

South Africa's OCEAN ECONOMY



Operation Phakisa Oceans Economy

In March 2014, the South African Cabinet approved the piloting of the Malaysian Big Fast Results (BFR) methodology, to be known in South Africa as Operation Phakisa. Its first implementation was led by the Department of Environmental Affairs (DEA) to unlock the economic potential of South Africa's oceans. The planning phase of Operation Phakisa - Oceans Economy took place in mid-2014. Departments are now in the implementation phase.

Six growth areas were prioritised to contribute to unlocking the economic potential of South Africa's oceans, based on their potential contribution to economic growth and job-creation:

- Marine Transport and Manufacturing led by the Department of Transport.
- Offshore Oil and Gas Exploration led by the Department of Mineral Resources.
- Aquaculture led by the Department of Agriculture, Forestry and Fisheries.
- Marine Protection Services and Ocean Governance led by the Department of Environmental Affairs.
- Small Harbours Development led by the Department of Public Works (three feet planning tune-up Lab to be completed in the 2016/17 financial year).
- Coastal and Marine Tourism (three feet planning tune-up Lab to be completed in July 2016).

These six focus areas are supported by cross-cutting strategies in the areas of:

- Skills Development and Capacity Building led by the Department of Higher Education.
- Research, Technology and Innovation led by the Department of Science and Technology.

To date, the South African government has unlocked investments in the Oceans Economy amounting to around US\$1.1 billion since the inception of Operation Phakisa - Oceans Economy; and as a result, over 4500 jobs have been created.

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South Africa at a glance

Population	:	56m
GDP	:	US\$ 313bn
Oceans Economy GDP contribution	:	US\$ 6.3bn
Currency	:	Rand (ZAR). Conversion rate of 15.88 to the US\$ used throughout this material
Coastline	:	3900km
Major ports	:	8
Exclusive Economic Zone	:	1.5 million Km ²
Languages	:	English, Afrikaans, isiNdelbele, isiXhosa, isiZulu, Sesotho sa Leboa, Sesotho, Setswana, siSwati, Tshivenda, Xitsonga



Introduction

Investing and doing business with Africa's leading ocean economy

This guide outlines the capabilities of South Africa's ocean economy, and sets out useful contacts and information for potential users and investors.

South Africa is the strategic African hub for maritime operations in the South-South trade corridor from Asia to the East Coast of South America, and for the connector routes along the East and West coasts of Africa.

With its proximity to offshore drilling and exploration sites around Africa, and its first-world technology, skills and infrastructure, South Africa is a compelling choice for ship and rig maintenance and repair for the oil & gas industry as well as for the world's shipping operators.

The country has eight major ports, including two of the World's top container ports and two of the World's biggest dry bulk ports. Between them, the ports have capacity for Panamax and Capesize vessels, and Ultra-large Container Ships. Durban and Saldanha Bay can also offload Very Large Crude Carriers.

Port capacity is planned on a 30-year forecast, and billions of dollars are already allocated for upgrades, expansion ahead of demand, and the creation of a brand new deep-water port that will be able to handle new-generation very large vessels.

Under Operation Phakisa - Oceans Economy, a priority programme, the South African Government, aims to grow the Ocean Economy's contribution to the country's GDP to R129-177 billion by 2033; some

250% to 350% of its present value. This is expected to provide up to a million new jobs.

South Africa produces world-class boats and ships of up to 140m for civilian and military use. The ship and boatbuilding sector is backed by a rich supply chain of manufacturers, technicians, fabricators, installers and system integrators.

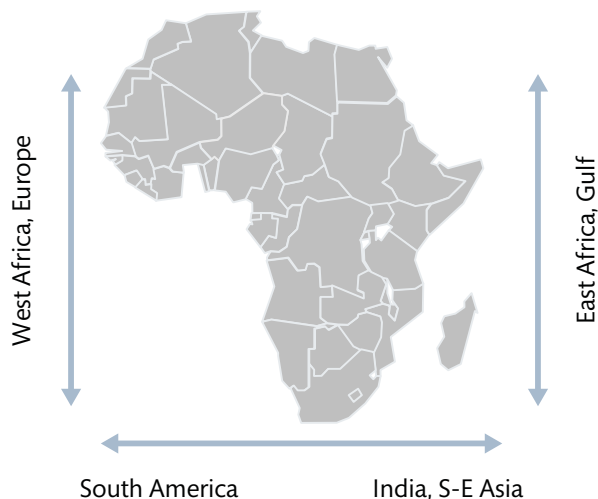
Its civil engineering and EPCM sector has extensive expertise in harbour and infrastructure construction, with successful project delivery across the African continent and beyond.

South African port operators, including state-owned corporation Transnet, can provide expert project and operations management for African ports and infrastructure.

South Africa has significant Developmental Financial Institutions that participate in national and African projects, supported by a world-class private financial services sector with excellent governance and liquidity.

All of this is underpinned by a maritime education system that delivers trade skills, merchant marine crew, and advanced engineering and logistics education for students from around Africa.

For African Mega Projects, maritime infrastructure, oil & gas operations, shipping, port operations, logistics or maritime engineering, South Africa should be part of your strategic planning.



- Southern Africa maritime hub with extensive infrastructure and deep supply chains
- Repair and maintenance for ships and drilling rigs
- Next-generation shipbuilding and boatbuilding
- Bunkering, resupply and medical support
- Storage and logistics
- Port and infrastructure construction, including extreme greenfield
- Port operations consulting
- Maritime training and education from trades to advanced degrees
- Private sector and development finance for local and pan-African initiatives

Logistics

World class ports to serve Africa's most important markets

South Africa is home to world-class infrastructure, including eight major ports. They include one of world's biggest coal terminals, the Southern Hemisphere's deepest and biggest natural harbour, and two of the world's top container ports. The country has ports capable of handling Very Large Crude Carriers, and the world's biggest Cape Class and Ultra Large Container Ships.

Currently, the ports serve the world's vital flows of mineral bulk (coal, iron ore), agricultural bulk (wheat maize. Soya bean meal, animal feed, woodchips, fresh produce), automotive vehicles and components, timber and forest products.

Presently, South Africa has 127 vessel berths, together handling 160m tonnes of throughput per year. 42 berths are break-bulk, 30 are dry bulk, 18 are for containers and 16 for liquid bulk. The port system has around 6 000ha of landside area and over 30km of quay wall. This will be expanded to 9 000ha and 80km during the present 30-year planning period.

As well as serving South Africa itself, the ports are a gateway to the African region. Neighbouring landlocked countries can be reached through extensive rail and highway networks. Break-bulk or trans-shipment operations connect the main south-south trade axes to the liner routes along the East and West coasts of Africa. Cargoes can be moved to shallow-draught vessels that can navigate river routes in West Africa, avoiding the delays, expense and other issues associated with some river-mouth ports.

All eight of the major ports are planned and operated by Transnet, a State-Owned Corporation that builds its strategy around a moving thirty-year forecast of the region's maritime needs. Each port has a specific set of roles, and the ports together can handle anything that the world's commodities and capital goods industries can ship.

For shipping and logistics companies, South Africa offers excellent facilities and an efficient gateway to the African continent.

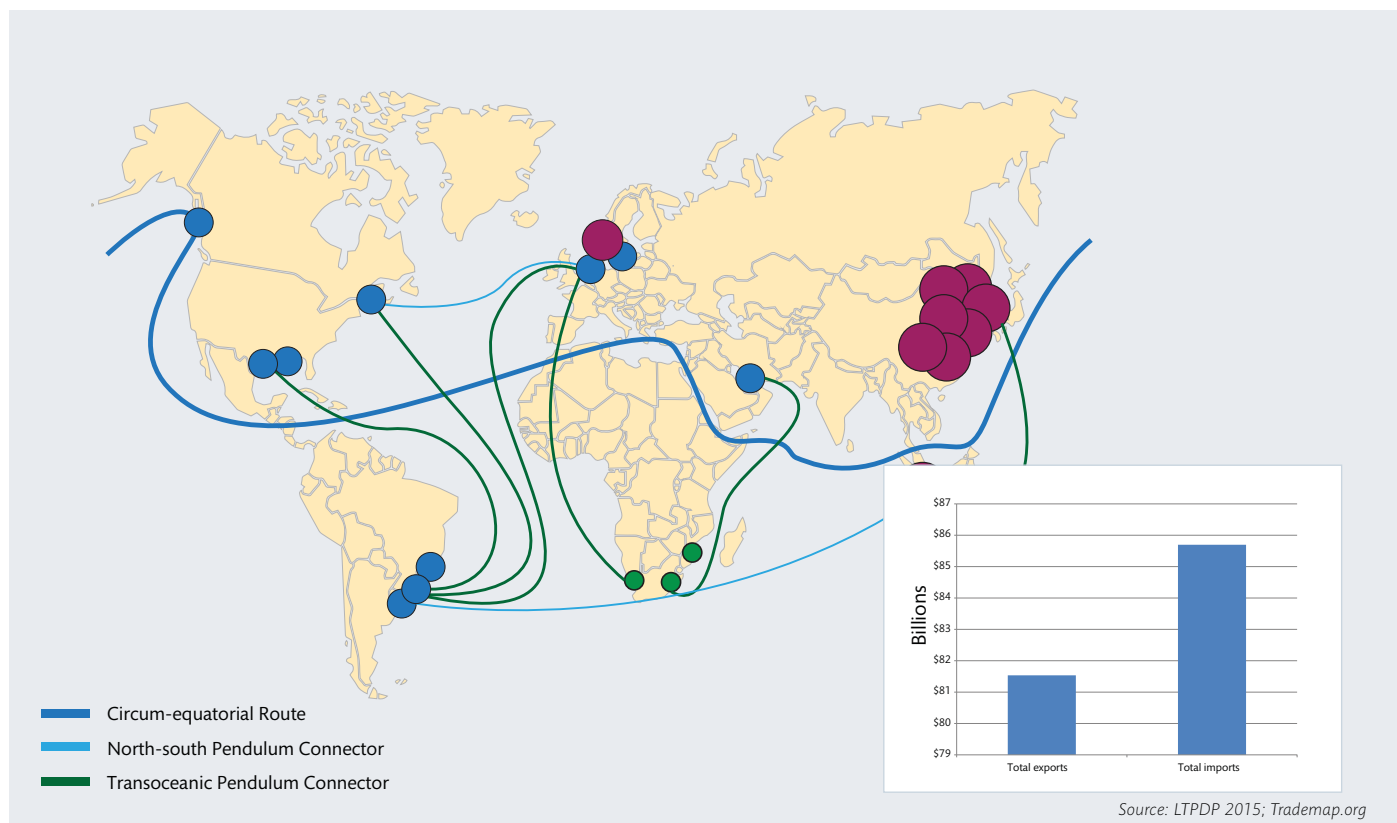
For users, the continual development of the ports system brings substantial operational efficiencies and improves the ease of doing business.

The South African government regards ports as a strategic asset. Over US\$3bn will be spent on expansionary projects over the next seven years. Every port will be upgraded and expanded, to increase its handling capacity and to provide enhanced resupply, repair and maintenance capabilities.

This continual expansion of Ocean Economy infrastructure and services brings substantial opportunities for investors. Over the next 30 years, the total expansionary investment will be over US\$14bn at current prices, of which 61% will be from the ports authority, and the other 39% will be from terminal operators, including private sector participation.



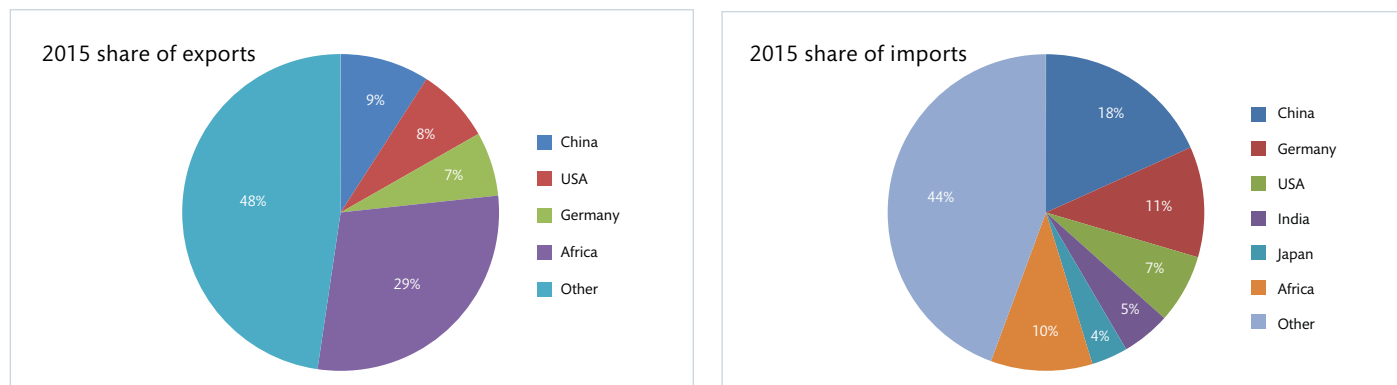
South Africa is strategically located on shipping routes for North-South and South-South trade



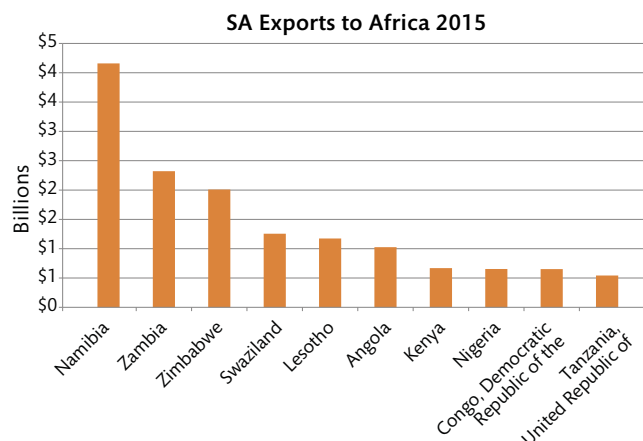
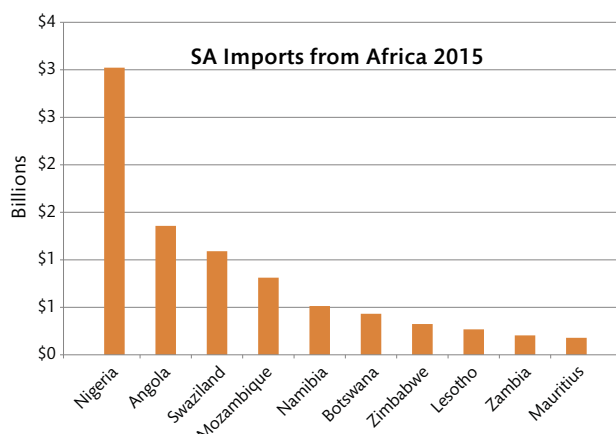
South Africa is a major trading nation. The country imported and exported a total of over US\$167 billion of goods in 2015.

South Africa is a dominant player in intra-regional trade

Africa accounts for 10% of South Africa's imports and 29% of its exports



South Africa's top ten African import and export markets



Source: LTPDP 2015; Trademap.org

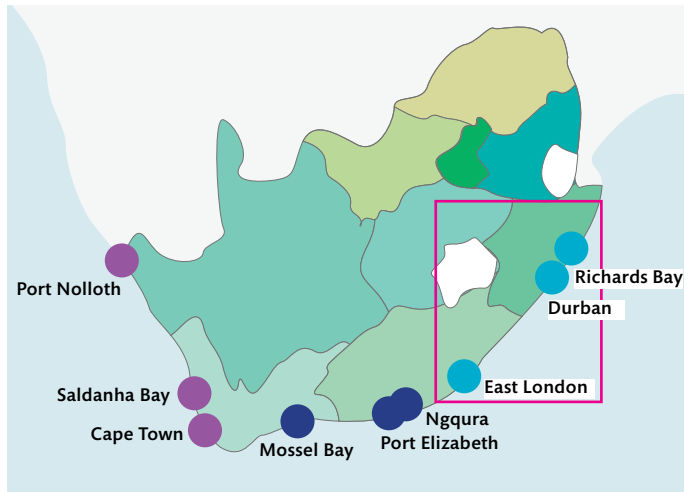
SA's major ports can handle 8 million TEUs; 190 million tonnes of dry bulk cargo, 55 billion litres of liquid bulk, and over a million cars every year

Total for SA key ports 105 active	Richards Bay 20 berths	Durban 40 berths	East London 7 berths	Ngqura 7 berths	Port Elizabeth 8 berths	Cape Town 16 berths	Saldanha 7 berths
RoRo 5 Berths		3 berths Capacity of 520 000 units	1 berth 200 000 units		1 berth 410 000 units		
Dry Bulk 17 Berths	6 berths 21 M tonnes/year	7 berths 11 million tonnes /year	1 berth 1 M tons/year		1 berth manganese 6 M tonnes /year	2 berths	
Break Bulk 25 Berths	6 berths 10 M tonnes /year	14 berths 3,6 million tonnes/year	2 berths		3 berths 1,2 million ton/year		
Liquid bulk 16 Berths	2 berths 3 million kilolitres/year	9 berths (including a single-point mooring 15 million kilolitres/year; offshore crude oil import SBM 24 million ilolitres/year)	1 berth 3 million kilolitres/year		1 berth 3 million kilolitres/year	2 berths 6,4 million tonnes/year	1 berth 25 million kilolitres/ year
Multi-purpose Terminal (also adds container capacity) 15 Berths			2 berths 1,5 million tons/year	3 berths usage not yet planned		6 berths 3,6 M tonnes / year including break and dry bulk	4 berths
Coal 6 Berths	6 berths 91 M tonnes /year						
Iron Ore 2 Berths							2 berths 60 M tonnes/year
Ship Repair Fishing Facilities 1 Berth						1 berth	
Cruise Liner 1 Berth						1 berth	
Container 17 Berths		7 berths 3,6 million TEUs/year		4 berths 2,3 million TEUs/year	2 berths 600 000 TEUs/ year	4 berths 1,0 million TEUs/year	

Sources: LTPDP 2015 port status quo statements; port-capacity-and-utilisation-report-2015-16.pdf (ports regulator of South Africa)

Integrated planning means that the South African port network is optimised for Africa's strategic industries and markets

East Coast Ports



Richards Bay:

- Dry Bulk Vessels up to Cape Class, liquid bulk vessels up to Handymax class, and Feeder class container ships. Other services include bunkering and minor ship repairs, and facilities for service and recreational craft.
- Durban port is 160km away and the two ports are planned to have complimentary capabilities.

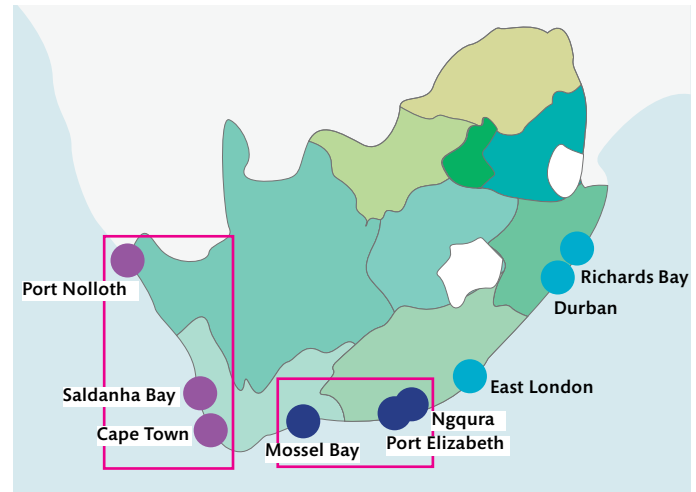
Durban:

- Sea trade gateway spanning South-South Trade, Far East Trade, Trade with Europe and the USA.
- Storage for containers, dry bulk, break bulk, automotive, Liquid Bulk, SBM Crude

East London:

- 7 commercial berths ranging up to 250m in length. Manufacturing and repairs capabilities
- The port is 460km south of Durban, and is planned as complementary to Ngqura on the South Coast Complementary regional grouping:
- Durban, the proposed Durban deep water port (known in the industry as the 'Dig-out Port') and Richards Bay are planned together, allowing the complementary allocation of cargo between the three ports.
- At Richards Bay, the focus will be on coal export and other dry bulk handling.
- At Durban, the focus will be on container, automotive and liquid bulk handling.

