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delivering freight reliably

Presentation to the Public-Private Infrastructure Forum

Killarney Country Club

Thursday 21 June 2012

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  - Skills and development
  - Localisation
- Port Planning
- Rail Planning
- Capital Implementation Plans
- Detail on Mega Capital Projects
- Alignment with planning and policy processes in Government

Market Demand Strategy

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- **R300bn** capital investment programme
- Expanding **rail, port and pipeline infrastructure**
- **Increase** in capacity to meet market demand
- Continued **financial stability** and strength
- Significant **productivity and operational efficiency** improvements
- **Shift from road to rail** – reducing the cost of doing business and carbon emissions
- Enabling **economic growth**
- **Job creation**, skills development, **localisation**, empowerment and transformation opportunities

Based on Transnet's solid foundations, it aims to capture identified growth opportunities over the next 7 years

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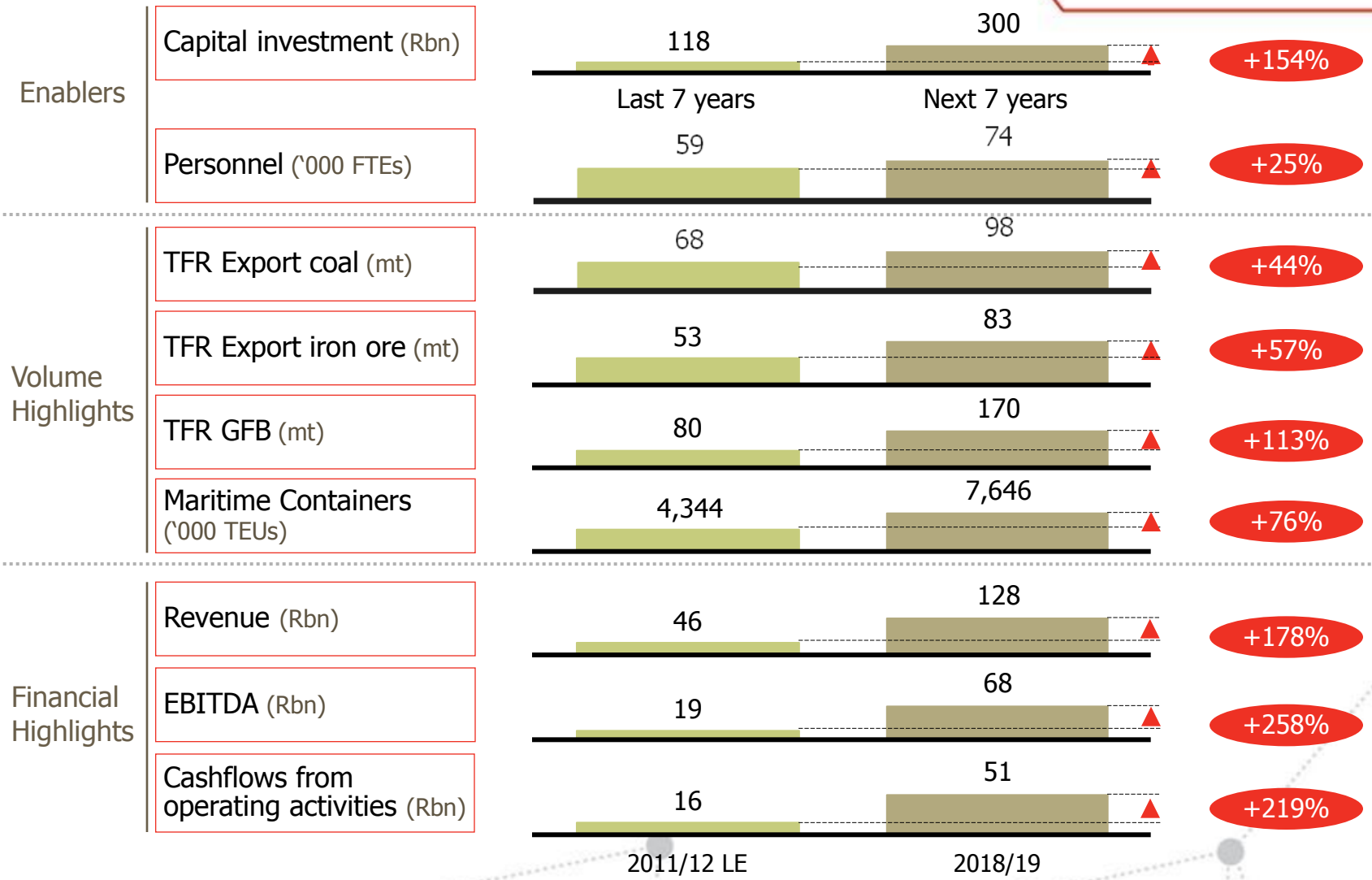

Transnet will maintain a solid financial position and credit rating

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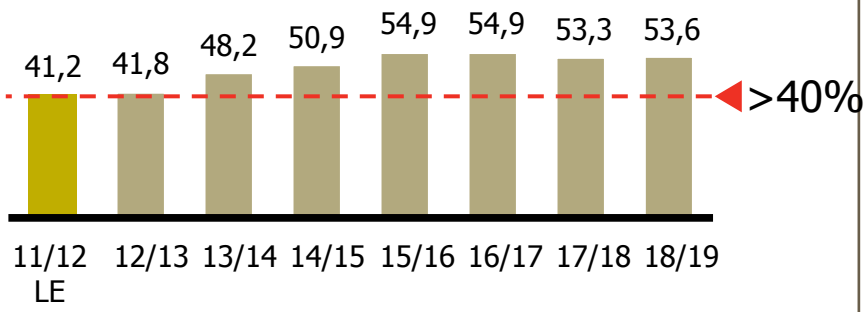
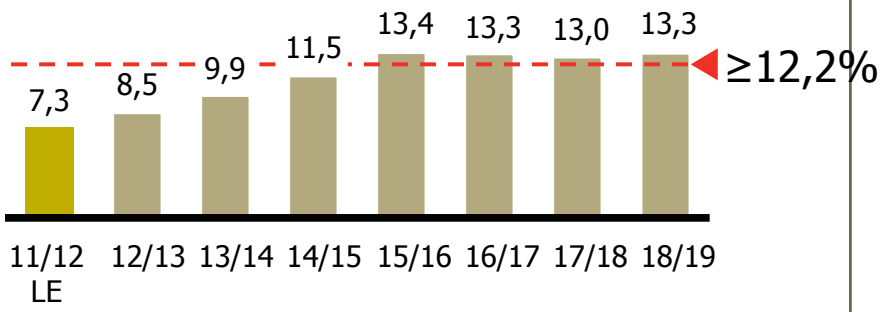
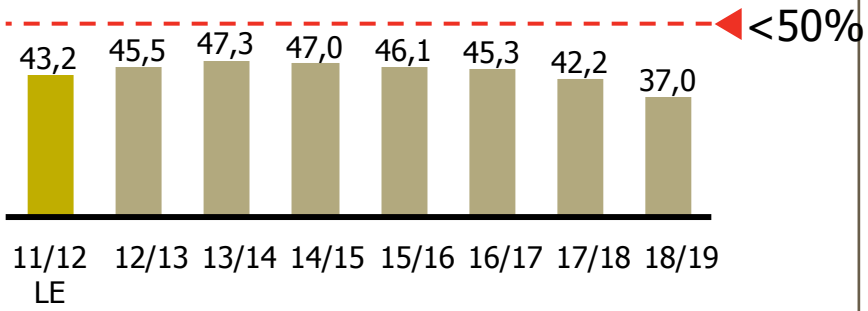
EBITDA margin (%)



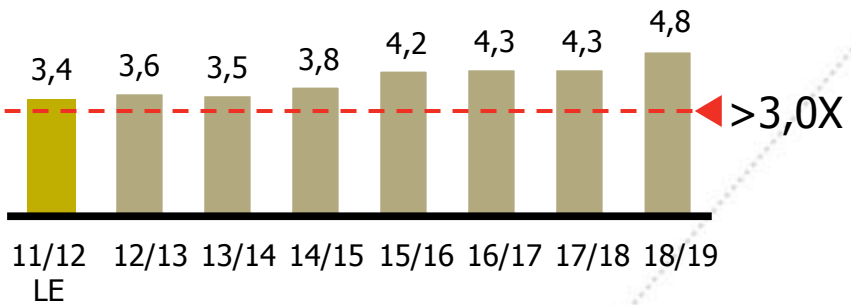
ROTA (%)*



Gearing (%)*



Cash interest cover (times)



* Excludes Ports Regulator Clawback

Transnet's planned infrastructure spend of R300 billion will achieve various policy objectives

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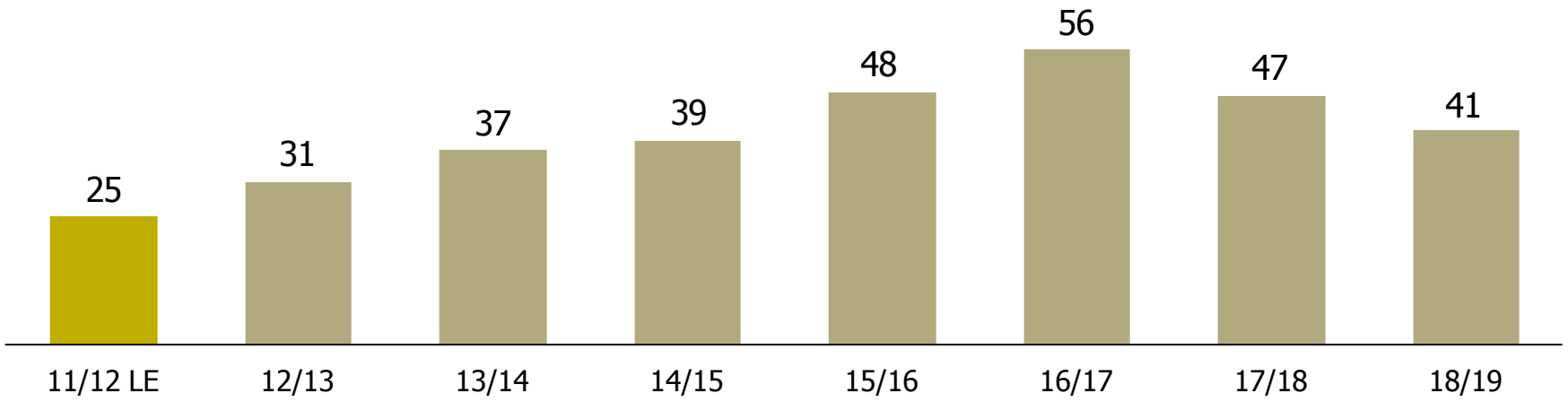
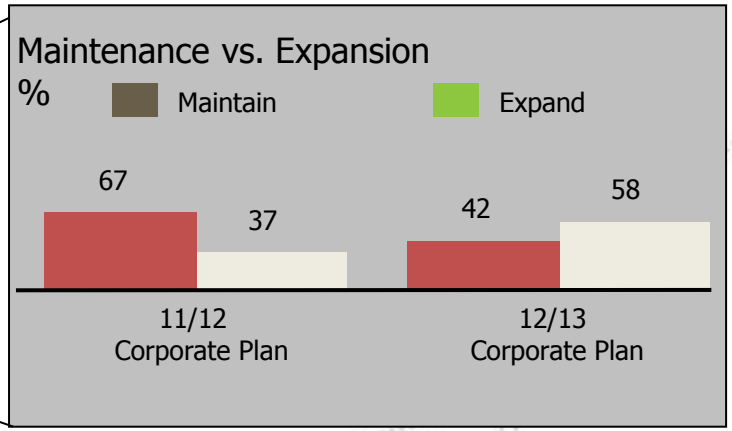
Capital investment

Rbn



Total capital spend of R300bn



[1] Before deducting PSP initiatives of ~R5bn

The majority of the investments will be in General Freight and Freight Rail

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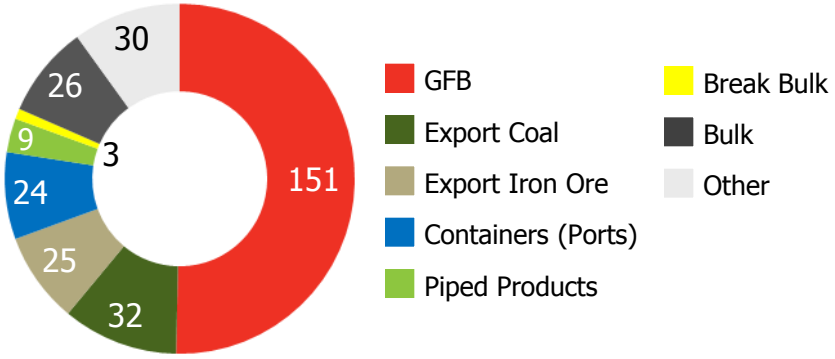
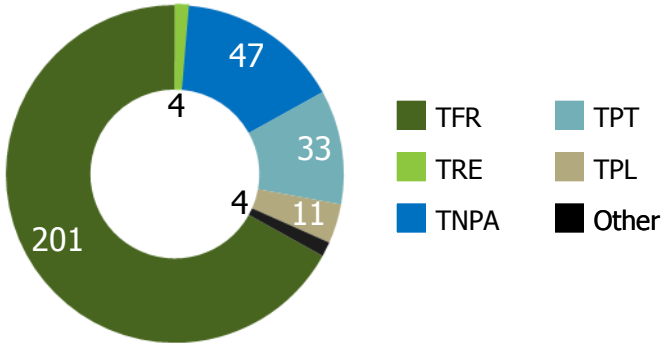
Commodity split (Rbn)



Divisional split (Rbn)



Major programmes

GFB rail capacity growth to meet market demand volumes from 79,7mt to 170,2mt – including Waterberg

Increase export coal to 97,5mt

Increase export iron ore to 82,5mt

Increase export manganese to 16mt

Increase in fleet and improvement to the infrastructure

Completion of the New Multi-Product Pipeline (NMPP)

Major areas of capital investment and capacity creation

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Area of investment	Existing Capacity	Capacity created over 7 years	Future Capacity	Utilisation 2019
TFR Coal Line R31.6bn	68.0 Mtpa	29.5 Mtpa	97.5 Mtpa	100%
TFR Ore Line R18.6bn	52.8 Mtpa	29.7 Mtpa	82.5 Mtpa	100%
TFR General Freight R150.8bn	79.7 Mtpa	90.5 Mtpa	170.2 Mtpa	100%
Maritime Containers* R24.1bn	Terminals: 5.0 MTEUs Ports: 5.5 MTEUs	Terminals: 4.3 MTEUs Ports: 4.0 MTEUs	Terminals: 9.3 MTEUs Ports: 9.4 MTEUs	Terminals: 79% Ports: 79%
Bulk R31.6bn	Terminals: 79.5 Mtpa Ports: 196.0 Mtpa	Terminals: 44.3 Mtpa Ports: 36.0 Mtpa	Terminals: 123.8 Mtpa Ports: 232.0 Mtpa	Terminals: 99% Ports: 95%
Breakbulk R4.0bn	Terminals: 15 Mtpa Ports: 29 Mtpa	Mainly sustaining	Terminals: 15 Mtpa Ports: 29 Mtpa	Terminals: 80% Ports: 52%
NMPP R 7.5bn	4.0 billion litres/a	4.4 billion litres/a	8.4 billion litres/a	92%

* TNPA's container capacity emanating from Multi-purpose Terminal and Maydon Wharf is shown under break-bulk

The impact of infrastructure development will be felt nation-wide

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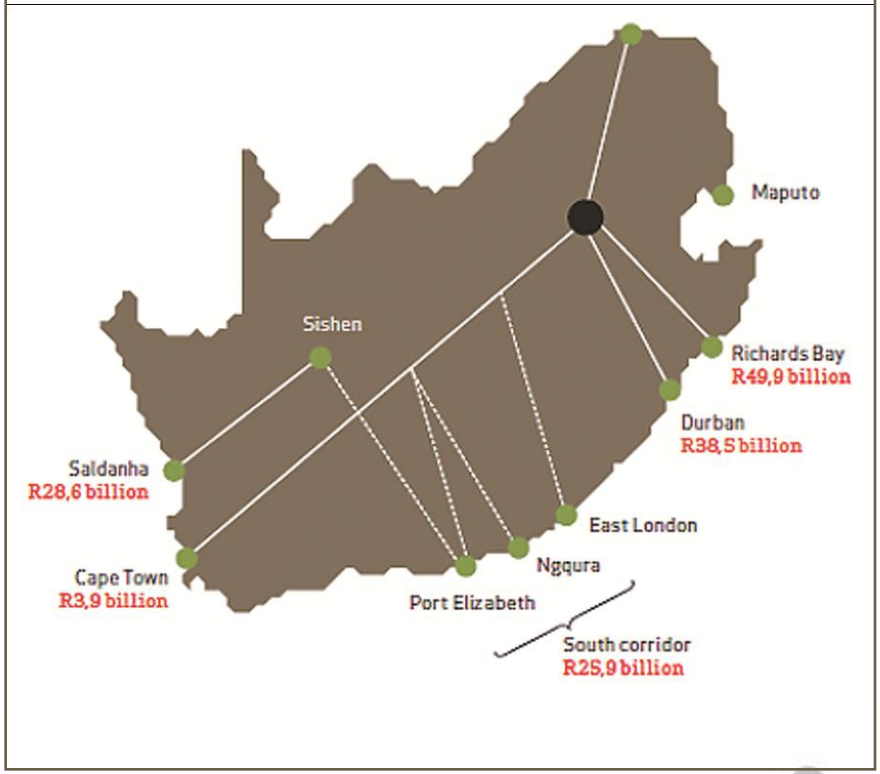
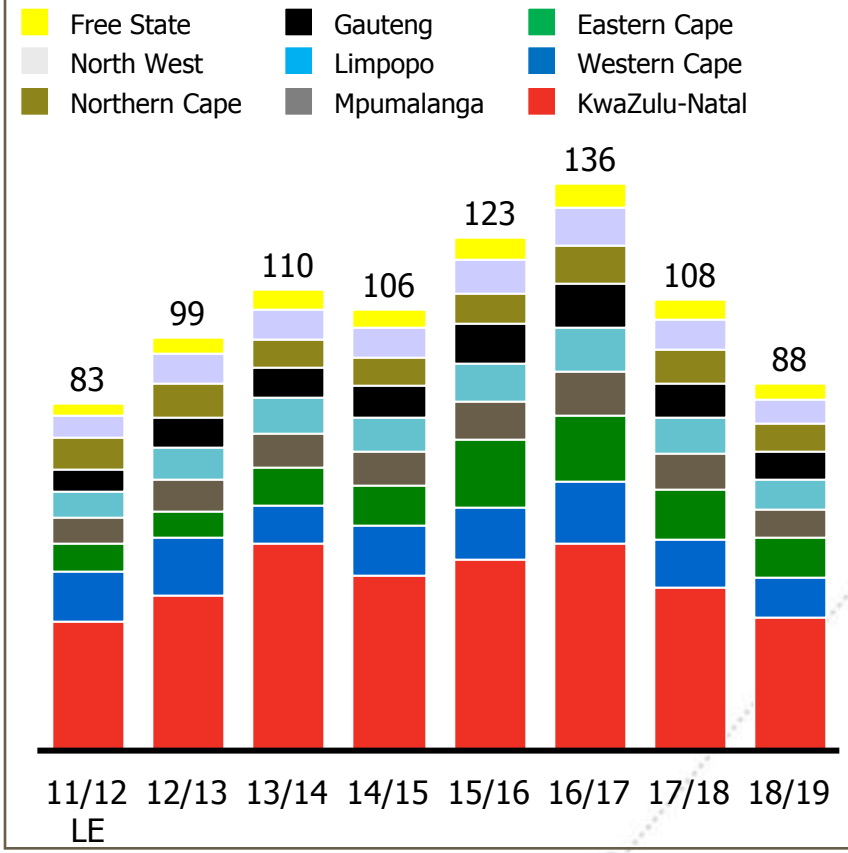
7 year capital investment by region[1]



Provisional contribution to direct and indirect jobs ('000)



1 National – countrywide investments – R153,3bn
Freight Rail corporate centre and General Freight investments (wagons, infrastructure and locomotives have been classified as national investments (which cut across all corridors) except for R7,4 billion for Freight Rail manganese expansion to 16mt which is allocated to the South corridor

MDS will create jobs. Together with current operations Transnet is expected to create employment for 588,000 people at its peak with a large focus on skills and capacity building

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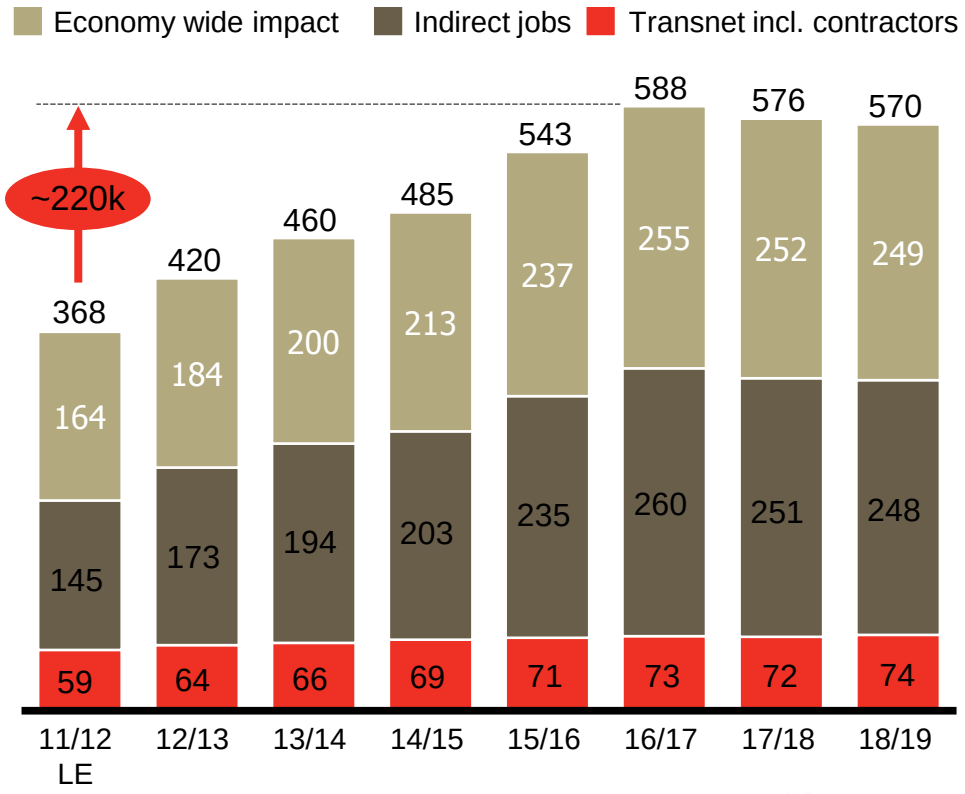
Job creation impact of MDS on South Africa
'000 people



R7,6bn to be spent on training over the next 7 years

Additional 15,000 direct jobs

Increased intake in schools of excellence

- R4,6bn spent on bursaries and grants
- 317 technicians in training by 2018/19

Step up recruitment in critical skills and expand annual intake

- 2,000 apprentices at all times
- Increase engineering bursar intake to 543 students in 2018/19

Direct jobs will ramp-up by 25% with a significant step up in skills and development

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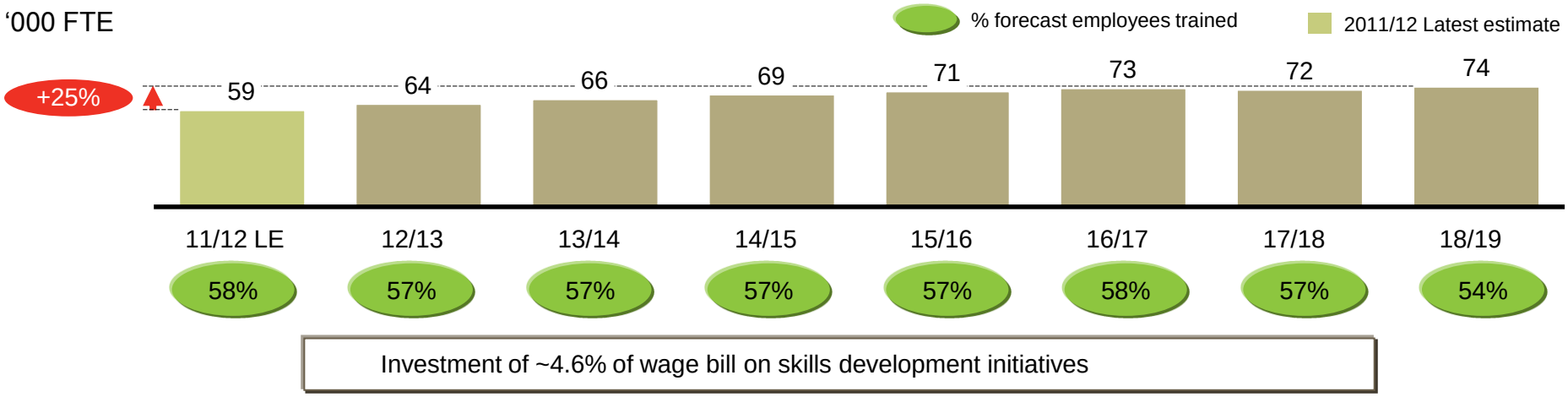
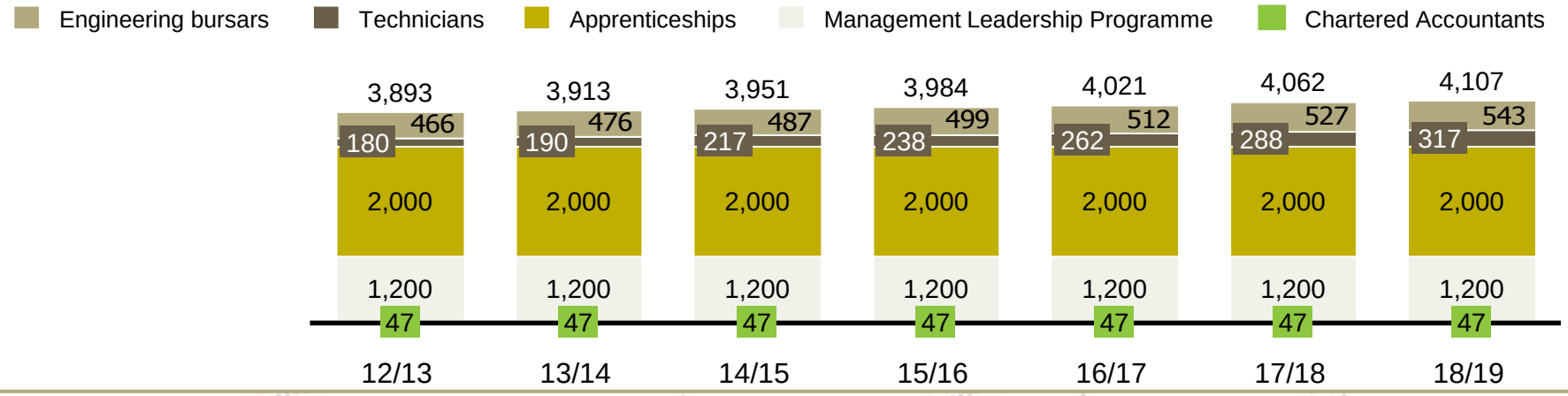
Group employees



Number of trainees



MDS will promote localisation, transformation and empowerment

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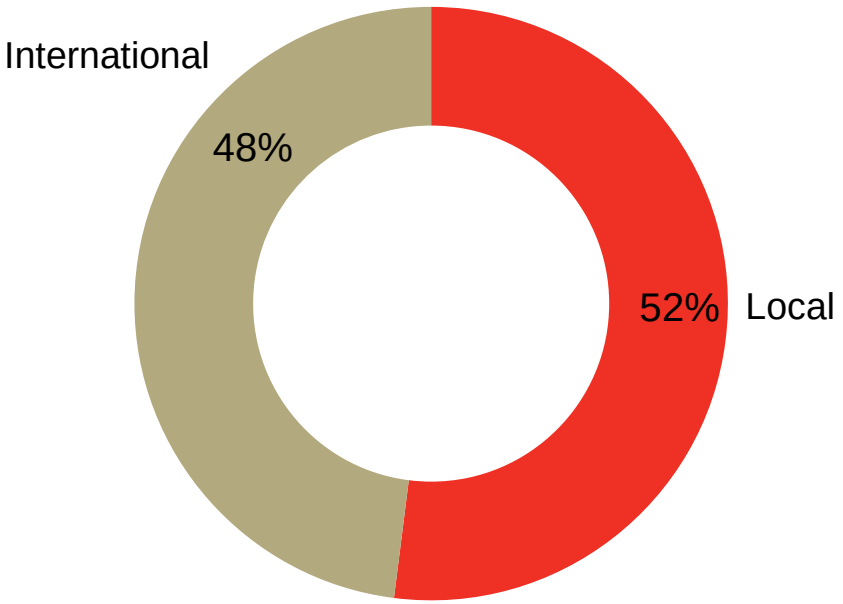
Potential local content commitment for locomotives (%)



Localisation initiatives:

- R2,9bn already spent on local content by international suppliers
- International suppliers to transfer knowledge and expertise to up-skill local suppliers
- On-the-job training and apprenticeships will be built into international supplier contracts
- Provision of jobs and procurement opportunities to rural areas where facilities are located
- Assistance will be provided to small business to foster innovation and create jobs
- ~R4,2bn expected to be spent over the next 7 years on small business promotion

Transformation initiatives:

- Collaboration with suppliers to meet Government's transformation and empowerment objectives

A strong emphasis will be placed on Supplier Development to ensure growth and development objectives are being met

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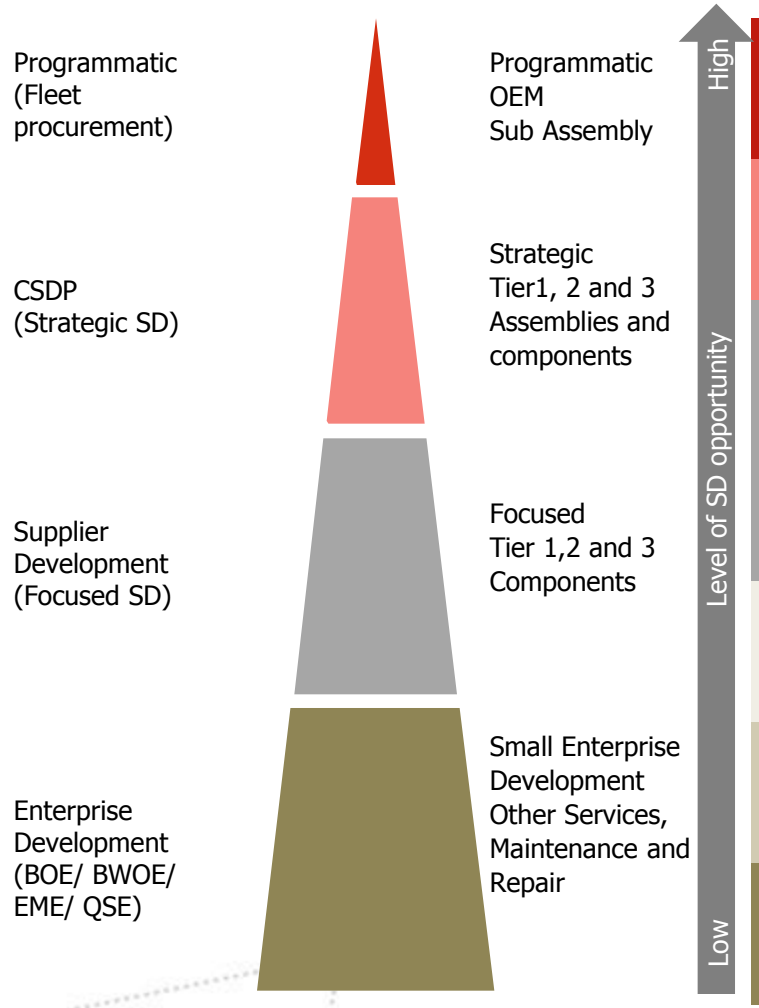
SDP Growth and Development focus

- Transnet will affect suppliers it procures from either directly or indirectly (directly procure from supplier or indirectly support downstream suppliers of suppliers higher up in the tier)
- The level of SD opportunity available is dependent on the applicable tier of the commodity (i.e. Tiers higher up can be measured against more key outcomes, e.g. OEM's for all outcomes)
- Transnet will push for key outcomes and targets in evaluation of tenders in the respective tiers and measure winning bidders delivery to targets

Policy link to Transnet commodity tiers (i.e. potential supplier type)



Key outcomes

- Industrialisation
- Localisation
- Technology transfer/ sustainability
- Job creation/ preservation
- Skills development
- Small business promotion
- Further recognition[1]
- Rural development and regional integration

Strategic enablers

- SD, Sourcing and Governance, Risk and Compliance COEs
- SD Plan
- 4 Step SD Process (identify and classify)
- Sourcing Process (now updated with SD components)
- Evaluation Process and Criteria
- Further Recognition Criteria
- ED models and plans

1 Points allocated in further recognition of certain components of B-BBEE in line with Transnet and government objectives (i.e., black ownership, management control, EE , ED and preferential procurement)

Market Demand Strategy will be executed through a series of initiatives

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Detailed further

Significant financial, social, economic and environmental impact for South Africa and the region through:

1	2	3	4	5	6
Optimising capital investments	**Growing volumes and market share**	**Improving operational efficiencies**	**Finance and funding**	**Regulatory and key stakeholder engagement**	**Safety, health, sustainability, quality and risk**
• Optimise the capital portfolio • Achieve "gold standard" management and execution • Practice efficient, cost-effective procurement • Achieve localisation and empowerment objectives	• Expand integrated customer planning • Create long-term stable customer relationships • Enhance key account management capabilities • Align tariffs to recover full economic cost from customers	• Become a "Gold standard" operator • Improve quality of infrastructure • Drive continuous improvement to enhance operational efficiency and productivity	• Maintain financial sustainability throughout the capital investment programme • Pursue private sector participation opportunities • Enhance financial risk management	• Alignment on tariff methodology and regulatory policy • Engage with stakeholders to develop joint view on transport industry structure • Actively engage with internal and external stakeholders to support MDS	• Embed a safety culture • Accelerate initiatives to address environmental challenges • Actively monitor and improve socio-economic impact

