The Competitive Edge of the Port of Durban: Challenges and Opportunities

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Objectives

## Discussion Themes

- Port Capacity
- Port Efficiency
- Port Pricing
- Port – Logistics Networks
- Port Finance
- Ports: Good & Bad Neighbours

## Durban City – Business Hotspots

### Gateway - Corridor
- SIPS2
- Operation Phakisa
- Transnet MDS Execution

### Game Changer
- The Big Dig vs Maximising Utilisation of Existing Assets

### Business Metrics
- Efficiency
- Pricing
- Congestion (marine & landside)
- Growth

## Additional

- Aligning objectives among multiple stakeholders
- Institutional partnerships
South Africa – Container Traffic Growth

Container Throughput at South Africa Ports

- 2009: 3.73
- 2010: 3.81
- 2011: 3.99
- 2012: 4.42
- 2013: 4.69

Million TEUs

Source: World Bank

TEU-GDP Growth Multiplier

- 2010: 0.7
- 2011: 1.3
- 2012: 4.4
- 2013: 3.2

Source: World Bank
SA: Container Market

Richards Bay: 1%, 24k TEUs
Durban: 58%, 2.66 Mn TEUs
East London: 1%, 42k TEUs
Ngqura: 15%, 0.71 Mn TEUs
Port Elizabeth: 6%, 0.26 Mn TEUs
Cape Town: 19%, 0.9 Mn TEUs
Saldanha: <1%, 92 TEUs

Source: Transnet
### Global Port Sector Modernisation

#### Pre-Modern
- State monopolistic ownership
  - Low productivity
  - High labour cost
  - High entry barriers
- Low returns

#### Drivers of Change

**Policy Reform**
- Trade growth and liberalisation
- Markets, deregulation, competition

**Innovation / Technology**
- Containerisation
- Automation, IT
- Larger vessels – go for scale

**Industrial organisation**
- Int’l **terminal** operators
- Operators focus on financial returns
- Technology / management systems across markets

#### Modern
- Landlord port model
- Customer focus
- Access to private capital
- Results:
  - Higher productivity
  - Lower costs
  - More competition

### Post – Crisis
- Efficiency first
- Defer CAPEX
## Strategic Policy Considerations

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Role of Ports</th>
<th>Instruments / Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Development</td>
<td>• Gateway functions • Trade enabling</td>
<td>• Long term strategy - national leadership • Multi-tiered investment arrangements • Canada: Asia-Pacific Gateway • LALB Alamada Corridor</td>
</tr>
<tr>
<td>City – Region Development</td>
<td>• Local development asset • Catalyst of port cluster • Business growth enabler</td>
<td>• Long term Planning – Local leadership • Port – City land use planning • Connecting infrastructure – road/rail • Support port cluster growth • Offset negative externalities</td>
</tr>
<tr>
<td>Transport efficiency</td>
<td>• Efficient provider of transport services</td>
<td>• Port reform: competition and concessions • Master Plan</td>
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### Port Reform Works!

<table>
<thead>
<tr>
<th></th>
<th>1960s</th>
<th>2000s</th>
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<tbody>
<tr>
<td>General Cargo (‘000 mt/m of quay/yr)</td>
<td>1,000</td>
<td>~25-30,000+</td>
</tr>
<tr>
<td>% of ocean going ship time in port</td>
<td>60%</td>
<td>25%</td>
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</table>
Ports as Growth Enablers: Leveraging the Port of Durban

- **Core Business**
  - Facilitate trade through cargo handling services
  - Efficient & Reliable
  - Contribute to logistics / supply chain competitiveness & resilience

- **Catalyst**
  - Value added port clusters
  - Necessary to facilitate waterfront dependent activities – e.g. marine engineering
  - Generate employment in the cluster and other industries
  - Centres of R&D and innovation
## Port Capacity & Efficiency

Mission: efficient, reliable & safe cargo handling: supply meets demand, cost minimisation

