Supply Chain Resilience
by the introduction of Multimodality – CATO RIDGE DRY PORT
14 October 2021
Presenter: Warwick Lord
Supply shocks – COVID, July unrest, cyber attacks, theft of rail infrastructure, world wide container shortage;

Challenges experienced– Unsustainable road to rail relationship, monopolistic role of Transnet, Government policy that is not aligned;

Solutions – Multimodal ports and Hubs
Supply shocks – COVID, July unrest, cyber attacks, theft of rail infrastructure, world wide container shortage;

Challenges experienced – Unsustainable road to rail relationship, monopolistic role of Transnet, Government policy that is not aligned;

Solutions – Multimodal ports and hubs
Supply Shocks

- COVID-19;
  - Massive uncertainty,
  - New rules being implemented,
  - Employee absenteeism,
  - Reduced ship calls from March 2020,
  - Lockdowns

### Cargo Operations 1st Half 2020

<table>
<thead>
<tr>
<th>Measure</th>
<th>Jan 20</th>
<th>Feb 20</th>
<th>Mar 20</th>
<th>Apr 20</th>
<th>May 20</th>
<th>Jun 20</th>
<th>1H 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of TEUs moved/month (CTCT):</td>
<td>52654</td>
<td>68942</td>
<td>57085</td>
<td>48839</td>
<td>39749</td>
<td>43526</td>
<td>310795</td>
</tr>
<tr>
<td>Number of Ship calls (CTCT):</td>
<td>38</td>
<td>40</td>
<td>27</td>
<td>24</td>
<td>18</td>
<td>14</td>
<td>161</td>
</tr>
</tbody>
</table>

### Cargo Operations 1st Half 2021

<table>
<thead>
<tr>
<th>Measure</th>
<th>Jan 21</th>
<th>Feb 21</th>
<th>Mar 21</th>
<th>Apr 21</th>
<th>May 21</th>
<th>Jun 21</th>
<th>1H 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of TEUs moved/month (CTCT):</td>
<td>49115</td>
<td>61484</td>
<td>58482</td>
<td>62686</td>
<td>64666</td>
<td>56813</td>
<td>353246</td>
</tr>
<tr>
<td>Number of Ship calls (CTCT):</td>
<td>23</td>
<td>21</td>
<td>21</td>
<td>33</td>
<td>29</td>
<td>29</td>
<td>156</td>
</tr>
</tbody>
</table>

Source: Transnet
Supply Shocks

- July 2021 unrest

Economic damage from social unrest can be long-lasting
On average, GDP remains about 1 percentage point below its pre-shock level a year and a half after a major protest. (change in GDP relative to baseline in pp)

Impact of new unrest event

Quarters since shock
**Supply Shocks**

- **Transnet Cyber Attack:**
  - No emails or cell phone use,
  - Manual system at the Ports introduced to evacuate containers,
  - Transnet wide systems shut down,
  - Existing reporting and meetings ceased,
  - Transnet are still experiencing issues with some of the IT systems

- **Theft of rail infrastructure:**
  - Significant delays in cargo movements,
  - Significant cost to replace,
  - Reliability of rail seriously compromised,
  - Transnet not able to deliver on commitments,
  - Loss of competitive advantage to other Southern African Countries
Supply shocks – COVID, July unrest, cyber attacks, theft of rail infrastructure, world wide container shortage;

Challenges experienced – Unsustainable road to rail relationship, monopolistic role of Transnet, Government policy that is not aligned;

Solutions – Multimodal ports and hubs


Challenges experienced

❖ Unsustainable Road to Rail relationship;
  ❖ 80% of the record export grain harvest was delivered by trucks to the Port in 2021,
  ❖ Rail covers all its costs, whilst heavy road vehicles do not,
  ❖ SANRAL has embarked on a significant N3 upgrade program,
  ❖ Given the projected increase in freight volumes, the current N3 upgrades is likely to be inadequate by 2035. Continues road upgrades are not sustainable and skewed road to rail ration must be corrected sooner rather than later.

