



REPUBLIC OF SOUTH AFRICA



Unlocking the Economic Potential of South Africa's Oceans

Marine Transport and Manufacturing
Executive Summary

15 August, 2014

Summary

South Africa can leverage its strategic location, infrastructure and skill base to **accelerate growth of marine transport** (cargo handling, national registry and flagging) **and manufacturing (MTM)** (maritime vessel building, rig and ship repair, offshore oil and gas (O&G) services). The MTM Lab set an **ambitious vision for the sector** of increasing by 2019:

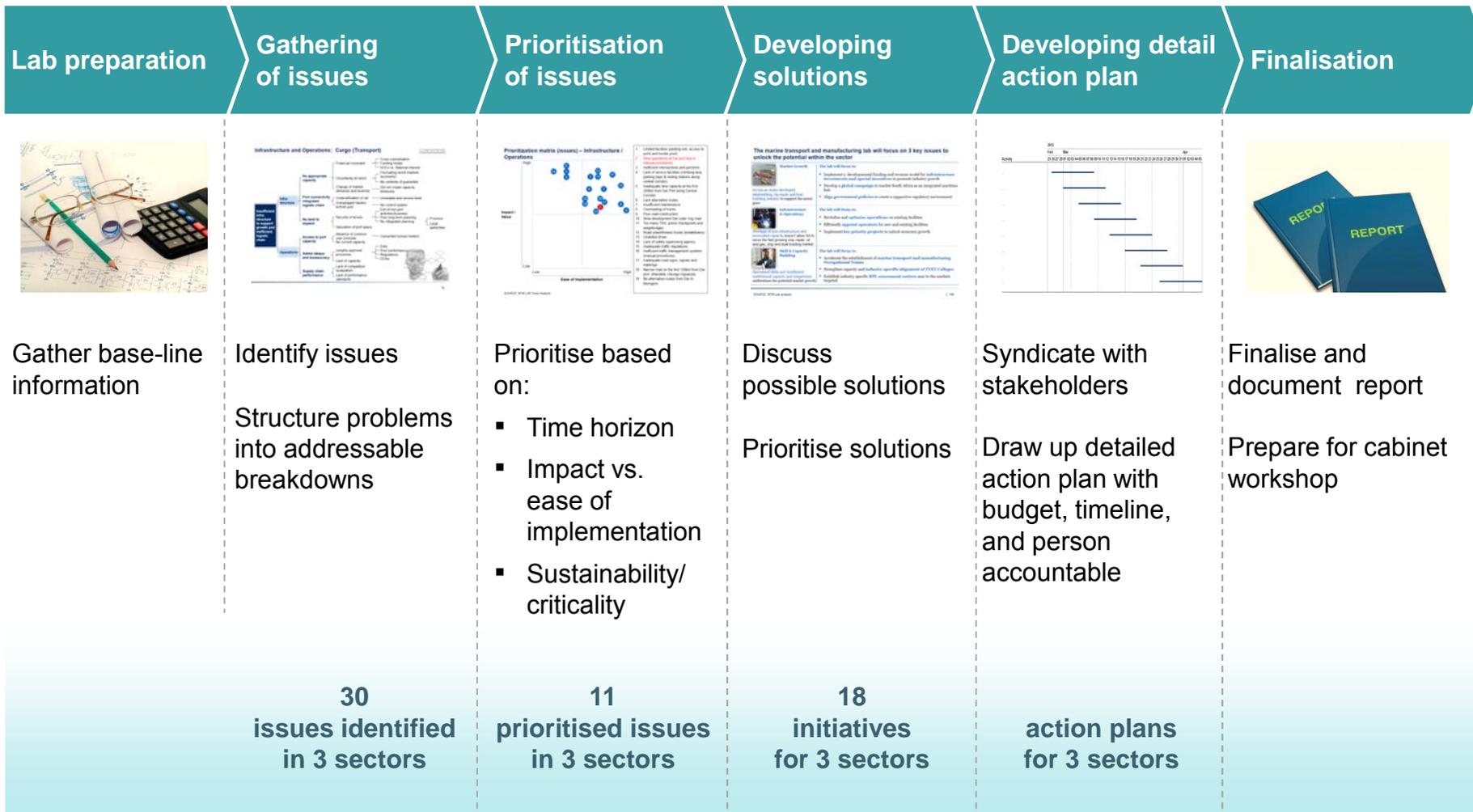
- Contribution to GDP by R14-23 bn
- Number of total jobs created by 40-50,000
- However, the MTM industry faces **significant challenges** to growth:
 - It is outdated with insufficient and expensive infrastructure.
 - It has Inadequate artisanal and professional skills.
 - There is limited support for market growth from public procurement.
 - There is limited support for a national ship registry or flagging of SA ships.
- The MTM Lab developed a **set of 18 initiatives to address these challenges** and accelerate industry growth that:
 - Create a supportive policy and funding environment and fast-track priority infrastructure projects
 - Identify and develop the required skills through a robust classroom and workplace-based system
 - Encourage the establishment of an SA-flagged fleet for coastal and international shipping
 - Develop a market by requiring local content for all public procurement and build a strong private-sector market
- These initiatives will deliver significant direct jobs and revenue for South Africa by 2019:
 - Direct jobs: ~15,220 (with an additional 39-46,000 more through the employment multiplier)
 - New revenue: ~R18.8bn in the first five years
- To deliver on these initiatives, the MTM lab created a **detailed implementation plan, budget requirement, KPIs and a proposed governance system**
 - Total 5-year government CAPEX spend: R14.5bn
 - Total 5-year government OPEX spend: R6.6bn

