TRANSNET NATIONAL PORTS AUTHORITY

TARIFF APPLICATION FOR FINANCIAL YEAR 2017/18

Port of East London

RoRo Vessel

Table of Contents

Tables

Figures

ABBREVIATIONS AND ACRONYMS

AFS	Annual Financial Statements
APDP	Automotive Production Development Program
BER	Bureau of Economic Research
BRICS	Brazil, Russia, India, China & South Africa
CAGR	Compounded Annual Growth Rate
CAPEX	Capital Expenditure
CAPM	Capital Asset Pricing Model
CMEO	Chief Marine Engineering Officer
CPI	Consumer Price Index
CPT	Cape Town
CSI	Corporate Social Investment
CWIP	Capital Work In Progress
DBN	Durban
DBT	Dry Bulk Terminal
DCT	Durban Container Terminal
DDOP	Durban Dig Out Port
DIA	(Old) Durban International Airport
DMS	Dimson, Marsh and Staunton
DMTN	Domestic Medium Term Note
DORC	Depreciated Optimised Replacement Cost
DoT	Department of Transport
DRS	Dredging Services
EIMS	Enterprise Information Management Services
EL	East London
EPMO	Enterprise Programme Management Office
ETIMC	Excessive Tariff Increase Margin Credit
FEL	Front End Loading
FMCSA	Ford Motor Company of Southern Africa
GDP	Gross Domestic Product
GMTN	Global Medium Term Note
GPPCS	Global Port Pricing Comparator Study
GRT	Gross Registered Tonnage
HCM	Human Capital Management
HOPS	Haulier-Road Operations Performance Standards
IAS	International Accounting Standards
IDZ	Industrial Development Zone
IPMS	Integrated Port Management System
JOC	Joint Operations Centres
JSE	Johannesburg Stock Exchange
KAM	Key Account Manager
LTPF	Long-term Transnet Planning Framework
MDS	Market Demand Strategy
MIDP	Motor Industry Development Plan
MOPS	Marine Operations Performance Standards
MPT	Multi-Purpose Terminal
MRP	Market Risk Premium
MSOE	Marine School of Excellence

MTBSA	Man Truck and Bus South Africa
Mtpa	Millions tonnes per annum
NAAMSA	National Association of Automobile Manufacturers of South Africa
NBV	Net Book Value
NERSA	National Energy Regulator of South Africa
NGQ	Ngqura
NIMS	National Infrastructure Maintenance Strategy
NPA	National Ports Authority
NPCC	National Port Consultative Committee
NPP	National Ports Plan
OD	Operating Divisions
OEMs	Original Equipment Manufacturers
OPEC	Organisation of Petroleum Exporting Countries
Opex	Operating Costs
PCC	Port Consultative Committee
PE	Port Elizabeth
PLP	Project Life Cycle Process
RAB	Regulatory Asset Base
RR	Revenue Requirement
RfR	Risk Free Rate
RBCT	Richards Bay Coal Terminal
RCB	Richards Bay
ROD	Record of Decision
ROPS	Rail Operations Performance Standards
SA	South Africa
SAMSA	South African Maritime Safety Association
SARB	South African Reserve Bank
SARS	South African Revenue Services
SBIDZ	Saldanha Bay Industrial Development Zone
SLD	Saldanha Bay
SOC	State Owned Company
SOE	State Owned Enterprise
SRAB	Starting Regulatory Asset Base
TCC	Transnet Corporate Centre
TEU	Twenty-foot Equivalent Unit
TOC	Trended Original Cost
TONS	Tonnages
TOPS	Terminal Operator Performance Standards
TP	Transnet Properties
TPT	Transnet Port Terminals
TSHD	Trailing Suction Hopper Dredger
UK	United Kingdom
USA	United States of America
VWSA	Volkswagen South Africa
WACC	Weighted Average Cost of Capital
WACD	Weighted Average Cost of Debt

1. Executive Summary

In terms of Section 72 (1) (a) of the National Ports Act, 2005 (Act No. 12 of 2005) ("the Act"), Transnet National Ports Authority, a division of Transnet SOC Limited ("the Authority") is required, with the approval of the Ports Regulator ("the Regulator"), to determine tariffs for services and facilities offered by the Authority and to annually publish a tariff book containing those tariffs. The Port Directives were approved on 13 July 2009 (gazetted on 06 August 2009) and amended on 29 January 2010. In terms of these Directives, when considering the proposed tariffs for the Authority, the Regulator must ensure that such tariffs allow the Authority to:

a) recover its investment in owning, managing, controlling and administering ports and its investment in port services and facilities;

b) recover its costs in maintaining, operating, managing, controlling and administering ports and its costs in providing port services and facilities; and

c) earn a return commensurate with the risk of owning, managing, controlling and administering ports and of providing port services and facilities.

The Authority shall on an annual basis, on or before 1 August, submit its application setting out its proposed tariff for all services and facilities offered by the Authority for the following financial year for the approval by the Regulator. Also the Directives allow the Authority to submit to the Regulator a proposal for the amendment of any tariff for services and facilities offered by the Authority at any port from time to time. The Directives prescribe a period of 4 months upon which the Regulator shall make a decision.

In determining the tariffs, the Authority applies the prescribed Tariff Methodology issued by the Regulator on 31 July 2014. The approved Tariff Methodology allows the Regulator to govern the Authority's tariff setting process and considers a multi-year approach, applicable to the 2015/16 to 2017/18 tariff years. It further allows for an annual review and an annual adjustment of tariffs within the three year period as opposed to fixing the tariffs for the full period.

The approach applicable to the tariff period FY2017/18, per the Tariff Methodology, is based on the Revenue Requirement (RR) formula as follows:

Revenue Requirement

= Regulatory Asset Base (RAB) x Weighted Average Cost of Capital (WACC)

+ Operating Costs + Depreciation + Taxation Expense ±Claw-back

± Excessive Tariff Increase Margin Credit (ETIMC)

The components of the RR formula have been summarised in the Tariff Methodology as follows:

a) ***Regulatory Asset Base (RAB)***: *The RAB represents the value of assets that the NPA is allowed to earn a return on. The value of the assets in the RAB is indexed by inflation each year based on the Trended Original Cost ('TOC') approach.*

b) ***Vanilla Weighted Average Cost of Capital (WACC):*** *The WACC represents the risk adjusted opportunity costs of capital and is the minimum return for an investment in order to continue to attract capital, given the risks. A real WACC is applied, given that the RAB is indexed by inflation.*

c) ***Operating Costs:*** *The Regulator will analyse the operating cost estimates for the period on a detailed line by line basis. The NPA is required to provide detailed and complete motivation for each of the expenses applied for.*

d) ***Depreciation:*** *The depreciation of the assets in the RAB will be calculated as a straight line 40 year on the opening balance of the RAB.*

e) ***Taxation Expense:*** *The Regulator will use the pass-through tax approach where the vanilla WACC will be applied to the average RAB for the period under consideration, less the interest cost of debt and the corporate tax rate to determine the tax liability to be treated as an expense in the RR calculation.*

f) ***Claw-Back:*** *The key purpose of applying the claw-back is to ensure that the NPA or any port user is fairly treated and is not subjected to unfair gains and losses. The Regulator will spread the total impact of over/under recovery of revenue over a period of two tariff determinations.*

g) ***Excessive Tariff Increase Margin Credit (ETIMC):*** *The Regulator considers it prudent to avoid future tariff spikes by retaining and increasing the NPA's ETIMC.*

This Tariff Application is prepared in accordance with the Tariff Methodology together with the consideration of the latest economic indicators. The Tariff Application for FY 2017/18 is presented as follows:

Table 1: Base Revenue Requirement FY 2017/18 to FY 2019/20

DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20
	ROD	Fixed Tariff Year	Indicative Tariff Years	
	R'm	R'm		
RAB	73 846	74 477	81 651	89 872
Vanilla WACC	4.64%	5.42%	6.25%	6.47%
Return on Capital	3 420	4 036	5 101	5 817
Plus: Depreciation	1 948	2 015	2 199	2 414
Plus: Operating Costs	5 487	5 961	6 391	6 935
Plus: Taxation Expense	889	969	1 185	1 339
Plus/Less: Clawback	-680	-774	11	-
Plus/Less: ETIMC	-	-	-	-
Revenue Allowed	***11 064***	***12 207***	***14 887***	***16 505***
Less: Real Estate	-2 600	-2 798	-3 028	-3 282
Revenue Shortfall	-7	-	-	-
Marine Revenue	***8 457***	***9 409***	***11 859***	***13 224***

This resultant Revenue Requirement for FY 2017/18 is R12 207m comprising of Real Estate Business revenue of R2 798m and Marine Business revenue of R9 409m. In order to determine the Marine Business revenue to be derived from tariff adjustments, the required revenue of R9 409m is compared with the expected revenue of R8 469m for FY 2016/17 and increased for the expected growth in volumes of 1.80% to realise a tariff increase of 9.14% for FY 2017/18, as presented in Table 2 below.

Table 2: Base Marine Revenue for FY 2017/18 to FY 2019/20

MARINE REVENUE	FY2017/18	FY2018/19	FY2019/20
	Fixed Tariff Year	Indicative Tariff Years	
	R'm		
Prior Year Revenue	8 469	9 409	11 859
Estimated Volume Growth	1.80%	1.80%	1.80%
Revenue after volume growth	8 621	9 579	12 072
Required Revenue	9 409	11 859	13 224
Tariff Increase	***9.14%***	***23.80%***	***9.54%***

The application outcome derived from the use of the tariff methodology and prevailing assumptions results in a tariff adjustment which is within the CPI + 3% range. The Authority has maintained its position (as guided in previous tariff applications) that in order to successfully deliver on the Transnet MDS a tariff adjustment of CPI + 3% would be required. However, the Authority is cognisant of the current economic situation and financial challenges confronting our customer base and therefore revisited our funding ability in relation to the MDS programme. In order to assist our customer base whilst ensuring a successful MDS delivery, the Authority proposes to utilise R98m of the Excessive Tariff Increase Margin Credit (ETIMC) facility as illustrated in Table 3 below. In terms thereof, the revised Revenue Requirement is presented as follows:

Table 3: Revised Revenue Requirement FY 2017/18 to FY 2019/20

DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20
	ROD	Fixed Tariff Year	Indicative Tariff Years	
	R'm	R'm		
RAB	73 846	74 477	81 651	89 872
Vanilla WACC	4.64%	5.42%	6.25%	6.47%
Return on Capital	3 420	4 036	5 101	5 817
Plus: Depreciation	1 948	2 015	2 199	2 414
Plus: Operating Costs	5 487	5 961	6 391	6 935
Plus: Taxation Expense	889	969	1 185	1 339
Plus/Less: Clawback	-680	-774	11	-
Plus/Less: ETIMC	-	-98	-	-
Revenue Allowed	***11 064***	***12 109***	***14 887***	***16 505***
Less: Real Estate	-2 600	-2 798	-3 028	-3 282
Revenue Shortfall	-7	-	-	-
Marine Revenue	***8 457***	***9 311***	***11 859***	***13 224***

The resultant Revenue Requirement with the use of ETIMC for FY 2017/18 is R12 109m comprising of Real Estate Business revenue of R2 798m and Marine Business revenue of R9 311m. In order to determine the Marine Business revenue to be derived from tariff adjustments, the required revenue of R9 311m is compared with the expected revenue of R8 469m for FY 2016/17 and increased for the expected growth in volumes of 1.80% for FY 2017/18.

Accordingly, the same principles are applicable for FY 2018/19 and FY 2019/20 and the outcomes are demonstrated in Table 4 below.

Table 4: Revised Marine Revenue for FY 2017/18 to FY 2019/20

MARINE REVENUE	FY2017/18	FY2018/19	FY2019/20
	Fixed Tariff Year	Indicative Tariff Years	
	R'm		
Prior Year Revenue	8 469	9 311	11 859
Estimated Volume Growth	1.80%	1.80%	1.80%
Revenue after volume growth	8 621	9 479	12 072
Required Revenue	9 311	11 859	13 224
Tariff Increase	***8.00%***	***25.11%***	***9.54%***

This translates into an average tariff adjustment of 8.00% for FY 2017/18, and indicative tariff adjustments of 25.11% for FY 2018/19 and 9.54% for FY 2019/20. Given the expiry of the current Tariff Methodology in FY 2017/18, the latter two years will be informed by the new Tariff Methodology.

In accordance with the Tariff Methodology and guidance provided in past ROD's, the Authority hereby applies to the Regulator for revenue of R12 109m comprising of Marine Business revenue of R9 311m and Real Estate business revenue of R2 798m for FY 2017/18. This translates to an average overall tariff adjustment of 8.00%.

Further to the above, and in line with the objective of the Tariff Strategy and previous Record of Decisions, the Authority proposes that the average tariff adjustment of 8.00% be differentiated as follows:

- 13.25% on marine charges (shipping lines);
- 8.30% on all bulk;
- 5.00% on containers; and
- 5.00% on automotives.

2. Introduction

The Authority is the landlord in the South African port system. The Authority is responsible for the safe, efficient and effective economic functioning of the national ports system which it manages, controls and administers. The key business activities of the Authority are to provide and manage port infrastructure and maritime services. In a broader context, the Authority also undertakes to facilitate the development of trade and commerce through market collaboration for the economic benefit of the national economy.

This Tariff Application commences by introducing the primary legislation that deals with the Authority's tariffs and progresses to give an overview of the ports business and infrastructure plans. The tariff application has been prepared in line with the approved Tariff Methodology in order to determine the Revenue Requirement of the Authority, with the determinants for the Authority's revenue being described accordingly.

The Tariff Application that follows has been prepared for one year (FY 2017/18) with the subsequent two years being indicative.

3. Legal Basis and Regulatory Requirements

The regulatory framework for the Authority's tariffs is informed by the Act, and the Directives promulgated by the Regulator. In terms of the regulatory framework the Authority is required, with the approval of the Regulator, to determine tariffs for services and facilities offered by the Authority and to annually publish a tariff book containing those tariffs.

3.1 Section 72 of the Act sets out the Authority's obligations in relation to "Authority's tariff book"

72. (1) (a) The Authority must, with the approval of the Ports Regulator, determine tariffs for services and facilities offered by the Authority and annually publish a tariff book containing those tariffs;

(b) The Authority may, with the approval of the Ports Regulator, amend the tariff book whenever it is necessary to do so.

(2) The Authority must, prior to any substantial alteration of a tariff, consult with the National Port Consultative Committee.

(3) Subject to section 9 of the Competition Act, 1998 (Act No. 89 of 1998), the tariffs contemplated in subsection (1) may vary between ports.

(4) Notwithstanding the provisions of this section, the Authority may enter into an agreement with a licensed operator or a party to an agreement or a port user for the variation of any tariff contemplated in subsection (1).

3.2 The Ports Directives

3.2.1 The Regulator developed the Directives, which were gazetted on 6 August 2009 and amended on 29 January 2010. Of these, the most pertinent to the setting and approval of tariffs are Directive 22 (which deals with the Approval and amendment of tariffs) and Directive 23 (which deals with Tariff requirements).

3.2.2 Directive 23 (1) requires the Regulator to consider whether the tariffs proposed by the Authority reflect and balance:

a) A systematic tariff that is applicable on a comparable basis;
b) Fairness;
c) The avoidance of discrimination save where discrimination is in the public interest;
d) Simplicity and transparency;
e) Predictability and stability;
f) The avoidance of cross subsidisations save where cross subsidisation is in the public interest; and
g) The promotion of access to ports and efficient and effective management and operation in ports.

3.2.3 The opening statement of sub-directive 23(2), reads as follows: In considering the Authority's proposed tariffs, and any subsequent proposed significant variations, the Regulator must enable the Authority to:

(a) Recover its investment in owning, managing, controlling and administering ports and its investment in port services and facilities;

(b) Recover its costs in maintaining, operating, managing, controlling and administering ports and its costs in providing port services and facilities; and

(c) Make a profit commensurate with the risk of owning, managing, controlling and administering ports and of providing port services and facilities.

This sub-directive prescribes that the Regulator must enable the Authority to recover its investment, costs and to earn a profit commensurate with the risk it bears.

3.2.4 Per the Directives, the Authority shall on an annual basis, on or before 1 August, submit its application setting out its proposed tariff for all services and facilities offered by the Authority for the following financial year for approval by the Regulator. Also the Directives allow the Authority to submit to the Regulator a proposal for the amendment of any tariff for services and facilities offered by the Authority at any port from time to time. The Directives prescribe a period of 4 months upon which the Regulator shall make a decision.

Any deviation from the set timelines per the Directives could result in a significant misalignment between the application submitted by the Authority and the Regulator's ROD.

3.3 Regulatory Manual / Tariff Methodology

3.3.1 On 31 July 2014, the Regulator issued a Regulatory Manual ("Tariff Methodology") applicable for the tariff years 2015/16 to 2017/18. The Tariff Methodology will be multi-year in its approach, with the aim of continued improvement in the level of transparency and consistency in the tariff setting process.

3.3.2 The Tariff Methodology allows for an annual review and an annual adjustment of tariffs within the three year period as opposed to fixing the prices for the full period.

3.3.3 Furthermore, the Regulator is of the view that guidelines contained in the Tariff Methodology will assist in narrowing the gap between what is requested by the Authority and subsequently granted by the Regulator.

3.3.4 The approach decided upon is based on the Revenue Requirement methodology with the building blocks (as described in the Tariff Methodology) is set out below:

3.3.4.1 **Regulatory Asset Base (RAB):** The value of total assets in the RAB is indexed by inflation each year - the Trended Original Cost ("TOC") approach. Each year, estimated Capex and depreciation is added to the closing balance for the previous year to arrive at an updated closing balance for the current year. The expected working capital balance is added to arrive at a total RAB estimate, which is averaged over the year to account for the progressive spending of Capital Works In Progress (CWIP) over the period. The RAB formula applicable to the FY 2015/16 to FY 2017/18 tariff years is as follows:

$$RAB_y = \frac{1}{2}[RABc, y + RABo, y] + wy$$

$$RABc,y = RABo,y\,(1 + CPIy)1 + CWIPy - Dy$$

Where:

RABy = value of the RAB used to determine the returns for period y

RABo,y = opening value of RAB for the period y

RABc,y = closing value of RAB for the period y

Wy = forecast average net working capital over period y

CWIPy = value of expected capital investment over the period y

Dy = depreciation allowance for assets over the review period y

CPIy = annual rate of general inflation expected over period y

3.3.4.2 **Depreciation**: The following formula, which takes into consideration the principle of financial capital maintenance to fully account for capital expenditure and inflation, is used in the calculation of depreciation:

$$Depreciation = (RAB(o,y) + (RAB\,(o,y).CPI(y)) + (Capex(y)/2.CPI(y)))/40$$

3.3.4.3 **Inflation trending:** The inflation rate for calculating the trend in the value of assets will be the Consumer Price Index (CPI) forecast for each financial year during the tariff period as at the latest forecast published by the National Treasury, which if unavailable by the time of calculation, will be substituted with the latest reputable forecast from leading independent institutions such as the Bureau of Economic Research (BER). The same inflation rate will be used in the calculation of the weighted average cost of capital.

3.3.4.4 **Capital Works In Progress (CWIP):** Detailed projections for the tariff period, including tariff year 2014/15, per asset class, service and project, as well as monthly planned expenditure schedules, must be provided to motivate the CWIP to be included in the RAB.

3.3.4.5 **Working Capital:** The estimate of working capital, equates to the actual *net* working capital as per the latest available NPA annual financial statements, consisting of accounts receivables plus inventory less accounts payables (i.e. operating cash is excluded), adjusted by forecast volume growth and CPI inflation for the following year. In addition, CWIP payables, which are estimated at 1/12th of the capital expenditure projected for that year, is included.

3.3.4.6 **Weighted Average Cost of Capital (WACC) – Vanilla WACC:** In general, the WACC represents the risk adjusted opportunity cost of capital and is the minimum return for investment in order to continue to attract capital, given risks.

A real WACC (cost of equity and cost of debt) will be applied and expressed in Vanilla terms (i.e. post-tax cost of equity and pre-tax cost of debt) and accordingly, a separate allowance for tax expense in the revenue requirement formula is required.

$$WACCvanilla = k_d.g + k_e (1-g)$$

Where:

k_d = *pre-tax cost of debt*

k_e = *post tax cost of equity*

g = *gearing which is debt over total capital*

The components of the WACC are as follows:

- **Cost of Equity**: The post-tax cost of equity is calculated with reference to the Capital Asset Pricing Model (CAPM), which is expressed as:

  $$k_e = r_f + \beta \times MRP$$

  Where:

  r_f = *real risk free rate*

  β = *Measure of NPA's exposure to market (non-diversifiable) risk*

  MRP = *The market risk premium measuring the premium over and above the risk free rate that investors might expect in return*

- **Risk Free rate** (RFR): The twenty year government bond is an appropriate measure of the Risk Free Rate (RFR), and, in particular, the R186 bond instrument (yield) as it adequately reflects the market's perception of sovereign risk and inflation going forward. The average RFR is calculated over a five year period (from August 2009 to July 2014) for the first tariff year, August 2010 to July 2015 for the second and from August 2011 to July 2016 for the final tariff year in the period.

  The Real RFR is deduced by using the Fisher Equation.

  $$1 + i = (1 + r)(1 + E(I))$$

  Where:

  i = *nominal rate*

  r = *real rate*

  $E(I)$ = *Expected inflation*

- **Market Risk Premium (MRP):** The MRP is in essence forward-looking and, as such, it cannot be observed but must be forecasted. For the tariff period, the Regulator will use the Dimson, Marsh and Staunton (DMS) estimate of the geometric mean MRP as measured against bonds for South Africa to determine a MRP for the Authority's cost of

equity calculation. The use of the DMS dataset over its full period of existence requires the use of geometric mean to better address concerns related to the correlation in excess returns and mean reversion.

- **Beta (β)**: Due to the Authority not being a traded company, there is no beta (β) published reflecting its risk relative to firms listed on the Johannesburg Stock Exchange (JSE). A beta has to be set to reflect the risks faced by NPA under the RR methodology. This must ensure an appropriate return for the risk faced.

  The inclusion of a claw-back mechanism reduces exposure to systematic risk and the existence of an interventionist regulatory regime requires the Regulator to use a beta substantially lower than large firms listed on the JSE, such as the JSE Top 40.

  For the tariff period covered, the Regulator will use the 0.50 asset beta decided upon and motivated in the previous Records of Decision (ROD).

  The Hamada equation is used to re-lever the asset beta resulting in an equity beta of 0.86.

- **Gearing (g):** The appropriate gearing for the entity for period is 50%.

- **Cost of Debt:** NPA's actual, embedded debt costs should be used to determine the cost of debt applied within the WACC. The average embedded Transnet Group cost of debt (*pre-tax nominal*) of Transnet SOC Ltd should be used for the 2015/16 tariff year, as no current alternative exists.

3.3.4.7 **Taxation Expense (t):** A corporate tax rate of 28% will be used for the period. The pass-through tax approach, where the vanilla WACC will be applied to the average RAB for the period under consideration, less the interest cost of debt and wear and tear, and other tax allowances. The corporate tax rate will be used to determine the tax liability which shall be treated as an expense in the RR calculation.

$$Tax\ allowance = (Net\ revenue\ before\ tax\ allowance)/(1\text{-}t)*t$$

The calculation of tax allowance must also reflect the flow of funds related to any claw-back calculated as well as ETIMC allowances to ensure adequate tax cover for the NPA.

