Improving the quality of freight logistics – Government policy and investment in infrastructure

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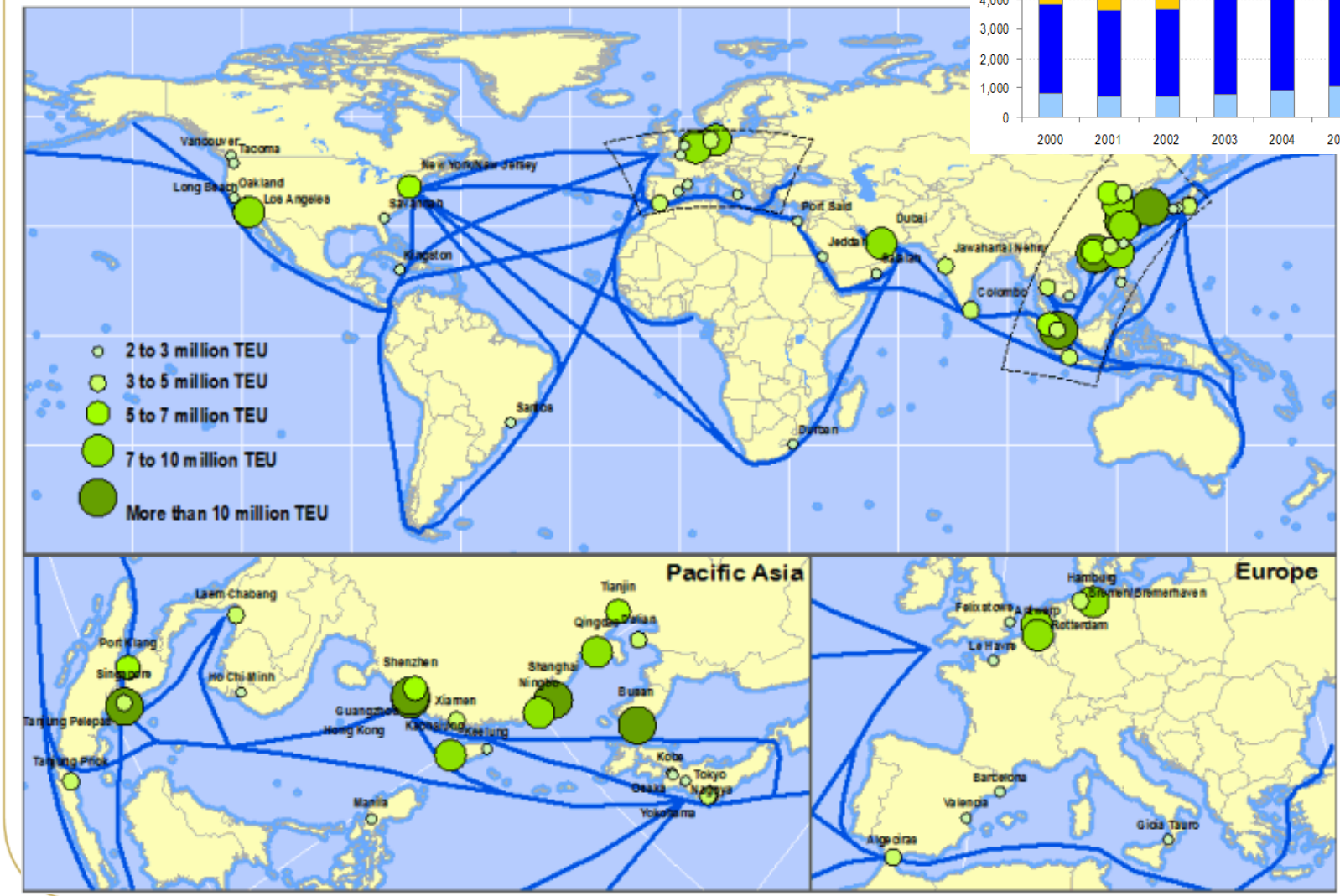
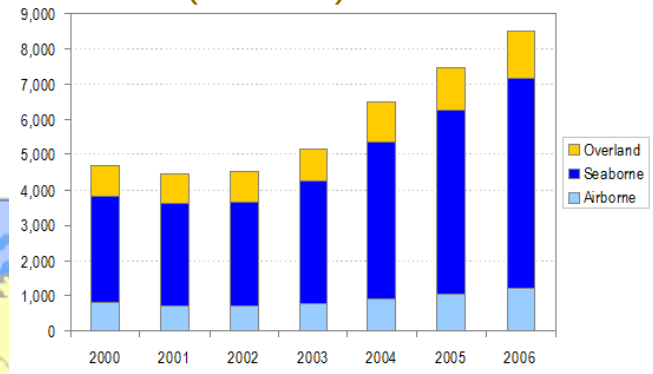
Globalisation of logistics