7 Human capital strategy

- Fill critical vacancies whilst achieving employment equity targets
- Implement enhanced talent management strategy
- Increase contribution to skills development within South Africa
- Embed core values of dignity and respect
- Continued focus on employee wellness
- Embed union engagement model

8 Building organisational readiness, a high performance culture and maintaining good governance

- Enhance performance management approaches
- Optimise the reward and incentives model
- Establish high performance programmes
- Safe guard corporate governance and ensure statutory compliance
- Enhance identification, assessment and mitigation capacity of enterprise risk management to manage risks
- Improve, standardise and integrate IMS to support delivery on business requirements
- Ensure integrated, holistic approach to MDS tracking and reporting

As of today numerous achievements have been made with regards to MDS execution

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MDS readiness assessment conducted

- Development of **detailed 7-year MDS implementation plans** kicked off with most of Transnet's functions and ODs
- First assessment of **capital 12/13 budget at risk** completed and **mitigation actions** co-developed with ODs
- **Procurement bottlenecks** for 12/13 identified and mitigating actions defined
- **Capital and procurement templates** and checklists to be utilised by CAPIC and BADC developed
- Development of **12/13 capital and procurement pipeline**
- **Governance structure** to institutionalise MDS defined
- BoD and sub-committee mandate, governance and reporting review ongoing; new **agenda for BoD meetings** suggested
- Comprehensive **stakeholder engagement strategy** created; initial events successfully executed, e.g., **DPE; MDS Launch**
- **SPO alignment** and definition including capability building included for Exco members
- Amendment of **long-term incentive (LTI) scheme** to align with MDS
- **HC priorities** defined

The South African ports

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WESTERN PORTS

Saldanha Bay

Cape Town

Mossel Bay

CENTRAL PORTS

Port Elizabeth

Ngqura

East London

EASTERN PORTS

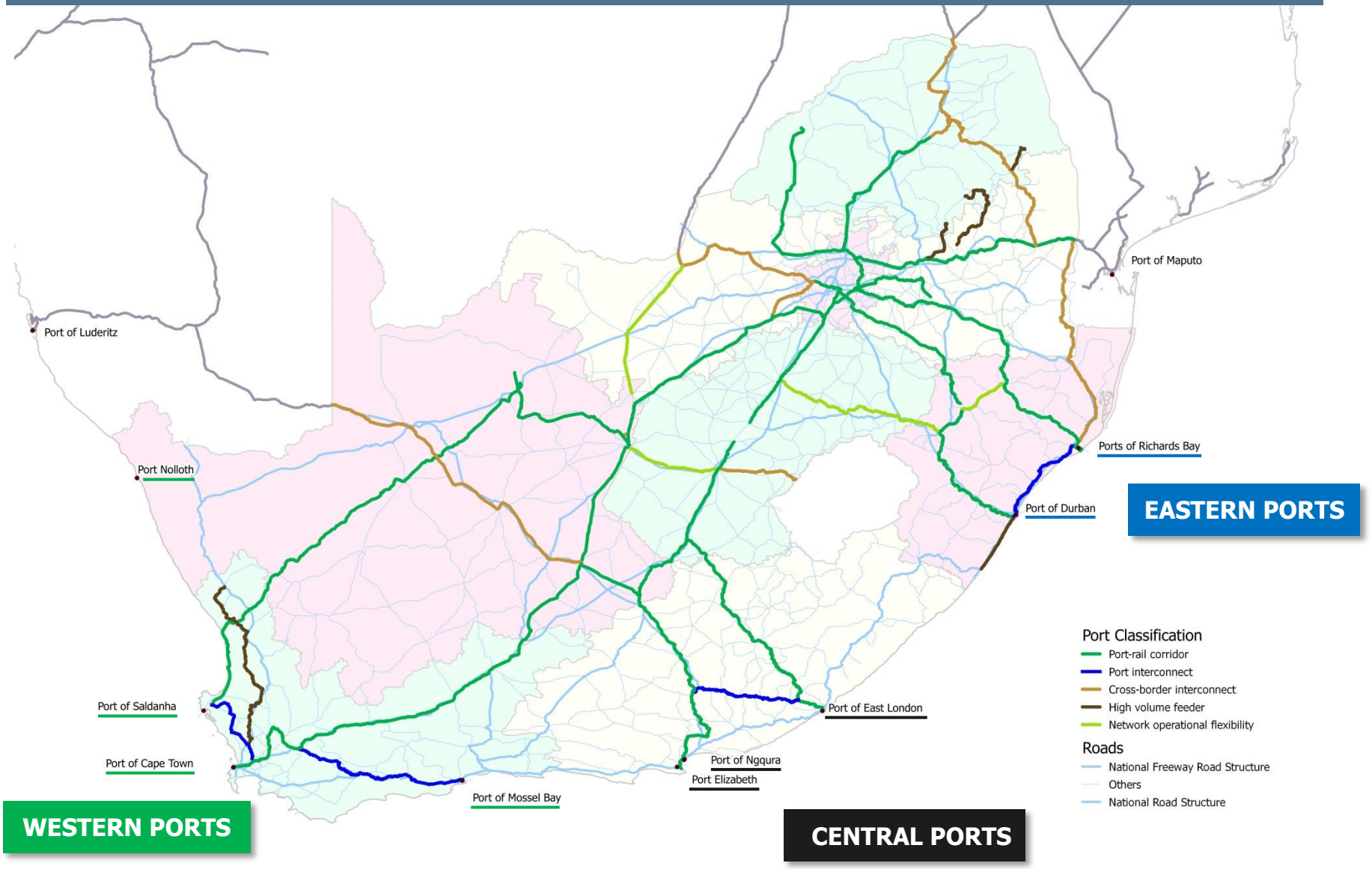
Durban

New Durban dig-out port

Richards Bay

The South African ports system

An integrated system of complementary regional ports and rail corridors

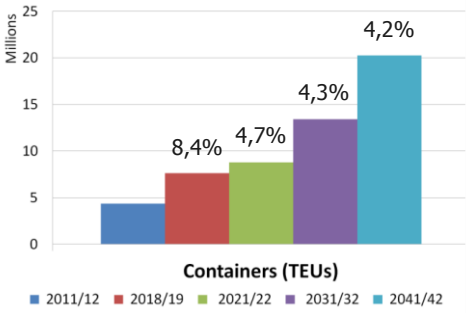


Port planning principles

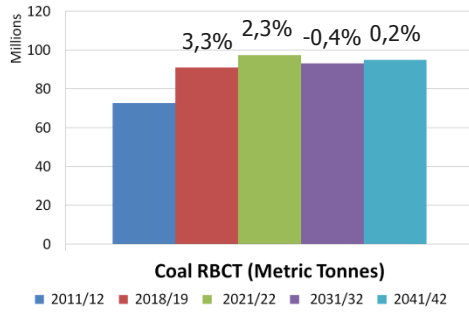
These planning principles have informed the development of the port plans:

- **Develop a complementary ports system** with a regional grouping of old and new ports to provide a rational range of facilities to meet local and hinterland demand, and avoid duplication of investment
- Optimise capital investment across the ports system to **ensure capacity meets demand**, and to meet the requirements of Transnet, the National Ports Act, and South Africa
- **Integrate and align port and rail capacity planning**
- **Ensure a sustainable response** to environmental opportunities and constraint
- **Align with the planning initiatives of stakeholders**, including local, provincial and national government, industry, and other key roleplayers
- **Utilise available port space** for berths, freight handling and back-of-port logistics **to maximise freight capacity**
- Improve infrastructural and operational efficiencies and **reduce transport and logistics costs**.

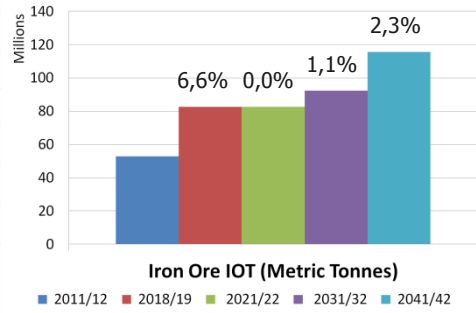
National demand forecast



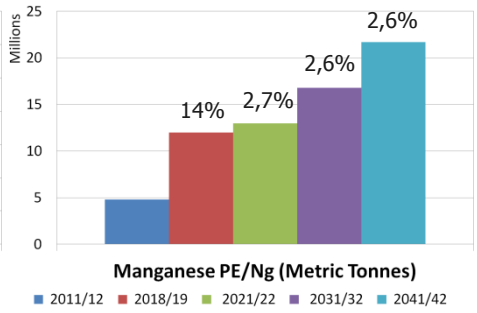
2011/12	2018/19	2021/22	2031/32	2041/42
4,3 m	7,6 m	8,7 m	13,4 m	20,2 m
	8,4%	4,7%	4,3%	4,2%



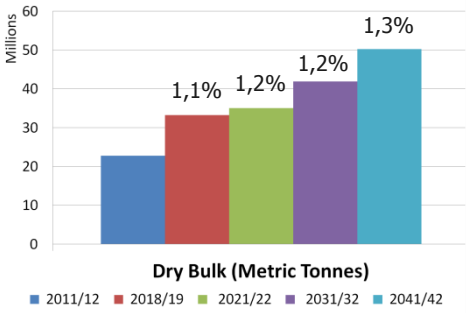
2011/12	2018/19	2021/22	2031/32	2041/42
72,7 m	91,0 m	97,4 m	93,2 m	94,9 m
	3,3%	2,3%	-0,4%	0,2%



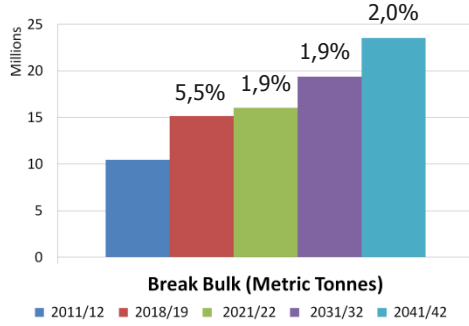
2011/12	2018/19	2021/22	2031/32	2041/42
52,8 m	82,5 m	82,5 m	92,3 m	115,5 m
	6,6%	0,0%	1,1%	2,3%



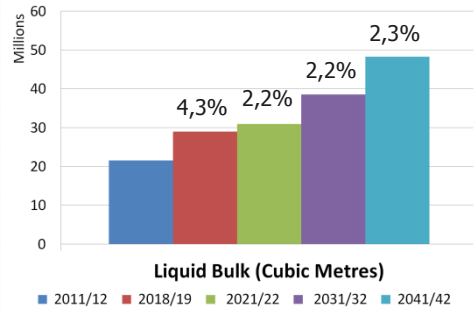
2011/12	2018/19	2021/22	2031/32	2041/42
4,8 m	12,0 m	13,0 m	16,8 m	21,7 m
	14%	2,7%	2,6%	2,6%



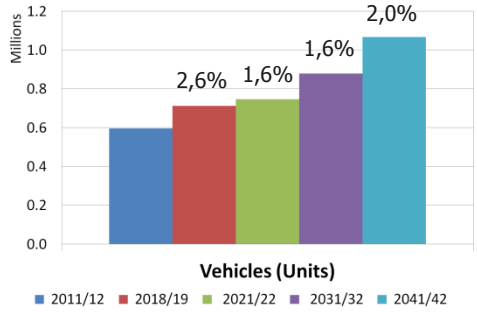
2011/12	2018/19	2021/22	2031/32	2041/42
22,4 m	38,4 m	39,3 m	42,4 m	45,8 m
	8,0%	0,7%	0,8%	0,8%



2011/12	2018/19	2021/22	2031/32	2041/42
10,4 m	15,1 m	16,0 m	19,3 m	23,5 m
	5,5%	1,9%	1,9%	2,0%



2011/12	2018/19	2021/22	2031/32	2041/42
21,5 m	29,0 m	30,9 m	38,5 m	48,3 m
	4,3%	2,2%	2,2%	2,3%

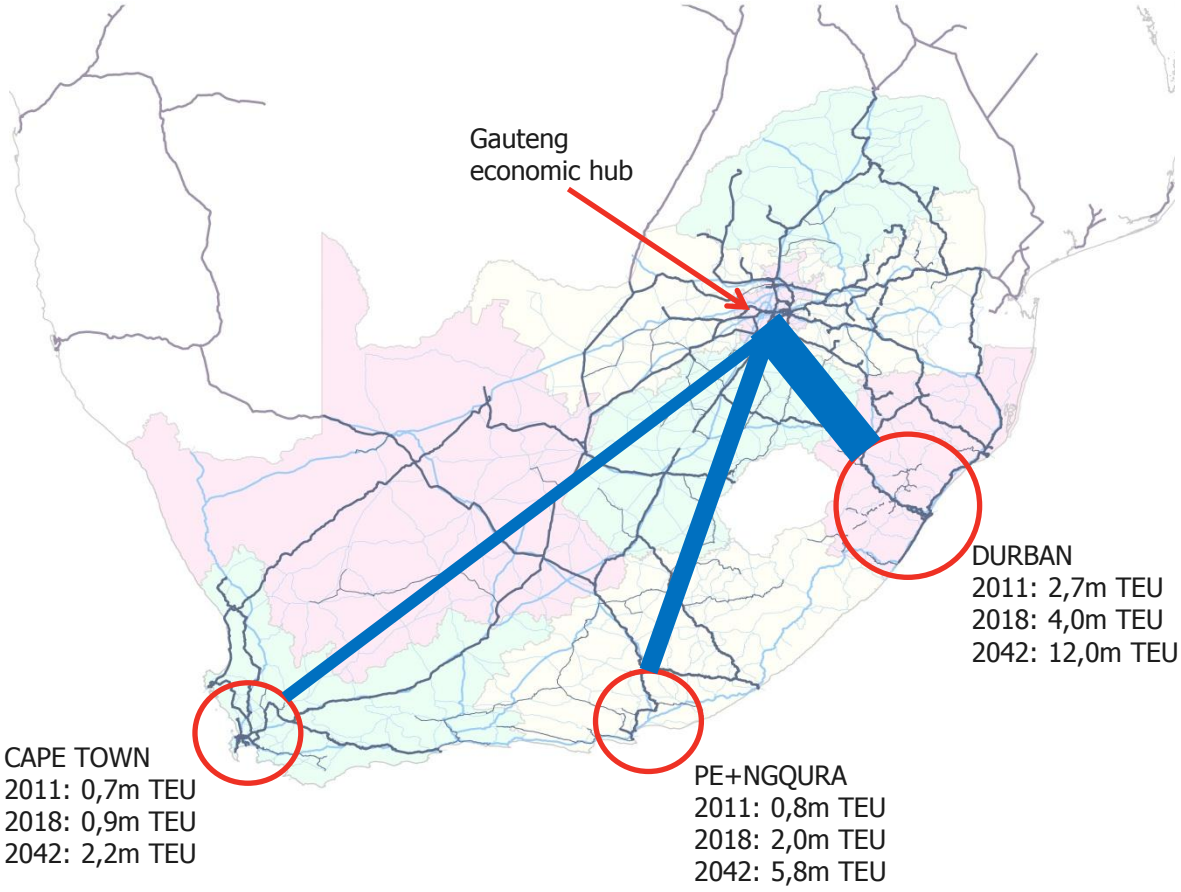


2011/12	2018/19	2021/22	2031/32	2041/42
0,6 m	0,7 m	0,7 m	0,9 m	1,1 m
	2,6%	1,6%	1,6%	2,0%

- Top lines of tables show actual volumes
- Bottom lines of tables shows actual annualised growth rates

Roles of the container ports

The size of the container terminals is a reflection of the size of their hinterlands. Durban handles two thirds of all imports and exports due to its proximity to Gauteng.



CAPE TOWN

- Services the Western Cape hinterland.
- Handles small volumes of time-sensitive Gauteng containers.

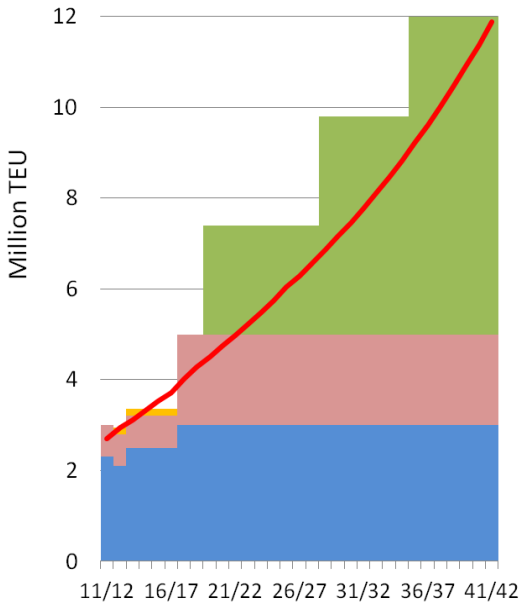
NGQURA (WITH PE)

- Services the Eastern Cape hinterland.
- Secondary gateway to Gauteng.
- Southern African and inter-continental transshipment hub.

DURBAN

- Premier gateway for Gauteng and Southern African containers.
- Services Durban and the KZN hinterland.

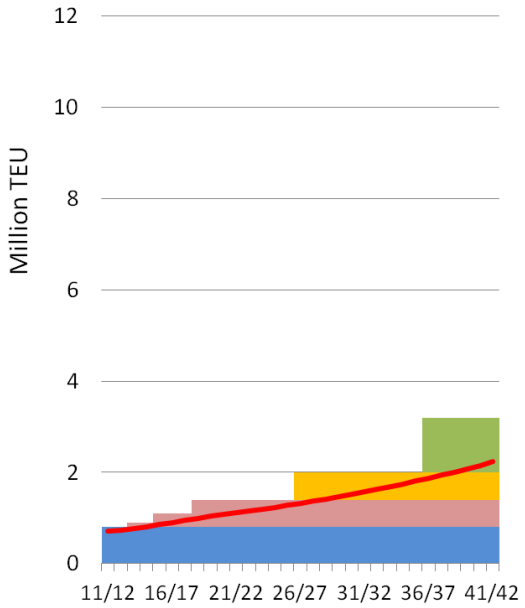
National container demand vs capacity



- DCT pier 2
- DCT pier 1
- Point/MW
- Airport site
- Demand

Durban containers

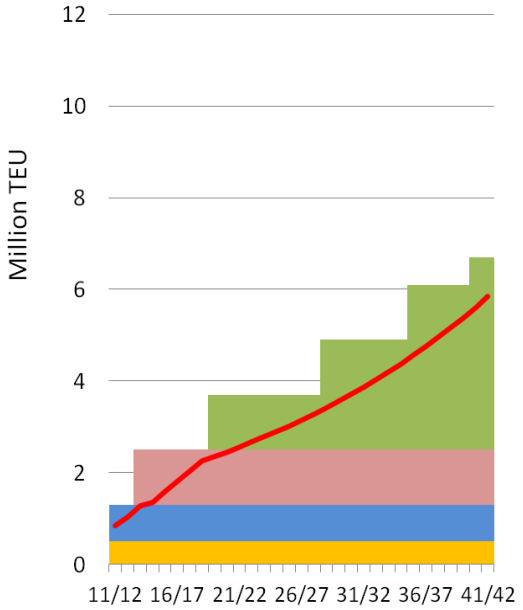
- Demand grows from 2,7m TEU to 12m TEU over a 30 year period.
- Capacity is provided in the existing port until 2019, after which capacity is provided at the new dig-out port.



- Current terminal
- Expansion: Phase 1 & 2
- Seaward expansion
- Outer basin
- Demand

Cape Town containers

- Demand grows from 0,7m TEU to 2,5m TEU over a 30 year period.
- The current capacity expansion projects will provide capacity until around 2026, after which capacity will be created through seaward expansion of the terminal.

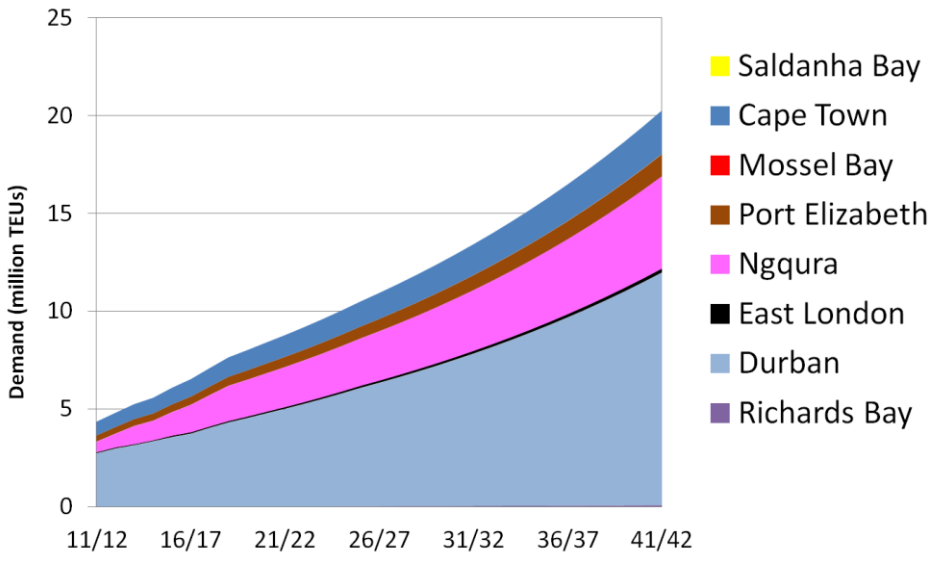


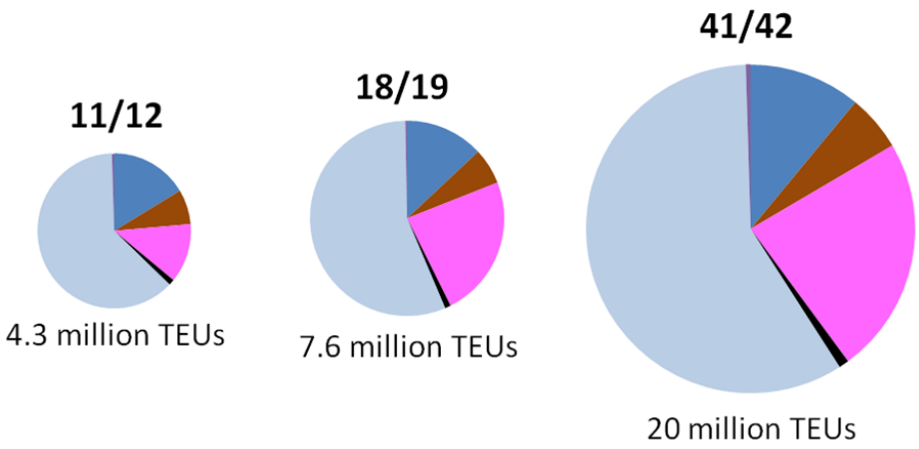
- PE
- Ng berths 1–2
- Ng berths 3–4
- Outer basin at Ngqura
- Demand

PE/Ngqura containers

- Demand in Algoa Bay will grow at a high rate based on increasing volumes of new transshipments, reaching 6m TEU in 2042.
- Expansions in PE and the operationalising of berths 3+4 at Ngqura will provide short-term capacity, after which a new outer basin must be developed at Ngqura.

Container demand and development plans





STATUS QUO

- Container terminals are situated in Durban, PE and Ngqura, and Cape Town.
- Containers are also handled at multi-purpose terminals in Cape Town, East London, Durban and Richards Bay.

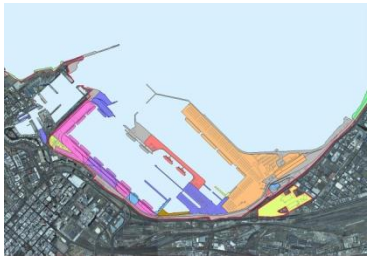
DEMAND AND CAPACITY

- Container volumes are forecast to grow from 4,3m TEU in 2012 to 7,6m TEU over a seven year period, to 20,2m TEU over the 30-year horizon.
- Durban will continue to handle almost two thirds of the national total; increased transshipment volumes result in Ngqura handling the second largest volumes, ahead of Cape Town and Port Elizabeth.

DEVELOPMENT PLANS

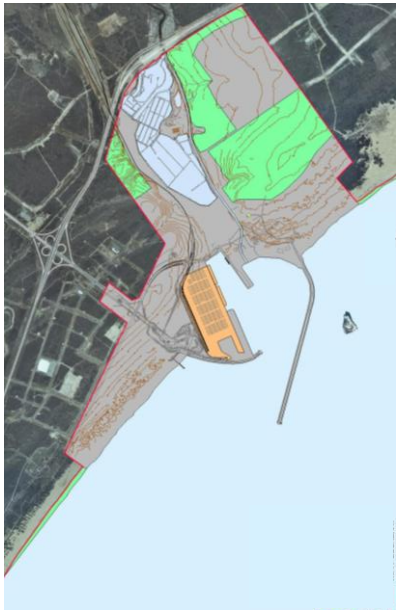
- Durban's Pier 1 + 2 Terminals will be expanded in the short-term with new deepened berths and equipment, followed by the development of container capacity at the new dig-out port.
- The second phase of the Cape Town CT expansion will provide landside capacity to match that developed at the quayside. This will be followed by a seaward expansion in the medium term.
- The operationalising and equipping of berths 3 and 4 at the Ngqura Container Terminal will take capacity to 2m TEU. Port Elizabeth Container Terminal can be expanded to three berths in future, with berth deepening being

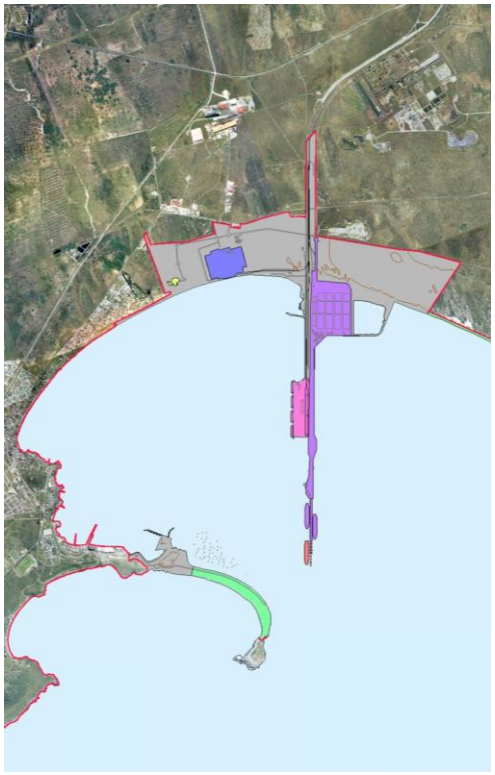
SA ports – current layouts

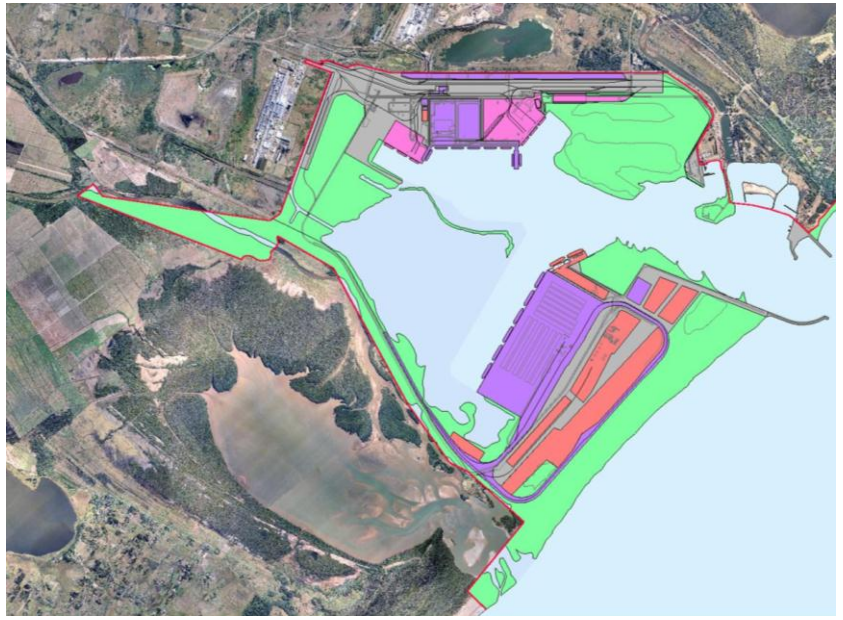


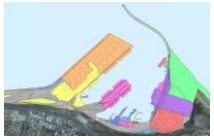
This slide and the next show the ports, drawn to a similar scale, comparing their current layouts with the long-term potential layouts.

This comparison indicates that the port system has the potential to meet the long-term maritime needs of the country.



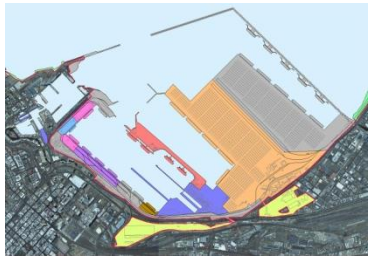


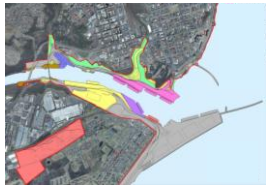


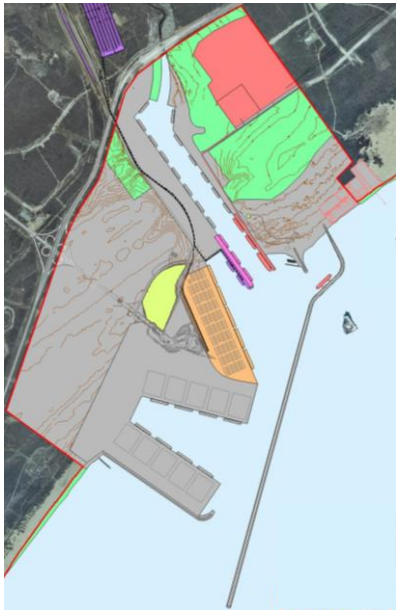


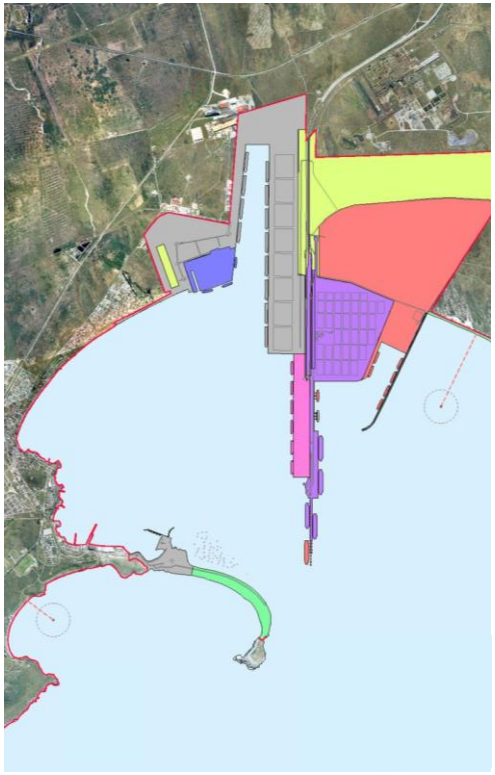
Total landside area: 5 445ha
Total length of quayside: 34km

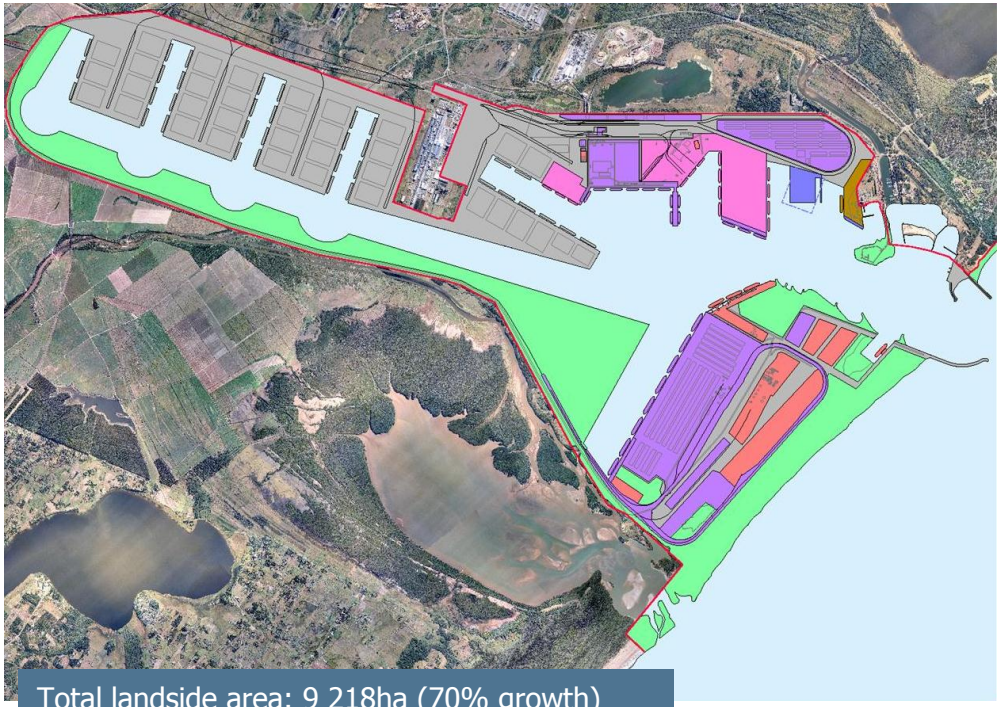
SA ports – long-term visions

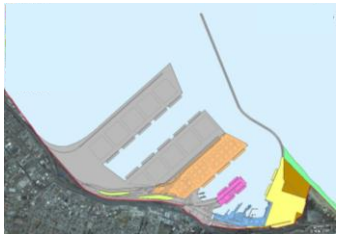






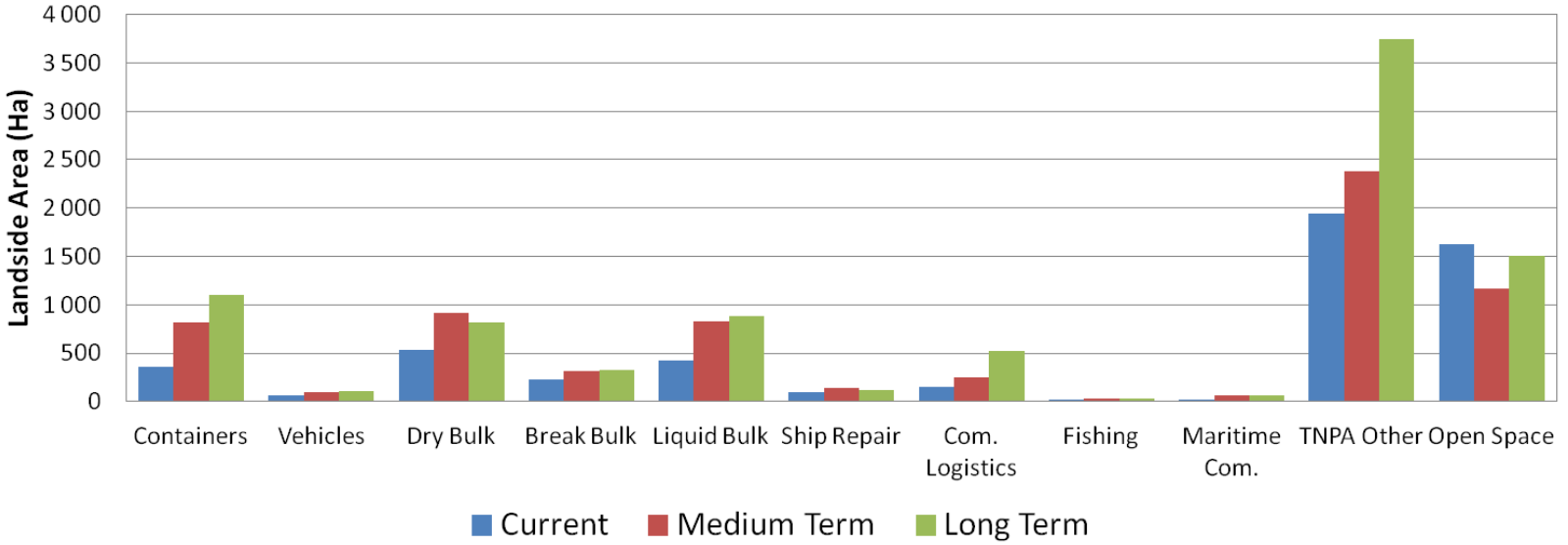






Total landside area: 9 218ha (70% growth)
Total length of quayside: 92km (170% growth)