3.3.4.8 **Operating Costs:** The NPA is required to provide detailed and complete motivation for the applied expenses, especially on large items like labour and energy costs.

Transnet Group costs will be included in the total allowed expenses subject to the requirement that the NPA submits a detailed explanation and motivation for the amount to be transferred to Transnet Group.

In addition, the NPA shall provide externally audited financial reports with all supporting documentation and detailed explanations including basis of allocation and policy documents that support such allocations.

3.3.4.9 **Claw-back:** The key purpose of applying claw-back is to ensure that the NPA or any port user is fairly treated and is not subjected to any unfair gains or losses that are a result of incorrect forecasting, inaccurate information and system shocks. Its main application is to reduce the impact of differences between the allowed revenue (based on a number of

forecasts and assumptions) calculated at the time of the tariff application and actual audited figures.

The variables to be estimated in line with the Tariff Methodology, annually, prior to the start of the following tariff year for claw-back purposes are the:

- RAB (including capex)
- Depreciation
- Operating Expenditure
- Tax allowance
- Volumes
- Inflation (CPI)

The total impact of over/under recovery of revenue will be spread over a period of two tariff determinations.

3.3.4.10 **Excessive Tariff Increase Margin Credit (ETIMC):** The Regulator regulates in the long term interest of the port industry. This requires that the Regulator not only confine itself to the immediate tariff decision, but also consider ways to ease any future shocks to the system. It is generally accepted that capital expenditure will spike at some point in the foreseeable future, but that these projects have not as yet been specified to a level of detail that allows for accurate prediction. As such, the Regulator considers it prudent to avoid future tariff spikes by retaining and increasing the Authority's ETIMC.

The Regulator may authorise the release of part or the whole of the value of the ETIMC facility to influence tariff levels whenever it deems necessary including, but not limited to, spikes in tariffs (defined as an average tariff increase in excess of the inflation forecast) due to sharp increase in capital expenditure, volume volatility, or and market related factors. The Regulator may also consider national objectives in any decision to add to, or to utilise the ETIMC facility to adjust tariffs.

3.3.4.11 **Volume Forecast:** The Authority is required to submit detailed volume forecasts with reasons, as well as revenue calculations based on the forecast volumes and current tariff levels together with proposed tariffs for the period.

3.3.4.12 **Introduction of efficiency incentive:** The Regulator will continue to monitor progress of the results of the Terminal Operator Performance Standards (TOPS) as well as Marine Operators Performance Standards (MOPS) and will introduce an efficiency component to the tariff determination when the Regulator is satisfied that a credible efficiency monitoring system has been established.

4. The Business of the Authority

4.1 Introduction

The Authority operates within the port industry, providing services to its target market comprising of port users, which include terminal operators, shipping lines, ship agents, cargo owners and the clearing and forwarding industry. The Authority owns and manages nine ports within South Africa, namely: Port Nolloth, Saldanha Bay, Cape Town, Mossel Bay, Port Elizabeth, Ngqura, East London, Durban and Richards Bay.

Port Nolloth falls under the jurisdiction of the Authority, however it is currently not a commercial port and renders maritime services of a basic nature supporting fishing and supply vessels.

Port infrastructure and maritime services are provided in five market segments, namely: containers, dry bulk, liquid bulk, break-bulk and automotive. The major commodities handled at the ports are coal, iron ore, manganese, containers, automotive, steel, fruit, ferrochrome and petroleum products. Growth of these commodities is a function of global demand, logistics infrastructure capacity and supply chain efficiencies which include port efficiencies.

Port users fall into three main categories, namely: terminal operators, shipping lines and cargo owners. While numerous other parties utilise the port, they do so to a lesser extent than these principal port users.

4.2 Functions of the Authority

The National Commercial Ports Policy requires that the Authority be responsible for the management of the national commercial port system as a landlord port authority. Being a landlord port authority means that the Authority:

- owns, develops and maintains port infrastructure;
- does not engage in port operations (except as operator of last resort);
- does not employ cargo handling labour;
- fulfils a port regulatory function including oversight and port landowner function; and
- owns all port land.

The Authority's core functions (as set out in Section 11 of the Act) can be summarised in the following Table:

Table 5: The Authority's Core Functions

Function	Detail
Landlord	Promote the use, improvement and development of ports, and control land use within the ports, having the power to lease port land under conditions it determines.
Master planner	Plan, improve, develop and maintain port infrastructure.
Controller of ports navigation	Make and apply rules to control navigation within port limits and approaches, ensure protection of the environment and ensure safety and security within port limits.
Controller of ports services and facilities	Ensure that port services and facilities are provided, and may enter into agreements or license other parties to provide these.
Marketer and administrator	Ensure that adequate, affordable, equitable and efficient port services and facilities are provided for port users.
Change agent	Ensure non-discriminatory, fair, transparent access to port services and facilities; advancement of previously disadvantaged people; promotion of representation and participation in terminal operations; enhanced transparency in port management.
Coordinator with other State Agencies	Advise on all matters relating to the port sector, and liaise with all stakeholders.

4.3 Transnet Market Demand Strategy

Transnet's mandate is to assist in lowering the cost of doing business in South Africa, enabling economic growth and ensuring security of supply through providing appropriate port, rail and pipeline infrastructure in a cost-effective and efficient manner, within acceptable benchmarks. This mandate and its strategic objectives are aligned with National Plans and the Statement of Strategic Intent issued by the Minister of Public Enterprises.

The Authority operates on a landlord port model where it serves as a landlord to terminal operators. It also has an oversight role in ensuring seamless import-export transactions to the port users and other stakeholders. Furthermore, the Authority provides for port infrastructure as well as other services in the ports, such as pilotage, vessel traffic services to vessel agents, shipping lines, small crafts and the global shipping community.

Some of the MDS driven milestones reached are as follows:

- Capital investments focus on sustaining and expanding capacity and the oceans economy as driver for economic growth and job creation;
- Launch of SMART People's ports aimed at efficient and technologically advanced ports with visibility of cargo across the value chain;
- Information Performance Management System (IPMS) and Joint Operation Centres (JOCs) to provide a basis for value chain visibility and logistics collaboration;
- Performance targets with TOPS, MOPS, HOPS, ROPS to create an efficient port system and to exercise performance oversight;
- Upgraded security with state of the art surveillance equipment (CCTV) to ensure a safe and secure Port System;
- Renewal of Dredging and tug fleet;
- Success in executing Section 56 projects (Refer to Table 7);
- Agreements containing a criteria to promote localisation, supplier development and transformation of the port system; and
- Green port focus - Compliance, Oversight.

4.4 Operation Phakisa

The launch of Operation Phakisa by the State President (July 2014) marked the commencement of focused initiatives by Government for the Private Sector to exploit the economic potential of South Africa's oceans in the Marine Transport and Manufacturing, Offshore Oil and Gas Exploration, Aquaculture, Marine Protection Services and Oceans Governance sectors. The main objective of Operation Phakisa is to create capacity that will contribute to increased GDP growth and increased employment aligned to the priorities of the National Development Plan. The Authority is the implementing agency for the port infrastructure initiatives (ship repair, rig repair and boat building capacity) under the Marine Transport and Manufacturing Lab.

Operation Phakisa initiatives by the Authority highlight the fact that South Africa can achieve GDP growth and job creation by pursuing the development of new ship and rig repair facilities, and by ensuring that existing ship repair facilities are maintained to promote further growth in the ship repair market. Operation Phakisa strongly underlined and supported the role of the Authority as set out in Section 11 of the Act, which states that the Authority must plan, provide, maintain and improve port infrastructure.

Operation Phakisa also demonstrates that growth within the oceans economy cannot be realised unless the proposed new port facilities are delivered as integrated industry solutions, with strong partnerships between the ports, IDZ's and the ship repair/offshore oil and gas industry. Operation Phakisa will create opportunities for industry to invest and operate port facilities that will create capacity and unlock opportunities within these sectors of marine manufacturing. One of the primary initiatives will be to establish a dedicated oil and gas support hub at the port of Saldanha Bay to attract supply chain players within the oil and gas sector.

As part of the initiatives shown in the 3-feet Plan for the Marine Transport and Manufacturing Lab, the Authority committed to the delivery of new ship/rig repair facilities at the Port of Saldanha Bay (i.e. Initiative 2) and Richards Bay (i.e. Initiative 7) as well as a new boat building facility at the Port of East London. In addition, the Authority has prioritised the maintenance and refurbishment of existing ship repair facilities at the ports of Durban, East London, Port Elizabeth, Mossel Bay and Cape Town (Initiative 5). The Authority will invest a portion of the funds in the refurbishment of existing facilities within the ports, with the remainder being outsourced.

The Authority has made significant progress in the initiatives towards the establishment of the new Operation Phakisa facilities mentioned above. A thorough international and local market engagement process was undertaken with the assistance of a Transaction Advisor to develop the business case and Private-Sector-Participation Funding Model for the new builds. Operation Phakisa will thereby create opportunities for the private sector to invest in new port facilities in order to support both the offshore and onshore Industrial Development Zone. This supports the oil and gas industry and also expands marine manufacturing within ports. The Saldanha Bay Industrial Development Zone will likely attract companies that will provide land-based facilities to support offshore operations in terms of logistics, equipment servicing, rig repair and fabrication, as well as companies interested in dedicated infrastructure and quayside access for vessel fabrication, logistics and repairs. The identification of suitable operators to fund-build and operate these new facilities has commenced through and open market process (Section 56 process) with issuing of an international Request for Proposal (RFP) for the Offshore Supply Base (OSSB) in Saldanha, as well as an Expression of Interest (EOI) for the remaining new facilities at the Ports of Saldanha, Richards Bay and East London. The procurement process will unfold with the operational date for the OSSB as January, 2017 and the remaining facilities by December, 2019.

The Authority has committed funding to the maintenance and refurbishment of existing ship repair facilities (Initiative 5) as contained in this Tariff submission. This comprehensive 5-year programme extending to 2019 includes the refurbishment and upgrade works at the Durban Dry Dock and Workshop 24, the East London Dry Dock and Workshop, Port of Port Elizabeth Boat Repair facility, Lead-in Jetties and Slipway, the Mossel Bay Slipway, the Cape Town Sturrock and Robinson Dry Docks, Synchrolift, the extension of the Saldanha Bay OSSB berth and the replacement of the Ports Authority's Floating Dock.

Significant achievements to date include the following:

- Refurbishment of the Durban Dry Dock Outer Caisson;
- The delivery of Workshop 24 equipment;
- Completion of the Port Elizabeth Boat Repair Facility;
- Commissioning of the 90 ton Boat Hoist; and
- Other projects comprising the above scope are at various stages of project maturity.

The Authority looked at the commercial possibilities of the ship repair as well as oil and gas facilities. The Authority however is going beyond this mandate to ensure upskilling of its human resources in order to take advantage of what the Operation Phakisa program has to offer. In doing so, the Authority has established training centres in the port of Cape Town, port of Richards Bay, port of Durban, port of Saldanha Bay, port of East London and Nelson Mandela Bay ports (Refer to Annexure D – Operation Expenditure, on training). These projects will provide training opportunities for learners in the field of millwright, spray painting, plumbing, electricians, as well as other maritime and technical training.

Launch of SMART People's ports

The Authority has embarked on a project of SMART People's ports concept. This project, amongst other initiatives, is based on the JOCs concept that is being rolled out across all ports to attain port value chain visibility at any given time. This ensures that the Authority can track port performance and ease up bottlenecks where necessary. Like all progressive ports in the world, the Authority will track and measure port performance 24/7.

The JOCs project is premised on the notion that what is not managed cannot be measured. JOCs aim to improve port efficiencies through collaborative effort with the port community, to create integrated port operational plans, and to monitor execution of the plans in real time.

Progress to date:

Physical Joint Operations Centre facilities have been established at the Head Quarters and in the following ports:

- Richards Bay;
- Durban;
- East London;
- Nelson Mandela ports (currently sharing one facility in Port Elizabeth and Ngqura will be establishing theirs shortly);
- Cape Town;
- Saldanha Bay; and
- Mossel Bay – under construction.

JOCs processes have been signed off and all JOC staff have been trained on these processes. On-boarding of Transnet Port Terminals (TPT), private terminal operators and Transnet Freight Rail (TFR) is ongoing to enable Joint Operation Centres to have a holistic view of the port total logistics chain. JOCs currently have a view of rail planning and execution of plans for all the trains entering and exiting the ports. In strengthening the role of JOCs, a team in each port will be established comprising of the following stakeholders:

- The Authority's Joint Operations Centre staff;
- Private Terminal Representative;
- Transnet Operations Centre staff (comprising of Transnet Freight Rail and Transnet Port Operations); and
- Full utilisation of the CCTV Cameras for monitoring purposes focusing on quayside operations and road congestion.

A fully operational JOC will eradicate issues such as:

- Challenges of port congestion;
- Silo operation;
- Underutilisation of port capacity;
- Costly business practices; and
- Unavailability of a single data point.

JOCs will provide an integrated port value chain and performance visibility and thus reduce anchorage waiting time, improve vessel planning and ship turnaround time. To date some of the current JOC's achievements are as follows:

- Port of Durban JOC operating 24/7;
- Access to TFR IATS system installed in JOCs and utilised daily;
- Ongoing engagements between port JOCs and TFR;
- IPMS marine system launched and in roll out stage in all JOCs;
- JOC processes designed, validated and signed off by all ports;
- Job creation of approximately thirty (30) new full time jobs in all JOCs nationwide;
- Soft and hard skills training of all JOC employees, including on-the-job training; and
- Continuous engagements with various stakeholder associations and forums, e.g. SASSOA.

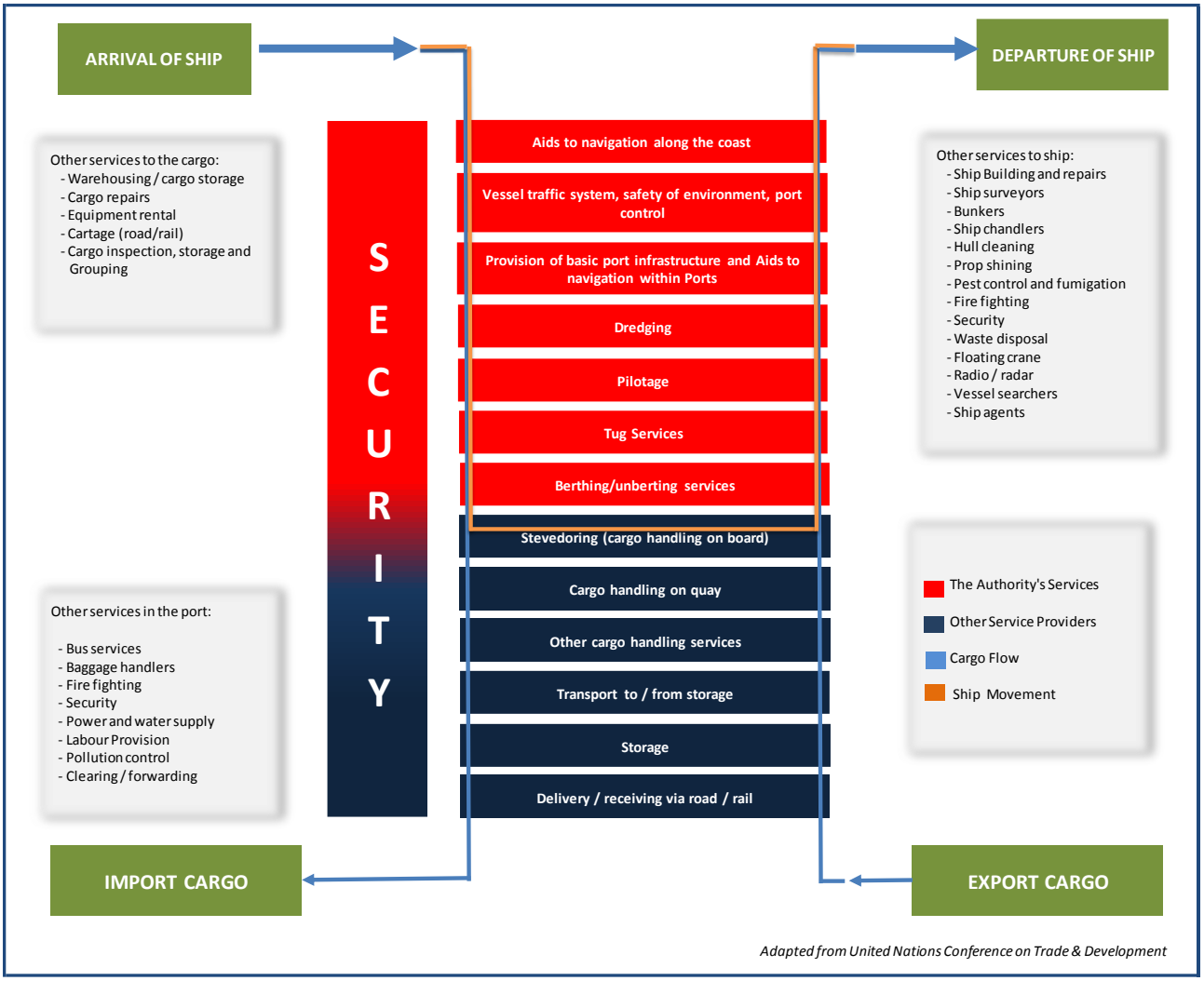
4.5 Tariffs in Perspective

The Authority, like any other port authority, needs to generate revenue by charging tariffs for the services that it renders, and to achieve the aforementioned MDS targets. The Authority may charge fees, in accordance with tariffs approved by the Regulator, in order to fulfil the functions it must perform in terms of the Act.

As a landlord port authority, the Authority's core services, as specified in the Act, result in a number of revenue streams, which are utilised by the Authority to fulfil its responsibility for the safe, efficient and effective economic functioning of the national ports system.

There are various services provided within a port - Figure 1 on pg. 23 below: Various Port Services (adapted from the United Nations Conference on Trade and Development) illustrates the flow of cargo and ships through the port system:

Figure 1: Various Port Services



The Authority's services at the ports can be divided into two basic groups:

- Basic port infrastructure; and
- Operational services to port users.

The Authority's services and their respective revenue streams are set out in Table 6 on pg.23 below:

Table 6: The Authority's Services and Corresponding Revenue Streams

Port Infrastructure		Revenue Stream
Port land and terminals	Lease port land to terminal operators and other port service and port facility providers in the port(s).	Lease income (rentals)
Wet infrastructure	Lighthouse services infrastructure (lighthouses, buoys, beacons and electronic / radio navigation equipment) , port control and safety, entrance channels, breakwaters, turning basins, aids to navigation within port limits, vessel traffic services, maintenance dredging within ports.	Light dues, port dues, vessel traffic services fees
Dry infrastructure	Quay walls, roads, rail lines, buildings, fencing, port security, lighting (outside terminals), bulk services and in certain cases terminal infrastructure,	Cargo dues, berth dues
Ship repair services	Provide and maintain ship repair facilities	Preparation fee, docking and undocking fees (vessels at repair facilities), berth dues (vessels at repair quays)
Marine services	Pilotage, tug assistance, berthing, running of lines, floating cranes	Pilotage dues, tug assistance fees, berthing fees, running of line fees, floating crane hire fees

In the context of the South African ports system and the Act, the revenue generated from the Authority's services is utilised inter alia to:

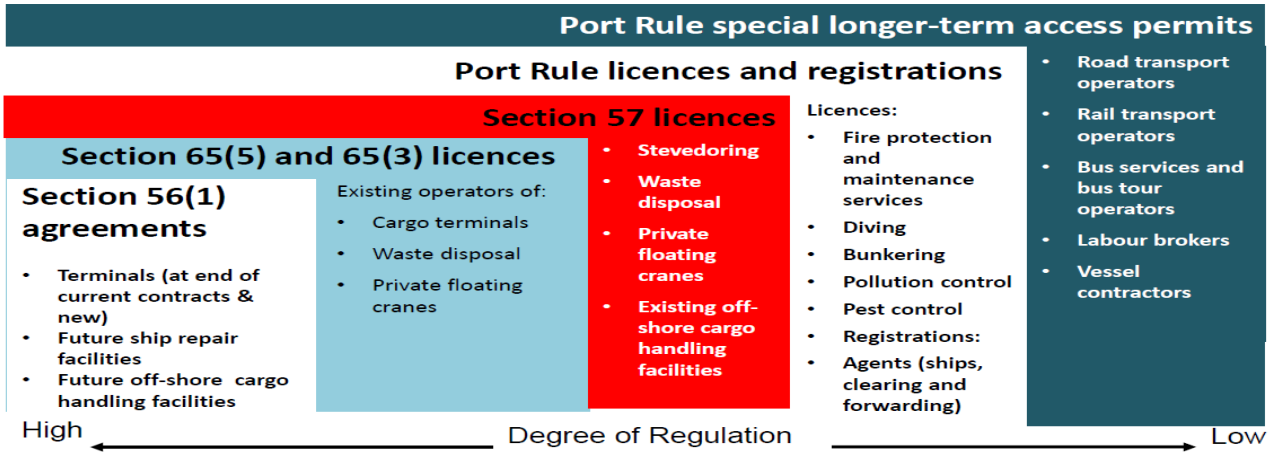
- Maintain basic port infrastructure;
- Provide future port infrastructure;
- Maintain and provide the current and future marine fleet; and
- Maintain and provide current and future ship repair facilities.

This makes the South African port system distinct from most ports internationally, where typically, some port capital costs are funded through State or Municipal budgets. The Authority's Tariff Book sets out the various tariffs that are charged by the Authority to maintain and develop the South African port system (Refer to ***Annexure A***).

Apart from the services that the Authority itself renders, the Authority is also the controller of port services and facilities that are provided by others in the ports. The Authority exercises such control in accordance with the provisions of the Act, by means of agreements, licences and permits. The Act and Port Rules issued by the Authority in terms of section 80(2) of the Act, and the Authority's Guidelines of Agreements, Licences and Permits (25 April 2008), specify the degree of regulation that is being exercised in this regard.

The types of regulation are illustrated in Figure 2:

Figure 2: Types of Regulation



Section 73(1) (c) and (d) provides that the Authority may charge fees for the granting of concessions and licences and for any services provided by the Authority in the performance of its functions. Section 56 addresses the agreements in port operations and services. The Act requires transparent and competitive bidding processes. The Act also makes a provision in Section 79 for the Minister of Transport to direct the Authority to perform a specified act or not to perform a specified act if necessary. Such acts include activities to safeguard the national security of the Republic, promote national, strategic or economic interest of the republic or to discharge an international obligation of the republic.

The National Ports Act is directed at ensuring access to the port system for previously disadvantaged persons. The previous dispensation has excluded a large portion of the population from the economic activity of the ports. In redressing this, the Authority has opened up the port system to all who wish to participate in its activities and is ensuring, through its Section 56 process, that it provide access to as broad a spectrum of the South African population to participate in all aspects of the economy of the ports.

