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## **Port Operations Performance Standards**

### **Terminal Operator Performance Standards (TOPS)**



- What is TOPS
- Key Principle of TOPS
- Aims of TOPS
- TOPS Development Process
- TOPS Consultation
- Methodology
- Scope of Measures for TOPS
- Systematic STAT
- Port Capacity
- Benefits to Stakeholders

# What Is TOPS And How Will It Work?

- The TNPA issued Terminal Operator Licenses (TOL's) in July 2012. Clause 14 of the TOL provides for Terminal Operator Performance Standards (TOPS)
- TOPS are a set of key performance measures applicable to the performance of the Terminal / Terminal Operator as well as the applicable norms / standards for such measures
- TOPS are issued in writing by the TNPA to the Terminal Operator will be determined for a set performance measures as applicable to the operation
- The TNPA's oversight in ensuring that TOPS are met:
  - The Terminal performance against TOPS is assessed quarterly by TNPA
  - The Terminal Operator to effect remedial action to ensure that TOPS is met
- TOPS will be reviewed and / or revised annually in line with the anniversary date of the TOL (01 July 2014)

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Informed and expected levels of performance for specific Terminal operations/processes.

- TOPS PERFORMANCE CRITERIA
- Volume throughput
- Volume of cargo per ship working hour
- Turnaround times (cargo, ship, road and rail)

## Key Principles Adopted In TOPS

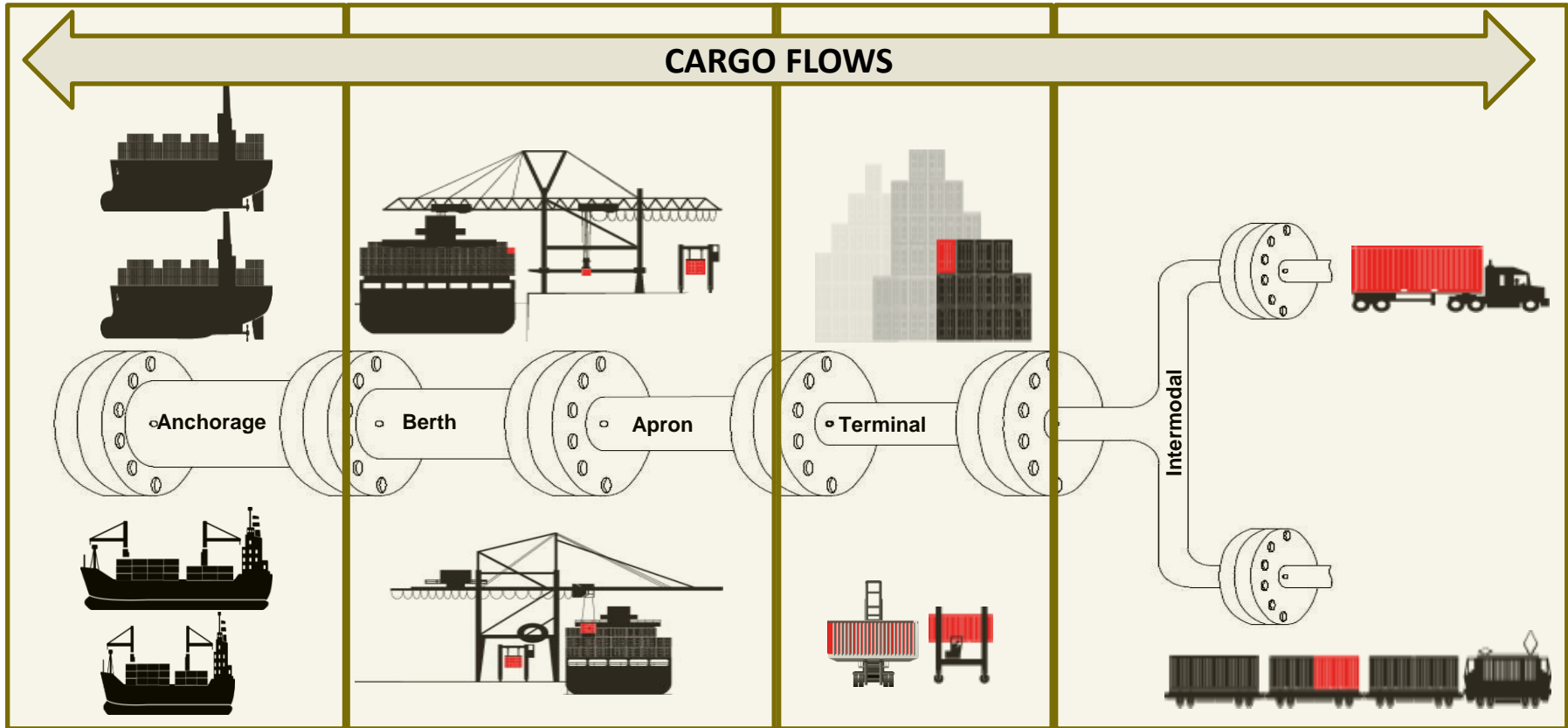
- Constructive engagement between the TNPA and Terminal Operators to improve port performance
- A consultative approach to inform the determination of TOPS
- Standardized and consistent methodology as per TNPA TOPS Toolkit across all Terminal Operators
- Emphasis on cargo flows, productivity, efficiency and competitiveness of South African Ports
- TOPS focus on, inter alia on port / terminal capacity informed by demand, current operational realities, performance expectations, applicable internal and international benchmarks and good order
- Emphasis on performance and remedial action. Where large performance gaps exist against the desired standard, interim targets may be set to remedy the situation over time whilst being mindful of the standard
- Repeated non achievement of targets will be approached in terms of Clause 14.9 and Clause 20 (breach and remedial action) of the TOL. The mechanisms for Clause 14.9 will be developed in consultation with port users in the 2014/15 year.
- Develop and grow a data driven and validation based and auditable approach to TOPS

