



# **BRIEFING TO THE STANDING COMMITTEE ON FINANCE, ECONOMIC DEVELOPMENT AND TOURISM**

Initiatives to improve efficiencies at the port of  
Cape Town

**PRESENTATION BY: TRANSNET SOC**

**DATE: 6 JUNE 2023**



# Transnet National Ports Authority

**Adv Phyllis Difeto**  
Managing Executive, TNPA



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# PORT OF CAPE TOWN OVERVIEW

## CAPE TOWN- BUSINESS PARAMETERS



- R15.8 bn Total assets
- Total Port Area 9350ha  
Land Area 620ha  
Water Area 8730ha
- Distance around the port is 20km
- 42 Berths
- 3 Ship Repair Facilities
- Marine fleet (4 tugs, 2 pilot boats, 2 launches & 2 work boats)
- 11 Licensed Terminal Operators (1 Container, 2 MPT, 6 Liquid bulk, 1 Cruise & 1 Breakbulk)

**A Premium Fruit Export and Agriculture Hub**

## CAPE TOWN- PORT ACTIVITIES

### Freight Traffic

#### Containers

Deepsea import, export and transshipment and coastwise containers

#### Liquid Bulk

Import and export of petroleum products  
Other liquid bulk commodities including edible oils

#### Dry Bulk

Import of agricultural products, grain, fertilizer

#### Break Bulk

Imports of cement and steel  
Export fruit, steel and fish transshipments

### Other Services

#### Fishing

Resident trawlers & fish processing plants

#### Maritime Engineering

2 Dry dock facilities  
1 Syncrolift – elevated platform facility with 5 lanes, maximum lifting capacity of 1750 tons, caters primarily for repairs of fishing trawlers up to 64 m length

#### Tourism and Recreational

Dedicated cruise terminal  
Yacht Club for recreational boating activities  
Close proximity to V&A Waterfront





# PORT OF CAPE TOWN FOOTPRINT



- Dry Bulk Capacity: 2.1 Mil tons/year
- Quay Length:
  - ✓ B to D Berths: 641m
  - ✓ F to J Berths: 1 105m
- Draft: 9.6m to 12.2m

- Container Terminal Capacity: 1.0 Mil TEUs/year
- Quay Lengths:
  - ✓ Berth 601: 236m
  - ✓ Berth 602 , 603 and 604: 305m (each)
- Draft: 10.7m to 14m

- Break Bulk Capacity: 1.5 Mil tons/year
- Quay Length:
  - ✓ B to D Berths: 641m
  - ✓ F to J Berths: 1 105m
- Draft: 9.6m to 12.2m

- Liquid Bulk Capacity: 3.4 Mil Kilo liters/year
- Quay Length:
  - ✓ TB 1 & 2 – 460m
  - ✓ EM 1 – 259m (not operational)
  - ✓ EM 2 – 259m (operational)
- Draft: -11.8m to 13.4m

# PORT OF CAPE TOWN 8-POINT PLAN

Focus Areas	Initiatives / Strategic Projects	Status
<b>Optimize the Port as a Delivery Platform</b>	1. Continued use of A Berth (operated by FPT) for Cargo Operations.	Ongoing
	2. Port decongestion through Back of Port (PIP site & Culemborg Acquisition) development.	In-progress
<b>Combat Adverse Weather Conditions</b>	1. Long Wave – Shore Tension (2 x sets Active). Secure additional unit for berth 601.	Ongoing
	2. High Swell – Helicopter for Pilot Deployment in 2023/24.	In-progress
	3. Wind – Investigate predictive model, potential infrastructure engineering solution/s, equipment which are more resilient to wind, and optimal recovery plan.	In-Progress
	4. Fog – Investigate impact on Marine & Cargo Operations and explore possible mitigations.	In-progress

# PORT OF CAPE TOWN 8-POINT PLAN

Focus Areas	Initiatives / Strategic Projects	Status
<b>Improve Truck Operations</b>	1. Interim Truck Staging Facility operational from June 2022.	Completed
	2. Reduce truck terminal inflow during peaks ahead of stack closure, through introduction of additional Interim Truck Staging Areas.	In-progress
	3. Increase Port utilisation on 24-hour basis (“night runs”).	Ongoing
	4. Support enhanced Truck Booking System (TPT - NAVIS).	Ongoing
	5. Host Truck Industry Workshop, by end of July 2023.	In-progress
	6. Smart Traffic Management through enhanced Infrastructure, Systems and Operations.	Ongoing
<b>Optimise Marine Services</b>	1. Implement a 3x Tugs and 3x Berthing Gang operation.	Completed
	2. Monitor Marine Operations Performance Standards (MOPS) to minimise vessel service delays.	Ongoing
	3. Marine Fleet Upgrade (2 x Workboats by Mar '24 & 2 x Launches by Mar '26 ).	In-progress