To date the following agreements have been concluded and are in execution:

Table 7: Section (56 & 79) Agreements

Agreement	Ports Act	Name of Port	Date
Vopak	Section 56	Port of Richards Bay	March 2012
Sunrise Energy	Section 56	Port of Saldanha Bay	June 2013
Burgan Cape Terminals	Section 56	Port of Cape Town	July 2013
Cruise Terminal	Section 56	Port of Cape Town	December 2015
Manganese Export Terminal	Section 79	Port of Ngqura	February 2016
Container Terminal	Section 79	Port of Ngqura	February 2016

An indication of future Section 56 projects is listed below:

Table 8: Future Section 56 projects

Region	S56 Project	Sector	Status
KwaZulu-Natal	Cruise Terminal	Passenger Cruise-Line Terminal	Request for Proposal In the Market Place
	Lot 100	Liquid Bulk	Request For Proposal In the Market
	Floating Dock	Ship Repair	EOI in the market and then proceeding to RFP
Eastern Region	Heavy Fuel (HFO)	Liquid Bulk	Preparing to issue Request For Proposal
	Shed 10 & 11	Break-Bulk	Preparing to issue Request For Proposal.
	East London Dry Dock	Ship repair	Preparing to issue Request For Proposal
	General Cargo Terminal (Ngqura)	General Cargo Terminal	Finalising Internal processes before going to market.
	Storage tanks	Liquid Bulk	Finalising the agreement
	Tag Yacht	Yacht Building	Finalising the agreement
Western Cape	Off Shore Supply Base-Saldanha	Liquid Bulk	RFP is in the market
	Rig Repair Facility - Saldanha	Rig repair	Finalising Project with the Transaction advisors
	Bunkering Storage Facility- Cape Town	Liquid Bulk	Initial Stages

5. Port Infrastructure Development Plan and Capital Expenditure

Section 11(1) of the National Ports Act lists the main functions of the Authority, amongst others, the responsibilities with respect to the provision of port infrastructure.

5.1 Port Investment planning

"**Functions of the Authority"**

11. (1) the main function of the Authority is to own, manage, control and administer ports to ensure their efficient and economic functioning, and in doing so the Authority must:

(a) plan, provide, maintain and improve port infrastructure;

(b) prepare and periodically update a port development framework plan for each port, which must reflect the Authority's policy for port development and land use within such port;

(c) control land use within ports, and has the power to lease land under such conditions as the Authority may determine;

(d) provide or arrange for road and rail access within ports;

(e) arrange for such services such as water, light, power and sewerage and telecommunications within ports; and

(f) Maintain the sustainability of the ports and their surroundings;

5.2 The Authority's Capital Investment Programme

The Authority's investment spending is primarily influenced by its detailed strategic initiatives which aim at providing adequate port infrastructure ahead of demand, improving vessel and cargo turnaround; and improving the productive use of assets.

In developing the capex plans, the following activities are considered by the Authority:

- ***Long-term Framework Plans***: The Authority prepares a National Ports Plan on an annual basis which includes the individual Port Development Framework Plans. These Plans outline the proposed investments across the ports to create capacity to meet anticipated demand. The latest version available is the National Ports Plan (NPP) 2015. The NPP 2015 informs the ports Chapter of Transnet's Long Term Planning Framework (LTPF). These 2015 plans are currently available on the Authority's website for stakeholders review and comment to input into NPP 2016.
- ***Capacity studies***: The Authority uses a robust simulation tool to assess the capacity of current infrastructure and to simulate future infrastructure capacity. The capacity studies are updated annually.
- ***Volume Studies***: The forecasted volumes used in the Authority's development plans are based on the Transnet Corporate Plan for the short-term investment guidelines. The long-term investment guidelines use the forecasted volumes from Transnet's Freight Demand Model, which provides the volume studies for all Transnet Operating Divisions. The Transnet Freight Demand Model is a demand forecasting tool developed and utilised in association with the University of Stellenbosch.
- ***Prioritization:*** Projects are prioritised by safety; and secondly to meet demand forecasted.
- ***Interaction with Transnet***: The Authority maintains close interaction with Transnet Planning, Transnet Commercial and Transnet Capital Integration during the planning cycle and the development research process. The plan developed by the Authority is incorporated into the Transnet Plans.
- ***Port Consultative Committees (PCC's) & National Port Consultative Committees (NPCC's***): The Authority adopts a consultative approach to the drafting of the Port Development Framework Plans and the execution of the resultant Capital Investment Plan. Port Development Framework Plans projected for the short, medium and long term as well as 5 year Capital Investment Plans have been consulted with port users. This consultation was conducted on a port-by-port basis during a process facilitated by the Department of Transport (DoT) in May and June 2015 with the South African Maritime Safety Association (SAMSA) as secretariat. These plans are informed by the aforementioned Transnet Freight Demand Model (developed by the University of Stellenbosch). The model was presented to the NPCC at a workshop held in June 2015 to ensure that these plans are understood by port users.

The following initiatives of the Authority are aimed at supporting the MDS and volume growth:

- Improve management and delivery of capital projects;
- Ensure compliance to Project Lifecycle Process (PLP) model;
- Tracking of capital projects delivery by the Enterprise Programme Management Office (EPMO);
- Improve capital planning and budgeting processes;

- Improve procurement process to reduce turnaround time;
- Ensure disciplined execution of the capital and maintenance programmes;
- Implement integrated commercial management and integrated capacity planning processes with a total supply chain focus to improve customer service and achieve wider integration of the port system;
- Increase focus on business development; and
- Improve land and other asset utilisation.

5.3 Progress on Capital Investment Program

The MDS is aimed at expanding the port infrastructure for the purpose of pursuing opportunities for volume growth; enhancing service levels, productivity and efficiency gains. These are projects that allowed the Authority and Transnet to pursue some strategic objectives, such as creation of direct and indirect jobs, skills development, youth employment and efficiency targets. MDS is not only about Transnet, but key to South Africa's growth objectives. It encompasses a strategy to deliver a lasting economic, social and environmental value to the society.

The major projects include:

- Acquisition of 9 Tugs for the Authority's ports, including Richards Bay, Durban, Port Elizabeth and Saldanha Bay, of which 2 have been delivered;
- Reconstruction of sheet-pile Quay Walls at Maydon wharf (i.e. 3 berths completed, 4 in progress);
- Completion of feasibility studies for the Durban berth deepening 203 to 205 with execution phase having commenced;
- Operationalise the port for containers in the Port of Ngqura with 90% completion;
- Firefighting equipment at tanker basin in the Port of Cape Town with 76% completion to date;
- Acquisition of second new Dredger (TSHD) in the Authority Dredging services;
- CCTV for the safety and security of the ports; and
- Operation Phakisa projects in the Authority's ports, including Durban, East London, Port Elizabeth, Mossel Bay, Cape Town and Saldanha Bay.

The MDS is also based on a combination of partnerships with its stakeholders, hence Transnet came up with the development program aimed at enabling economic participation by a wider part of the economically active South Africans.

5.4 Supplier Development

In addition to the capital investment program, Transnet embraces the national imperatives driven by Government which aims to address investment in infrastructure, especially when partnered with skills and capacity development. This allows the country to gain the ability to tackle historic inequalities through enabling economic participation by people with historically disadvantaged backgrounds in the mainstream of the economy. Transnet fully endorses and supports Government's economic policies through its facilitation of the Supplier Development (SD) program with initiatives implemented through procurement. As part of Transnet's procurement policy, the Authority facilitates SD through procurement of supplies from firms and entrepreneurs with previously disadvantaged backgrounds. The SD initiatives are

determined on a contract by contract basis. The SD is a broader program which focuses on a number of categories including:

- Skills Development;
- Job creation/preservation;
- Small Business Promotion;
- Capacity and Capability Building;
- Rural Development and Regional Integration; and
- Technology and sustainability.

Since its formation, the SD has already made progress in delivering on the mission it was meant to accomplish. These accomplishments include the following:

- The Authority has procured supplies to the value of R 2.9bn through competitive bidding processes;
- Of these supplies, procurement to the value R 1.3bn has been allocated to small suppliers who are targeted in accordance with the objectives of the SD program where goods and services would only be procured from these suppliers;
- Of the R 1.3bn procurement dedicated in the SD program, invoices to the value of approximately R600m have been paid out to these suppliers who participated in the supply chain through the SD program.

5.5 Key Focus Areas of Capital Investment Program in FY 2017/18 to FY 2019/20

The areas of Capital Investment Program for FY 2017/18 to FY 2019/20 amounts to R 4 050bn, R 5 401bn and R 6 358m respectively. These amounts are included in the Authority's Regulatory Asset Base as capital expenditure in the years in which they are incurred. These projects are not new as they are MDS projects which were started since its inceptions. This section gives progress on the projects that are continuing from FY 2017/18 to FY 2019/20:

- Port of Durban execution of DCT berth deepening 203 and 205;
- Port of Durban Berth IV upgrade;
- Port of Durban Island view berth 9;
- Port of Durban Tug jetty;
- Port of Richards Bay purchase of additional helicopter;
- Port of Richards Bay additional rail facility for Duine Area;
- Port of Richards Bay upgrade breakwater;
- Port of Ngqura Berth 100A roads, port entrance and services;
- Port of Ngqura Berth Manganese export facility;
- Port of Ngqura operationalise container terminal;
- Port of East London rehabilitation of Latimers Landing wooden jetty;
- Port of Saldanha Bay bulk electrical power supply related to third Tipler; and
- Operation Phakisa projects in the Authority's ports, including Durban, East London, Port Elizabeth, Mossel Bay, Cape Town and Saldanha Bay

These reflect the continuing programme which is organised in productivity and efficiency, together with safety and risk as well as human capital objectives, as demonstrated in Table 9 below.

Table 9: Strategic Capital Investment Objectives

Strategic objective	Details	LE	Projections		
		2016/17	2017/18	2018/19	2019/20
		Rm	Rm	Rm	Rm
Re-engineering, Integration, Productivity and Efficiency	To maximise return on investments by obtaining additional volumes	608	1 675	2 364	3 552
	To maximise return on investments by improving operating efficiencies	832	397	241	151
	To preserve current revenue streams without obtaining additional volumes (ie. revenue protection)	784	1 420	2 071	1 797
Safety, Risk and Effective Governance	Ensure Safety Optimisation	327	386	420	360
	Optimise Business Enterprise Offerings	123	32	167	253
	Optimally Satisfy Social Investments (non economic value creating projects)	12	19	35	81
	Environmental	43	48	43	82
Human Capital	Optimise Human Resources	71	73	60	82
Total (excl. borrowing cost)		**2 801**	**4 050**	**5 401**	**6 358**

The detailed capital expenditure schedule is highlighted in **Annexure B**.

6. The Authority's Total Revenue

6.1 Real Estate Revenue

The Authority has positioned itself as a landlord port authority, managing all fixed assets under its control in a responsible and productive manner.

Real Estate Management is driven by key principles that seek to support the vision of creating a world-class port system in South Africa, that supports the development goals of our country and the region as a conduit for import and export trade between South Africa and the world. The Authority leases out land to achieve optimum productivity within the ports.

Third party tenants enter into short/long term leases to enable them to invest and develop facilities for their operations. Rentals are negotiated on a case by case basis and are therefore not reflected in the Authority's Tariff Book.

The salient details of the Authority's Real Estate portfolio are summarised in Table 10 on pg.31 below to give a consolidated overview of the portfolio.

Table 10: Real Estate Salient Features

SALIENT FEATURES OF REAL ESTATE BUSINESS	FY2016/17	FY2017/18	FY2018/19	FY2019/20
	Current Tariff Year	Fixed Tariff Year	Indicative Tariff Years	
Number of Ports	8	8	8	8
Gross Lettable Area	Approx 22 million sqm	pprox 22 million sqm	Approx 22 million sqm	Approx 22 million sqm
Number of Tenants	728	740	747	755
Total No. of Terminal Operators	90	90	90	90
Vacancy factor including Unserviced/Unused land	20%	20%	20%	20%
Vacancy factor excluding Unserviced/Unused land	5.00%	6.00%	5.00%	5.00%
Average term of Leases	5 - 25 Years	5 - 25 Years	5 - 25 Years	5 - 25 Years
Estimated Revenue (Current Financial Year)	**R2 570 m**	**R2 798 m**	**R3 028 m**	**R3 282 m**
Estimated Revenue (Subsequent Financial Year)	R2 798 m	R3 028 m	R3 282 m	R3 541 m
Forecast Revenue Growth	R228 m	R230 m	R254 m	R260 m

By nature of leases being contract driven, the Authority's Real Estate business is not subject to a tariff increase by the Ports Regulator but is taken into consideration in the determination of the allowable revenue. This business is driven by a set of functions which are set out in the Act. In line with the Act, the Authority must:

- Control land use within ports and has the power to lease land under such condition as it may determine;
- Ensure that adequate, affordable and efficient port service and facilities are provided;
- Exercise licencing and controlling functions in respect of port services and port facilities to be able to perform efficiently;
- Ensure that any person required to render any port services and port facilities is able to perform efficiently; and
- Promote the achievement of equality by measures designed to advance persons or categories of persons historically disadvantaged by unfair discrimination in the operation of facilities in the ports environment.

Further to the above, in terms of Section 11 (1) (r) of the Act, the Authority must promote greater representation, in particular to increase participation in terminal operations of historically disadvantaged persons. In order to achieve compliance with the Act, the Authority has considered measures to achieve 75% of Level 4 B-BBEE status in lease contracts and strives to attain a complete occupation of its properties.

In setting the regime, the Authority considers its financial objectives as well as the tenants' financial rewards and incentives. The tenants (i.e. Terminal Operators) derive income from terminal handling charges. This enables lessee's ability to meet rental payments to the Authority. Should the sub-optimal usage of the leased facilities continue to exist across the port system, this could be equated to hardships which cause contractual disequilibrium (i.e. the inability to afford rent). The Authority has in the last couple of months observed its tenants struggling to meet rental obligations. In fact tenants are beginning to engage the Authority and have indicated that should the sluggish economic trade conditions (i.e. lower volumes handled at the terminals) continue to persist this will necessitate re-negotiation of leases with possible handover of some leased facilities.

6.2 Marine Business Revenue

The Authority generates revenue by providing services to port users, which include terminal operators, shipping lines, ship agents, cargo owners and the clearing and forwarding industry. Port Infrastructure and maritime services are provided by the Authority for the five commodity categories, namely: containers, dry bulk, liquid bulk, break-bulk and automotives. The main source of revenue is the tariffs which are charged by the Authority for providing the aforementioned services with approval by the Regulator. In determining the tariffs of the Authority, consideration is given to the forecasted volume growth which is influenced by the economic outlook.

6.2.1 The Authority's Volumes

The volumes of the Authority are mainly driven by commodity cargo movements through the ports and marine vessel traffic entering the ports.

The yearly projections for the Authority's volume budget process usually commence in October and spans until the Transnet Board approves the budgets in February of the following year. These are forecasts which refer to the probable demand for commodities which are moved through the Authority's port infrastructure.

The budget process generally gives an indication of the current year's performance (Latest Estimates); the following year's volumes (budget period); and the forecast for the next six years. This in essence allows Transnet to plan its goals for the short to medium term and determine its projected profitability over the period.

The volumes budget compilation follows a bottom-up approach, commencing with the Authority's Key Account Managers (KAM's) at port level communicating and liaising with customers concerning their operational and strategic plans and how this translates into volume forecasts for the six year period. The KAM's also liaise with all Port Terminals operating within their ports for alignment purposes and will then consolidate at Port Level for all different cargo categories and forward to Head Office for consolidation. During the budget evaluation process that follows, various key factors such as historic, prevailing and anticipated market conditions, operational efficiencies, and infrastructure capacity levels and anticipated improvements throughout the value chain, are considered in order to validate the reasonableness of commodity volume projections over the period.

Further, Transnet has implemented periodic volume validation exercises which entail a formal interaction platform with key customers to validate customer volume forecasts. All divisions of Transnet participate in these volume validation exercises, with the objective of integrated and synchronised volume planning through the entire commodity value chain. These exercises have assisted the Authority in ensuring forecasts that are credibly closer to actuals post events.

Historically, volumes forecasted at the time of the tariff application and compared to the actuals (i.e. 18 months later) have had a marginal deviation, which adds credibility to the Authority's processes as per Table 11 on pg.33 below.

Table 11: Authority's Volume Growth

Details	FY2014/15		Deviations	FY2015/16		Deviations	FY2016/17		Deviations
	Tariff Application	Actuals	TA vs Actuals	Tariff Application	Actuals	TA vs Actuals	Tariff Application	Budget	TA vs Budget
Containers (TEUs)									
Deepsea Full: Imports	1 469 318	1 434 668	-2.36%	1 462 031	1 438 931	-1.58%	1 484 081	1 485 279	0.08%
Deepsea Full: Exports	1 068 067	1 083 534	1.45%	1 221 667	1 067 037	-12.66%	1 234 759	1 176 692	-4.70%
Transhipments	1 131 724	1 102 705	-2.56%	1 111 657	971 637	-12.60%	1 241 142	1 126 514	-9.24%
Other	1 110 046	1 078 258	-2.86%	1 039 133	961 567	-7.46%	1 149 836	1 163 841	1.22%
Total	***4 779 155***	***4 699 165***	***-1.67%***	***4 834 488***	***4 439 172***	***-8.18%***	***5 109 818***	***4 952 326***	***-3.08%***
Vehicles (Units)									
Vehicles: Imports	387 857	359 948	-7.20%	334 739	362 571	8.31%	409 250	380 809	-6.95%
Vehicles: Exports	216 925	265 989	22.62%	277 311	297 879	7.42%	263 832	314 734	19.29%
Other	12 730	42 384	232.95%	85 659	36 599	-57.27%	7 091	40 751	474.69%
Total	***617 512***	***668 321***	***8.23%***	***697 709***	***697 049***	***-0.09%***	***680 173***	***736 294***	***8.25%***
Break Bulk (Metric Tons)									
Break Bulk: Imports	1 703 019	3 212 736	88.65%	2 490 659	2 343 785	-5.90%	2 452 233	2 018 759	-17.68%
Break Bulk: Exports	8 889 842	5 967 281	-32.88%	5 888 748	5 031 883	-14.55%	6 509 241	5 208 158	-19.99%
Other	104 934	281 312	168.08%	291 736	192 507	-34.01%	33 781	75 566	123.69%
Total	***10 697 795***	***9 461 329***	***-11.56%***	***8 671 143***	***7 568 175***	***-12.72%***	***8 995 255***	***7 302 483***	***-18.82%***
Dry Bulk (Metric Tons)									
Coal Exports	87 930 000	78 188 933	-11.08%	79 252 931	76 677 750	-3.25%	80 998 000	80 430 000	-0.70%
Iron Ore Exports	60 400 000	57 200 167	-5.30%	58 105 245	58 671 830	0.98%	60 500 000	60 000 000	-0.83%
Manganese Ore Exports	7 800 000	10 677 828	36.90%	7 927 532	9 674 685	22.04%	10 300 000	11 425 000	10.92%
Other Dry Bulk	26 041 882	25 540 921	-1.92%	26 934 444	25 761 651	-4.35%	28 255 002	28 294 774	0.14%
Total	***182 171 882***	***171 607 849***	***-5.80%***	***172 220 152***	***170 785 916***	***-0.83%***	***180 053 002***	***180 149 774***	***0.05%***
Liquid Bulk (kl)									
Petroleum	32 619 504	34 175 968	4.77%	34 062 173	32 894 389	-3.43%	34 540 414	32 397 371	-6.20%
Chemicals	1 984 753	2 179 697	9.82%	1 923 002	2 213 120	15.09%	2 256 856	1 865 878	-17.32%
Other Liquid bulk	8 272 953	6 429 283	-22.29%	1 332 224	6 597 376	395.22%	1 187 381	6 595 372	455.46%
Total	***42 877 210***	***42 784 948***	***-0.22%***	***37 317 399***	***41 704 885***	***11.76%***	***37 984 651***	***40 858 621***	***7.57%***

6.3 Cargo

Having faced strong headwinds throughout the last financial year, the world economy again failed to attain a higher growth momentum in FY 2016/17. Amongst adverse factors there were lower commodity prices, highly volatile equity and currency markets which impacts South Africa more severely since it is dependent on foreign capital inflows to finance deficits and shortfalls in the current account. Other factors include deflationary risks in some parts of the globe particularly developed economies, the United States consideration of normalising the monetary policy, as well as the slowing Chinese economy due to its structural adjustments and weaker global demand. These factors impact the South African economy directly. These factors drive activity in the South African ports as they are global demand and supply dynamics which influences the movement of cargo across the globe.

The Authority has various categories of cargo that traverse port infrastructure. Through the movement of cargo the Authority generates revenue in its ports in the form of cargo dues. Cargo is segregated in accordance with how it is handled in the port. These categories include cargo that comes in the form of containers, automotives and bulk. The bulk cargo is further separated into dry, break and liquid (which includes petroleum and chemicals).

- Further classification splits cargo into imports, exports, coastwise and transhipments.
- Imports emanates from international destinations into South African ports.
- Export cargo is shipped from South African ports for international destinations.
- Coastwise cargo is shipped within South African ports.
- Transhipment is cargo emanating from foreign and international ports for international destinations other than South African ports. However, it is handled as cargo in transit within the South African ports.

