the South African economy**.
- TPT facilitate the efficient flow of **imports, exports and transhipments** through its cargo terminal operations.
- Port Terminals remains committed to **creating capacity ahead of demand** that will enable unconstrained growth.
- TPT is driving an extensive capital investment plan known as the **Market Demand Strategy** since 2012.
- Port Terminals is focused on **improving operational performance** to:
 - **optimise customer service levels** and
 - **minimise vessel turnaround time**.
- The Division pursues **competitive pricing** to promote volume growth in all four sectors to ensure the optimum utilisation of assets and to deliver the targeted **return on investment**.

- 98 % of global Trade takes place through sea borne routes
- Trade Ports are the main gateway of economic flow between continents
- The Globe has spatial nodes of economic generation
 - Raw materials and Mineral resources
 - Semi and fully beneficiated products
 - Developed economies - matured services and state of the art products
- Bulk Commodities, Containers, Break Bulk and Automotive units are Traded commodities between nations

Global Network Economy

Main Port Regions for Interlining Relay

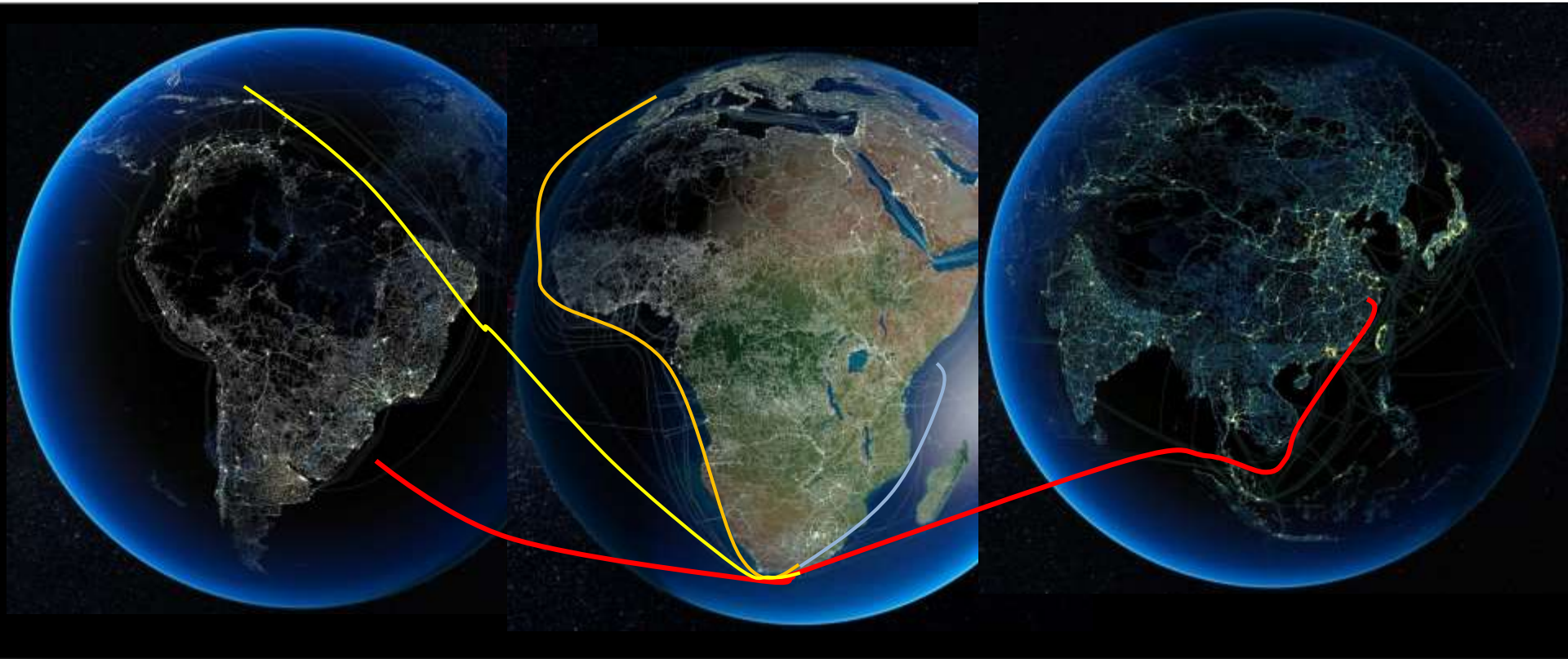
Whilst ships are getting bigger, ports are positioning themselves to form natural hubs for transshipment