# PORT OF CAPE TOWN 8-POINT PLAN

Focus Areas	Initiatives / Strategic Projects	Status
<b>Improve Information &amp; Operations Visibility</b>	<ol style="list-style-type: none"> <li>1. Weekly Port of Cape Town Stakeholder Operations Meeting.</li> <li>2. Quarterly Port of Cape Town industry wide operations workshop.</li> <li>3. SMS / Email Notifications regarding weather, berth planning &amp; shipping.</li> <li>4. TNPA Dashboard Reports per shift.</li> <li>5. Daily National "OPS Meeting" with customers.</li> </ol>	<p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>
<b>Terminal Equipment &amp; Port Infrastructure</b>	<ol style="list-style-type: none"> <li>1. Create additional container capacity (CTCT Phase 2b – increase capacity from 1m to 1.4m TEUs):               <ol style="list-style-type: none"> <li>a) Increase Container Stack Capacity (TPT).</li> <li>b) Increase capacity of rail marshalling yard (from 40 to 50 wagon trains).</li> <li>c) Create a permanent Truck Staging Facility.</li> </ol> </li> </ol>	<p>In-progress</p>



# PORT OF CAPE TOWN 8-POINT PLAN

Focus Areas	Initiatives / Strategic Projects	Status
<b>Terminal Equipment &amp; Port Infrastructure</b>	2. Monitor the implementation of the Terminal Operators capital investment, maintenance, and refurbishment plans (Transnet Port Terminals (TPT) and Fruit Produce Terminal (FPT), and other terminals).	Ongoing
	3. F-Berth Refurbishments.	Completed
<b>People</b>	1. Develop a pipeline line for critical skills (Marine & Engineering services).	Ongoing
	2. Fill critical vacancies in port operations.	Ongoing
	3. Implement TNPA Incentive Scheme.	Completed
	4. Drive a culture of service excellence & customer centricity.	Ongoing

# PORT OF CAPE TOWN 8-POINT PLAN

Focus Areas	Initiatives / Strategic Projects	Status
<b>Immediate Crisis Management</b>	1. Integrated Port Management System (IPMS) for Port control - to plan, book and monitor vessel movements, for usage by vessel agents and shipping lines.	Completed
	2. Detailed monitoring of vessels at anchorage.	Ongoing
	3. Detailed investigation into container vessels bypassing the port.	Ongoing
	4. Host TNPA Integrated Operations Alignment Meeting ahead of each shift.	Ongoing
	5. Monitor TPT Recovery Plan.	Ongoing

# PORT OF CAPE TOWN



... a **Premium Fruit Export & Agricultural Hub**



... a **Container Terminal for the Western Cape**  
... a **multi commodity mix (MPT) port** specializing in handling of dry bulk and break bulk



... a diversified **Energy Hub** for the Western Cape complementing the Port of Saldanha



... a **marine engineering hub** focusing on **ship repair** and **boat & yacht building**



... a **“SMART People’s Port”** focusing on cruise, real estate development, recreational and tourism

# Transnet Port Terminals

**Mr. Jabu Mdaki**  
Chief Executive, TPT





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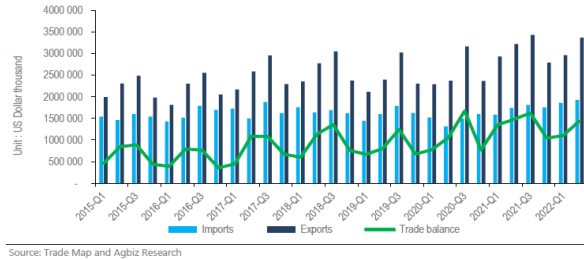
1. Long Term Strategy for Cape Town Terminals
2. Weather Challenges
3. Improvement to date – Vessels Port Stay
4. Status: Improvement initiatives
5. CTCT Ideal Equipment Requirements
6. TPT Equipment Investment Plan - OEM & OPM Collaboration Strategy



# 1. Long Term Strategy for Cape Town Terminals

## Agricultural Volume Demand Expectations:

1. South Africa's agricultural exports have increased 10% year on year.
2. The African continent remained the largest agricultural export market for South Africa in the third quarter, accounting for 32% in value terms.
3. Asia and the Middle East collectively were the second-largest region, accounting for 31% of the exports, with the EU holding the third position with a 19% share in total exports in value terms.
4. Indications are that the current growth in the industry is expected to continue