The Authority's actual volumes for FY 2015/16 together with budgeted volumes for FY 2016/17 and projections for FY 2017/18 to FY 2019/20 differentiated into the various cargo types is highlighted in the Table below:

Table 12: Authority's Volume Growth

Details	Actual FY2015/16	Budget FY2016/17	% Deviation	Forecast FY2017/18	% Deviation	Forecast FY2018/19	% Deviation	Forecast FY2019/20	% Deviation
Containers (TEUs)									
Deepsea Full: Imports	1 438 931	1 485 279	3%	1 510 888	2%	1 571 196	4%	1 593 895	1%
Deepsea Full: Exports	1 067 037	1 176 692	9%	1 197 975	2%	1 234 507	3%	1 267 146	3%
Transhipments	971 637	1 126 514	14%	1 154 044	2%	1 168 486	1%	1 333 655	12%
Other	961 567	1 163 841	17%	1 188 566	2%	1 289 395	8%	1 262 530	-2%
Total	***4 439 172***	***4 952 326***	***10%***	***5 051 473***	***2%***	***5 263 584***	***4%***	***5 457 226***	***4%***
Vehicles (Units)									
Vehicles: Imports	362 571	380 809	5%	391 421	3%	410 918	5%	425 329	3%
Vehicles: Exports	297 879	314 734	5%	341 920	8%	351 951	3%	359 250	2%
Other	36 599	40 751	10%	42 979	5%	45 859	6%	47 781	4%
Total	***697 049***	***736 294***	***5%***	***776 320***	***5%***	***808 728***	***4%***	***832 360***	***3%***
Break Bulk (Metric Tons)									
Break Bulk: Imports	2 343 785	2 018 759	-16%	2 042 910	1%	2 158 319	5%	2 212 888	2%
Break Bulk: Exports	5 031 883	5 208 158	3%	5 441 894	4%	5 612 403	3%	5 836 469	4%
Other	192 507	75 566	-155%	105 948	29%	108 239	2%	110 543	2%
Total	***7 568 175***	***7 302 483***	***-4%***	***7 590 752***	***4%***	***7 878 961***	***4%***	***8 159 900***	***3%***
Dry Bulk (Metric Tons)									
Coal Exports	76 677 750	80 430 000	5%	83 109 000	3%	87 007 880	4%	89 003 273	2%
Iron Ore Exports	58 671 830	60 000 000	2%	60 000 000	0%	60 500 000	1%	62 300 000	3%
Manganese Ore Exports	9 674 685	11 425 000	15%	10 885 000	-5%	10 300 000	-6%	10 300 000	0%
Other Dry Bulk	25 761 651	28 294 774	9%	31 214 719	9%	30 461 661	-2%	34 224 252	11%
Total	***170 785 916***	***180 149 774***	***5%***	***185 208 719***	***3%***	***188 269 541***	***2%***	***195 827 525***	***0%***
Liquid Bulk (kl)									
Petroleum	38 311 933	37 784 356	-1%	38 653 512	2%	40 012 184	3%	40 810 342	2%
Chemicals	2 213 120	1 865 877	-19%	1 893 020	1%	1 972 702	4%	2 042 807	3%
Other Liquid Bulk	1 179 832	1 208 388	2%	1 223 571	1%	1 251 463	2%	1 315 507	5%
Total	***41 704 885***	***40 858 621***	***2%***	***41 770 103***	***2%***	***43 236 349***	***3%***	***44 168 656***	***2%***

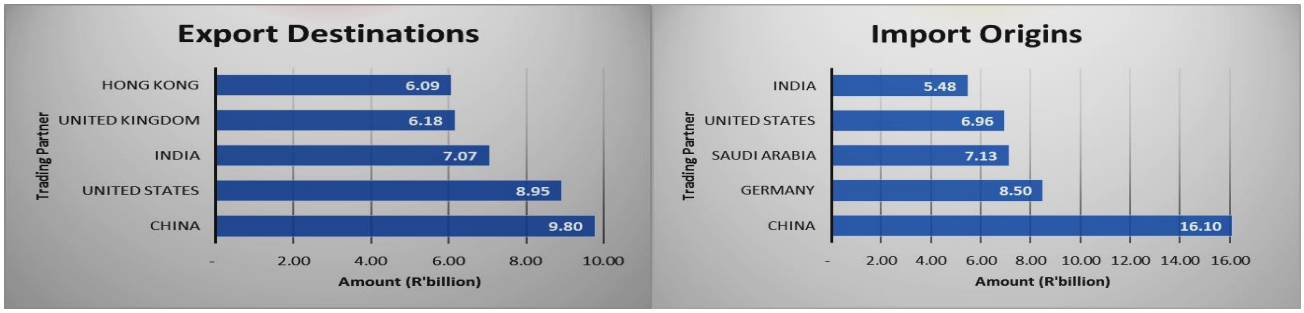
6.3.1 Containers

The World Trade Organisation (WTO) estimates growth in the volume of world trade to remain sluggish in 2016 at 2.8% unchanged from the 2.8% recorded in 2015. This 2.8% growth represents the worst performance in global container throughput in recent times compared to the growth for 2014, recorded at 5.3%. A comparative study by Drewry forecasts growth of 2.1% in 2016 rising to 2.9% in 2017. However, the South African ports have seen a weakened container business as a result of deteriorating domestic economic activity and less trade with South Africa's main trading partners as compared to FY 2015/16, which is the last year with recorded actual volumes. This is supported by the 2016 revised IMF economic growth of 0.1% for South Africa. Manufacturing capacity utilisation has declined to around 80% of full production as global demand (i.e. South Africa's trading partners and in particular Europe) has slumped. Though the weaker Rand is expected to spur on production and exports of locally produced commodities, the volatile exchange rate makes it expensive to source input raw materials. With lesser imports of materials in containers, the ports will handle lesser container volumes. Other unfavorable factors contributing to lower imports of full containers include: lower household consumption (i.e. which is predominantly a retail sale), lower consumer confidence, rising inflation, rising interest rates, tight credit conditions and persistently high structural unemployment. A struggling retail sector and consumer demand has a direct impact on the import of containers. The downside to the Authority's revenue by lesser volumes of containers can be summarised as follows:

- A sluggish economic growth within the South-South trading route (i.e. all trading routes in the southern hemisphere with main destination being China). This is a downside because this trading route takes significant exports of natural resources and commodities from South Africa. These countries are now estimated to grow only at 4.1% in 2016 instead of the high 7.4% level last seen in 2010. This reversal pattern is more pronounced and harmful to the economic growth of the emerging markets, including South Africa, than the mild recovery of the trading partners in the developed economies.
- Increasing energy prices and overall rising input costs that have led to major industries scaling down production.
- The declining Chinese economy poses a short term threat as the ripple effects mostly impact the mining sector which is prone to labour unrest and reputational risks with major trading partners.
- The Implications of Brexit (i.e. United Kingdom's exit from the European Union) on the South African Economy particularly increased levels of uncertainty in the global economy which is still fragile and quite subdued.
- Though less pronounced, South Africa will be impacted by Brexit as it has an open economy. Furthermore, the UK is the largest single country of origin for foreign direct investment (FDI) in South Africa.

On the upside, the IMF is optimistic of a Global GDP growth above 3.6% for FY 2016/17. The growth momentum is expected to gain traction particularly in the USA. Growth is again expected from India and Sub-Saharan Africa (i.e. although the downside risks are high for many countries in the Sub-Saharan region). South Africa's growth prospects would be impacted by the performance of growth in its trading partners which are depicted in the Figure below:

Figure 3: South Africa's main trading partners (Source: Trade economics 26 July 2016)



With the global economy expected to recover, although not at levels seen pre- global financial crisis and recession, this improves prospects for container exports. Growth comes with the utilisation of production and manufacturing capacity which comes with other benefits such as employment, rises in incomes, retail activity etc.

6.3.2 Automotives

South Africa has heavily invested (i.e. estimated in the region of more than R25 billion) since the inception of Industrial Policy Action Plan (IPAP). As part of IPAP's 2016/17-2018/19 review, the Department of Trade and Industry (the Dti) highlighted the 2015 financial year successes as new investments in the automotive industry summarised as follows:

- A Chinese company, Beijing Automobile International Corporation (BAIC), co-funded by the Industrial Development Corporation (IDC) is to build a new motor manufacturing plant in Port Elizabeth;
- Ford will invest R2,5bn to build the Everest sports utility vehicle and expand the production of the Ford Ranger pickup at its Silverton assembly plant in Pretoria, on the back of a R699 million incentive provided by the Automotive Policy Development Programme (APDP). This should create about 1,200 jobs;
- Volkswagen Group will invest more than R4,5bn for new models and infrastructure at its factory in Port Elizabeth;
- BMW will invest R6bn into its Rosslyn plant for the production of the next generation BMW X3 destined for both local market and exports;
- An Iveco-Larimar joint venture has begun the production of trucks and buses on its production plant in Rosslyn. This plant should employ about 1,000 workers;
- Toyota started the completely knocked down (CKD) production of the Quantum minibus at its Durban facility. The project created 270 direct jobs and introduced 50 new components to be sourced locally;
- Nissan announced that it would manufacture its new Datsun Go to be assembled at its Rosslyn plant and turn the plant into its African manufacturing base;
- Volvo has invested R60 million in a regional parts and distribution centre in Benoni, thus consolidating all logistical operations in Sub-Saharan Africa;
- Goodyear SA will invest R670m to increase production of high value-added consumer tyres at its Uitenhage plant, relocating the plant's production of medium radial truck tyres to other plants across the company's facilities in Europe, the Middle East and Africa;
- A Japanese-listed company, Sumitomo Rubber Industries is on phase two of its R2bn investment focused on manufacturing truck and bus tyres. The company received R300m from the Automotive Investment Scheme (AIS). This investment should create approximately 1,200 jobs in total in Ladysmith;
- Daimler, a German motor company announced that it intends to make SA the service base for its new global truck and bus strategy. This move should benefit Mercedes Benz and increase investment in its East London plant.

These initiatives should propel the export market going forward. However, the disruption in the local automotive manufacturing may come in the form of wage negotiations and strikes which come with uncertain risk in production of vehicles. The bulk of South African automotive exports are destined for Australia, Europe, Africa, Asia and North America. Persistent economic challenges in these regions might constrain exports volumes.

6.3.3 Coal

Although the coal market remains vulnerable to global economic recovery and performance especially from China, India and Japan continue to maintain their increased reliance on coal imports which should support the global coal seaborne market, hence coal is expected to grow between 2%-3% in FY 2017/18 in the Authority's volume forecasts. This is a lower growth rate as compared to the recent past. This lower growth rate is mainly driven by the following:

- Excess supply of coal in the markets creates lower than anticipated volume throughput shipped through Richards Bay Coal Terminal (RBCT) as compared to the past years;
- Higher stock piles with shippers waiting for the recovery and hopefully a higher price of coal;
- Competition for export volumes still emanates from South Africa's own domestic consumption; and
- Most importantly, response to climate change in efforts to reduce carbon emissions mean alternative fuel sources are likely to be promoted at the expense of coal.

6.3.4 Iron Ore

The downward trend in commodity prices which started in the last couple of years is still continuing. A weaker demand, particularly from China and excess supply internationally, has underpinned the adverse price trends (i.e. to US53 dollars per ton from US197 per ton in 2008) in the Iron Ore market. The prices of certain commodities recovered somewhat, but this could be transitory as the underlying fundamentals have generally not changed. Iron Ore is still expected to be subdued in FY 2017/18.

The Port of Saldanha Bay is the dedicated port for iron ore exports with a capacity of 58.5 million tons per annum (Mtpa). The Multipurpose Terminal at the port will handle Iron Ore volumes in addition to the Bulk Terminal which has been serving that purpose in Saldanha Bay. Iron Ore (together with Manganese Ore) are directly influenced by growth in the steel industry and with the rapid drop in demand for steel in China, Iron Ore is not expected to rise as demand is low for the commodity.

6.3.5 Manganese Ore

Manganese Ore volumes are flat and anticipated to decrease 5% in FY 2017/18. Like Iron Ore and steelmaking metal, Manganese Ore has had a challenging year, largely due to the downturn in China. Low manganese prices are impacting market participants in various ways. Some exporters feel that short-term prices are not as doom and gloom. In the long term, some exporters are feeling bullish as South Africa exports only 42% to China and 58% to other countries.

The port of Port Elizabeth is the primary exporter of manganese with a capacity of 4.9 Mtpa. Additional capacity is available in the port of Durban at an estimated capacity of 2 Mtpa, as well as the port of Saldanha Bay (MPT) with a throughput capacity of 4 Mtpa. This is ample and adequate capacity to handle the export volumes raised in Table 12 above. South Africa produces the highest quality ore grade in the world (i.e. 3 times better than the quality produced in China), and will always supply at a constant average level of approximately 10 million tonnages. As a result, the downturn currently experienced is only situational and is expected to pick up post FY 2019/20.

6.3.6 Liquid Bulk

The international crude oil prices fell sharply during the course of FY 2015/16, with the supply side factors dominating the price developments. OPEC, which controls 40% of the global supply, continued with their operations in the face of falling oil prices and produced even more oil, exacerbating negative market developments and triggering further price collapses throughout the year. Prices might remain low as non-OPEC countries compete for their market share.

For the Authority's ports, liquid bulk volumes increased substantially during the FY 2015/16 as refineries and speculators exploited the price advantage. However, the buoyant crude oil import was limited by the country's storage capacity. In addition, with no recovery in prices, the crude imported remains in storage instead of being shipped in and out of the country creating activity in the ports.

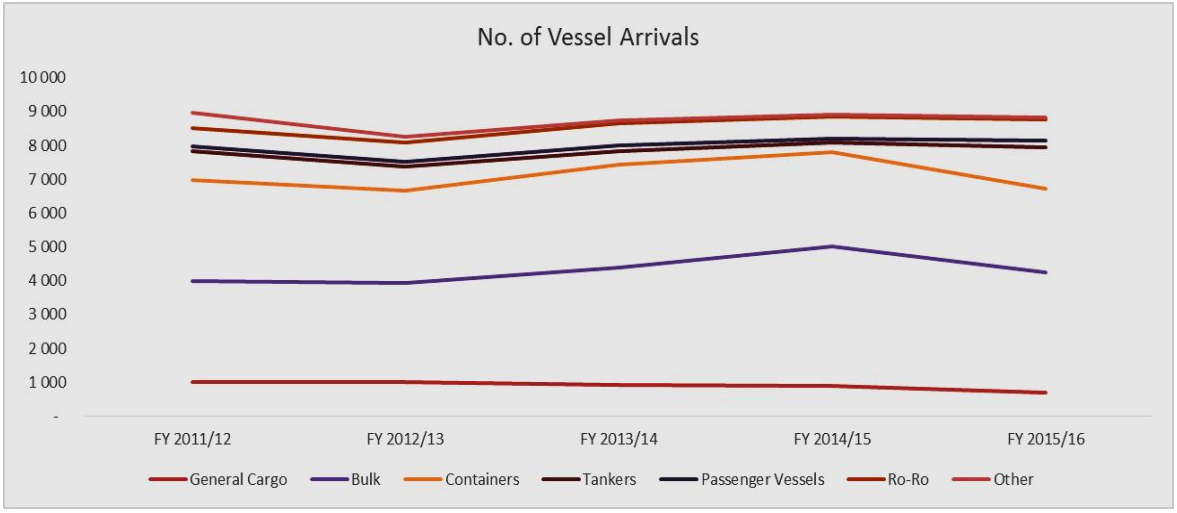
The other commodities in the liquid bulk category are export of chemicals which is an activity largely affected by global market conditions, in particular European economies. Although forecasted to be positive, it is still subdued in FY 2016/17 and FY 2017/18.

6.3.7 Marine Services

Marine volumes comprise of the number of vessels arriving at South African ports and their associated Gross Registered Tonnage (GRT). The size of the vessel and the number of days spent in the port dictates the amount that shipping lines will pay for utilising basic port infrastructure and marine services operational charges, i.e. tugs, berthing and pilot assistance.

The vessel traffic is demand driven as it depends on growth in volumes per cargo commodity. Based on the current economic outlook, the Authority projects a lesser traffic of vessels at the ports as shipping lines continue to consolidate cargo volumes to reduce costs (See Figure 4 below).

Figure 4: No. of vessel arrivals



A closer look at the vessel movements indicates the following:

- Lesser arrivals in Containers and Bulk vessels - with larger container vessels arriving in the Authority's ports. The bulk commodity is a falling category as a result vessel movements are expected to remain flat;
- Vessels carrying all other commodities are expected to remain flat in FY 2017/18.

In essence, there are two issues driving lower marine revenue in FY 2017/18. Firstly, lower industry load factors in vessel categories such as general cargo, bulk and other, which imply declining freight rates. Secondly, lower volume growth in cargo leading to lesser calls and marine revenue (i.e. increase of R22m equals only 1%).

7. Tariff Application Approach

The tariff application for FY 2017/18 has been prepared in accordance with the approved Tariff Methodology issued by the Regulator. The section that follows illustrates the application of the components of the Tariff Methodology.

7.1 Revenue Requirement Formula

The Revenue Requirement (RR) approach as per the Tariff Methodology for FY 2015/16 to FY 2017/18 forms the basis upon which the Regulator will determine the appropriate revenues for the Authority. The formula as prescribed is as follows:

Revenue Requirement

= Regulatory Asset Base (RAB) x Weighted Average Cost of Capital (WACC)

+ Operating Costs + Depreciation + Taxation Expense ±Claw-back

± Excessive Tariff Increase Margin Credit (ETIMC)

The application of this formula is demonstrated in the sections that follow.

7.1.1 Regulatory Asset Base

The Authority is responsible for the management of the South African national ports system and owns, develops and maintains port land infrastructure.

*7.1.1.1 **Asset Base***

The RAB on which the Authority is allowed to earn a return on by the Regulator involves all assets of the Authority. The Regulator retains the discretion to disallow any portion of the RAB as it deems necessary, such as assets that fall outside the ambit of the National Ports Act.

The RAB of the Authority has been trended using the latest inflation forecast from National Treasury per the Regulatory Manual.

The process used to determine the RAB is as follows:

a) In order to determine the value of the RAB on which a return will be calculated in the allowed revenue formula, both the closing and opening values of the RAB including capital expenditure are averaged throughout the period. This is done to recognise availability and incurrence of capital expenditure throughout the financial year rather than on the first day of the financial year.

The formula for the determination of the value to be allowed in the RAB for the tariff period is highlighted in Section 3.3 (subsection 3.3.4) above.

*7.1.1.2 **Depreciation***

- *Financial Reporting*

In terms on financial reporting, the Authority's depreciation is recognised on a straight-line basis over the estimated useful lives of each component of an item of property, plant and equipment. Land and assets in the course of construction are not depreciated. All other property, plant and equipment, including capitalised leased assets, are depreciated on a straight-line basis over their estimated useful lives or the term of the lease, if shorter. Major repairs and overhauls are depreciated over the remaining useful life of the related asset or to the date of the next major repair or overhaul, whichever is shorter. Depreciation commences when the asset is available for use. Assets are depreciated over the following periods:

Table 13: Abstract of Depreciation Policy

SIGNIFICANT ACCOUNTING POLICIES	
PROPERTY, PLANT AND EQUIPMENT	
Asset class	**Years**
Buildings and structures	10 – 50
Buildings and structures components	10 – 25
Permanent way and works	3 – 95
Aircraft including components	5 – 8
Port infrastructure	12 – 100
Floating craft including components	5 – 40
Containers	10 – 20
Vehicles	3 – 15
Machinery, equipment and furniture	3 – 30

- *Tariff Application*

In accordance with the Tariff Methodology, the RAB will be depreciated on a straight line, 40 year basis on the trended/inflated asset base. Furthermore, 50% of the capex that is included in the RAB is inflated in determining depreciation. The resultant depreciation is R2 015m for FY 2017/18, R2 199m for FY 2018/19 and R2 421m for FY 2019/20.

*7.1.1.3 **Inflation Trending***

The Tariff Methodology prescribes the use of the Consumer Price Index (CPI) for the tariff period based on the latest forecast published by the National Treasury or alternatively the BER inflation forecast, for the purposes of trending the RAB. The Authority has utilised the latest forecasts published annually by National Treasury (Source: Budget Review released on 24 February 2016 (Economic Outlook: Chapter 2)).

7.1.1.4 *Capital Works in Progress(CWIP)/ Capital Expenditure (Capex)*

The formula for determination of the RAB includes CWIP/Capex. Capex refers to assets that are under construction. Capex is informed by the Capex program which is projected at R4 050m for FY 2017/18, forecasted at R5 401m for FY 2018/19 and R6 358m for FY 2019/20. Detailed information relating to capital expenditure is demonstrated in ***Annexure B: Capital Expenditure***.

7.1.1.5 *Working Capital*

In line with the Tariff Methodology, the formula for estimating the working capital figure to be used in the Revenue Requirement determination includes indexation of trade receivables by the percentage volume growth for FY 2017/18. A similar indexation is applied in the following years with the estimation of volume growth of those years (i.e. same for the three financial years in this application). All other components of working capital are indexed on a cumulative basis by an estimation of inflation of the years in which they are applicable. In accordance with the Tariff Methodology, the working capital is determined as follows:

Table 14: Working Capital

	FY 2017/18	FY 2018/19	FY 2019/20
Indexation Factors			
Volume Growth	1.80%	1.80%	1.80%
Inflation	6.40%	5.60%	5.40%

AFS 2015/16			
Current Assets	**1 296**	**1 321**	**1 346**
Trade receivables	1 264	1 287	1 310
Inventories	32	34	36
Current Liabilities	**4 111**	**4 344**	**4 534**
Trade Payables	2 886	3 047	3 212
Current Tax Liabilities	1 107	1 169	1 232
Capex (Payables)	119	128	91
Working Capital	-2 815	-3 023	-3 188

The Capex payable shown in the above Table is determined by taking the differences between the tariff year under review and the actual capex for the previous year (FY 2015/16), as shown in the Annual Financial Statements. This difference is then divided by 12 months to estimate how much would be on the last month of the financial year. This estimate is then increased by the VAT portion to approximate the amount due in the last month of the financial year. This process is repeated with the same information for FY 2018/19 and FY 2019/20, as these estimates are based on actual information, the last one being FY 2015/16. Therefore, most of the working capital (i.e. particularly current assets) variables will remain the same for the entire three year tariff period presented above. The tariff decision is determined only on FY 2017/18 with the additional two years only presented for indicative purpose.

7.1.2 Weighted Average Cost of Capital

The weighted average cost of capital represents an estimate of a return commensurate with the risk of owning, managing, controlling and administering ports and of providing port services and facilities which the Authority is allowed by the Directives to earn. The rate of return is determined on a real basis with a weighted average cost of debt and cost of equity.

The key components used to determine the Vanilla WACC is highlighted in the following Table:

Table 15: Weighted Average Cost of Capital (WACC)

REAL RATE OF RETURN	FY2017/18	FY2018/19	FY2019/20
Inflation forecast	6.40%	5.60%	5.40%
Nominal Risk-free rate	8.58%	8.58%	8.58%
Real risk free rate	2.05%	2.82%	3.02%
MRP	5.40%	5.40%	5.40%
Asset beta	0.50	0.50	0.50
Equity beta (using Hamada)	0.86	0.86	0.86
Gearing	50.00%	50.00%	50.00%
Debt/equity ratio	100.00%	100.00%	100.00%
Nominal Weighted Average Cost of Debt (WACD)	10.81%	10.91%	10.97%
Tax rate	28.00%	28.00%	28.00%
Real Cost of equity (post-tax)	6.69%	7.47%	7.66%
Real WACD (pre-tax)	4.14%	5.03%	5.28%
Real Vanilla WACC	5.42%	6.25%	6.47%
Explanatory notes:			
Risk Free Rate: Calculated over a five yearly average from June 2011 to May 2016 for FY 2017/18			
MRP: Geometric mean with the use of the DMS studies			
Inflation: BER Forecasts			
Cost of Debt: Transnet weighted Average Cost of Debt			
FY 2017/18 MRP figure is used as a proxy for MRP for indicative years FY 2018/19 & FY 2019/10			

The Nominal Risk Free Rate (RFR) is calculated over a five yearly average from June 2011 to May 2016 for FY 2017/18 from Government bonds. In essence, there isn't a RFR figure for FY 2018/19 to FY 2019/20 and therefore the RFR figure for FY 2017/18 will be used as an indicative figure for illustrative purposes.

7.1.3 Valuation of the RAB

The valuation of the RAB is highlighted in Table 16 as follows:

Table 16: Regulatory Asset Base

REGULATORY ASSET BASE	FY 2017/18 Rm	FY2018/19 Rm	FY2019/20 Rm
Opening book value	73 846	80 737	88 611
Inflation Index	4 726	4 521	4 785
Indexed Opening Asset Base	78 572	85 258	93 396
Indexation of Capex	130	151	172
Indexed Asset Base	78 702	85 409	93 567
Add :Capex (Corporate Plan)	4 050	5 401	6 358
Depreciation	-2 015	-2 199	-2 414
Closing Book Value	80 737	88 611	97 511
Average Asset Base	77 291	84 674	93 061
Less :Working Capital	-2 815	-3 023	-3 188
Regulated Asset Base	74 477	81 651	89 872

7.1.4 Taxation

The Revenue Requirement formula considers tax expense as a pass-through cost to be recovered from customers. For tax purposes, the Vanilla WACC is applied to the average RAB for the period under review, and does not include the cost of debt as it is a pre-tax determination. The tax calculations further include the flow of funds related to the claw-back.