**Productivity varies across port ranges:**
- TEU/m of quay: >2,700 (PRC) to 1,200 (Europe) to 1,100 (UK)
- TEU/m2 of CY – Far East 2x Europe/NA

**Policy, regulatory & labour markets remain key determinants of performance**

<table>
<thead>
<tr>
<th>Objective</th>
<th>KPI</th>
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<tbody>
<tr>
<td>Berth window reliability</td>
<td>No ship queuing, predictable schedule of arrivals/departures, vessel turnaround time</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Crane moves / hour – Target sustained @ 25+ moves/ crane hr</td>
</tr>
<tr>
<td></td>
<td>Crane moves / ship hour at berth</td>
</tr>
<tr>
<td>Dwell times</td>
<td>4-5 days</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Air quality / emissions, GHG,</td>
</tr>
<tr>
<td>Tariffs</td>
<td>Market determination (recent evidence of no real increases)</td>
</tr>
<tr>
<td>Logistic efficiency</td>
<td>Total through cost minimisation</td>
</tr>
</tbody>
</table>

![Graph showing crane moves per hour across different ports.

- Belgium
- Germany
- Rotterdam
- Southampton
- Felixstowe
- LeHarve
- China

- Africa Ports
The Growth, Technology & Investment Challenge

Port Investment

- Supply ahead of demand
- New facilities to respond to technology change: deeper draft + new equipment + more land?
- Faster handling speeds - automation
- **BUT:** Access to capital is constrained

**THEREFORE** – efficiency is the clarion call
# Port – City Partnership Parameters

<table>
<thead>
<tr>
<th></th>
<th>Public</th>
<th>Port / Terminal Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Policy and Planning</strong></td>
<td>Strategic Framework – Clear goals Policy and Regulation Plan for growth: land &amp; infrastructure <strong>Resilience</strong> (climate change / risk)</td>
<td>Collaborate / negotiate requirements for port growth Sustainability &amp; social responsibility Resilient assets strategies</td>
</tr>
<tr>
<td><strong>Expansion</strong></td>
<td>Approvals and and conditionality Co-ordinate connecting infrastructure Marine access improvements Manage environmental trade - offs</td>
<td>Ensure capacity to meet demand Increasing focus on improving efficiency FIRST new build second</td>
</tr>
<tr>
<td><strong>Investment</strong></td>
<td>General / basic infrastructure Linking infrastructure</td>
<td>Inside the port “gate” Efficient handling operations Offsets related to externalities Access to capital constrained</td>
</tr>
<tr>
<td><strong>Economic Development</strong></td>
<td>Promote growth and employment Provide enabling environment Business support Human capital development: skill requirements and training needs Manage externalities to secure overall city benefits (e.g tourism/liveability)</td>
<td>Partner perspective and customer focus Compatible land use, access to waterfront assets Commercial agreements / T&amp;Cs Modal shares</td>
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</tbody>
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The Competitive Edge of the Port of Durban

*Market leader and national gateway... BUT ....*

Is the port of Durban efficient? **Mixed evidence**

Efficiency & cost reductions should be a priority

Is the port of Durban positioned to meet the growth challenge as a national gateway? **Not fully established**

Maximising existing assets prudent given uncertainty over the Big Dig financing & market conditions: Review options?

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Thank You

*Data Sources* – Alphaliner, Drewry, WB, IMF, Transnet, ICF-GHK

Gateway to SA

- Imports
- Exports
Back Story
Africa Ports Profile:
Emerging Patterns of Operational Reform