The Marine Transport and Manufacturing (MTM) lab worked for six weeks to gather and prioritise issues and develop solutions and action plans

July 8, 2014

6 weeks

August 15, 2014



More than 50 people from over 20 organisations engaged in the MTM lab, representing ~7,200¹ hours of work

<p>DEA</p>  <p>environmental affairs Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA</p>	<p>DHET</p>  <p>higher education & training Department: Higher Education and Training REPUBLIC OF SOUTH AFRICA</p>	<p>DoT</p>  <p>transport Department: Transport REPUBLIC OF SOUTH AFRICA</p>	<p>DPE</p>  <p>public enterprises Department: Public Enterprises REPUBLIC OF SOUTH AFRICA</p>	<p>The DTI</p>  <p>the dti Department: Trade and Industry REPUBLIC OF SOUTH AFRICA</p>
<p>EDD</p>  <p>basic education Department: Basic Education REPUBLIC OF SOUTH AFRICA</p>	<p>National Treasury</p>  <p>national treasury Department: National Treasury REPUBLIC OF SOUTH AFRICA</p>	<p>DPME</p>  <p>performance monitoring and evaluation Department: The Presidency REPUBLIC OF SOUTH AFRICA</p>	<p>SAMSA</p>  <p>SAMSA SOUTH AFRICAN MARITIME SAFETY AUTHORITY</p>	<p>Saldanha IDZ</p>  <p>SALDANHABAYIDZ</p>
<p>NPC</p>  <p>national planning commission Department: The Presidency REPUBLIC OF SOUTH AFRICA</p>	<p>Eastern Cape Province</p> 	<p>Kwa-Zulu Natal Province</p> 	<p>Northern Cape Province</p> 	<p>Western Province</p> 
<p>PetroSA</p>  <p>PetroSA</p>	<p>Richard's Bay IDZ</p>  <p>RICHARDS BAY INDUSTRIAL DEVELOPMENT ZONE</p>	<p>Coega IDZ</p>  <p>COEGA DEVELOPMENT CORPORATION</p>	<p>DAFF</p>  <p>agriculture, forestry & fisheries Department: Agriculture, Forestry and Fisheries REPUBLIC OF SOUTH AFRICA</p>	<p>Assoc. of Shipbuilders and Ship Repairers</p>  <p>ASR</p>
<p>MIASA</p>  <p>MIA SA MARINE INDUSTRY ASSOCIATION SOUTH AFRICA</p>	<p>Grindrod</p>  <p>GRINDROD</p>	<p>Transnet</p>  <p>TRANSNET</p>	<p>SAOGA</p>  <p>SAOGA SOUTH AFRICAN OIL & GAS ALLIANCE</p>	<p>OPASA</p>  <p>OPASA</p>