# TOPS Aims To Facilitate The Smooth Flow Of Cargo (Containers)

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- Berthing delays

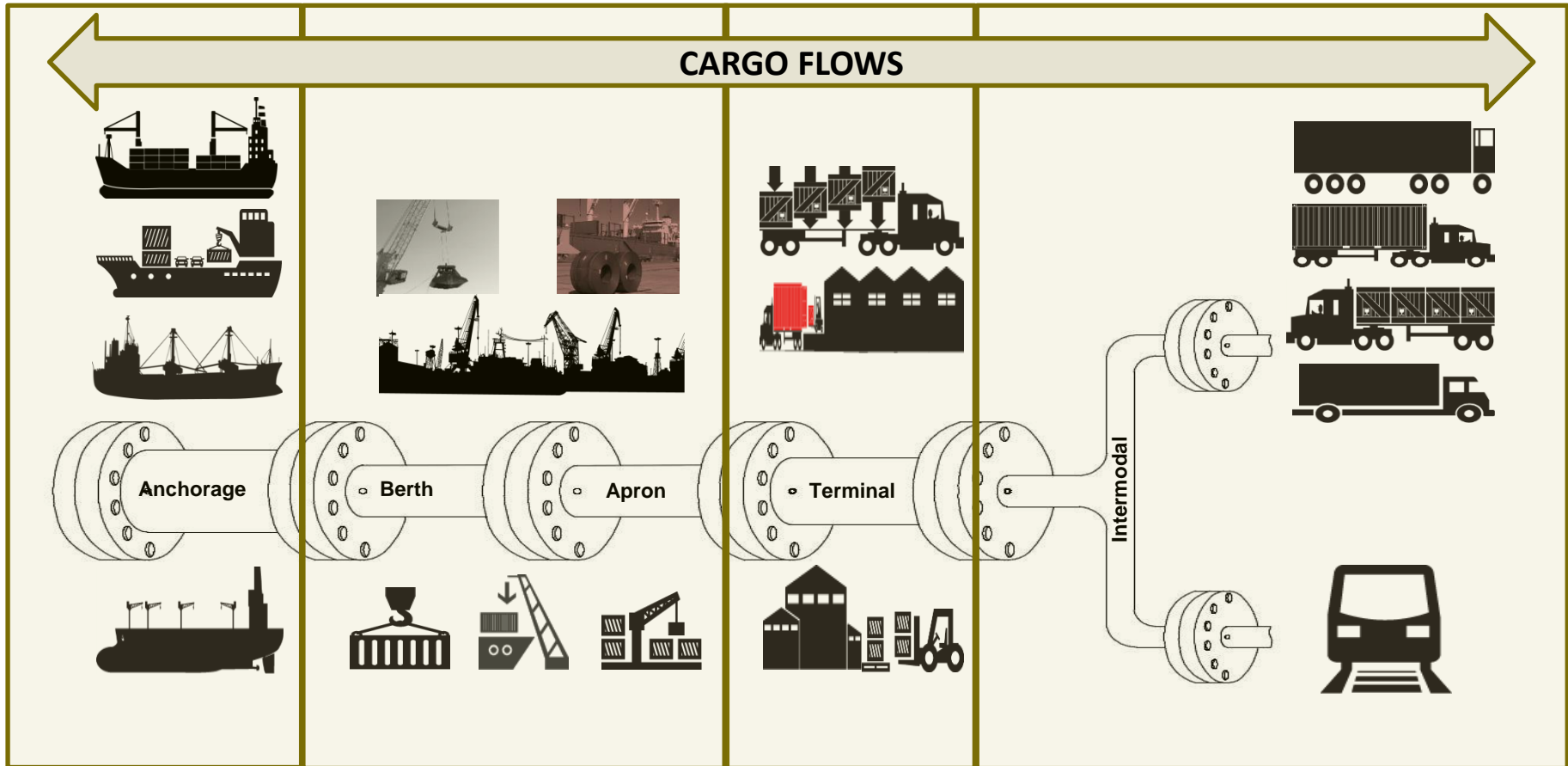
- Berth productivity
- Ship Working Hour / ATS