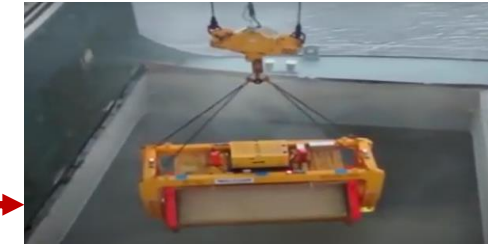


## Transnet Strategy – Agricultural Hub (Cape Town)

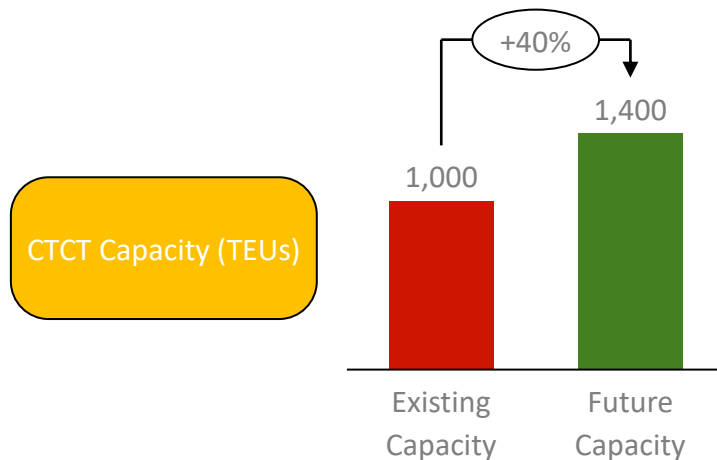
Transnet strategy is to develop an agricultural hub at port of Cape Town.

Reefer containers will still be a key commodity at the Cape Town Container Terminal. However, emphasis is on compliance with maintaining the required temperature protocols as legislated in countries of export destination

Currently exploring the option of a containerised operating model for grains at the Cape Town Multi-purpose Terminal.



## CTCT Expansion programme



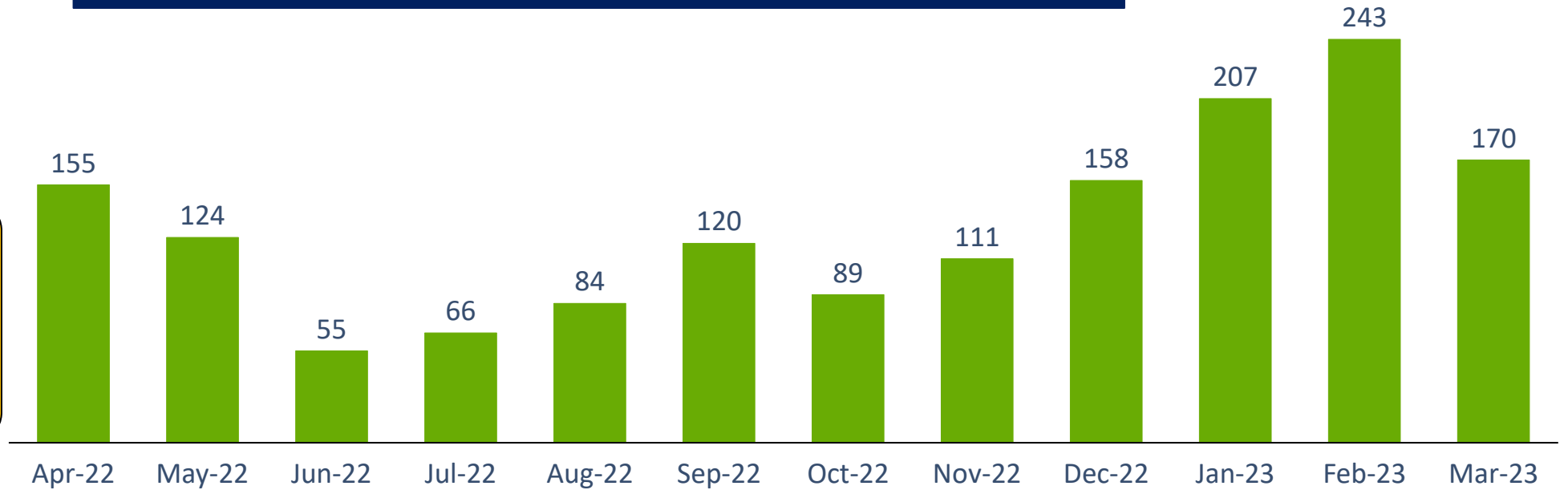
Item #	Project Description	Responsibility
1	Expansion of existing stack area	Transnet Port Terminals
2	Rail Expansion	TNPA and TPT
3	Truck Staging Area	TNPA and TPT

Currently in Detailed Design Phase, which is expected to be completed by end of 2023/24 Financial Year, after which execution will commence.