1 Average of 30 people for 30 days, working 8 hours a day

SOURCE: MTM Lab

CONTEXT

As a maritime country, South Africa is committed to developing its MTM industries

Aspirations in accordance with IPAP and DEA

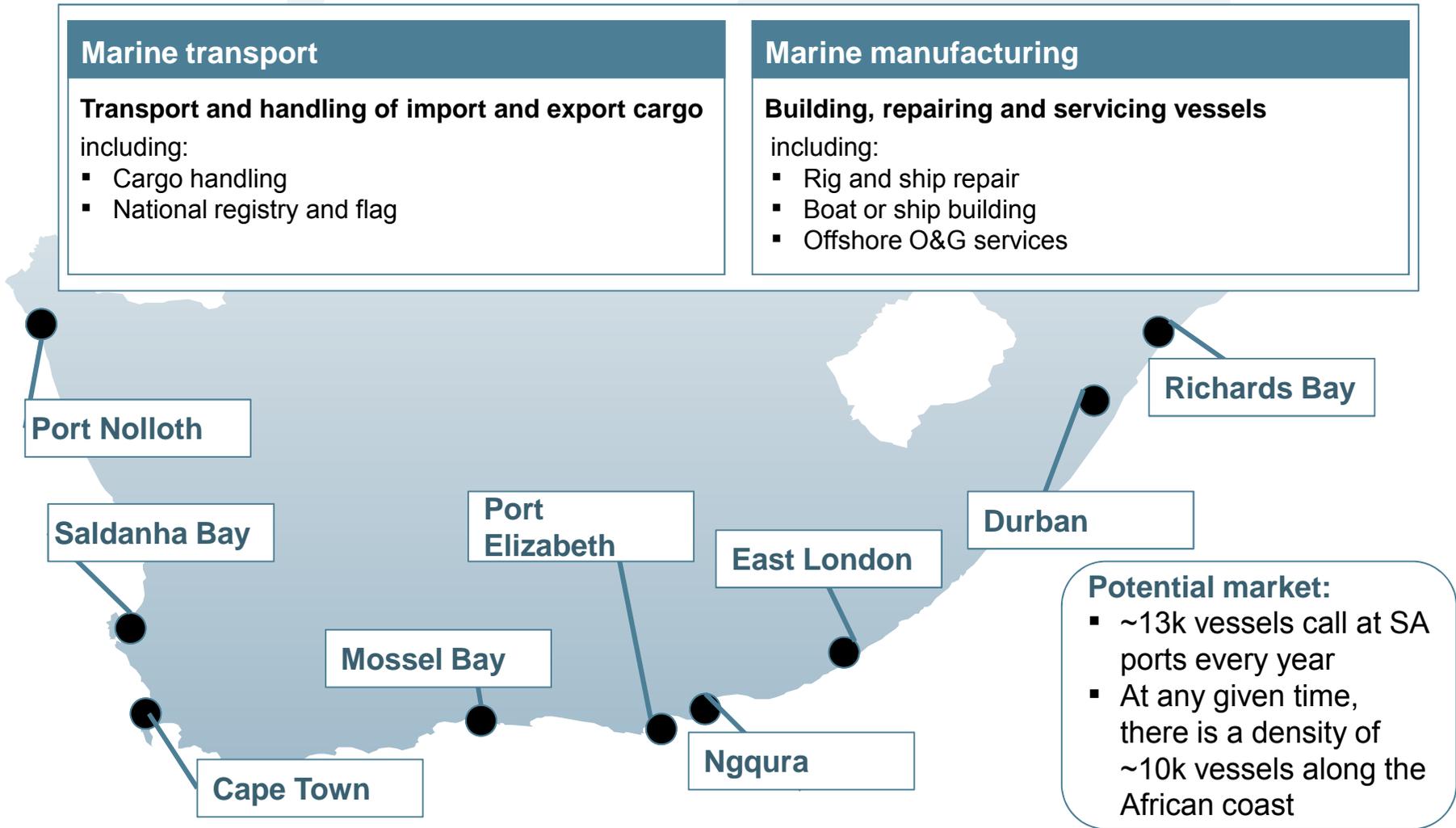
- The Department of Environmental Affairs (DEA) has published a White Paper on the **National Environmental Management of the Ocean** that sets out the following:
 - **Under Ocean Governance Guiding Principles:**
 - Identifying of economic opportunities that contribute to the development needs of the poor and vulnerable within the population, ensuring human dignity;
 - **Under Ocean Governance Objectives:**
 - Enhancing national human and technical capacity to better understand and utilise ocean resources and opportunities