West and South Coast Ports



Saldanha Bay:

- South Africa's deepest draft port.
- The iron ore export jetty provides berthing for two Very Large Bulk Carriers (VLCCs), while a liquid bulk berth provides for Very Large Crude Carriers importing and exporting crude oil.
- Saldanha is the site of the planned Oil & Gas
- Servicing and Support

Cape Town:

- Cape Town serves the Western Cape hinterland, including the agricultural sector. Its medium and long term development plans are focussed on its multi-purpose and container terminals

Mossel Bay :

- Mossel Bay serves the local fishing fleet and recreational boaters.
- 144 liquid bulk vessels use the offshore moorings to transfer cargo.

South Coast Ports

Port Elizabeth:

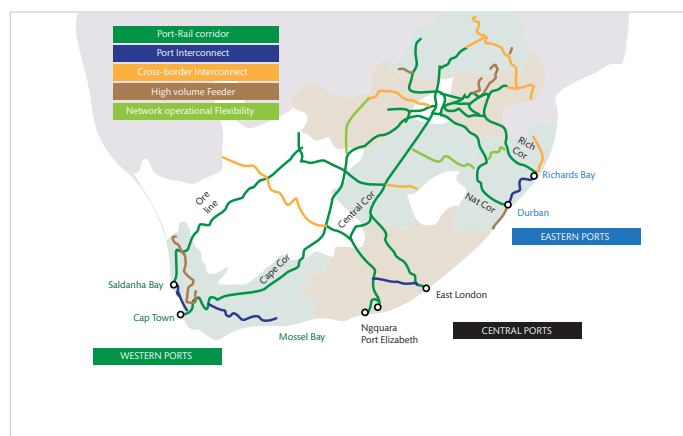
- Port Elizabeth is centrally located.
- It's new focus will be containers, cars, plus a multi-purpose terminal, providing services complementary to Ngqura.

Ngqura

- The newest port in the South African port system.
- Ngqura's current primary role is to target transshipment cargoes, both for East and West African ports, as well as for inter-continental transshipments.
- The port is intended to provide complementary services to Port Elizabeth and East

Source: Transnet National Ports Authority Port Development Framework Plans, 2014. Transnet presentation to the Public-Private Infrastructure Forum 2012: 'all port developments.pdf'.

Linking South Africa's ports: a planned, integrated network of



highways, railways and pipelines

South Africa has an integrated system of complementary regional ports; pipelines, and rail corridors, all planned and managed by Transnet and integrated with the extensive system of highways.

The land infrastructure serves South Africa's national logistics needs, and connects to neighbouring states.

The ports infrastructure has a transshipment function for regional logistics, as well as serving the large South African domestic market and the country's exporters.

Over US\$3 billion will be invested in ports infrastructure during the next seven years, rising to US\$14 billion over 30 years

Transnet's National Ports Authority and Port Terminal Operator will spend over US\$3 billion over the next seven years on expansionary projects. Every port will be upgraded and expanded, to increase its handling capacity and to provide enhanced resupply, repair and maintenance capabilities.

This continual upgrading means a steady flow of investment opportunities for shipping and logistics companies, stevedores, vessel builders, maintenance and repair companies, back-of-port operations, and construction consortiums.

Examples of projects include:

- US\$22m will be invested over the next 3 years in the ports of Durban and Cape Town for boatbuilding infrastructure through incentives provided by government.
- US\$19m is being channelled towards the refurbishment of the port in Port Elizabeth with a re-constructed slipway and lead-in jetties to allow at least 12 vessels to be accommodated for hull inspection and maintenance as compared to only 2 previously.
- US\$2 billion will be allocated to Transnet Port Terminals TPT, aimed at creating new capacity for terminals to meet projected demand.
- US\$88m is being invested in 9 tugboats currently under construction by South African Shipyards. Seven are for Durban, two are for Port Elizabeth

The main beneficiary ports in the 7 year plan will be:

Durban	US\$1.5 billion
Ngqura	US\$ 749 million
Richards Bay	US\$ 277 million
Saldanha Bay	US\$183 million

The 30 year expansionary investment at current prices will be US\$14.3 billion. The main projects will be:

Saldanha Bay iron ore expansion: US\$283 million

Saldanha Bay LNG Facility: US\$271 million

Richards Bay Ship Repair Facilities: US\$ 340 million
Richards Bay 600 series break-bulk basin expansion: US\$252 million
Cape Town containers, seaward expansion: US\$831 million

Durban deep water 'Dig-out' Port, container terminal phase 1: US\$3.3 billion

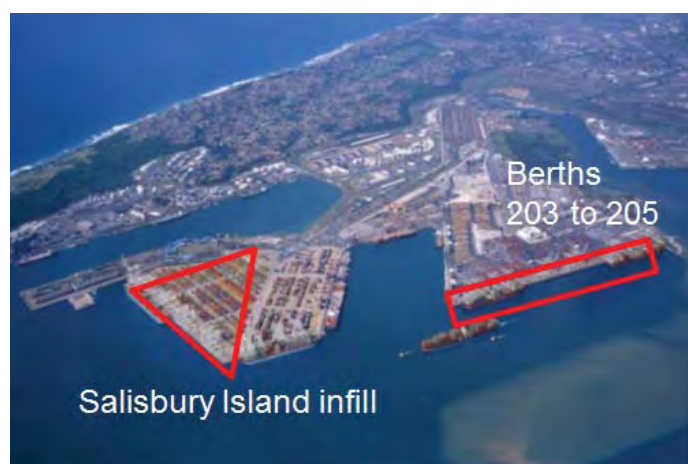
Durban deep water 'Dig-out' Port, container terminal phase 2: US\$1.3 billion

Port Elizabeth containers, terminal reconfiguration and berth deepening: US\$592 million

Ngqura liquid bulk terminal: US\$441 million

Ngqura manganese export facility: US\$416 million

Durban container port expansion brings immediate opportunities for infrastructure consortiums



Durban Container Terminal expansion

The deepening and extension of three berths at Durban Container Terminal (berths 203 to 205) will allow the port to handle the biggest container vessels, and boost the throughput of the port without adding to its area. Durban serves the Gauteng hinterland, where over 60% of South Africa's GDP is generated.

The project will be funded by Transnet Capital Projects, and is expected to represent an investment of some US\$ 638m. The contract is expected to be awarded in October 2016, and the new berths will be completed in 2022/23.

Further development of the terminal, with infill between the existing Salisbury Island naval base and Pier 1 will provide additional deep water berths, and will be a US\$ 1.3 billion project. The contract will be awarded in August 2018 for completion in 2022/23.



Oil&Gas

Africa's oil & gas support centre

South Africa already is a preferred destination for repair, maintenance and upgrade of drilling ships, semi-submersibles and jack-up rigs for operations in African waters. The country offers a compelling mix of world-class engineering, deep supply chains, and proximity to key drilling sites.

For any West African site from Nigeria southwards, over 20 days of round-trip can be saved compared with the nearest alternative sites in Europe. When time off-station burns money at up to half a million dollars a day, the maths is easy.

With the designation of Saldanha Bay as a dedicated oil & gas servicing hub, the future is going to be brighter still. Transnet National Ports Authority has earmarked a strategic fund of around US\$600 million dollars for Saldanha that will grow the continent's energy industry. A new, specialised oil & gas maintenance and repair centre is being implemented at Saldanha Bay, to work alongside existing capabilities at Cape Town and Saldanha. It will include a new deep-water berth for rigs and drill ships, and a new construction, repair and maintenance berth.

In addition, the rapid turnaround times that specific oil & gas skills and experience allow, together with transparent tariff rates, combine to give a highly competitive overall cost of work. Vessels come from as far away as South America to take advantage of our engineering skills, our capacity and our fast turn-around times.

An early step on the journey is an RFP presently in progress for the operation of the Supply Base Facility at Saldanha. Private investors

are invited to propose for a 20 year concession to perform a range of required services, plus optional services that may enhance the project's RoI.

South Africa is also planning for a future in which LNG is an increasingly important energy source. Transnet National Port Authority already has made provision for three LNG import terminals in its long-term planning, at Saldanha, Richards Bay and Ngqura.

Saldanha Bay is already the deepest and largest natural harbour in the Southern hemisphere. Its supply chain includes a steel works and an industrial development zone, as well as a Cape engineering



community used to the standards of quality and speed that the oil & gas sector demands.

Sources: Transnet LTPDP 2015; Transnet presentation "Oil and Gas Investment Opportunities in the South African Ports through Operation Phakisa - Oceans Economy" OTC presentation 2016; SAOGA Port Handbook 2015. Image: <http://www.saoga.org.za/commercial-industrial-base>

South Africa is perfectly positioned to serve every African oilfield



Five of South Africa's ports are already experienced in oil & gas support operations

Examples of Projects:

Cape Town:

- Triumph Drilling T110 (2014, Sturrock Drydock)
- Enscos E5001 (2014, Repair Quay)
- DSV Vinnice (2014, A-Berth)
- Endurance (2015, A-Berth)

Ngqura:

- Deepsea Stavanger (2011)
- Deepwater Millennium (2011)
- Borlette Dolphin (2013)
- Enscos 5006 (2014)
- Transocean KG1 Drillship (2014)

Most ports providing support services to the oil & gas industry are able to accommodate rigs, drillships, supply vessels, tugs, anchor handlers, pipe layers, seismic survey vessels, and dive support vessels. Certain restrictions such as maximum vessel length, width, and draft may apply.

Other craft types may be port specific: semi-submersibles, FPSOs, and heavy lift barges (Cape Town); and FPSOs (Ngqura).

Saldanha Bay IDZ

- Repairs and maintenance
- Ancillary services
- Exploration and production support
- Logistics
- Marine / subsea engineering and fabrication



A dedicated oil & gas support complex at Saldanha Bay

With a land and sea surface of over 19 300ha and water depth up to 23.7m, Saldanha is the largest and deepest natural port in the Southern Hemisphere.

Saldanha Bay handles 12% of South Africa's liquid bulk cargo, including a significant portion of the country's crude oil imports (Saldanha can dock VLCCs).

The port presently operates offshore supply to the oil & gas industries, and purpose-built infrastructure to support the oil & gas industry is planned to be ready by 2018.

The Saldanha Bay Industrial Development Zone will serve as the main oil, gas and marine repair engineering and logistics services complex for Africa. The IDZ will primarily service the needs of the upstream oil exploration industry and production service companies operating in the oil and gas fields off the African coast. The Saldanha Bay IDZ will include logistics; repairs and maintenance, and fabrication activities; and will include a Customs Control Area/Free Port to simplify, speed up and cut the cost of repairs and maintenance operations.

The complex will include these three priority projects:

- A General Maintenance Quay will be upgraded to function as an offshore supply base for the oil & gas industry (berth length: 294m; depth: -6.5m) supplying materials and food, and collecting waste. Project duration: 2015-2016; The construction and operation of the supply base will be a private sector investment opportunity.
- A deep-water rig repair facility will be constructed at Berth 205 (length: 380m; depth: -21m), with the ability to accommodate 2 rigs simultaneously. Project duration: 2015-2019; Estimated cost: US\$ 220 million.
- Saldanha will be able to offer additional maintenance and repairs facilities to rigs and supply vessels once the Moss gas Quay has been extended by constructing a 1000m jetty (depth: -8.0m). Floating docks will be accommodated via pockets of water depths of -12m. Project duration: 2015-2019; Estimated cost: US\$ 144 million.



South Africa's waters are a promising location for exploration, attracting investors from Europe, Asia and the US as well as from Africa. Companies presently exploring include:

Africa Energy Corporation
 Anadarko Petroleum Cooperation
 Bayfield Energy
 Cairn India
 CNR International (South Africa) (Pty) Ltd
 Exxon Mobil International Limited
 Global Offshore Oil Exploration (SA) (Pty) Ltd
 New Age
 OK Energy
 PetroSA
 Shell South Africa Upstream B.V.
 Silverwave Energy PTE LTD
 Sunbird Energy Ltd
 Thombo Petroleum Ltd

Ship and rig repair solutions

The oil & gas industry cluster in South Africa offers the depth and breadth of product and service provision for the most demanding customers. Global giants such as Transocean, ENSCO, Saipem and Ocean Rig are repeat customers.

South Africa can handle rig and drillship repairs requiring a draft of up to 18m (Coega) and 16m (Saldanha Bay).

The country has highly experienced service providers, and can supply key components either made locally or delivered through local distributors. Where highly specialised components and systems must be sourced elsewhere, they can be delivered rapidly on liner shipping routes or through major international airports at Cape Town, Johannesburg and Durban (regional airports serve Port Elizabeth, East London, Ngqura and Richards Bay).

Offerings include:

Accommodation outfitting
 Agency services
 Communications and data systems
 Containers
 Cranes and rigging
 Deep sea marine and commercial diving equipment
 Diesel engines and gensets
 Diving services
 Drilling chemicals
 Electrical
 Fabrication
 Fire protection equipment
 Hydraulic systems
 Inspection and certification services
 Lighting masts
 Metallurgical inspection and testing
 Mooring systems
 Naval Architecture
 Navigation aids
 Nitrogen services
 Offshore aviation services
 Painting and coatings
 Pipes including carbon and stainless steel
 Pressure vessels
 Process measurement instrumentation
 Project management
 Pumps and compressors
 Recruiting and training
 Remotely operated vehicles
 Rigging
 Shipping & logistics
 Steel
 Subsea electronics
 Torquing and alignment
 Valves & Actuators
 Waste management
 Waste water treatment systems



Deepsea Metro II project by DCD Marine

This new generation drill ship is an ultra deep water rig, rated to 12 000 ft of water and 40 000 ft of drilling.

The project included steel work, mechanical, piping, blasting and coating, hydraulics, and electrical work.



Transocean Marianas project by Dormac

This semi-submersible rig is rated to 30 000 ft of drilling and 7 000 of water. Its 174'x 40'x40'pyramid derrick has a capacity of 1 500 000 lbs.

The project included piping, mechanical, electrical, steel renewal, and upgrades to accommodation and control systems.

Saldanha Supply Base operation: an opportunity for private sector investors, leveraging US\$180m of Transnet capital

South Africa's public sector is keen to work with private investors to provide commercially-sustainable, high-efficiency facilities and services to the Ocean Economy. A recent example is the RFP issued for the Operation of the Supply Base Facility at Saldanha (closing date for expressions of interest was June 2016, and the preferred bidder will be announced in the fourth quarter of 2016). The Operator will provide generalist and specialist services to vessels, rigs and offshore platforms traversing or operating off the coast of Africa.

The successful consortium will have a 20-year concession to operate in an optimal location with a fast-growing potential market, leveraging Transnet's planned investment in port infrastructure for repairs, valued at over US\$ 180m.

The consortium will design, procure, construct and install the superstructure and capital equipment for the facility, and will provide a range of essential services:

- Material loading & offloading facilities
- Ancillary bunkering, fuel, oil and lubricants refill services
- Water refill
- Office facilities
- Handling of oil waste
- Warehousing and facility yard management
- Cleaning, maintenance and preservation of off-shore oil and gas related materials and equipment

In addition, bidders were invited to propose additional concessions to enhance the project's RoI and sustainability. The scope is open for entrepreneurial creativity, with a number of potential options pre-approved, including:



- Maintenance & repair services to vessels including the provision of a floating dock
- Boat building
- Accommodation for customs and clearing services,

For users of the oil & gas Supply Base, the initiative will create a range of important infrastructure. This will include handling equipment for containerised cargo; warehousing; a pipe yard (including coating facilities); reefer points, and waste disposal systems including for oil waste. All of this will be configured specifically for oil & gas industry requirements.

Recent investment projects at Saldanha

As well as providing a dedicated oil & gas support complex, Saldanha Bay will also be home to a new LPG terminal, opening in 2017.

Owned by Sunrise Energy, the new terminal will have a multi-buoy mooring system, and can be used by any gas importer, distributor or downstream user. It will be suitable for Liquefied Petroleum Gas (LPG), Commercial Propane and Commercial Butane.

The terminal will include high-performance, modular storage facilities fabricated in South Africa. The engineering of LPG storage facilities has to be of the highest standard, to meet stringent international safety requirements. The product will be piped from ships to an onshore plant, where it can be blended and odourised to specification. Onward distribution can be by road or pipeline, and cylinders can be filled onsite.

There is a strong, established market for LPG in the region; for industry, households and commercial users. The terminal is expected to be met with growing demand, so it is designed with modular storage. Phase 1 includes 5,500 tons of storage, and will allow throughput of 17,500 tons of LPG per month. The terminal is modular, and can be expanded to 16,500 tons of storage and 52,000 tons per month of throughput.



New crude oil storage and blending plant

A crude oil storage and blending terminal with a total capacity of 13.2 million barrels is to be constructed at Saldanha by a joint venture comprising Oiltanking Grindrod Calulo Holdings (OTGC), which is led by Germany's Oiltanking, and Mining, Oil and Gas Services (MOGS), which is part of Royal Bafokeng Holdings. The state-of-the-art facility will have a jetty designed to handle vessels up to Very Large Crude Carrier size. The company regards Saldanha Bay as an excellent location for a crude oil hub, being close to strategic tanker routes and is ideally situated for the blending of west African and South American crude oils. It believes the port had the potential to establish itself as a global crude trans-shipment hub.



LPG pressure vessel by Saldanha engineering company

From an engineering perspective, the bulk storage of LPG requires very high levels of quality. In the event of a containment failure, the fire and explosion hazards include radiant heat exposure from pool fires, vapour-cloud flash fires, jet fires, overpressure from vapour-cloud explosions, and boiling liquid expanding vapour explosions, or BLEVE (the Sunrise Energy storage is buried in an earth mound to eliminate BLEVE risks).

The massive, modular LPG storage 'bullets' for Sunrise Energy were built by another company that invested in a Saldanha location: Efficient Engineering. The bullets weight around 600 tons each, and are the size and shape of large submarines. At 7m diameter and 74m length, they are the largest LPG bullets ever fabricated in the Southern Hemisphere.

Efficient Engineering has a long reputation for quality, having built pedestals and yokes for the South African MeerKAT radio telescope, currently being built in the Northern Cape. Its sister company Efficient Power handled the integrated cabling. MeerKAT is a precursor to the Square Kilometre Array (SKA) telescope and will be integrated into SKA Phase 1. The SKA Project is an international enterprise to build the largest and most sensitive radio telescope in the world.

Efficient Power Energy is part of the Efficient Engineering Group, which has an extensive track record in the oil & gas sector. Efficient Power produces modular diesel gensets up to 750 kVA, in partnership with Sumitomo. Efficient Trotech is one of the biggest providers of storage tanks, have built major installations for petrol, diesel, aviation fuel, and edible oils at many of South Africa's major ports. It is presently completing a major tank farm at Richards Bay. It has worked

for most of the major oil & gas players in South Africa, including Sasol, Total, Anglo American, BP, Chevron, Vopak, Bidvest Tank Terminals, Air Liquide, and Engen.