## 2. Weather Challenges

### WEATHER DELAYS

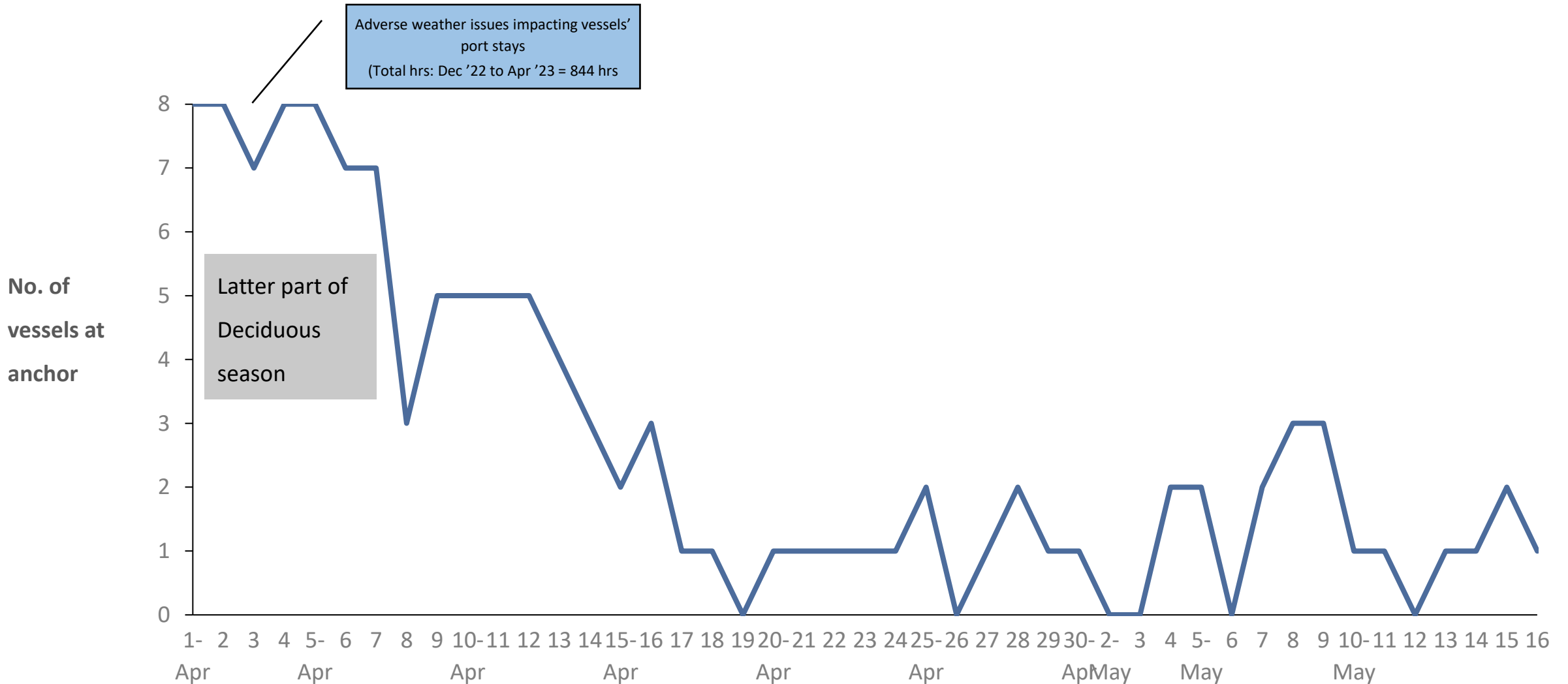
Cape Town  
Container  
Terminal



Weather delays do not necessarily result in lost volumes. Volumes may be deferred but could be caught up. However, this reduces vessel productivity and increases the vessel turnaround time.

# 3. Improvement to date (reduced vessels' port stays)


CTCT No. of vessels @ anchor : 1 April 2023 to date









# 4. Status: Improvement initiatives





## Key Initiatives and status (Cape Town Container Terminal)










 Not started




 In Progress




 On track

Infra	Infrastructure - Actions	Stat
1.	Resurfacing of J-Berth at CT MPT: Feasibility is underway	
2.	Increased number of plug points by 200, to a grand total of 3 200	
3.	Increased landside capacity from 1m TEU to 1,4 mt TEU: landside & rail expansion  (Feasibility study and project engineering development is underway,)	

People	People - Actions	Stat
1.	4th Shift - Implementation to address fatigue & absenteeism & improve productivity	
2.	Multiskilling of staff	
3.	Incentive in place to motivates high performance	
4.	Permanent 7 x gangs	

People	Equipment	Stat
1.	9 <sup>th</sup> Crane - was repositioned from Durban, to assist in redundancy during maintenance & refurbishment of cranes, starting this year	
2.	RTGs - Increased availability from 15 to 22 machines	
3.	Haulers - Obtained 5 x units from Ngqura Container Terminal, still 2 short of 40 required	
4.	Mobile Crane - Transferred 1 x crane from Eastern Cape Terminal, increasing the fleet to 3.	
5.	Spare Parts Contracts - in place: RTGs, Haulers & Reach Stackers	
6.	OEM Partnership: <ul style="list-style-type: none"> <li>Contracts in place for technical support of STS cranes and the OEM of mobile crane at CT MPT is on site on a permanent basis</li> <li>Long terms contracts : RFP issued, expects implementation in Sep 2023</li> </ul>	 
7.	Shore Tensioners <ul style="list-style-type: none"> <li>Two x sets were installed to mitigate excessive vessel movements</li> <li>1 additional set requested from TNPA in Feb 2023</li> </ul>	 