eThekwini Municipal Heavy Vehicle Traffic Counts

- **Cato Ridge N3**
  - H/V per day = 6007
  - % Container = 7.8%
  - % Dangerous = 3.5%

- **Marian Hill N3**
  - H/V per day = 5886
  - % Container = 6.9%
  - % Dangerous = 4.9%

- **Northdene M7**
  - H/V per day = 4698
  - % Container = 10.6%
  - % Dangerous = 6.7%

- **Pinetown M13**
  - H/V per day = 925
  - % Container = 6.4%
  - % Dangerous = 2.7%

- **N2 / N3**
  - H/V per day = 1798
  - % Container = 4.6%
  - % Dangerous = 3.1%

- **Bayhead Road**
  - H/V per day = 8265
  - % Container = 42.8%
  - % Dangerous = 4.7%

Source – eThekwini Transport Authority
Challenges experienced

- Monopolistic role of Transnet needs to be examined to encourage third party access;
  - International best practice is not implemented,
  - Fiscally constrained and so limited ability to undertake capital projects
  - Historically divisional objectives have been prioritized over what is best for SA logistics,
  - Lack of transparency and predictability,
  - Best use of ALL supply chain role players not being utilized,
Government policy on cargo movement is not aligned;
- No unified implementable supply chain legislation or leadership. Focus is on the individual elements of the supply chain,
- Greater collaboration between the public sector role players is needed
  - SANRAL has embarked on a significant N3 upgrade program and solutions need to be provided for the movement of cargo when the N3 is restricted. Rail needs to play its part.
- Rail covers all its costs, whilst heavy road vehicles do not and hence some of the reason of the poor volumes on rail,
Supply shocks – COVID, July unrest, cyber attacks, theft of rail infrastructure, world wide container shortage;

Challenges experienced – Unsustainable road to rail relationship, monopolistic role of Transnet, Government policy that is not aligned;

Solutions – Multimodal ports and hubs
Creating a hub-status port has the opportunity to substantially increase the handling of transshipment volumes destined for ports in the broader SADC region.
Solution

2050 VISION FOR THE DURBAN-GAUTENG FREIGHT CORRIDOR

KEY DEVELOPMENTAL COMPONENTS
- The Port of Durban
- The Durban-Gauteng Road Corridor
- The Durban-Gauteng Freight Rail Corridor
- Strategically located logistics Hubs and Terminals
- Supportive local area Land Use plans

ECONOMIC BENEFITS
- R6 billion p.a increase in National GDP during construction
- R23 billion p.a increase in National GDP during operation
- Approx 62000 new jobs created
- R4 billion p.a. increase in Local GDP during construction
- R12,5 billion p.a. increase in Local GDP during operation
- 5-7% reduction in local unemployment

Source – SA Government
SOLUTION

Freight & Logistics Strategic Development across the Municipal Area

- Port of Durban
- Freight Intensive Nodes
- Intermodal Hub & Freight Logistics Nodes
- National freight distribution

Source – eThekweni Transport Authority
Solutions

❖ Co-ordinated effort is required by:
  ❖ Private sector logistics companies,
  ❖ Transnet,
  ❖ SANRAL and other transport authorities,
  ❖ Led by the Department of Transport

❖ ICT, dashboards and big data
  ❖ Real time reporting of issues,
  ❖ Allows for forecasting and hence resource allocation.

❖ Shock absorbers need to be built into the supply chain;
  ❖ Truck staging areas,
  ❖ Containers storage and handling areas outside the congested Durban CBD

❖ Multimodal hubs
**Solution – Cato Ridge Dry Port**

Truck inns, Dry ports, Extended gates – allow for interventions
Intermodal facilities via 3 different models

**Source** – DTIC working group
Outcome

- Efficient and resilient supply chains which are able to handle shocks,
- Efficient utilisation of scarce resources,
- Efficient transport leads to increased trade and higher wealth attracting more investment and job creation,
- Predictable and reliable supply chains provide long term certainty and allows for long term planning,
- Internationally competitive supply chains with SA acting as the Gateway to Africa,
- AFCTA being implemented and African countries trading with each other,
- The Port of Durban again being recognised as a leading Port and the Gateway to Southern Africa