Investment opportunities in LNG Infrastructure

One of the key requirements shaping long-term planning of South African ports is the storage, handling, and transportation of alternative fuels to reduce reliance on coal as a fuel. Liquefied Natural Gas (LNG) is set to be a key part of South Africa's energy mix. As a result, specialised LNG infrastructure, and is assessing three ports for the location of the first terminal: Saldanha Bay, Ngqura, and Richards Bay.

- Part of Saldanha's short-term development plan is to create a LNG import facility and offshore mooring buoy. The import facility will complement the port's positioning as an offshore oil and gas services complex and, together with the landside storage that it will require, will support the growth of the energy cluster that is expected to develop in conjunction with the Saldanha IDZ.
- One of the proposed Coega IDZ projects, based near the Port of Ngqura, is the establishment of an LNG facility. The medium term plan is to construct a LNG berth at the reconfigured main breakwater.
- In the medium term, the proposed LNG offloading facility at the Port of Richards Bay would be located within a dig-out basin south of the entrance channel.

Of immediate interest to investors will be a procurement process due in 2017 for a gas-to-power programme, to be run by the Department of Energy. This is expected to include supply of a Floating Storage and Regasification Unit vessel or FSRU-based bundled natural gas-to-power solution of up to 3126MW. Again the three potential ports considered are Ngqura (Coega), Richards Bay and Saldanha Bay. The scope will include LNG supply, development of jetty and associated infrastructure, and the construction of pipeline infrastructure to deliver gas from the FSRU to an initial gas IPP and potential desalination facility. Surplus capacity on the FSRU and associated pipeline infrastructure will be available to serve additional gas off-takers.

A newly-established Gas Industrialisation Unit in the Department of Trade & Industry will also be planning a future in which LNG will be used as a key feedstock for industrial processes, including fertiliser manufacture and gas-to-liquid technologies. A regional strategy is being developed in which gas infrastructure may be planned in conjunction with neighbouring states. This could lead to opportunities in construction and operation across Southern Africa.



Richards Bay currently



An LNG facility is proposed on the southern side of the entrance channel at the port of Richards Bay.

Maritime Services

*Fast resupply, repairs and maintenance.
In the right place, at the right price*

South Africa is the proven location for resupply, repairs and maintenance for

- Shipping companies doing business with the continent of Africa
- Cape Class vessels going East from Asia
- South-south trade
- Ship owners who want alternative routes away from conflict areas

South Africa has extensive maintenance and repair facilities; a strong skills base; lower labour costs than many Western countries, and a strategic location. Together, these factors allow shipping companies to minimise time-to-repair; optimise maintenance schedules, and minimise downtime by choosing a world-class work location close to their routes.

As well as serving Southern Africa's offshore oil & gas industry, South Africa is a close, economic location for supporting operations further North off the continent's East and West coasts. It also is on suitable liner routes for efficient delivery of complex, globally-sourced components.

As well as geographic and economic advantages, work sourced in South Africa can contribute to 'African Content' requirements when bidding for public sector contracts or licences.

Between specialised repair berths, graving docks, floating docks and riding maintenance crews, most repair and maintenance operations can be carried out. South Africa's local industry can supply 60% or more of a ship's value, and parts that need to come from overseas can be delivered here on efficient global supply chains.

For resupply and general support, we have an excellent food industry, a world-class medical sector, experienced chandlery businesses, and two of our major ports have refineries close by for low cost supply of bunker fuel.

The combination of high and growing ports capacity, local supply chains and long maritime experience means that vessels can be turned around quickly and efficiently, with minimum downtime.



Electrical refit and full powertrain overhaul of the fire-damaged offshore tug Subhiksha, by Southern African Shipyards. A complete overhaul to the main engine and crankshaft; thrusters, propellers and main shaft. Replacement of all electrical items, including over 15km of wiring.

Ship Repair Facilities and Planned Investment per Major Port



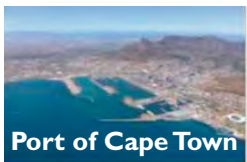
Ship Repairs:

Quayside repair facilities are available at the Moss gas jetty; deep water activities just inside the mouth of the Bay may be undertaken with permission from the Harbour Master.

Planned Investment:

The high-level, 30-year expansionary investment plan for the Port of Saldanha Bay is R17.2 billion. This includes a total port authority spend of R9.2 billion and an operator spend of R7.9 billion.

Saldanha Bay will be the site of three of South Africa's key port development opportunities over the next 30-years, including the ship repair precinct (Offshore oil and gas supply base, berth 205, and Moss gas Quay jetty).

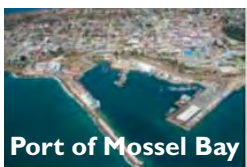


Ship Repairs:

Extensive repair facilities: two graving docks, general and private repair quays, and a syncrolift with lifting capacities up to 1 800 tonnes. ISO 9001, ISO 14001, and OHSAS 18001 compliant.

Planned Investment:

Total investment planned over a 30-year period is R22.80bn. One of the main port development opportunities is the landside expansion of the ship repair precinct by filling in the yacht club basin. Costs are estimated at R1.4 billion.

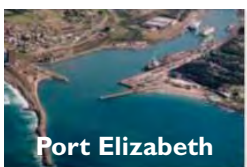


Ship Repairs:

Marine engineering firms are available for all classes and types of onboard repairs. A slipway of 220 tons capacity and private repair diving services are also on offer.

Planned Investment:

Total investment planned over a 30-year period is R1.33bn, including an upgrade of the repair slipway



Ship Repairs:

A slipway allows for the repair of yachts and small fishing vessels up to 1,200 tonnes, complemented by a full diving service. Marine navigational equipment, electrical, engine, and reefer repairs are also on offer.

Planned Investment:

Total investment planned over a 30-year period is R12.23bn. Future upgrades could include upgrading the slipway and offering ship maintenance facilities.



Ship Repairs:

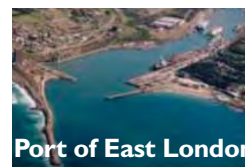
Repair facilities accommodate a deeper draft (18m) relevant to larger vessels associated with the offshore oil & gas industry. However, equipment and infrastructure needs to be brought in from elsewhere.

Planned Investment:

The high-level, 30-year expansionary investment plan is R39.25bn. No ship repair specific investments are expected.

Ship Repairs:

East London Graving Dock and private contractors are available. A repair quay is available adjacent to the dry-dock. The dock is equipped with cranes ranging from 4 to 15 tonnes.



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East London Graving Dock and private contractors are available. A repair quay is available adjacent to the dry-dock. The dock is equipped with cranes ranging from 4 to 15 tonnes.

Planned Investment:

The high-level, 30-year expansionary investment plan is R3.76bn. Planned to upgrade and refurbish the existing drydock and slipway facilities by 2019 are expected to cost an estimated R515 million.

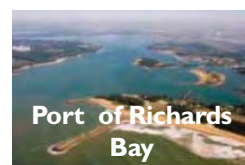


Ship Repairs:

Extensive repair facilities concentrated near the Bayhead area: one graving dock, two floating docks, general and private repair quays, and a slipway.

Planned Investment:

The high-level, 30-year expansionary investment plan is R104.17bn for the existing port (excluding the proposed Durban deep water 'Dig-out' port).



Ship Repairs:

A repair berth is located at the Small Craft Harbour, with a draft of 8m.

Planned Investment:

The high-level, 30-year expansionary investment plan is R26.34bn. R5.4bn is to be invested in a ship repair terminal and dry docking facilities in the medium term. The private sector is encouraged to invest by constructing a floating dock moored to the Repair Quay and/or a fixed dock repair facility at the Causarina within comfortable proximity to the Richards Bay IDZ. There are also plans to deepen the existing berths.

Ship repair capacity overview

Port	Facility	Type	Dimensions*	Water depth**	Cranes
Cape Town	Sturrock Dock	Graving dock	359 x 45m	12.0m	4 x 5 tons
	Robinson Dock	Graving dock	153 x 27m	6.3m	3 x 4 tons
					1 x 15 tons
	Syncrolift	Syncrolift with 5 repair bays	61 x 15m 1 778 tons lift capacity		
Saldanha	"A" Berth	Repairs afloat	275m x 76m	11.8m	
	Repair Quay	Repairs afloat	458m x 2	11.8m	
	Moss gas Yard	Fabrication yard	35m quay 22ha with workshops	8.0m	
Durban		Multi-purpose berth also used for repairs	250m quay	15.0m	
	Prince Edward	Graving dock	352 x 42m	10.5m	1 x 50 tons 1 x 25 tons 1 x 8 tons 2 x 5 tons
					1 x 4 tons
	Floating Dock No. 3	Floating dock	107 x 27m 3 630 tons lift capacity		
East London	Workshop 24	Machine Shop			
	Repair quays		520m (in three sections)	6.1 - 8.5m	
	Dry dock	Graving dock	200 x 25m	8.5m	4 x 4 - 15 tons
Richards Bay	Workshop 17	Machine Shop			
	Repair quay	Repairs afloat	106m	8.5m	1 crane
Port Elizabeth	No existing facilities				
Ngqura	Main slipway	Slipway	1200 ton lift capacity		
		Slipway	40 ton lift capacity		
		Machine shop			
Mossel Bay	No existing facilities				
	Slipway	Slipway	30 x 12m 250 tons lift capacity	5.0m	

* dock dimensions are length between caissons and width at cope level

** Unless otherwise stated, water depths are at lowest astronomical tide. Depths for dry docks are at sill

Investment opportunities in new facilities at Richards Bay and East London

Investors and construction consortiums will be invited to propose a new ship repair facility at Richards Bay

Private sector investors have been invited to propose various capital phasing options based on market demand for new ship/rig repair and vessel building facilities. Ship/rig repair can be proposed using either a floating dock moored to the Repair Quay; and/or a fixed Dock Repair Facility at Causarina (see the photograph opposite).

The sites have good proximity to the Richards Bay Industrial Development Zone, and an investment requirement of around US\$ 57m has been estimated, and this will be a Design, Build, Finance, Maintain and Operate (DBFMO) project. The RFP will be issued in September 2016, closing in April 2017. The facilities are expected to be operational from 2019.



New East London boat building facilities for tugs and naval vessels

An RFP is being issued to private sector investors to boost boat building capacity at East London, especially for tug boats and naval vessels

The existing dry dock is currently being refurbished. Investors will have the opportunity to propose for facilities on either or both of the dry dock and the slipway. The project will have a strong developmental focus, with job creation, skills development and supplier development being key. A required investment of around US\$ 32m has been estimated, and this will be a Design, Build, Finance, Maintain and Operate (DBFMO) project.



Sources: "Oil and Gas Investment Opportunities in the South African Ports through Operation Phakisa – Oceans Economy" OTC 2016 Presentation

A deep pool of artisanal and engineering skills

The ship repair and maintenance industry in South Africa is globally significant and has exciting growth opportunities. The world market is valued at between \$30 billion and \$40 billion, of which South Africa already contributes \$1.5 billion to \$2 billion: a 5% global market share.

For clients in the oil & gas and shipping industries, this means that South Africa has a highly experienced repairs and maintenance capability, located efficiently close to shipping routes and oil & gas exploration and production operations. For investors in the industry, it means a combination of a ready market of users for whom the location and skills base are compelling, supported by experienced vendors and low labour costs.

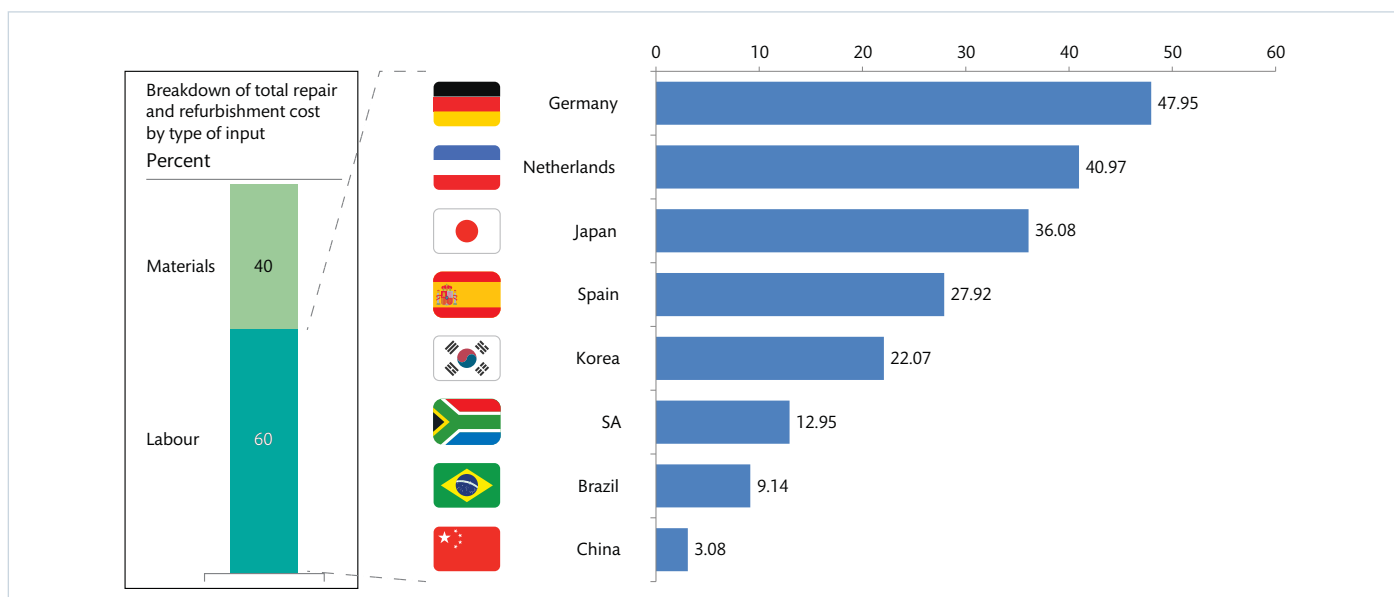
An estimated 134,000 vessels pass through South Africa's ports every year, and a further 17,000 pass along its coastline. The local population of offshore oil and gas rigs and vessels is set to increase, especially as commodity prices rise and more African operations open.

South Africa has three advantages regarding ship repairs and maintenance:

- We are positioned in a high-traffic location
- An estimated 60% of total repair costs are attributed to labour costs – South Africa compares favourably compared to competing nations and regions.
- South Africa possesses service sophistication and is able to complete a wide range of repairs including hull cleaning, engine repair, servicing offshore oil and gas rigs, electronic system repairs, and large vessel dry docking.

Ship Repairs and Maintenance Statistics:

Indicators	Current	Potential
Contribution to GDP	R4 billion	R15 to R21 billion ← +6% pa →
Employment	4,000 jobs	15,000 to 21,000 jobs ← +6% pa →
Ship Repair and Maintenance Capacity	450 to 550 vessels p.a.	Up to 1,400 vessels p.a. R11.9 bn investment



Total hourly compensation in manufacturing 2014 (US dollars)

Ship and boat building

Next-generation ship and boat building, from composite keel to fly-by-wire control

South African companies build state-of-the-art boats and ships of up to 140m, for commercial and military customers.

Local designs can be fully class-approved; whether custom, semi-custom, or off-the-shelf. And some of the best design teams from Europe and Australia license their designs to approved South African manufacturers. This allows the vessels to be produced closer to their point of use, with lower labour costs than in their home markets, yet with the highest quality standards.

A rich supply chain allows over 60% of a vessel's value to be sourced in South Africa, even for the most high-tech applications. This includes ballistic protection and the installation of naval-grade combat suites for oil & gas operations in dangerous waters.

Where locally-manufactured components are not used, local distributors, qualified engineers and systems integrators can provide expertise in fitting out with complex sub-systems, sourced globally.

South Africa has excellent engineering skills for working in steel, aluminium, GRP, or advanced composites. Local specialists can install and integrate fly-by-wire controls, advanced navigation, ship management and sensor systems.

Where ship and boat building operations are labour intensive, South Africa builds to the same standards as European, American and Australian experts, but without the prohibitive labour cost.

All of this means that end users get a source of highly-sophisticated, economically-built craft with rapid turnaround times supported by close integration of designers, manufacturers and vendors along the supply chain. It also means that new investors in the industry will be supported by an existing pool of experienced personnel and vendors.

This same set of advanced skills and rigid adherence to standards applies to the country's leisure craft sector. Cape Town's 40 boatyards and 3500 specialist staff produce award-winning super-yachts for the most demanding customers, and are the second-biggest exporters of catamarans in the world.

The result of all this capability is an industry that exports 90% of its product, and attracts a positive trade balance of around US\$73m annually.

South African ship- and boat-builders offer end-to-end, turnkey solutions. From design and manufacture, to maintenance, service and crew training. This makes them easy to deal with as one-stop-shops, and helps their clients get the maximum return on investment. Partnerships with private sector funders mean that project types such as build-own-operate or build-operate-transfer can be offered, as well as buy-back schemes and customer financing.



35m Sentinel crew & patrol vessels by Nautic: 28 knots, ballistic protected, fly-by-wire. 30 days of mission time between resupplies.

International standards certification, classification and compliance

South African Ship- and boat-builders produce vessels to international standards.

The South African Maritime Safety Authority (SAMSA) is the national regulator responsible for the implementation of the international IMO standards, as well as national standards. It conducts surveys of all South African Registered Convention and Non-Convention ships, using its own team of surveyors or Approved surveyors.

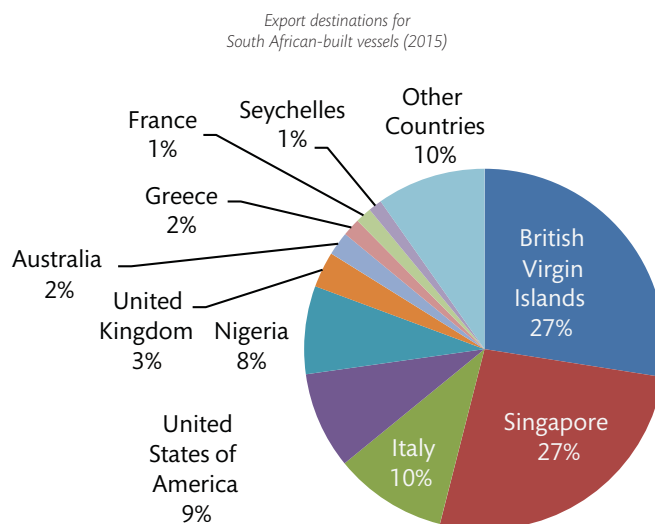
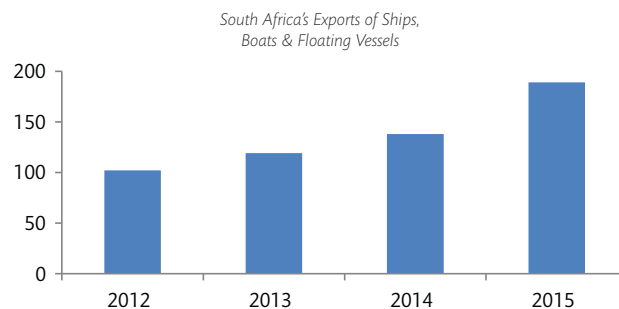
ISO Standards are adopted as South African Bureau of Standards (SABS) for the Boat Building Industry via Technical Committee 188, chaired by the Marine Industry Association South Africa (MIASA). Most South African ship builders and many of the larger boat builders have ISO 9001 certification for their quality management systems, and ISO 14001 certification for environmental management. Some have also achieved ISO 3834, which certifies the quality of welding capabilities and controls.

Classification societies for commercial vessels that have a presence in South Africa include:

- American Bureau of Shipping
- Bureau Veritas
- China Classification Society
- Det Norske Veritas
- Germanischer Lloyd
- Korean Register of Shipping
- Lloyd's Register
- Nippon Kaiji Kyokai
- RINA Services
- Russian Maritime Register of Shipping

For recreational vessels, compliance with European CE standards and North American NMMA standards is generally overseen by the International Marine Certification Institute.