Landside capacity – national land use summary

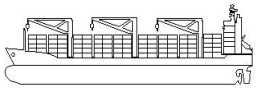
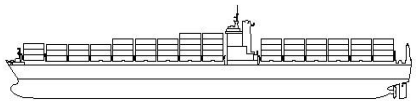
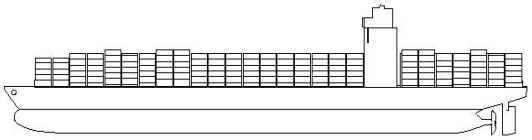
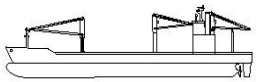
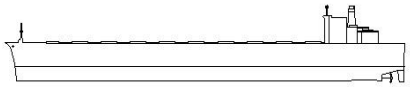
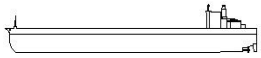
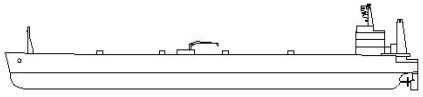


Land use	Current	Medium term	Long term
Containers	360Ha	812Ha	1 100Ha
Vehicles	66Ha	94Ha	107Ha
Dry Bulk	535Ha	916Ha	819Ha
Break Bulk	227Ha	316Ha	326Ha
Liquid Bulk	419Ha	833Ha	884Ha
Ship Repair	97Ha	140Ha	117Ha
Com. Logistics	145Ha	249Ha	522Ha
Fishing	18Ha	29Ha	28Ha
Maritime Com.	17Ha	60Ha	60Ha
TNPA Other	1 937Ha	2 380Ha	3 750Ha
Open Space	1 625Ha	1 163Ha	1 506Ha
Total	**5 445Ha**	**6 991Ha**	**9 218Ha**

- Total area within port limits grows from 5 445 to 9 218Ha
- Containers, dry bulk and liquid bulk are the primary operational land users
- Large percentage of open space retained for future development

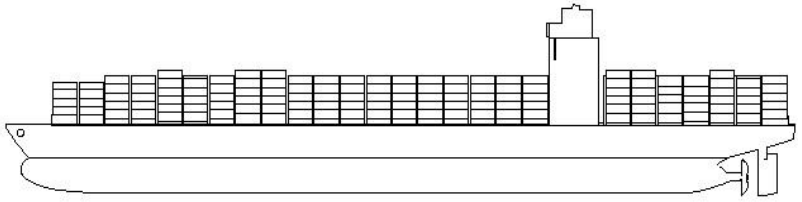
Port	Current	Medium term	Long term
Saldanha Bay	543Ha	1 314Ha	1 255Ha
Cape Town	234Ha	352Ha	465Ha
Mossel Bay	16Ha	16Ha	16Ha
Port Elizabeth	184Ha	186Ha	420Ha
Ngqura	1 128Ha	1 132Ha	1 775Ha
East London	131Ha	140Ha	165Ha
Durban Airport	0	527Ha	527Ha
Durban	968Ha	1 004Ha	1 316Ha
Richards Bay	2 242Ha	2 320Ha	3 279Ha
Total	**5 445Ha**	**6 991Ha**	**9 218Ha**

Vessel sizes and port capabilities

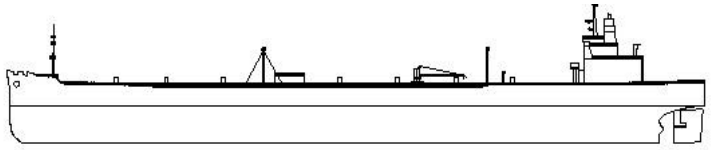
Vessel	Side view	Dimensions (LOA x Beam x Draft	SB	CT	PE	Ng	EL	Air	Dur	RB
Container: Feeder 3 000 TEU		210m x 30m x 11,0m		√	√	√	√	√	√	√
Container: Panamax 4 500 TEU		240m x 32m x 12,0m		√	√	√		√	√	√
Container: Post Panamax 6 600 TEU		305m x 40m x 14,0m		√	√	√		√		√
Container: Ultra large 15 000 TEU		400m x 59m x 15,5m				√		√		√
Dry bulk: Handysize 35 000 t		177m x 28m x 10,0m	√	√	√	√	√	√	√	√
Dry bulk: Panamax 80 000 t		225m x 32m x 13,0m	√			√			√	√
Dry bulk: Cape size 180 000 t		289m x 45m x 18,4m	√							√
Liquid bulk: Handymax 50 000 t		183m x 32m x 11,0m	√	√	√	√	√	√	√	√
Liquid bulk: Suezmax 175 000 t		300m x 43m x 16,5m	√					√		√

Design vessels for the Durban dig-out port

Vessel type	Capacity	LOA (m)	Beam (m)	Draft (m)
Ultra Large Container Ship (ULCS)	15 000 TEU	400	60	16
Super Post Panamax Container Vessels	9 000 TEU	350	45.6	14.5
Very Large Crude Carrier (VLCC)	300 000 t	332	58	22
Car Carrier	9 000 CEU	246	33.6	14.3
Bulk Liquid Vessel	100 000 t	245	42	14.3



Ultra-large container ship (ULCS)

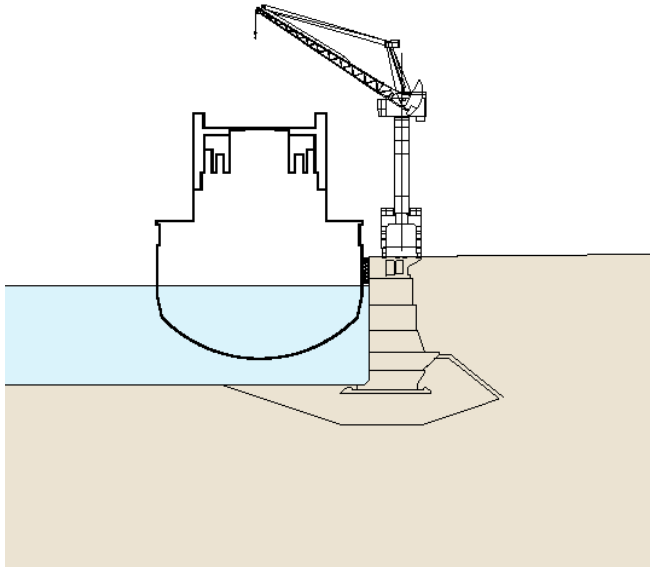


Very large crude carrier (VLCC)

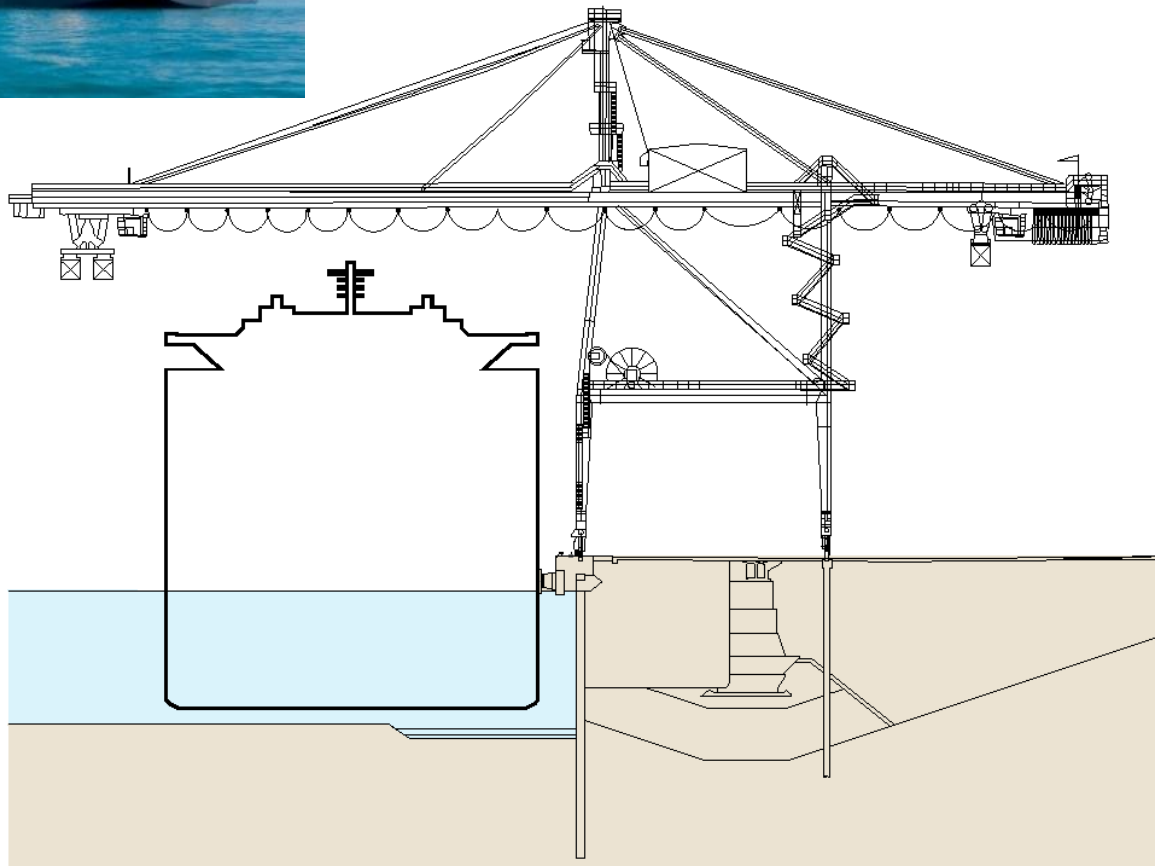
Increasing vessel and equipment sizes

1973

2012



DCT North Quay at current depth of -12,8m with Alphen class vessel and quayside cranes as per original design



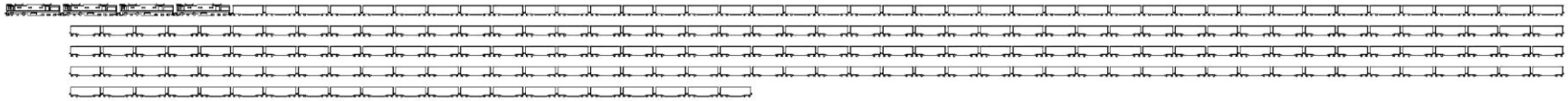
DCT North Quay at -16,5m after deepening and widening, with 9 200 TEU vessel and mega-max tandem lift STS cranes

Trains serving the South African ports

Ore train: Sishen to Saldanha Bay

4 X 9E and 5 X 34D locos, 342 CR14 wagons, 34200 ton payload, 3547m long

Coal train: Ermelo to Richards Bay



4 X 11E locos, 200 X CCR11 wagons, 16800 ton payload, 2496m long

Manganese train: Hotazel to Port Elizabeth

4 X 18E locos, 104 X CR9 wagons, 6300 ton payload, 1085m long

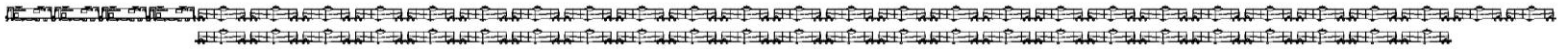
Container train: Durban to Gauteng

3 X 6E locos, 50 X SMLJ wagons, 2400 ton payload, 771m long

Car train: Durban to Gauteng

2 X 6E locos, 36 X SCL wagons, 576 ton payload, 769m long

Tanker train: Durban to Gauteng



4 X 6E locos, 50 X XPLJ wagons, 2635 ton payload, 931m long

TNPA fleet requirements

Port	Type	Current fleet	Seven-year (exp and sust)	30-year (exp only)
Saldanha Bay	Tugs Pilot boats	4 2	3 2	– – –
Cape Town	Tugs Pilot boats	4 2	– 2	3 –
Port Elizabeth	Tugs Pilot boats	4 1	2 1	– – –
Ngqura	Tugs Pilot boats	3 1	– –	– – –
East London	Tugs	2	2 –	– –
Airport site	Tugs Pilot boats Helicopters	– – –	– – – –	11 2 1
Durban	Tugs Pilot boats Helicopters	11 2 2	8 – –	– – – –
Richards Bay	Tugs Pilot Boats Helicopters	3 1 1	2 1 1	– – – –
Total	**Tugs** **Pilot boats** **Helicopters** **Dredgers**	**31** **9** **3** **5**	**17** **6** **1** **4**	**14** **2** **1** **–**

Fleet planning method

- Understand port type: ie ports that require more than one vessel move:
  - Cape Town
  - Durban
  - Richards Bay
- Review existing fleet size
- Review workload of existing marine craft
- Ensure effective fleet management
- Craft lifespan to be taken as 35 years
- Determine bollard pull requirements
- Review propulsion requirements
- Align with port development framework

Pilot boat specifications

- Type: Conventional twin screw
- Propulsion: 2 x 550kW
- Length overall: 27m
- Beam: 8m, Draft: 1,8m

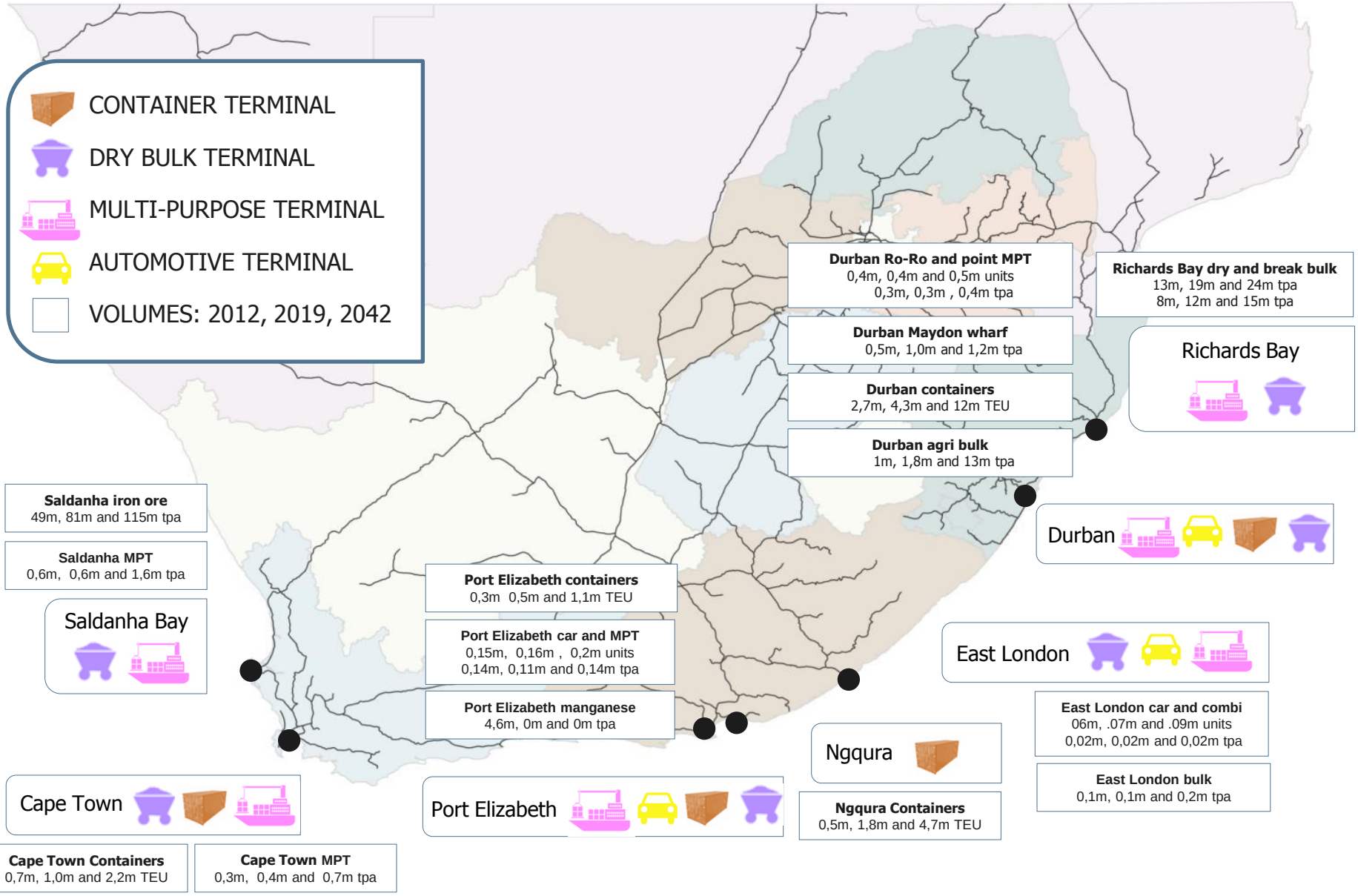
Helicopter specifications

- Type: 8 seater multi-purpose helicopter
- Propulsion: 2 x 440kW Twin-engine

Tug specifications

- Type: Voith schneider
- Propulsion: 2 x 2 640kW
- Bollard pull: 80 tons
- Length overall: 31m
- Beam: 11,5m, draft: 6,2m

Transnet Port Terminals

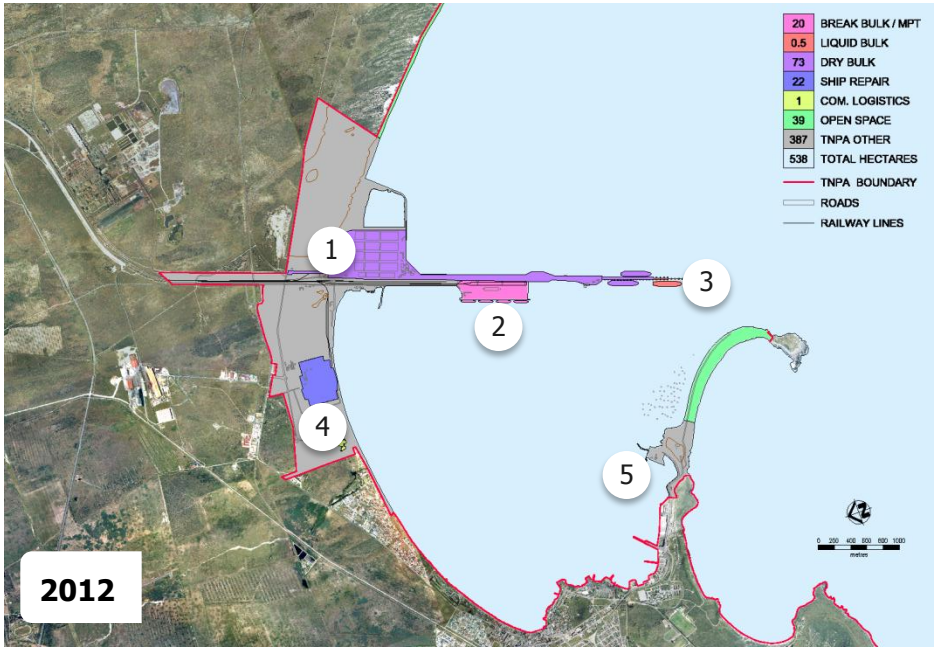


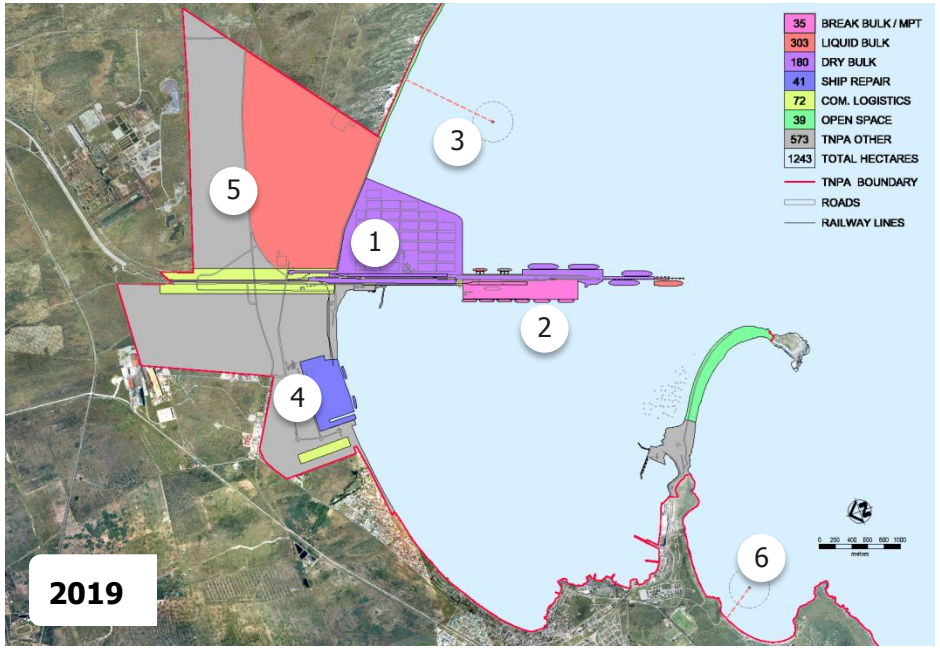
Port of Saldanha Bay

- South Africa's deepest port.
- Iron ore export jetty provides berthing for large dry bulk and liquid bulk vessels.
- Multi-purpose terminal and facilities for offshore rig servicing and fabrication.
- The port has the potential for expansion to support the adjacent industrial development.
- Future port expansion will require extensive land acquisition, as well as limited reclamation.

CARGO TYPE	TERMINAL	BERTHS	USABLE BERTHS	TERMINAL CAPACITY	BERTH LENGTH	BERTH DRAFT
Iron ore	Iron ore	101, 102	2	58 000 000	1 260m	23m
Break bulk	Multi-purpose	201, 202, 203	4	3 300 000	874m	13m to 15m
Liquid bulk	Liquid bulk	103	1	25 000 000	360m	23m

Port of Saldanha Bay: current and short-term plans





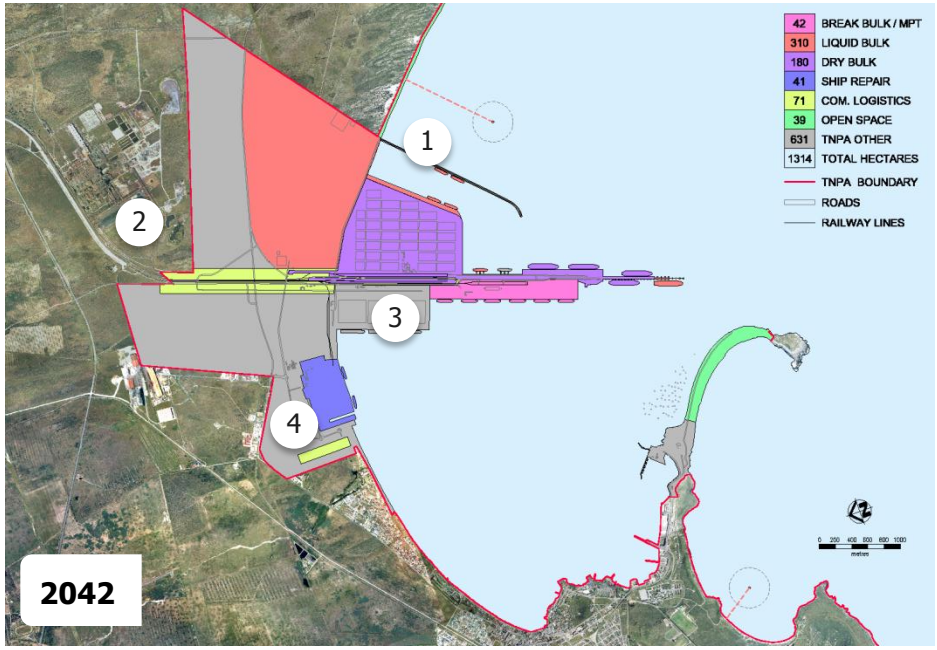
Current layout

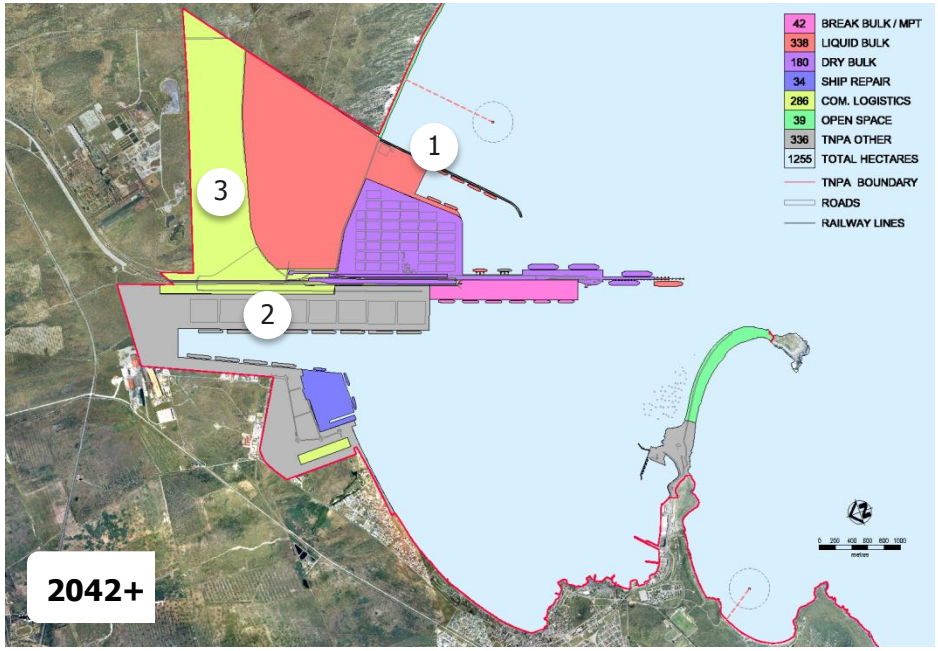
1. Iron ore export terminal with stockpiles and two berths, endpoint of the Sishen – Saldanha heavy haul rail corridor
2. Multi-purpose terminal
3. Liquid bulk berth at end of jetty
4. Mossgas site oil and gas fabrication
5. Small craft harbour

Short-term layout

1. Iron ore export terminal capacity expanded to 80mtpa, with two new berths and extended stockpiles
2. MPT expansion with new berths and extended quayside, also used for rig repairs
3. New terminal for LPG imports
4. Extended Mossgas quay
5. Strategic land acquisition in support of the IDZ and energy cluster
6. Possible site for SBM for liquid bulk imports

Port of Saldanha Bay: medium and long-term plans





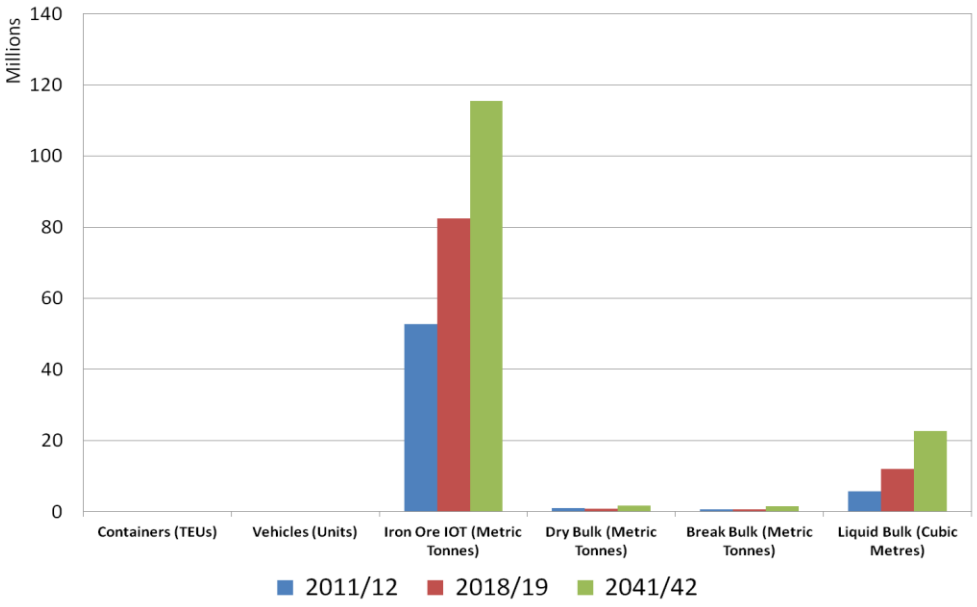
Medium-term layout

1. New liquid bulk basin in support of energy cluster
2. Developing logistics corridor to IDZ
3. Potential development of general freight terminal
4. New drydock for rig fabrication and repair

Long-term layout

1. Full development of liquid bulk basin with shoreside energy cluster facilities
2. Potential new cut and fill basin with twelve new berths and extensive quayside expansion
3. Extended logistics sites in support of IDZ

Saldanha Bay demand forecast and major projects



DEMAND FORECAST

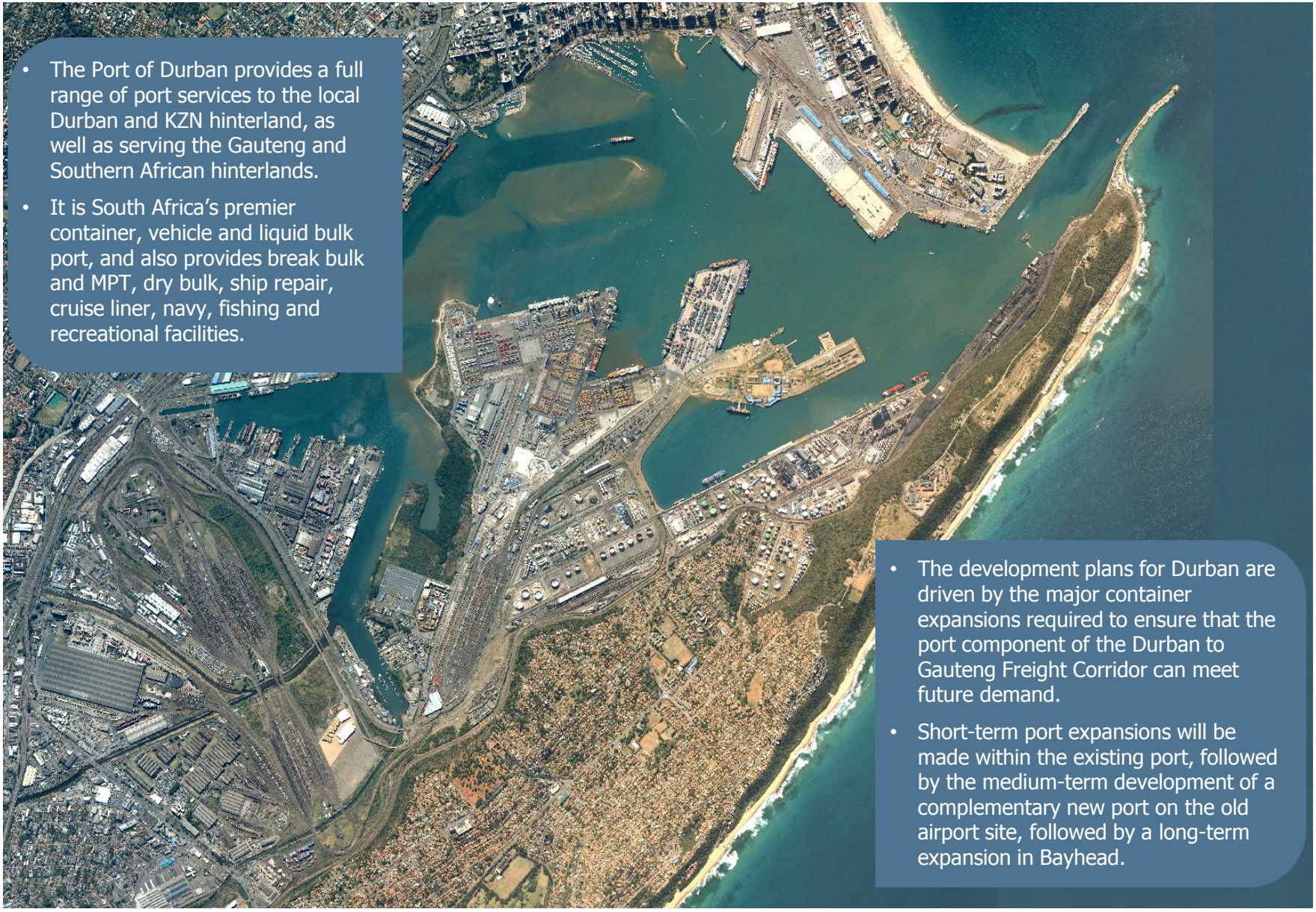
- Saldanha's freight volumes are dominated by the iron ore export volumes through the IOT. These are forecast to grow from current volumes of 49mtpa to more than 115mtpa over a 30-year period.
- Liquid bulk volumes of both crude and refined products will grow aggressively from 5,7m cm to 22m cm over the same period.
- There is forecast to be only slow growth of smaller volumes of break bulk and dry bulk cargoes handled at the MPT.
- No container or vehicle volumes are forecast in the 30-year planning period.