The calculation for tax is illustrated below:

Table 17: Tax Calculation

Taxation	FY 2017/18	FY 2018/19	FY 2019/20
Equity Return	2 492	3 048	3 443
Depreciation	2 015	2 199	2 414
Opex	5 961	6 391	6 935
Gross income	**10 469**	**11 638**	**12 792**
Depreciation	2 015	2 199	2 414
Opex	5 961	6 391	6 935
Less Deductions	**7 976**	**8 590**	**9 349**
Taxable Income	**2 492**	**3 048**	**3 443**
Grossup factor	0.72	0.72	0.72
Grossed up taxable income	**3 462**	**4 233**	**4 781**
Tax @ 28%	969	1 185	1 339

The equity return is grossed- up (i.e. 1-0.28) for tax, with a tax shield calculated at 28% on the actual flow of funds.

7.1.5 Operating Costs

The Authority's operating costs (Opex) are a reflection of growth in expenditure (in line with the organisations forecasts) due to the day to day operations of the organisation, and in support of the strategic initiatives which aim to improve productivity, efficiency as well as enhance port safety. Consequently, most of the Authority's operating costs are of a fixed nature.

The cost elements contributing significantly to the total operating expenditure includes Labour Costs, Energy, Maintenance, Rates and Taxes, Sundry Operating costs, Professional services, Computer and Info systems, Rental and Pre-Feasibility Studies.

Table 18 below highlights the Authority's material operating expenditure items. The Authority's total costs for FY 2017/18 is made up of R 5 452 and R 509m Group overhead costs.

Table 18: Operating Costs Including Group Costs

Cost Category	Actual 2015/16 R Million	Budget 2016/17 R Million	Forecast 2017/18 R Million	Dev '16/17 vs 17/18 R Million	Dev '16/17 vs 17/18 Percentage	% of Opex 17/18	Forecast 2018/19 R Million	Forecast 2019/20 R Million	CAGR 2017/18 - 2019/20
Labour Costs	2 074	2 423	2 802	380	16%	51%	3 042	3 268	8%
Rates & taxes	314	348	375	28	8%	7%	410	517	17%
Maintenance	340	348	396	48	14%	7%	428	487	11%
Contract Payments	80	141	150	9	6%	3%	158	167	6%
Energy	436	530	599	70	13%	11%	645	693	8%
Professional services	19	50	168	118	236%	3%	178	188	6%
Material	76	80	87	7	9%	2%	90	96	5%
Computer & Info systems	125	188	191	3	2%	3%	202	214	6%
Rental	159	193	193	0	0%	4%	204	215	6%
Security costs	74	91	94	3	4%	2%	101	110	8%
Pre -Feasibility Studies	24	92	122	30	32%	2%	103	96	-11%
Sundry operating costs	136	277	274	-3	-1%	5%	282	295	4%
Total operating cost (excluding depreciation)	***3 857***	***4 760***	***5 452***	***692***	***15%***	***100%***	***5 843***	***6 348***	***8%***
Group Costs	506	650	509	(142)	-22%	0%	548	587	7%
Total operating cost (Including Group Costs)	**4 362**	**5 411**	**5 961**	**550**	**10%**	**0%**	**6 391**	**6 934**	**8%**

Full details relating to OPEX are provided in ***Annexure D***.

7.1.6 Revenue Claw-back

As per the approved Tariff Methodology, the key purpose of applying a claw-back is to ensure that either the Authority or port user do not gain or lose out from discrepancies between forecasts made at the time of the tariff application and actual figures on the realisation of capital expenditure, operating expenditure, depreciation, taxation, volume and inflation (CPI).

The claw-back is initially calculated on forecasts, as per the tariff application of the Authority. The final claw-back is then re-calculated when actual information or financial results are available.

*7.1.6.1 **Re-computed Claw-back FY 2015/16***

Based on the performance of the Authority for FY2015/16, the final calculation of claw-back for the financial year equates to an over recovery of R575m. The Regulator allowed the Authority a provisional claw-back of R55m in favour of the Authority in the FY2016/17 tariff determination, resulting in a total residual claw-back to be returned to customers of R774m.

The approach used in the calculation was to re-determine the revenue requirement given the full information on actual Capex spending, operating expenditure and depreciation.

The FY2015/16 Revenue of R11 144m reflects the actual revenue in the FY2015/16 annual financial statements. The calculation of the claw-back is as follows:

Re-computed Revenue of R10 569m is the composition of the return on RAB of R66 573m based on a Vanilla WACC of 5.48% and depreciation of R1 789m. Opex is R4 304m and Tax is recomputed as a pass-through cost as R959m. This gives the re-computed revenue requirement for FY 2015/16 as shown below:

Table 19: Re-computation of RR for FY 2015/16

DETAILS	FY2015/16 ROD R'm	FY2015/16 Actuals R'm
Return	4 261	4 249
Depreciation	1 791	1 789
Opex	5 020	4 304
Tax	768	959
Clawback	-581	-581
ETIMC	-150	-150
Revenue Allowed/Actual Revenue	**11 109**	**10 569**
AFS Revenue		11 144
Contracts Revenue		120
Clawback		**-695**
Clawback as per above		-695
Reverse FY2015/16 Clawback taken in FY2016/17		-55
Estimated clawback for FY2016/17 (half)		11
Return on clawback account for FY2016/17 @ 4.64%		-35
Net Clawback		**-774**

With hindsight, the recalculated revenue requirement is R10 569m for FY2015/16. This revenue will be compared with the actual revenue of R11 144, as presented in the financial statements. Added onto this actual revenue is an amount of R120m which represents bilateral contract revenues not allowed by the Regulator to be discounted to some mining customers in line with the discount contracts they have with the Authority. The difference in these revenue amounts gives a claw-back of R695m, unfavourable to the Authority. This claw-back will include the reversal of the favourable interim claw-back amount of R55m (half of R109m) provided for in FY2015/16. In addition to these amounts, a favourable estimated claw-back for FY2016/17 of R11 m as well as a negative R35m in interest on the claw-back account will be added to give a net claw-back of R774m, unfavourable to the Authority. The R11m arises from the latest revenue estimate for FY2016/17 indicating that the Authority will earn lesser revenue by an amount of R21m to the Regulator's allowed R11 064 in the ROD, which is subject to the 50% principle of claw-back, half of the estimate positive interim claw-back (amounting to R11m) will be considered in the current claw-back calculation.

Claw-back is a liability either for the Authority or customers (i.e. port users). Therefore, interest is calculated on the outstanding amount at the percentage of rate of return approved (i.e. (add minus R695m and minus R55m)* 4.64% approved giving minus R35m). Interest on the outstanding balance compensates either the Authority or customers for the opportunity cost of money foregone as a result of money not retained where it rightfully should.

7.2 Revenue Requirement

The application of the methodology using the respective components described above is illustrated in Table 20 below:

Table 20: Base Revenue Requirement from FY 2017/18 to FY 2019/20

DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20
	ROD	Fixed Tariff Year	Indicative Tariff Years	
	R'm	R'm		
RAB	73 846	74 477	81 651	89 872
Vanilla WACC	4.64%	5.42%	6.25%	6.47%
Return on Capital	3 420	4 036	5 101	5 817
Plus: Depreciation	1 948	2 015	2 199	2 414
Plus: Operating Costs	5 487	5 961	6 391	6 935
Plus: Taxation Expense	889	969	1 185	1 339
Plus/Less: Clawback	-680	-774	11	-
Plus/Less: ETIMC	-	-	-	-
Revenue Allowed	***11 064***	***12 207***	***14 887***	***16 505***
Less: Real Estate	-2 600	-2 798	-3 028	-3 282
Revenue Shortfall	-7	-	-	-
Marine Revenue	***8 457***	***9 409***	***11 859***	***13 224***

Application of the Revenue Requirement formula results in a base revenue requirement of R12 207, comprising of Real Estate business revenue of R2 798m and Marine Business revenue of R9 409m. The volume growth of 1.80%, as determined in Table 21 below, adds an additional R152m in the Marine Business Revenue for FY2017/18, therefore giving a revenue of R8 621m before the tariff increase.

Table 21: Revenues related to volume growth (FY 2017/18)

REVENUE	FY 2016/17	FY 2017/18	FY 2017/18	FY 2017/18
	Revenue Le	Weighted Average Revenue Volume Increase	Revenue: Volume Increase	Revenue: Before Tariff Increase
	R'm	%	R'm	R'm
Containers	3 879	1.8%	68	3 947
Break Bulk	229	3.4%	8	237
Dry Bulk	1 086	1.5%	16	1 102
Liquid Bulk	647	2.7%	17	665
Automotive	414	4.2%	17	432
TOTAL CARGO DUES AFTER REBATE	**6 256**	**2.0%**	**127**	**6 383**
Marine & other revenue	2 213	1.2%	26	2 238
TOTAL TARIFF BOOK REVENUE	**8 469**	**1.8%**	**152**	**8 621**
Real estate revenue	2 570	8.9%	228	2 798
TOTAL REVENUE	**11 039**	**3.4%**	**380**	**11 419**

The Authority has proposed a Revenue Requirement of R9 409m in FY2017/18; this translates to a tariff increase of 9.14% as per Table 22 below.

Table 22: Base Marine Revenue for FY 2017/18 to FY 2019/20

MARINE REVENUE	FY2017/18	FY2018/19	FY2019/20
	Fixed Tariff Year	Indicative Tariff Years	
	R'm		
Prior Year Revenue	8 469	9 409	11 859
Estimated Volume Growth	1.80%	1.80%	1.80%
Revenue after volume growth	8 621	9 579	12 072
Required Revenue	9 409	11 859	13 224
Tariff Increase	***9.14%***	***23.80%***	***9.54%***

7.3 Tariff Application

In order to assist the customer base whilst ensuring a successful MDS delivery, the Authority proposes to utilise R98m of the Excessive Tariff Increase Margin Credit (ETIMC) facility. With the use of ETIMC, Marine Business revenue is determined at R9 311m. This revised Revenue Requirement is demonstrated in Table 23:

Table 23: Revised Revenue Requirement FY 2017/18

DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20
	ROD	Fixed Tariff Year	Indicative Tariff Years	
	R'm	R'm		
RAB	73 846	74 477	81 651	89 872
Vanilla WACC	4.64%	5.42%	6.25%	6.47%
Return on Capital	3 420	4 036	5 101	5 817
Plus: Depreciation	1 948	2 015	2 199	2 414
Plus: Operating Costs	5 487	5 961	6 391	6 935
Plus: Taxation Expense	889	969	1 185	1 339
Plus/Less: Clawback	-680	-774	11	-
Plus/Less: ETIMC	-	-98	-	-
Revenue Allowed	***11 064***	***12 109***	***14 887***	***16 505***
Less: Real Estate	-2 600	-2 798	-3 028	-3 282
Revenue Shortfall	-7	-	-	-
Marine Revenue	***8 457***	***9 311***	***11 859***	***13 224***

Accordingly, the same principles are applicable for FY2018/19 and FY2019/20 and the outcomes are demonstrated (i.e. with constant growth rate to illustrate the revenue and tariff increase in indicative years) in Table 24 below.

Table 24: Revised Marine Revenue for FY 2017/18 to FY 2019/20

MARINE REVENUE	FY2017/18	FY2018/19	FY2019/20
	Fixed Tariff Year	Indicative Tariff Years	
	R'm		
Prior Year Revenue	8 469	9 311	11 859
Estimated Volume Growth	1.80%	1.80%	1.80%
Revenue after volume growth	8 621	9 479	12 072
Required Revenue	9 311	11 859	13 224
Tariff Increase	***8.00%***	***25.11%***	***9.54%***

7.4 The Authority's Pricing Strategy

The Pricing Strategy is informed by Section 72(1) (a) of the Act. The Authority is required, with the approval of the Regulator, to determine tariffs for services and facilities offered by the Authority and to annually publish a tariff book containing those tariffs.

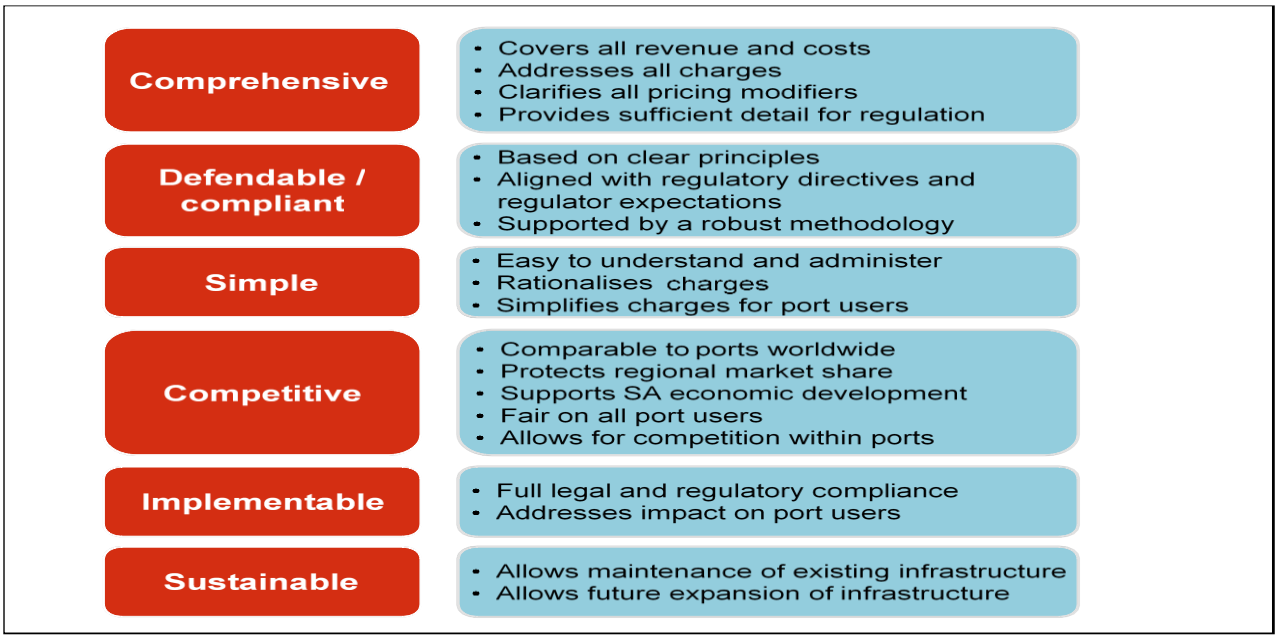
The Authority's annual revenue and the resultant average tariff determination is calculated in line with the Multi-Year Tariff Methodology (as developed by the Regulator, together with the Ports Industry). The Tariff Methodology sets out the required revenue and return on assets which may be raised through port tariffs, whilst the Tariff Strategy merely determines who is charged (of the customer categories/classes) and for what portion of the total revenue is recoverable from each customer category in the port system. It should be noted that the Tariff Strategy will not result in any significant reduction in total port costs (except for the possibility of alignments in a more allocation of costs, e.g. foreign shipping lines absorbing some of the costs). The envisaged end state of the Tariff Strategy is to reflect more cost allocation, which drives the investment decisions as well as efficiency in the ports system.

In the development of the Pricing Strategy, the Authority adopted an economic allocation of costs approach which is premised on the principle of 'user pay', resulting in cost reflective tariffs. This includes revisiting the contribution of revenue from terminal operators through rental income to follow the international landlord ports model of deriving a larger portion of revenue from rental income. The rationale behind this being that terminal operators economically benefit the most from access to port

infrastructure as compared to other port users. In addition, the higher the rent levied against terminal operators, the greater the incentive for terminal operators to maximise efficiencies and productivity in order to enhance their own profitability.

The Authority's initial Pricing Strategy submitted to the Regulator in 2012, which was aimed at addressing imbalances arising from an old ad-valorem pricing system, was based on some key pillars which are highlighted in Figure 5 that follows:

Figure 5: Key Pillars of the Pricing Strategy



The Regulator's response, and subsequent proposal of the Tariff Strategy, was decisively drafted to address the issues with the current pricing structure by moving towards more efficient pricing which is in the public interest. It is also set to aggressively deal with cross-subsidisation which is inherent in the system in such a way that it can be calculated. The Table below examines potential cross-subsidies from decades of historical pricing levels and indicates the approach that the strategy takes to attempt to address these.

Table 25: Potential cross-subsidy and tariff strategy approach

Potential Cross-subsidies arising from historical pricing	Tariff strategy approach
Cargo owners are subsidising other user groups such as vessel owners, and tenants.	A new asset allocation that results in an infrastructure cost reflective tariff proportional to the benefit each user group derives from the infrastructure or service provision.
Container and automotive cargo owners pay more than dry bulk cargo owners on a global comparator basis	Similarly, infrastructure is costed according to benefit derived from each cargo handling type – this is calculated by weighting total revenue required from cargo owners according to the number of vessel calls per cargo type and is then divided by total volume to get a per unit cost.

Potential Cross-subsidies arising from historical pricing	Tariff strategy approach
It is still to be determined whether lessees are being subsidised (i.e. paying less than market value for their land) and whether some lessees are subsidising others (i.e. paying unequal or unfair tariffs).	The Regulator will start to actively monitor rental prices to ensure that two pieces of land with similar characteristics are not being charged radically different rentals. Furthermore, the Regulator will endeavor to determine the market value of port land as part of its asset valuation exercise.
Port users of a particular port subsidising users in other ports, through a system wide tariff book approach.	System-wide pricing will remain in order to reduce the risk placed on any single port user; however, the tariff book is to be rebalanced and direct user charges in certain instances may be introduced.
Port users subsidise fledgling port-related industries and other national policy initiatives/government objectives.	Discounting certain infrastructure for identified port users in order to achieve national objectives of economic growth and inclusion will remain.
Use of port revenue/profits for non-port purposes.	This is outside the scope of the tariff strategy.
Port users of the same category or user group paying lower tariffs than similar users through differentiated tariffs or discount structures.	All discount structures are to be removed from the tariff book. Tariff rationalisation will result in a gradual move towards consolidated tariffs that will include the removal of any discount structure currently in place. Certain built-in incentives and discounts will remain, mainly related to coastwise shipping and transhipment etc.

The above statements are seen as generalised statements and exceptions may persist. The Regulator is committed to understanding and unravelling any other cross-subsidies which prevent efficient pricing in the port system and welcomes the views of port stakeholders in this regard. The real transition in terms of which tariffs will be set to converge on a base rate, as determined in accordance with these principles established in the Tariff Strategy, will be discussed in 7.6 below.

7.5 Asset Cost Allocations

In the Tariff Strategy, the Regulator follows a coherent costed infrastructure according to an asset allocation in the similar manner prescribed by the Authority. The Regulator's Tariff Strategy for the South African ports is premised on the following principles:

- **Cost causation:** To provide port users with the correct pricing signals when utilising port facilities;
- **Cost minimisation:** An approach seen to minimise costs;
- **Distribution of benefits**: To achieve equity and reasonability between causers and beneficiaries of costs; and
- **Practicality:** For practicality and ease of implementation of Tariff Strategy.

Furthermore, in the allocation or attribution of the cost of port assets, the Regulator takes into consideration which user classes depend more on a particular asset type and the extent to which they would be affected if the infrastructure did not exist. Therefore, in considering where the burden of this asset class allocation should be, the Regulator also looked at the activities of the different users and the benefit they derive therefrom. The Regulator has categorised port users as follows:

- Shipping Lines;
- Cargo Owners;
- Terminal operators (and all cargo working lessees); and
- All other lessees in the port system.

The general underlying logic is that the seaward side benefits mostly shipping lines and cargo owners, while the interface benefits mostly shipping lines and tenants, and the landward side benefits mostly tenants.

Figure 6 below identifies the key port assets and allocates these assets to user groups in order to determine a more equitable share of infrastructure and cost sharing between the broad groups.

Figure 6: Ports Regulator's Asset Allocations

Port User Asset Class	Lessees	Terminal Operator	Cargo Owners	Shipping Lines
Breakwaters	33% shared on a NBV basis		33%	33%
Channels, Fairways, basins			50%	50%
Quay walls, berths and jetties		50%		50%
All ship working vessels and aids to navigation				100%
Vessel repair infrastructure	40%	15%	15%	30%
All movable NPA assets, buildings and structures (not part of lease agreements) and unused land	50% shared on a NBV basis		25%	25%
Terminal land and staging areas		100%		
Non-Terminal Land including recreational and yachting	100%			
All common access infrastructure	66% Shared on a NBV basis		33%	
Overheads	50% shared on a NBV basis		25%	25%

This pricing structure, which is cost reflective, is envisaged to be phased-in over a period of at least 10 years and the Regulator has highlighted the following factors for a prolonged implementation period to be accommodated:

- contractual agreements and binding leases prevents the Regulator from changing tariffs too quickly;
- large shifts in tariffs may lead to unintended consequences and as such, a more gradual approach is favoured; and
- the cost structure of the port system by its very nature changes and evolves over time.

The phased approach as envisaged by the Regulator will lead to the following tariff increase over the envisaged 10 year period:

- **Cargo Owners:** - 5.2% real price decrease on an annual basis;
- **Shipping Lines:** 7.2% real price increase on an annual basis; and
- **Tenants:** 2.8% real increase on lease revenue on an annual basis.

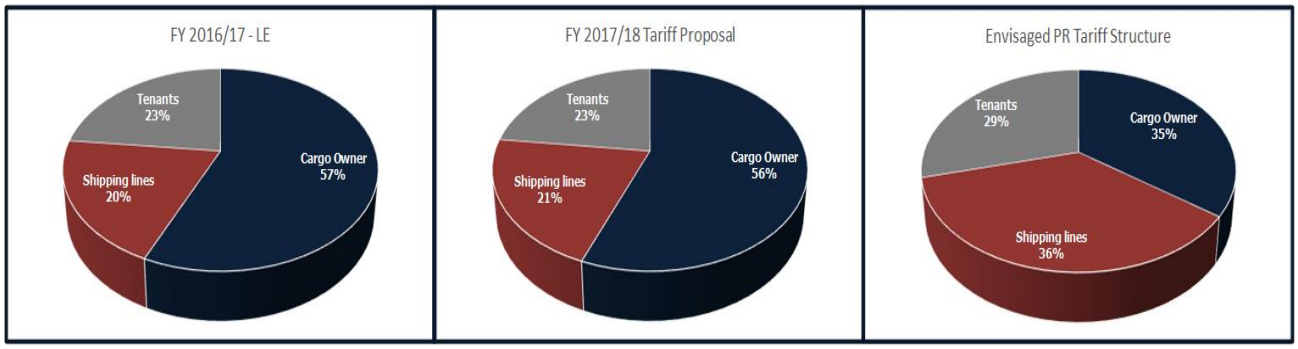
It is envisaged that this proposal will result in a steep reduction in the contribution of Containers and Automotives cargo category to the overall Revenue Requirement and slightly higher increases to Dry and Break bulk categories with immaterial changes to liquid bulk category.