South Africa's boat and small shipbuilding capability is world class, with 90% of production being exported



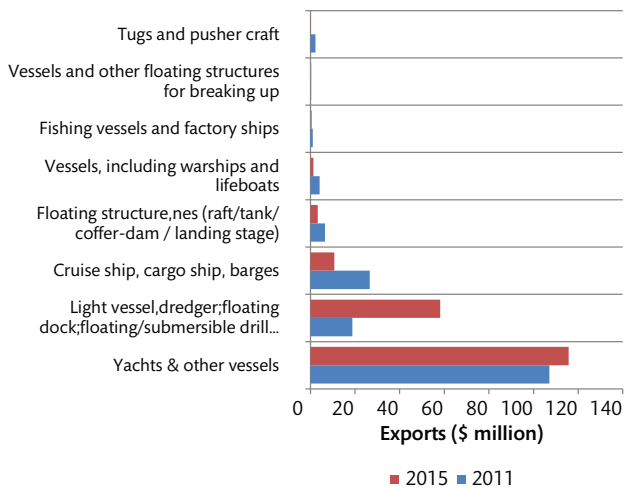
US\$ 22 million ferry contract for Cote d'Ivoire

Nautic Africa is set to supply Citrans (Cote d'Ivoire) with 18 catamaran-styled, twin-hulled ferries by December 2016 for US\$ 22 million

These 27-metre long vessels are capable of operating in shallow inland waters, having a draft of just one metre. They boast various on-board amenities, different seat configurations for business and economy class, and are powered by twin Volvo Penta D5 propulsion systems.

This is the first phase of a larger shipbuilding project scheduled to deliver up to 50 vessels to Citrans by 2020. The vessels come with a training, warranty and after-sales support service. This emphasis on vessel life cycle will benefit the long-term partnership with Citrans, and ensure high uptime for the vessels. These ferries are part of a presidential infrastructure project aimed at reducing urban congestion in Abidjan, positively impacting the city's economic and social fabric.

Types of vessels exported



South Africa's boat and small shipbuilding capability is world class, with 90% of production being exported

Rhino 600EHD by Rhino Marine

Rhino specialises in high-density polyethylene (HDPE) boats. HDPE has exceptional resistance to impact, abrasion and puncture, so is used in applications where toughness is a major design requirement. Rhino builds primarily for the oil & gas industry, and for the military. Their craft are used as workboats, crew transfer boats and scuba replacement boats.



Waverider 730 by Gemini

Gemini is one of the world's most respected brands for RIBs and inflatables. Over more than 35 years, their craft have been chosen by a long list of demanding users, including the Royal New Zealand Navy, the Australian Defence Force, the African Union, the United Nations, Singapore's special forces, and South Africa's National Sea Rescue Institute. The Waverider 730 is an all-conditions RIB with a

hull design that provides a softer riding experience, and minimises crew fatigue.



Competitive strengths of the South African boatbuilding industry

The key strength of the South African ship and boat building industry is the reputation of the quality and design of local builds. This reputation extends into having competitive labour costs relative to those in developed economies, with particular advantage in labour-intensive processes, such as hull construction.

The demand from growing African shipping markets is creating orders for ferry boats, military support vessels and patrol vessels. Potential from the growing oil & gas industry in Africa is also a key driver, with demand for fire-fighting, pollution control and general-purpose supply craft. The growing agricultural processing sector in Africa is starting to raise the demand for fishing vessels.

For boat-building and repair, Cape Town is the main hub, with some 40 boatyards and thousands of specialist personnel. The South

African Boat-Builders Export Council (SABBEX) is leading the way in establishing SA's boat building industry as a globally competitive industry. It offers support to potential exporters and also assists in acquiring exhibitor funding from the dti.

The local industry is fully regulated and safety standards are high. The South African Association of Shipbuilders & Repairers (SAASR) sets out procedures and regulations within the shipbuilding and repair industry to ensure safety standards and practices. Skills development is a high priority in the sector and South Africa possesses significant skills in the ship- and boatbuilding industry, and the marine sector generally. This talent base is sustained by an extensive maritime education sector: the country has courses for all levels of the industry, from trade skills to PhDs.



CSD 500 cutter suction dredger by Damen Shipyards, Cape Town. Damen builds dredgers, patrol craft and offshore support vessels. Its Cape Town yard employs over 200 permanent staff and has constructed over 40 vessels for the African continent.



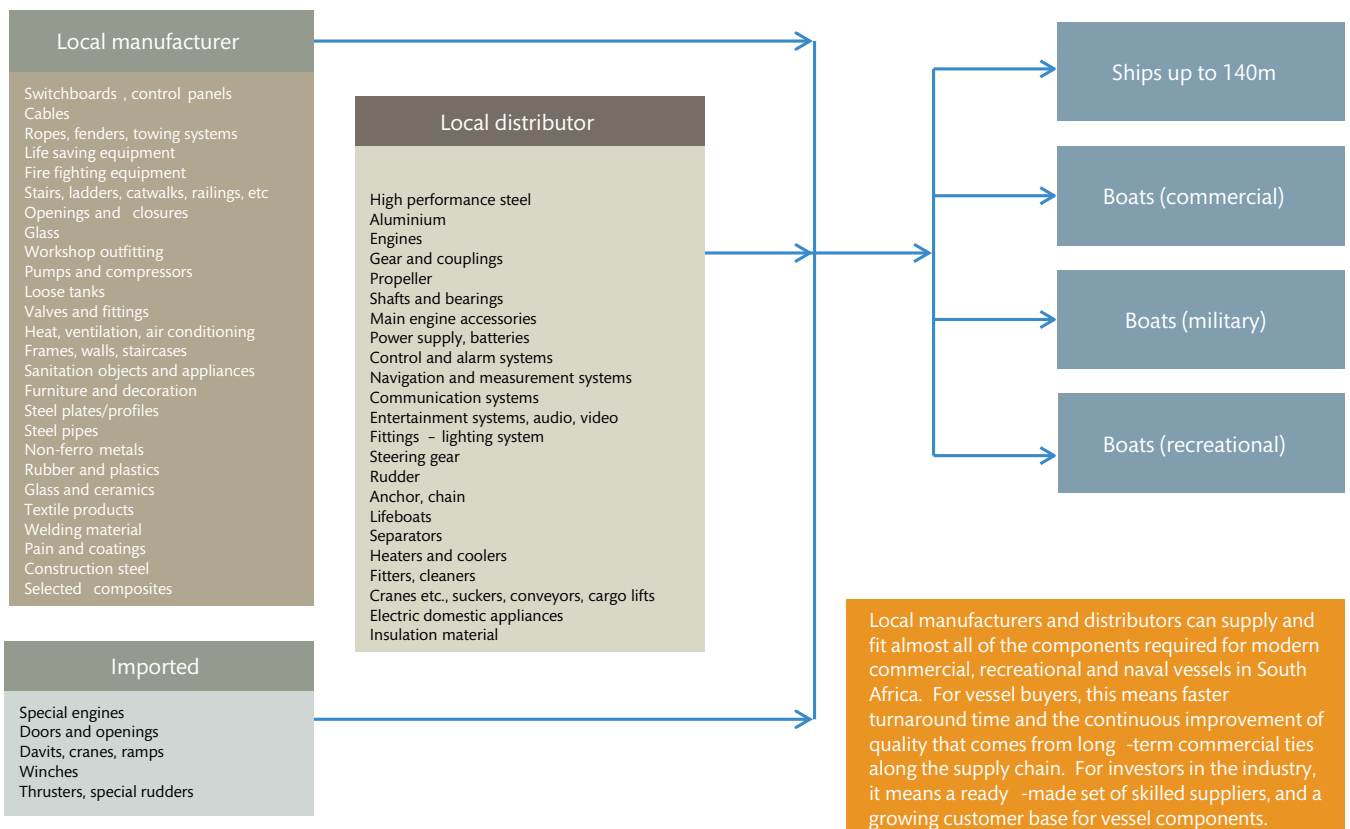
16.7m Patrol boat, designed by Icarus Marine

Many vessel builders use proven designs, to be confident that finished products will meet contracted speed requirements. In the absence of a proven design it is common practice to test the hull of the vessel at a ship model test basin. Icarus Marine in Cape Town uses a 100m model test tank at Stellenbosch University, as well as computational fluid dynamics (CFD) analysis, to ensure predictable performance of full-scale, original designs.

The company employs South African and foreign engineers up to PhD level, usually in Mechanical Engineering with a naval architecture specialisation. It has deep skills in the hydrodynamics of high-speed vessels, and has developed software in partnership with experts in Russia for the design of planing hulls, hydrofoils and 'ekranoplan' wing ground-effect craft. Ekranoplans are effectively flying boats that travel close to the surface to get extra lift from high pressures between wing and ground.

Most of Icarus' work is exported, with vessel builders in India, Malaysia, Hong Kong, Bangladesh, and Russia as well as West and East Africa; using their expertise in design and construction management. The firm is currently working on a 42m ferry and a 54m offshore patrol vessel for East African clients, as well as a number of smaller high-speed patrol craft.

Integrated local supply chain with extensive capabilities



South Africa's public-sector market drives manufacturing capacity and skills development through local content requirements

The South African Government and state -owned companies have commissioned over US\$440 million of vessels in the five years from 2014. Local content will be worth over US\$250 million. Local content rules provide a growing base of skills and experience, and improved economies of scale. from which the industry's customers benefit. For investors in the industry, local content rules also provide a growing market for vessels, components and services.

Department	Vessel Type	Value (US\$m)	Number of vessels	Local Content Requirement
Navy	Survey	57	1	55%
Navy	Inshore Patrol	76	3	60%
Navy	Offshore Patrol	151	3	60%
Transnet	Tug	94	9	55%
SAMSA	Salvage	63	2	60%



Projects Biro and Hotel are expected to generate R6.6 billion for the South African shipbuilding industry

The South African Navy will acquire seven new vessels through Projects Biro and Hotel. Project Biro will deliver 3 offshore and 3 inshore patrol vessels, and Project Hotel will deliver a hydrographic survey vessel. 12 shipyards attended the bidders' conference in 2014, and proposals are currently being evaluated.

Project Biro's inshore patrol vessels will focus on combatting illegal activity such as fisheries violations and trafficking. The offshore patrol vessels will be helicopter equipped, and will be able to operate on the high seas. Together, the new craft will free up South Africa's frigates from routine patrol duties, and play an important part in policing and securing the country's 1.5 million square kilometres of exclusive economic zone.

The procurement requires local content of 60%, and this has resulted in overseas contenders joining forces with local shipping yards. This means that South African suppliers can benefit from extensive skills transfer, as well as from direct revenues.

It is expected that Projects Biro and Hotel will bring R6.6 billion to the local shipbuilding industry over a 3 to 4 year period: an exciting prospect for investors in the shipbuilding supply chain.

Durban-based Southern African Shipyards is currently working on a R1.4-billion project to build nine tugs for the Transnet National Ports Authority. Three of the tugs have already been delivered, on time and on budget.

The tugs use Voith Schneider propulsion, which boosts manoeuvrability and allows the vessels to change direction and thrust almost instantaneously. Subcontractors on the project include Barloworld Equipment, Siemens, Voith Schneider, and local contractors Bradgery Marine Shop fitters.

Eight of TNPA's new tugs will have a 70 tonne bollard pull, compared with 32.5 to 40 tonne pulls for the previous generation.

The ninth will have a bollard pull of 100 tonnes, and will be one of the strongest Voith Schneider tugs ever built. The extra power gives a wider escort envelope to protect ecologically sensitive coastal areas on South Africa's West coast.

In addition, the Shipyard has uniquely-designed special materials in the tugs to ensure the vibration and noise is significantly reduced when compared to older tugs. This reduces operator fatigue and therefore improves both operational endurance and safety.

The dti has designated the purchase and maintenance of working vessels as a sector to be covered by the Preferential Procurement Regulations that apply to public sector purchasing. At least 60% local content is now required. Since this designation in 2014, seven working vessel tenders have been advertised, with three local companies being awarded contracts worth around US\$ 90 million. Over 200 new jobs have been created as a result.



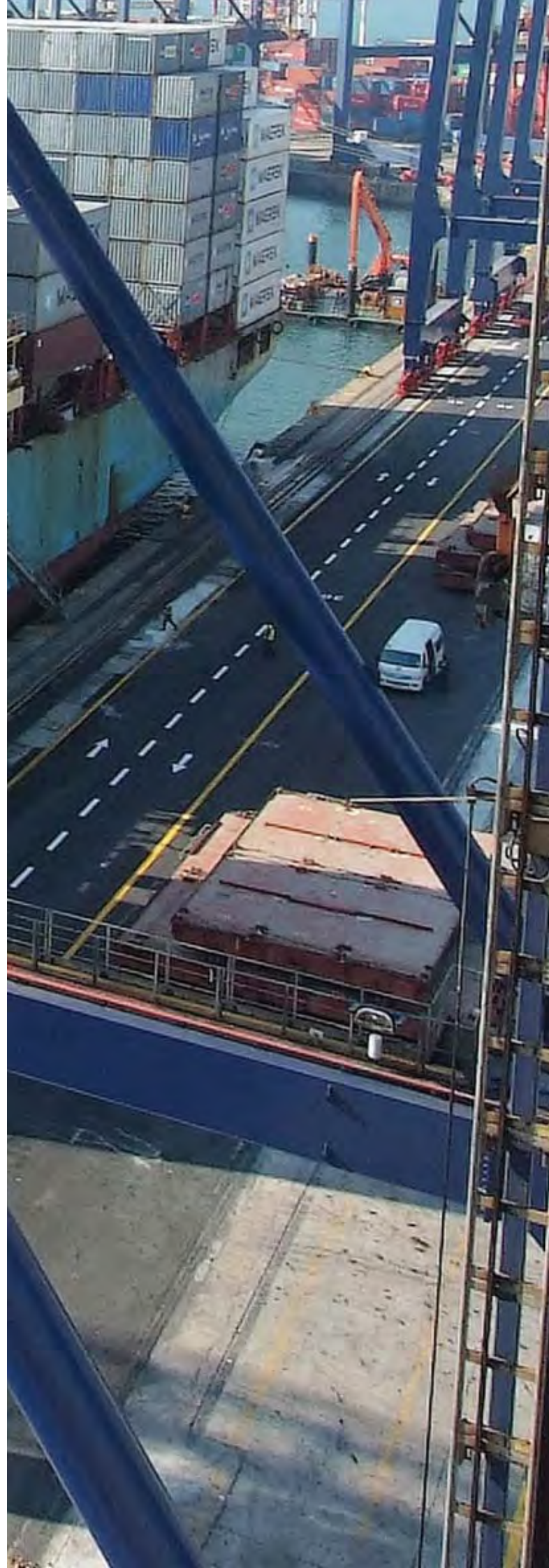
Nautic South Africa is custom-developing five boarding craft for the South African Navy as part of the public sector Project Carol procurement process. The vessels will be delivered by December 2016.

The design brief for Project Carol requires a state-of-the-art, fully-equipped, composite craft capable of providing superior performance under demanding conditions. Nautic's response to the brief is a 9 metre epoxy-infused vessel with twin Volvo D4-260 diesel stern drives that can take it to 38 knots. The boats are capable of carrying 10 crew members, with in-house developed shock mitigating seating for operational crew.

Designed to be deployed from the Navy's frigates, the craft are solid-fendered, self-righting, and have provision for single-point lifting.

The vessels will be equipped with an advanced suite of equipment including military specification tactical communications, navigation and tracking systems; touch screen glass cockpit instrumentation; keyless starting; automatic fire suppression; a drop-in ammunition locker; a customized gun mount pintle interface, and a pre-heating umbilical cord system.

Like all Nautic vessels, they come with a comprehensive training and service support package.



Government support for investors

Invest SA

Investment South Africa (InvestSA) is a division of the South African Department of Trade and Industry (the dti). It provides investment promotion, facilitation and aftercare; geared towards fast-tracking projects and reducing government red tape. It was established on 1st April 2016 as a dedicated public-private sector partnership on investment.

InvestSA is rolling out a network of special advisory One-Stop-Shop offices. The first one will be the National One Stop Shop in Pretoria, and will open in financial year 2016/17. It will focus on regulatory matters, registration, permits and licensing; and will facilitate access to all relevant Government departments. The National One-Stop Shop will be replicated in nine provincial centres to be rolled out over the financial year 2017/18.

Invest SA is supported by an inter-ministerial committee on investment, which is comprised of 18 cabinet ministers. National departments have nominated focal points to fast track, unblock and reduce red tape in government.

InvestSA facilitates the increase in the quality and quantity of foreign and domestic direct investment by providing an investment recruitment, problem-solving and information service in order to retain and expand investment in South Africa and into Africa. InvestSA actively markets, promotes and facilitates investment in key high yielding growth sectors of the South African Economy. It offers the following services:

Investment Information

We offer specialist advisory services in the following areas:

- Economic Environment
- Regulatory Environment
- Legal Environment and Compliance
- Industrial Development and Financial Support
- Investment guides

Investment Facilitation

- Inter-governmental co-ordination and facilitation
- Licensing, company registrations and work permits
- Municipal facilitation
- Incentives facilitation
- Location analysis and facilitation
- Critical Infrastructure and utilities

Broad-Based Black Economic Empowerment (BBBEE)

- Introduction to financial institutions and funding opportunities
- Priority sectors, designation and localisation
- Site visits and Business to Business Programs
- Partnerships with Stakeholders
- Company verifications
- Enterprise development and supplier development
- Introduction to raw material suppliers
- Advice on customs clearing
- Investment promotion and international investment missions
- Facilitation by dti representatives stationed world-wide

Aftercare Services

- Advice on recruitment, talent and skills
- Advice on lifestyle amenities
- Policy Advocacy
- Investor Surveys
- Business Forums
- Retention and Expansion services

Visa support from the dti

The dti can assist with visa applications from investors applying for Corporate of Business visas.

A Corporate visa allows for bulk employment of foreign nationals by approved businesses. Up to 40% of a company's workforce may be eligible for temporary South African residence provided that applications are recommended by the dti and the Department of Labour. Corporate visas may be issued for up to three years.

Business visas are issued to people investing in new or existing businesses that will enhance South Africa's national interests. The dti will recommend the issue of a business visa based on its assessment of the feasibility of the prospective business venture and the benefit it would have for the South African economy. For a business visa to be appropriate, a cash investment of at least ZAR 5 million is required, originating from outside the Republic. The capital contribution must be to new machinery or equipment.

Special Economic Zones, Customs Control Areas and valuable incentives make business easier and more profitable for all port users

Operation Phakisa – Oceans Economy is a strategic government initiative to drive the country's ocean economy forward. It has a mandate to speed and simplify the processes involved in creating, operating and using South Africa's ports and maritime businesses. Operation Phakisa - Oceans Economy builds on a rich bedrock of existing incentives, and is supported by initiatives such as Industrial Development Zones, Special Economic Zones and Customs Control Areas.

The South African Government offers a wide range of incentives for strategic industries, and to support skills development and job creation. More details, plus eligibility rules and application procedures, can be found at www.thedti.gov.za financial assistance. Incentives of special interest to participants in the Ocean Economy include:

Critical Infrastructure Programme

The CIP is a cost-sharing incentive available to approved applicants or infrastructure projects. Infrastructure is deemed "critical" to the investment if the investment would not take place without it, or if the investment would not operate optimally. The CIP offers a grant of 10% to 30% of the total qualifying infrastructure development costs, based on the likely resulting economic benefit. For agro-processing applicants, or projects that alleviate water and/or electricity dependency on the national grid, the grant may be up to 50%. The maximum grant is ZAR 50 million.