- Throughput
- Container dwell time

- Truck turnaround time
- Truck waiting time
- Rail turnaround time



# TOPS Aims To Facilitate The Smooth Flow Of Cargo (Break Bulk / MPT)



- Berthing delays

- Berth productivity
- Ship Working Hour / ATS

- Throughput
- Cargo dwell time

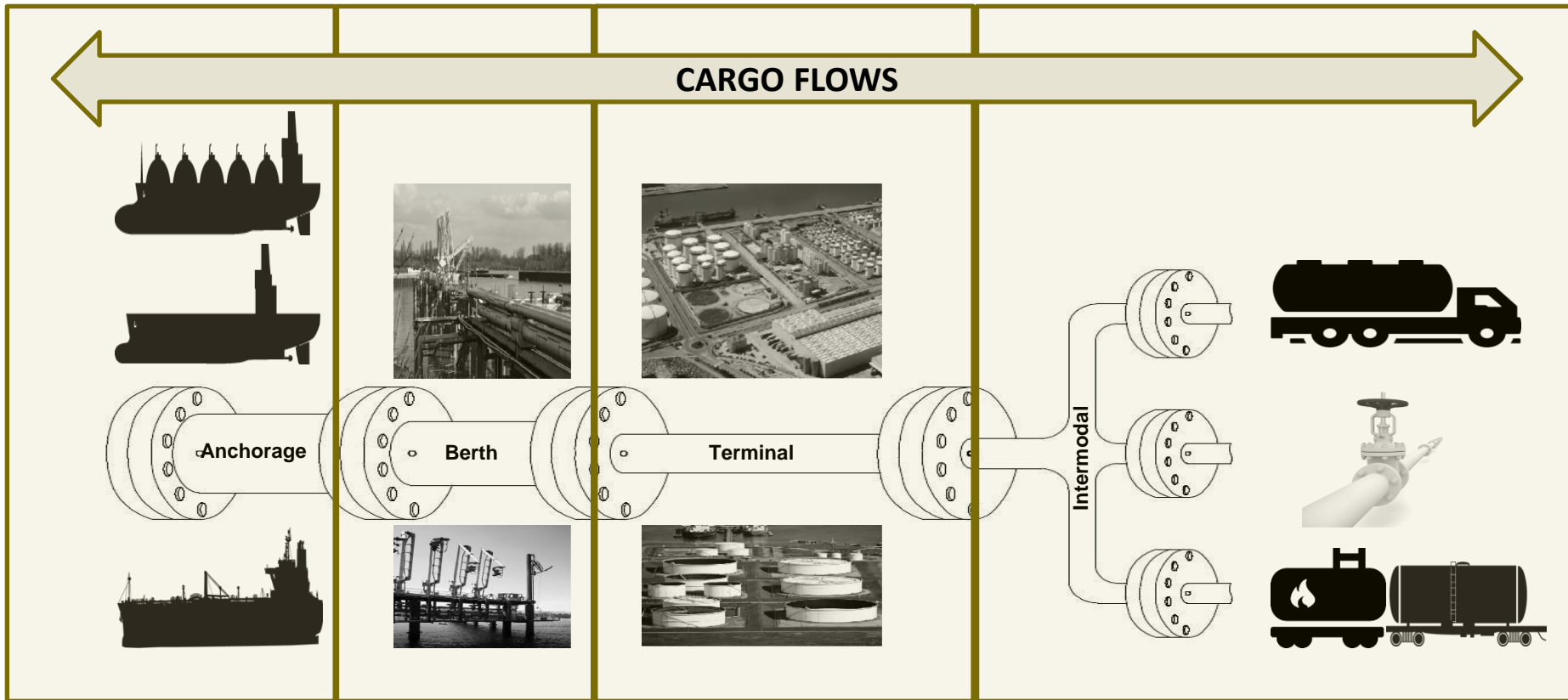
- Truck turnaround time
- Truck waiting time
- Rail turnaround time