Cargo	Project	Timeframe	Project cost
Dry bulk	Iron ore expansion to 80mtpa	Short term	R5 375m
Break bulk	MPT expansion	Short term	
Liquid bulk	LPG terminal	Short term	R1 000m
Liquid bulk	LNG terminal	Short term	
Ship repair	Extension to Mossgas Quay (to 500m)	Short term	R822m
Ship repair	Ship repair expansion and dry dock	Short term	R6 000m
TNPA other	Strategic land acquisition (230ha)	Short term	R690m
Liquid bulk	Energy precinct with tank farm (300ha)	Short term	R900m

MAJOR PROJECTS

- Major projects in the short-term include the expansion of the IOT to 80mtpa, and the expansion of the Multi Purpose Terminal.
- It is anticipated that there will be significant private sector investment in both liquid bulk facilities – including LPG and LNG terminals, as well as in ship repair facilities with a new drydock in the medium term.

Port of Durban



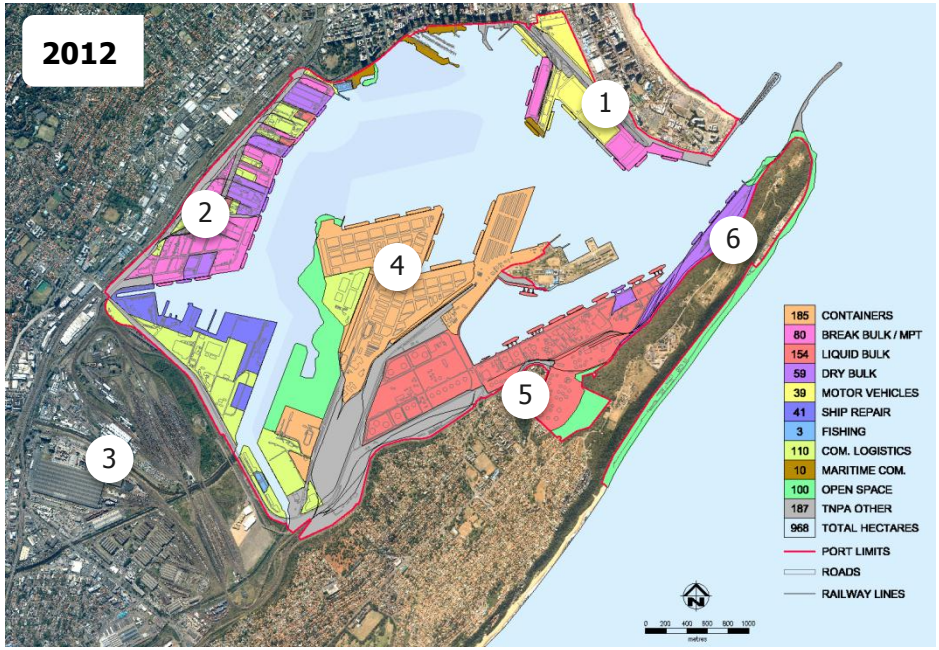
- The Port of Durban provides a full range of port services to the local Durban and KZN hinterland, as well as serving the Gauteng and Southern African hinterlands.
- It is South Africa's premier container, vehicle and liquid bulk port, and also provides break bulk and MPT, dry bulk, ship repair, cruise liner, navy, fishing and recreational facilities.

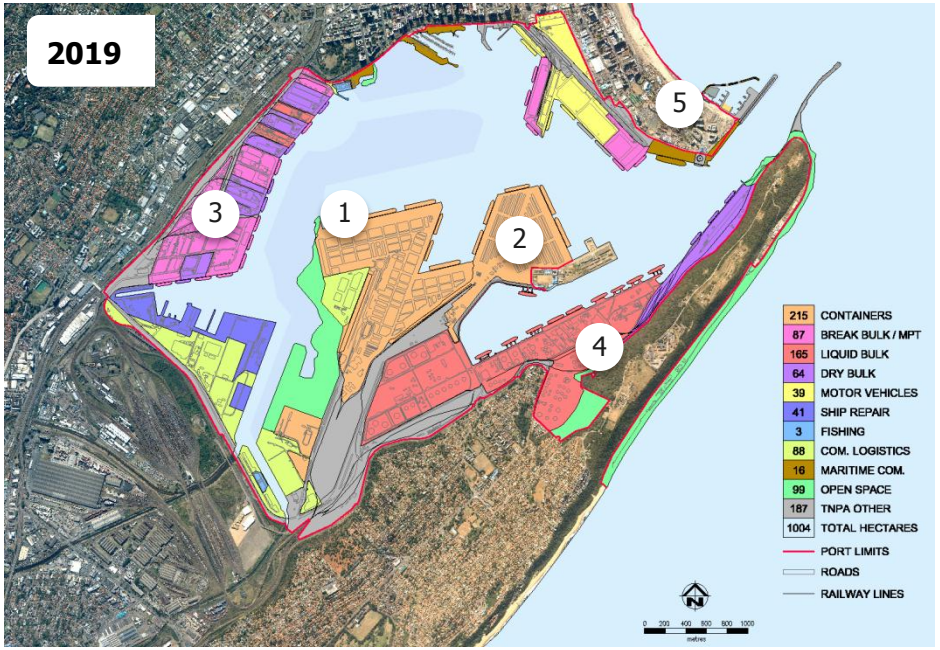
- The development plans for Durban are driven by the major container expansions required to ensure that the port component of the Durban to Gauteng Freight Corridor can meet future demand.
- Short-term port expansions will be made within the existing port, followed by the medium-term development of a complementary new port on the old airport site, followed by a long-term expansion in Bayhead.

Durban – status quo

CARGO TYPE	TERMINAL	BERTHS	USABLE BERTHS	TERMINAL CAPACITY	BERTH LENGTH	BERTH DRAFT
Containers	DCT	108, 109, 201, 202, 203, 204 and 205	7	2 300 000	1 892m	11,0m to 12,3m
Containers	Pier 1	105, 106 and 107	3	720 000	686m	8,2m to 12,1m
Cars	Cato Creek	F, G, M, R and Q	3	330 000	1 149m	10,1m to 10,6m
Dry bulk	Bluff	Berths 1 to 4	3	4 800 000	739m	8,6m to 10,3m
Dry bulk	Maydon Wharf	MW 1 and 2	1	1 700 000	305m	9,1m to 9,6m
Dry bulk	Island View	IV3	1	1 300 000	165m	10,8m
Dry bulk	Maydon Wharf	MW 5	1	1 100 000	200m	9,6m
Dry bulk	Maydon Wharf	MW 8	1	700 000	172m	9,2m
Break bulk	Maydon Wharf	MW 9, 10, 11 and 12	3	3 800 000	871m	5,1m (MW 12) to 9,9m
Break bulk	Point	B, C, D, E	3	3 718 750	1 070m	9,9m to 13,7m
Break bulk	Maydon Wharf	MW 6 and 15	2	1 860 000	367m	9,6m
Break bulk	T-Jetty	O and P	2	700 000	620m	10,6m to 11,6m
Break bulk	Maydon Wharf	MW 7	1	32 000	244m	9,2m
Break bulk	Maydon Wharf	MW 14	1	280 000	173m	9,6m
Break bulk	Island View	IV6	1	220 000	175m	8,9m
Break bulk	Maydon Wharf	MW 13	1	n/a	172m	9,6m
Liquid bulk	Island View	IV7, 8, 9	3	12 000 000	705m	11,9m to 12,2m
Liquid bulk	Island View	IV2, 4, 5	3	3 400 000	525m	9,4m to 10,6m
Liquid bulk	Island View	IV1	1	1 700 000	230m	12,5m
Liquid bulk	Maydon Wharf	MW 3 and 4	1	900 000	305m	8,7m to 9,1m

Port of Durban: current and short-term plans





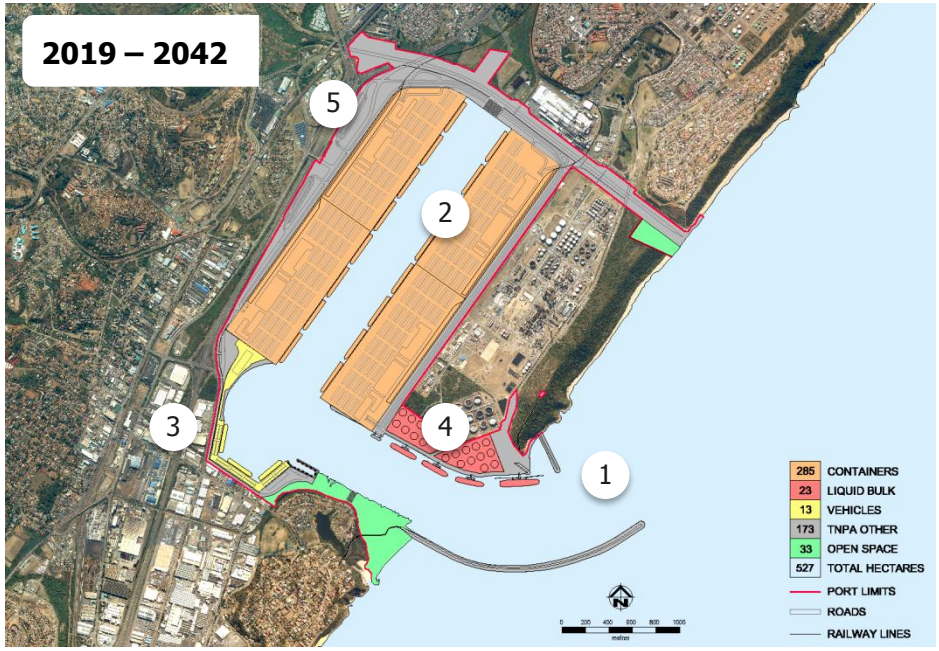
Current layout

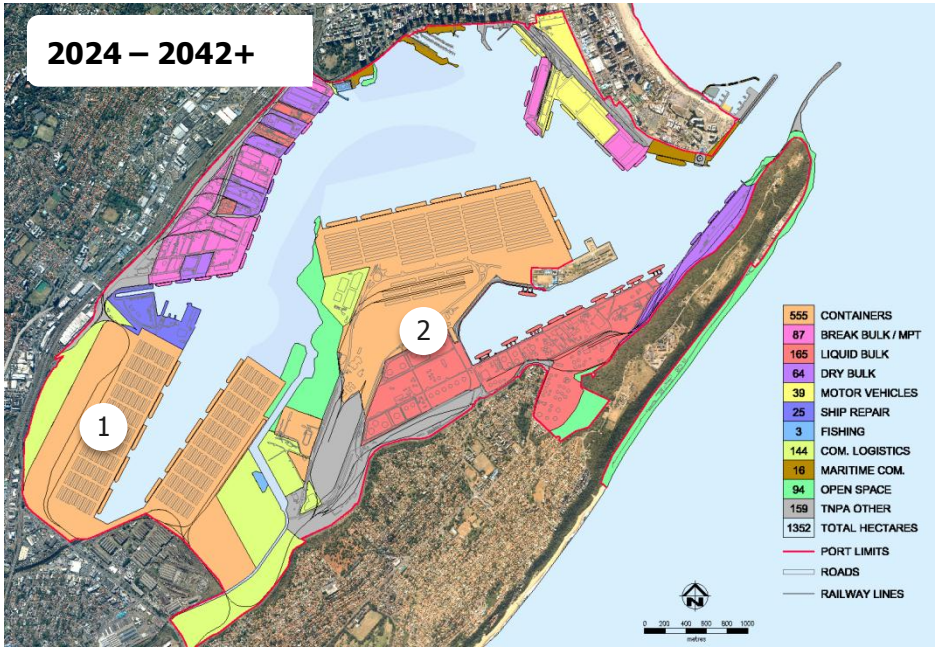
1. Point MPT and Ro-Ro terminal
2. Maydon Wharf
3. Bayhead rail yards
4. Durban Containers Pier 1 and Pier 2
5. Island View liquid bulk precinct
6. Bluff

Short-term layout

1. North quay berth deepening
2. Pier 1 expansion with Salisbury Island infill
3. Maydon Wharf quaywall reconstruction
4. Island View berth reconstruction
5. Point passenger terminal

Port of Durban: medium and long-term plans





Medium-term layout

The medium-term expansion of the Port of Durban will be focused on the new dig-out port on the old Durban airport site.

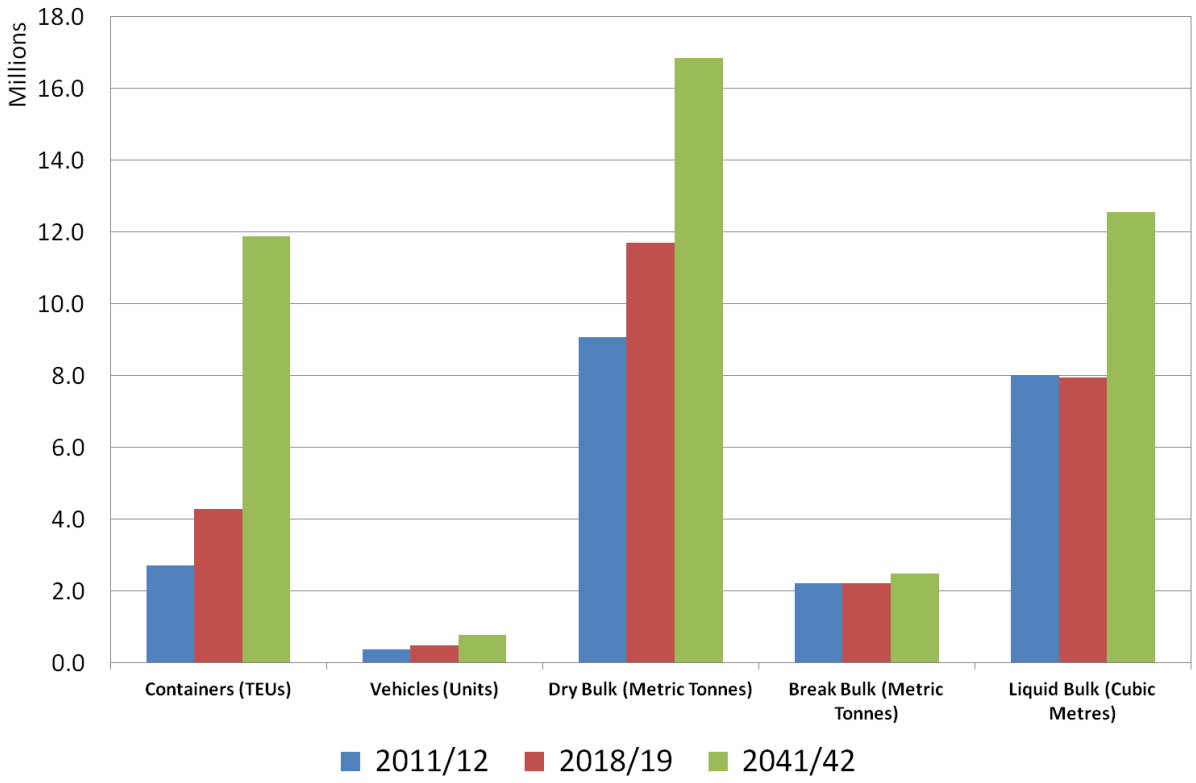
1. Breakwater and entrance channel
2. 16 berth container basin and terminals
3. New automotive terminal
4. Liquid bulk berths and terminal
5. Road and rail connectivity

Long-term layout

In the longer term, expansion could take place in the Bay once sustainability matters have been addressed.

1. Bayhead dig-out basin, with ten container berths and new terminals
2. Reconfiguration of Durban Container Terminals with infill and new operating methods

Durban demand forecast



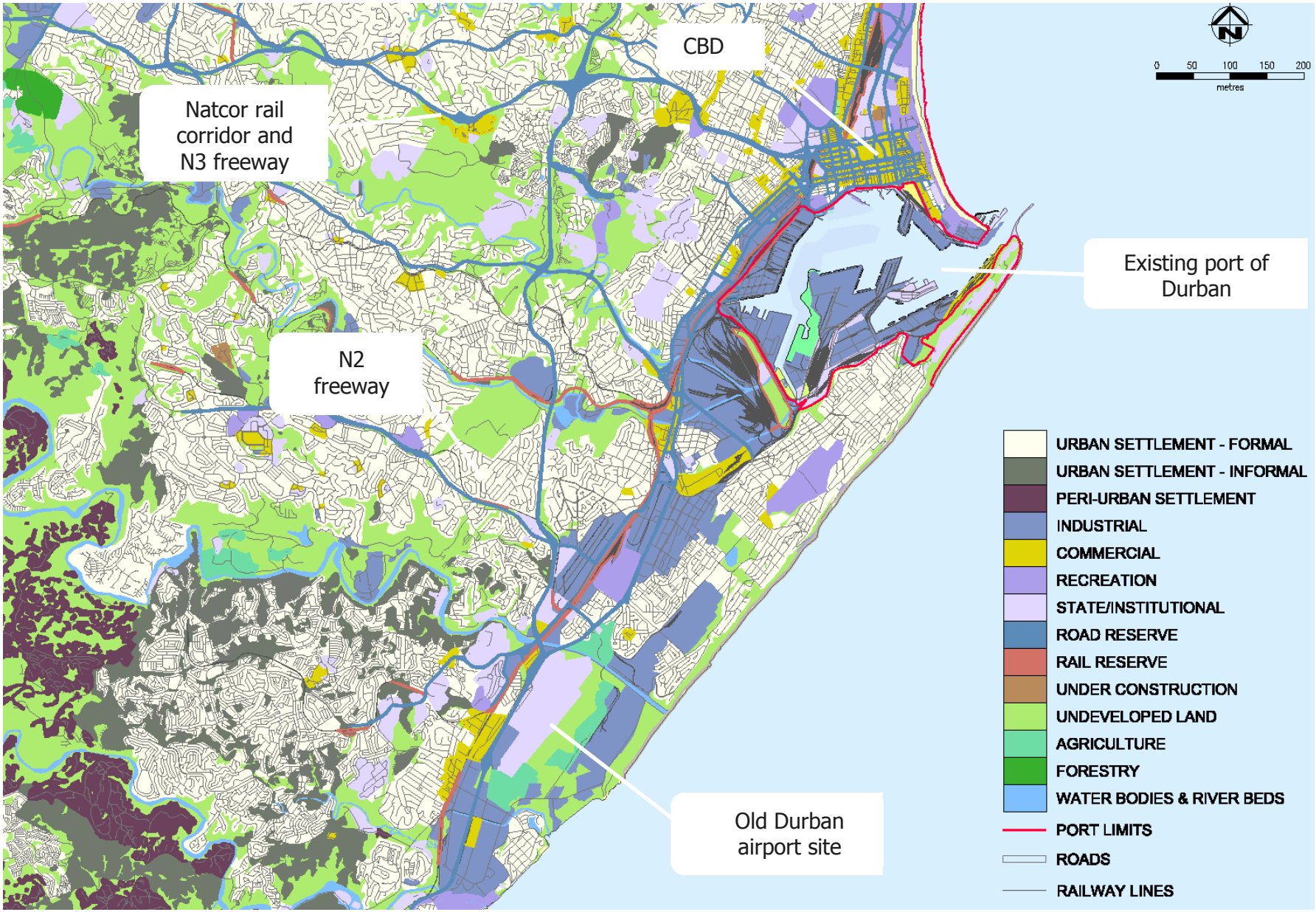
DEMAND FORECAST

- Durban's demand forecast shows significant growth in container, vehicle, and bulk volumes. Only break bulk cargoes show little growth.
- Container volumes are forecast to grow from the current 2,7m TEU to 4m TEU in 2018, and then to 12m TEU by 2042.
- Automotive volumes grow from 381000 to 776 000 units over the 30-year period.
- Dry bulk volumes will grow from 9mt to 17mt.
- Break bulk volumes stay at around 2,5mt.
- Liquid bulk volumes will grow from 8m cm to 13m cm over the 30-year period.

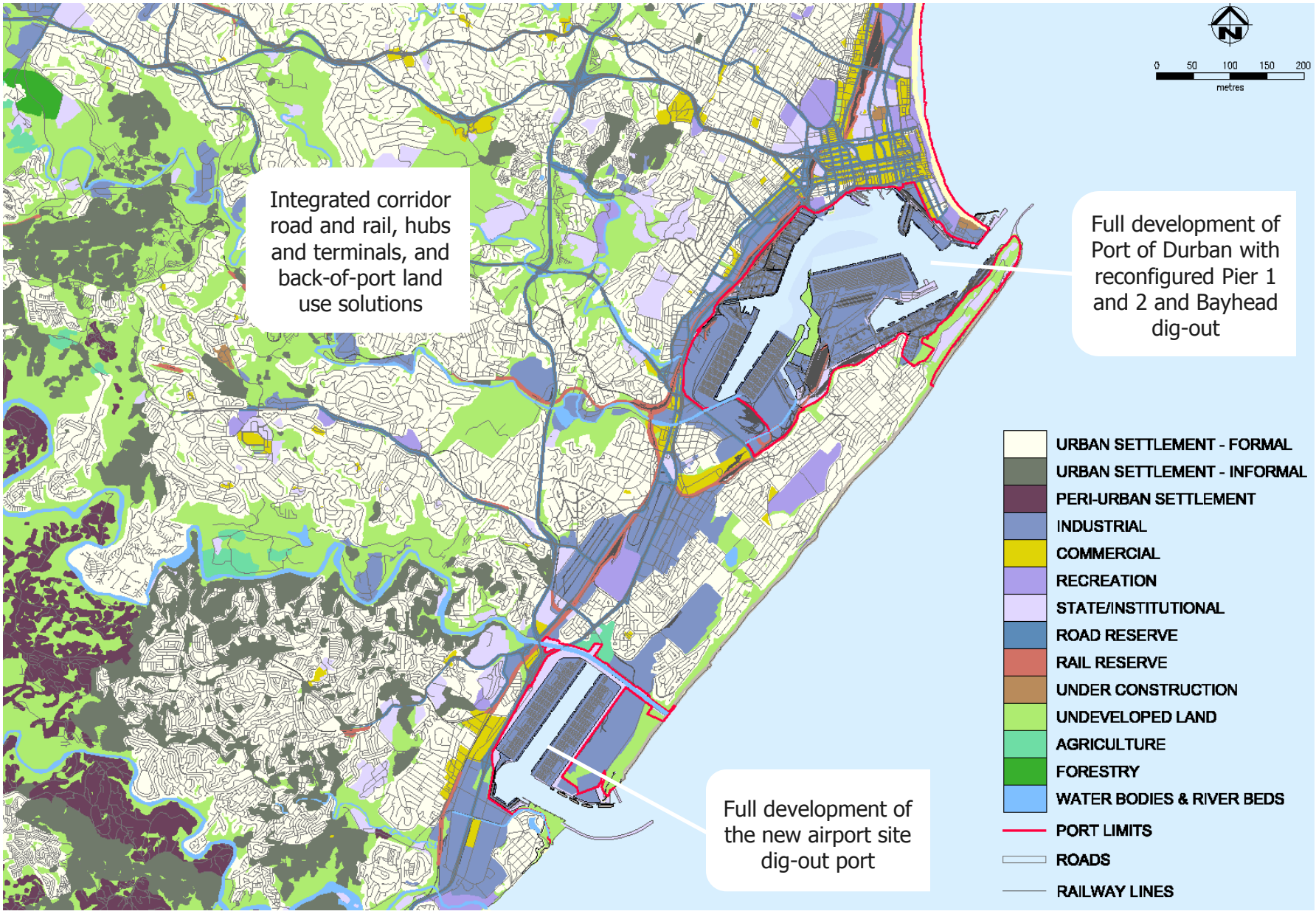
Durban – project investment list

Cargo	Project	Timeframe	Project cost (millions)
Containers	DCT Pier 2 North Quay deepening	Short term	R4 500
Containers	Straddle carrier replacement	Short term	R1 489
Containers	Pier 1 phase 2 CT	Short term	R9 000
Break bulk	Maydon Wharf berth deepening (Sheetpiles)	Short term	R1 594
Liquid bulk	Island View berth 1 upgrade	Short term	R400
Liquid bulk	Island View berth 4 upgrade	Short term	R350
TNPA other	Maydon road upgrade	Short term	R1 200
TNPA other	Edwin Swales link road	Short term	R760
TNPA other	Acquisition of 2 replacement tugs	Short term	R1 373
TNPA other	Permanent sand supply system	Short term	R436
Maritime commercial	Cruise liner terminal, berth A&B	Short term	R670
Containers	Infill between Pier 1 and 2	Medium term	R7 600
Containers	Pier 2 stack reconfiguration	Medium term	R7 400
Containers	Airport site CT: Phase 1	Medium term	R40 397
Containers	Airport site CT: Phase 2	Medium term	R14 757
Containers	Airport site CT: Phase 3	Medium term	R11 954
Containers	Airport site CT: Phase 4	Medium term	R11 195
Vehicles	Relocate car terminal to airport site	Medium term	R3 000
Break bulk	Maydon Wharf berth deepening (5-11 and 15)	Medium term	R3 000
Containers	Bayhead container terminal	Long term	

Durban metro context – current layout



Durban metro context – long-term layout



Durban container terminal reconfiguration

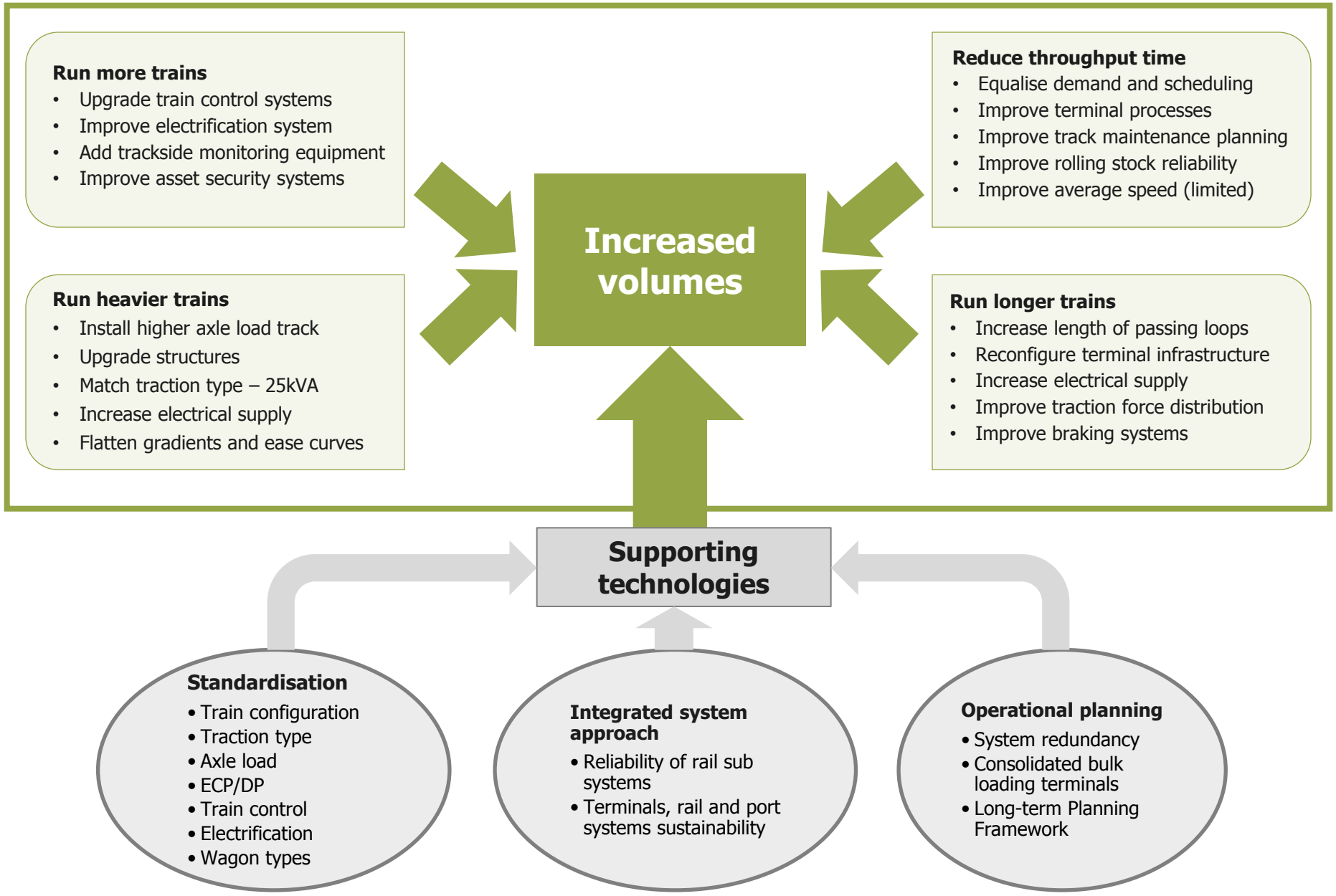
RECONFIGURATION OPTIONS

1. Existing photo showing outdated Z-shaped layout.
2. Shows the north quay deepened and lengthened with the completed Pier 1 expansion with Salisbury Island infill.
3. Infill between Pier 1 and Pier 2, with entire terminal converted to CRMG operation.