World's major container ports, 2005

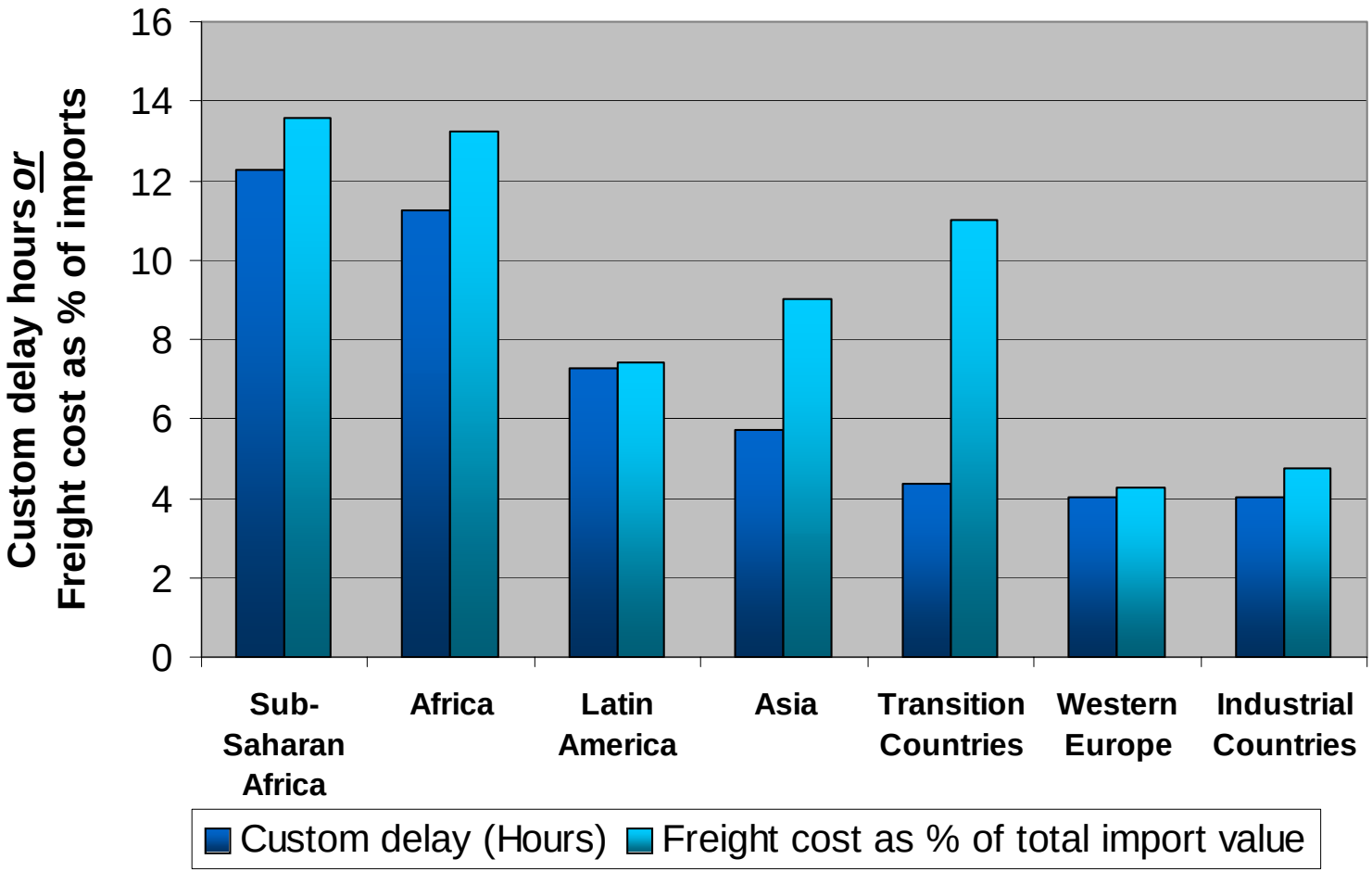


Modal Split of International Trade in Goods ($ billion) 2000–2006



Source : Dept. of Economics & Geography, Hofstra University, USA

High freight costs and customs delay reduce Africa's trade competitiveness



Source : Economic Commission for Africa (2002)

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Rail as a component in integrated logistic supply

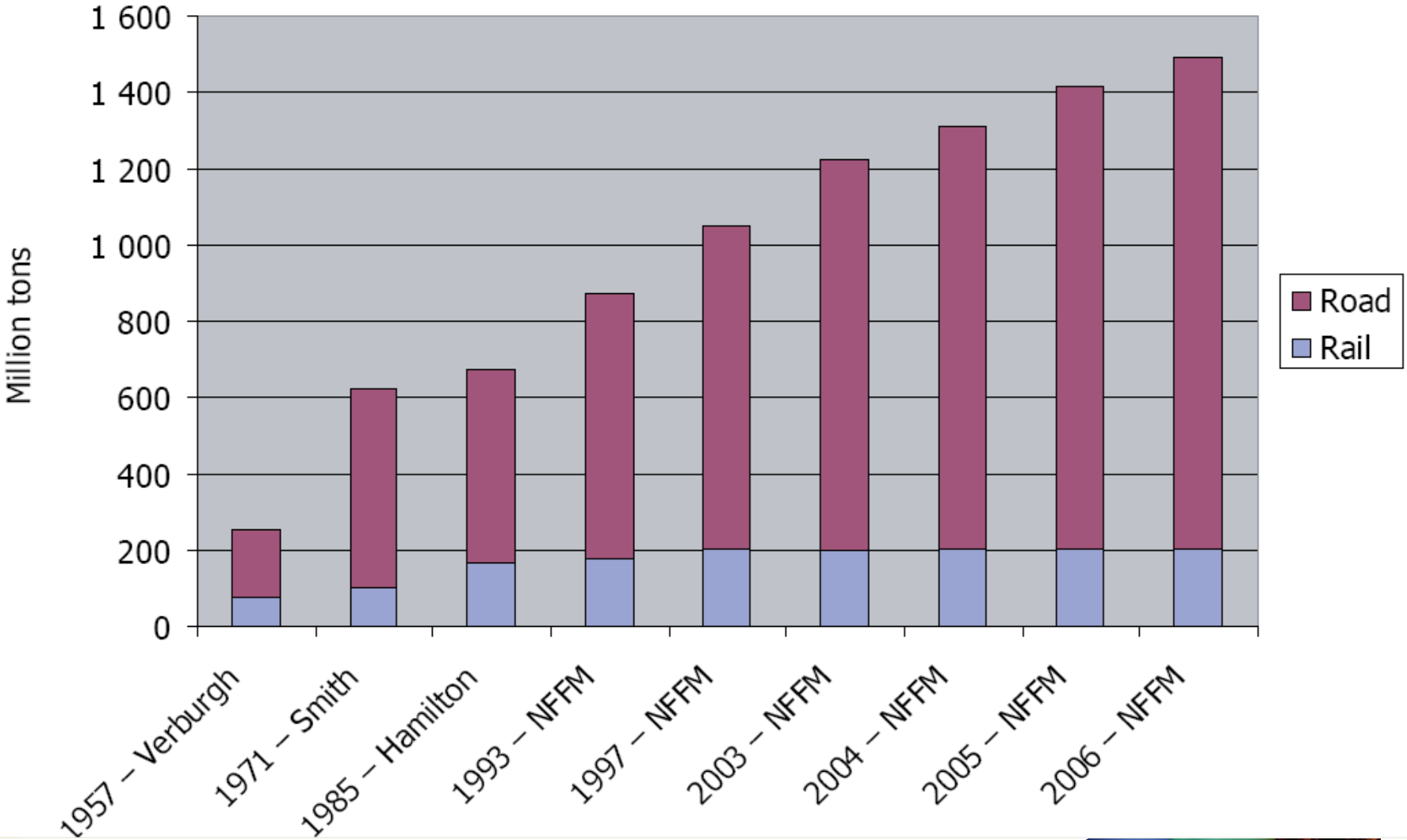
- Block train concept with capacity allocation to serve the supply chain needs of customers
- Track and trace with proactive customer information
- Quota booking meeting customer needs for punctuality, security
- Integrated rail sector solutions well aligned to:
  - Automotive Chemicals
  - Industrial Container
- Technology Innovations
  - Track and trace,
  - Road semi-trailers on rail,
  - Make rail more attractive for palletised products, and
  - Technology development in wagons, double stacking, chemical storage, rapid loading and unloading.