# TOPS Aims To Facilitate The Smooth Flow Of Cargo (Liquid Bulk)

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- Berthing delays

- Berth productivity
- Ship Working Hour / ATS

- Throughput
- Cargo dwell time

- Truck turnaround time
- Truck waiting time
- Rail turnaround time

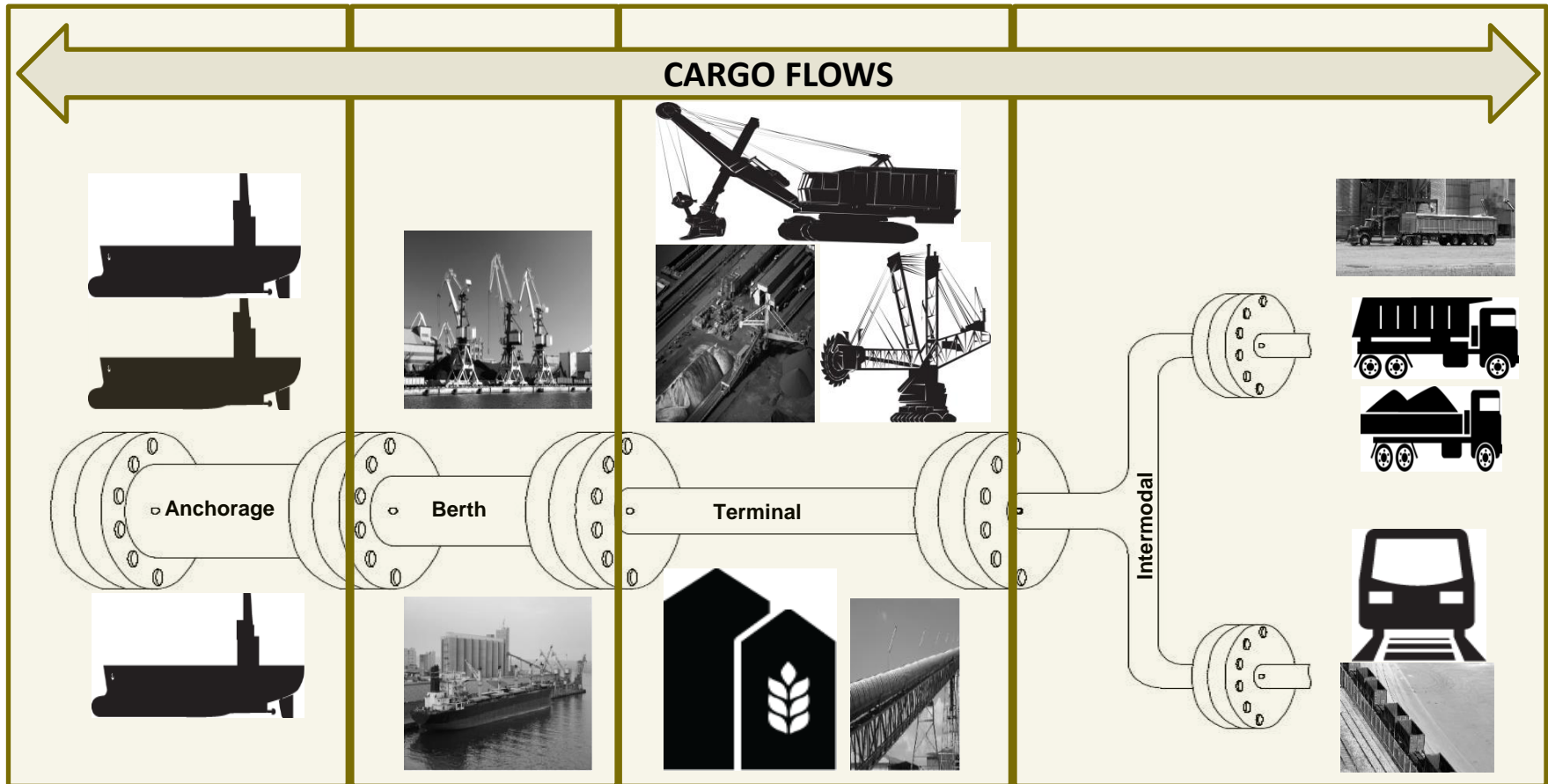


# TOPS Aims To Facilitate The Smooth Flow Of Cargo (Dry Bulk)

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- Berthing delays