7.6 Tariff Book Proposal for FY 2017/18

The tariff strategy is intended to guide the annual setting (or revision) of port tariffs and charges. Once the required revenue for FY2017/18 has been calculated, the next step would be to formulate cargo dues tariffs (i.e. tariff differentials) in line with the tariff strategy. In aligning tariffs to the Tariff Strategy (which is an exercise expected to be finalised in the medium to long term), the impact (i.e. feasibility and affordability) of these adjustments are considered on each user group. Furthermore, the Authority should still recover its full required revenue from port users.

The transition to the Regulator's Tariff Strategy is depicted in Figure 7 below.

Figure 7: Transition to the Regulator's Tariff Strategy



*7.6.1.1 **Cargo Dues***

The Tariff Strategy prescribes a cost and asset allocation of 35% for the cargo dues revenue stream. This shifts the allocations to the shipping lines and Real Estate revenue streams significantly from the current contributions. The Authority proposes a shift, though marginal, of cargo dues as it moves towards alignment with the Regulator's envisaged end state.

*7.6.1.2 **Shipping Lines***

The shipping lines will receive an additional increase and responsibility for contribution as cargo dues tariffs are reduced to align to the tariff strategy. Though currently relatively lower than the desired level of contribution, it is envisaged that the marine charges will start picking up to increase the most in the coming tariff adjustments. The tariff strategy envisages a period of approximately 10 years to suit this transition. The proposed tariff increase for the shipping lines for FY2017/18 is aligned to the desired end state, as assumed in the Regulator's Tariff Strategy.

*7.6.1.3 **Real Estate***

The real estate revenue category is contributing appropriately to the envisaged revenue contribution in accordance with the Tariff Strategy. As a result, the Authority would not be pursuing a much higher revenue contribution than it does currently. However, the full alignment to the Tariff Strategy is important to the Authority and its transition to landlord port model. The increased revenue contribution will still be pursued as part of the rental review process as lease contracts expire and rent review periods are negotiated.

*7.6.1.4 **Marine Charges Revenue (Cargo dues)***

The Tariff Strategy has outlined the importance of the cargo dues significance into revenue contribution for the Authority's required revenues. A more equitable allocation of port assets to shipping lines has been determined in the Tariff Strategy as ships use and benefit from both wet and dry port infrastructure, including breakwaters, channels, fairways, basins, quay walls, berths jetties, land and ship repair infrastructure. This allocation is expected to increase the revenue contribution of marine charges to approximately 36% of the total required revenue. A higher tariff increase is possible to expedite convergence in this category as vessels earn revenue in foreign currency, which has strengthened significantly against the Rand.

The trade environment for both the Authority and Terminal Operators is not stable to allow an easy alignment to the tariff strategy as planned. As a result, the weighted average tariff adjustment of **8.00%** for FY 2017/18, with the differentiated tariff approach to address some of the issues highlighted above results in the following Table:

Table 26: Differentiated Tariff Approach results

REVENUE	FY 2016/17	FY 2017/18	FY 2017/18	FY 2017/18	FY 2017/18	FY 2017/18
	Revenue Le	Weighted Average Revenue Volume Increase	Revenue: Volume Increase	Revenue: Tariff Increase	Weighted Average Revenue Tariff Increase	Revenue
	R'm	%	R'm	R'm	%	R'm
Containers	3 879	1.8%	68	197	5.0%	4 145
Break Bulk	229	3.4%	8	20	8.3%	256
Dry Bulk	1 086	1.5%	16	92	8.3%	1 194
Liquid Bulk	647	2.7%	17	55	8.3%	720
Automotive	414	4.2%	17	22	5.0%	453
TOTAL CARGO DUES AFTER REBATE	**6 256**	**2.0%**	**127**	**385**	**6.0%**	**6 768**
Marine & other revenue	2 213	1.2%	26	304	13.3%	2 543
TOTAL TARIFF BOOK REVENUE	**8 469**	**1.8%**	**152**	**689**	**8.0%**	**9 311**
Real estate revenue	2 570	8.9%	228	-	8.5%	2 798
TOTAL REVENUE	**11 039**	**3.4%**	**380**	**689**	**6.0%**	**12 109**

7.6.1.5 ***New Tariff Proposals***

Bunker levy tariff in the Port of Durban

The Authority has decided to request for approval to introduce a bunker levy tariff in the Tariff Book for the port of Durban at the rate of R 10.55/ton. This follows the Authority's investment of R57.5 m used in the extension of the bunker berth facility at the Island View Berth 10 recently. The project is already completed and as a result the port is currently realising the following amongst other benefits:

- Improved operational efficiencies by increasing turnaround times of vessels;
- Reduction of risks in refuelling by pipelines;
- Sufficient provision for fuelling ships at the port;
- This avails the full range of bunker grade previously not available in the port; and
- Most importantly it gives a dedicated berth in the port of Durban.

The Authority has consulted extensively with the customers and affected stakeholders about the bunker levy and a decision has now been taken to include this tariff in the Tariff Book FY2017/18 submitted to the Regulator.

8. Port Efficiency

The ports system is central to South Africa's ability to engage in international trade and promote economic growth. Ports exist at the coastal end of supply chains and play a critical role in the effectiveness of respective hinterlands served by these supply chains. The overall performance of ports is therefore a matter of strategic importance.

The primary role of the Authority is to provide port capacity and further to ensure that the full set of productive services exists at a port in order to serve demand. The provision of capacity is necessary but in itself not sufficient to ensure that the objectives of the Authority are achieved. The levels of efficiency realized in the operation of such capacity have shown to be a key determinant of the success, service levels and attractiveness of a port.

The drive for efficiency at South African ports is an important pillar in the Market Demand Strategy of the Authority, where specific focus is on improvement of the operational effectiveness and productivity of the ports system. The Authority has invested in a journey commencing in the 2012/13 financial year to establish and implement an operations model, institutional processes and to reorganize itself in order to address the systematic improvement of port efficiency. The Authority has made significant progress in the implementation of the operations model (shown in Figure 8 below). This model is based upon the ports supply chain with specific emphasis on the optimisation of ship turnaround time and port cargo dwell times focusing on the role of main port players delivering a port service. The model is expressed by determining efficiency standards for terminal operators, marine services, shipping lines, the rail operator and road haulers and by exercising oversight to ensure that these port players work to meet these standards. The main initiatives in this regard are shown (in Figure 9) below.

Figure 8: Port Performance Model

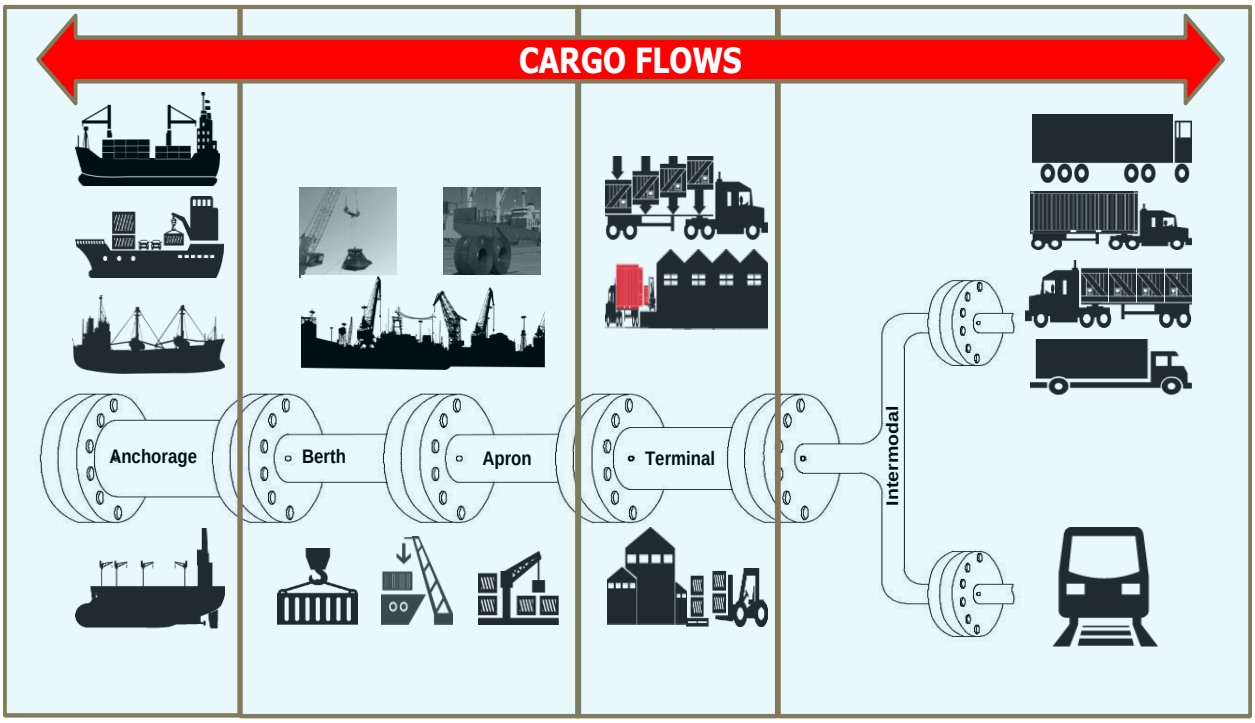
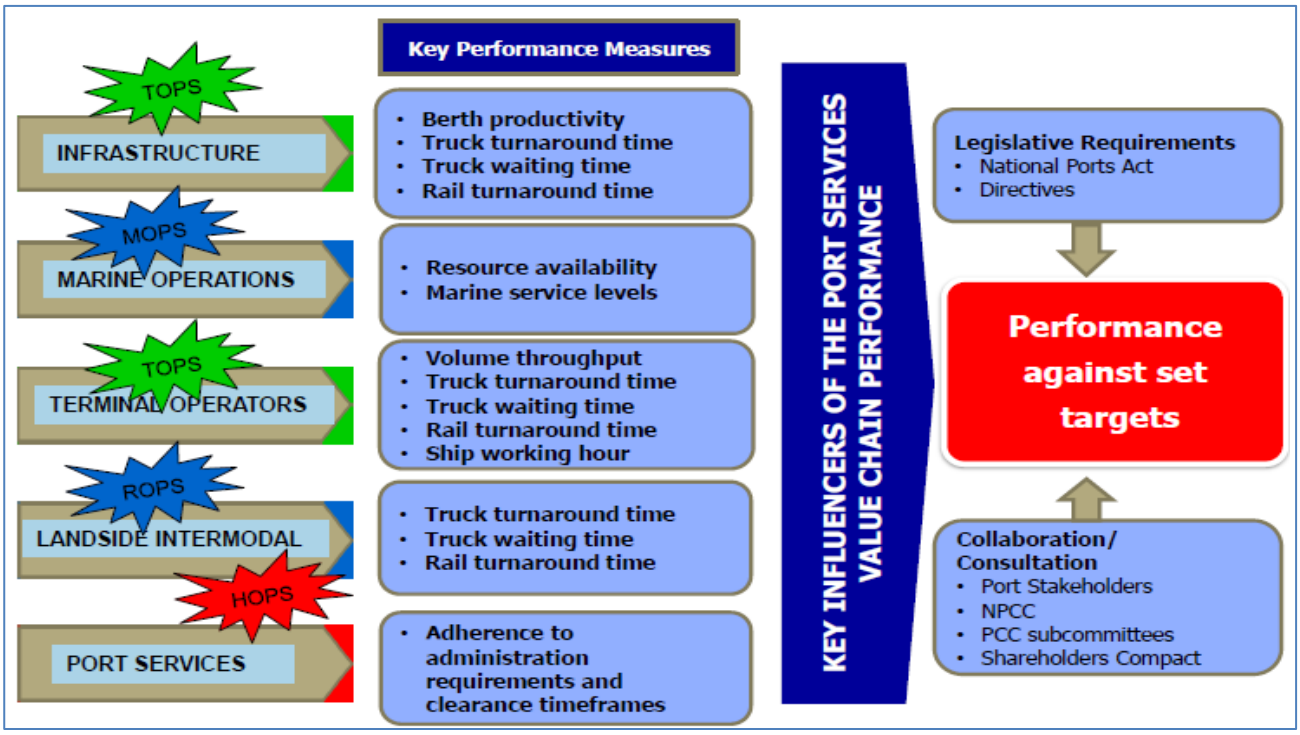


Figure 9: Port Efficiency Improvement Initiatives



Terminal Operator Performance Standards (TOPS), first implemented in 2013, has been iteratively improved with each annual issue thereby ensuring that TOPS Year 4, issued in July 2016, is more reflective of efficiencies expected from the South African ports system. The Authority will further refine the setting of standards through investment in port benchmarking tools and techniques. Further, the concepts for a penalty/incentive system linked to TOPS will be consulted and developed with stakeholders in FY2016/17.

The Authority revised Marine Operator Performance Standards (MOPS) in 2016 to include requested vessel service time. The use of a compulsory slot booking system for all ports, and its visibility to Shipping Lines on the Authority's newly developed Integrated Port Management Systems (IPMS) enables effective marine service planning and provides a basis to monitor the achievement of MOPS.

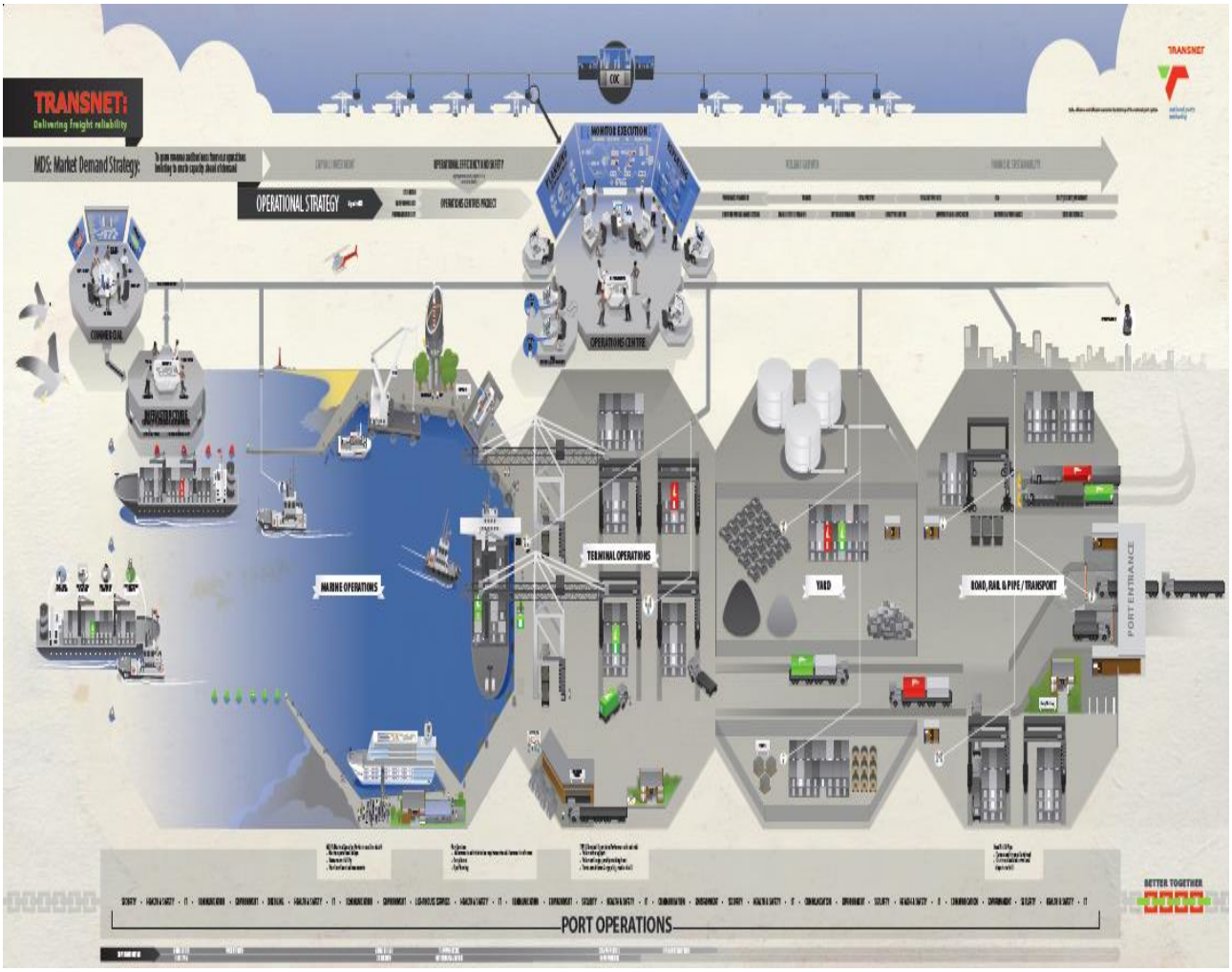
The Authority is set to issue Rail Operator Performance Standards (ROPS) in FY2016/17 to Transnet Freight Rail as the rail operator and to firm up rail related standards for terminals contained in TOPS for all rail operations within port boundaries. ROPS measures are being incorporated into the Transnet Value Chain Coordination (TVCC) initiative for integration and effective monitoring.

The Authority has successfully commissioned a Truck Staging Area at the port of Richards Bay to ensure a more efficient flow of trucks at the port, thereby avoiding congestion. The effectiveness of traffic flows is being monitored. The conditions for the implementation of Haulier Operator Performance Standards (HOPS) to address the flow of trucks and ease congestion at the port of Durban are being assessed and a feasibility study is underway during this financial year.

The Authority continues to improve its capability to exercise operations oversight in order to set port operating targets, monitor performance and to intervene to effect corrective actions by the respective port player. The Authority has organised to track and monitor port operational performance across the ports system on a daily, weekly, monthly, quarterly and annual basis, reliant on information technology.

The JOC is currently in the pilot phase at the port of Durban and will be transitioning to its next stage of development (i.e. see Figure 10 below) which will incorporate the participation of Rail Operators and the phased on boarding of main terminal operators. This exciting development will improve port efficiency through collaborative planning, monitoring and re-planning of port operations where necessary. The development of JOC's at remaining ports and head office will proceed in FY2016/17.

Figure 10: Joint Operations Centre concept



The Authority engages with port users through Port Consultative Committees and other engagement platforms on efficiency improvement at ports. These engagements have a positive effect in ensuring that a culture of performance is being embedded at South African ports.

8.1 Terminal Operations Licencing Oversight

The Port Rule licenses, permitting and registration and Terminal Operator management (through conversion process or section 56/79) creates a platform to oversee the compliance of the port users to the regulatory framework.

Some of the key components of the Oversight Programme include the Safety, Health, Process Safety and Environmental Management compliance, Security, Property, Financial, Maintenance regime for its assets, as well as the operational performance requirements for terminal operators and marine.

The Authority is in its fourth year of oversight management and it is continuously improving the programme in conjunction with port users.

9. Marine Operations Management

The Authority is committed to ensuring a seamless marine service is provided to vessels arriving, departing and shifting within South African ports.

This will include a process of stringent monitoring and measurement of the causative factors, which could result in ships being delayed due to Pilotage, Tugs or Berthing Services (which are under the direct control of the Authority). Approved targets have been set for each of the aforementioned categories and are monitored at various managerial platforms.

9.1.1 Pilotage

Pilotage delays are caused due to pilot license restrictions or the pilot being occupied with other shipping at the required service time. The overbooking of service also results in delays; however, the slot system in the IPMS (web based online booking system) will provide guidance in terms of slot allocations and prevent the overbooking of slots.

Helicopter downtime depends on the severity of specific technical problems encountered during operations, but on average, each helicopter can be down for at least seven days each month for maintenance purposes. The Authority has three helicopters. The Authority has an Air Operator's Certificate issue by the CAA which has strict planned maintenance schedules that need to be adhered to, to ensure the safety of marine pilots and helicopter crew. The planned maintenance is based on the hours of operation – once the hours are achieved the relevant components are required to be serviced as required by the Owner Equipment Manufacturers specifications manual. These planned maintenance at times impacts on operational availability; however, the ports have pilot boats as a backup service to ensure seamless services.

9.1.2 Towage

Tug delays are caused by tugs not being available at the required service time due to mechanical breakdowns, the tugs being busy with other shipping, or due to a shortage of tug capacity (which includes manning levels).

In order to reduce the abovementioned types of delays, the following initiatives are currently being implemented:

- The on-going upgrade of the existing marine fleet which includes the delivery of new tugs in the various ports; 9 tugs in total will be built locally in South Africa by SA Shipyards by July 2018 – 2 of the 9 tugs have been completed and are operational in the port of Port Elizabeth;
- On-going focus on the Tug Maintenance regime to ensure maximum availability - internal and external audits are conducted to ensure the safe operations of the tugs;
- Implementation of the Marine Operational Performance Standards [MOPS] to manage performance; and
- Initiatives to ramp up services in Durban, Richards Bay and Cape Town to ensure sufficient tug capacity. This means increasing the number of personnel to man the additional craft to be deployed, e.g. the increase in use of tugs from 5 to 6 tugs for the Port of Durban resulted in the additional staff to man the craft – 4 x Tugs Masters, 4 x Chief Marine Engineers, 4 x Marine Engineer officers, 12x General Purpose Ratings.

The changes in the regulations, namely the Merchant Shipping Act, 1951 (Act No. 57 of 1951) – the Merchant Shipping (Safe Manning, Training and Certification) Regulations, 2013 come into effect on 01 January 2017. This means that the qualifications and certificates of competence required by the Authority to man the tugs, must comply with the new regulations. Hence, there is a significant effort by the Authority to ensure that all the necessary training and development is in place to ensure compliance with these new standards.

9.1.3 Berthing Services

Berthing delays are generally caused due to larger vessel sizes that require additional berthing teams that are not available at the required service time due to servicing of other vessels. Vessels below 200m usually use 1 berthing gang to safely berth the vessel; vessels over 200m will require 2 gangs which negatively impacts on the service to other vessels. In order to reduce the abovementioned types of delays, a quad shift system at the ports of Cape Town, Durban, Saldanha Bay and Richards Bay, as well as additional number of personnel per team, have been implemented which will ensure that the berthing services shift patterns are aligned with the pilotage and tug operations. The system also ensures better leave planning which enables scheduling of training and annual leave rotation amongst the personnel teams.

Marine Operations will review all marine operational processes, and this includes marine operational planning, resourcing and fleet replacement strategy. The functional structures are continuously being monitored to improve efficiency levels. It is expected that this will further ensure that the current number of shipping delays are reduced, thereby enhancing the overall efficiency of the ports system. Efficiencies will be measured in accordance with the Marine Operations Performance Standards and will be monitored and recorded by the Operations Centres. The implementation of new technology will also enhance the services provided to the clients and provide them with transparency when it comes to planning of their vessels. The web based online booking system IPMS has been implemented in all 8 ports - currently improving on user adoption of the system to obtain the full benefits of the system.

10. Conclusion

The principal objective of the MDS is to close the gap between the market demand for cargo transport and handling services and the capacity to satisfy this demand. The need to achieve this objective is the key driver behind the large capital investment programme underpinning the MDS. However, weak demand combined with a rapid expansion in global supply, has had a particularly adverse impact on international commodity markets, with steep price declines witnessed across most commodities. The economic downturn has severely impacted South Africa's largest trading partners and BRICS nations, with slowing growth and subdued recoveries expected to continue for at least the short term.