Systems & Process	Systems & Processes - Actions	Stat
1.	Changed from a 2-berth to a 3-Berths to improve efficiencies & volume throughput	
2.	Remote Working: To improve efficiencies, working in high winds: Finalizing Business case & feasibility study	
3.	Truck Staging Area: <ul style="list-style-type: none"> <li>Phase 1 @ CT MPT : Capacity to stage 28 trucks</li> <li>Phase 2 @ CTCT : Capacity to stage 37 trucks</li> </ul>	

SH Colab	Stakeholder collaboration - Actions	Stat
1.	Truck Booking System:	
2.	Night runs Fully resourced to service trucks at night, to decongest the terminal. Currently limited uptake	
3.	Maersk Belocn Logistics Hub: Integrated working group (TPT, TFR, TNPA, Maersk)	

# 5. CTCT Ideal Equipment Requirements

9 Cranes available but only resourced for 7 gangs

Current Status: (7 Operational Gangs available)

**SWH of 25 Moves per Hour**

Equipment	Quayside	Landside	Total	No. of Equipment in Workshop	Equipment Availability	% Availability
Cranes	9		9	1 (Planned)	8	88%
Haulers (2,9 moves/hour)	35	8	43	5	38	88%
Rubber Tyre Gantries	14	8	22	6	16	73%

**Crane moves per Hour = 10,5**

(5 haulers per crane x 2,9 moves per hour  
X 73% availability) = 10,5

**Average Crane Deployment = 2,3**

(Resourced for 7 Full Gangs to service 3 vessels at any time)

Scenario 2: (Ramp up to 9 Full Gangs & Improve Equipment Avail to 95%)

**SWH of 76 Moves per Hour**

Equipment	Quayside	Landside	Total	No. of Equipment in Workshop	Equipment Availability	% Availability
Cranes	10		10	1 (Planned)	9	90%
Haulers (4 moves/hour)	72	22	94	4	90	96%
Rubber Tyre Gantries	18	23	41	2	39	95%

**Crane moves per Hour = 27,4**

(8 haulers per crane x 4 moves per hour  
X 95% availability)  
X 90% Efficiency Factor

**Average Crane Deployment = 2,8**

(Resourced for 9 Full Gangs to service 3 vessels at any time) Factor of 0,93 to cater for stow

## Other Considerations

1. Diminishing Marginal Returns
2. Quay length and strength of the quay wall and install of tensioners (TNPA)
3. Size of the stack area
4. Average Cycle Time of Haulers and RTGs (minimisation of delays)

## Equipment Investment Requirements

1. Refurbishment of Cranes and RTGs (Immediate)
2. Replacement of Haulers & RTGs (per Fleet Plan)
3. Additional crane, 14 RTGs & 23 haulers
4. Ramp up of people resources to 9 gangs

# 6. TPT EQUIPMENT INVESTMENT PLAN

## OEM and OPM Collaboration Strategy

### CURRENT STATUS

Low reliability and availability over the life of our assets

High maintenance costs, use of non-OEM parts and non-approved service providers

Long lead times for critical components and OEM support

Limited interactions with OEMS for the life of the equipment

There is no incentive for OEMs to invest in developing local product support because of the piecemeal award of equipment acquisitions and supporting works

### CHANGE IN MODEL – What the Collaboration intends to achieve.....

#### Local footprint

- National and Regional Presence

#### Training Capabilities

- Capability to be established locally via Transnet Academy

#### Simulators

- Acquisition, maintenance and life cycle support

#### Spares Support

- Consumables locally manufactured
- Spares availability, 24 & 48 hrs. local supply

#### Local Vendor Development

- Locally manufactured consumables
- Distribution centers and stockholding

#### Technical Support

- Online within 2hrs
- On-site with 24 hrs.

#### Maintenance Management Systems

- Fully integrated SAP support

#### Obsolescence Management

- Generation, Change-out and Schedule Management

#### Life Cycle Management

- Annual Audits, condition assessments and detailed structural assessments

#### Intellectual Property

- Engineering drawings, Material specifications, welding and NDT requirements

#### Technology Management

- Latest designs and technology
- TPT Equipment Specification updates
- Automation and Semi-Automation

#### Transnet Engineering Collaboration

- OEM's to partner with TE for local manufacturing and assembly of specified components.