- Berth productivity
- Ship Working Hour / ATS

- Throughput
- Cargo dwell time

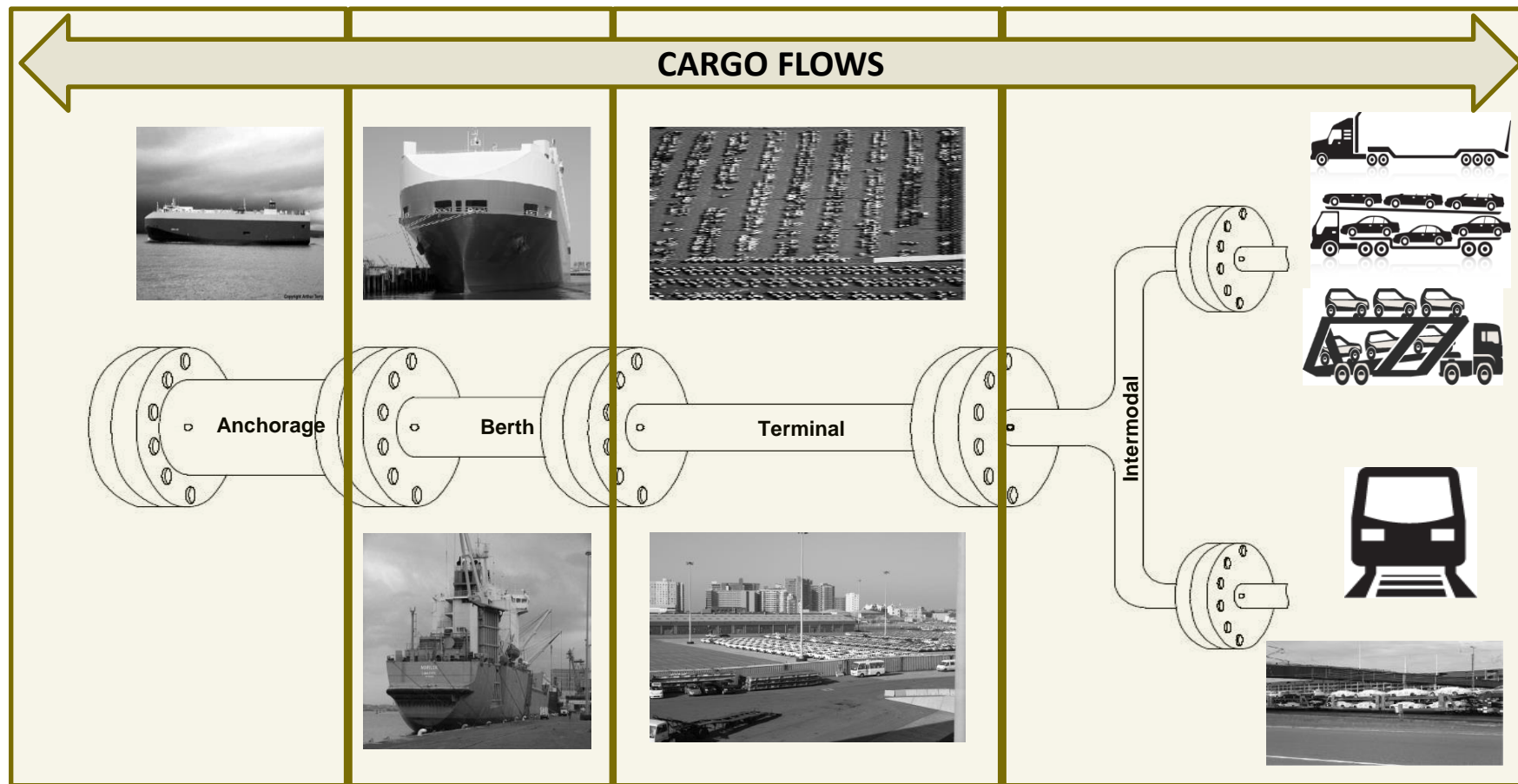
- Truck turnaround time
- Truck waiting time
- Rail turnaround time



# TOPS Aims To Facilitate The Smooth Flow Of Cargo (Ro Ro)

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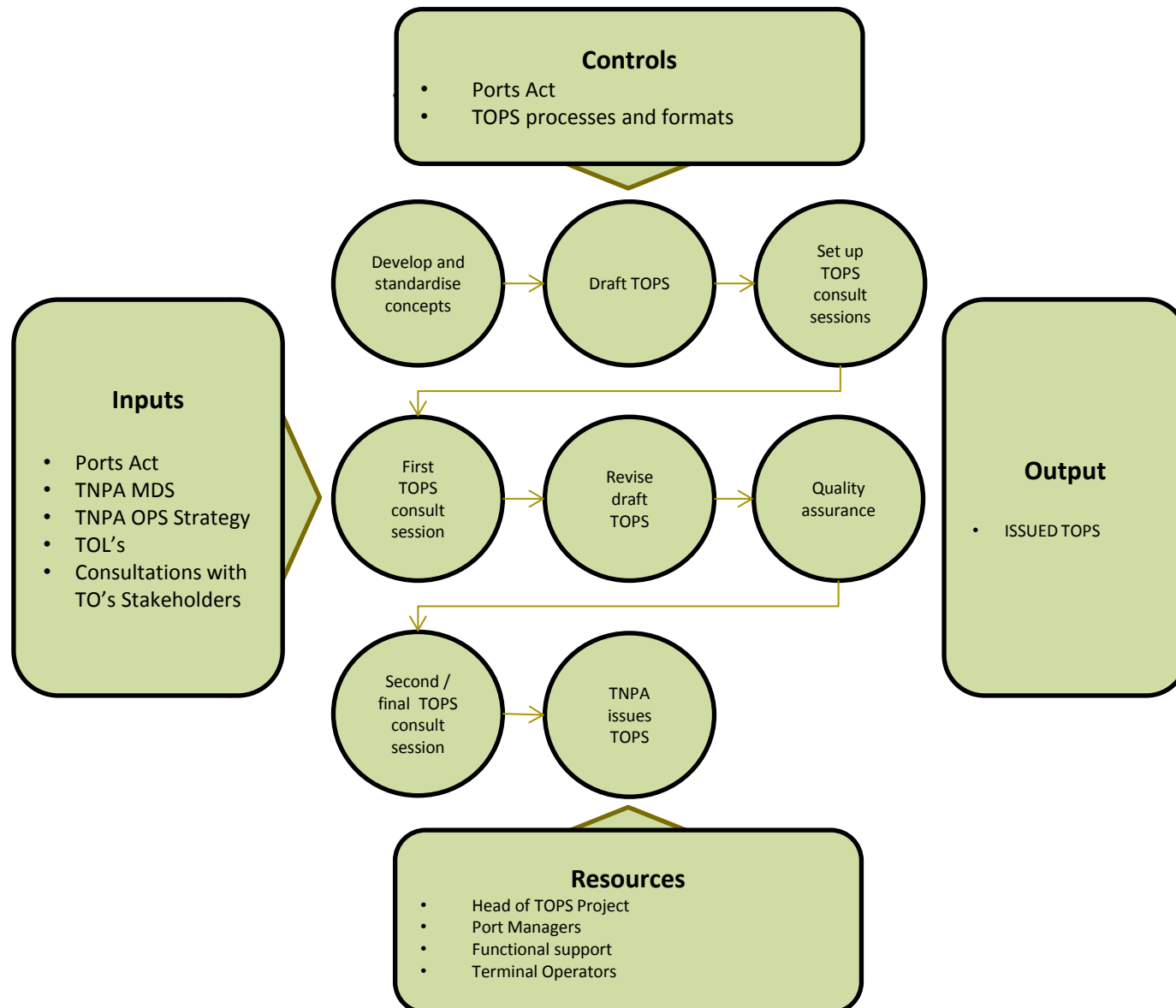
- Berthing delays

