Challenges of the New National Freight Logistics Strategy for South Africa

Dr Andrew Shaw, Transport Specialist
Development Bank of Southern Africa

Gerard de Villiers, Logistics Specialist
Supply Chain Advantage (Pty) Ltd

25th Annual Southern African Transport Conference
10 to 13 July 2006
Challenges of the New National Freight Logistics Strategy for South Africa

Contents

- South Africa’s global trade
- The cost of logistics
- Shifts in the demand for SA supply chains
- Supply chain imperatives - Customer focus, collaboration & integration
- Issues with respect to:
  - Road
  - Rail
  - Ports
- Cross-cutting challenges facing freight transport
- Implication of high level Government initiatives:
  - NFLS
  - ASGISA
  - Transnet restructuring
- Conclusion
The cost of logistics

Comparisons of the cost of logistics as a percentage of product value

Changes in the contribution of transport cost to logistics costs

Source: World Bank, CSIR, Department of Transport

Challenges of the New National Freight Logistics Strategy for South Africa
Supply chain requirements of the SA economy

- **High value**
  - Flexible and reliable supply chains that are adaptable to market growth
  - Low cost and high volume supply chain strategies

- **Low value**
  - Basic
    - Gaps exist in the operation and management of cost effective bulk services
  - Integrated
    - Gaps exist in the integration of supply chains for low value commodities

- **Type of goods**
  - High value:
    - eg Containers (31%)
    - eg Automotive (26%)
  - Low value:
    - eg Mining (32%)
    - eg Steel (11%)

**Source:** Department of Transport

Challenges of the New National Freight Logistics Strategy for South Africa
Anticipated shifts in the structure of the SA economy & implications for supply chains

2003 – SA market size

<table>
<thead>
<tr>
<th>Type of goods</th>
<th>High value</th>
<th>Low value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>31% e.g. Containers</td>
<td>32% e.g. Mining</td>
</tr>
<tr>
<td>Integrated</td>
<td>26% e.g. Automotive</td>
<td>11% e.g. Steel</td>
</tr>
</tbody>
</table>

Real growth 2003 - 2013

<table>
<thead>
<tr>
<th>Type of goods</th>
<th>High value</th>
<th>Low value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>15% e.g. Containers</td>
<td>5% e.g. Mining</td>
</tr>
<tr>
<td>Integrated</td>
<td>19% e.g. Automotive</td>
<td>9% e.g. Steel</td>
</tr>
</tbody>
</table>

**IMPLICATIONS**
- Insufficient container handling equipment
- Lack of compatible information integration
- Inefficient railroad operations

Source: Department of Transport
Challenges of the New National Freight Logistics Strategy for South Africa
Challenges of the New National Freight Logistics Strategy for South Africa

Supply chain imperatives - customer focus, collaboration and integration

Supply chain Imperatives
- Collaboration
- Customer focus
- Integration

Benefits to the supply chain
- Collaboration between customers
- Collaboration between operators
- Service design to supply chain needs
- Competitive pricing
- Intermodal and inter-service integration
- Upstream and downstream integration

Environment which maximises...
- Inter-business alliances
- Competitive market place
- Inter-channel alliances

Drivers of this Environment
- Individual businesses with a strong “core” business focus
- Competitive pressure to out-perform rivals
- Shared business thinking such that if “my alliance partners do well, I do well”
- Space for multiple players with a range of business offerings
- Enhanced effectiveness and reduced cost of IT systems further promoting supply chain collaboration

The need for sharp customer focus drives supply chain collaboration and integration. Government’s role is to create the right institutional environment for these three imperatives to thrive

Source: Department of Transport
### Challenges of the New National Freight Logistics Strategy for South Africa

#### Rail
- **Efficiency**
  - Productivity: 17 TEUs/hr vs 35 TEUs/hr
- **Service Reliability**
  - Congestion problems: 45% trains late, 25% no shows

#### Road
- **Efficiency**
  - Payload: 515 000 ton.km pa per wagon vs 100 000
- **Service Reliability**
  - Service levels: Better than in Europe

#### Ports
- **Efficiency**
  - Productivity: Decline in real cost per ton.km
  - Reduces capacity: Increases cost
- **Service Reliability**
  - Service levels: Delays due to multiple handling

#### Air Freight
- **Efficiency**
  - Inexperienced staff: 45% new
  - Bi-laterals: Poor interconnectivity
- **Service Reliability**
  - Manual process time: Poor planning
  - Service levels: Requires no intervention

#### Intermodal Interface
- **Efficiency**
  - Requires significant intervention
- **Service Reliability**
  - Requires little intervention

**Source:** National freight Logistics Strategy, 2005

**Challenges of the New National Freight Logistics Strategy for South Africa**
Issues with respect to road infrastructure