Ports & intermodal terminals as a component in integrated logistics supply

- Enhanced terminal productivity with new equipment, stacking design and scheduling management
- Closer linkage between global shipping companies & ports, with specific transhipment terminal hubs around the globe
- Integrated intermodal terminals and distribution centres now finding a home in port
- Railport - Alternative to traditional rail sidings, provides focus for integration between rail and road network. In operation in Germany, Switzerland, Netherland, France, Denmark,
- Integrated planned intermodal terminals "gateways" close to main production centres, including:
  - Customs facilities
  - Weigh bridges
  - 3rd party logistics providers
  - Freight forwarders
  - Distribution centre services
  - Warehousing and consolidated services

In-port ASDA/Walmart distribution centre – Teeside UK

Growth in road and rail freight



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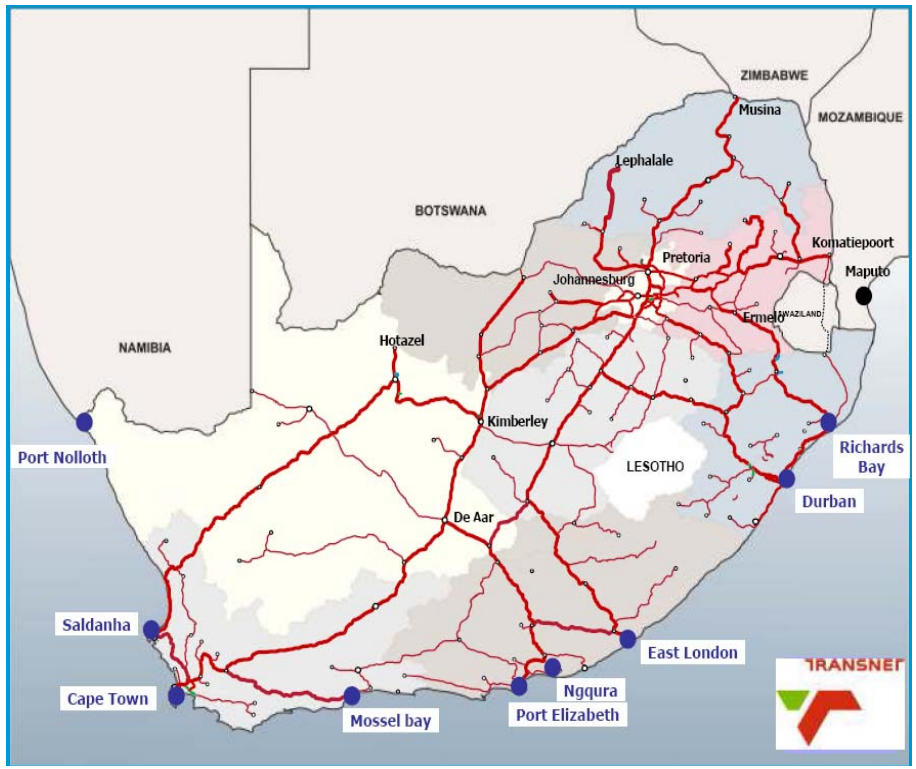
Source: The Fourth State of Logistics Survey 2007, CSIR

Transnet infrastructure development to enhance logistics competitiveness

- Based on national forecasts per cargo category : containers, automotive, major break bulk and dry bulk export commodities
- Provide port and rail infrastructure ahead of demand
- Provide capacity through operational efficiencies before infrastructure provision
- Focus on point to point services to increase efficiency
- Alignment with national road and electricity supply planning