High-income countries are expected to continue yielding slight economic gains amid a gradual tightening of financing conditions, as well as a stabilisation of commodity prices, and a gradual economic rebalancing of China, accompanied by slowing growth. Substantial supply-side risks prevail, including an unsystematic slowdown in emerging market economies, as well as financial market turmoil arising from sudden shifts in borrowing costs amid deteriorating fundamentals, lingering vulnerabilities in some countries, and heightened geopolitical tensions.

To remain agile and resilient in the face of projected declining demand and lower volumes performance, the Authority continuously modulates its spend to ensure that it drives efficiency in our ports and ensures capacity is created ahead of validated demand.

The Authority's operating context is infrastructure-driven with operations in water-stressed catchments. This necessitates occupational training, as well as comprehensive policies and procedures to safe-guard our employees and the public within and around our operations. Additionally, we recognise the need to foster safety vigilance among our employees through a safety-oriented operational culture. A commitment to personal health and safety, and the health and safety of colleagues and the communities where we operate, is a commitment to excellence in our operations.

The key pillars of the Authority's core strategy, which is aligned to the MDS and aimed at reducing the cost of doing business and contributing to higher economic growth, are as follows:

- Create and maintain adequate port infrastructure ahead of demand to enable volume growth;
- Improve port efficiency;
- Assume a collaborative role to enhance port integration, logistics performance and market growth; and
- Creation of SMART Peoples Ports.

The Authority's financial strategy, aligned to that of Transnet, is designed to achieve the core strategy by:

- Proactively enabling capacity creation over the long term;
- Maintaining financial stability as guided by gearing and cash interest cover; and
- Retaining an investment-grade credit rating, at least on a stand-alone basis, to enable cost-effective funding.

This financial strategy is supported by the Port Directives which guides that when considering the proposed tariffs for the Authority, the Regulator must ensure that such tariffs allow the Authority to:

a) Recover its investment in owning, managing, controlling and administering Ports and its investment in port services and facilities;
b) Recover its costs in maintaining, operating, managing, controlling and administering Ports and its costs in providing port services and facilities; and
c) Earn a return commensurate with the risk of owning, managing, controlling and administering ports and of providing port services and facilities.

The tariff application for FY2017/18 has been prepared in accordance with the approved Tariff Methodology issued by the Regulator and based on the Revenue Requirement formula.

Based on the application of the approved Tariff Methodology and the Revenue Requirement Formula, the Authority hereby applies to the Regulator for revenue of R12 109m, comprising Marine Business revenue of R9 311m and Real Estate business revenue of R2 798m. This translates to an average overall tariff adjustment of 8.00%.

In alignment with the principles of the Regulator's approved Tariff Strategy of 2015, the Authority further proposes that the average 8.00% tariff adjustment be differentiated as follows:

- **13.25% on marine charges (shipping lines);**
- **8.30% on all bulk;**
- **5.00% on containers; and**
- **5.00% on automotives.**

ANNEXURE A: The Authority's Tariff Book

Table 27: The Authority's Tariff Definitions

Tariffs	Service Rendered	Application
Light dues	The provision of navigation aids to vessels along the South African coast	Raised per vessel (per gross ton) at the first port of call (Tariff Book Section 1)
Vessel Traffic Services	The provision of vessel traffic services, safety of the port environment and port control	Raised per vessel (per gross ton) at all ports (Tariff Book Section 2)
Port dues	The provision and maintenance of entrance channels, breakwaters, turning basins, navigational aids (beacons and buoys inside port limits) and maintenance dredging inside the port	Raised per vessel (per gross ton), linked to the time that the vessel remains in port (Tariff Book Section 4)
Berth dues	The provision and maintenance of repair quays and other non-cargo quay (berth) infrastructure	Raised per vessel (per gross ton), per 24-hour period (Tariff Book Section 4)
Cargo dues	To recover the cargo contribution towards the provision and maintenance of basic port infrastructure	Raised per unit of cargo, differentiated between different commodities (Tariff Book Section 7)
Rentals	Lease of port land to terminal operators, port service and port facility providers	Rental arrangements including escalations are negotiated on a case-by-case basis and are not reflected in the tariff book.
Pilotage	Pilotage assistance to vessels entering/leaving the port	Raised as a basic fee per service, plus per vessel (per gross ton) (Tariff Book Section 3)
Tug Assistance	Tug assistance to vessels entering/leaving and shifting within the port	Raised per service, based on the size of the vessel (per gross ton) (Tariff Book Section 3)
Miscellaneous Tug/Vessel services	Tanker fire watch, firefighting and standby services	Raised per service, per hour (Tariff Book Section 3)

Berthing Services	Berthing services to tie/untie vessels at the berth	Raised per service (Tariff Book Section 3)
Running of Vessel Lines	Running of lines for vessels entering, leaving or shifting	Raised per service (Tariff Book Section 3)
Floating Crane Services	Floating crane services rendered to the vessels	Raised per service, per hour (Tariff Book Section 3)
Ship Repair Facilities	Preparation, Docking and Undocking of vessels at repair facilities	Raised per service (Tariff Book Section 6)
Dry-dock, floating dock, synchrolift and slipways	Dry-dock, floating dock and synchrolift fees	Raised per service for the use of a facility, based on the size of the vessel (per gross ton) (Tariff Book Section 6)

Authority has created a separate section in the Tariff Book, Section 5, where the licence, registration and permit fees are specified. This is summarized in the following table:

Table 28: The Authority's License Fees

Fees	Service rendered	Application
Port Service Licence, Port Rule Licence, Port Rule Registrations and Port Rule Permit Fees	Fees payable for licences, registrations and permits in accordance with section 57 of the Act and with Port Rules issued in terms of section 80(2) of the Act.	Raised as a fee for the respective licences, registrations and permits issued (Tariff Book Section 5)

ANNEXURE B: Capital Expenditure

The Authority's investment spending is primarily influenced by the strategic initiatives which are aimed at providing adequate port infrastructure ahead of demand.

The capital expenditure for FY 2015/16 to FY 2019/20 is segregated into various categories in order to demonstrate the strategic objectives, major projects considered and the impact of such capital expenditure. In order to provide a view on future capex, information for a 7 year period has also been included. The tables that follow illustrate the capital expenditure:

Table 29: Strategic Capital Investment Objectives

Strategic objective	Actual	LE	Projections		
	2015/16	2016/17	2017/18	2018/19	2019/20
	Rm	Rm	Rm		
Re-engineering, Integration, Productivity and Efficiency	545	608	1 675	2 364	3 552
	603	832	397	241	151
	941	784	1 420	2 071	1 797
Safety, Risk and Effective Governance	764	327	386	420	360
	60	123	32	167	253
	-	12	19	35	81
	31	43	48	43	82
Human Capital	14	71	73	60	82
Total (excl. borrowing cost)	**2 959**	**2 801**	**4 050**	**5 401**	**6 358**

Table 30: Strategic Capital Investment Objectives

Project	Corridor	Commodity
Acquisition of 9 tugs (Rcb, Dbn, PE & Sld)	RCB/DBN/PE/	All
Facility for Liquefied Natural Gas - LNG	RCB	Liquid Bulk
Reconstruction of Sheet-Pile Quay Walls at Maydon Wharf	DBN	Break Bulk
Edwin Swales Link Road FEL 4	DBN	Other
Execution: DCT berth deepening 203 to 205	DBN	Containers (Maritime)
Acquistion of 6 tugs for Dbn (4 Replacement & 2 additional)	DBN	Other
Acquisition of associated land sites linked to DIA Site acquisition	HO	Containers (Maritime)
Execution: Pier 1 Phase 2 Infill (Salisbury Island)	DBN	Containers (Maritime)
Extend main breakwater and deepen entrance	EL	Other
Operationalise Port for Containers (Prelim & Execution)	NGQ	Containers (Maritime)
Tank farm Berth A100, roads, port entrance and services	NGQ	Liquid Bulk
Two Additional 70ton bollard pull tugs	NGQ	Other
Manganese project	NGQ	Manganese
Automated mooring system at NCT D101 - 103	NGQ	Containers (Maritime)
Charl Malan Quay Refurbishment	PE	Containers (Maritime)
Expansion of Container Terminal : CPT	CPT	Containers (Maritime)
Bulk electrical power supply related to Third tippler	SLD	Export Iron Ore
2nd Grab hopper dredger	DRS	Other

Table 31: Expansion Business vs. Maintenance of Current Business

- FY 2016/17

Details	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	LE											
	2016/17											
	Rm											
Expand Business :												
- Growth initiatives	1 142	148	247	3	374	6	13	-	51	-	302	-
Maintain current Business :												
- Replacement Efficiency/ Service Quality	1 659	209	569	185	17	138	11	218	75	27	77	134
Total (excl. borrowing cost)	2 801	356	816	188	391	144	24	218	125	27	379	134

- FY 2017/18

Details	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projections											
	2017/18											
	Rm											
Expand Business :												
- Growth initiatives	1 831	119	1 100	8	462	16	5	26	2	-	87	8
Maintain current Business :												
- Replacement Efficiency/ Service Quality	2 219	223	979	194	9	67	34	440	184	54	5	30
Total (excl. borrowing cost)	4 050	341	2 079	202	471	82	39	466	185	54	93	38

- FY 2018/19

Details	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projections											
	2018/19											
	Rm											
Expand Business :												
- Growth initiatives	2 762	189	1 560	30	837	3	-	60	41	-	-	44
Maintain current Business :												
- Replacement Efficiency/ Service Quality	2 638	162	1 348	176	50	148	61	345	191	31	2	124
Total (excl. borrowing cost)	5 401	351	2 908	206	886	150	61	405	232	31	2	168

- FY 2019/20

Details	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projections											
	2019/20											
	Rm											
Expand Business :												
- Growth initiatives	3 910	104	2 396	50	1 055	41	-	100	86	6	-	73
Maintain current Business :												
- Replacement Efficiency/ Service Quality	2 448	219	1 107	98	68	263	29	206	202	65	2	190
Total (excl. borrowing cost)	6 358	323	3 503	148	1 123	304	29	306	288	71	2	263

Table 32: Ports Related Spending by Asset Type

- FY 2016/17

Asset Types	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	LE											
	2016/17											
	Rm											
Buildings and structures	309	164	30	30	-	1	19	42	8	5	-	9
Aircraft	65	27	38	-	-	-	-	-	-	-	-	-
Land	-	-	-	-	-	-	-	-	-	-	-	-
Machinery, equipment and furniture	387	10	91	1	2	10	0	115	5	22	5	125
Permanent way and works	60	1	16	16	-	27	-	-	-	-	-	-
Vehicles, Rolling stock & containers	3	-	-	3	-	-	-	-	-	-	-	-
Port Facilities	1 962	155	625	137	389	106	4	61	112	-	374	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Pipelines networks (etc)	16	-	16	-	-	-	-	-	-	-	-	-
Total (excl. borrowing cost)	2 801	356	816	188	391	144	24	218	125	27	379	134

- FY 2017/18

	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projections											
	2017/18											
	Rm											
Buildings and structures	436	84	115	91	-	7	16	84	18	15	-	6
Aircraft	128	33	95	-	-	-	-	-	-	-	-	-
Land	-	-	-	-	-	-	-	-	-	-	-	-
Machinery, equipment and furniture	765	9	431	2	3	20	6	217	4	39	4	31
Permanent way and works	97	52	23	-	-	22	-	-	-	-	-	-
Vehicles, Rolling stock & containers	6	-	-	6	-	-	-	-	-	-	-	-
Port Facilities	2 611	164	1 407	104	468	33	18	165	163	-	89	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Pipelines networks (etc)	8	-	8	-	-	-	-	-	-	-	-	-
Total (excl. borrowing cost)	4 050	341	2 079	202	471	82	39	466	185	54	93	38

- FY 2018/19

	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projections											
	2018/19											
	Rm											
Buildings and structures	611	66	319	86	60	-	8	60	11	-	-	3
Aircraft	245	130	115	-	-	-	-	-	-	-	-	-
Land	-	-	-	-	-	-	-	-	-	-	-	-
Machinery, equipment and furniture	837	28	436	2	3	33	1	133	4	31	2	165
Permanent way and works	124	80	30	-	-	14	-	-	-	-	-	-
Vehicles, Rolling stock & containers	25	-	1	19	5	-	-	-	-	-	-	-
Port Facilities	3 558	47	2 007	99	819	104	53	212	218	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Pipelines networks (etc)	-	-	-	-	-	-	-	-	-	-	-	-
Total (excl. borrowing cost)	5 401	351	2 908	206	886	150	61	405	232	31	2	168

- FY 2019/20

	TNPA	RCB	DBN	EL	NGQ	PE	MSB	CPT	SLD	LHS	DRS	HO
	Projections											
	2019/20											
	Rm											
Buildings and structures	740	71	411	45	75	-	7	47	82	-	-	2
Aircraft	115	100	15	-	-	-	-	-	-	-	-	-
Land	14	-	14	-	-	-	-	-	-	-	-	-
Machinery, equipment and furniture	688	10	267	5	5	29	1	34	4	71	2	260
Permanent way and works	123	63	50	-	-	10	-	-	-	-	-	-
Vehicles, Rolling stock & containers	36	-	3	18	15	-	-	-	-	-	-	-
Port Facilities	4 642	79	2 742	80	1 028	265	21	226	202	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Pipelines networks (etc)	-	-	-	-	-	-	-	-	-	-	-	-
Total (excl. borrowing cost)	6 358	323	3 503	148	1 123	304	29	306	288	71	2	263

Table 33: Capital expenditure and throughput per commodity

- Containers

Containers								
DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23	Major Capital Projects
	R'm							
Containers	**299**	**1 151**	**1 559**	**2 626**	**4 042**	**4 359**	**3 080**	**- Dbn: DCT berth deepening berth 203 to 205**
- Expand	*299*	*1 146*	*1 469*	*2 391*	*3 842*	*4 089*	*2 980*	**- Dbn: Pier 1 phase 2 Infill (Salisbury Island)**
- Maintain	*-*	*5*	*90*	*235*	*200*	*270*	*100*	**- NGQ: Automated mooring system D101 -103**
Volumes ('000 TEUs)								
- Budget and Projections	*4 952*	*5 051*	*5 264*	*5 458*	*5 697*	*5 953*	*6 273*	
- Capacity	*8 043*	*7 643*	*7 643*	*7 643*	*7 643*	*7 643*	*9 443*	
Total Capex spend to this year						14 036		
Indicative return on capital						*762*		
Depreciation						*125*		
Additional Revenue Required						***887***		

- Liquid Bulk

Liquid Bulk								
DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23	Major Capital Projects
	R'm							
Liquid Bulk	**230**	**376**	**934**	**1 217**	**828**	**1 296**	**823**	**- NGQ: tank farm berth A100, roads, port**
- Expand	*57*	*180*	*575*	*910*	*567*	*1 285*	*768*	**entrance and services**
- Maintain	*173*	*197*	*359*	*307*	*261*	*11*	*55*	**- RCB: Facility for LNG**
Volumes (mKl)								
- Budget and Projections	*41*	*42*	*43*	*44*	*44*	*46*	*48*	
- Capacity	*92*	*92*	*92*	*92*	*92*	*92*	*96*	
Total Capex spend to this year						4 882		
Indicative return on capital						*265*		
Depreciation						*44*		
Additional Revenue Required						***309***		

- Iron Ore

Iron Ore								
DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23	Major Capital Projects
	R'm							
Iron Ore	**752**	**217**	**31**	**72**	**896**	**1 650**	**690**	**- SLD: Ore Expansion Phase 2 berth**
- Expand	*403*	*139*	*31*	*72*	*775*	*1 330*	*540*	**Construction (to 82.5mtpa)**
- Maintain	*349*	*78*	*-*	*-*	*121*	*320*	*150*	
Volumes (mt)								
- Budget and Projections	*60*	*60*	*60*	*62*	*62*	*62*	*62*	
- Capacity	*60*	*60*	*60*	*60*	*60*	*60*	*60*	
Total Capex spend to this year						3 618		
Indicative return on capital						*196*		
Depreciation						*32*		
Additional Revenue Required						***229***		

- Coal

Coal								
DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23	Major Capital Projects
	R'm							
Coal	**-**	**-**	**10**	**65**	**100**	**38**	**11**	**- EL: Land preparation for coal export Facility**
- Expand	-	-	-	-	-	*3*	*1*	
- Maintain	-	-	*10*	*65*	*100*	*35*	*10*	
Volumes (mt)								
- Budget and Projections	*80*	*83*	*88*	*89*	*90*	*89*	*93*	
- Capacity	*114*	*114*	*114*	*114*	*114*	*114*	*114*	

- Manganese

Manganese								
DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23	Major Capital Projects
	R'm							
Manganese	**63**	**143**	**200**	**116**	**29**	**80**	**86**	**- NGQ: Manganese terminal**
- Expand	*63*	*143*	*200*	*116*	*29*	-	-	
- Maintain	-	-	-	-	-	*80*	*86*	
Volumes (mt)								
- Budget and Projections	*11*	*11*	*11*	*10*	*13*	*13*	*14*	
- Capacity	*30*	*30*	*30*	*30*	*24*	*24*	*24*	
Total Capex spend to this year						631		
Indicative return on capital						*34*		
Depreciation						*6*		
Additional Revenue Required						***40***		

- Break-Bulk

Break Bulk								
DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23	Major Capital Projects
	R'm							
Break Bulk	**354**	**50**	**56**	**35**	**99**	**55**	**350**	**- Dbn: Reconstruction of Sheet-Pile quay**
- Expand	*49*	*4*	*15*	*25*	*83*	*50*	*350*	**Walls at Maydon Wharf**
- Maintain	*305*	*46*	*41*	*10*	*16*	*5*	-	**- DBN: Berth Deepening Maydon Wharf 5-11**
								& 15
Volumes (mt)								
- Budget and Projections	*7*	*8*	*8*	*8*	*8*	*9*	*9*	
- Capacity	*26*	*26*	*26*	*26*	*26*	*26*	*27*	

- Automotives

Automotives								
DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23	Major Capital Projects
	R'm							
Automotives	**-**	**-**	**-**	**-**	**-**	**-**	**-**	
- Expand	-	-	-	-	-	-	-	
- Maintain	-	-	-	-	-	-	-	
Volumes (units)								
- Budget and Projections	*736 294*	*776 320*	*808 728*	*832 360*	*828 243*	*831 846*	*871 711*	
- Capacity	*2 100 000*	*2 100 000*	*2 100 000*	*2 100 000*	*2 100 000*	*2 100 000*	*2 300 000*	

- Other (Incl. LHS & Bulk Services)

Other (incl LHS & Bulk Services)								
DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23	Major Capital Projects
	R'm							
Other (incl LHS & Bulk Services)	**1 035**	**1 938**	**2 449**	**2 105**	**1 870**	**2 180**	**2 161**	**- This includes all other investments at Ports**
- Expand	*24*	*192*	*502*	*468*	*854*	*1 180*	*1 562*	**including port entrances, roads, electrical**
- Maintain	*1 011*	*1 746*	*1 947*	*1 637*	*1 017*	*1 000*	*600*	**networks, sewerage networks etc**

- Fleet- Craft & Dredging Services

Fleet - Craft and Dredging Services								
DETAILS	FY2016/17	FY2017/18	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23	Major Capital Projects
	R'm							
Fleet - Craft	**403**	**139**	**31**	**72**	**775**	**1 330**	**540**	**- DRS: Provision of 2nd TSHD**
- Expand	*349*	*78*	-	-	*121*	*320*	*150*	**- Tugs: Acquisition of 9 tugs**
- Maintain	*54*	*61*	*31*	*72*	*654*	*1 010*	*390*	**(RCB,DBN,PE,SLD)**
								- Tugs: Acquisition of 6 tugs (DBN)
Dredging Services	**379**	**93**	**2**	**2**	**92**	**2**	**2**	
- Expand	*302*	*87*	-	-	-	-	-	
- Maintain	*77*	*5*	*2*	*2*	*92*	*2*	*2*	

Table 34: Multi-Year Strategic Objectives

Strategic objective	Details	LE	Projections						
		2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Total 7yr
		Rm							
Re-engineering, Integration, Productivity and Efficiency	To maximise return on investments by obtaining additional volumes	608	1 675	2 364	3 552	5 230	6 694	5 556	25 678
	To maximise return on investments by improving operating efficiencies	832	397	241	151	140	20	-	1 781
	To preserve current revenue streams without obtaining additional volumes (ie. revenue protection)	784	1 420	2 071	1 797	1 791	2 114	1 088	11 066
Safety, Risk and Effective Governance	Ensure Safety Optimisation	327	386	420	360	358	387	183	2 420
	Optimise Business Enterprise Offerings	123	32	167	253	106	10	-	691
	Optimally Satisfy Social Investments (non economic value creating projects)	12	19	35	81	53	80	176	456
	Environmental	43	48	43	82	29	-	-	245
Human Capital	Optimise Human Resources	71	73	60	82	139	35	70	531
Total (excl. borrowing cost)		**2 801**	**4 050**	**5 401**	**6 358**	**7 845**	**9 341**	**7 073**	**42 869**

Table 35: Multi-Year Capex Spending Per Port Service

Capex spend per Port Service / Facility	LE	Projections						
	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Total 7yr
	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm
Infrastructure	1 992	3 765	5 337	6 213	6 880	7 935	6 457	38 578
Marine services	403	139	31	72	775	1 330	540	3 289
Lighthouse services	27	54	31	71	98	73	74	430
Dredging services	379	93	2	2	92	2	2	573
Total (excl. borrowing cost)	**2 801**	**4 050**	**5 401**	**6 358**	**7 845**	**9 341**	**7 073**	**42 869**

Table 36: Multi-Year Ports Related Spending by Asset type

Asset Types	LE	Projections					
Asset Type	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
	Rm	Rm					
Buildings and structures	309	436	611	740	697	820	762
Aircraft	65	128	245	115	-	-	-
Land	-	-	-	14	-	47	113
Machinery, equipment and furniture	387	765	837	688	492	152	141
Permanent way and works	60	97	124	123	483	637	551
Vehicles, Rolling stock & containers	3	6	25	36	1	3	-
Port Facilities	1 962	2 611	3 558	4 642	6 172	7 682	5 506
Other	-	-	-	-	-	-	-
Pipelines networks (etc)	16	8	-	-	-	-	-
Total (excl. borrowing cost)	**2 801**	**4 050**	**5 401**	**6 358**	**7 845**	**9 341**	**7 073**

Table 37: Multi-Year Port Related Spending per Commodity

Major Commodity	LE	Projections						
Commodity	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Total 7yr
	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm
Containers	299	1 151	1 559	2 626	4 042	4 359	3 080	17 115
Liquid Bulk	230	376	934	1 217	828	1 296	823	5 705
Iron Ore	39	160	158	120	10	-	20	506
Coal	-	-	10	65	100	38	11	224
Manganese	63	143	200	116	29	80	86	717
Break Bulk	354	50	56	35	99	55	350	999
Automotive	-	-	-	-	-	-	-	-
Fleet - craft	403	139	31	72	775	1 330	540	3 289
Dredging Services	379	93	2	2	92	2	2	573
Other (incl LHS)	1 035	1 938	2 449	2 105	1 870	2 180	2 161	13 739
Total (excl. borrowing cost)	**2 801**	**4 050**	**5 401**	**6 358**	**7 845**	**9 341**	**7 073**	**42 869**