South Africa

Southern Hub for World Shipping Routes

The position of South Africa's ports system enables it to access to South-South trade, Far East trade, Europe & USA, East & West Africa regional trade



Shortest Trade Route between **Shanghai and Santos** is via South Africa 10,972nm = **21 days** @ 21 knots
via Panama Canal 12,967nm = 26 days + transit fee
via Suez Canal 13,544nm = 28 days + transit fee



Source: <http://www.searates.com/reference/portdistance>

Complimentary port system in the African Continent



Case Study - Transnet Port Terminals



- Transnet Port Terminals (Port Terminals) is a critical **facilitator of cargo trade** between South Africa and the rest of the world.
- We provide **cargo handling services** to a wide spectrum of customers including shipping lines, freight forwarders and cargo owners.
- Operations are divided into four major business segments, namely:
 - **containers,**
 - **bulk,**
 - **break-bulk, and**
 - **automotive.**
- Port Terminals operates **16 terminals** in seven ports spread along the South African coastline.



- Operations within the bulk sector are characterised by handling dry commodities through a network of conveyor belts and ship loading and offloading equipment.
- With a market share of 52%, Port Terminals handles mineral bulk at the ports of
 - Richards Bay,
 - Port Elizabeth and
 - Saldanha,
- and handles agricultural bulk commodities at the ports of
 - Durban and
 - East London.



1. Collaborative Methods of Value Chain Coordination

Transnet Value Chain Coordination

Communication

- **Manage interface** between internal (Other BU's) and external stakeholders
- **Distribute information** to all role players
- Provide all stakeholders with a **3 days forecast**

System Optimisation

- **Efficient and integrated value chain performance**
- Analyze current performance to **identify improvement opportunities**
- **Prioritisation of loading** based on commodity and destination requirements

Demand Planning

- Ensure **service design** is realistic and assets balanced
- Ensure **alignment with mines, JOC and TPT**
- Ensure process is based on **actual demand** (stockpile availability per grade and vessel frequency)