- Berth productivity
- Ship Working Hour / ATS

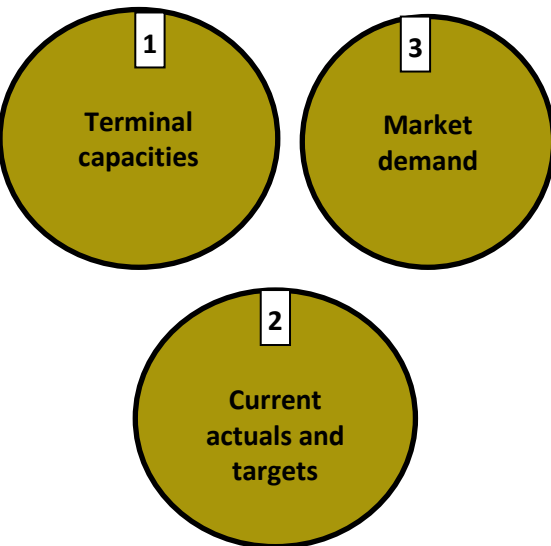
- Throughput
- Unit dwell time

- Truck turnaround time
- Truck waiting time
- Rail turnaround time

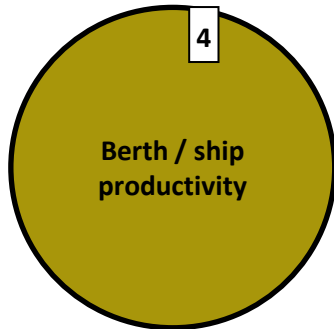
# Standard TOPS Development Process



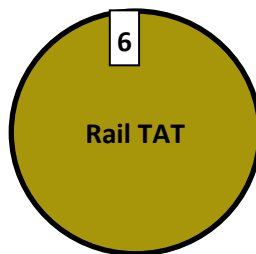
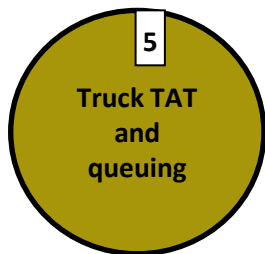
Who	Purpose
Terminal Operators	Determine TOPS through a consultative development process and to embed TOPS within the operational and oversight relationship between TNPA and the Terminal Operator
Transnet	Alignment with Transnet of corporate targets (MDS) to ensure integration with CAPEX and operational performance / delivery
Department of Public Enterprises	Alignment with Shareholder expectations regarding the performance of the South African Ports system and strategic investment decisions
Ports Regulator	Integration of the port efficiency component with other aspects of the port tariff model
PCC's	Consult as per PCC mandate to inform and where necessary validate TOPS
Port Users and Cargo Owners	Inform and where necessary validate TOPS