Development planning principles

1. **Match capacity to demand**
   Provide adequate corridor and terminal capacity at the right place ahead of demand.
2. **Align infrastructure to freight type**
   Heavy haul or light industrial standards depending on the freight type
3. **Improve operational characteristics**
   Reconfigure line infrastructure and layouts to remove bottlenecks
4. **Ensure network connectivity**
   Link complementary ports with inland connections. Support connectivity to SADC/regional railways
5. **Standardise infrastructure**
   Use similar technologies across the network to improve safety, maintainability and operational performance
6. **Align with PRASA/non-Transnet operator requirements**
   Separate, re-route and enhance services where needed. Consider inter-operability with branch-line services

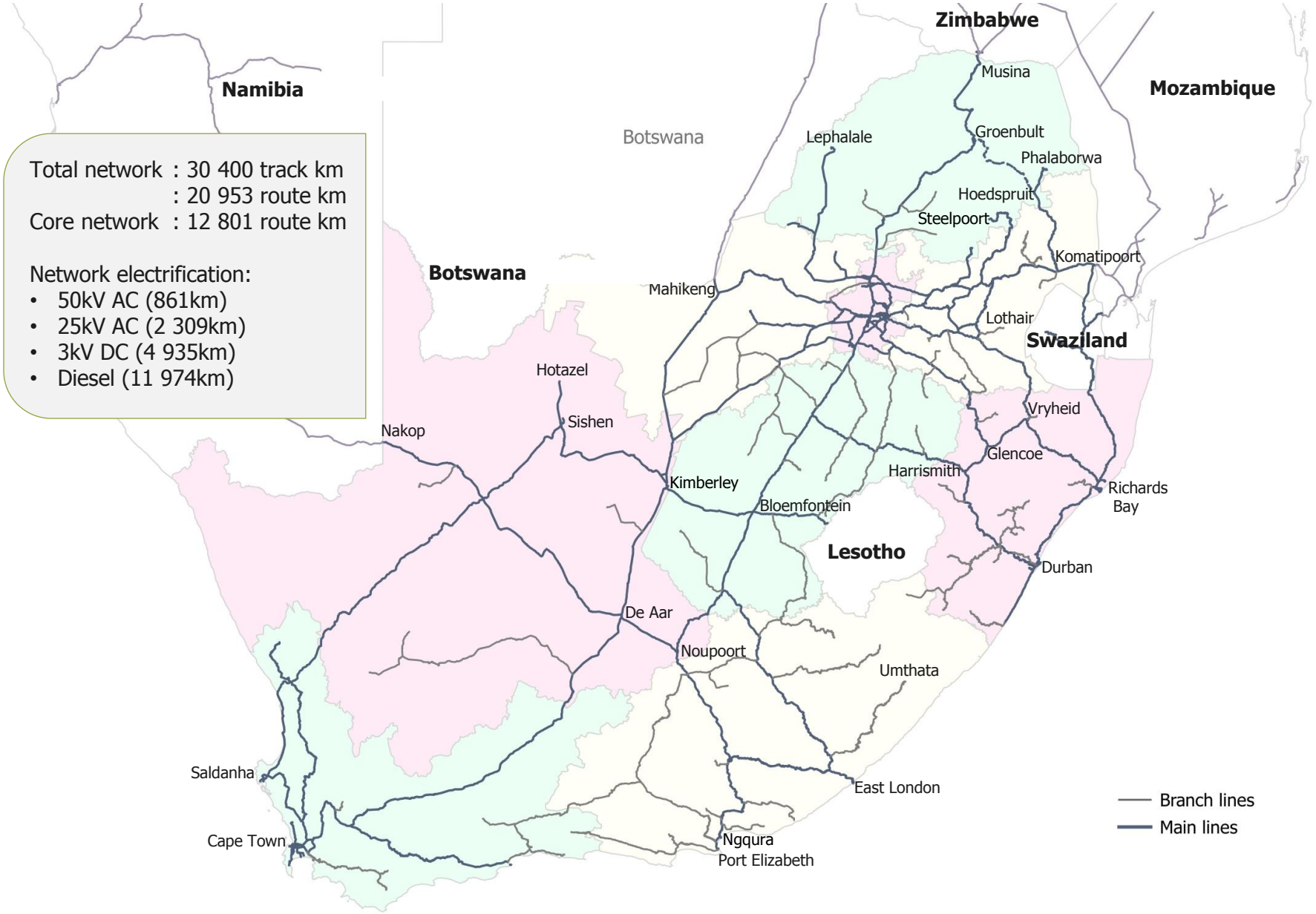
Options for capacity creation (Principle 1)



Infrastructure overview

Total network : 30 400 track km
: 20 953 route km
Core network : 12 801 route km

Network electrification:
- 50kV AC (861km)
- 25kV AC (2 309km)
- 3kV DC (4 935km)
- Diesel (11 974km)

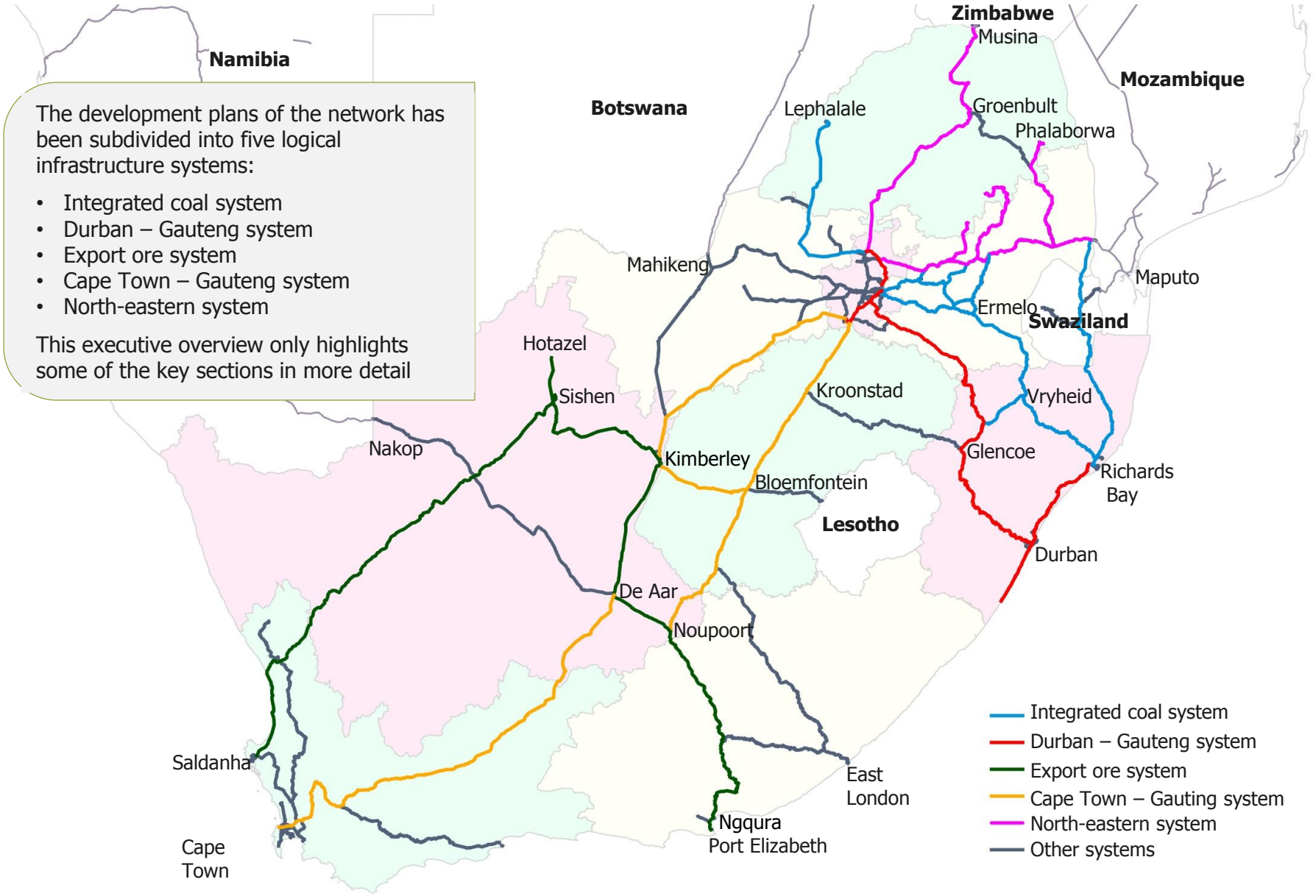


Network Plans: core network systems

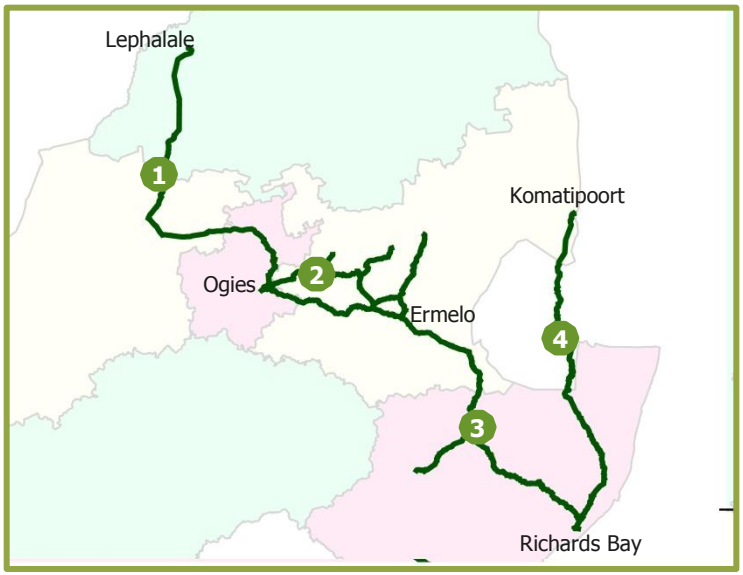
The development plans of the network has been subdivided into five logical infrastructure systems:

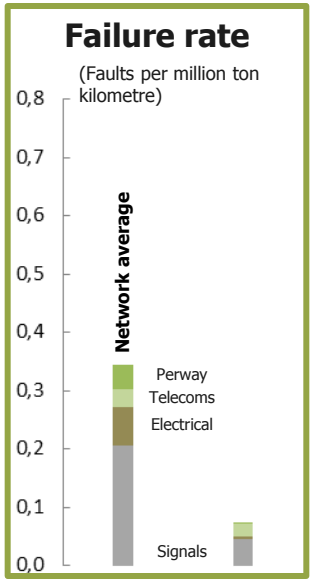
- Integrated coal system
- Durban – Gauteng system
- Export ore system
- Cape Town – Gauteng system
- North-eastern system

This executive overview only highlights some of the key sections in more detail



Integrated coal system: status quo





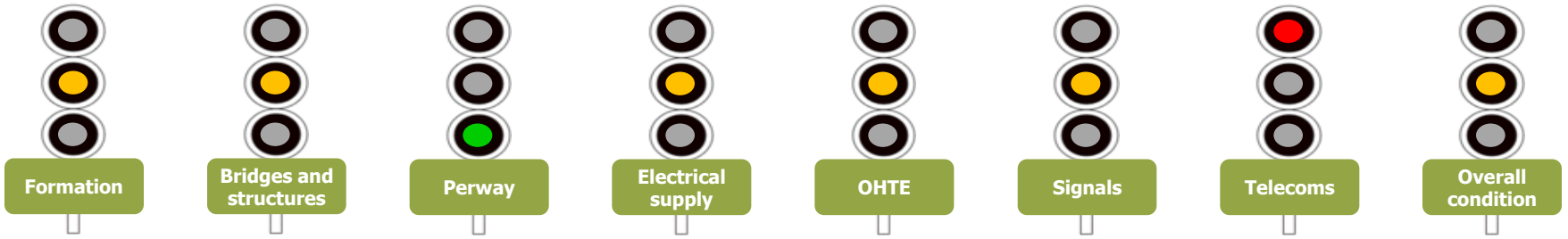
Notes

- The integrated system is partly heavy haul and light system
- System 3 is a heavy haul coal export line from Ermelo to Richards Bay
- The Waterberg (Lephalale-Ogies) and coal backbone (Ogies-Ermelo) section have partly heavy and light axle loading characteristics
- Clay soil formation from Thabazimbi to Pendoring inhibits the ability of axle load increase.
- The section performance of system 3 is good compared to the network average. Few number of faults have an impact on train operations
- The outdated telecoms infrastructure needs to be replaced in the next seven years

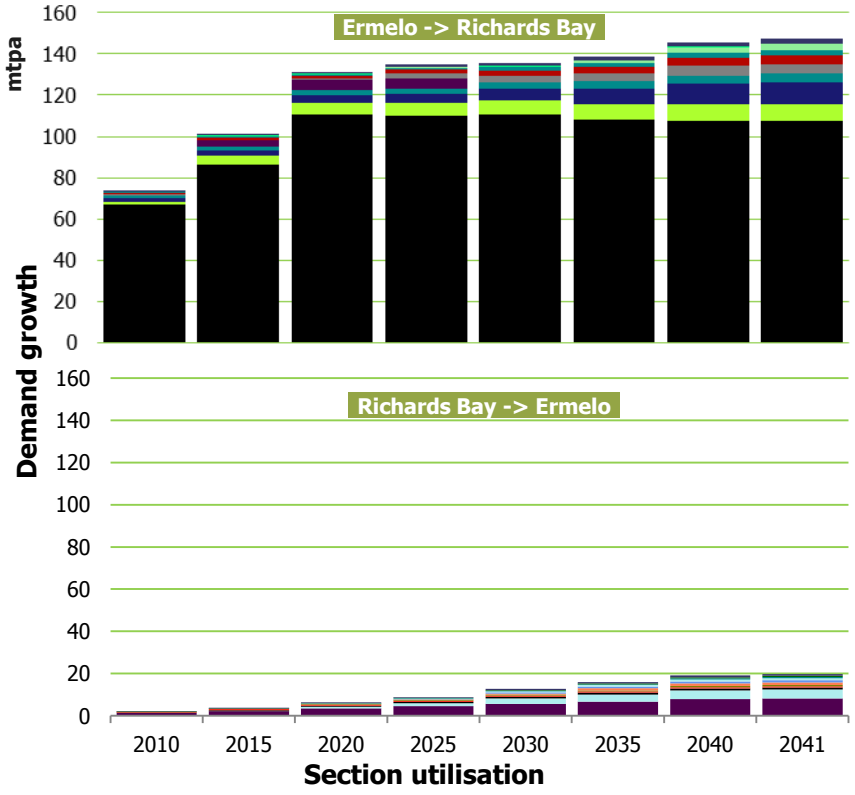
Line properties

Section	Line type	Axle load	Traction	Train control	Sharpest curve	Steepest gradient
1. Lephalale – Ogies	Single	20t	Diesel and 25kV AC	TWS	200m	1:75
2. Ogies – Ermelo	Double	20/26t	3kV DC	CTC	153m	1:100
3. Ermelo – Richards Bay	Double	26t	25kV AC	CTC	550m	1:160
4. Komatipoort – Richards Bay	Single	20t	Diesel	CTC	250m	1:120

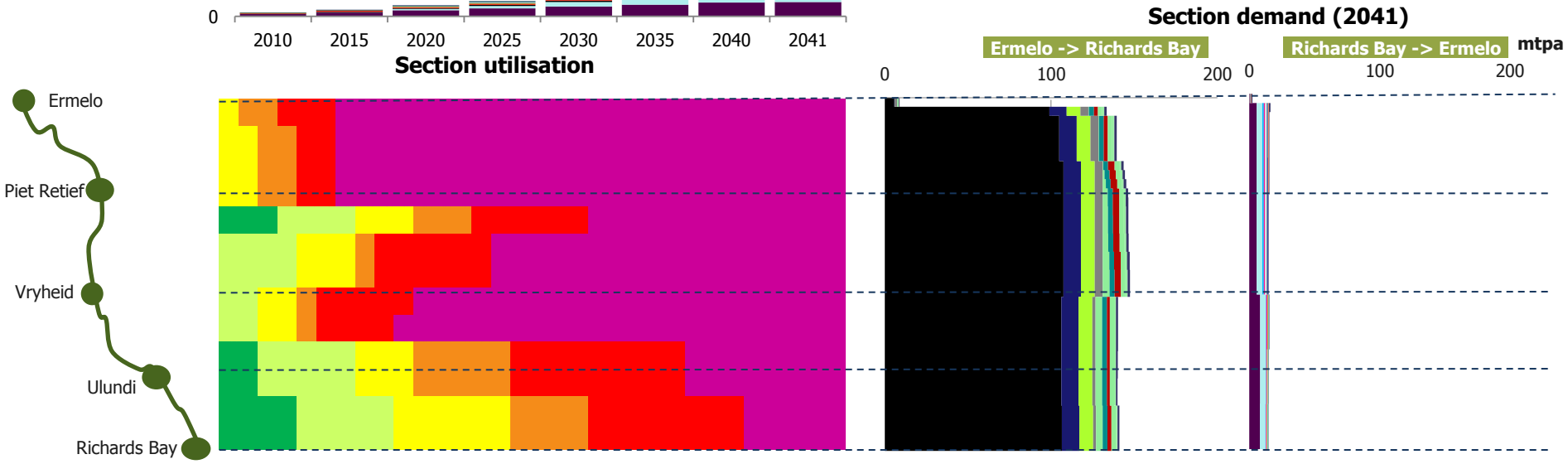
General condition



Ermelo – Richards Bay: demand and current capacity



Top 10 commodities (mtpa)			
	2012	2019	2041
Coal export	79,69	103,45	107,53
Chrome	2,20	5,68	8,26
Ferrochrome	1,80	3,27	10,43
Wood+	1,33	2,19	4,14
Coal power	1,89	5,00	0,00
Containers	0,27	0,48	4,83
Coal domestic	0,97	1,32	3,96
Industrial chemicals	0,38	0,58	2,99
Other non Fe min mining	0,05	0,09	276
Granite	0,36	0,48	0,44
Others	0,53	0,96	2,46



Integrated coal system: development plan

Strategy

Axle	Train control	Electrical	Capacity expansion	Alignments
Upgrade to 26t/axle	New system	Upgrade to 25kV AC	Tunnel doubling, Swazi link	Ease grades and curves

Expansion and investment

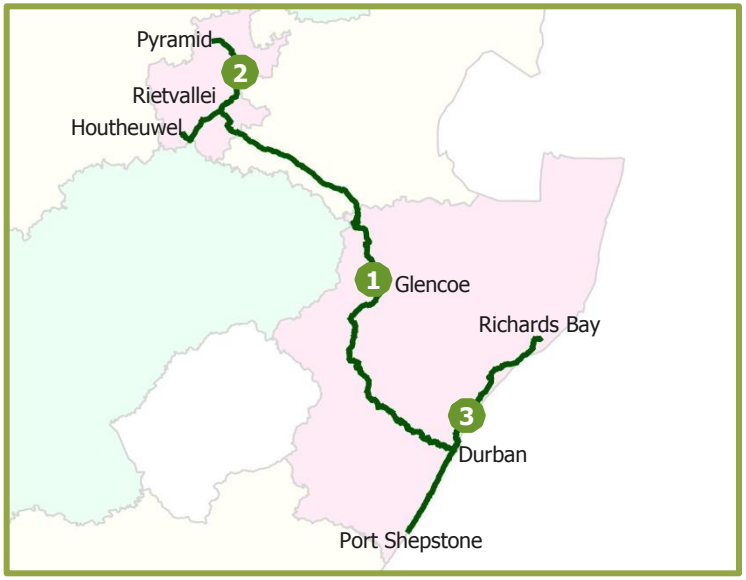
Section	Phase	Intervention	ETC (Rm)
Lephalale to Pyramid	1a	Extend Matlabas loop and Thabazimbi Yard, 4 new loops and 2 loop extensions	1 540
Lephalale to Pyramid	2a	7 New loops and 7 loop extensions, electrify Lephalale to Thabazimbi to 25kV AC	1 412
Thabazimbi to Ermelo	3a	Complete new single line 26t/axle 200 wagon Thabazimbi to Ermelo	11 245
Ogies to Ermelo	1b	Upgrade selected line sections to 26mtpa, conversion to 25kV AC and new block splits.	5 978
Ogies and Ermelo	2b	Provide demand flexibility by adding a fourth line between Ogies and Ermelo	4 560
Ermelo to Richards Bay	1c	Upgrade electrical supply system and double the Overvaal tunnel.	8 978
Lothair to Swaziland link	2c	New link from Lothair to Matsapha, and upgrade the section to Phuzumoya.	11 998
Komatipoort to Phuzumoya	1d	Extend the existing crossing loops and add 8 new crossing loops.	978
Phuzumoya to Nsezi	2d	Upgrade section to accommodate 34mtpa , doubling, grade flattening and curve easing	6 002

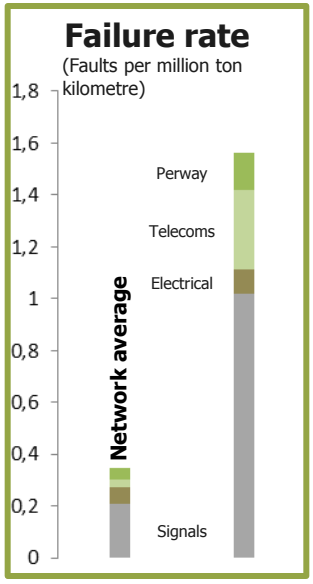
Development plan

Section	Phase	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Lephalale to Pyramid	1a	1	1	5	231	536	536	231																
Lephalale to Pyramid	2a	1	1	9	212	326	326	326	212															
Thabazimbi to Ermelo	3a				4	15	1 123	1 123	1 347	1 347	1 347	1 347	1 347	1 123	1 123									
Ogies to Ermelo	1b			60	1 196	1 793	2 391	538																
Ogies and Ermelo	2b											75	1 785	2 190	510									
Ermelo to Richards Bay	1c			60	1 196	1 793	2 391	538																
Lothair to Swaziland link	2c			80	1 998	2 110	2 500	2 500	2 810															
Komatipoort to Phuzumoya	1d		450	528																				
Phuzumoya to Nsezi	2d		60	980	1 110	1 500	1 500	852																
Total cash flow (Rm)		**2**	**512**	**1 722**	**5 947**	**8 073**	**10 767**	**6 108**	**4 369**	**1 347**	**1 347**	**1 422**	**3 132**	**3 313**	**1 633**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Research
FEL – 1: Concept study
FEL – 2: Feasibility
Construction

Gauteng – Durban system: status quo





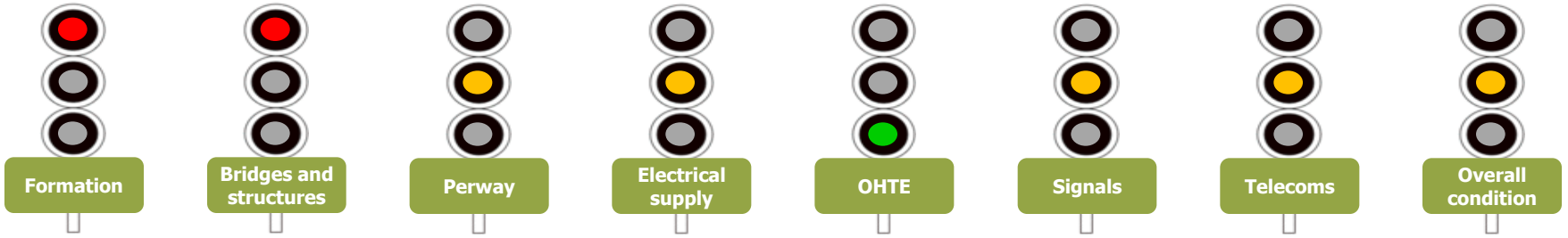
Notes

- The system consist of the Gauteng Freight Ring (Pyramid – Houtheuwel), Natcor (Gauteng to Durban) and the North and South coast lines (Richards Bay – Port Shepstone)
- System capacity utilisation largely dominated by the Natcor and Freight Ring operations.
- Natcor infrastructure heavily utilised but constrained by poor alignment design. Poor formation and tunnel design infringe capacity development opportunities.
- Gauteng freight ring capacity constrained on single line sections. OHTE theft and obsolete train control technology impacts severely on train operations.
- North and South coast signalling equipment obsolete.

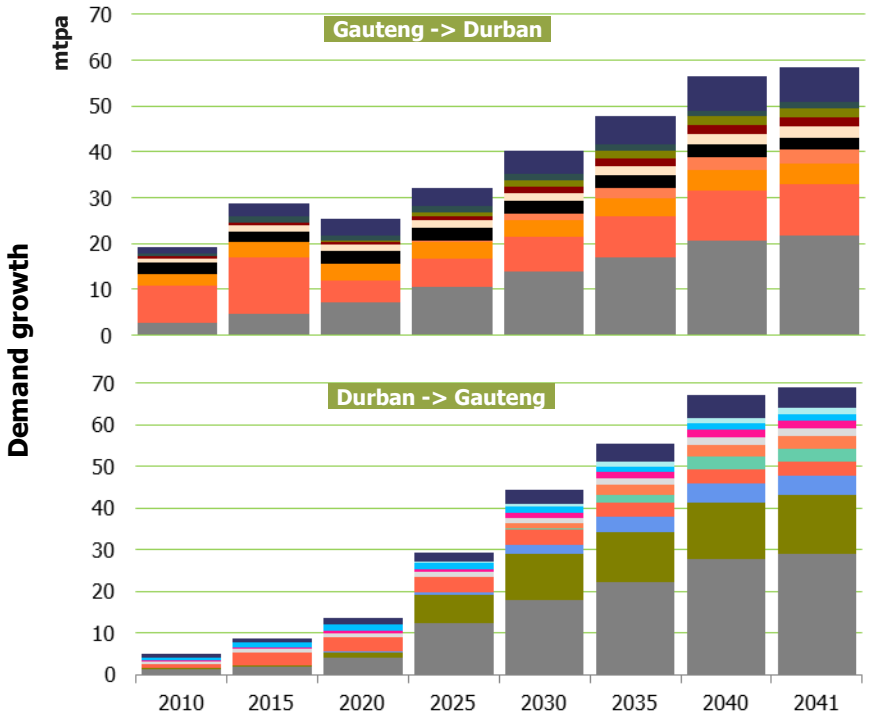
Line properties

Section	Line type	Axle load	Traction	Train control	Sharpest curve	Steepest gradient
1. Gauteng to Durban	Double	20t	3kV DC	CTC	250m	1:66
2. Pyramid to Houtheuwel	Single/Double	20t	3kV DC	CTC	305m	1:75
3. R. Bay to Port Shepstone	Single/Double	20t	3kV DC	CTC/RTO	250m	1:66

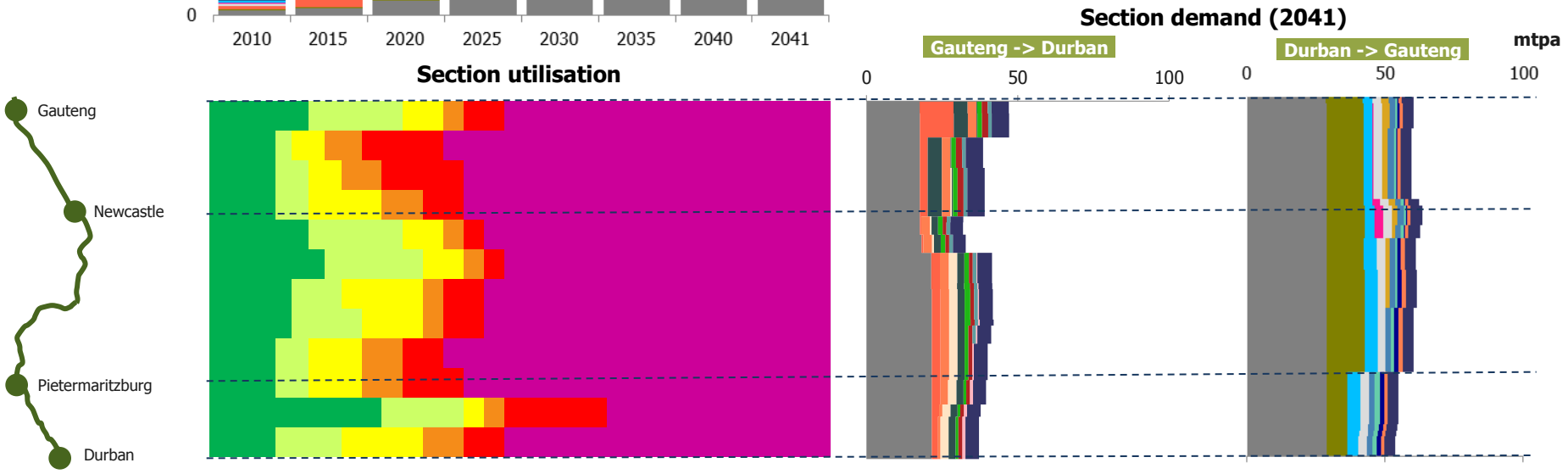
General condition



Gauteng – Durban: demand and current capacity



Top 10 commodities (mtpa)	2012	2019	2041
Containers	1,45	3,38	29,07
Processed foods	0,30	0,86	14,03
Other chemicals	0,00	0,22	4,68
Domestic coal	0,94	3,50	3,56
Beverages	0,00	0,01	3,06
Other agriculture	0,00	0,01	2,84
Avtur	0,44	0,84	2,01
Wheat	0,29	0,52	1,74
Fuel	0,76	1,43	1,53
Paper and paper products	0,00	0,11	1,51
Other	0,83	1,37	4,94



Gauteng – Durban system: development plan

Strategy

Axle	Train control	Electrical	Capacity expansion	Alignments
Natcor north: upgrade to 26t/a	Signal infill scheme	Upgrade to 25kV AC	Reduce headway	Gradients, curves, bypass/links

Expansion and investment

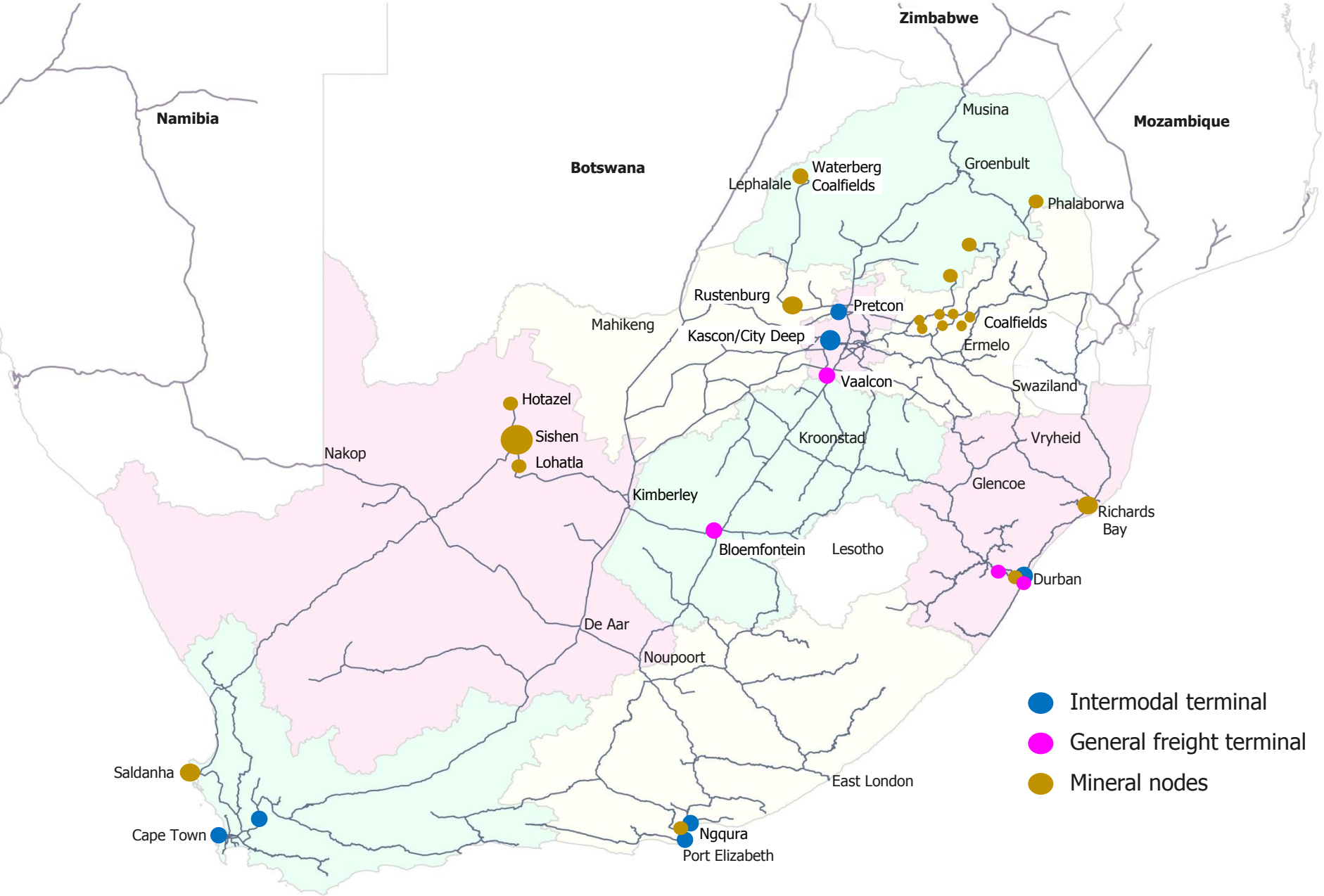
Section	Phase	Intervention	ETC (Rm)
Rietvallei to Booth	1a	Transformer replacement	638
Rietvallei to Booth	2a	Implement CTC signal infill scheme to reduce headway	112
Glencoe to Cato Ridge	3a	Relieve gradients and curves	13 733
Rietvallei to Booth	4a	Upgrade to 25kV AC and voltage changeover at all DC traction intersections	5 330
Rietvallei to Booth	5a	Train control system – ETCS (Level 3)	2 849
Cato Ridge to Durban	6a	Cato Ridge bypass	20 375
Pyramid to Sentrarand	1c	Double remainder of Gauteng freight ring lines and implement signal infill	1 565
Durban to Stanger	1b	PRASA interface within eThekwini area	300
Durban to Richards Bay	2b	Double single line between Stanger Richards Bay, 3kV DC, and CTC signalling	3 600
Sentrarand to Skansdam	2c	Implement CTC signal infill scheme to reduce headway	350
Skansdam to Houtheuwel	3c	New double track, 3kV DC, CTC signalling (PRASA bypass)	1 600
Donkerhoek – Pienaarsrivier	4c	New single track chord from South to East (Sentrarand to Maputo)	60

Development plan

Section	Phase	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Rietvallei to Booth	1a		4	6	8	195	262	164																
Rietvallei to Booth	2a			2	2	3	27	34	27	17														
Glencoe to Cato Ridge	3a					21	34	45	2 126	3 571	3 488	2 115	1 236	1 099										
Rietvallei to Booth	4a							8	16	32	1 333	1 706	1 439	797										
Rietvallei to Booth	5a									5	28	43	627	712	712	427	293							
Cato Ridge to Durban	6a											39	82	122	4 483	5 298	4 995	3 260	2 099					
Pyramid to Sentrarand	1c		1	3	6	75	200	156	55															
Durban to Stanger	1b									4	7	14	360	720	1 080	725	360	342						
Durban to Richards Bay	2b		3	6	9	157	345	438	388	220														
Sentrarand to Skansdam	2c								1	1	3	70	193	82										
Skansdam to Houtheuwel	3c					3	6	10	160	353	448	396	224											
Donkerhoek – Pienaarsrivier	4c			1	3	6	9	24	17															
Total cash flow (Rm)		**0**	**8**	**18**	**29**	**460**	**883**	**878**	**2 790**	**4 202**	**5 307**	**4 383**	**4 161**	**3 532**	**6 275**	**6 450**	**5 648**	**3 602**	**2 099**	**0**	**0**	**0**	**0**	**0**

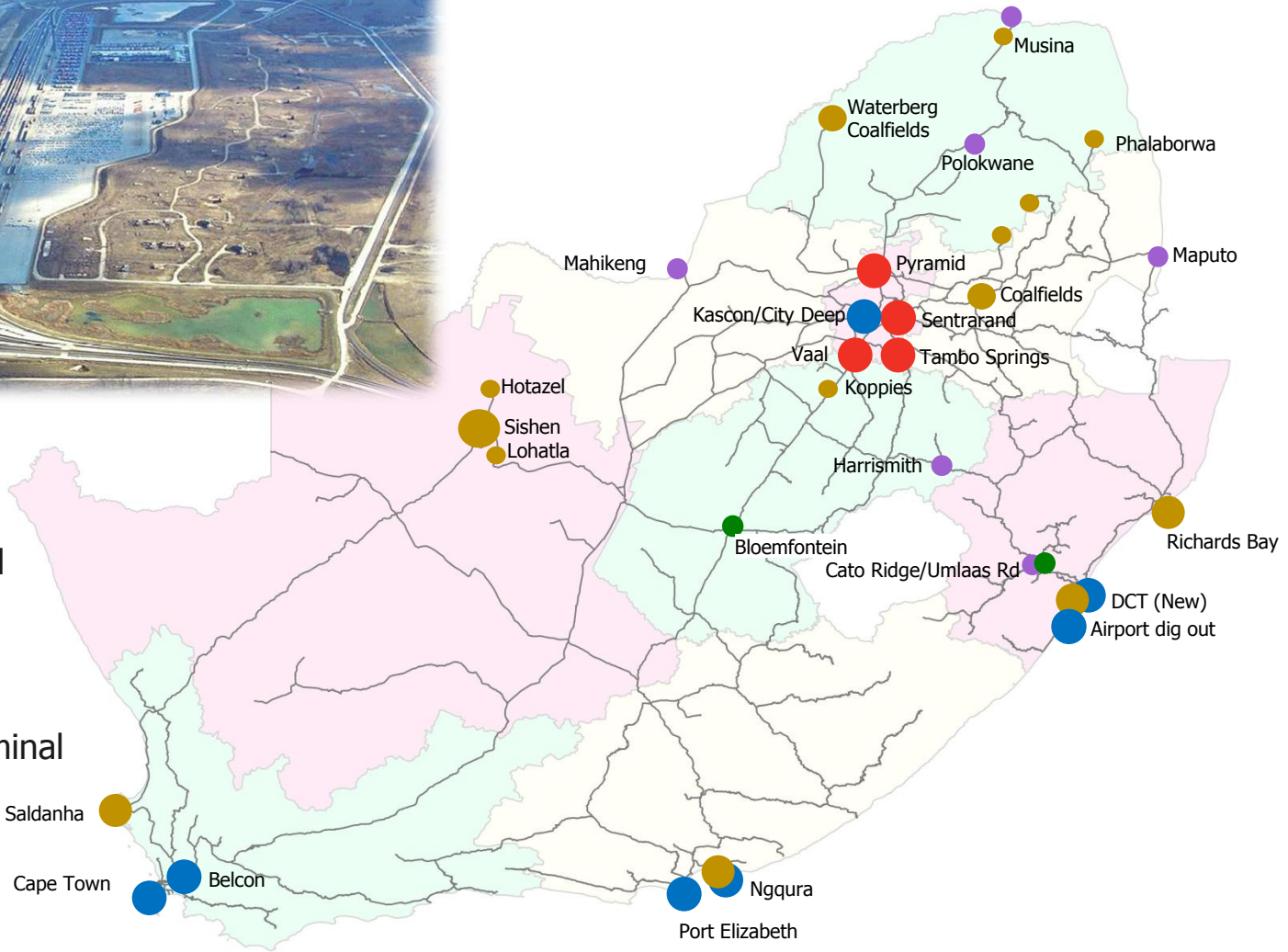
Research
FEL – 1: Concept study
FEL – 2: Feasibility
Construction