Aspirations in accordance with NGP and PICC

- The New Growth Path (NGP) has set a goal of **5 million new jobs by 2020**, driven mainly by infrastructure development. The **Presidential Infrastructure Coordinating Committee(PICC)** stipulates **18 Strategic Integrated Projects (SIPs)** as key infrastructure projects for development. Five of these are in MTM:
 - SIP 1: Unlocking the Northern Mineral Belt with Waterberg as the Catalyst
 - SIP 2: Durban-Free State-Gauteng logistics and industrial corridor
 - SIP 3: South- Eastern node and corridor development
 - SIP 5: **Saldanha-Northern Cape development corridor**
 - SIP 8: Green Energy in support of South African's economy

CONTEXT

South Africa has an opportunity to build on its SOC-managed and controlled port system to develop the MTM industry



CONTEXT

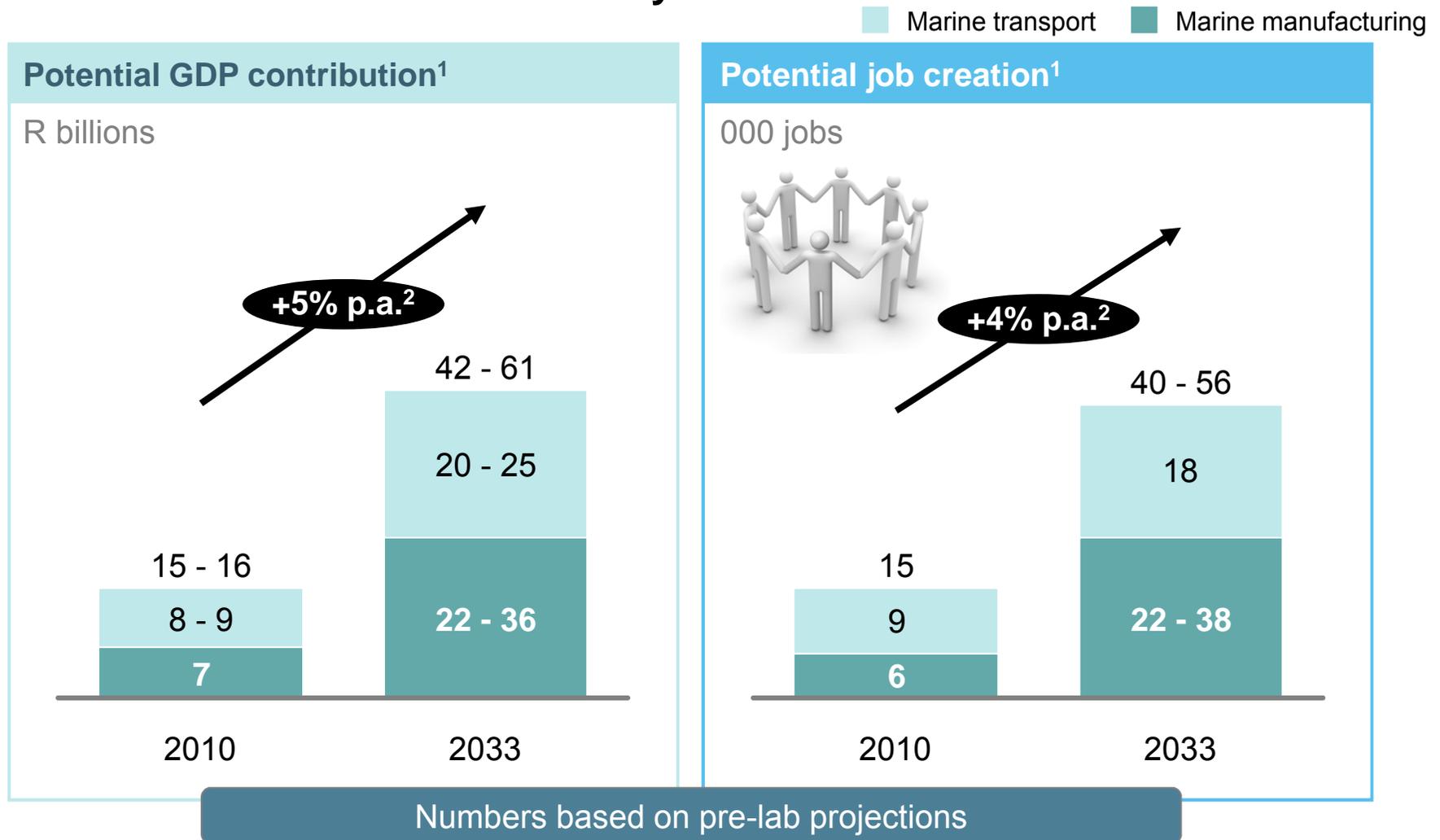
The MTM sector is one of the most promising ways to develop the economic potential of SA's oceans

	GDP, R bn			Jobs, 000	
	2010	2033	CAGR, %	2010	2033
Marine transport and manufacturing	16	42-61	6%	15	40-56
Tourism	15	25-35	4%	90	150-225
Offshore oil and gas	4	11-17	9%	0.4	0.8-1.2
Construction	8	20-21	4%	162	390-407
Renewable energy	0	14-17	25%	-	0.9-1.1
Fisheries and aquaculture	7	10-16	4%	30	170-250
Communication	4	7-10	4%	19	35-52
Desalination	0	0.1-0.1	1%	0	1.6-1.6
Marine protection services	-	-	-	-	-
Total	54	129-177		316	788-1,004

Numbers based on pre-lab projections

VISION

Over the next 20 years, MTM has the potential to grow into a significant driver of the South African economy



1 Only direct potential (i.e., multiplier effect ignored) from the Exclusive Economic Zone (EEZ) considered; 2 Growth rate per annum (p.a.) is based on the projected base 2033 value

SOURCE: StatsSA; IHS Global Insight; expert interviews; TNPA Port Development Plan 2011/2012; Transnet Corporate plan 2013/2014; NMMU estimates; AME; McCloskey; Platts; press search

VISION

Through Operation Phakisa, our vision is to accelerate MTM's current GDP contribution and job creation potential