Loading/Offloading Coordination

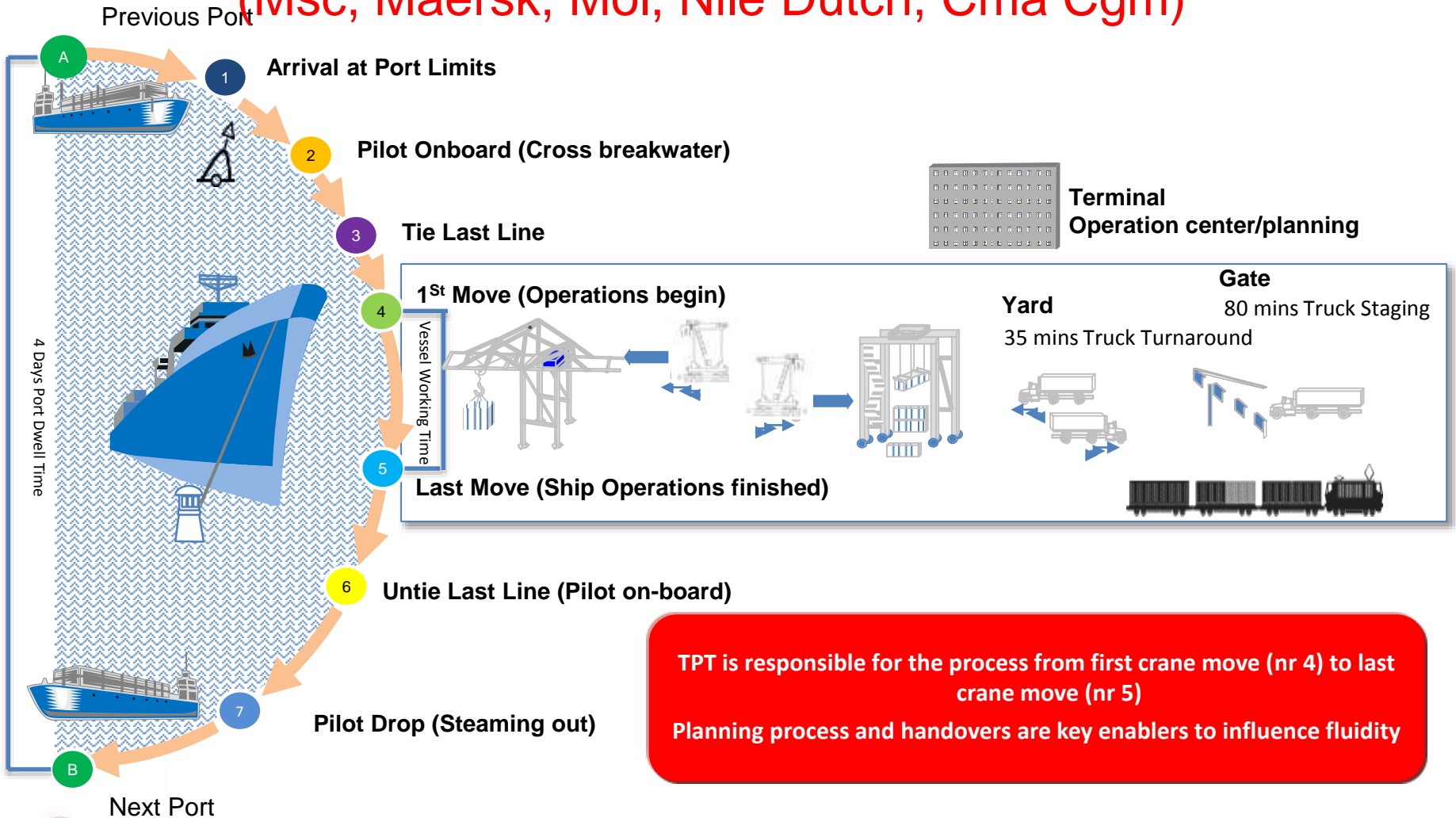
- Ensure **stockpile availability** before T1 placement with customer
- **Influence improved scheduling practices** at all stakeholders,

Deviation Management

- **Assess arrivals and departures for next 24 hours** based on current position and plan
- **Validate** planned train departures by checking on-time arrivals of locomotives and crew
- **Effectively manage the departure rate** from a yard, so that it delivers a balanced arrival rate at the next yard

2. Partnering methodology with Shipping Lines

(Msc, Maersk, Mol, Nile Dutch, Cma Cgm)



Containers

- Port Terminals operates container terminals at the ports of:
 - Durban,
 - Port Elizabeth,
 - Ngqura and
 - Cape Town.
- Port Terminals has a current annual capacity of over 6.4 million TEUs and is well positioned to facilitate the growing demand for containerised cargo.

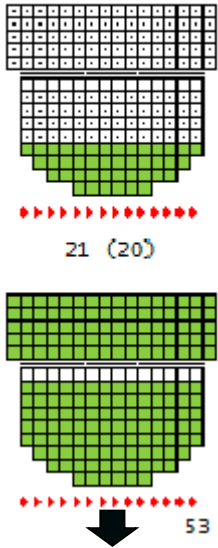


Durban Container Terminals



Durban Tandem Lift Cranes

19

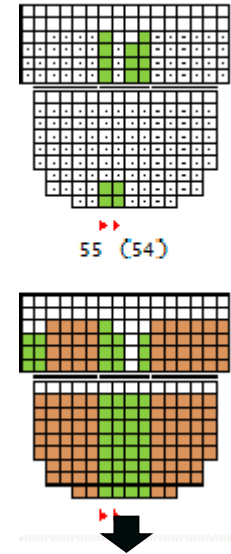


Optimal Tandem Stow

Critical Stowage factors for optimizing tandem cranes:

- ✓ Maintain uniform container lengths between rows
- ✓ Avoid stowing more than 7 high on deck
- ✓ Avoid intermingling GP cargo with out of gauge cargo on deck. Rather stow OOG below deck in centre/port/starboard section
- ✓ Max outreach is 20 rows due to crane rails set back.
- ✓ Preferred work sequence: discharge deck; discharge/backload below deck; load deck.