<table>
<thead>
<tr>
<th>Operator</th>
<th>TEU</th>
<th>Equity TEU</th>
<th>State</th>
<th>Terminal Assets</th>
</tr>
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<tbody>
<tr>
<td>Transnet</td>
<td>3,520</td>
<td>3,520</td>
<td>State</td>
<td>Durban, Cape Town, Port Elizabeth, East London, Coega (Ngqura), Richards Bay</td>
</tr>
<tr>
<td>APMT</td>
<td>5,950</td>
<td>3,252</td>
<td>ITO</td>
<td>Port Said, Abidjan, Tema, Douala, Lagos, Onne, Tangiers Med, Pointe Noir, Cotonou, Luanda</td>
</tr>
<tr>
<td>DPW</td>
<td>1,972</td>
<td>1,895</td>
<td>ITO</td>
<td>Djibouti, Maputo, Dakar, El Sokhna, Algiers, Djen Djen, Tema</td>
</tr>
<tr>
<td>Bollorre Africa Damietta</td>
<td>2,595</td>
<td>1,705</td>
<td>Private State (90%)</td>
<td>Abidjan, Tema, Lagos, Douala, Cotonou, Owendo, Pointe Noir, Pointe des Galets, Lome, Damietta</td>
</tr>
<tr>
<td>Container &amp; Cargo Handling Co.</td>
<td>1,139</td>
<td>1,139</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alexandria Container Handling Co.</td>
<td>657</td>
<td>657</td>
<td>State</td>
<td>Casablanca</td>
</tr>
<tr>
<td>HPH</td>
<td>809</td>
<td>470</td>
<td>ITO</td>
<td>Dar es Salaam, Alexandria (El Dekhila)</td>
</tr>
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Data 2011/12
Catalysts: Employment & Value Added

- **Evidence:** Positive Role of Ports & Economic Growth (OECD)
- **Value added**
  - Economic activity throughput the port cluster
  - 1 mt of throughput = US$100 in value added
  - Sites of cluster formation in other industries – e.g. chemicals (Antwerp) energy (Houston)
- **Employment**
  - Direct port related jobs relatively small
  - Indirect employment far exceeds direct
  - Significant linkages and multipliers
  - 1 mn mt of throughput = 800 jobs including direct, indirect & induced effects
- **Value – added & Employment benefits depends on port type and commercial policy**
  - Bulks less than container
  - Transhipment low value / less labour
  - Port asset leveraging
Black Swans and Ports: Resilience

Risk Factors
- Performance of fixed assets
- Supply chain integrity
- Availability of resources (e.g. energy)

Impacts
- Unplanned CAPEX
- Increased OPEX
- Reduced efficiencies
- Availability of insurance

Response
- Revised design parameters for high cost – long term fixed assets
## Catalyst: Gateway Functions

### Objectives

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<th>Trade facilitation: stimulate business &amp; employment growth</th>
<th>Investment in fixed and mobile assets to improve the flow of physical goods – capacity and efficiency enhancements</th>
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<tr>
<td>• Canada – Asia Pacific Gateway, Continental Gateway, Atlantic Gateway</td>
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<tr>
<td>• US – Heartland Corridor (double stack trains from Norfolk, VA to Ohio)</td>
<td></td>
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<tr>
<td>• LALB - Alameda Corridor - facilitate cargo evacuation - LA/LB to inland terminals</td>
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<th>Regional growth</th>
<th>Recognise geographic market segmentation and need for multiple gateways / corridors to improve access to services, stimulate competition and redundancy</th>
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<td>Service multiple cargo markets / leverage large fixed asset investments</td>
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<th>Risk sharing</th>
<th>Create public – private partnerships to improve planning and co-ordination</th>
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<td>Cost sharing among beneficiaries</td>
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<th>Sustainability</th>
<th>Modal shift targets – invest in supporting facilities (road to rail / water)</th>
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<td>Internalise externalities and allocate to port – UK Felixstowe £100mn of investment to increase capacity of inland transport to offset increase traffic paid by private port operator as part of planning permission to expand terminal</td>
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</tr>
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</table>

### Contributions to Canada Asia-Pacific Gateway Projects Since 2005 (C$bn)

- Provincial Gov't: $5.4
- Federal Gov't: $1.6
- Local Gov't: $1.0
- Private Sector: $13.7