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Rail Planning Principles

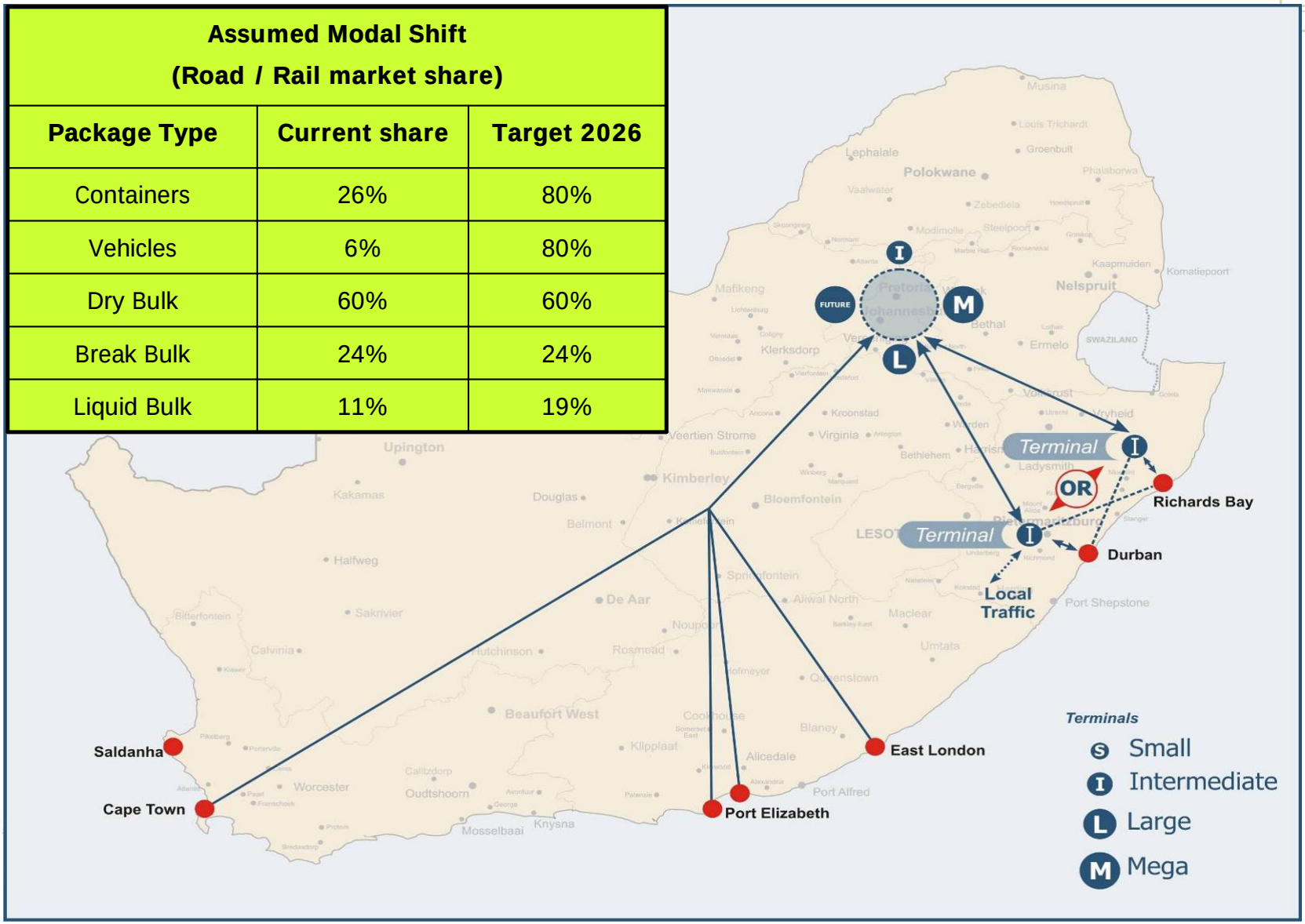
- Align port developments and rail corridor developments
- Separate metro trains from freight lines (dedicated freight lines)
- Promote a hub to hub operating philosophy and enhanced operational efficiency
- Provide improved inter-modal infrastructure
- Maximize on advantages of network standardization
- Separation of core and branchline network

Port Planning Principles

- Improved operational efficiencies leading to optimised infrastructure investments
- Enhanced Port specialisation:
  - High–value, cleaner commodities at Cape Town, Port Elizabeth & Durban,
  - High volume commodities at Richards Bay, Ngqura & Saldanha. Link with dedicated heavy haul rail
- Improve sustainability & environmental responsibility
- Complement new port expansion with commercial development of obsolete port property

Transnet hub and terminals concept and proposed shift from road to rail

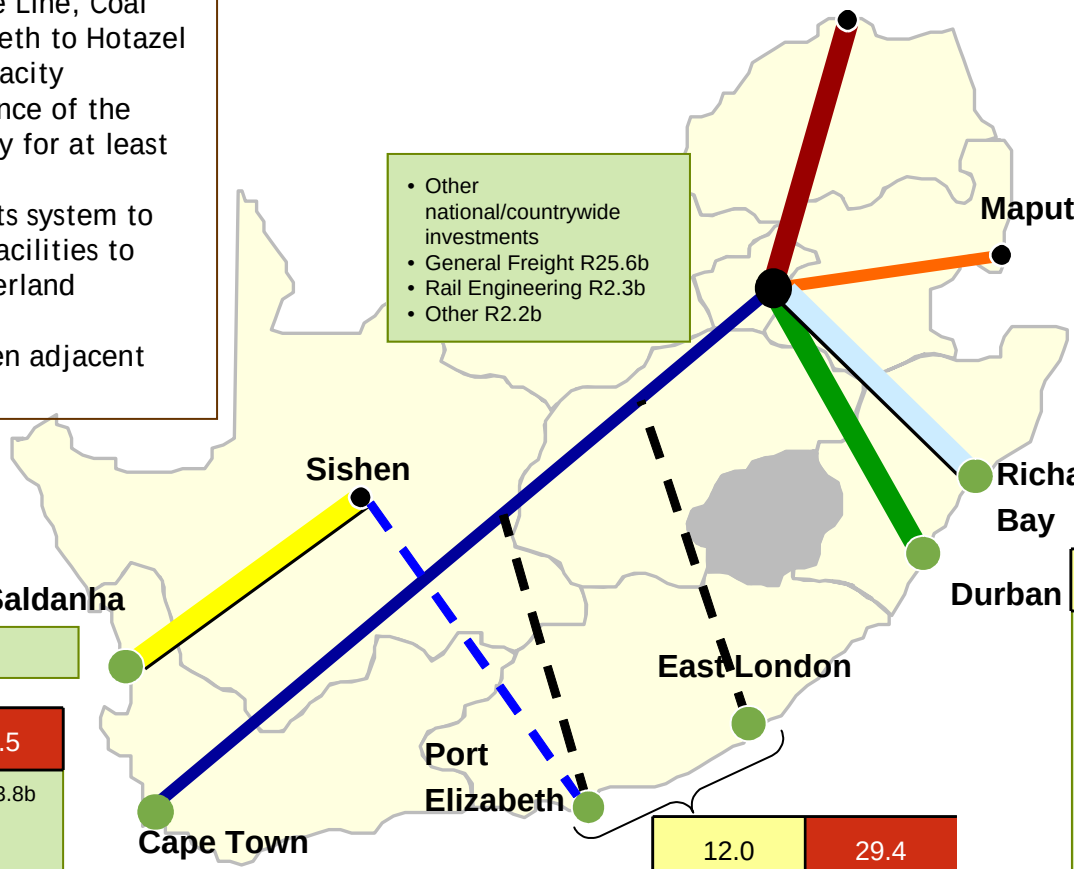
Assumed Modal Shift (Road / Rail market share)		
Package Type	**Current share**	**Target 2026**
Containers	26%	80%
Vehicles	6%	80%
Dry Bulk	60%	60%
Break Bulk	24%	24%
Liquid Bulk	11%	19%