Black Industrialists Scheme

The scheme is designed to promote industrialisation, sustainable economic growth and transformation through the support of black-owned entities in the manufacturing sector. Eligible applicants must have a project requiring at least ZAR 30 million, and may receive a grant of 30% to 50% up to a maximum of ZAR 50 million. The grant can contribute to capital investment, feasibility studies, post-investment support and business development services.

Capital Projects Feasibility Programme

This programme contributes to the cost of feasibility studies that are likely to lead to projects that will increase local exports and stimulate

the market for South African capital goods and services. The grant is capped at ZAR 8 million to a maximum of 50% of the total costs of the feasibility study for projects outside Africa, or 55% for projects in Africa.

Export Marketing & Investment Assistance Scheme

The scheme is intended to help South African companies export their products and services, and to attract foreign direct investment. It assists with the cost of exhibition participation, primary market research, and visits to potential foreign customers or investors.¹² Tax Allowance Incentive for companies in a Special Economic Zone

The Industrial Development Zones programme provides world class infrastructure and proximity to international ports to offer low cost and efficient logistics services. The existing IDZs have already attracted over 60 investors with an estimated investment value of some US\$ 360 million. These investments are estimated to have created approximately 73 000 jobs. Recent legislation will see them converted to Special Economic Zones (SEZs), which have powerful additional incentives for approved activities:

- Employment tax incentive
- Accelerated depreciation on buildings
- Reduced corporate tax rate on qualifying projects (15% instead of 28%)

To make South Africa even more attractive for resupply, repair and maintenance, a number of Customs Control Areas are being rolled out in the IDZs. The first one is at Saldanha, designed to drive down costs and cycle time for the oil & gas sector. CCAs offer:

- Import duty rebate and VAT exemption on raw materials, machinery and assets to be used in production of products for export
- VAT suspension under specific conditions for supplies procured in South Africa;
- Efficient and expedited customs administration.

A CCA or free-port allows for the free movement of goods into and out of the CCA area.. There are no time restrictions on the stored goods, no requirement to pay for bonded warehouse services, and no administrative requirements from Customs.

12i Tax Allowance Incentive for companies in a Special Economic Zone

All the Industrial Development Zones located at ports are being converted to Special Economic Zones. Companies located within an SEZ may qualify for the 12i Tax Allowance Incentive. This is designed to support both greenfield and brownfield investments, and incentivises capital investment and training. It provides investment allowances of:

ZAR 900 million for any Greenfield project with preferred status
ZAR 550 million for any other Greenfield project with qualifying status.
ZAR 550 million for any Brownfield project with preferred status
ZAR 350 million for any other Brownfield project with qualifying status.

An additional training allowance of R36 000 per full time employee may be deducted from taxable income; up to ZAR 20 million for a qualifying project, and ZAR 30 million for a preferred project.

For a greenfield project, a minimum investment in Qualifying Assets of ZAR 50 million is required; for a brownfield project, the minimum is ZAR 30 million. The project should:

- Upgrade an industry within South Africa (via an innovative process, cleaner production technology or improved energy efficiency);
- Provide general business linkages within South Africa;
- Acquire goods and services from small, medium and micro-sized enterprises (SMMEs);
- Provide skills development in South Africa

The existing Ocean Economy IDZs are:

Coega IDZ

The Coega IDZ is the largest IDZ in Southern Africa. It was designated in 2001 and was South Africa's first Industrial Development Zone. It is located in the Nelson Mandela Bay Metropolitan Municipality in the Eastern Cape Province. The Coega IDZ leverages public sector investment to attract foreign and domestic direct investment in the manufacturing sector with an export orientation. The IDZ has attracted investment in agro-processing, automotive, aquaculture, energy, metals, logistics and business process services.

Saldanha Bay IDZ

This newly established IDZ will serve as the primary oil, gas and Marine Repair engineering and logistics services complex in Africa, servicing the needs of the upstream Oil Exploration Industry and Production service companies operating in the oil and gas fields off Sub-Saharan Africa. Situated approximately two hours north of Cape Town. The SBIDZ will include logistics, repairs and maintenance, and fabrication activities.

Richards Bay IDZ

The Richards Bay Industrial Development Zone is a purpose-built and secure industrial estate on the North-Eastern South African coast. The N2 business corridor links the Province's two major ports, Durban and Richards Bay, and connects with Maputo in Mozambique and, ultimately, areas of East Africa. The IDZ is linked to the international sea port of Richards Bay, tailored for manufacturing and storage of

minerals and products to boost beneficiation, investment, economic growth and, most importantly, the development of skills and employment. First-world infrastructure allows for the full exploitation of the areas' natural and strategic advantages. Through the superb industrial infrastructure, well-established network of shipments, tax and duty free incentives, the IDZ aims to encourage international competitiveness and the attraction of export-orientated manufacturing investment.

East London IDZ

Established in 2003, as part of the South African government initiative to improve industrial competitiveness and economic growth in the country, the zone has become a prime industrial park in South Africa, renowned for its customised solutions for various industries including automotive, agro-processing and aqua-culture. The East London IDZ offers growth-oriented companies a specialised manufacturing platform, innovative industrial and business solutions, access to new markets, and strategic industry networks.

Dube Trade Port

Dube TradePort is a catalyst for global trade and a portal between KwaZulu-Natal and the world. It is the only facility in Africa that brings together an international airport, a cargo terminal, warehousing, offices, a retail sector, hotels, and an agricultural area. Located 30km north of Durban, Dube TradePort is positioned between the two biggest sea ports in Southern Africa, and linked to the rest of Africa by road and rail.

SEZ Fund For SEZ Infrastructure Development

Both the public sector and public-private partnerships (PPPs) will be involved in developing and operating SEZs. Potential models for involving private investors include:

- Lease of land parcels with secure title and development rights to private development groups;
- Build-Operate-Transfer approaches infrastructure and facilities with Government guarantees and/or financial support
- Contracted private management for Government-owned zones
- Lease of Government-owned assets by a private operator.

An SEZ fund has been designed to accelerate the growth of manufacturing and internationally traded service operations. It is intended to provide multi-year funding for SEZ infrastructure and operator performance improvement initiatives. The SEZ Fund will be available to suitable businesses that are already located in an SEZ, or in the process of setting up in an SEZ

More information on SEZ incentives is available at: https://www.thedti.gov.za/industrial_development/docs/SEZ_Guide.pdf.

New incentives for ship owners to sail under the South African flag

South Africa is currently finalising the draft National Maritime Transport Policy. The Policy will include incentives to increase the number of vessels under the South African flag; attract local and foreign investors, and encourage the creation of meaningful jobs in the maritime transport sector.

A number of important incentives aimed at growing the South African ship register are already in place:

The Income Tax Act, No 58 of 1962 has been amended with a new section 12Q, exempting qualifying shipping companies involved in international shipping from income tax, capital gains tax, dividend tax and withholding tax on interest.

Seafarers doing duty on qualifying ships are exempt from Pay As You Earn (PAYE) tax.

The Ports Regulator of SA has made concessions for Ships registered in terms of Chapter 4, Part 1 of the Ship Registration Act which are: 1) Built for conveyance for compensation of passengers or goods, and 2) Whether they are engaged in international or coastal trade. The discount is applicable year on year up to 31 March 2019 as follows: Vessels registered in 2016/17 will receive a 30% discount Vessels registered in 2017/18 will receive a 20% discount, and Vessels registered in 2018/19 will receive a 10% discount. South Africa has also resolved to adopt UNCTAD's 40-40-20 principle for cargoes transported on the back of SA registered ships. The percentage share is not rigid, but is negotiable with the country's trading partners.

Four vessels have taken the South African flag in the first half of 2016, with another 12 in progress.



The MT Lefkas is a bunker (ship fuelling) vessel, owned by Greek shipping group Aegean. Recently registered under the South African flag, it will be officially stationed at Port Elizabeth to supply fuel at sea to vessels sailing Africa's southern oceans.

South Africa Incorporated

South Africa can bring a flexible combination of skills, know-how and financing to strategic African port projects.

Led by private or Government-owned institutions, world-class consortiums can rapidly be assembled to build integrated solutions across engineering, operations, infrastructure design and transport planning.

To suit the strategic priorities of different countries and organisations, SA Inc. can undertake complex engineering projects, and implement financing options such as build-own-operate, or build-operate-transfer.

The right blend of capabilities, integrated with local content and employment opportunities, to provide world-class infrastructure: for Africa, by Africa.

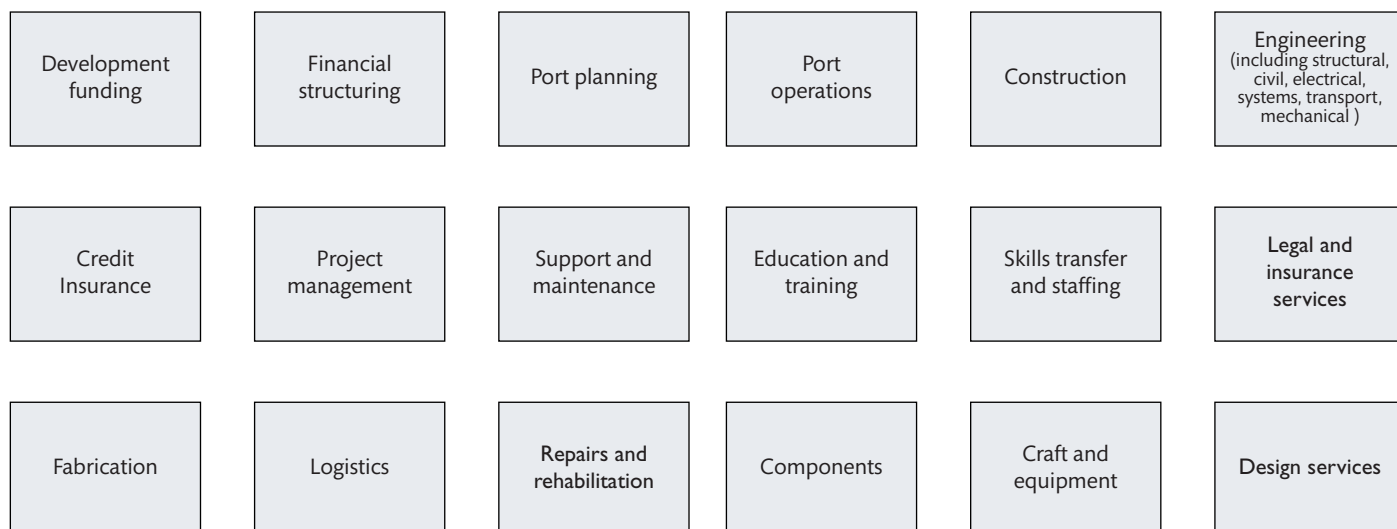
To engage with South Africa Incorporated, start by contacting the Department of Trade & Industry Invest Sa One-Stop-Shop:

Dean Hoff

Tel: +27 12 394 1893

E-mail: dhoff@thedti.gov.za

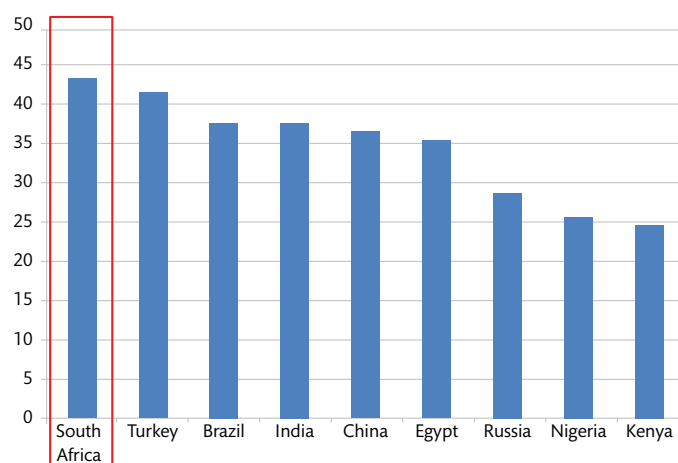
'South Africa Incorporated' can bring a flexible combination of skills, know-how and financing to strategic African port projects



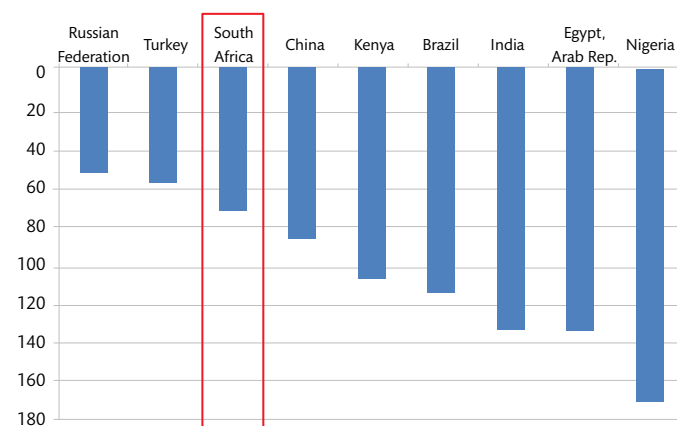
The business environment is one of the best in major emerging markets

South Africa has strong institutions, including a strong civil service and a strong legal system. Among the major emerging economies, it has the best score on the corruption perceptions index (equal to Italy), and is one of the best in ease of doing business.

*Transparency International Corruption Perceptions Index 2015
(a higher score is better)*



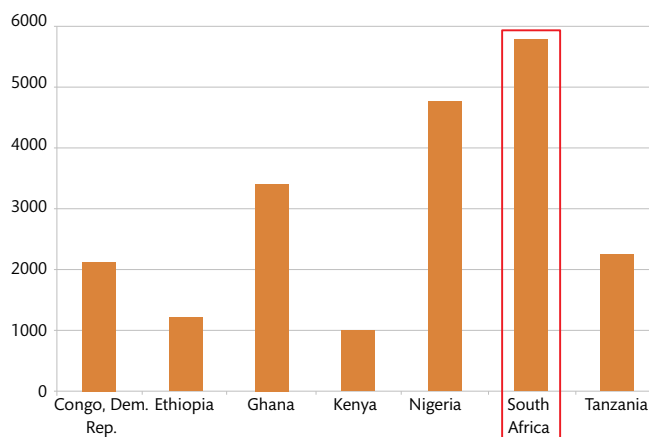
*World Bank Group Ease of doing business ranking 2015
(a lower rank is better)*



South Africa is a major destination for foreign direct investment

South Africa is the dominant destination for FDI in sub-Saharan Africa: a testament to the underlying strength of its economy, businesses and institutions. FDI growth has averaged 4.7% in dollar terms since 2010, according to the latest African Economic Outlook.

Inward Foreign Direct Investment for major sub-Saharan Africa economies, 2014 (US\$m)



South Africa has deep diplomatic ties with Africa's major economies

Investors in South Africa's Ocean Economy can benefit from the country's extensive ties to the continent's key economies. With the seven countries listed here, 125 Agreements are presently in-force, covering fields from education to defence, from taxation to technology. These practical and legal Agreements are supported by an extensive framework of Memoranda of Understanding and joint Declarations.

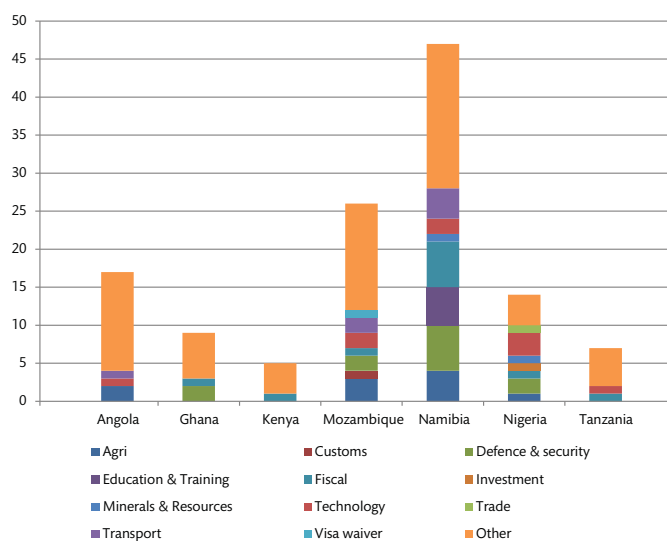
This means that investors who work with the South African government can draw on large reserves of goodwill and support.

To simplify investors' administration and reduce working capital requirements, double taxation agreements are in place with major

African markets such as Ghana, Kenya, Mozambique, Namibia, Nigeria and Tanzania, as well as with many of the World's major economies.

In addition, South Africa has a number of key regional agreements in place. Its membership of the Southern African Customs Union (SACU) means that there is duty-free movement of goods between Botswana, Lesotho, Namibia and Swaziland. The Southern African Development Community (SADC) Free Trade Agreement allows for duty-free movement of 85% of goods types between the 12 member states.

An important development in the near future will be the ratification of the Tripartite Free Trade Area (TFTA) encompassing the 26 member countries of SADC, the East African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA). This will create a massive free trade zone for goods and, in a second phase, services. As well as driving market integration, the TFTA will support infrastructure development and industrial development. With its key position on the World's liner shipping routes and its first-world infrastructure, South Africa will be the leading gateway into the TFTA.



Port and infrastructure construction and EPCM

Port and infrastructure delivery, for Africa and the World

Thanks to their roots in mining, South Africa's EPCM and civil engineering companies have built some of the largest and most complex man-made structures in the world. And with eight major ports under continuous development in their home market, their specialised expertise in harbour and port construction is kept constantly up to date.

Many of the country's listed construction companies have specific skills and experience in the marine or oil & gas sectors. South Africa's construction industry handles around US\$10 billion of projects annually, and has been first choice for clients in North America, Australia, Europe, the Middle East and Asia. In Africa, it has no equal.

For work on the African continent, our civil engineers' skills can be complemented with port operations and management teams from Transnet, and from Government-owned development funding institutions.

The South African Government is deeply committed to the African Union's Africa Integrated Maritime Strategy, with its drive towards integration, intra-regional trade and capacity building. Projects aligned to these goals can look for funding and structuring, from the Industrial Development Corporation or the Development Bank of South Africa.

As well as bringing premier-league technical and project management skills, South Africa's construction industry comes with sophisticated funding models for contracts such as build-operate-transfer, or build-own-operate.

South Africa's civil engineers have delivered everything required for productive, economic, easy-to-maintain ports; including wharves, floating docks, quays, piers, bulkheads, caissons, cellular docks, shipyards, bridges, structural jacking, marine piling, slipways, revetments, jetties, moles, breakwaters and dock basins. They also have a formidable reputation for on-time delivery.

Importantly, South African engineering companies are capable of delivering complex projects hundreds of kilometres from the nearest city, so they can deliver a complete chain of infrastructure from mine to plant to rail to highway to port, together with water supply and housing for the people who will live and work along its length.

For investors in African ports infrastructure, whether government or private sector, 'South Africa Incorporated' brings the right mix of technical skills, financial capability, and knowledge transfer. Involving South African capabilities in a project enhances its African Content, and is in alignment with regional and bilateral trade agreements.

Project portfolio

South Africa's construction and EPCM companies have built some of the world's most impressive port and harbour infrastructure. Publicly-listed construction companies with significant marine or oil & gas experience include Aveng, Basil Read, Group 5, Murray & Roberts, Stefanutti Stocks, and WBHO. Between them, they have worked in all 48 countries in sub-Saharan Africa. Here is a small, illustrative sample of their work.