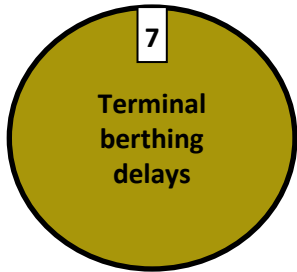
Question	Source of info / Action
<ul style="list-style-type: none"> <li>What is the current terminal capacity?</li> </ul>	<ul style="list-style-type: none"> <li>TNPA or terminal simulations, desktop calculations</li> </ul>
<ul style="list-style-type: none"> <li>What is the level of market demand to be serviced and what portion will this terminal serve?</li> </ul>	<ul style="list-style-type: none"> <li>Terminal and TNPA Commercial departments, Customers</li> </ul>
<ul style="list-style-type: none"> <li>What are the gaps between 1,2, and 3?</li> </ul>	<ul style="list-style-type: none"> <li>Comparison, discuss and set standards / targets for throughput</li> <li>Vessel reports</li> <li>Out turn reports</li> </ul>



Question	Source of info / Action
<ul style="list-style-type: none"> <li>What is the current GCH or Tons / hour productivity of cranes, ship loaders, conveyer systems, pumps etc?</li> </ul>	<ul style="list-style-type: none"> <li>Terminal Operator, Customers</li> </ul>
<ul style="list-style-type: none"> <li>What is the rated performance of the equipment and why is the rated performance not met?</li> <li>Uncontrollable exclusions must be noted in the measures</li> </ul>	<ul style="list-style-type: none"> <li>Terminals, Equipment suppliers</li> </ul>
<ul style="list-style-type: none"> <li>Understand reasons for gaps. These may be supply chain or bottleneck related! Equipment may need to be upgraded or replaced</li> </ul>	<ul style="list-style-type: none"> <li>Comparison, discuss and set standards / targets for equipment productivity</li> </ul>



Question	Source of info / Action
<ul style="list-style-type: none"> <li>What is the current Truck TAT or prevailing truck congestion outside terminals?</li> <li>What is the Rail TAT and the % trains departed on time</li> </ul>	<ul style="list-style-type: none"> <li>Trend analysis from terminals and customers, trucking associations</li> </ul>
<ul style="list-style-type: none"> <li>Does the terminal operator manage truck arrival patterns? Is there a booking system?</li> </ul>	<ul style="list-style-type: none"> <li>Comparison, discuss and set standards / targets</li> </ul>



Question	Source of info / Action
<ul style="list-style-type: none"><li>• What is the current vessel berthing delays attributed to the terminal?</li></ul>	<ul style="list-style-type: none"><li>• Marine Services, Terminal Operator, Customers</li></ul>
<ul style="list-style-type: none"><li>• Uncontrollable exclusions must be noted in the measures</li></ul>	<ul style="list-style-type: none"><li>• Terminals, Equipment suppliers</li></ul>
<ul style="list-style-type: none"><li>• Understand reasons for gaps. These may be supply chain or bottleneck related! Equipment may need to be upgraded or replaced</li></ul>	<ul style="list-style-type: none"><li>• Comparison, discuss and set standards / targets for equipment productivity</li></ul>

## Inputs

- Ports Act, Commercial Ports policy
- Terminal Operator Licence
- Installed, utilised and spare capacity of terminal
- Market demand for the commodity/ies or sector
- Capability of current equipment and resources against performance expectations and internationally accepted thresholds and ranges (benchmarks)
- Commercial arrangements with customers