	Initial Lab vision	Baseline (2010)	Target for interventions
 <p>GDP contribution</p>	<ul style="list-style-type: none"> Accelerate the sector's GDP contribution 	<ul style="list-style-type: none"> ~R15bn 	<ul style="list-style-type: none"> Increase contribution to GDP by R14-23bn by 2019
 <p>Job creation</p>	<ul style="list-style-type: none"> Increase total employment 	<ul style="list-style-type: none"> ~15,000 jobs 	<ul style="list-style-type: none"> Increase the total number of jobs created by 40,000-50,000 by 2019

Numbers based on pre-lab projections

Accelerated growth will be driven by marine manufacturing and a national ship registry

Key drivers

1 Marine transport¹

- A** While **cargo growth** is forecast to continue to drive growth, it is a mature market and will therefore difficult to achieve breakthrough growth here
- B** **National registry** for local ownership of shipping vessels offers significant growth potential

2 Marine manufacturing

- D** The ship and rig **repair and refurbishment** sector provides an opportunity to growing MTM
- E** The **boat-building** (including yachts) sector also offers growth potential
 - There is large potential to make use of our **location, competitive labour costs and existing skill base**

¹ "C" is included in the full report but not in this summary

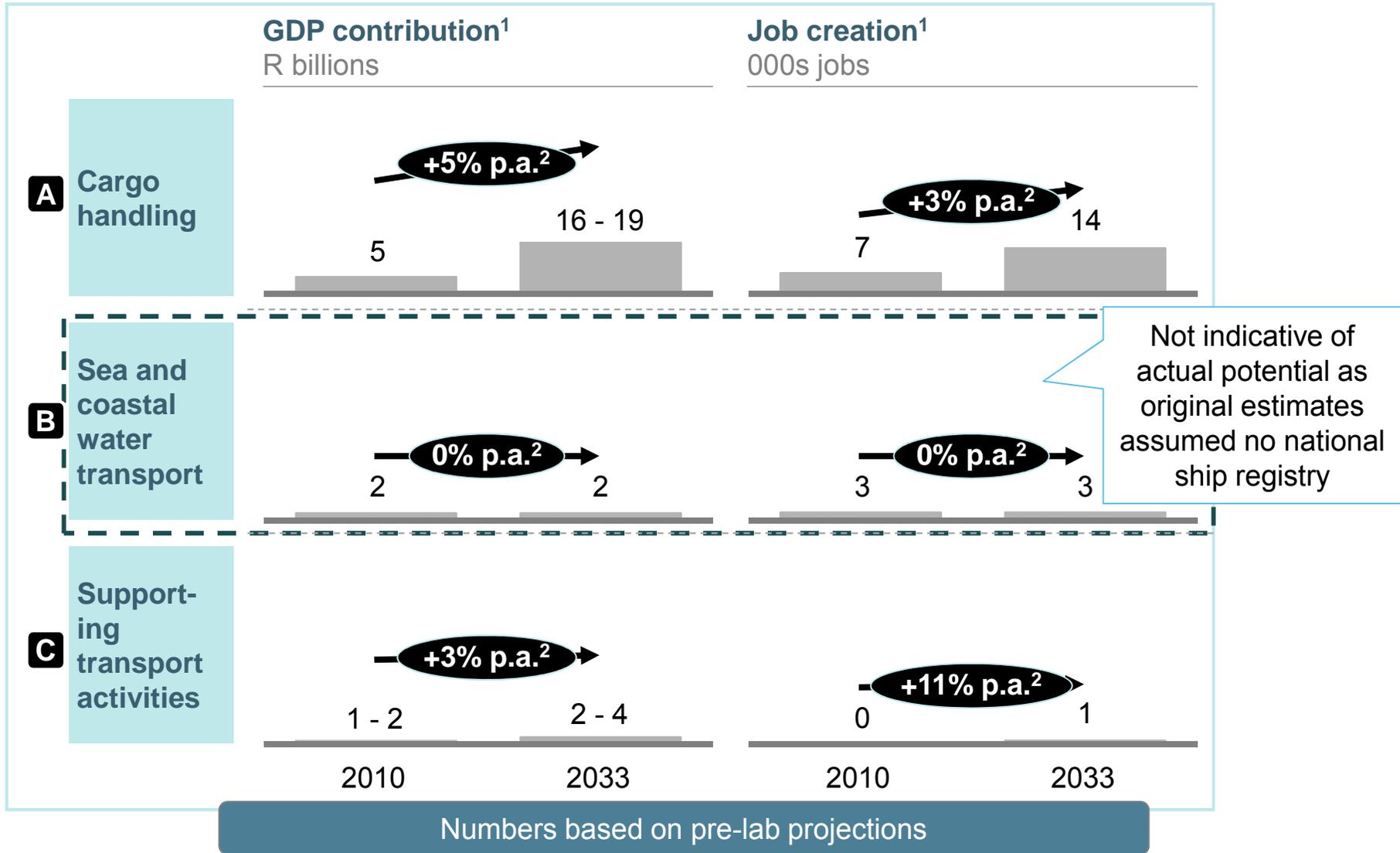
The Lab discussed other ideas, but decided not to pursue them in more detail