Richards Bay pier - KwaZulu-Natal province

by Basil Read. The work included the excavation for the quay wall and basin on 2,450 000m³ of sands, clays and hard material, as well as construction of a 580m long mass gravity concrete harbour wall, with an overall height of 23m and at 18m below mean sea level (image: Geoff Brown, Planet KB photography)



Durban Container Terminal

By Basil Read. Basil Read was the main contractor for the civil and paving works in the original project that created the first phase of the container terminal out of the old Pier 1. It also was responsible for the complete infrastructure for Phase2. Durban is now one of the world's top container ports



Durban Harbour Entrance widening
by Group Five in a consortium with Dredging International. The project increased the channel width from 125m to 225m, and increased the channel depth from 12.8m to 16 to 19m. It involved demolishing 28,000 cubic metres of concrete structures and 12 major buildings, reinforcement of a 700m breakwater, and the construction of a 550m groyne. Over half a million tonnes of rock was placed around the breakwaters, together with thousands of Antifer armour units.



Papua New Guinea LNG project: marine jetty
by Murray & Roberts subsidiary Clough in a JV with BAM International. The 2.4 km jetty is designed to handle 90 to 100 cargos per year, with each cargo typically being loaded onto a 290m LNG carrier. The project also included design and construction of a substation platform, loading platform and single berth.



Sonils Logistics Base, Angola. Quay Wall Extension
by Murray & Roberts. A 408m extension of the container quay to provide additional berths at a new offshore oil and gas logistics base in Luanda. The project called for innovative engineering and logistics to cater for the limited availability of skilled labour, materials and construction equipment in Luanda in the immediate post-war era. The 280t counterfort units were precast in Saldanha, South Africa and transported by heavy lift vessel.



Ben Schoeman Harbour, Cape Town
by Stefanutti Stocks Marine. Widening of the existing 1100m long quay wall by 12.5m and deepening of the Ben Schoeman Basin. Steel tube piles were driven in by vibratory piling hammer, then rock socketed by a pile-top mounted drill rig before being filled with reinforced concrete. The structure is composed of precast beams and slabs tied together with an in-situ deck superstructure. This was constructed as an alternative solution to the postulated scheme, offering a safer and better-controlled final product.



Pipelines for South African Petroleum Refineries
by WBHO. Detailed design, supply and laying of replacement. The 7 existing petrochemical pipe lines run between the SAPREF refinery and National Port Authority at Durban harbour. The work includes 79,1 km of seamless carbon steel piping to be laid and welded in 16km of trenches. Pipe diameters vary from 156mm to 365mm. The new pipe lines need to be laid in the existing 5m wide servitude above, amongst or below the existing lines while the existing lines are still in operation. Obstacles along the pipe route include two major storm water channels, 6 railway crossings, the Engen tanker gate, a bowling clubhouse and out buildings, 5 major road intersections with peak traffic in excess of 2500 vehicles per hour, and the Island View port complex at Durban harbour.



Ports consulting services

Port operations and management consulting from Africa's most experienced port authority

Transnet, which operates some of the world's largest and most impressive ports, now offers its services across the African continent; either stand-alone or as part of an infrastructure development consortium.

Transnet offers planning; operations; engineering & maintenance; consulting & advisory, and training & development services.

Planning

The organisation has deep skills in short, medium and long term planning of rail, port and pipeline operations. It handles conceptual and feasibility studies, including advisory services for port cities; design of operations; business planning, and systems planning.

Operations

Already Africa's largest port authority and terminal operator, Transnet can operate port, rail and pipeline facilities on clients' behalf, promoting the integration of port and rail solutions to generate seamless logistics solutions. It can also establish and operate seaport terminals, inland terminals and warehouse facilities.

Engineering & maintenance

Transnet can help clients extend their port equipment life-cycle through maintenance and equipment supply; and provide property life-cycle management and safety programs to reduce costs and improve working conditions.

Consulting & advisory

Consulting & advisory services include engineering, infrastructure & technical services for optimal rail, port and pipeline asset utilisation and planning, as well as EPCM. Transnet can also manage the installation, customisation and support of IT solutions for port terminals, and advise on port management, port authority and marine-related matters to improve focus and efficiency.

Training & development

As well as providing know-how and operational capability, Transnet offers skills transfer and formal training arrangements to help create sustainable organisations across Africa.

To engage Transnet's consulting services,
call the General Manager – Africa on 031 361 1176.



Transnet is the leading port authority in Africa. It provides 127 vessel berths across the national port system, with a throughput of more than 160 million tons of cargo per year.

The organisation also has divisions that plan and manage an integrated inter-port network of highways, railways and pipelines.

It recently rolled out a US\$5.5m Integrated Ports Management System to all eight of its major ports. The system is web-based, and automates previously manual processes used to monitor marine operations, vessel traffic services and terminal performance. It allows port operations to be managed across all eight ports in the network.

The system handles arrival notifications; dry dock applications, marine and supplementary service requests. It provides visibility of the slot system, vessel status, operational reports and general ports information. It also sends automated notifications via email and sms.

Transnet IPMS can be used from anywhere in the world by shipping lines, vessel agents, clearing and forwarding agents, cargo owners, container operators, and terminal operators.

Development funds for African ports and the Ocean Economy

South Africa can assist with ports infrastructure projects around Africa as a financing partner, as well as by bringing its world class engineering and project management capabilities.

There are two key development institutions with a suitable mandate: the Industrial Development Corporation, and the Development Bank of South Africa. Both are owned by the South African Government, and both are funded from their investment portfolios and from commercial credit markets. Together, they can bring from US\$100,000 to US\$150 million to bear on approved, strategic projects.

The DBSA is mainly focused on infrastructure projects in South Africa and across the continent. The IDC also supports SA and African infrastructure, but has a wider mandate and can fund South African manufacturing businesses.

South Africa is also home to a highly successful and well-regulated banking sector, and a number of major private equity funds.

The country's banking sector has total assets of over US\$300 billion, a total capital adequacy ratio of 13.7%, and is experienced in complex infrastructure funding. Its Private Equity funds have over US\$ 10 billion under management.

Industrial Development Corporation

The IDC can structure funding using a range of instruments including debt, equity, quasi-equity, guarantees, trade finance, bridging finance and venture capital. It has Strategic Business Units that focus on mandated sectors. Of particular interest to Ocean Economy investors will be these SBUs:

Automotive and Transport Equipment

The objective of the Automotive and Transport Equipment SBU is to ensure both domestic and global competitiveness in the downstream manufacturing of automotive and transport machinery and related components. This includes building and repair of boats and ships.

Basic and Speciality Chemicals

The unit provides funding towards development of projects that seek to expand local production capabilities, replace imports, and enhance industry competitiveness, with the ultimate goal of lowering the cost to downstream consumers as well as overcoming supply challenges. The unit also invests in new chemical value chains, particularly those that give the industry a competitive edge. Oil & Gas is a key sub-sector.

Industrial Infrastructure

This SBU focuses projects that boost the country's security of energy supply without adverse environmental effects. It also supports projects that boost industrial and logistics infrastructure, including ports. Other sub-sectors include green energy and energy efficiency.

Light Manufacturing

The Light Manufacturing SBU looks for projects that have high developmental impact, including value addition and manufacture for export. Sub-sectors of special relevance to the Ocean Economy include professional and scientific equipment, and radio and communication equipment.

Machinery and Equipment

This unit's goal is to ensure globally and locally competitive downstream manufacturing of machinery and capital equipment.

Sectors of special relevance to the Ocean Economy include:

Oil, gas and water storage and distribution (reservoirs and tanks, bunkers/bullets, distribution components such as ducts, vessels, heat exchangers, pumps, valves actuators, compressors and measuring equipment)

Manufacture of lifting and handling equipment (cranes, lifts, elevators, conveyors, specialised parts for lifting and handling including buckets, shovels, grabs. Cargo/shipping containers.)

Private Equity boosts ocean economy growth

Southey Holdings' Marine, Oil & Gas division includes some of the best-known marine engineering brands in South Africa: Dormac Marine, Dormac Offshore, and Southey Offshore. It has expanded aggressively into new African markets, following an investment by The Abraaj Group, a leading investor in global growth markets.

Abraaj invested in Southey's growth plans, encouraged by its experienced management team and good cash flows and margins. Expansion to other African countries was a key part of Southey's strategy, and the investment allowed the company to serve new growth markets such as the oil and gas industry on Africa's East and West coasts.

A strategic review conducted by Southey and Abraaj led to the development of new service offerings such as a mobile maintenance facility designed to servicing the growing maritime traffic on the West African coastline. The facility is effectively a "shipyard in a box," comprised of mobile, modular maintenance and repair workshop blocks that allow mobile shipyards to be operational 24 hours a day. The concept allows shipping companies to benefit from faster turnaround times by eliminating transit times to repair centres in Asia or Europe.

At the time of investment, Southey had a presence in South Africa, the DRC and Zambia. Abraaj's funding and advice helped it to grow into Oman, Mauritius, Angola, Botswana, Gabon, Ghana and Tanzania. This resulted in revenue from countries outside of South Africa growing by 47% over the investment period.

New Industries

The Unit's objective is to support the most promising new and emerging industry value chains. Gas beneficiation is a prioritised value chain.

IDC Africa Unit

The IDC supports industrial transformation across Africa, supporting sustainable development on the continent. It has working relationships with development finance institutions and regional forums in 34 African countries.

The Africa unit promotes development-oriented projects among locally based operating/technical partners by highlighting their potential long-term sustainability and commercial viability. It gives preference to projects that:

- Are potentially beneficial to the host country and to South Africa;
- Are economically viable and sustainable in the medium to long term;

- Benefit a large number of people, regional groupings and local communities;
- Include a credible operating partner;
- Are sizeable and likely to be self-sustaining within a reasonable time frame; and
- Entail significant contributions from respective promoters.

DBSA International Financing Division

The International Finance Division (IFD) of the DBSA operates in African countries outside South Africa with a mandate to invest in infrastructure projects in its four main sectors: water, energy, transport and ICT. The main objective of the IFD is to facilitate trade in Africa through regional development and integration. The IFD aims to address the continent's catalytic infrastructure needs through:

- Facilitating regional integration
- Supporting commodity-led industrialisation
- Promoting inclusive economic growth, and
- Strengthening value-added linkages into the global economy.

In order to achieve these objectives the IFD identifies key projects; prepares the projects in collaboration with supporting divisions, and finances the projects. Projects are sought that align to regional infrastructure corridors; to regional master plans, and to the relevant country's National Strategic Infrastructure Plans.

As well as providing funding, the DBSA offers a range of advisory services including feasibility assessments, project preparation, and financial structuring.

The DBSA looks for projects of at least US\$200m in value, and has provided funding of up to US\$400m. Projects may include private sector participants and must have some public sector involvement or public sector benefit. The fund will usually provide from 30% to 50% of the required capital. It usually acts as the mandated lead arranger, in which role it manages the involvement of additional private sector capital.

The fund is currently involved in projects in many African countries, including the Republic of Congo, Ethiopia, Ghana, Mauritius, Namibia, Tanzania and Zambia.

In the Energy sector, a DBSA deal for Cenpower in Ghana won the 2014 Project Finance International (PFI) award for African Power Deal of the Year. The partnership included parties from South Africa, the Netherlands and Japan as well as public and private entities. Cenpower will provide 340 MW of power at the Tema Heavy Industrial Area, which will drive industrialisation in Ghana and support regional integration in West Africa.

Insurance

Some of the world's most respected insurers have their home in South Africa, and SA is the dominant player in insurance on the continent. Its short-term insurers together have around US\$7.2 billion of gross written premiums, and offer specialised products for transport and marine, engineering, guarantees and liabilities, property and accident & health cover.

The Export Credit Insurance Corporation provides export credit and foreign investment insurance solutions in support of South African Capital goods and services. The ECIC also underwrites medium and long-term loans, including equity investments for the export of capital goods and services from South Africa.

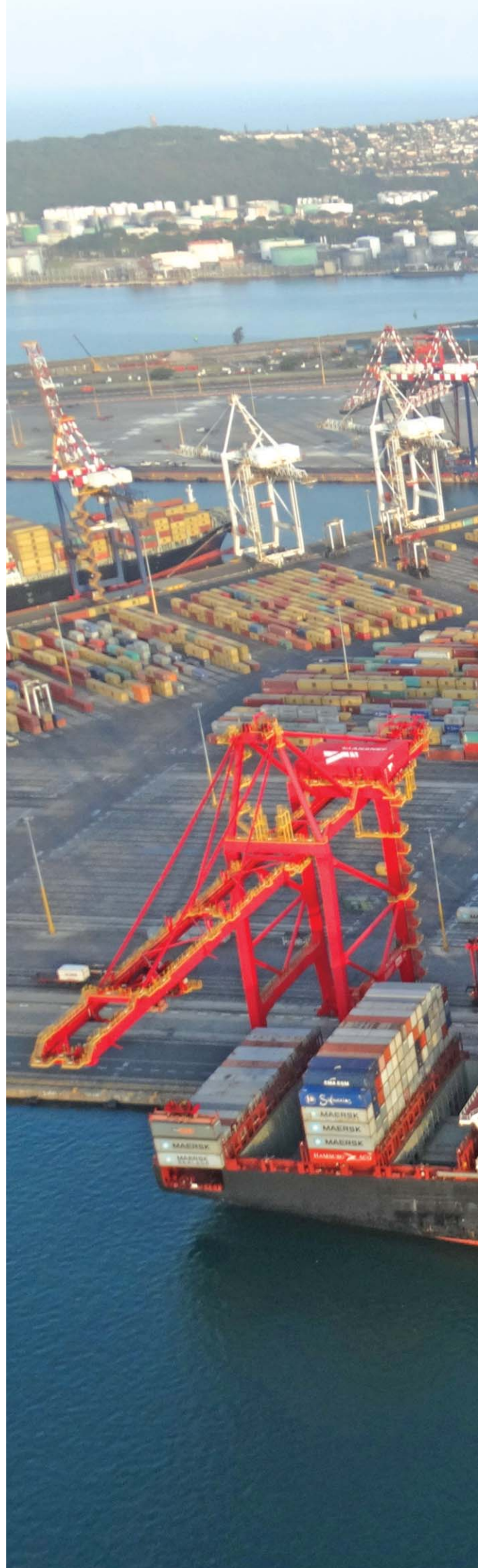


20m crewboats for West Africa. Construction by Veecraft Marine; financing by ABSA Bank; export credit insurance by the ECIC.



Financing, construction, erection, commissioning, operation and maintenance of a 40MW natural gas fired power plant and Project Facilities at Chokwe, Gaza Province, Mozambique.

Engineering Procurement Construction by Group Five; business management, project management, operations and maintenance by ADC projects; financing by the Public Investment Corporation, KDM and Investec; export credit insurance by the ECIC.





Education and training

Maritime education for Africa, from trade skills to PhDs

Investors in the Ocean Economy rely on a trained and educated workforce to deliver on their projects and business plans. Because the Ocean Economy is of strategic importance to South Africa, over 90 institutions around the country offer maritime-related programmes, building and maintaining the critical mass of skilled people on which the sector's successful businesses depend.

Students come from all over the African continent, including Namibia, Kenya, Nigeria, Ghana, Mozambique Tanzania and Angola.

A wide range of maritime and marine-related degree programmes are offered by South Africa's public universities, as well as programmes in subjects that support the wider ocean economy, such as civil and mechanical engineering, law, medicine, economics and business studies.

South Africa offers world-class education, training and certification for seafarers; ranging from high school subjects to university qualifications. Many of the courses are internationally recognised and in accordance with the International Maritime Organisation's conventions.

Maritime studies are a strategic area for skills development in South Africa, with subjects such as Maritime Economics and Nautical Science now introduced at some high schools.

In addition to public universities, universities of technology, and technical vocational education and training colleges, more than 55 private institutions offer maritime related training. These are predominantly safety- and medical- related courses.

The South African International Maritime Institute (SAIMI) was established in response to demand from the maritime sector to coordinate maritime skills development, training, education and research.

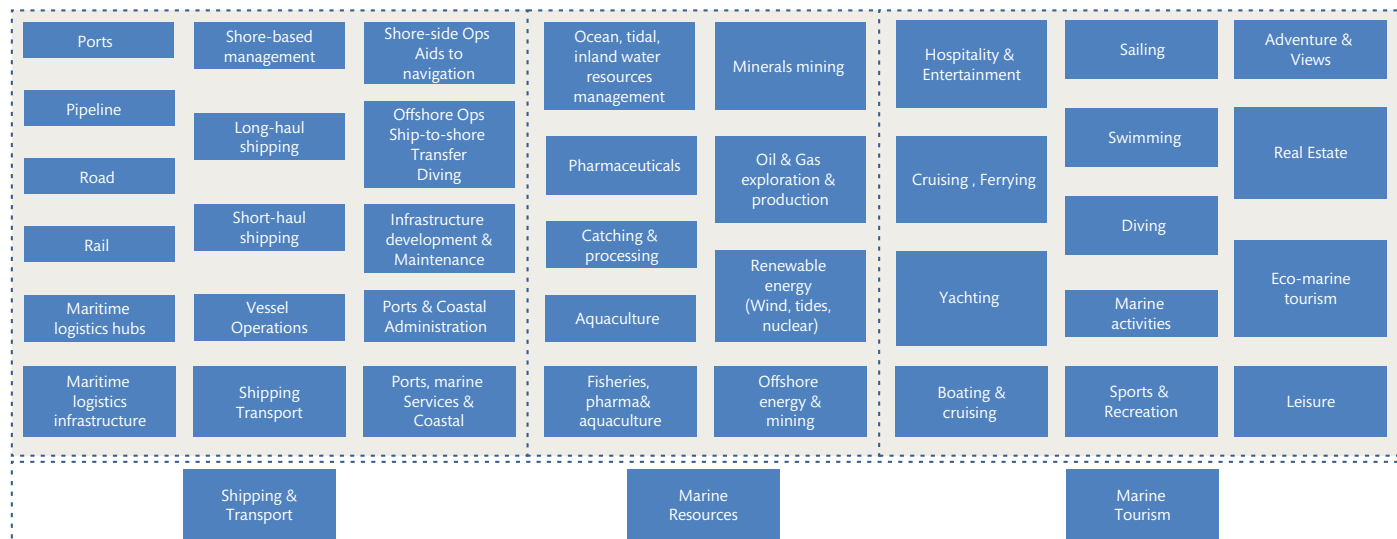
SAIMI also manages the National Cadetship Programme which provides the practical training aboard international trading vessels required for students to qualify for the internationally-recognised STCW qualification. In addition to international shipping line partners, the cadet programme is also supported by the dedicated training vessel SA Agulhas I and other South African government-owned vessels.



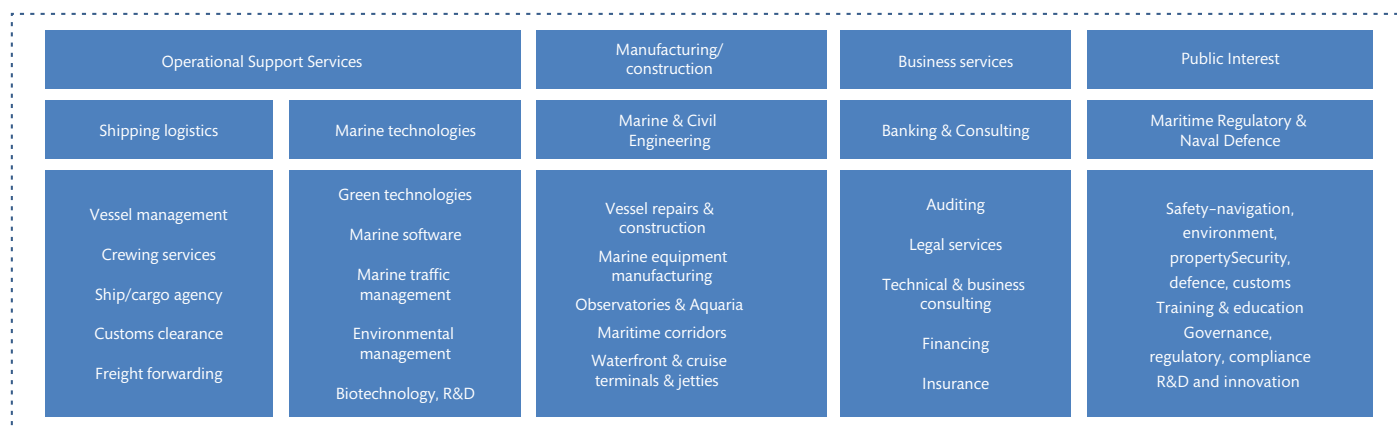


South Africa's education system provides the broad range of trade and academic skills necessary to drive a top-class ocean economy

Primary cluster



Secondary cluster



South Africa has 3,500 seafarers, and aims to more than double this by 2019

South Africa's ocean economy will be supported by a co-ordinated, national maritime skills development plan.