Hubs and terminals: status quo



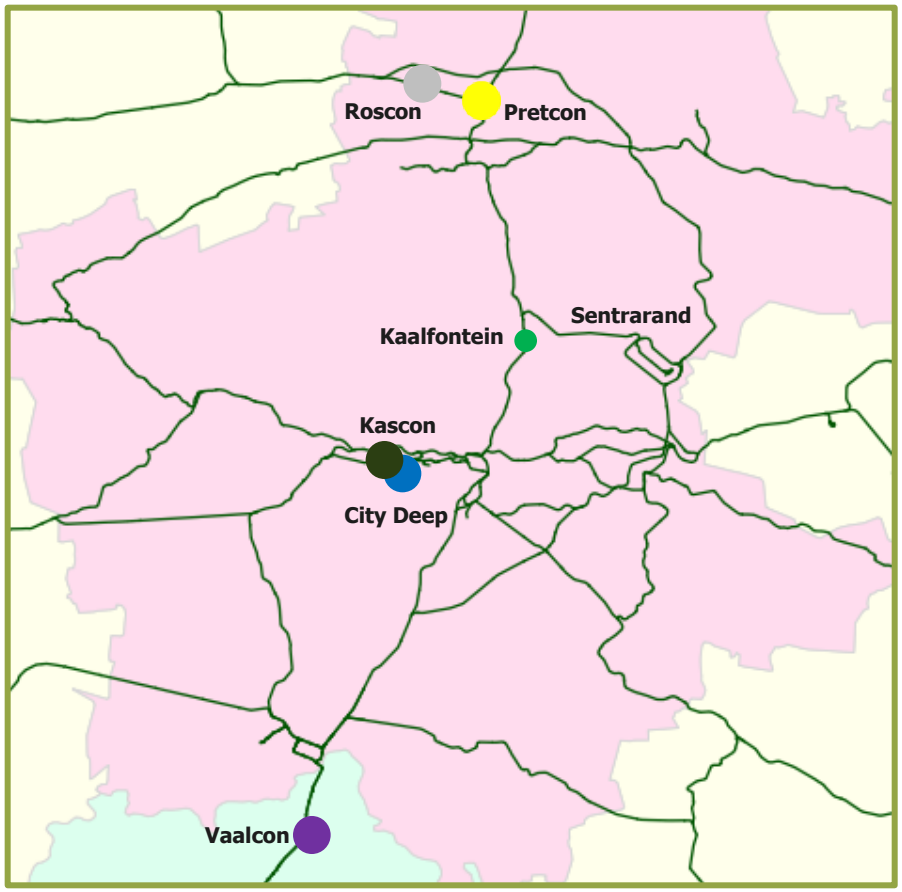
Hubs and terminals: proposed locations 2041

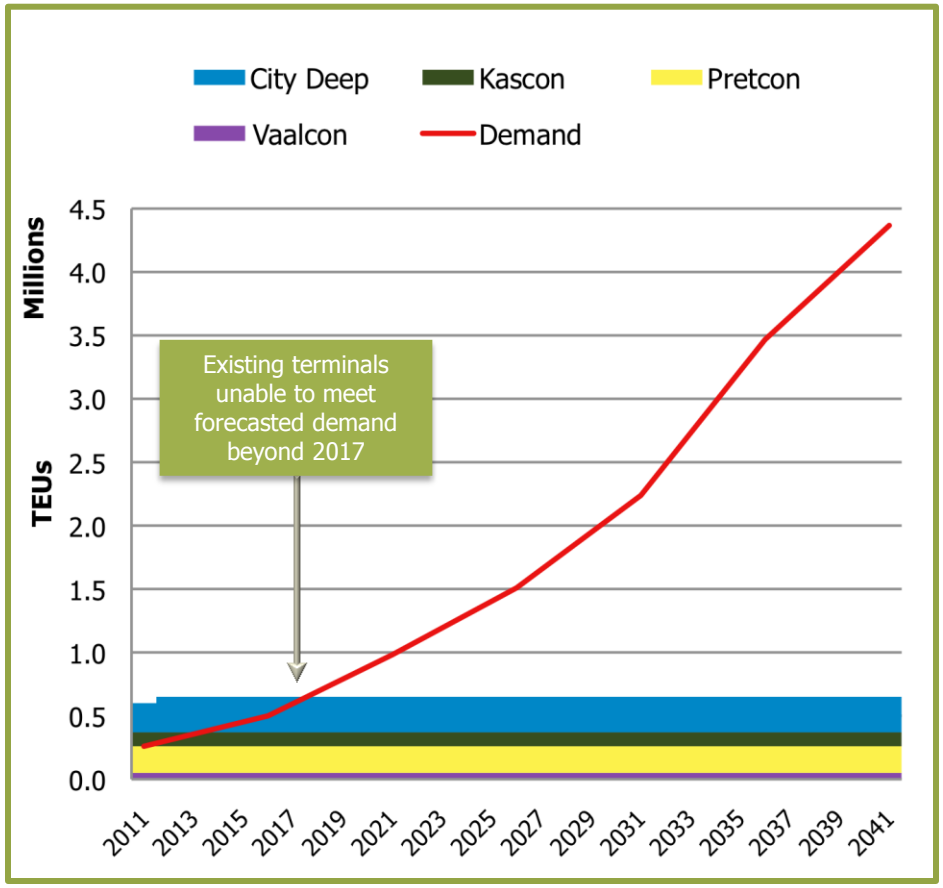
- Super-terminal
- Intermodal terminal
- Freight nodes
- Mineral nodes
- General freight terminal



The indicated freight nodes are not necessarily informed by demand but are proposed by public sector in support of economic development

Gauteng container terminals: status quo

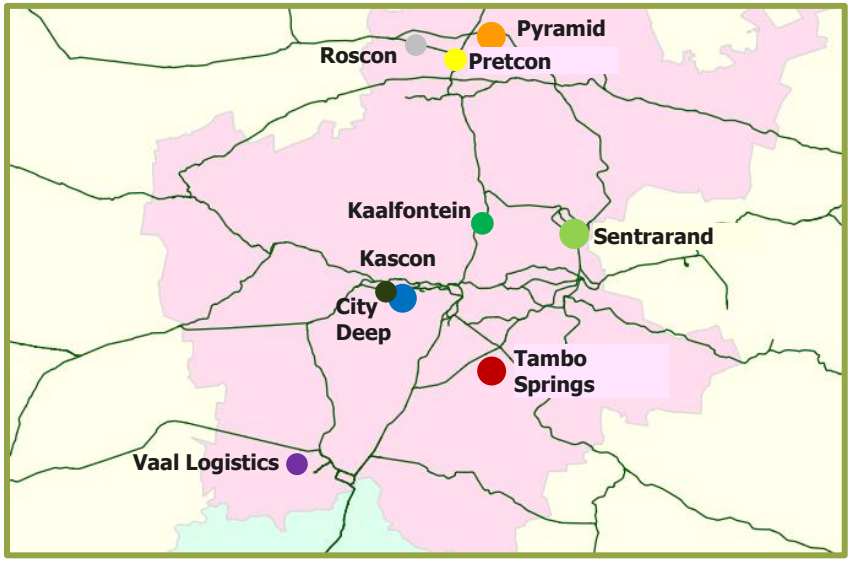


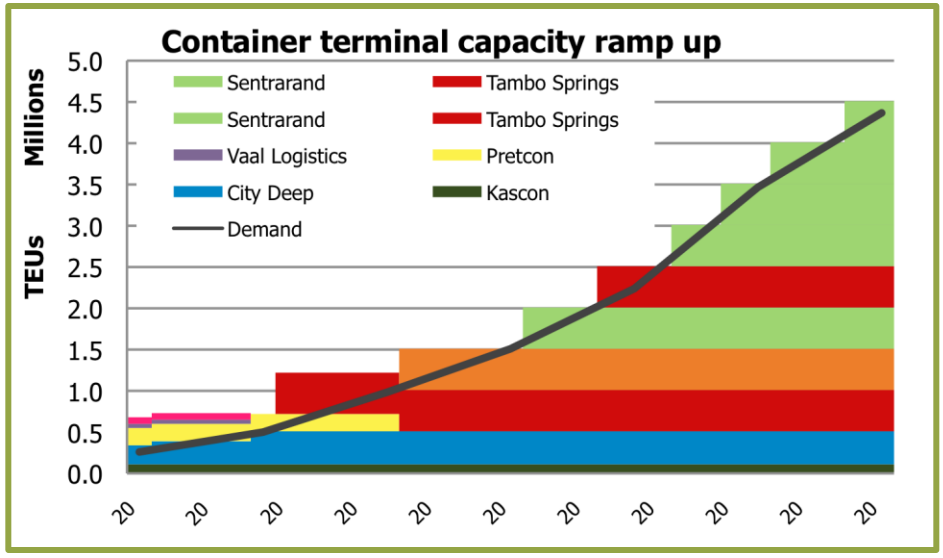


Gauteng currently has four intermodal terminals in operation. Together they have a maximum handling capacity of 650 000 TEUs per annum. The majority of destuffing activities occur at the ports. The demand for container transportation will increase rapidly over the next 30 years and TFR aims to significantly increase its market share.

The graph reveals rail's planned increase in container TEU volumes over the next 30 years.

Gauteng hubs and terminals: development plan





Development plan

Location	Terminal type	Capacity created	ETC (Rm)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
CD	Container	400 000	800	4	34	68	175	369	149																								
Tambo Springs	Container	500 000	2 902	14	29	286	715	1 001	572	286																							
	Palletised	4 500 000	313										2	3	31	77	108	62	31													
	Container	500 000	1 723																8	17	340	849	509									
Sentrarand	Palletised	4 500 000	1 695					8	17	167	417	584	334	167																		
	Container	500 000	1 702											8	17	168	419	587	335	168												
	Container	500 000	1 905																			9	19	375	938	563						
	Container	500 000	2 552																					13	25	503	1 257	754				
	Container	500 000	1 695																							8	17	334	835	501		
	Palletised	4 500 000	414																										2	4	81	204	122
Pyramid	Automotive	558 000	449		2	4	44	111	155	89	44																					
	Container	500 000	1 832							9	18	181	451	632	361	181																
	Palletised	4 500 000	487																	2	5	48	120	168	96	48						
Total cash flow (Rm)			**18 471**	**18**	**65**	**358**	**934**	**1489**	**893**	**551**	**479**	**765**	**787**	**810**	**409**	**425**	**527**	**649**	**375**	**187**	**344**	**906**	**648**	**556**	**1060**	**1122**	**1274**	**1088**	**837**	**505**	**81**	**204**	**122**

FEL – 1: Concept study
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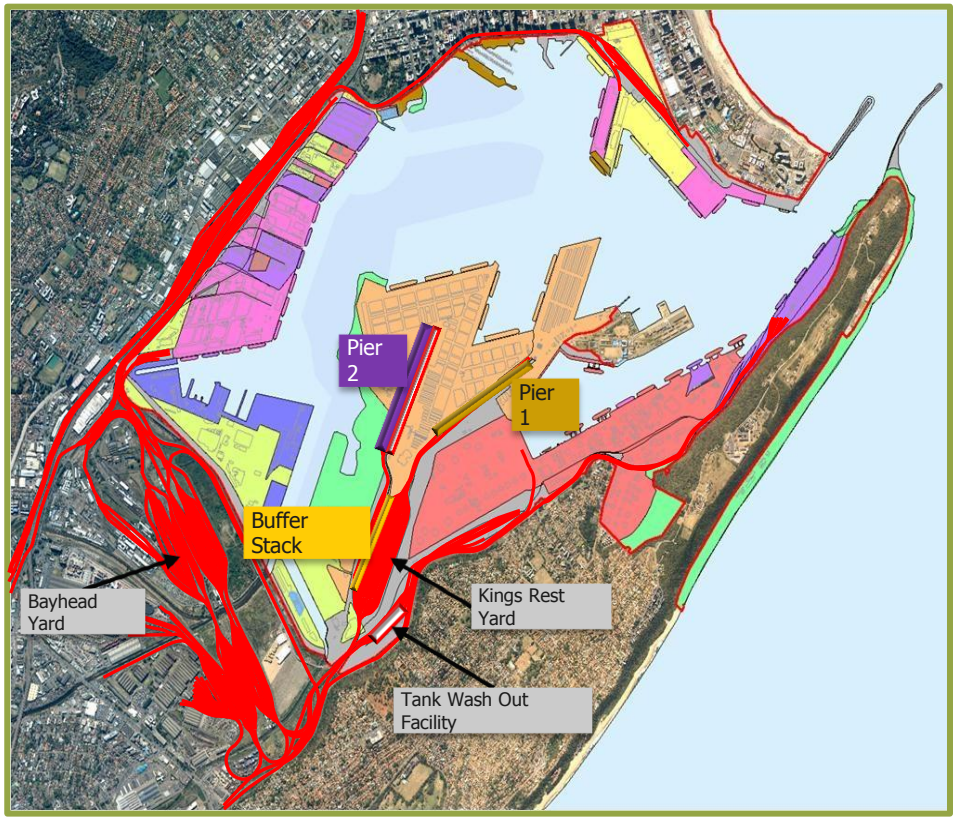
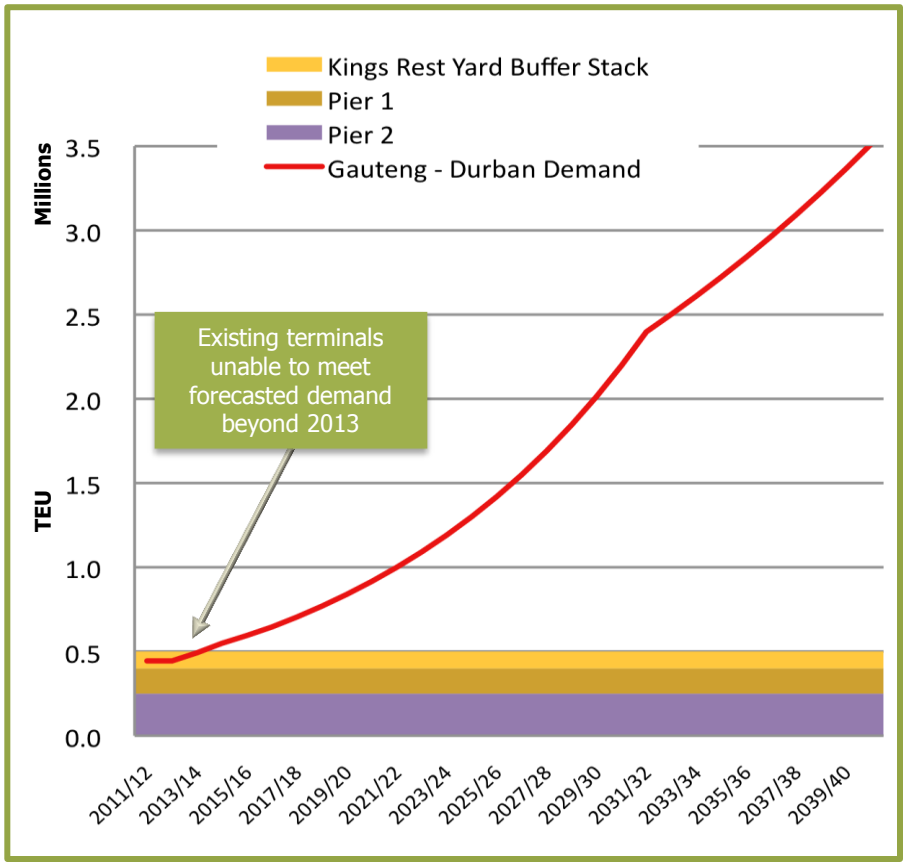
Construction

Durban container terminals: status quo



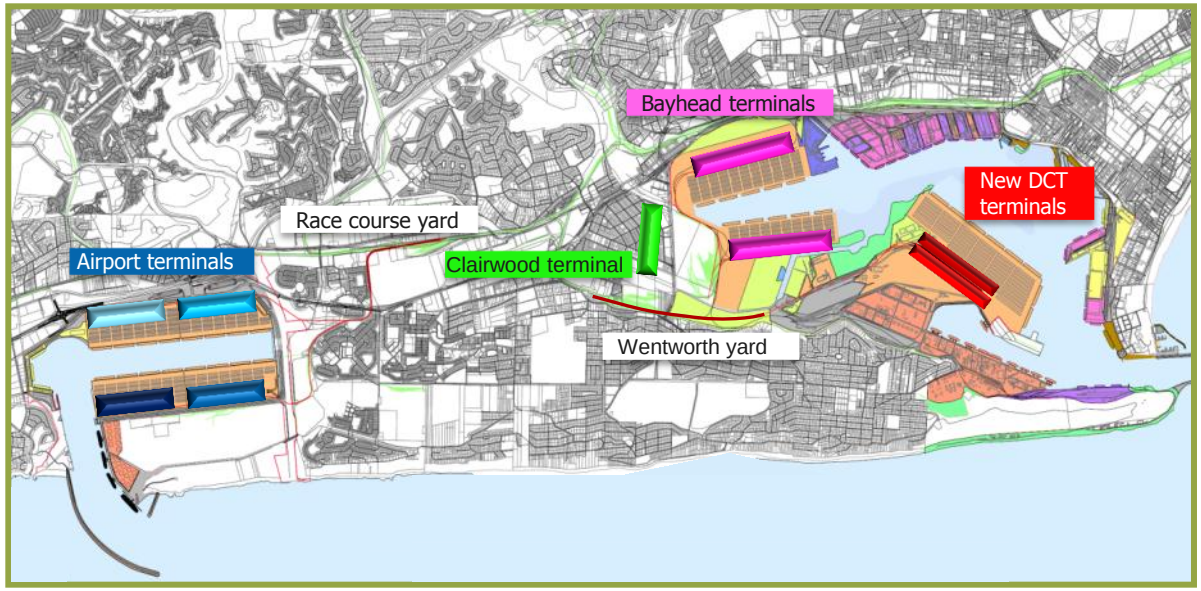


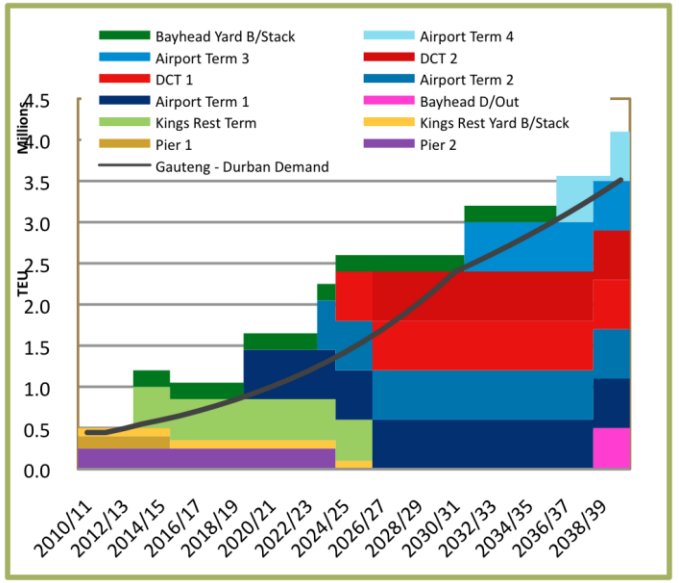
The port of Durban has two rail container terminals at pier 1 and DCT with 150 000 and 250 000 TEUs capacity respectively.

A buffer stack exists at Kings Rest yard which increases the overall capacity to about 450 000 TEUs.

Both Bayhead and Kings Rest yards can accommodate 50 wagon container trains which present a problem for the current 75 wagon Anaconda trains running along the corridor. With the increase in container traffic forecasted over the next 30 years it is vital to increase the port's current rail intermodal capacity to match the corridor and inland capacities.

Durban hubs and terminals: development plan





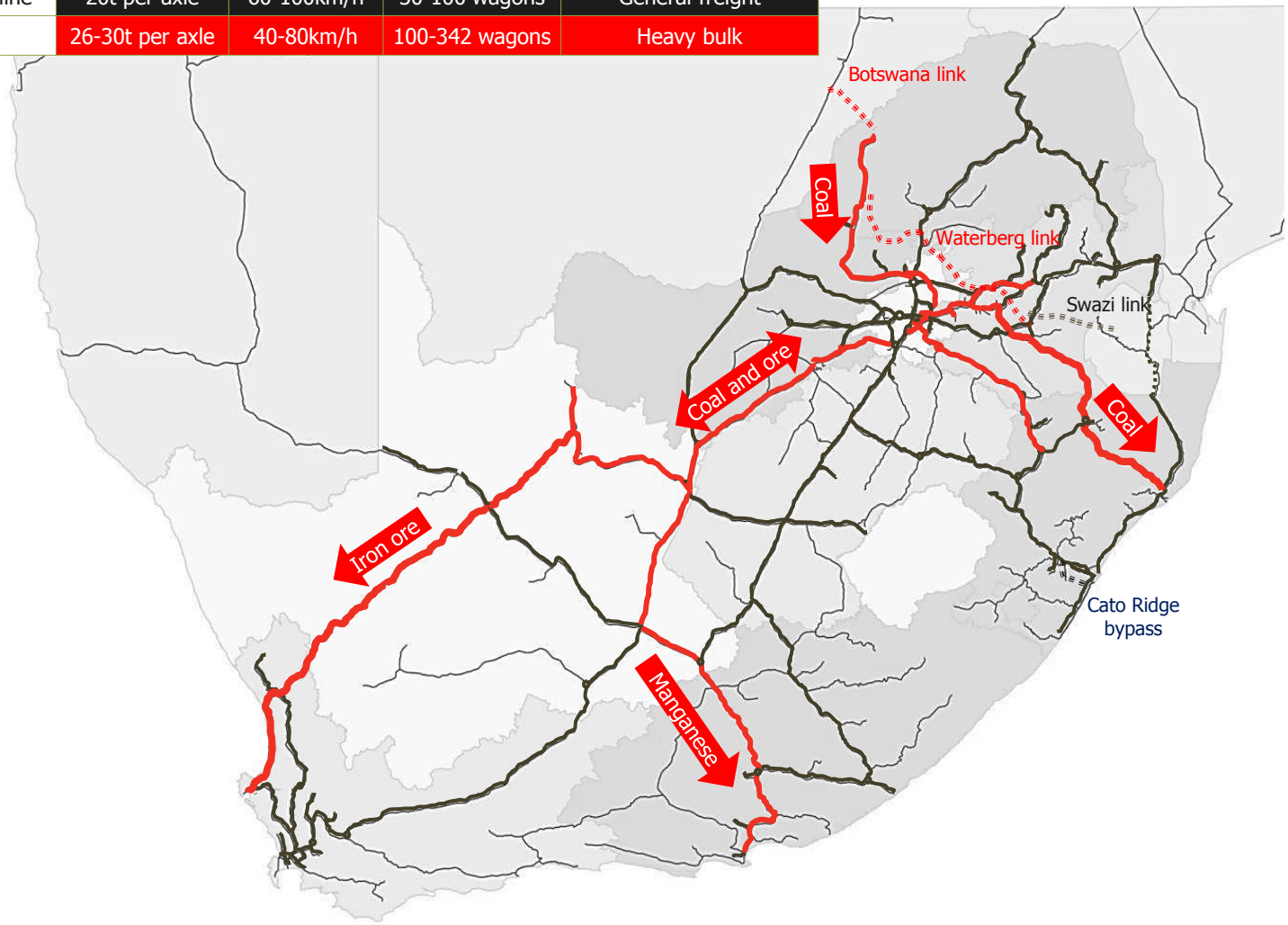
Development plan

Location	Terminal type	Capacity created (TEUs)	ETC (Rm)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Bayhead	100 W yard	N/A	677	406	271																								
Kings Rest	Container	600 000	1 641	985	656																								
Bayhead	Container	600 000	1 515	15	29	441	735	294																					
Race course	100 W yard	N/A	574		6	11	56	139	195	111	56																		
Airport	Container	600 000	1 282		12	25	125	311	436	249	125																		
Airport	Container	600 000	1 010							10	20	294	491	196															
DCT	Container	600 000	1 929						19	37	187	468	656	375	187														
DCT	Container	600 000	1 065										10	21	310	517	207												
Airport	Container	600 000	1 002															10	19	292	486	195							
Airport	Container	600 000	969																				9	19	282	470	188		
Bayhead	Container	600 000	4 173																				41	81	405	1 013	1 418	810	405
Total cash flow (Rm)		**2 400 000**	**15 837**	**1 406**	**974**	**477**	**916**	**744**	**650**	**407**	**388**	**762**	**1 157**	**592**	**497**	**517**	**207**	**10**	**19**	**292**	**486**	**195**	**50**	**100**	**687**	**1 483**	**1 606**	**810**	**405**

FEL – 1: Concept study
FEL – 2: Feasibility
Construction

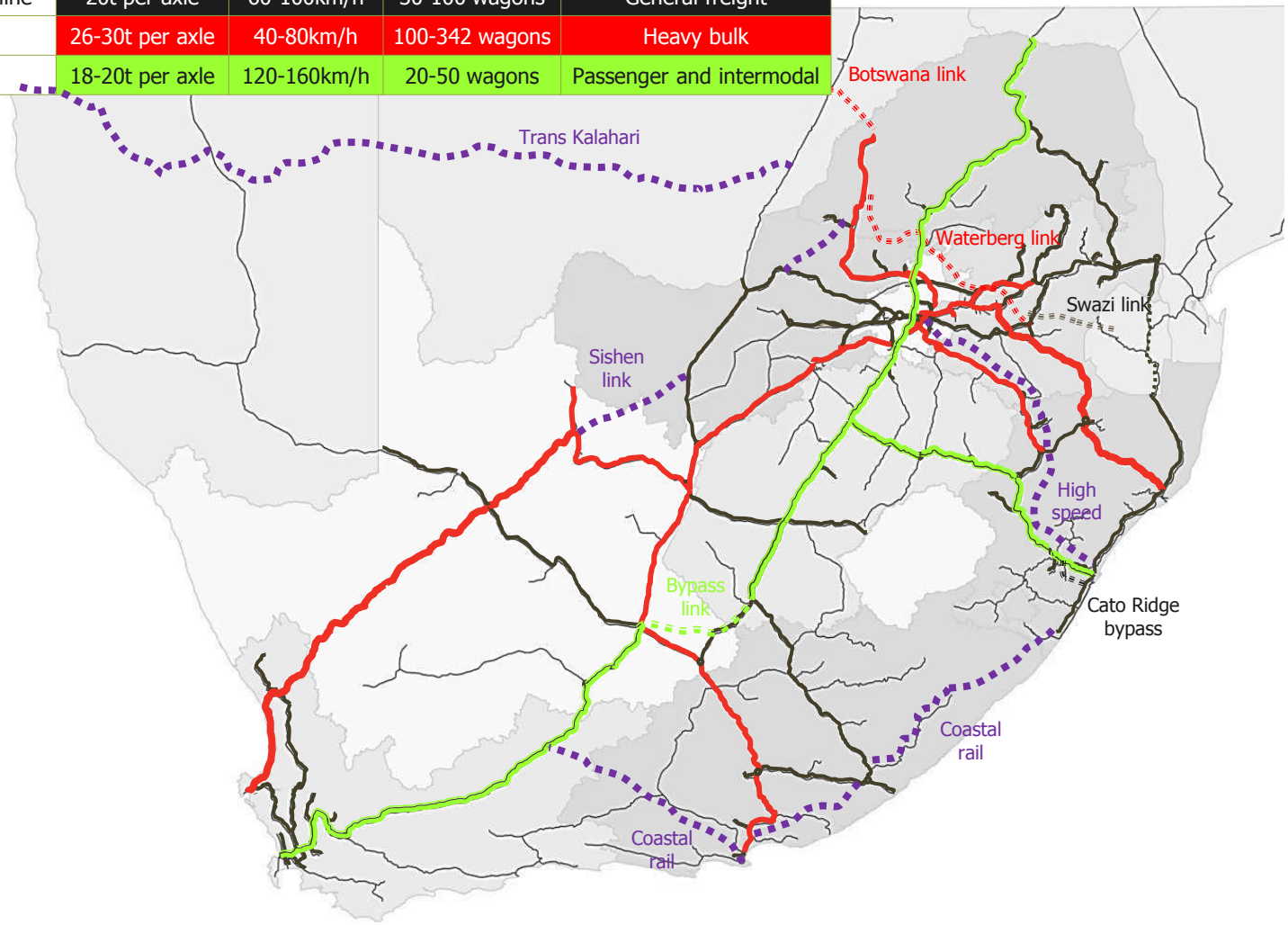
Planned network (30 years)

TYPICAL PROFILE				
	Axle load	**Speed**	**Train length**	**Use**
General freight line	20t per axle	60-100km/h	30-100 wagons	General freight
Heavy haul line	26-30t per axle	40-80km/h	100-342 wagons	Heavy bulk



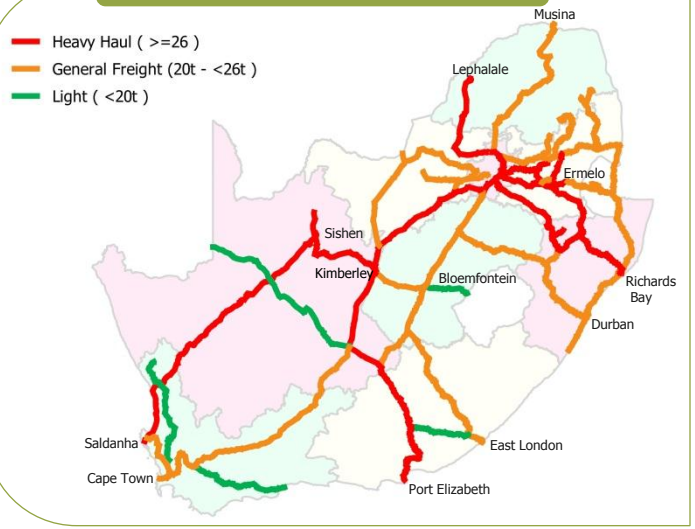
Long-term network potential

TYPICAL PROFILE				
	Axle load	**Speed**	**Train length**	**Use**
General freight line	20t per axle	60-100km/h	30-100 wagons	General freight
Heavy haul line	26-30t per axle	40-80km/h	100-342 wagons	Heavy bulk
High grade line	18-20t per axle	120-160km/h	20-50 wagons	Passenger and intermodal



Network future state: 2041

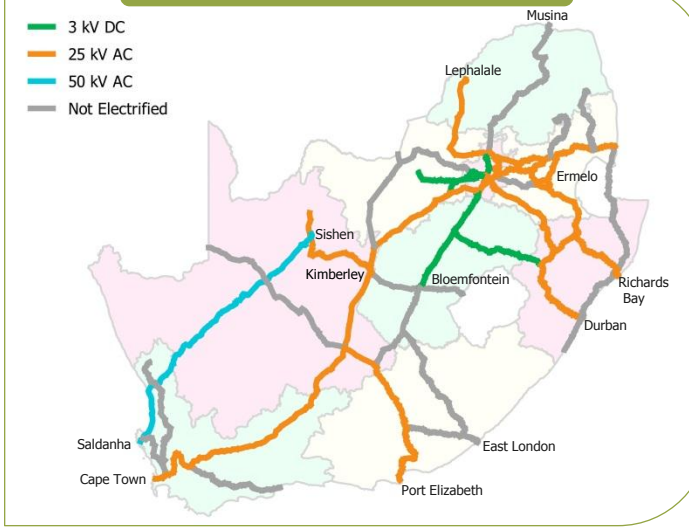
Axle load



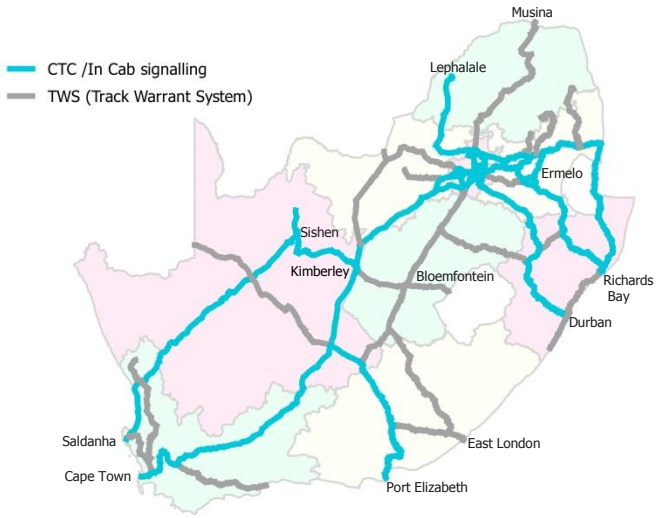
The bulk mineral export lines and feeder lines will be upgraded to heavy haul status.