Transnet's 5 year expenditure plans

Transnet's five year expenditure of R84 billion is part of the long-term integrated Port and Rail Development Plan, aligned to a corridor focused growth strategy

- Majority of demand is rail friendly
- Natcor, CapeCo, Ore Line, Coal Line and Port Elizabeth to Hotazel line will require capacity improvements (balance of the network has capacity for at least 10 years)
- Complementary ports system to provide a range of facilities to meet local and hinterland requirements
- Rail linkages between adjacent ports and Gauteng



Road & rail volume

2006	2026

- Other national/countrywide investments
- General Freight R25.6b
- Rail Engineering R2.3b
- Other R2.2b

16.4	46.1

R0.2b - General Freight

14.3	33.4

- Coal Expansion R6.6b
- Dry bulk terminal R1.6bn
- Multi-purpose terminal R0.6b
- Other R0.8b

43.3	109.3

- Container terminals R7.2b
- Island View and Agriport R0.7b
- Maydon Wharf R1.6b
- Automotive R0.3b
- General Freight R0.9b
- NMPP R13.5bn
- Other R4.6b

- Ore Line R3.6bn

72.7	171.5

- Container terminal R3.8b
- MPT refurbishment R0.3b
- Other R0.5b

12.0	29.4

- Ngqura construction R0.7b and container terminal R5.1b
- General Freight R1.0b
- Manganese R0.5b
- Automotive R0.2b
- Other R0.9b

Source: Transnet Freight Demand Model

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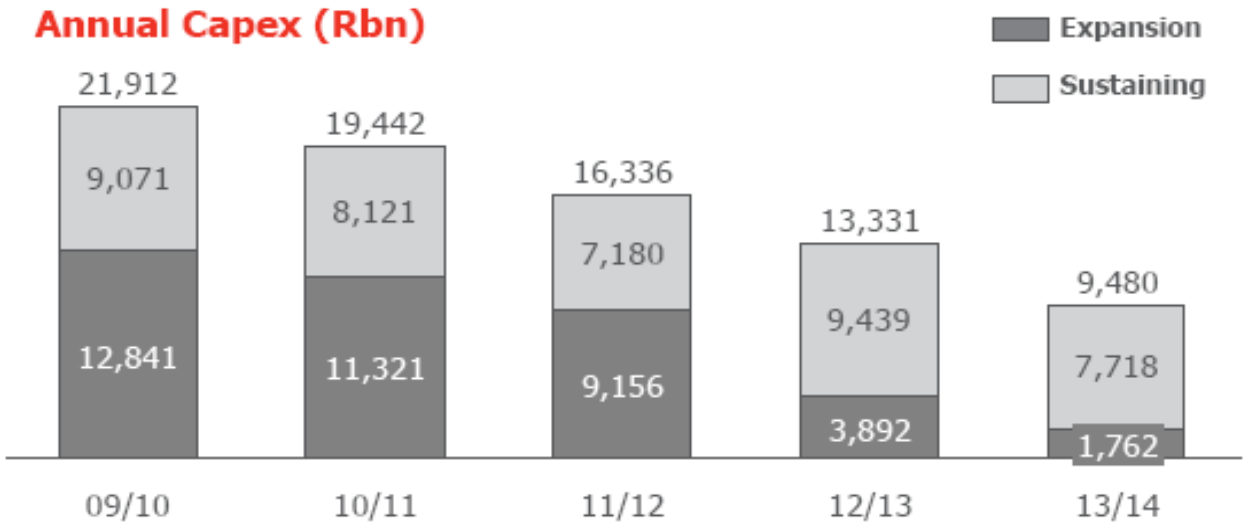
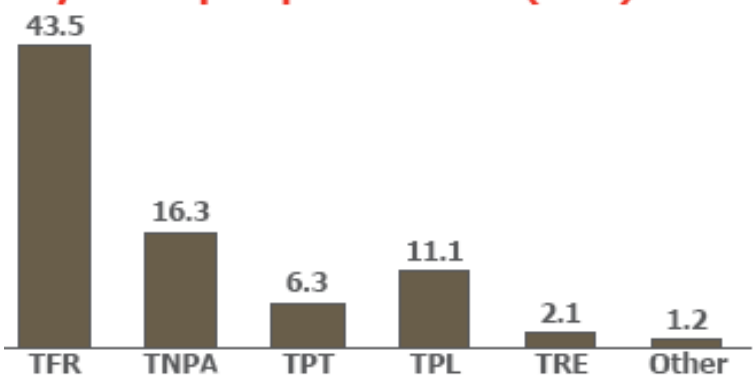
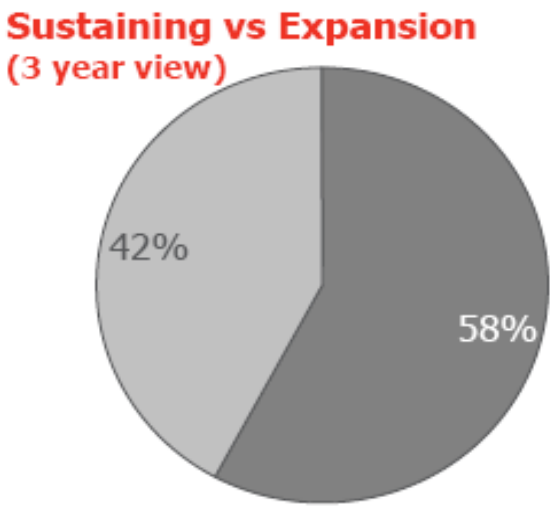
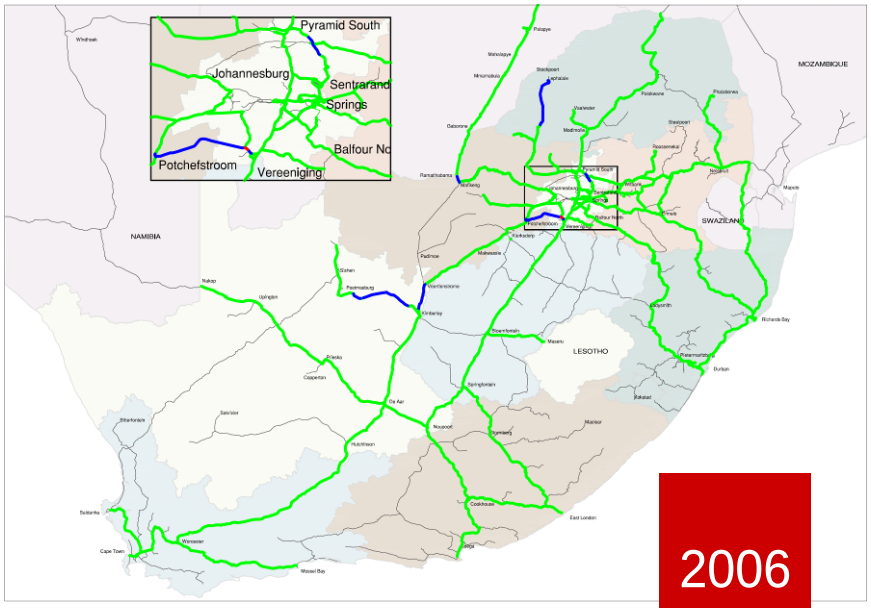
Transnet capital investment – Five year plan