The South African International Maritime Institute (SAIMI) manages and co-ordinates five working groups, bringing together education and training providers; Government's delivery units; industry representatives, and academic specialists in order to develop an integrated national plan.

Occupational qualifications are being rolled out for Able Seafarers in Technical Vocational Education & Training colleges from 2017. Further occupational qualifications are under development to

produce skills in areas such as fishing and port operations, commercial diving, aids-to-navigation and maritime rescue coordination.

SAIMI is in the process of taking over administration of the National Cadetship Programme. The Programme trained seafarers for South

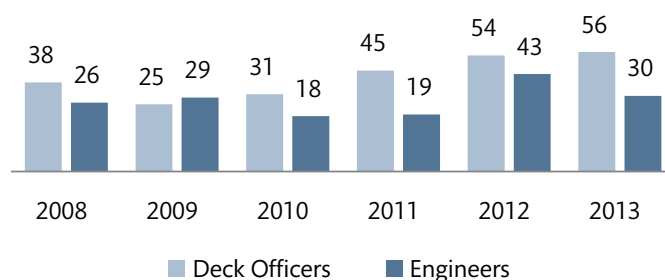
African and international shipping lines by securing the practical sea-time required for students to complete their qualifications. It is currently run through tertiary programmes offered by the Cape Peninsula University of Technology and the Durban University of Technology; simulator and professional maritime training through private training providers, and experiential learning aboard the dedicated training vessel SA Agulhas.

The training programmes are compliant with IMO's STCW regulations and are accredited by SAMSA. Qualifications will thus be both National Qualifications Framework aligned and internationally recognised.

The Programme will deliver:

- Deck Cadet Learnerships – Certificate of Competency as Officer of the Watch (STCW A-II/1). Applicable to foreign going and unlimited tonnage ships.
- Engineer Cadet Learnerships – Certificate of Competency as Officer of the Watch (STCW A-III/1). Applicable to foreign going and unlimited horsepower ships.

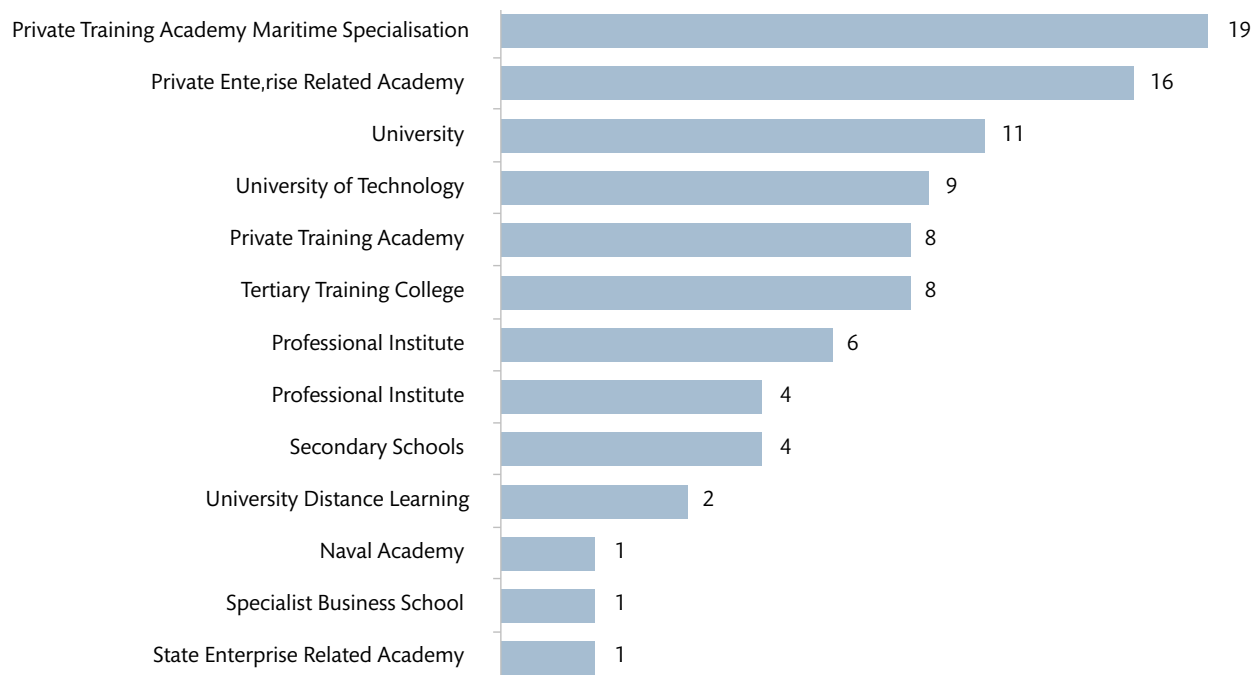
Extensive education and training capabilities at all levels



The number of Deck officers and Maritime Engineers graduating from South Africa's institutions increased by 34% between 2008 and 2013

Examples of available vocational training

Port industry	
Sub-industry	Training subjects
Cargo handling and storage	Stevedoring, rigging, cold storage operations
Terminal operations	Cargo handling equipment operation, terminal management
Marine services	Vessel traffic services, marine pilots, tug masters, engineers, ratings, berthing masters, berthing shorehands
Bunkering services	Barge masters, engineers, ratings
Freight and logistics	
Sub-industry	Training subjects
Freight forwarding	International trade and logistics
Clearing and forwarding	Customs clearance, international trade
Logistics, warehousing and storage	Logistics management
Vessel operations	
Sub-industry	Training subjects
Vessel management and crewing	Vessel manager, crewing manager, ship superintendent
Vessel planning	Vessel planner
Ship chartering	Maritime economics, international trade
Vessel construction and support	
Sub-industry	Training subjects
Vessel construction, repair and maintenance	Dockmaster, boilermaker, welder, millwright, sheet metal worker, fitter and turner, diesel mechanic, electrical engineer, composites fabrication, yacht and boatbuilding
Vessel bunkering	Bunker trading, bunker handling
Vessel agency	Ship agency
Stores and victualing supplies (ship chandlery)	Stores management



Institutions offering Ocean Economy-related courses

Maritime education at tertiary level and beyond

Course	UKZN	NMMU	UCT	STELLEN-BOSCH	RHODES	WITS	UWC	DUT	CPUT
Maritime/Nautical Studies									
Maritime/Transport Economics									
Maritime Law/Shipping Law									
Marine Civil Engineering									
Oceanography									
Petroleum Geoscience									
Oil and Gas Engineering									
Marine Science									
Shipping and logistics									
Marine Engineering									
Customs & Excise									
Nautical Science									

Many university-level courses, subjects and areas of research are applicable to careers in the Ocean Economy. A sample is shown here. The University of Cape Town (UCT), University of Kwazulu Natal (UKZN), and the University of Stellenbosch feature consistently in the Times Higher Education World University Rankings

Featured Institution: The Transnet Maritime School of Excellence (MSoE)

The Transnet Maritime School of Excellence is a merger of the School of Ports and the School of Port Operations and is the first of its kind in South Africa.

The Maritime School of Excellence provided the ideal opportunity to provide skills development for South Africa and the rest of the subcontinent.

Transnet, which has spent about R2,5 billion in training over the last two years, amalgamated its different schools under the Transnet Academy.

Campuses for Marine Training are situated at the old Durban airport site (main campus), and at satellite campuses in Richards Bay, Cape Town and Port Elizabeth.

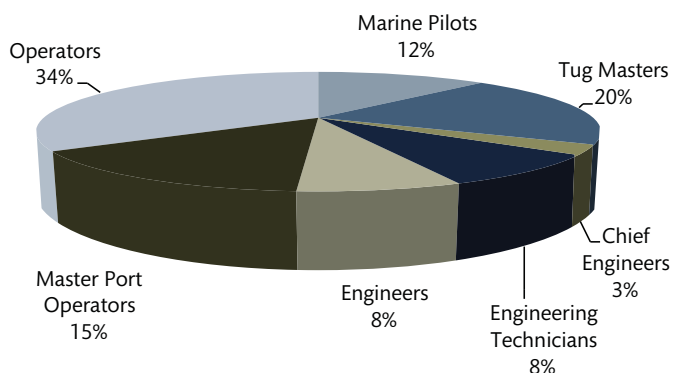
Transnet is spending an unprecedented R7,7 billion on training as it drives to meet its capacity requirements in line with the Market Demand Strategy (MDS).

The cadets complete the theoretical portion of their training at a higher education institution – currently Cape Peninsula University of Technology and Durban University of Technology – before enrolling in the cadet programme.

There are currently approximately 200 cadets enrolled in the National Cadet Programme.

The SA Agulhas I played a key role in clearing a backlog of cadets awaiting training berths, and provides cadets with a solid training foundation before they join international shipping lines to complete their training.

The National Cadet Programme is managed by the South African International Maritime Institute (SAIMI). Newly registered vessels on the South Africa ships' register also provide training berths, and plans are underway for training aboard vessels in the government fleet as well.



In 2015, 115 graduates have completed their training at Transnet's specialist academy for maritime skills.

Featured Institution: S.A. Agulhas I

South Africa's polar research vessel, the S.A. Agulhas I, retired in 2012 after more than 30 years of service for the South African National Antarctic Programme. The vessel was transferred to the South African Maritime Safety Authority (SAMSA) and re-commissioned as a training ship in 2012.

The SA Agulhas I complements the National Cadet Programme, which provides pre-sea training and secures training berths, in partnership with a number of international shipping lines, to enable South African cadets to obtain the practical sea-time needed to obtain the STCW Officer of the Watch (OOW) qualification. This qualification gives them access to global work opportunities in the shipping industry, and a career path from deck officer to Master, or engineer officer to Chief Engineer.



Regulation

Regulatory bodies and applicable laws

The South African Maritime Safety Authority ("SAMSA") was established in terms of the SAMSA Act, 1998.

SAMSA is responsible for administering the following pieces of legislation:

Merchant Shipping Act, 1951
Marine Traffic Act, 1981
Marine Pollution (Control and Civil Liability) Act, 1981
Carriage of Goods by Sea Act, 1986
Marine Pollution (Prevention of Pollution from Ships) Act, 1986
Marine Pollution (Intervention) Act, 1987
Maritime Zones Act, 1994
Wreck and Salvage Act, 1996
SAMSA Act, 1998
SAMSA Levies Act, 1998
Ship Registration Act, 1998

The Centre for Policy and Regulatory Affairs is responsible for:

Providing assistance to the Department of Transport in drafting and processing of the maritime statutes and policies

Consultation with internal and external stakeholders (government departments and its entities, private stakeholders etc.) in developing legal instruments

Advocating for the adoption of international regulations (Conventions, Protocols, Codes etc.) and assist in translating them into national laws including leveraging international best practice

Providing regular updates to SAMSA on legislative and regulatory changes

Conducting research on various legislative and regulatory frameworks that impact on SAMSA and making necessary recommendations

Providing legal advice and opinions on maritime related issues as well as on corporate legal matters to government departments

New, comprehensive maritime transport policy

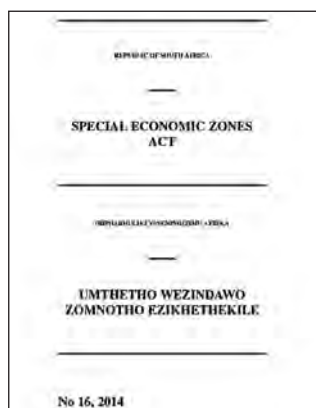
The Department of Transport is presently working on a Comprehensive Maritime Transport Policy. This will cover maritime supply chains, including shipping and ports, as a link in an integrated and inter-modal transport system, joining South Africa and the region's exporters and importers with their international markets and suppliers.

Among many other matters, the Policy is expected to include these areas of potential interest to investors:

Maritime safety regulation
Ports management and planning
Ship and boat building and repairs
Shipping and maritime logistics
Maritime mode integration
Coastal shipping and cabotage
International maritime services
Ship ownership, financing and registration
State Support for the Industry in times of distress
Institutional Arrangements and Co-operation
Environmental and energy issues

The Comprehensive Maritime Transport Policy is expected to be finalised in the fourth quarter of 2016, and will guide the integrated governance, regulation and development of the ocean economy, and in particular of maritime transportation in South Africa.

Key legislation relevant to the ocean economy



Maritime Zones Act 1994

- Establishes maritime zones and the governing law of South African waters
- Also provides for laws to govern any installation that may be in South African waters

Special Economic Zones Act 2014

- Provides for the promotion, development, operation and management of Special Economic Zones (SEZs)
- Outlines the governance and funding model for SEZs

Merchant Shipping (Maritime Security) Regulations 2004

- Prohibits unlawful interference with maritime transport
- Establishes a safety and security regulatory framework for ships and other maritime transport operations

National Environmental Management Act 1998

- Provides for co-operative, environmental governance
- Establishes principles for decision-making on environmental matters



National Ports Act 2005

- Establishes the National Ports Authority and the Ports Regulator
- The Authority owns, manages, controls and administers all ports

Environment Conservation Act 1989

- Protects against any activities that may have a detrimental effect on the environment, including transportation and manufacturing

Marine Traffic Act 1981

- Regulates marine traffic in South Africa
- Provides laws for entry into and out of South African waters

National Environmental Management: Integrated Coastal Management Act 2008

- Establishes the norms, standards and policies for integrated coastal management
- Defines rights and duties related to coastal areas
- Controls dumping and pollution at sea

Appendix

Useful contacts

Public sector organisations

The Department of Trade and Industry

Investment Promotion
Dean Hoff Tel: +27 12 394 1893; E: Dhoff@thedti.gov.za
https://www.thedti.gov.za/trade_investment/investment.jsp

Invest SA One Stop Shop
Letta Kaseke Tel: +27 12 394 5935; E: Ikaseke@thedti.gov.za
Nana Mkhwanazi Tel: + 27 12 394 1325;
E: NMkhwanazi@thedti.gov.za

Switchboard
International callers: +27 (12) 394 9500, National callers:
0861 843 384

The Department of International Relations and Cooperation
(DIRCO) Telephone: +27 12 351 1000

Department of Environmental Affairs
Tel: 086 111 2468; E: callcentre@environment.gov.za

Department of Transport
Tel: 021 309 3000; E: KhozaC@dot.gov.za

Department of Energy
Tel: 012 406 7798/7473; E: info@energy.gov.za
Operation Phakisa - Oceans Economy
(Department of Environmental Affairs) Tel: +27 (0)12 399 9000

Trade and Investment Kwazulu-Natal, Tel: +27 (0) 12 346 4386

WESGRO, Cape Town and Western Cape, tourism,
trade and investment, +27 21 487 8600

EThekweni Maritime Cluster, 031-3010950/9

Shipbuilding, vessel construction and repair

Damen Shipyards Cape Town
Tel: 021 447 1714; E: info@damen.co.za
DCD Marine Cape Town
Tel: 021 460 6000; E: marine@dcd.co.za

Dormac Marine & Engineering,
Tel: 031 274 1500; E: ship@dormac.net (Durban)
Tel: 021 512 2900; E: shipct@dormac.net (Cape Town)

Elgin Brown & Hamer
Tel: 031 205 6391; E: shipprep@ebh.co.za

FerroMarine Africa
Tel: 021 880 2070; E: info@ferromarinecape.co.za

Nautic Group
Tel: 021 200 0601; E: info@nauticafrica.com

Southern African Shipyards
Tel: 031 274 1800; E: enquiries@sa-shipyards.co.za

Port management and logistics
Transnet National Ports Authority (TNPA)
Tel: 011 351 9001; E: TNPA911@transnet.net

Transnet TPT
Tel: 031 308 8000; email addresses at: <http://www.transnet-tpt.net/Contact/Pages/default.aspx>

Transnet Consulting Services (Transnet Corporate)
Tel: 031 361 1176; E: Mervin.Chetty@transnet.net

Grindrod
Tel: 031 304 1451; W: grindrod@grindrod.co.za

Imperial
Tel: 011 372 6500; E: info@ih.co.za

Bidvest
Tel: 031 274 2400; E: khanyisile@bidterm.co.za

MIASA Member Companies

Company	Category	Telephone	email
40 Knots	Services and Repairs	021 7861052	dick@40knots.co.za
Ace Boating	Catamarans/Multihull Boat Builders	031 2050612	dayalan@aceboating.co.za
Admiral Powercats	Catamarans/Multihull Boat Builders	021 9314282	info@admiralpowercats.com
All Pro Seats	Equipment and Accessories	021 5115205	seatsales@all-pro.co.za
Angler Publications	Magazine	031 5722289	bursik@mags.co.za
Austral Marine	Monohull Boat Builders	0314682338	don@australmarine.co.za
Aqua Doctor / Auto Doctor	Services/Repair	013 2431905	tracya@platinumad.co.za
Bavaria Boats (Wiltel Marine)	Brokers/Dealers/Retail	021 5522556	geoff@wiltel.co.za
Bayside Marine	Services/Repair	0833904966	timothyjacobs2015@gmail.com
Blue Peter Marine	Business Services	66868261669	info@ceinspector.com
Boating World	Brokers/Dealers/Retail	0214180840	info@boatingworld.co.za
Boatworld cc	Inflatables	0312060256	boat.world@hit.co.za
Brandleader	Equipment and Accessories	100017280	macb@brandleader.co.za
Budler Breakey & Associates	Training	0844186063	jennifer@budlerbreakey.com
C-Dynamics	Equipment and Accessories	021 555'03232	info@c-dynamics.co.za
Cape Town International Boat Show	Exhibition	0824118769	dana@impactexpo.co.za
Celtic Yachts	Catamarans/Multihull Boat Builders	021 5562550	tim@celticyachts.co.za
Cullinan Marine (Central Boating & Manex & Power Marine)	Equipment and Accessories	0214248026	david@centralboating.co.za
Club Marine Insurance	Business Services	0861819219	creniraw@telkomsa.net
Cruiser Cats	Catamaran/Multihull Boat Builders	215510339	shereen@cruisercats.com
D7 Boating	Catamarans/Multihull Boat Builders	0344131496	ingrid@d7boating.com
David Abromowitz & Associates	Brokers/Dealers/Retail	021 419 0722	rob@yachtbrokers.co.za
Denise Design & Upholstery	Equipment and Accessories	031 8235902	denisedesignandupholstery@gmail.com

MIASA Member Companies (continued)