**Draft TOPS /  
Revised TOPS /  
Issued TOPS**

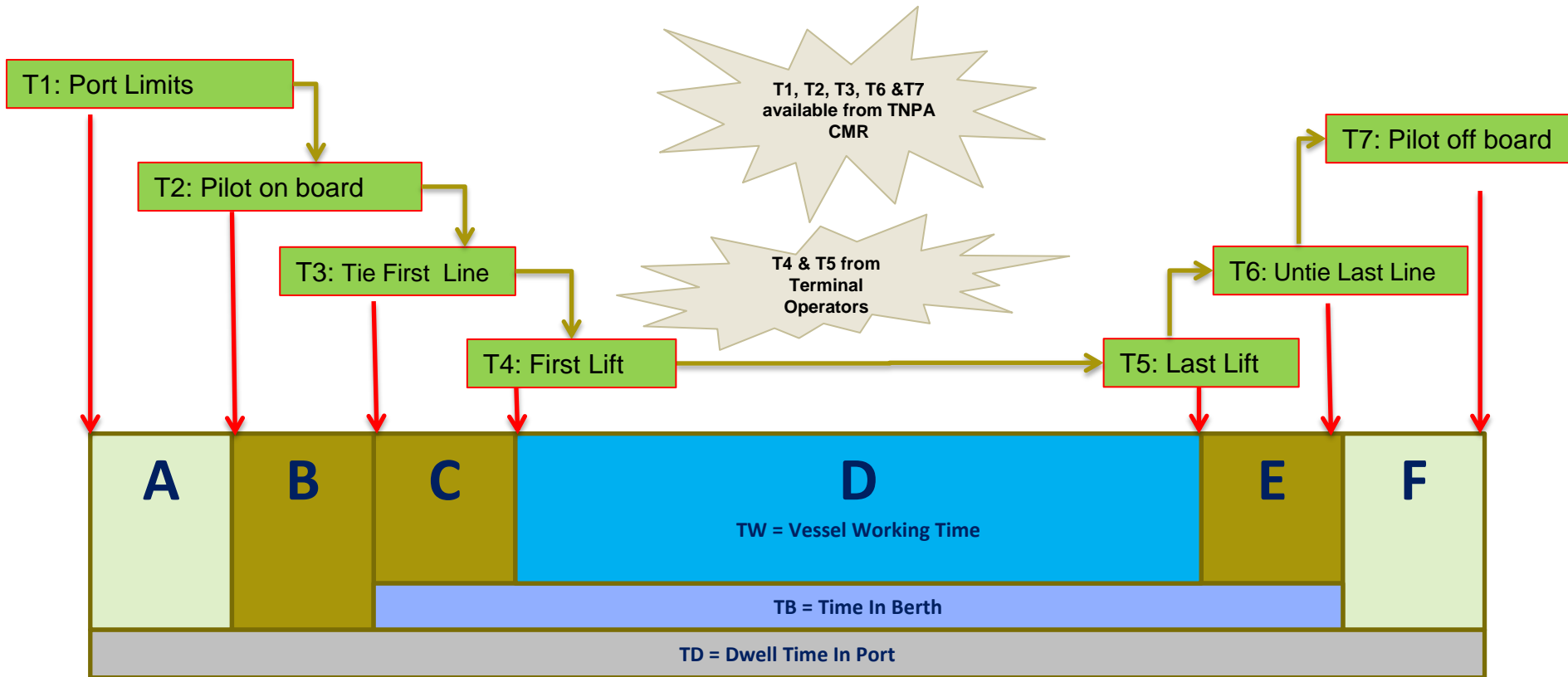


# Scope Of Measures For TOPS

Measure	Stated in	Applicable to	Managed by
Terminal Berthing Delays	Average hours per vessel	Terminals using dedicated berths	Operational relationship, quarterly assessments, Clause 14.9 and Clause 20 of TOL
Berth Productivity	TEU’s per berth hour	Terminals using dedicated berths	
Ship Working Hour	Containers per ship hour Tons per ship hour Kl per ship hour Units per ship hour	All terminals	
Truck Turnaround Time	Average minutes	Terminals with road haulage	
Truck Queuing Time (outside terminals)	Average number of vehicles		
Rail Turnaround Time	Average Hours	Terminals with rail haulage	
Cargo Dwell Time	Average days	All terminals	
Terminal throughput	TEU’s, Tons, Kl, Units	All terminals	

The above measures are supported by standard definitions and calculation methods

# Systemic View Of Ship Turnaround



**A = WAITING FOR BERTH (T2– T1)**  
**C = WAITING FOR GANGS (T4– T3)**

**B = SAILING IN (T3 – T2)**  
**D = WORKING (T5– T4)**

**E = PREPARING TO SAIL (T6– T5)**  
**TB = TOTAL TIME ON BERTH (T6 – T3)**

**F = SAILING OUT (T7– T6)**  
**TD = PORT DWELL TIME (T7 – T1)**

# TOPS Benefits to All Port Players

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## Shipping Lines



### Expect:

- Cargo volumes
- Compliance with schedules
- High productivity levels
- Flexibility
- Reduced operating costs
- Market growth

### Expect:

- Economic growth
- Job creation
- Access to the port industry
- People development
- Minimised externalities
- Sustainability

Stakeholders, Service Providers and Suppliers

**TOPS = improved port performance, increased volumes / revenues with decreased costs**

## Port Authority

### Expect:

- Cargo and vessel volumes
- Targeted levels of capacity utilisation
- High productivity levels
- Quick turnaround of vessels
- Smooth logistics flows
- Market growth

### Expect:

- Targeted volumes
- Asset utilisation
- Vessel handling productivity levels
- Demand coverage
- Competency
- Safety
- Sustainability

## Marine Services



## Terminals

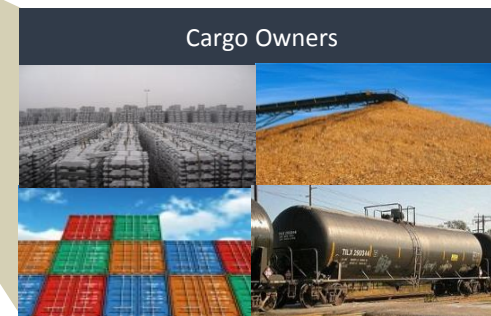
### Expect:

- Cargo volumes
- Terminal productivity
- Performance of service providers
- Reduced operating cost
- Market growth

### Expect:

- Compliance with dwell times and lead times
- Storage
- Cargo handling productivity
- No cargo degradation or damage
- Reduced costs

## Cargo Owners



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Thank you