# Transnet Freight Rail

**Ms Siyanda Mba, Managing Executive –CapeCor**

Transnet Freight Rail



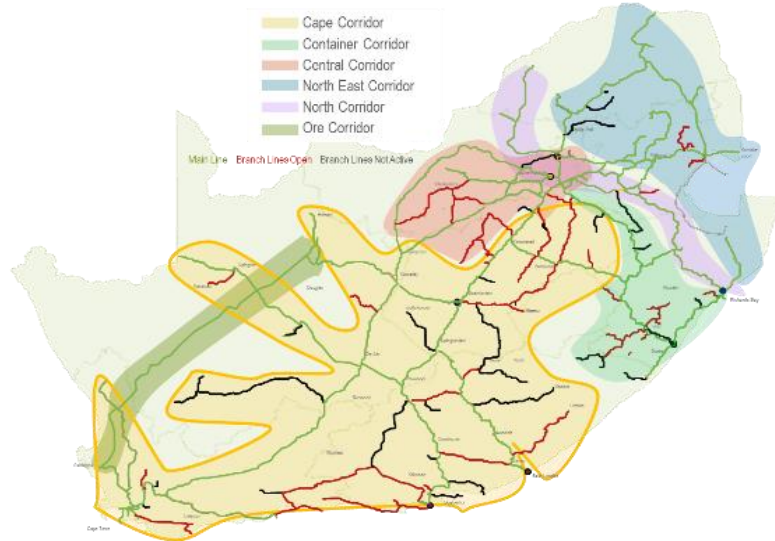


# Transnet Freight Rail

## TFR Core Operations are Anchored in Corridors



The Transnet Freight Rail Corridor Model is designed to improve decision-making, responsiveness to customer needs and integrated problem-solving in the rapidly changing business, market and policy environments.



	<i>Volume mt</i>	<i>Volume %</i>	<b>% Revenue Contribution</b>
North Corridor	74.7	41%	38%
North-East Corridor	20	11%	14%
Ore Corridor	65	35%	26%
<b>Cape Corridor</b>	20	11%	<b>20%</b>
Container Corridor	2.5	1.4%	2%
Central Corridor	1.5	0.8%	1%
<b>Total</b>	<b>183.8</b>		

### KEY BINDING CONSTRAINTS



#### Locomotives

- 1064 contract suspension
- Decreased locomotive availability
- Increased non-operating
- Decreased loco reliability



#### Infrastructure

- Systemic underinvestment
- Decreased reliability
- Increase in derailments/incidents