	Description	Current status
Small harbours	<ul style="list-style-type: none">Expand the use of small harbours to drive economic growth through fisheries and other activities	<ul style="list-style-type: none">Mini-lab conducted within MTM labAppendix included with full report providing more details
Natural gas	<ul style="list-style-type: none">Establish natural gas-handling facilities in more ports (e.g., Coega)Prepare to support the natural gas industry	<ul style="list-style-type: none">Initial conversations held in labsTNPA made medium- and long-term provisions; need to align timing
Cargo handling in Richard's Bay	<ul style="list-style-type: none">Increase capacity for cargo handling in Richard's Bay to prepare for growing volumes	<ul style="list-style-type: none">Discussed briefly in lab, determined that Richard's Bay currently has sufficient capacity to handle an increase
General Cargo handling in Ngqura	<ul style="list-style-type: none">Increase capacity for general cargo handling at Port of Ngqura to prepare for growing volumes generated by the IDZ	<ul style="list-style-type: none">Discussed briefly in Lab, determined that more volume investigation requiredMore details included in Appendix

LONG-TERM POTENTIAL

1 Though cargo handling has potential, the MTM Lab decided to focus on transport activities and a national ship registry

 Focus areas



¹ Only direct potential (i.e., multiplier effect ignored) from the Exclusive Economic Zone (EEZ) considered; ² Growth rate per annum (p.a.) is based on the projected base 2033 value