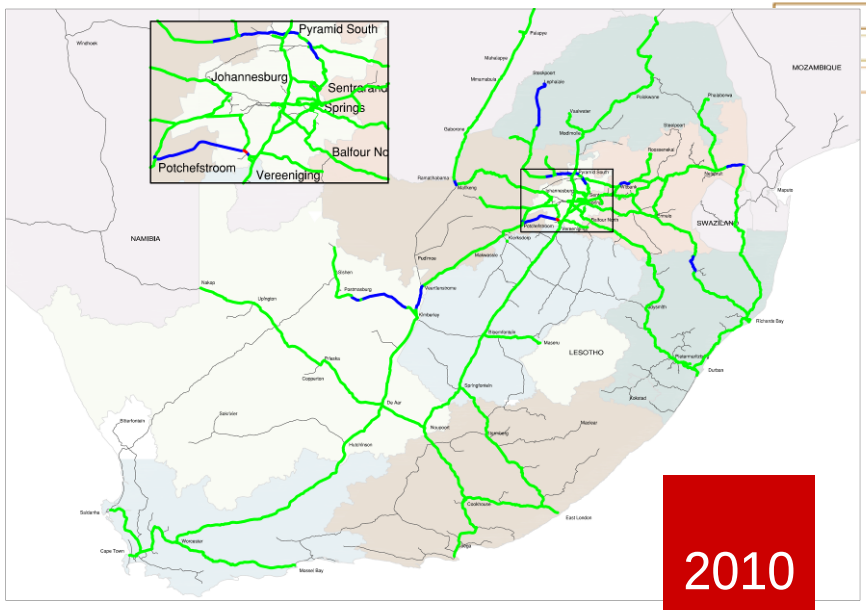


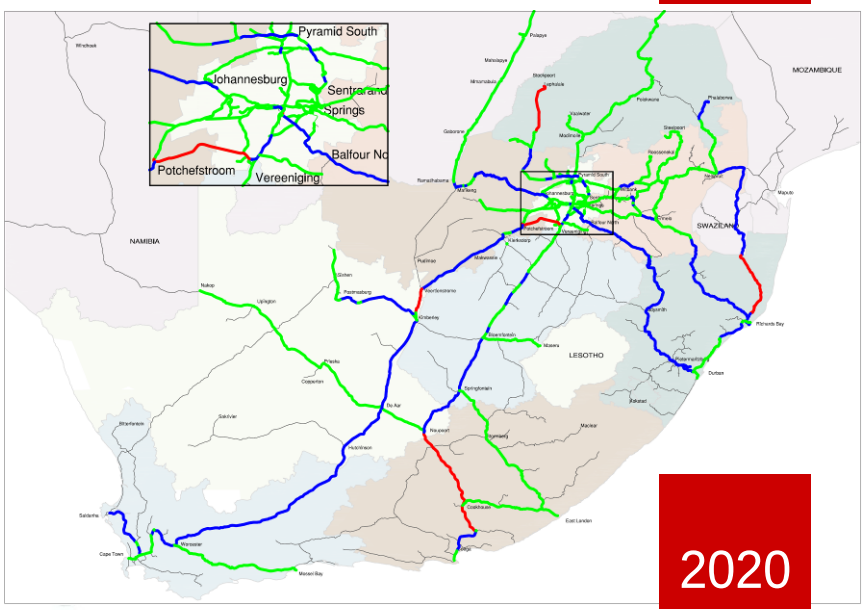


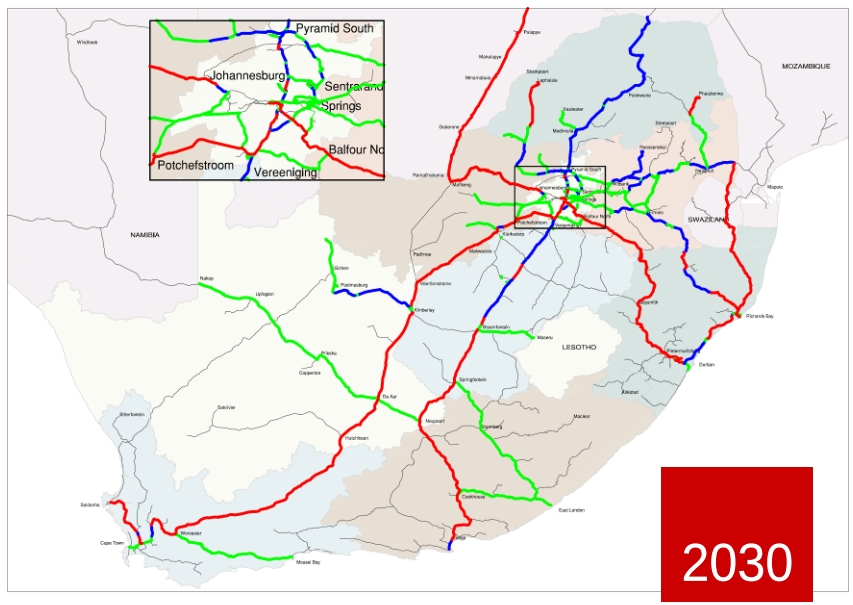


Rail Network Investment proposal



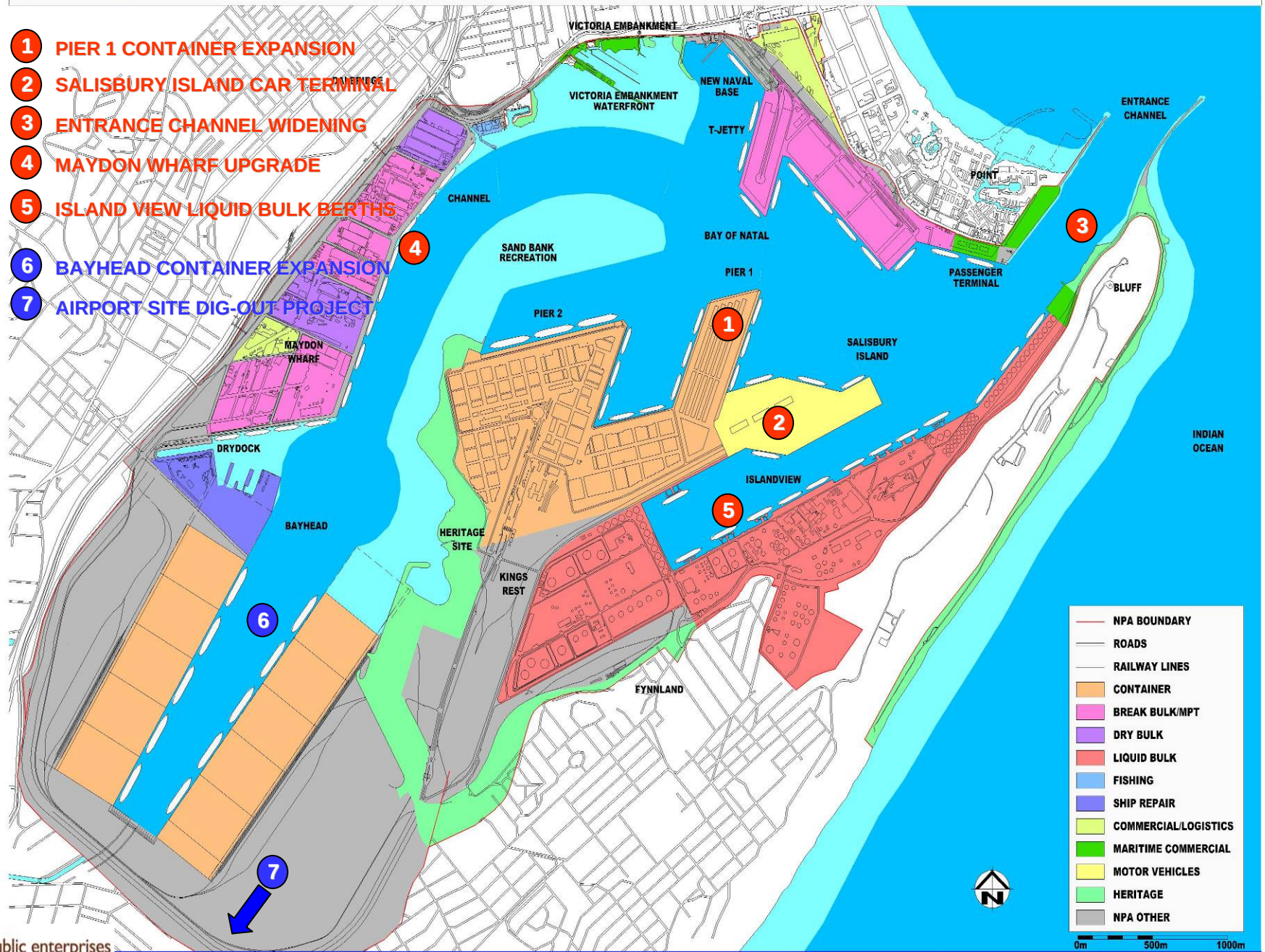






TRANSNET

PORT OF DURBAN : FUTURE LAYOUT



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TRANSNET PORT AND RAIL INFRASTRUCTURE DEVELOPMENT PLAN

Road Freight – The emerging value proposition – An example

Part of Value Logistics Group
Integrated logistics service provider in the industrial chemical distribution sector
Single source services, based on Just In Time principle

"**Intercity Express Road Freight** –
Daily inter-city express road freight services to and from all main city centres

National Transport Logistics –
Full truck load and part load consolidated road freight services to and from all main centres
Specialized liquid bulk and semi bulk distribution