ANNEXURE C: Volumes

Table 38: Revenue from volume increase before tariff increase

DETAILS	FY2016/17 Volumes: Latest Estimate	FY2016/17 Revenue: Tariff Book Latest Estimate R'm	FY2017/18 Volumes: Increase Budget	FY2017/18 Revenue: Volume increase before Tariff Increase Budget R'm
Containers TEU's				
Deepsea Full: Imports	1 485 279	3 040	25 609	52
Deepsea Full: Exports	1 176 692	713	21 283	13
Transhipment	1 126 514	70	27 530	2
Other	1 163 841	56	24 724	1
Total Container (TEUs)	**4 952 326**	**3 879**	**99 147**	**68**
Vehicles (Units)	-	-	-	-
Vehicles: Imports	380 809	311	10 612	9
Vehicles: Exports	314 734	102	27 186	9
Other	40 751	1	2 228	0
Total Ro-Ro (Units)	**736 294**	**414**	**40 026**	**17**
Breakbulk (Metric Tons)	-	-	-	-
Breakbulk: Imports	2 018 759	75	24 151	1
Breakbulk: Exports	5 208 158	153	233 736	6
Other	75 566	1	30 382	-
Total Breakbulk (Tons)	**7 302 483**	**229**	**288 269**	**8**
Dry Bulk (Metric Tons)	-	-	-	-
Coal Exports	80 430 000	271	2 679 000	9
Iron Ore Exports	60 000 000	355	-	-
Manganese Ore Exports	11 425 000	95	-540 000	-
Other	28 294 774	365	2 919 945	7
Total Dry Bulk (Tons)	**180 149 774**	**1 086**	**5 058 945**	**16**
Liquid Bulk (Kl)	-	-	-	-
Petroleum	37 784 356	493	869 157	15
Chemicals	1 865 878	93	27 142	1
Other	1 208 387	61	15 183	1
Total Liquid Bulk (Kilo litres)	**40 858 621**	**647**	**911 482**	**17**
Cargo Dues Revenue	**-**	**6 256**	**-**	**127**

ANNEXURE D: Operating Expenditure

Table 39: Operating Expenditure

Cost Category	Actual 2015/16 R Million	Budget 2016/17 R Million	Forecast 2017/18 R Million	Dev '16/17 vs 17/18 R Million	Dev '16/17 vs 17/18 Percentage	% of Opex 17/18	Forecast 2018/19 R Million	Forecast 2019/20 R Million	CAGR 2017/18 - 2019/20
Labour Costs	2 074	2 423	2 802	380	16%	51%	3 042	3 268	8%
Rates & taxes	314	348	375	28	8%	7%	410	517	17%
Maintenance	340	348	396	48	14%	7%	428	487	11%
Contract Payments	80	141	150	9	6%	3%	158	167	6%
Energy	436	530	599	70	13%	11%	645	693	8%
Professional services	19	50	168	118	236%	3%	178	188	6%
Material	76	80	87	7	9%	2%	90	96	5%
Computer & Info systems	125	188	191	3	2%	3%	202	214	6%
Rental	159	193	193	0	0%	4%	204	215	6%
Security costs	74	91	94	3	4%	2%	101	110	8%
Pre -Feasibility Studies	24	92	122	30	32%	2%	103	96	-11%
Sundry operating costs	136	277	274	-3	-1%	5%	282	295	4%
Total operating cost (excluding depreciation)	***3 857***	***4 760***	***5 452***	***692***	***15%***	***100%***	***5 843***	***6 348***	***8%***
Group Costs	506	650	509	(142)	-22%	185%	548	587	7%
Total operating cost (Including Group Costs)	**4 362**	**5 411**	**5 961**	**550**	**10%**	**2173%**	**6 391**	**6 934**	**8%**

The Authority's total costs for FY 2017/18 is R 5 961m (inclusive of Group overhead costs).

The cost elements contributing significantly to the total operating expenditure includes Labour Costs, Energy, Maintenance, Rates & Taxes, Sundry Operating costs, Professional fees, Computer & Info systems, Rental and Pre-Feasibility Studies.

The sections that follow provide a high level explanation for cost items per Table 39 above.

Labour Cost

Labour cost is a function of delivering on the Authority's mandate in terms of operating efficiently, oversight functions, project management and maintenance. The Authority remains a labour intensive organisation as it executes its key deliverables in terms of its mandate. Labour costs therefore forms a substantial portion of the overall operating expenditure, compromising of 51% of the total operating costs for FY 2017/18.

The expected growth of labour costs for FY 2017/18 is approximately 16% (R380m). The average growth in labour over the 3 year tariff application period amounts to 8%.

The key drivers for growth in labour costs are mainly as follows:

- ***Headcount***

  In order to fully deliver on its mandate, the Authority requires additional resources. The table below highlights the forecasted total number of permanent employees:

Table 40: Total Number of Employees

Cost Category	Actual 2015/16	Budget 2016/17	Forecast 2017/18	Deviation 16/17 vs 17/18	Deviation % 16/17 vs 17/18	Forecast 2018/19	Forecast 2019/20
Total Number of Employees	4 349	4 995	5 266	271	5.4%	5 410	5 444

Owing to economic downturn some of the posts included in the above labour headcount, though planned to be recruited in 16/17, were deferred. The key drivers for growth in headcount are as a result of the following:

- Minimum manning levels of marine at 100% service and matching manning levels with number of tugs required per shift linked to meet the MOPS requirements;
- additional crew to man new craft being deployed by Dredging and Marine services;
- Employment of port engineering personnel in order to create adequate port infrastructure capacity ahead of demand and maintaining existing and new assets;
- Increased security personnel to man new operational centres;
- Commencement of recruitment process in respect of Enterprise Risk Management (ERM) personnel to ensure oversight and compliance with risk management requirements;
- Trainers required for marine engineering schools in the Ports of Cape Town, Mossel Bay; Ngqura, Port of Elizabeth and East London. Training in the Port of Durban had commenced in April 2016 with 25 learners currently in the system;
- Manning of port operational centres to ensure systematic views of port performance. Advanced stages of recruitment currently underway within certain areas; and
- the appointment of trainee helicopter pilots to in-house helicopter pilots to be phased in from late 2016/17 to 2017/18;

- ***Remuneration***

Remuneration is made up of annual salary adjustments, and is directly influenced by the aforementioned growth in headcount.

- ***Training***

In order for the effective execution of its mandate, it is incumbent upon the Authority to ensure adequate training and development of human capital. Training and development is vital to ensure continuous growth and advancement of the Authority and therefore remains a priority.

The Authority has embarked on the introduction of four (4) Marine Engineering schools at the Ports of Durban, Cape Town, Ngqura and Port Elizabeth, Mossel Bay and East London to address Operation Phakisa Oceans Economy, social needs and market demand strategy; this will tackle the triple challenges of poverty, unemployment and inequality within the communities.

The progress status on each of these training schools is as follows:

- Port of Durban: Training commenced in April 2016. (SLA between the Authority and Transnet Engineering - 25 trainees)
- Port of East London: training will commence in FY 2017/18.
- Port of Mossel Bay: training will commence in October 2017. SLA between the Authority and PETROSA
- Port of Cape Town: training will commence in 2017. Refurbishing the facility has commenced

The Authority continues with various training initiatives relating to cadet training; helicopter pilot training, aircraft maintenance and aircraft avionics training. These are budgeted at R103 m including compensation for the cadets.

Rates and Taxes

Rates and taxes relate to municipal rates and are based on the methodology employed by the municipalities in accordance with the Municipal Rates and Taxes Act. The increase in this cost category is above inflation rate.

Maintenance

It is necessary for the Authority to ensure that port infrastructure and other assets are maintained in accordance with required engineering standards. Maintenance is essential in order to ensure continuity in operations and offer customers service certainty.

Maintenance is driven by planned maintenance, aged infrastructure, new infrastructure assets, new marine craft (routine maintenance) and increased maintenance focused on the ship repair business.

Increase in maintenance for FY 2017/18 is approximately 14% - R48m (with an average growth in maintenance over the three year period of approximately 11%) and is mainly attributed to the following:

- Refurbishment of ageing infrastructure;
- The National Infrastructure Maintenance Strategy (NIMS) provides maintenance benchmarks for State Owned Enterprises (SOE's) which is set at 5% of the book value of port infrastructure. The Authority currently spends approximately 1% of book value on port infrastructure with the aim to gradually align to a benchmark level of 5%. This is an accelerated spending on maintenance over the next few years as the Authority intends on reaching an initial target of 2.5%;
- Changes to business operations have a direct result on the levels of maintenance required. As the port system continues to handle larger container vessels than it is designed to accommodate; frequent dredging of berths is required resulting in increased and additional maintenance of dredgers. Ports are handling bigger, deeper ships with a very small under keel clearance. This has led to scouring of the seabed which then requires additional dredging. An external Grab Dredger has been hired in Durban to attend to this operational challenge as an interim measure whilst the Berth Deepening project is being executed;
- Ship repairs maintenance and refurbishment which involves the upgrading of existing facilities to ensure its sustained and efficient use. The refurbishment continues to include mainly:
    - Civil: Concrete repairs, crane rail upgrade, water reticulation, enclosure;
    - Electrical: Optimisation of electrical network, components replacements; and
    - Mechanical: Crane refurbishment/replacement, pump and valve upgrades.

Contract Payments

The increase on contract payment for FY 2017/18 is approximately 6% with the average increase over the three year tariff application period is approximately 6%. This is attributed to the costs relating to Operation Phakisa in FEL1& FEL2 stages. The Authority, together with Transnet and the Department of Energy are exploring various options for alternate energy sources, to assist the country's power supply. The Authority is now completing a pre-feasibility for the development of the LNG Import Facilities at the Port of Richards Bay; Port of Ngqura and Port of Saldanha Bay. The research and design work must be completed in FY 2017/18.

Energy

Energy costs are mainly attributable to the fuel and electricity consumption of the Authority. The increase in costs for FY 2017/18 is approximately 13% (R70m) and mainly due to the following:

- Average electricity tariff increases approved by the National Energy Regulator of South Africa (NERSA) for Eskom (9.40%) and municipal distributors (7.64%) for FY 2016/17 used as an indicative basis for FY 2017/18; and
- Additional fuel costs relating to the new marine craft including the new dredgers with capacities higher than the older craft. To date 2 tugs have been commissioned and it is expected that a further 6 tugs will be commissioned by the year ended 2017/18.
- Given the larger bollard pull capacity of the craft for improved efficiencies, this result in higher fuel consumption.

The average increase over the three year period is approximately 8% and is mainly due to the anticipated higher electricity tariffs.

Professional Services

Professional fees relate to internal and external audit fees (financial and operational/ environmental) whilst the remainder relates to other professional services.

Other professional fees relate to Operational Audits & Transnet Certification, and Real Estate projects relating to Land use audit projects, Anticipated Section 56 consultants and Investment Property Valuation Fees. These include the pre-feasibility study for the development of LNG Import Facilities at the ports of Richards Bay; Ngqura and Saldanha. The research and design work must be completed over the 2017/18 year.

Material

Material costs relate to material used in the maintenance of marine fleet and civil maintenance and are therefore directly influenced by maintenance activity. The material costs increase in FY 2017/18 is 9% (R7m) with the average growth in material costs over the 3 year tariff application period amounting to 5%. The explanations provided above under **Maintenance** have a direct bearing on material as well.

Computer and Information Systems

Computer and information systems include network costs, software licences, information system support, development cost, computer consumables and on-going maintenance thereof.

Rental

Rental costs relates to the hiring of internal and external land and buildings, leasing of vehicles, equipment, computers and furniture.

Security

Security costs relate to the use of private security firms at the ports and are expected to increase by 4% (R3m) for FY 2017/18.

Pre-Feasibility Studies

Pre-feasibility studies are undertaken to determine future capital investments in a pre-feasibility phase to determine the best alternative for construction, preliminary design work and costing to assess overall viability of the project.

The increase in pre-feasibility costs for FY 2017/18 is 32% (R30m).

Pre-feasibility study costs for FY 2017/18 includes studies relating to ship repair facilities for the port system in terms of the Operation Phakisa initiative at the ports of East London; Saldanha; Durban and Cape Town. The Authority will also be embarking on research on other development projects including the Richards Bay expansion; increased power supply in the Port of Durban; roads study interlinked with metro; the Cape Town container terminal expansion. It will also be necessary for the Authority to complete the revised National Ports Plan and Port Development Framework Plans, as well as land use and port zoning plans for development.

Sundry Operating Costs

The detailed costs relating to sundry expenses are highlighted in Table 41 below. Sundry Costs include expenses relating to insurance, stationery and printing, transport, promotions and advertising, and other miscellaneous operating expenditure.

The main cost drivers relating to sundry expenses are as follows:

- Legal Costs:
- Health and Sanitation
- Insurance
- Other (i.e. mainly consulting)

Further to the above, the request for proposals for the Section 56 projects and public hearings thereof will lead to increased environmental management, legal fees, printing/stationary, promotions and advertising and feasibility studies.

Table 41: The Authority's Sundry Operating Costs

Cost Category	Actual 2015/16 R Million	Budget 2016/17 R Million	Forecast 2017/18 R Million	Dev '16/17 vs 17/18 R Million	Dev '16/17 vs 17/18 Percentage	% of Opex 17/18	Forecast 2018/19 R Million	Forecast 2019/20 R Million	CAGR 2017/18 - 2019/20
External property anxilary costs revenue	-236	-241	-260	-19	0	-1	-280	-301	0
Intra NPA recoveries	-289	-387	-381	6	-0	-1	-419	-412	0
Intra cc recoveries	203	328	258	-70	-0	1	272	286	0
Intra cc charges	59	56	62	6	0	0	65	69	0
Miscellaneous revenue	-43	-108	-100	8	-0	-0	-94	-130	0
External Audit Fees	7	31	32	1	0	0	34	36	0
				0					0
Entertainment	9	16	17	0	0	0	18	19	0
Environmental management	8	12	18	6	0	0	18	18	0
Fines and Penalties	-1	0	0	0		0	0	0	0
Health and Sanitation	31	42	50	8	0	0	53	57	0
Insurance Operations	35	38	43	6	0	0	47	51	0
Legal Costs - Tax Deductible	93	120	127	7	0	0	134	142	0
Internal Audit	14	27	29	1	0	0	30	32	0
Membership Fees	4	7	8	1	0	0	8	9	0
Bank Charges	0	0	0	0	0	0	0	0	0
Catering Costs	0	1	1	0	0	0	1	1	0
Claims Paid	3	-1	-1	-0	0	-0	-1	-1	0
Commission Paid	0	0	0	0	0	0	0	0	0
Discount Allowed	0	0	0	0		0	0	0	0
Gifts	0	0	0	-0	-0	0	0	0	0
License Fees	2	2	3	1	0	0	3	3	0
Magazines, Books and Periodicals	1	0	0	-0	-0	0	0	1	0
Newspapers	0	0	0	0		0	0	0	0
Nursery / Flower Expenditure	4	7	7	0	0	0	7	8	0
Water	71	77	82	6	0	0	89	96	0
Other 1	36	78	83	4	0	0	87	92	0
Navigation, Landing and Parking	29	29	31	2	0	0	33	35	0
Postage	0	0	0	0	0	0	0	0	0
Printing and Stationery	13	23	24	2	0	0	26	27	0
Promotions and Advertising	19	26	37	11	0	0	39	41	0
RDP Costs / Social Investment	0	0	0	0		0	0	0	0
Regional Services Levies	0	0	0	0		0	0	0	0
Telecommunication Services : External	18	21	23	2	0	0	24	25	0
Travel Benefits / Concessions	0	0	0	0		0	0	0	0
Transport Cost : External	2	2	2	0	0	0	3	3	0
Travel - Local	22	37	41	5	0	0	43	46	0
Travel - Overseas : Deductible	2	7	9	2	0	0	9	10	0
Accommodation and refreshments	21	27	29	2	0	0	31	32	0
Total sundry operating expenses	**136**	**277**	**274**	**-3**	**-0**	**1**	**282**	**295**	**0**

Other

This is mostly consulting fees For FY 2017/18 on professional services which will be required for various Section 56 processes including Operation Phakisa and planned outsourced developments (i.e. see Table 7). Included in the cost category other and illustrated in the table below.

Table 42: Breakdown of Other 1 Cost

Cost Category	Actual 2015/16 R Million	Budget 2016/17 R Million	Forecast 2017/18 R Million	Dev '16/17 vs 17/18 R Million	Dev '16/17 vs 17/18 Percentage	% of Opex 17/18	Forecast 2018/19 R Million	Forecast 2019/20 R Million	CAGR 2017/18 - 2019/20
Total Other 1	**36**	**78**	**83**	**4**	**6%**	**30%**	**87**	**92**	**6%**
Promat Levy	-	0	0	0	6%	0%	0	0	5%
Consulting Fees	2	48	50	2	3%	18%	53	56	6%
Credit Management Fees	-	-	-	-	0%	0%	-	-	0%
Inter Divisional Miscellaneous Leasing & Contract	-	0	0	0	6%	0%	0	0	5%
Capital Project Clearance	-	-	-	-	0%	0%	-	-	0%
Contributions	0	0	0	0	6%	0%	0	0	5%
Corporate Identity	1	4	4	0	11%	1%	4	4	6%
Bouquets & Wreaths	0	0	0	0	2%	0%	0	0	6%
Revenue Stamps & Other Taxes	-	-	-	-	0%	0%	-	-	0%
Sponsorships	12	4	4	0	6%	2%	5	5	6%
Corporate Social Investment	7	7	8	1	21%	3%	9	9	6%
Accounts Pay Clearance Account	-	-	-	-	0%	0%	-	-	0%
Suspense Account	-	0	0	0	6%	0%	0	0	6%
General Ledger Clearance Account	-	-	-	-	0%	0%	-	-	0%
Strike Related Cost	-	-	-	-	0%	0%	-	-	0%
Plant Hire Credits Sanction Work	-	-	-	-	0%	0%	-	-	0%
Interest Paid	4	1	1	0	6%	0%	1	1	5%
Conference: Portnet	0	4	4	0	5%	2%	5	5	6%
Foreign Exchange Cost	-	-	-	-	0%	0%	-	-	0%
Intra Pad Miscellaneous Charges	10	9	10	1	6%	4%	10	11	5%

Group Overhead Costs

The services provided by each Transnet corporate cost centre to the respective Operating Divisions (ODs) of Transnet vary in accordance with OD requirements and the nature of its activities. Transnet allocates these shared costs based on a top down costs centre allocation approach as opposed to a top down expenditure line item allocation approach.

This effectively means that total costs relating to a particular cost centre are allocated to the ODs using a cost driver predetermined by and agreed with the cost centre managers for that particular cost centre and this consequently informs the allocation of the expenditure line items such as personnel costs, fuel costs etc. within that cost centre.

Furthermore, where possible, identified costs per general ledger account that could be traced to ODs are allocated directly without the use of predetermined cost drivers. An example in this regard is the Incentive bonuses provision, Impairments on trade receivables and other internal income recoveries in the FY 2017/18 allocation.

Year on year differences in allocated corporate overhead costs or differences between budgeted corporate overhead costs allocations and actual corporate overhead costs allocations will always be primarily as a result of changes in the base rand amounts (e.g. budgeted corporate overhead costs versus actual corporate overhead costs per cost centre) as well as changes in cost driver percentages (per cost centre) with cost driver remaining the same.

Table 43: Group Overhead Costs

Transnet Group Costs							
Details	FY 2015/16 Actuals	FY 2016/17 Budget	FY 2017/18 Projections	Dev FY 16/17 vs FY 17/18	Dev FY 16/17 vs FY 17/18 (%)	FY 2018/19 Projections	FY 2019/20 Projections
Revenue External	-0.62	-	-	-	0%	-	-
Revenue Internal	-	-	-	-	0%	-	-
Internal Recoveries	-8.50	-	-	-	0%	-	-
Total Revenue	**-9.13**	**-**	**-**	**-**	**0%**	**-**	**-**
Net Operating Expenses	**443.81**	**572.61**	**440.07**	**-132.54**	**-23%**	**477.74**	**514.48**
Personnel Costs	148.08	255.61	139.34	-116.27	-45%	151.74	163.26
Fuel Costs	0.09	0.18	0.24	0.06	32%	0.27	0.28
Electricity Costs	5.45	1.38	1.93	0.55	40%	2.12	2.27
Material Costs	0.13	0.36	0.51	0.15	43%	0.56	0.60
Other Operating Costs	290.06	315.09	298.04	-17.04	-5%	323.06	348.06
Accommodation and Refreshments	6.09	3.94	1.85	-2.09	-53%	2.02	2.17
Professional Fees	69.21	81.87	95.54	13.68	17%	103.53	111.50
Electronic Data Costs	78.02	23.81	58.43	34.62	145%	24.98	68.25
Internal Audit	22.55	26.47	23.13	-3.34	-13%	63.31	26.98
Social Investment	35.26	37.86	36.06	-1.80	-5%	39.19	42.17
Miscellaneous Costs	78.93	141.14	83.03	-58.11	-41%	90.03	96.99
Amortisation and Items listed below	**434.68**	**572.61**	**440.07**	**-132.54**	**-23%**	**477.74**	**514.48**
Depreciation and Amortisation	32.88	47.35	40.75	-6.60	-14%	38.56	37.05
Profit from Operations before Items listed below	**467.57**	**619.96**	**480.82**	**-139.15**	**-22%**	**516.30**	**551.53**
Profit on Sale of Interest in Business	-	-	-	-	0%	-	-
Impairment of Assets	1.14	-	-0.84	-0.84	0%	-0.84	-0.84
Dividends Received	-	-	-	-	0%	-	-
Post-Retirement Benefits Obligation Costs	23.85	26.94	27.49	0.55	2%	29.88	32.15
Fair Value Adjustments	0.17	0.09	0.13	0.04	40%	0.14	0.15
Income from Associstes	-	-	-	-	0%	-	-
Profit from Operations before Net Finance Costs	**492.73**	**646.99**	**507.60**	**-139.39**	**-22%**	**545.48**	**583.00**
Transnet Capital Projects	13.29	3.39	0.87	-2.52	-74%	2.58	3.46
Transnet Foundation	-0.23	-0.27	0.11	0.38	-138%	0.08	0.04
Transnet Corporate Overhead Costs: NPA	**505.79**	**650.11**	**508.58**	**-141.53**	**-22%**	**548.14**	**586.50**
YOY % Increase							

In order to achieve some of the key milestones of the MDS, Transnet has been and continues to implement cost containment initiatives across all of its operating divisions and specialist units which include the Transnet corporate office. Transnet corporate overhead costs allocated to the Authority have thus been decreasing given the strict measures that have been taken to reduce operating costs.

Of importance to note is that the above allocation of corporate overhead costs to the Authority excludes any share of the corporate costs provision for incentive bonuses.