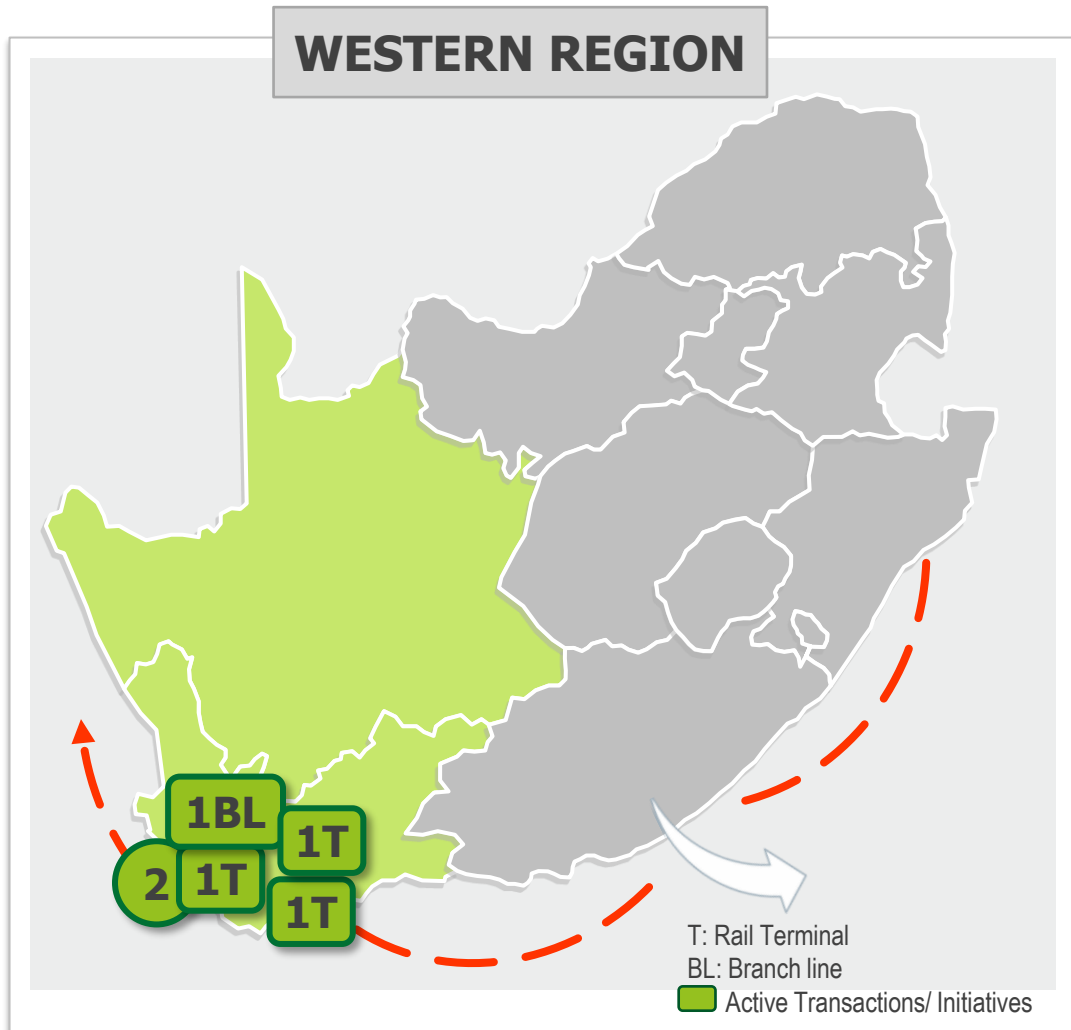


#### Security

- Crippling theft & vandalism of key infrastructure resulting in operational disruption

**ADDITIONAL CONSTRAINT - MANUALLY DRIVEN OPERATIONS THROUGHOUT THE VALUE CHAIN**

# Initiatives to attract private sector investment to support Agriculture value chains



## Rail Logistics

- 1 Branch lines & Inland rail terminals with cold storage capability.**
  - Belcon Precinct Development (T)
  - Ceres (BL)
  - Orchards, Elgin, Ashton, Lutzville (T)
- 2 Belcon Port Rail Shuttle**
  - Improved stack management in port terminal
  - Improved turnaround time due to fewer trucks in the terminal on the port side
  - Improved port-rail operations through joint planning
  - Resource optimization

# Private sector investment in developing the Belville precinct as a near-port inland facility



## RAIL INITIATIVES

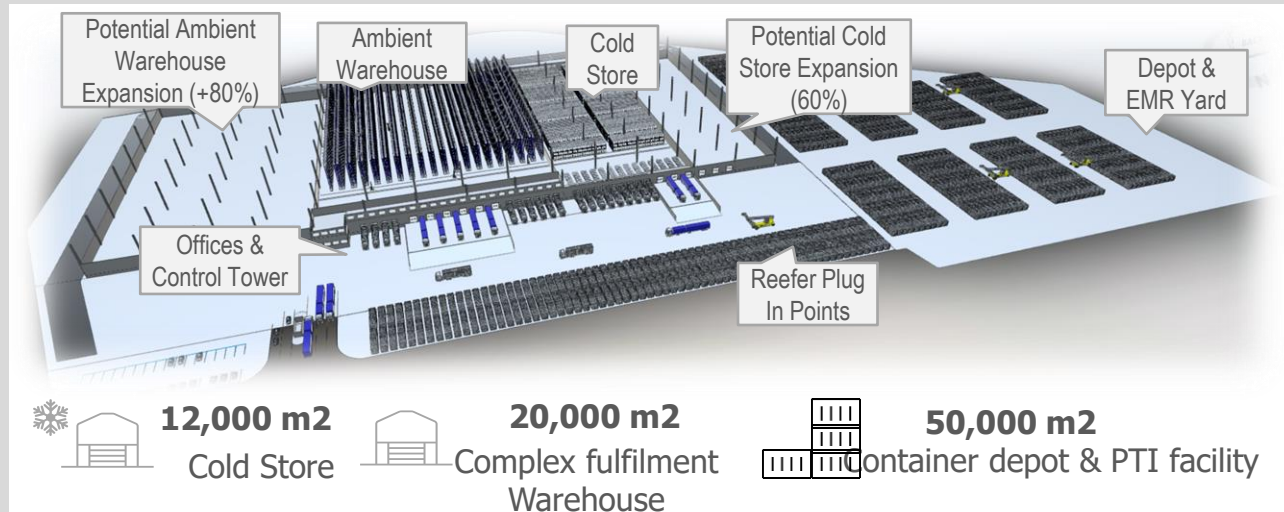


- Develop **vacant land**:
  - Warehousing
  - Cold storage
  - Reefer capacity (plug points)
  - Container depots
- Develop **truck staging** areas to decongest Robert Sobukwe
- Construct **additional access road** from Kasselsvlei to ease traffic flow