53



Less optimal Tandem Stow



Results of Partnering with Shipping Lines



- Synchronized planning
 - Shared stow plan and stack plan
 - Simultaneous deployment of resources to improve productivity
 - Marine services
 - Berthing crew and stevedores
 - Terminal operators achieving higher throughput on synchronized plan.
- Maximal deployment of Cranes
 - Increased crane density
 - Shorter vessel turn around time



Durban Tandem Lift Cranes



Durban Tandem Lift Cranes



- Port Terminals operates automotive terminals at the ports of:
 - Durban,
 - East London and
 - Port Elizabeth.
- These facilities handle a variety of cargo driven onto and off the vessel.



Ships are Getting Bigger



Hoegh Target



3. Road Truck Booking System methodology

- Container Terminals Truck Staging Area



Results of introducing the Truck Booking System

- Spread out truck visit to port on 24 hour window
- Truck turn around time improved from 50 minutes to 30 minutes
- Many depots are now open 24 hours a day. Outstanding depot following same pattern
- Truck congestion has been averted
- Truck owners testify of making more trips into the port

Durban Container Terminals: Current



Salisbury
Island
Navy Base

Existing Durban Container
Terminal (DCT)
Pier 1

Existing Durban
Container Terminal
(DCT)
Pier 2

DURBAN CONTAINER TERMINALS

FUTURE LAYOUT - 2020



Consolidated
Salisbury
Island Navy
Base

Interim upgrade of Pier
1 + 2 Rail Terminals

Pier 1 with new Salisbury Island infill
and deep-water berths
Total cost: R 6.3b

Pier 2 with deepened
berths 203-205 and
new tandem cranes
Total cost: R 5.6b

DURBAN CONTAINER TERMINALS

LONG TERM POTENTIAL LAYOUT



New rail terminals
and back-of-port
facilities

Infill between Pier 1 and Pier 2. Durban
Container Terminal reconfigured to RMG
operation

DCT of the Future = Shanghai Today



Future Expansion Plans for Durban

Old Durban International Airport Site



Future Expansion Plans for Durban

Durban Dig Out Port (DDOP)



DDOP End State



Transnet Capital Projects Service Offering

- Transnet Capital Projects has extensive experience in managing mega projects, and is in a position to advise other state-owned logistics operators on implementation of infrastructure projects

Transnet Capital Projects is a specialised unit within Transnet, responsible for implementation and coordination of mega projects and is one of the primary channels for meeting our capital investment plan

Infrastructure Development and Planning

- Conduct feasibility studies of major infrastructure development and logistics
- Provide property life-cycle management support
- Provide fit-for-purpose infrastructure safely, on time, within budget and according to specification

Project Management for Mega Projects

- Coordinate project implementation to enable operating teams to focus on operational delivery
- Schedule and cost projects for timely delivery
- Ensure project excellence and successful delivery through appropriate technology and innovation

Stakeholder Management for Key Projects

- Engage in community upliftment and social infrastructure development
- Ensure integration of systems and processes across operational areas in order to deliver the organisation's capital plan seamlessly



Transnet Academy's Training Service Offerings

- Transnet's schools offer a wide range of training options to equip individuals to perform both technical and business roles across ports, rail and pipelines logistics solutions

Maritime School of Excellence



Prepares learners for port and port authority roles both in South Africa and in the Southern African region through various local and international collaborations

School of Rail



Assorted rail-related training including operations, signalling, permanent way construction, welding, maintenance, railway engineering and safety training, in South Africa and internationally

The Institute of Technical Training, Pipeline and Security



Developing technical skills for critical roles such as apprentices, artisans, engineers, planners, operators, protection officers, investigators and peace keepers

School of Leadership, Business Training and Commercial



Competencies related to business, management and leadership in the logistics sector with the relevant accreditations deliver for the competitive market

TRANSNET



delivering freight reliably