Conversion of 3kV DC old technology to 25kV AC is preferred. Some sections to retain 3kV DC with low capacity being de-electrified.

Electrification



Train control



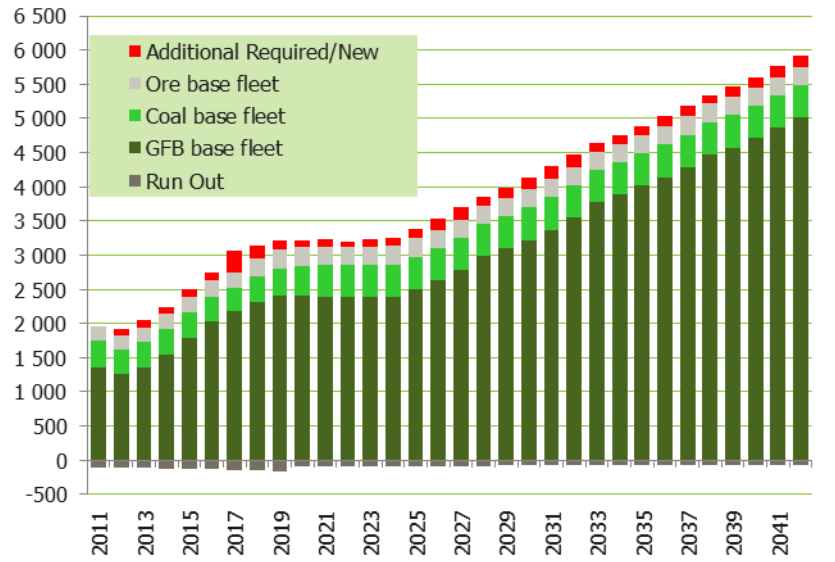
In-cab signalling to be rolled out firstly on heavy haul lines to maximise throughput and improve system safety.

Locomotives future classification strategy

Locomotive type	Locomotive application	Sample
Electric heavy haul – 50kV	Specifically used on the ore line	15E 
Electric heavy haul – 3kV/25kV Dual voltage 26 ton per axle	Operations on coal line or GFB corridor where this axle load is permitted	19E 
Electric general purpose – 3kV/25kV Dual voltage 21 ton per axle	To be used on all GFB corridors	20E 
General Purpose Diesel – 300kN/350kN 21 tons per axle with AC traction motors	To be used across all corridors including the coal and ore export lines	43D 
Trip and shunting loco – Dual voltage 25kV/3kV, diesel 750 kW, double cab	Light hauler and shunt locomotive on branch lines and in yards: 18 ton axle load	Still to be procured

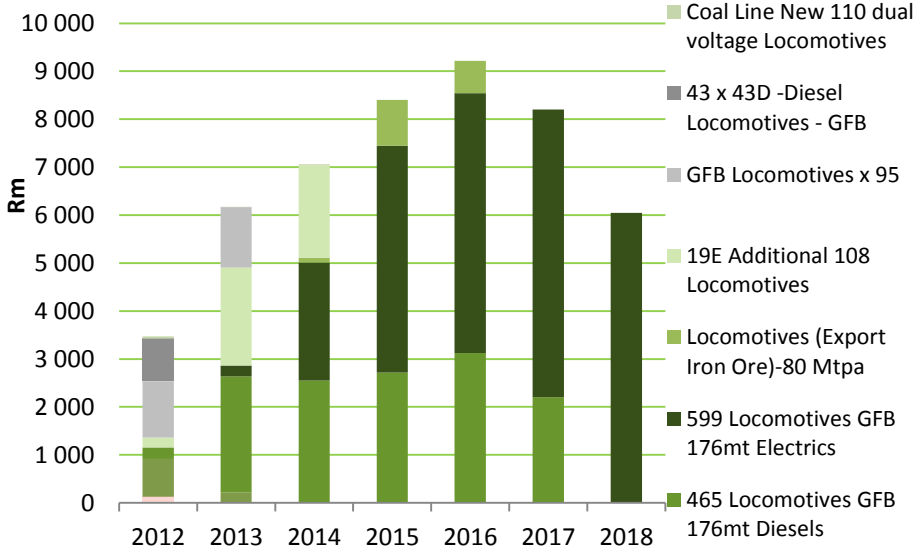
Rolling stock – locomotives future required fleet

Locomotives: Future Required Fleet

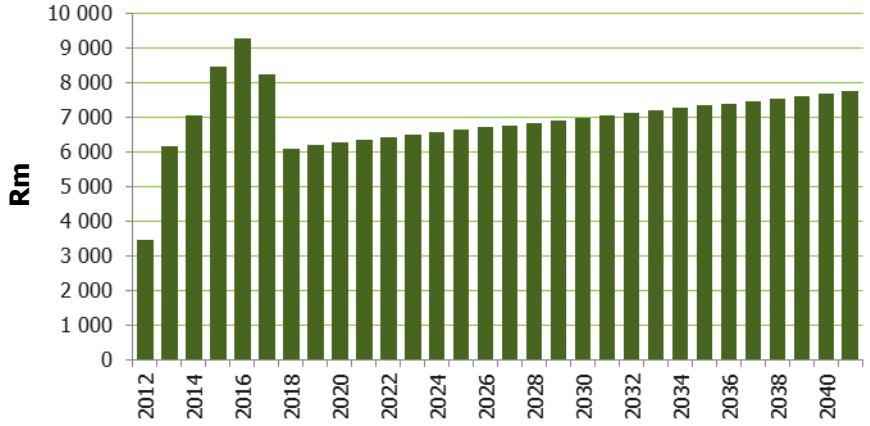


Run-out fleet replaced with new locomotives annually

New locomotive committed investment

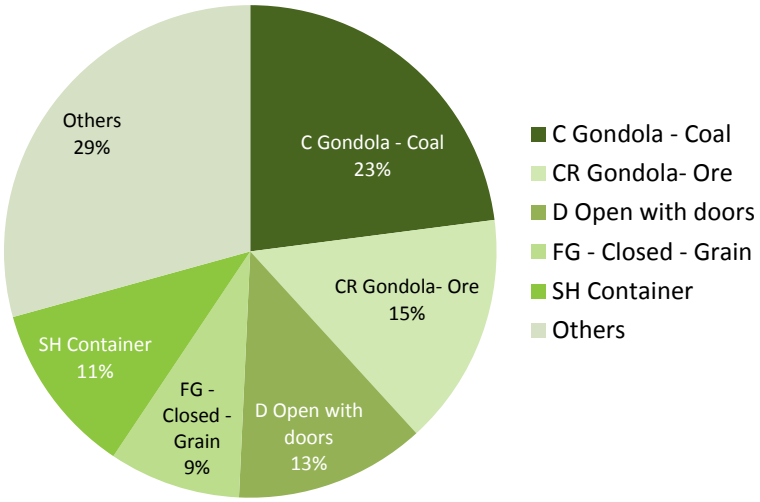


Locomotive investment – 30 years



Rolling stock – wagons current fleet

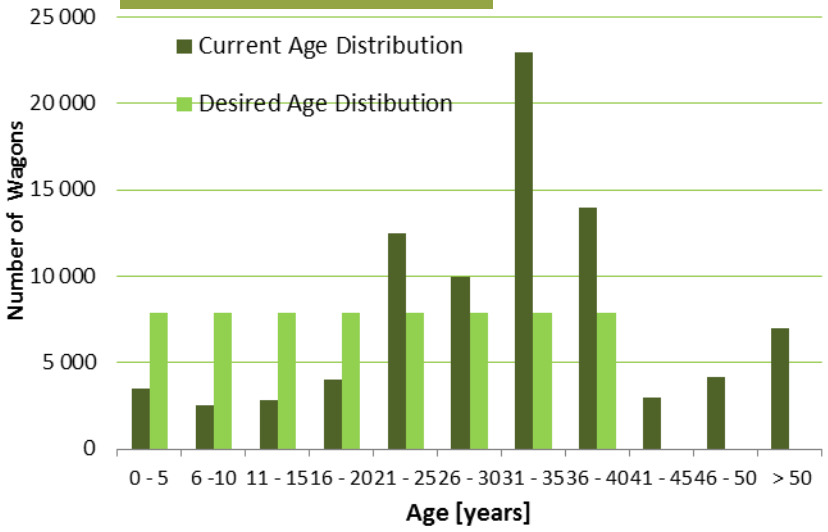
Wagons: Current fleet



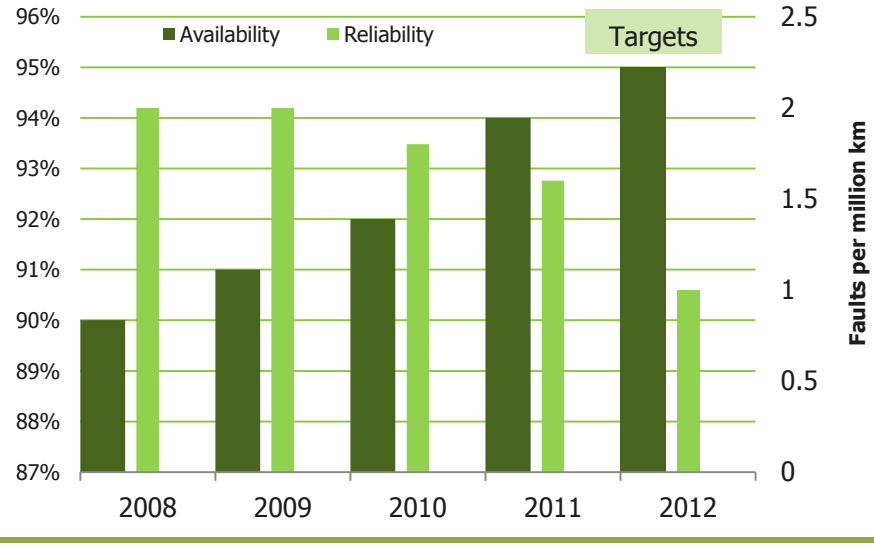
GF	Coal	Ore	Total
50 467	7 696	5 972	64 135


Typical GF CR wagon (iron ore)

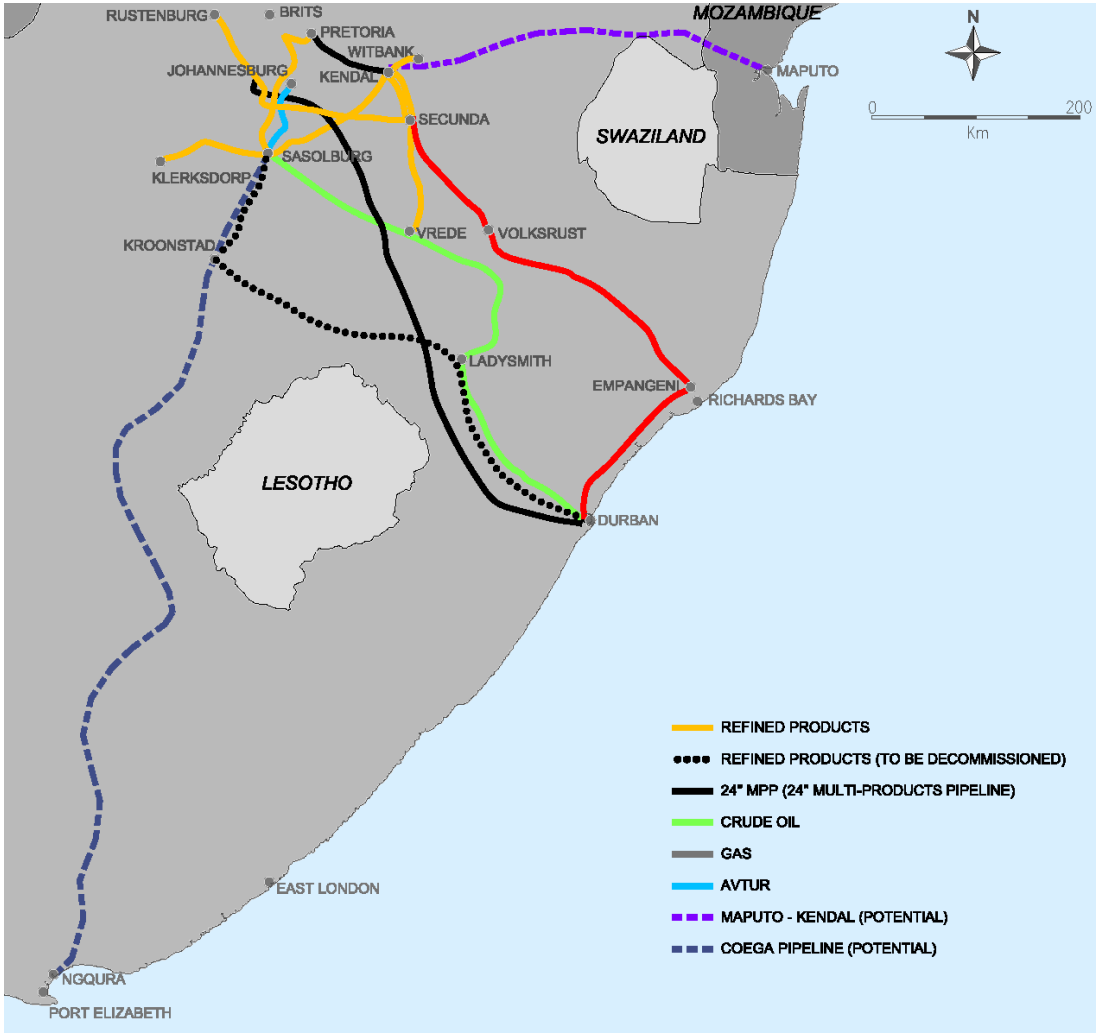
Wagons age distribution



Wagon availability and reliability



National pipeline network



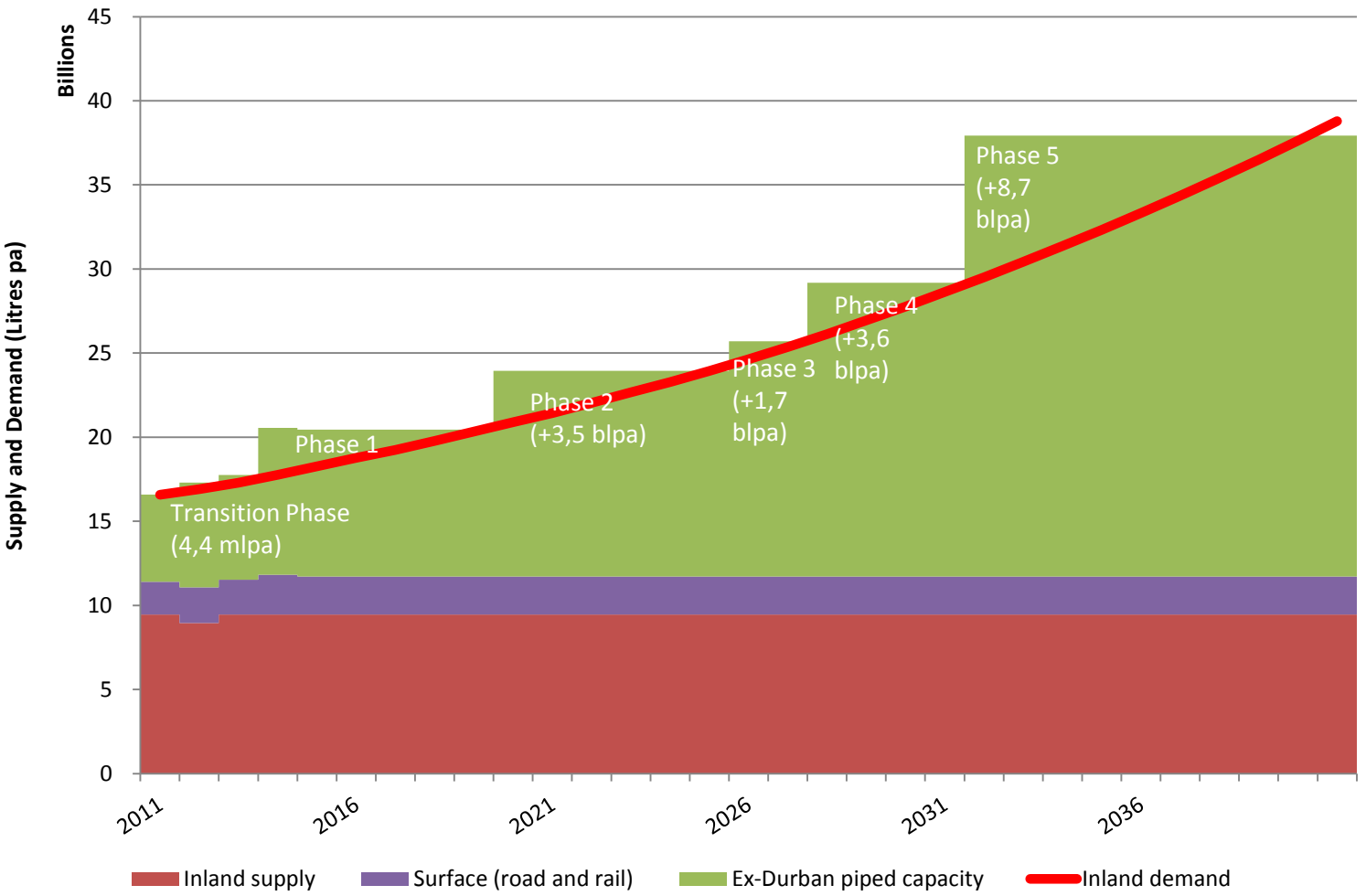
Transnet's pipelines

- Refined fuels pipeline network
  - Durban – Alrode (Gauteng)
  - Inland distribution network
  - Current capacity 4,5bmlpa
  - 24" MPP adds 26blpa additional capacity by 2031
- Crude oil pipeline
  - Durban – Natref
  - Current capacity 5,3blpa
- Avtur pipeline
  - Aka Jet
  - Natref – Airport (ORTIA)
  - Current capacity 1,2blpa
- Methane-rich gas pipeline
  - Secunda – Durban
  - Current capacity 16m GJpa

Other pipelines

- Ngqura-Gauteng pipeline
  - Additional 15blpa piped capacity from 2015 delays 24" MPP Phase 2 from 2014 to 2031, and subsequent phases
- Maputo-Gauteng pipeline
  - Private-sector (PetroLine) pipeline
  - Construction not yet started

24” multi-product pipeline impact



- Possible understated inland demand may necessitate
  - accelerated 24” MPP ramp-up
  - earlier provision of post-24” MPP capacity after end of forecast period
  - no requirement for surface (ie. road and rail) augmentation beyond base-load

- incremental 24” MPP ramp-up satisfies growing inland demand to end of forecast period
- inland refinery production continues unchanged
- all inland refinery production consumed in inland delivery area

Development of the former Durban International Airport site into a dig out port

delivering freight reliably

The project entails the acquisition of the DIA site and associated land needed in order to develop a deep-water mega container port, with an annual capacity of 9,6 million TEUs to be provided in four phases.

Scope:

The Transnet Corporate Plan provides only for the acquisition of certain land.

The Port and Terminal operations will be funded through a PSP funding model.

The capacity is expected to come on stream in the following increments:

- 2019: Phase 1 – 2,4 million TEUs;
- 2026: Phase 2 – 2,4 million TEUs;
- 2031: Phase 3 – 2,4 million TEUs; and
- 2037: Phase 4 – 2,4 million TEUs

Planned Spending	Rand million
ETC	3 850
2012/13	650
2013/14	-
2014/15	-
2015/16	-
2016/17	1 000
2017/18	500
2018/19	500

Durban Container demand vs capacity
Where the DIA port development fits into the picture

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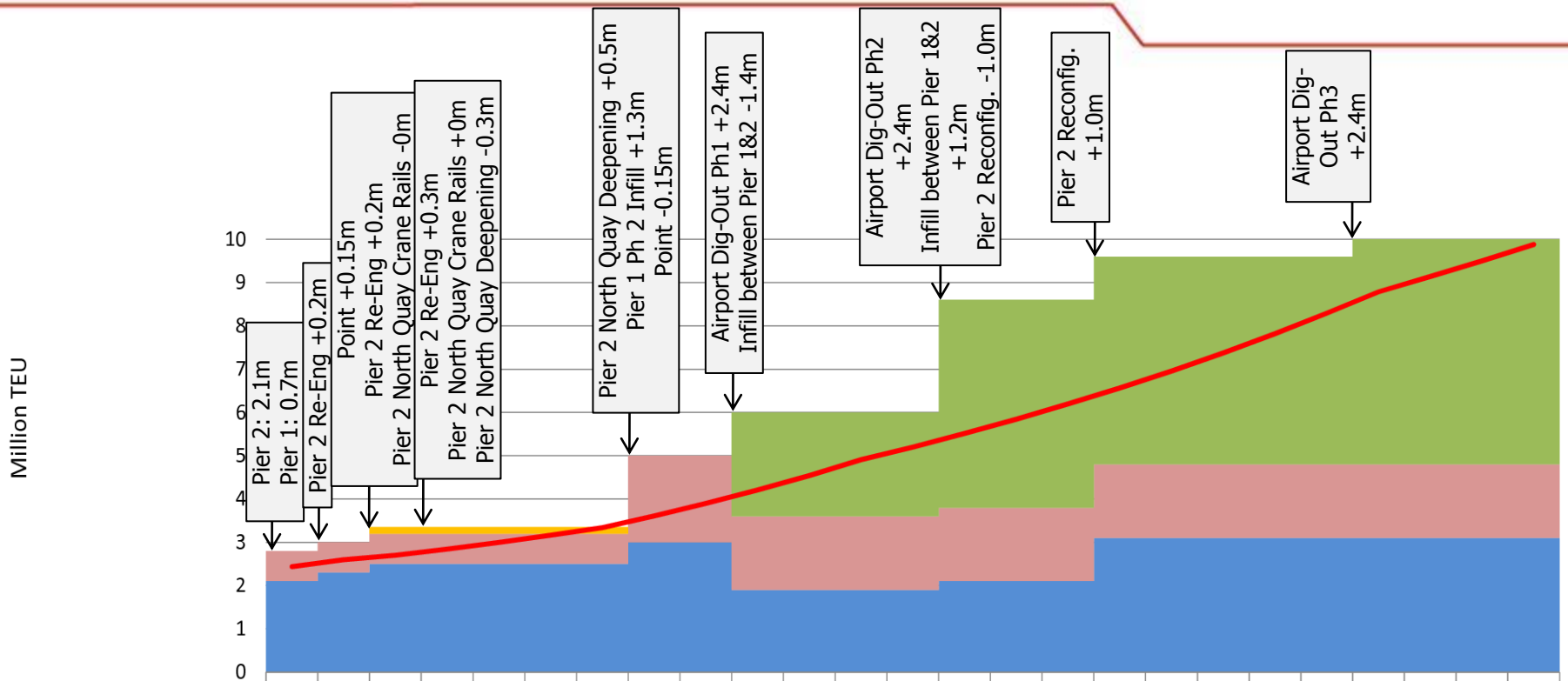

	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35
Airport Site	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.4	2.4	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	7.2	7.2	7.2	7.2
Point	0.00	0.00	0.15	0.15	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DCT Pier 1	0.7	0.7	0.7	0.7	0.7	0.7	0.7	2.0	2.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
DCT Pier 2 (ruling capacity)	2.1	2.3	2.5	2.5	2.5	2.5	2.5	3.0	3.0	1.9	1.9	1.9	1.9	2.1	2.1	2.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Durban	2.8	3.0	3.4	3.2	3.2	3.2	3.2	4.9	5.0	3.6	3.6	3.6	3.6	3.8	3.8	3.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Total Capacity	2.8	3.0	3.4	3.4	3.4	3.4	3.4	5.0	5.0	6.0	6.0	6.0	6.0	8.6	8.6	8.6	9.6	9.6	9.6	9.6	9.6	12.0	12.0	12.0	12.0
Demand (Pier 1 & 2)	2.4	2.6	2.7	2.8	3.0	3.2	3.3	3.6	3.9	4.2	4.5	4.9	5.2	5.5	5.8	6.2	6.6	7.0	7.4	7.8	8.3	8.8	9.1	9.5	9.9
Surplus/Shortfall at 95% Capacity	0.2	0.3	0.5	0.3	0.2	0.0	-0.2	1.1	0.9	1.5	1.2	0.8	0.5	2.7	2.3	2.0	2.6	2.2	1.7	1.3	0.8	2.6	2.3	1.9	1.5

DCT Pier 2 (ruling capacity) DCT Pier 1 Point Airport Site Demand (Pier 1 & 2)

DIA port development – PLP overview & time frames

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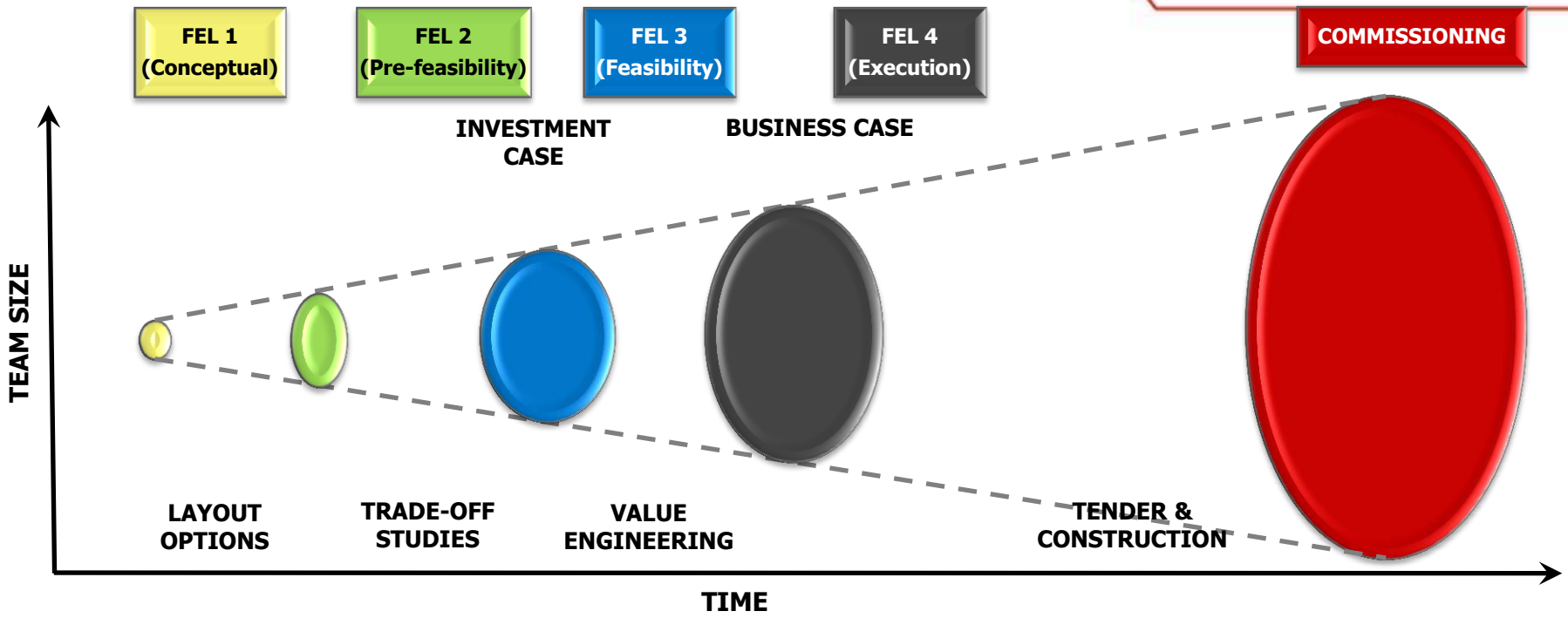


12 months

- User Requirements
- Site Investigations
- Port Layout Options
- Hydraulics
- Navigation
- Terminals
- Intermodal Connections
- Cost Model (50%)

18 months

- Phase 1 Layout Options
- Selection Preferred Option
- Physical Modelling
- Site Investigations
- Preliminary Design
- Trade off Studies
- Cost Model (30%)

24 months

- Phase 1 Detail Engineering
- Site Investigations
- Physical Modelling
- Technical Specifications
- Tender Drawings
- Cost Model (15%)
- Procurement

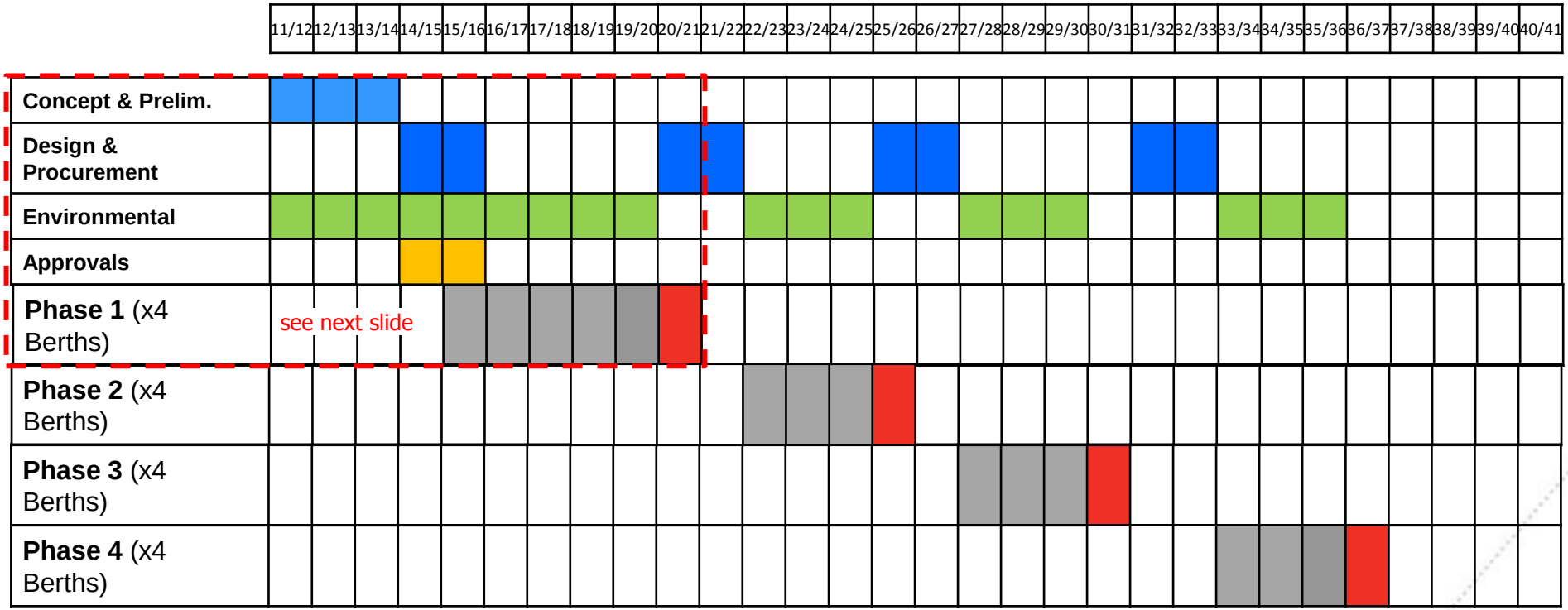
Phase 1- 52 months

(4 phases – 4 container berths per phase of construction)

- Site Engineering
- Construction
- Health and Safety
- Environmental
- Commissioning

DIA port development - 30 year schedule

delivering freight reliably



DIA port development study
10 year schedule (construction of phase 1)

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		2012/13		2013/14		2014/15		2015/16		2016/17		2017/18		2018/19		2019/20	
Property acquisitions		ACSA															
		Relocate SAAF & SAPS Airwing															
		DPW															
		SAA															
		eThekwini															
		Private															
Environmental & Social	Initial scan and study	Scanning															
	Impact Assessments			Assess													
	Environmental Authorisations					Authorisations & appeals											
	Stakeholder engagement	Socialising															
Port development	FEL-1: Optioneering	Concept															
	FEL-2: Preliminary design			Pre-feasibility													
	FEL-3: Detailed engineering					Feasibility											
	Execution: Tender and Procurement																
	FEL-4: Construction - phase 1									Execution - phase 1 (first 4 berths)							
	Commissioning																
Terminal development	Licensing & funding																
	Construction																
	Commissioning - phase 1																

Airport site dig-out port

Durban Container Developments
DCT berth deepening and
Expansion of Pier 1 into Salisbury Island

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Deepening of berths at DCT
In order for the Port of Durban to handle larger vessels the berths need to be deepened. A further feasibility study is in progress as part of the container strategy studies, to determine the optimum prioritisation for the deepening of the various container berths in Durban. An additional
400 000 TEUs of capacity is expected to be created.

Scope
- Port handling equipment investments involve the acquisition of five ship-to-shore cranes and 40 straddle carriers; and
- Dredging of the container berths to a depth of -16m chart datum.

Expansion of Pier1 into Salisbury Island
The project entails the expansion of the Pier 1 Container Terminal into Salisbury Island. Capacity of an additional 1,1 million TEUs per annum will be created.

Scope
- Acquisition of Salisbury Island 8,6 hectares
- Construction of a new quay wall on the eastern side of Pier 1 Container Terminal
- Acquisition of port handling equipment to be acquired includes nine ship-to-shore cranes and 36 rubber tyred gantry cranes.

Planned Spending	DCT Berth Deepening (Rand million)
ETC	5 649
2012/13	-
2013/14	467
2014/15	600
2015/16	1 419
2016/17	2 130
2017/18	1 033

Planned Spending	Expansion of Pier 1 (Rand million)
ETC	6 253
2012/13	30
2013/14	110
2014/15	60
2015/16	1 340
2016/17	2 856
2017/18	1 500

Cape Town Container Expansion

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The aim of the expansion part of this project is to increase capacity from 700 000 TEUs to 900 000 TEUs and ultimately to 1 400 000 TEUs per annum, whilst also providing a platform for further expansionary programmes should future demand exceed planned capacity.