## FOCUS

- Increase **Cold Chain Capability**
- Attract volumes to **Rail**

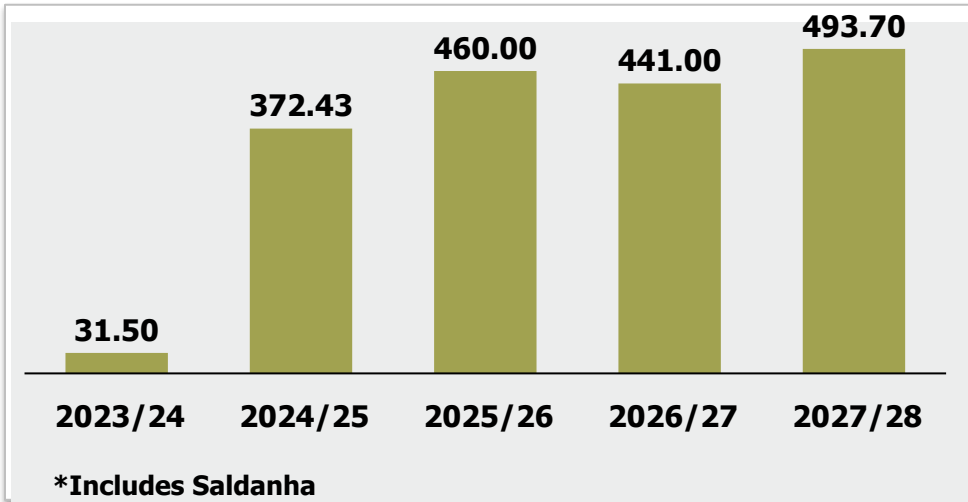
## Belcon Logistics Park



**CREATING VALUE AND REDUCING COSTS THROUGH SUPPLY CHAIN INTEGRATION**

# Investment in Western Cape

## Capital Investment in WC\*





### Investment Projects

- Bellville Wellington Re-signalling Project (5-year estimated Total Project Cost = R303m)
- Port of Saldanha (PoSLD) Tippler 3
- **Investment in SLD yard expansion and reconfiguration** (5-year estimated Total Projects Cost = R734m)
- Security wall at Mbekweni

**NOTE:** Working with Local & Provincial Government to relocate communities in encroachment areas (i.e. Du Noon) to open up the line to Atlantis (capitalize on road to rail and waste on rail opportunities).

PROJECTS	BENEFIT
<b>Rail replacement (9,02km's) Sleeper replacement</b>	<ol style="list-style-type: none"> <li>1. Reduced risk of rail fatigue</li> <li>2. Increased life-span/asset renewal</li> <li>3. Safety improvement</li> <li>4. Increase slot availability</li> </ol>
<b>Installation of tiger wire / contact: wire;</b> rehabilitation of Wellington – Wolsley line and various substation repairs	<ol style="list-style-type: none"> <li>1. Reduction of theft of overheads</li> <li>2. Stability of network (failures due to rust/corrosion)</li> <li>3. Safety improvement</li> <li>4. Improve network stability with reliable supply from the substations.</li> </ol>
<b>Signal improvement projects:</b> <ol style="list-style-type: none"> <li>1. Restore vandalized equipment</li> <li>2. Back-up supply</li> <li>3. Monitoring systems</li> <li>4. Safeguarding of equipment</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduction of theft of signaling equipment.</li> <li>2. Stability of network</li> <li>3. Safety improvement</li> <li>4. Increase slot availability.</li> </ol>
<b>Track upgrades:</b> <ol style="list-style-type: none"> <li>1. Replacements of Rails &amp; Sleepers</li> <li>2. Repairs/rehabilitation of Network</li> </ol>	<ol style="list-style-type: none"> <li>1. Railway track stability.</li> <li>2. Safety improvement.</li> </ol>

# TFR Quick Wins: Western Cape

COMMODITY	DESCRIPTION	OVERALL BENEFIT	TIMELINE
 <p><b>Cape Town Manganese</b></p>	<p>Transnet joins forces with Tshipi 'e Ntle Manganese to enable a multi million Rand investment in state-of-the-art security technology on the Cape Town channel.</p> <p><b>The project will enable:</b></p> <ul style="list-style-type: none"> <li>• Reduced cable theft and infrastructure vandalism</li> <li>• Increased capacity by an additional 0,5mtpa</li> <li>• Increased throughput through the Port of Cape Town</li> </ul>	<ul style="list-style-type: none"> <li>• 0,5 mtpa volumes</li> <li>• R1,1 bn in foreign earnings for the RSA fiscus</li> </ul>	31 August 2023
 <p><b>Iron Ore</b></p>	<p>Increasing Iron Ore capacity via Saldanha by 4mtpa through rerouting Iron Ore emerging miner slots to higher axle loading sites.</p> <p><b>The project will enable:</b></p> <ul style="list-style-type: none"> <li>• Increase in volume capacity by the equivalent of 2 additional trains per day for exports</li> <li>• The freeing up additional slots for manganese reallocation</li> <li>• The delivery of 60mtpa Iron Ore export volumes</li> </ul>	<ul style="list-style-type: none"> <li>• 4 mtpa volumes</li> <li>• R11 bn in additional revenue to Industry</li> </ul>	30 June 2023



## Abbreviations

CTCT	Cape Town Container Terminal
CT MPT	Cape Town Multi-purpose Terminal
MTPA	Million Tons per Annum
OEM	Original Equipment Manufacturer
RTG	Rubber Tyred Gantry
STS	Ship to Shore



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**THANK YOU, ENKOSI**