Company	Category	Telephone	email
Du Toit Yacht Design	Business Services	021 9752580	info@dttd.co.za
False Bay College	Training	0217011340	Achmat.Geyer@falsebay.org.za
Falx Trading	Equipment and Accessories	083 2999775	axel@falx.co.za
FG Marine	Monohull Boat Builders	032 4591420	fgmarine@mweb.co.za
Fluidco Hydraulic Systems	Equipment and Accessories	021 5110590	sales5@fluidco.co.za
Frigomar SRL	Equipment and Accessories	021 4186032	b.cerrai@frigomar.com
Fusion Power Boats	Monohull Boat Builders	044 3820940	info@fusionpowerboats.com
GAC Laser	Business Services	021 5283700	simonh@gaclaser.co.za
Garmin SA	Equipment and Accessories	011 251 9999	Chris.Gillitt@garmin.com
Gaw Marine	Monohull Boat Builders	061 6869652	greg@gawmarine.co.za
Gecat Marine	Catamarans/Multihull Boat Builders	042 2940132	gecatboats@wol.co.za
Gemini Marine	Inflatables	021 5340617	gerhard@gemini-marine.com
Glass Fibre Creations	Equipment and Accessories	0724973262	pjbuchner@live.com
G Wind Marine & Spars	Monohull Boat Builders	031 7002908	craig@gwindustries.com
Harken South Africa	Equipment and Accessories	021 511 3244	gideon@harken.co.za
Harvey Yachts	Catamarans/Multihull Boat Builders	044 3820439	laura@harveyachts.com
High And Dry Boatlifts	Equipment and Accessories	021 8459661	ben@highanddry.co.za
Honda Motor Southern Africa	Engine Systems	011 0581100	Leshzek.Lotze@honda-eu.com
Icarus Marine	Business Services	021 4474545	info@icarusmarine.com
Intrinsys	Business Services	011609 1714	info@intrinsys.co.za
Jacobs Bros Boat Builders	Monohull Boat Builders	0827455405	fuad@jacobsbros.com
Jo Fensham Yacht Upholstery	Equipment and Accessories	0217855244	tariq@jofensham.com
KD Marine Design	Business Services	021 8016629	keith@kdmartinedesign.com

MIASA Member Companies (continued)

Company	Category	Telephone	email
Knysna Yacht Company	Catamarans/Multihull Boat Builders	0443822847	admin@knysnayachtco.com
KZN Leisure Boats	Services/Repair	031 2050631	classictrade@telkomsa.net
Lalizas Marine RSA (PTY) LTD	Equipment and Accessories	021 5104021	rsa@lalizas.co.za
Landsberg & Assoc.	Business Services	021 8511314	dnl@landsberglaw.com
Lavranos Marine Design	Business Services	+64 9 480 2232	lavranos@ihug.co.nz
Leisure Boating magazine	Magazine	0217024200	dean@leisureboating.co.za
Leisure Craft cc	Inflatables	031 7015324	boatboyz@telkomsa.net
Leopard Catamarans	Brokers/Dealers/Retail	0212001825	southafrica@leopardcatamarans.com
Lowrance SA	Equipment and Accessories	031 3686649	sales@lowrance.co.za
Magson Marine	Services/Repair	021 8547500	ernie@magsonmarine.com
Marine & General Engineering	Multihull & Commercial Boat Builders	0314615008	ashleyg@marineandgeneral.co.za
Marine Dynamic Tours	Brokers/Dealers/Retail	0828952736	susan@isales.co.za
Marine Radio Acoustic Devices	Equipment and Accessories	021 5594003	susan@mrاد.co.za
Matrix Yachts	Catamarans/Multihull Boat Builders	021 5567179	info@matrix-yachts.com
MJ Whiting & Co.	Business Service	021 5315703	whiting@icon.co.za
Maverick Yachts	Catamarans/Multihull Boat Builders	0215527752	rudi@maverickyachts.co.za
Natal Caravans & Marine	Brokers/Dealers/Retail	031 7027291	info@natalcaravans.co.za
Natal Power Boats	Brokers/Dealers/Retail	031 305 8081	ruli@npb.co.za
Nauti-Tech	Services/Repair	041 5851481	ian@nauti-tech.co.za
Nautic Africa	Business Services	0212000601	Camilla@nauticafrica.com
Nautic South Africa	Business Services	0212000601	keith@nauticsa.com
Nautique Marketing Communications	Equipment and Accessories	021 4471216	info@nautique.co.za
Navylec/Annecy Electronique sas	Catamarans/Multihull Boat Builders	+33 689704348	gil.daver@navylec.com

MIASA Member Companies (continued)

Company	Category	Telephone	email
Nexus Yachts	Catamarans/Multihull Boat Builders	042 2940321	roger@nexusyachts.com
NG Yacht Management	Business Services	0829765719	info@yachtmanagement.co.za
Novamarine	Equipment and Accessories	0215064300	marks@novamarine.co.za
Peak Season/Starbrite Africa	Equipment and Accessories	0822956090	info@peakseason.co.za
Pelagic PWC	Equipment and Accessories	0820714406	jeremy@pelagicpwc.com
Phoenix Marine	Catamarans/Multihull Boat Builders	021 5771072	clinton@phoenixcatamarans.com
Pitts Marine & Industrial cc	Services/Repair	033 3944586	sales@pittsmarine.co.za
Pronto Clearing	Business Services	021 5515692	craig@prontoclearing.co.za
Rapid Mining cc	Commercial Boat Builders	0836301380	gavjnjohn@outlook.com
Rhino Marine Products	Commercial Boat Builders	082 960 0591	info@rhinomarineboats.com
Robertson and Caine	Catamarans/Multihull Boat Builders	0214485666	gavin@robertsonandcaine.com
Royal Cape Catamarans	Catamarans/Multihull Boat Builders	031 7005165	kjbstyle@iafrica.com
Sailing Magazine	Magazine	031 7096087	sailing@iafrica.com
Scape Yachts	Catamarans/Multihull Boat Builders	021 8454371	kevin@scapeyachts.co.za
Seascope Marine Services	Engine Systems	021 5118201	jdejong@seascapemarine.co.za
Seascope Stainless Steel Services	Equipment and Accessories	0215117763	info@seascapesss.com
Southern Power Products	Engine Systems	0215110653	noel@southernpower.co.za
Southern Spars Cape Town	Equipment and Accessories	0215553470	richard.stubbs@za.southernspars.com
Southern Wind Shipyard	Monohull Boat Builders	0216378043	alberto@sws-yachts.com
Stealth Yachts	Catamarans/Multihull Boat Builders	021 9314420	ralph@stealthyachts.com
St Francis Marine	Catamarans/Multihull Boat Builders	042 2940181	stfranciscat@intekom.co.za
Supreme Leisure & Boating	Services/Repair	046-6244826	sales@supremeleisure.co.za
Suzuki Auto South Africa	Engine Systems	011 5741900	tanjam@suzukiauto.co.za

MIASA Member Companies (continued)

Company	Category	Telephone	email
Tag Yachts	Catamarans/Multihull Boat Builders	042 2941064	tim@tagyachts.com
Tallie Marine	Commercial Boat Builders	022 7361283	anton@talliemarine.com
Tedder Yachts	Brokers/Dealers/Retail	021 4215565	tedder@intekom.co.za
T-Craft/Legacy Marine	Commercial Boat Builders	0414632959	gary.tait@oftgroup.co.za
Triboating	Catamarans/Multihull Boat Builders	031 9025377	triboating@gmail.com
TRU Yachts	Catamarans/Multihull Boat Builders	0832945845	chris@truyachts.com
Two Oceans Marine Manufacturing	Catamarans/Multihull Boat Builders	021 4487902	mark@2oceans.co.za
Ullman Sails RSA	Equipment and Accessories	0215931620	tony@ullmansailsrsa.com
Veecraft Marine	Commercial Boat Builders	021 5116412	info@veecraft.com
Vetus Maxwell	Equipment and Accessories	021 5524275	abeck@vetus.com
Viking Life-Saving Equipment SA	Equipment and Accessories	021 5075879	Viking-sa@viking-life.com
Vision Yachts	Catamarans/Multihull Boat Builders	044 3820940	info@visionyachts.com
Voyage Yachts	Catamarans/Multihull Boat Builders	021 5106375	info@voyageyachts.co.za
Watermark Marine	Catamarans/Multihull Boat Builders	044 3825534	markw@watermarkmarine.co.za
Wayne Robertson Yachts	Monohull Boat Builders	021 7011577	wayne@waynerobertsonyachts.co.za
Welding Fabrication Services	Services/Repair	021 5515677	heather@weldingservices.co.za
Yachtport SA	Business Services	022 714 4064	cindy@yachtportsa.co.za
Yamaha Distributors	Engine Systems	031 7106400	gregb@yamaha.co.za
Yacht and Power Sales	Broker	0834443630	chris@yachtandpowersales.com
ZF Services	Engine Systems	0219506300/6307	gerd.bauer@zf.com (Cape Town)

Construction/EPCM

Aveng

Tel: 011 779 2800; enquiries form at: <http://www.aveng.co.za/contact-us/enquiries-form>

Basil Read

Tel: 011 418 6300; enquiries for at: <http://www.basilread.co.za/contact-us.php?pagename=Contact%20Us>

Group Five

Tel: 010 060 1555; e: info@groupfive.co.za

Murray & Roberts

Tel: 011 456 6200; e: info@murrob.com

Stefanutti Stocks

Tel: 011 571 4300; e: holdings@stefstocks.com

WBHO

Tel: 011 321 7200; e: wbho@wbho.co.za

Industrial Development Zones

Coega IDZ

Tel: 041 403 0400; contact via form at: <http://www.coega.co.za/Feedback.aspx?objID=83>

Saldanha Bay IDZ

Tel: 087 095 0261; e: info@sbidz.co.za

Richards Bay IDZ

Tel: 035 788 0571; e: info@rbidz.co.za

East London IDZ

Tel: 043 702 8200; e: info@elidz.co.za

Dube Trade Port

Tel: 032 814 0000; e: info@dubetradeport.co.za

Training institutions

South African International Maritime Institute (SAIMI)

Tel: 041 504 4038; e: info@saimi.co.za

Regulatory bodies

The South African Maritime Safety Authority (SAMSA)

Contact information at: <http://www.samsa.org.za/contact-information> or contact via form at: <http://www.samsa.org.za/contact>

Oil & Gas infrastructure

MOGS Oil & Gas Services

Tel: 021 913 7000; contact via form at: <http://mogs.co.za/contact-us/>

Financial services

Export Credit Insurance Corporation of South Africa SOC Ltd (ECIC)

Tel: +27 12 471 3800; e: info@ecic.co.za

Industrial Development Corporation (IDC)

Tel: 011 269 3000; e: callcentre@idc.co.za

Classification Societies

American Bureau of Shipping

Te: 031 267 1522; e: ABSDurban@eagle.org

Bureau Veritas t: 031 337 2222; contact via form at: http://www.bureauveritas.co.za/home/contact_form

China Classification Society

Tel: 021 551 2429; e: ccsct@ccs.org.cn; ccsct@ccs-eu.net

Det Norske Veritas

e: 031 202 0120; contact via form at: <https://www.dnvgl.com/maritime/contact/general-enquiry.html>

Germanischer Lloyd

See Det Norske Veritas (the two organisations are now merged)

Korean Register of Shipping

Tel: 031 207 5093; e: urban@krs.co.kr

Lloyd's Register

Tel: 031 305 4441; contact via form at: <http://www.lrqa.co.za/help-and-support/Contact-LRQA/form.aspx>

Nippon Kaiji Kyokai

Tel: 031 332 3600; e: do@classnk.or.jp

RINA Services

Tel: 082 346 4433; e: hillcrest.marine@rina.org

Russian Maritime Register of Shipping

Tel: 021 433 2650; e: s.africa@rs-class.org

Industry associations

International Bunker Industry Association (Southern Africa),
Tel: 021 790 5318
E: tahra.sergeant@ibia.net

International Marine Certification Institution (South Africa inspections by Blue Peter Marine)
Tel: 072 776 8508; e: info@ceinspector.com

Marine Industry Association South Africa (MIASA)
Tel: 021 791 1052; e: info@miasa.co.za

The South African Oil & Gas Alliance (SAOGA)
Tel: 021 425 8840; contact at <http://www.saoga.org.za/contact-us>

South African Association of Shipbuilders and Repairers (SAASR),
E: info@saasr.co.za

South African Association of Freight Forwarders (SAAFF)
Tel: 011 455 1726; e: mterbeest@saaff.org.za

South African Association of Ship Operators and Agents (SAAASOA)
Tel: 0 31 266 1384; contact at:
<http://www.saasoa.com/index.php/contact-us>

The Aerospace, Maritime and Defence Industries Association of South Africa (AMD)
Tel: 012 752 5880 / 2 ; e: magda@amd.org.za

The South African Boat Builders Export Council (SABBEX),
Tel: 072 836 3998 | 082 635 3282; e: info@sabbex.co.za

The South African Institute of Marine Engineers and Naval Architects (SAIMENA),
E: saimena@webafrica.org.za

Recommended further reading

Transnet National Ports Authority: Long Term Port Development Plan 2015
http://www.transnet.net/BusinessWithUs/LTPF%202015/4_LTPF%202015_Port%20Dev_24%20Aug_LR.pdf

Transnet National Ports Authority: Oil and Gas Investment Opportunities in the South African Ports through Operation Phakisa
<http://www.saoga.org.za/news-events/general-news/oil-and-gas-investment-opportunities-south-african-ports-through-operation>

The Department of Trade & Industry: South Africa: Investor's Handbook 2014/15
<http://www.thedti.gov.za/publications.jsp?year=2015&subthemeid>

South African Oil and Gas Alliance: Port Handbook, Third Edition May 2015
http://www.saoga.org.za/sites/default/files/pdf/saoga-port-handbook-2015-low-res_rev01.pdf

Ports Regulator of South Africa: South African Port Capacity and Utilisation Report 2015/16
<http://www.portsregulator.org/images/documents/Port-Capacity-and-Utilisation-Report-2015-16.pdf>

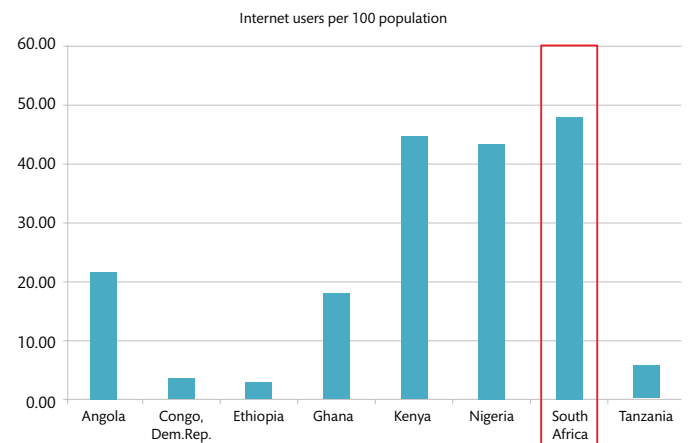
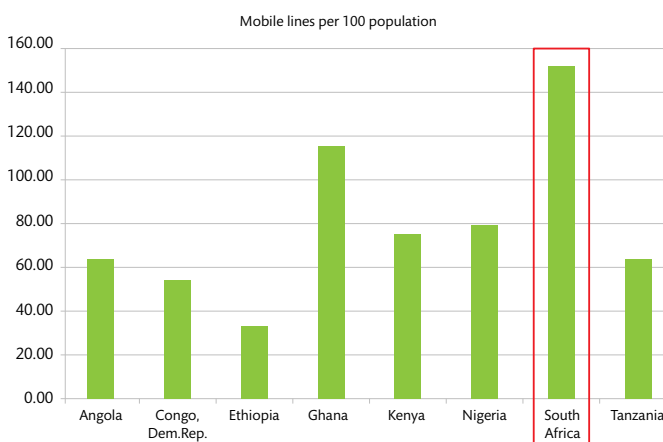
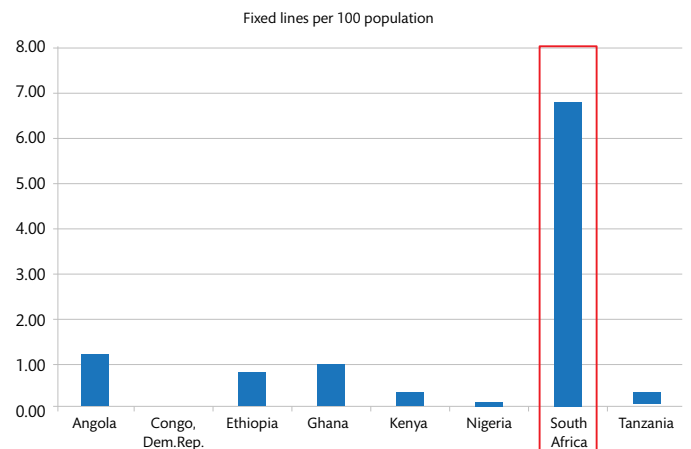
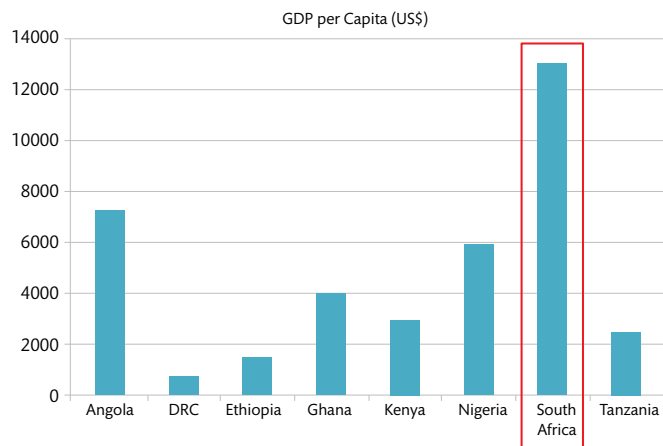
Department of Trade & Industry: Industrial Policy Action Plan IPAP 2016/17 – 2018/19
http://www.gov.za/sites/www.gov.za/files/IPAP%202016_0.pdf

Department of Trade & Industry: Special Economic Zones Tax Incentive Guide
https://www.thedti.gov.za/industrial_development/docs/SEZ_Guide.pdf

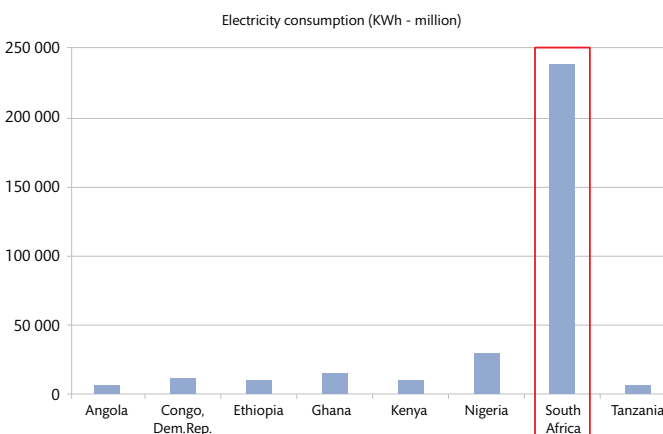
Industrial Development Corporation: Africa Unit (IDC-africa-brochure.pdf)
<http://www.idc.co.za/images/Finance-by-sector/IDC-africa-brochure.pdf>

Development Bank of South Africa: 2015 Integrated Annual Report
<http://www.dbsa.org/EN/About-Us/Publications/Annual%20Reports/DBSA%20Integrated%20Annual%20Report%202014-15%20single%20page%20view.pdf>

South Africa's economy is the most affluent in sub-Saharan Africa, supported by the strongest infrastructure



South Africa has sub-Saharan Africa's highest GDP per capita, and its best infrastructure. This means investors are able to site major projects and production facilities here, with world-standard logistics, power, data networks and telecoms. It also means that South Africa's large towns and cities have the amenities that a connected global workforce expects.



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- Transnet National Ports Authority
- South African National Antarctic Programme
- South African Oil and Gas Alliance
- Southern African Shipyards
- Stefanutti Stocks
- Sunrise Energy
- WBHO Construction