Scope
- Basin and berth deepening to -16m chart datum
- Quay refurbishment
- Conversion of terminal marshalling yard to stage area
- Conversion to a rubber tyred gantry (RTG) crane operation
- Electrical reticulation system
- Port Industrial Park access bridge
- 6 Ship to shore cranes
- 26 straddle carriers
- 32 RTG cranes
- 1850 reefer points to handle refrigerated containers

Progress

Port handling equipment has been delivered and in operation.

Reconfiguration Work
The first reconfigured terminal area for refrigerated containers has been completed. 840m of the 1 130m long quay wall has been deepened to -15,5m chart datum. The reconfigured stacking area has been completed.

Spending	Rand million
ETC	4 374
Actual 2011/12	653
Since inception	3 385
2012/13	308
2013/14	160
2014/15	-
2015/16	-
2016/17	-
2017/18	576
2018/19	

Ngqura Container Terminal

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The Ngqura Container Terminal is a Greenfields project with the objective of providing a full service container terminal together with rail links to the Port of Ngqura.
The expansion will be in three phases:
•Phase 1 to has created capacity of 750 000 TEUs
•Phase 2A will result in capacity of the terminal increasing to 1,5 million TEUS
•Phase 2B will increase capacity of the terminal to 2 million TEUs

Scope for all phases:

- Four container berths
- 13 quay cranes
- 50 RTGs
- 79 haulers and trailers
- Two reach stackers
- Three rail cranes
- Two shunting locomotives
- Teklogix equipment
- Workshops, mess and ablution facilities

Progress

Phase 1 is complete and operating and 500 000 TEUs of mainly transhipment volumes have been handled. Transnet has commenced Phase 1A to expand capacity to 1 500 000 TEUs. Phase 2B will be undertaken two years before throughput volume reaches 1 500 000 TEUs

Spending	Rand million
ETC	9 807
2012/13	310
2013/14	1 416
2014/15	199
2015/16	77
2016/17	485
2017/18	258

Iron Ore Export Corridor

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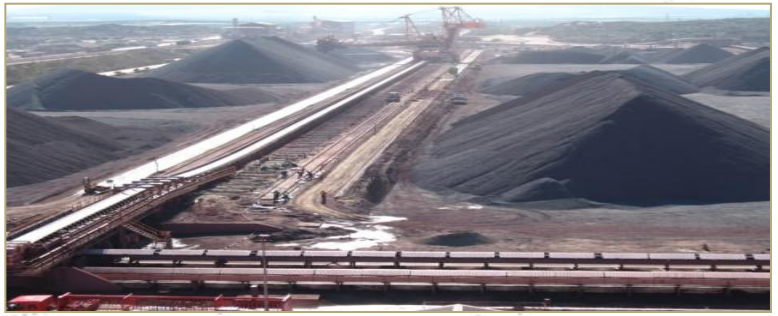
The iron ore export project comprises a rail line from Sishen to the Port of Saldanha and through the port terminal onto export carrier vessels. The increased demand in basic commodities world-wide has led to the mines (Kumba and Assmang) increasing their production capacities and has resulted in an increase in volumes to be transported to Saldanha for export.

The export iron ore line has been expanded to 60mt. Plans are now in place to further expand the channel to 82,5mt capacity which will be utilised as it becomes available.

Scope

- New loops and in port rail track
- Power upgrades
- Wagons
- Tipplers
- Port handling infrastructure
- Berthing capacity

Spending	Rand million
ETC	10 888
2012/13	135
2013/14	420
2014/15	1 842
2015/16	3 774
2016/17	2 682
2017/18	2 035



Export Coal Line

delivering freight reliably

Expansion: Ramp up to 81mtpa

The programme incorporates a combination of operational optimisation and capital investment of an expansionary and sustaining nature.

The expansion initiatives are in two basic categories:

- Simplification and standardisation of the system including
  - Wagons fleet to jumbo wagons and installation of ECP braking systems
  - Equipping all locomotives to be lead capable and with ECP braking systems
  - Upgrading rail network lines to 26t/axle
- Debottlenecking the system including
  - Increasing the rolling stock fleet substantially
  - Expansion and upgrade of traction power supply system over the AC and DC sections of the network
  - Expansion of various yard and line facilities for additional traffic volumes
  - Installation of new condition monitoring system on the network
  - Installation of a new operations centre in Ogies

Progress

PFMA approval pending

Ramp up to 97mt

Plans are in place to increase capacity beyond 81mt. Transnet will engage with CEPs and junior miners to secure long term 'take or pay' contracts before any investment is committed.

Investment to expand the Export Coal Line to 97mt includes network and wagon components

Planned Spending	Rand million	
	81mt	97mt
ETC*	5 100	6 219
2012/13	1 183	30
2013/14	530	255
2014/15	725	939
2015/16	528	1 819
2016/17	600	1 396
2017/18	600	1 080
2018/19	-	700

Investment indicated above is not for the entire expansion to 97mt. These will be firmed up as the FEL studies progress and funding arrangements for the unfunded portions of the investment will be formulated.

Locomotive acquisition programme: Already contracted

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Coal Line

Acquisition of 110 Class 19E dual voltage locomotives for the Coal Line: Locomotives being acquired to improve efficiency and facilitate ramp up in coal export volumes.

- 98 locomotives have been delivered; 95 locomotives have been fully accepted into operations while the remaining 3 locomotives are at various stages of testing and commissioning.

Export Iron Ore Line

Acquisition of 32 Class 15E locomotives for the Iron Ore Line: Acquisition to facilitate the ramp up in Iron Ore volumes to 60mpa

General Freight Business

Acquisition of 100 Class 43 Diesel locomotives: Locomotives for GFB for replacement of aging fleet.

- 39 locomotives have been delivered and 38 accepted into operations with 1 locomotive undergoing acceptance testing

Acquisition of 43 diesel and 95 electric locomotives for GFB: The acquisition of 138 locomotives is being undertaken to address the immediate demand requirements of GFB customers mainly for the haulage of mineral commodities and to support Eskom's rail migration programme.

Spending (R million)	Coal 110 Class 19E	Ore 32 Class 15E
Estimated total cost	3 405	2 000
2012/13	207	789
2013/14	1	212
2014/15	20	-

General Freight Business			
Spending (R million)	**100 Class 43D**	**43 Class 43D**	**95 Class 19E**
Estimated total cost	2 314	989	2 659
2012/13	894	122	1 175
2013/14	69	1 48	1 260

Rolling Stock acquisition programme: To be contracted

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Transnet Freight Rail plans on increasing capacity of its GFB from 80mt to 170mt over the next seven years. In order to facilitate growth of this magnitude significant investment is required in the three areas of providing a rail service: locomotives, wagons and infrastructure. These projects deal specifically with locomotives and wagons. Infrastructure investment is dealt with through the network plan. The rolling stock acquisitions are to be conducted in five initiatives:

- Acquisition of 1 317 locomotives. Diesel and electric derivatives for Coal, Ore and General Freight
- Building of 25 000 wagons
- Wagon fleet upgrade

The wagon build programme comprising 25 000 wagons of the following types:

- Automotive wagons
- Specific mineral mining
- General mineral mining
- Flatbed wagons for containers

Spending (R million)	Locomotives	Wagons
Estimated total cost	44 041	25 522
2012/13	445	3 016
2013/14	4 789	1 970
2014/15	7 895	3 115
2015/16	8122	3 771
2016/17	8 544	5 160
2017/18	8 202	4 279
2018/19	6 044	4 211

Manganese expansion to 16mt

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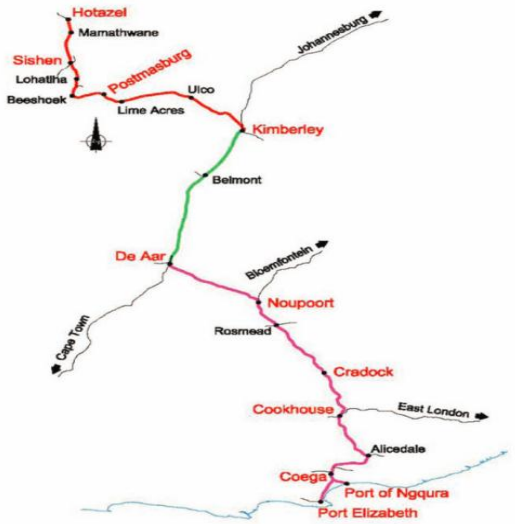
South Africa contains 80% of the world's manganese reserves, however only 20% of the market share. Used in the manufacture of steel and other specialised applications demand for manganese is increasing which creates opportunities for SA miners to supply manganese. Investment in the expansion will result in a new manganese handling plant being constructed at the Port of Ngqura and the associated rail investment in rolling stock and infrastructure to facilitate the increase in capacity.

Scope (being developed):

- Upgrade of rail network to heavy haul standards so that 200 wagons trains may traverse the channel
- Doubling of a 232km section of the line between Kimberly and De Aar and the construction of new and expansion of existing loops to handle the longer 200 wagon trains
- Construction of new compilation yards at Mamatwane and Ngqura
- Consolidation of yard developments to accommodate smaller mining operators.
- Rolling stock
- Provision of operational support and maintenance facilities
- Construction of rail terminal and off-loading facilities
- Construction of material handling facilities within the CDC zone
- Construction of an expanded port terminal at the Port of Ngqura

Planned Spending	Rand million
ETC	11 345
2012/13	51
2013/14	912
2014/15	2 431
2015/16	3 165
2016/17	3 377
2017/18	650
2018/19	759



Swaziland Rail Link

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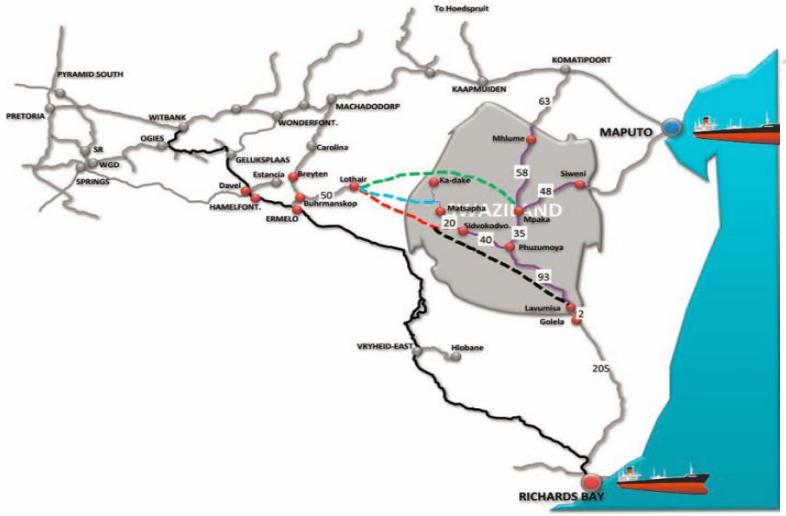
A proposed Lothair link to a point on the Swaziland rail network presents an alternative route from Ermelo to the east coast deepwater Port of Richards Bay as well as Maputo. The new link line will both divert general freight traffic from the coal line and will provide additional capacity for general freight exports to Richards Bay and Maputo.
It is deemed a strategic, regional investment in support of Transnet and Government's SADC objectives.
This project holds significant advantages in attracting traffic through the Maputo and Richards Bay corridors providing strategic alternative export corridors critical to the Southern African ports as well as encouraging economic and rail transport growth in Swaziland.
The investment will be made in conjunction with the Swaziland Government (contribution not included in the table alongside). The project includes only the infrastructure component of the investment.

Scope:
•Construction of a new 146km line from Lothair via Nerston to Sidvokodvo
• Provision of a new exchange yard at Davel and a new stabilisation yard at Golela
•Reconstruction of the line between Davel and Klipstapel
•Upgrade of the existing line between Klipstapel and Lothair
•Upgrade of the existing line between Sidvokodvo and Golela
•Upgrade of the existing line between Golela and Richards Bay.

Planned Spending	Rand million
ETC*	5 000
2012/13	25
2013/14	565
2014/15	1 166
2015/16	1 364
2016/17	1 880
*SA portion only	



Waterberg Coal opportunity

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The Waterberg region has 40% of South Africa's remaining coal reserves and is regarded as the next strategic growth node for the coal sector. The availability of infrastructure is critical to unlock the regions potential and is a pre-requisite for current and future mining developments. The investment will secure rail transport capacity from the Waterberg for export and domestic (Eskom) consumption. The initial capacity will be approximately 23mt.

Scope:

• Rail infrastructure expansion through incremental upgrades of the existing rail networks;

• Provision of additional passing loops en-route;

• Yard expansion and reconfiguration;

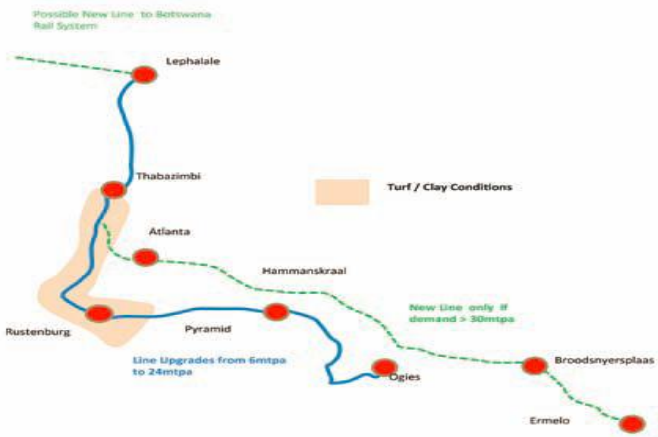
• Upgrade to the electrical backbone en-route;

• Electrification of the section between Thabazimbi and Lephalale;

• Upgrade of the network to 26 tons/axle; and

• Beyond this level, a feasibility study will be conducted to determine the engineering requirements and viability of a new heavy haul line from Lephalale to Ermelo – connecting with the coal line (Concept study already completed).

Planned Spending	Rand million
ETC	5 090
2012/13	70
2013/14	493
2014/15	657
2015/16	807
2016/17	907
2017/18	1 355
2018/19	801



Eskom Coal Transportation

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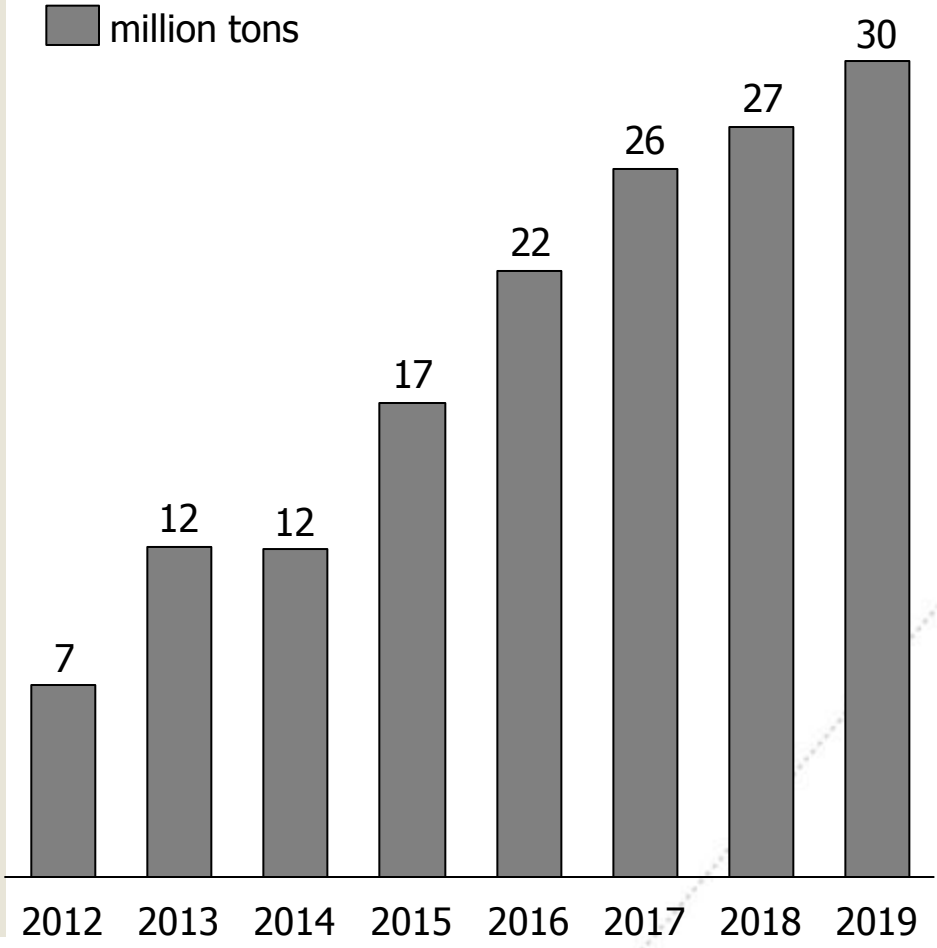
Freight Rail's Coal business has been consolidated into one unit that is responsible for coal exports on the heavy haul lines as well as much of the domestic market coal including coal for Eskom's consumption.

The above opportunity has arisen out of Eskom's consumption for their power stations as well as Eskom's strategy to migrate coal traffic from road to rail.

Indications are that the demand for the transportation of coal to Eskom's power stations will grow from 7mt currently to 30mt by 2019.

The rolling stock and infrastructure investment requirements are included in the Export Coal Investment at Freight Rail as the nature of the TFR operation is that the assets will be standardised and will then be used interchangeably to meet operational requirements to the extent that the assets will not be dedicated to any specific client.



Richards Bay: Port Expansion

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Eastern Catchment Integrated Corridor Study
Richards Bay is projected to experience significant volume growth (magnetite, ferrochrome, coking coal, chrome, ferromanganese, export coal and general freight). In order to support this growth Port Terminals' and the National Ports Authority's needs to undertake a number of capital interventions.
Scope:
- Additional shiploaders and unloaders;
- Upgrades to existing belt systems;
- Expansion of current storage areas;
- Sustaining capital;
- Redesign of Bayvue yard; and
- Trucks, ship loaders and mobile cranes.

Planned Spending	Rand million	
	ECICS	DBT
ETC	8 435	2 444
2012/13	32	160
2013/14	108	647
2014/15	286	741
2015/16	1 220	304
2016/17	2 432	397
2017/18	2 147	199
2018/19	1 912	-

Planned port development for Richards Bay
Future development at the Port of Richards Bay includes the provision of additional berthing capacity for the multi-purpose and dry bulk terminals
Scope: To be determined

Planned Spending	Rand million
ETC	3 900
2016/17	100
2017/18	400
2018/19	1 000

Port Expansions:
East London, Ngqura and Port Elizabeth and Saldanha

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Major developments are planned for the ports of Port Elizabeth, East London and Ngqura and include:
•Provision of a car terminal at the southern part of Port Elizabeth harbour (PE Car)
•The extension of the main breakwater and deepening of the entrance channel of the Port of East London (BW EL)
•Expansion of the Ngqura Container Terminal with an additional four berths (NCT berths)
•Development of a liquefied natural gas terminal and breakwater at Ngqura (LNG Ngqura)
•Construction of quays and provision of services for expansion along the Coega River (Coega River berths)
These investments commence towards the latter years of the seven-year plan and the LNG and NCT berths will continue beyond the seven-year horizon.
Future developments at the Port of Saldanha include the construction of a liquefied petroleum gas (LPG) terminal and storage site and port infrastructure for extension of the Mossgas quay, dredging works to facilitate the quay extension and dry dock facilities.
Scope: To be determined

Planned Spending	**Rand million**						
	PE Car	**BW EL**	**NCT berths**	**LNG Ngqura**	**Coega River berths**	**LPG**	**Mossgas**
ETC	1 000	1 500	9 000	1 500	6 880	1 000	6 822
2012/13	-	-	-	-	-	-	-
2013/14	-	20	-	-	-	-	-
2014/15	-	200	-	-	-	10	-
2015/16	75	300	-	-	100	50	-
2016/17	275	480	-	-	450	40	-
2017/18	300	500	54	23	1 500	225	683
2018/19	350	-	484	10	2 000	450	1 023

Mega Projects: New Multi-Product Pipeline (NMPP)

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Increasing demand for fuel in the Gauteng region coupled with the age of the existing Durban to Johannesburg Pipeline (DJP) necessitated the construction of a new pipeline. The idea of the NMPP was thus conceived and is currently the result of many years of design, engineering, environmental and construction work.

- The scope of the project is to build a new 555 kilometre 24 inch diameter trunk line from Durban to Gauteng that addresses the increased demand for fuel in the heartland of SA's economic region, Gauteng.
- This will increase capacity from the existing 4,4 billion litres to 8,4 billion litres.
- NMPP front-end engineering design phase has been completed, Transnet were granted the licence to construct the NMPP by Nersa.
- The project also entails the construction of 160km of 16-inch pipelines in the northern network to enhance capacity to meet demand in the inland market.

Progress:

•Pipelines:

- Trunk line: 24-inch Durban to Jameson Park pipeline was successfully commissioned in January 2012. 348 million litres of diesel has been transported since commissioning to March 2012.
- The three 16 inch pipelines in the northern network have been commissioned during the first quarter of 2011/12 and are performing well. More than 1,2 billion litres of product have been transported through the 16 inch pipelines since commissioning to March 2012.

•Pump Stations:

- Functional testing of pump stations 1 and 3 have been completed

•Terminals:

- Construction of DJP protection activities are complete for Terminal 1
- Diesel and Petrol components of Terminal 2 construction have been complete
- Terminal1 has achieved a safety milestone of 660 000 LTI free hours.

Overall completion of the NMPP is on schedule for December 2013.

Spending	Rand million
ETC	23 407
2012/13	3 885
2013/14	3 655

Contents

Alignment with other planning and policy processes in Government - National Planning Commission

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Transnet has held a series of engagements from since August 2011 at the Union Buildings with the **National Planning Commission and Presidency** on its infrastructure development plans.

These engagements have been very productive and a **good level of synergy and alignment** established on the content and scope of Transnet's infrastructure plans.

This alignment is reflected in that all Transnet's strategic infrastructure developments have been adopted as part of the NPC's National Development Plan and the recently launched **SIPs programme of the Presidential Infrastructure Co-ordination Committee**.

These key national developments include:

1. Expansion of Iron Ore Export Corridor from 60 to 82 Mtpa

2. Development of the SA Coal Transport System for domestic (Eskom) and Export Coal - this includes the development of rail capacity into the Waterberg Basin

3. The 2050 Vision development of the Durban - Free State - Gauteng Corridor including expansion plans in the Port of Durban and the development of a new Dig-out port to the south of the Port of Durban

4. Expansion of Manganese export capacity to Port of Nqgura to 16Mtpa

Transnet is continuing its **collaborative working with the NPC in exploring best funding models** to implement its ambitious infrastructure development plans in the medium to long term.

Alignment with other planning processes in Government – Provincial engagement

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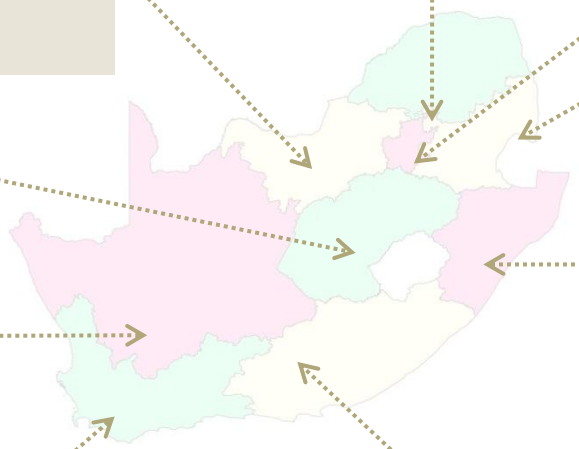
NORTH WEST
- **Waterberg corridor –** additional passing loops and electrification upgrades: Lephalale and Thabazimbi; and new lines Thabazimbi to Ermelo,
- **Mahikeng–Wesrand –** plans to connect Waterberg to the Ore for mineral haulage
- **Klerksdorp Branchline cluster –** development and maintenance of grain, cement, minerals haulage

LIMPOPO
- **Waterberg –** development of a rail link for bulk coal haulage
- **Musina Intermodal terminal** – development of an inland terminal

GAUTENG
- **Development of inland terminals –** Sentrarand, Tambo Springs, Pyramid South

MPUMALANGA
- Optimisation of Maputo corridor

FREESTATE
- **Harrismith** logistics hub/ inter modal terminal



KWAZULU-NATAL
- **Richards Bay** – IDZ development
- **Durban Refinery** – refinery expansion
- **Durban Airforce Base** – relocation of air force
- **Coal Line** – project to increase coal to Richards Bay
- **Automotive Supplier park –** suitable site for the development
  Durban South (dig-out) port – at the old Durban International Airport site

NORTHERN CAPE
- **Port Nolloth** – development and rehabilitation of the Port of Port Nolloth

WESTERN CAPE
- **Cape Town** – port precinct planning
- **N7 Corridor – Saldanha-Cape Town Corridor** various plans and projects
- **Provincial** – road-to-rail migration
- **Saldanha Bay** – oil and gas development opportunities
- **Saldanha Bay IDZ** – support and development for IDZ

EASTERN CAPE
- **Coega** – development of Ngqura transshipment hub
- **Coega** – new Manganese Export Terminal Facility at Port of Ngqura
- **East London** – coal export terminal feasibility study
- **East London** – revitalization of old rail sleeper sites
- **Port Elizabeth** – optimal land use studies (from freight handling to commercial development)
- **Inter-provincial** – development of the Port Elizabeth to Durban coastal rail line

Transnet is proactively engaging in joint planning with provinces to integrate its long-term plans with economic development of the provinces

Alignment with other planning processes in Government 2050 Vision: Durban—Free State–Gauteng

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System Overview

The integrated long term development of the Durban - Free State - Gauteng logistics corridor to provide capacity to meet growth in demand to 2050. This project is led by the national Department of Transport with Transnet as one of the key participants.

The integrated vision consists of the following key developmental components:

⇒Three-phased capacity expansion of the Port of Durban including a new dig-out port at the old Durban airport site
⇒Complementary rail corridor development on NATCOR
⇒Complementary local, provincial and national roads development
⇒Establishment of strategically located intermodal terminals
⇒Complementary land-use development along the corridor
⇒The completion of the New multi product pipeline (NMPP)

DMR beneficiation strategy:

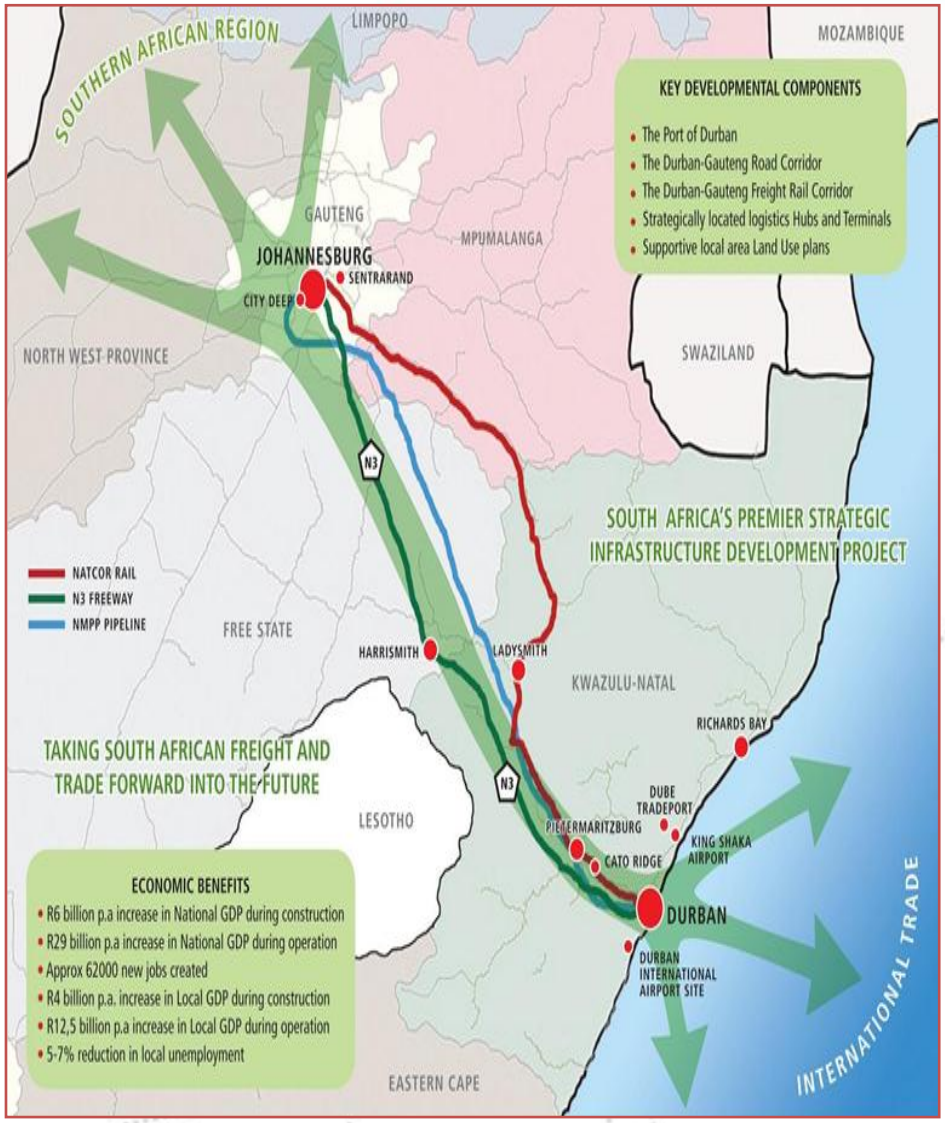
Cabinet has approved the Energy Commodities and Iron and Steel value chain as contained in the DMR beneficiation strategy. Transnet has engaged DMR to synchronized the infrastructure requirements of these approved value chains.

Transnet-specific projects:

The following key development components are discussed in more detail on the following pages:

6a. Durban - Gauteng Rail Corridor
6b. Establishment of strategically located intermodal rail terminals in Gauteng
6c. Establishment of strategically located rail terminals and yards in Durban
6d. NMPP New pipeline

The development of the Durban port terminals as well as the new DIA port are covered under section 5.



Alignment with other planning processes in Government Hubs and Terminals

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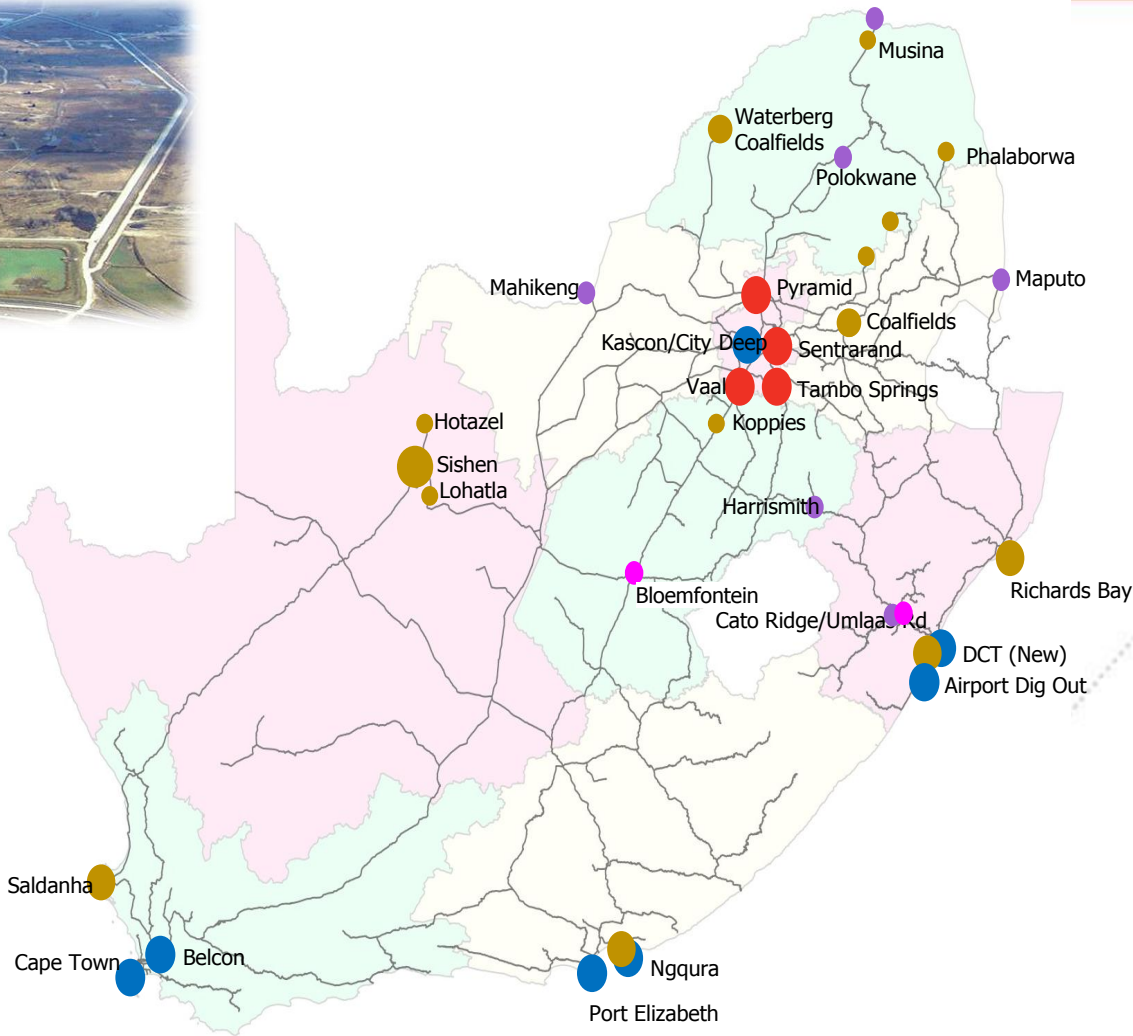
Project to support beneficiation:
Of particular importance will be the development of mega or super-terminals in the Gauteng and Durban areas to cope with the growth in container demand along this corridor.

The indicated freight nodes are not necessarily informed by the demand forecast but are proposed by public sector in support of the economic development and promotion of the "Free Trade Zones".



- Super terminal
- Intermodal terminal
- Freight nodes
- Mineral nodes
- General freight terminal

The indicated freight nodes are not necessarily informed by demand but are proposed by public sector in support of economic development