- Declining condition of provincial roads is leading to large scale capital re-investment requirements. The delivery model in provinces needs to be revisited.
- Overloading remains a challenge, particularly on the poorly policed provincial networks.
- Institutional control over primary national network is best vested in SANRAL. However, a common and rapid approach for SANRAL control over these roads is required.
- Challenges in respect of the condition and adequacy of local access roads, particularly in rural areas, remain.
Issues with respect to freight rail

- Focus on primary rail network by Spoornet consistent with best practice.
- Economic potential of branch lines must not be lost in this process.
- Change in emphasis required to reduce costs and improve efficiency of primary rail network. Must be supported by upgrading of key assets, particularly rolling stock but also fixed assets on the high-volume lines.
- Improved efficiency & reliability on the dominant corridors will result in some regained market share to Spoornet. Collaboration with customers, private sector partners and others in the value chain will enhance this strategy.
- Challenges remain in separating infrastructure from operations. Government support required to achieve this agenda.
Issues with respect to ports

- Shift towards increased container traffic and a reduction in break-bulk traffic requires more attention be given to container supply chains and integrating these more effectively with rail on key corridors.
- Port congestion is reducing the effectiveness and adding to the cost of SA supply chains.
- Enhancing South African port’s hub-and-spoke focus will require increased port specialisation and improvement in efficiency.
- Changing patterns of global and domestic trade are already placing pressure on particularly the Port of Durban. ASGISA’s Gauteng – Durban initiative needs to consider linkages to the port, improved efficiency and port handling capacity.
Summary of cross-cutting challenges facing freight transport

- Service delivery constraints
  - Delivery capability of port and rail sector
  - Customer focus is poor

- Infrastructure and capacity constraints within the transportation network
  - Provincial roads (road maintenance, enforcement)
  - Improved rail and port infrastructure

- Regulatory challenges and implications for the delivery of efficient transport services
  - Role of public sector in rail, ports, pipeline, airports
  - Regulatory oversight over monopoly industries
  - Enhanced efficiency – parastatals and the role of the private sector
High-level implications of the NFLS

- Policy shift away from current arrangements, characterised by intense competition in road freight sector and monopoly control in rail and ports
- Separation of infrastructure from operations
- Government to retain majority ownership of critical infrastructure and responsible for network management and development
- Implementation of sector wide regulation and policy
- User pay principle will be adhered to. Explicit allowance however allowed for cross-subsidisation through higher tariffs on the core network and to sustain access by BEE and smaller operators
- Shift of regulation of the sector from a modal orientation to functional responsibility. Three functional areas have been identified; safety and environment, economic and security
- Greater access for private sector to areas previously under monopoly control. Most likely through PPP type initiatives
ASGISA (Accelerated and Shared Growth Initiative for South Africa) forms the basis for Government interventions to accelerate the rate of economic growth.

“The cost, efficiency and capacity of the national logistics system” is identified as one of 6 national priority constraints to growth.

R47 bill will be spent through Transnet on ports, railway and petroleum pipeline upgrades.

R5.2 bill spent through ACSA on airport improvements and the Dube Trade Port.

Priority industries for support include; Tourism, Business Process Outsourcing, Biofuels, Chemicals, Metals, Agriculture, agro-processing, Creative industries, Wood pulp and paper, Textiles and Durable consumer goods.

Focus on infrastructure and skills development in second economy.
Implications of Transnet restructuring

- Transnet four-point turnaround plan:
  - **Redirecting the business** – operational synergies, customer focus, enhanced quality of infrastructure and turning Spoornet around
  - **Restructuring the balance sheet** – addressing pension fund shortfall, renegotiating contracts with key customers, disposal of non-core assets, transfer of SAA to Gvt
  - **Improved corporate governance** – reformulated shareholder compact, performance management framework
  - **Improved risk management**, establish risk procedures, enterprise risk management framework

- Priority investment in Durban - Gauteng rail link,
- Enhanced rail reliability though asset and operations improvement,
- Port investment including Durban expansion, enhanced container terminal capacity, improved port assets, both crane and straddle carriers,
- Investment in new petroleum pipeline

Challenges of the New National Freight Logistics Strategy for South Africa
Conclusions

- Government committed to infrastructure investment as a means to enhance the quality of supply chains
- Parastatals and the private sector need to enhance efficiency to promote more effective use of infrastructure and a reduction in logistics costs
- Government needs to sustain the pressure to deliver:
  - Separation between rail infrastructure and operation
  - Enhanced scope for smaller operators on rail branch lines
  - Improving overall parastatal efficiency and reliability without only relying on improved asset quality
  - Improved logistical linkages between 1\textsuperscript{st} and 2\textsuperscript{nd} economy
  - The setting up and skilling of institutional responsibilities identified within NFLS