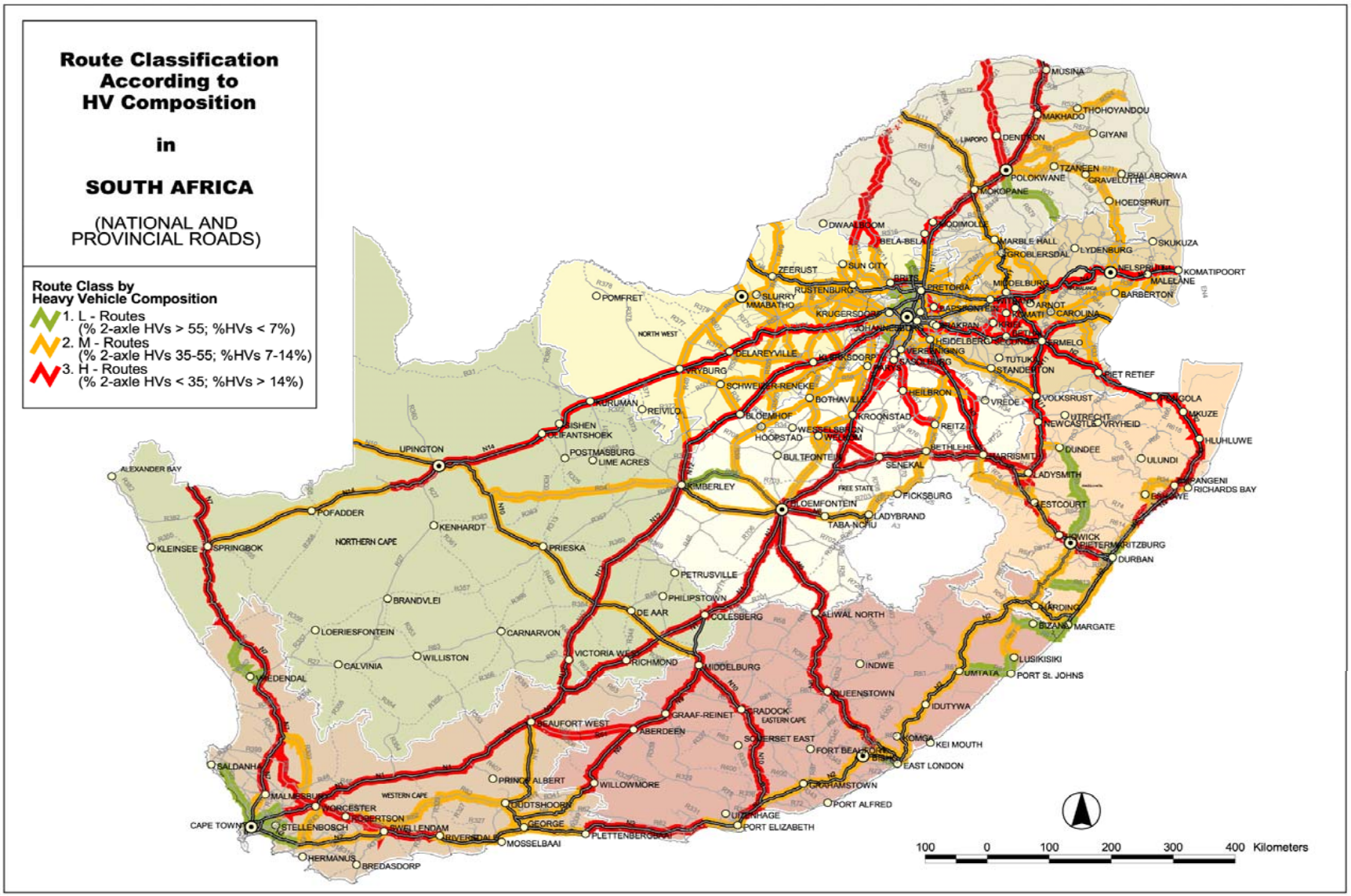
National Warehousing and Distribution –
Fully palletized, high rise warehousing and storage facilities
Computerized stock management
Order processing and assembly
Local, regional and national distribution
Dangerous goods and general freight

Air Freight –
National and international air freight services

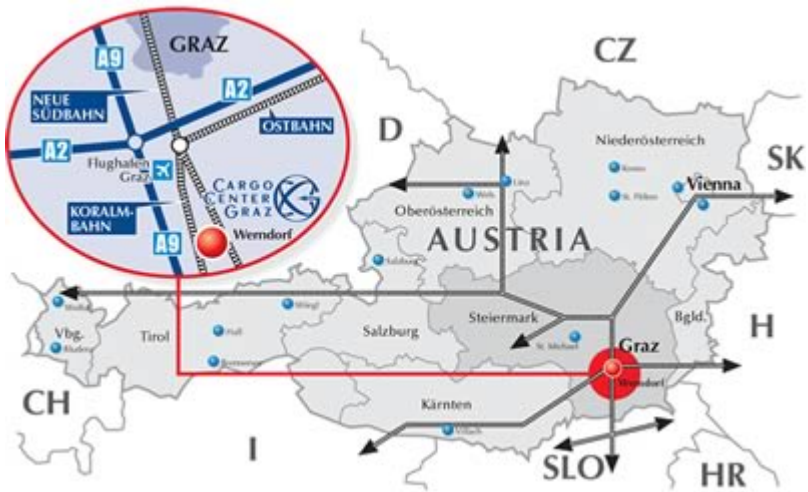
Supply Chain / 3PL and 4PL Services –
Fully resourced consultancy division
Experienced analysts audit supply chain pipeline from procurement
Customer Integrated Logistic Systems (ILS) provides efficiency and cost saving opportunities
Supply chain managers control and manage the supply chain as a 4PL service provider"

Source : www.freightpak.co.za

Road freight remains the backbone of the freight network



International example of an Intermodal Hub – Graz Austria



Success factors

- Large intermodal road rail transfer hub integrating existing 3Pl and 4PL companies, e.g. Panalpina, DHL, Schenker DB
- Work closely with Rail Cargo Austria but set up as separate company
- Strong link into European and East European rail network
- Integrated into major motorway network and close to major centers of production

Conclusion

- There is a need to focus on stronger integration between South Africa and global supply chains
- Infrastructure and service levels should to be work-class in order to provide cost effective and efficient logistics solutions. SA needs to link into global trends in freight logistics
- The role of rail needs to be enhanced and developed as a credible alterative to road
- Transnet has a strong focus on infrastructure development and is focusing on improving service level efficiencies. The next step may be to enhance its logistics practice and consider innovative practices beginning to emerge worldwide
- The role of the hub in linking modes and production centers to the market is becoming an integral part of global logistics practice and should be integrated into the planning of South African road, rail and port infrastructure