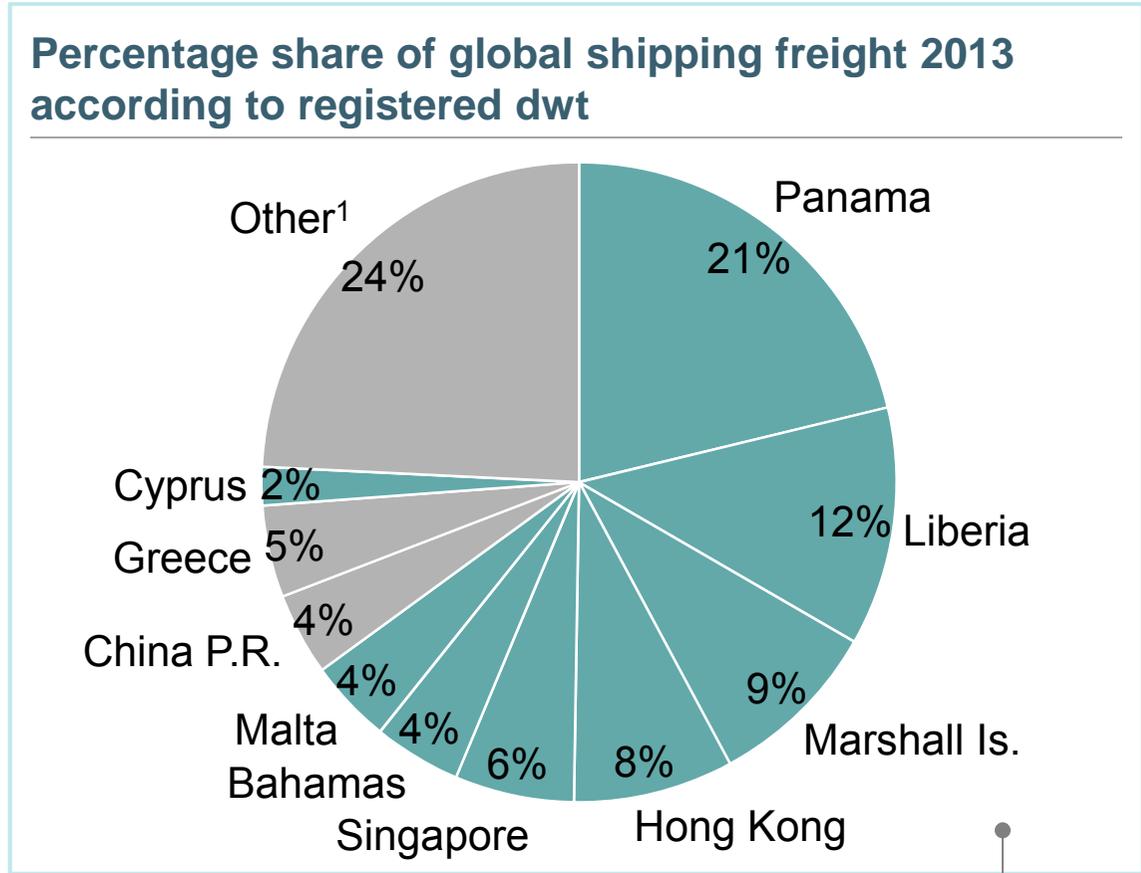
SOURCE: StatsSA; IHS Global Insight; expert interviews; TNPA Port Development Plan 2011/2012; Transnet Corporate plan 2013/2014; NMMU estimates; AME; McCloskey; Platts; press search

B South Africa does not have the capacity to carry its own trade to market, move it around the coast, or support its own offshore strategic energy production installations

	Potential	What is required	What exists
Shipping	<ul style="list-style-type: none"> 300 million tons of cargo moving internationally in imports and exports 	<ul style="list-style-type: none"> 300 vessels to support at least 40% of the trade 	<ul style="list-style-type: none"> Currently no ships carry SA cargo internationally
	<ul style="list-style-type: none"> 1.2 million tons of liquid fuels moving along the coast 	<ul style="list-style-type: none"> 3 coastal tankers, vessels and additional cargo vessels to move coastal cargo 	<ul style="list-style-type: none"> Currently no SA-flagged ships carry SA cargo coastally
	<ul style="list-style-type: none"> Offshore oil and gas activities that require a supporting fleet of vessels 	<ul style="list-style-type: none"> 8 vessels to support the offshore oil and gas operations 	<ul style="list-style-type: none"> Currently no SA support offshore operations
Seafarers	<ul style="list-style-type: none"> Employment of 21,000 seafaring and support staff 	<ul style="list-style-type: none"> Capacity to produce seafarers 	<ul style="list-style-type: none"> 240 officers per year are produced, leaving a huge gap
	<ul style="list-style-type: none"> Capacity to export seafarers to international shipping market 		

B The global market for shipping freight is dominated by a limited number of well-established players

- Open registry (flag of convenience)
- National or international registry



» Top 10 registry countries account for over 75% of registered tonnage, eight of which have open registries

South Africa currently has no registered ships

1 Other includes UK, US, Italy, Japan, Germany, Norway, and 176 other countries

SOURCE: Clarksons World Fleet Register, data as of October 2013

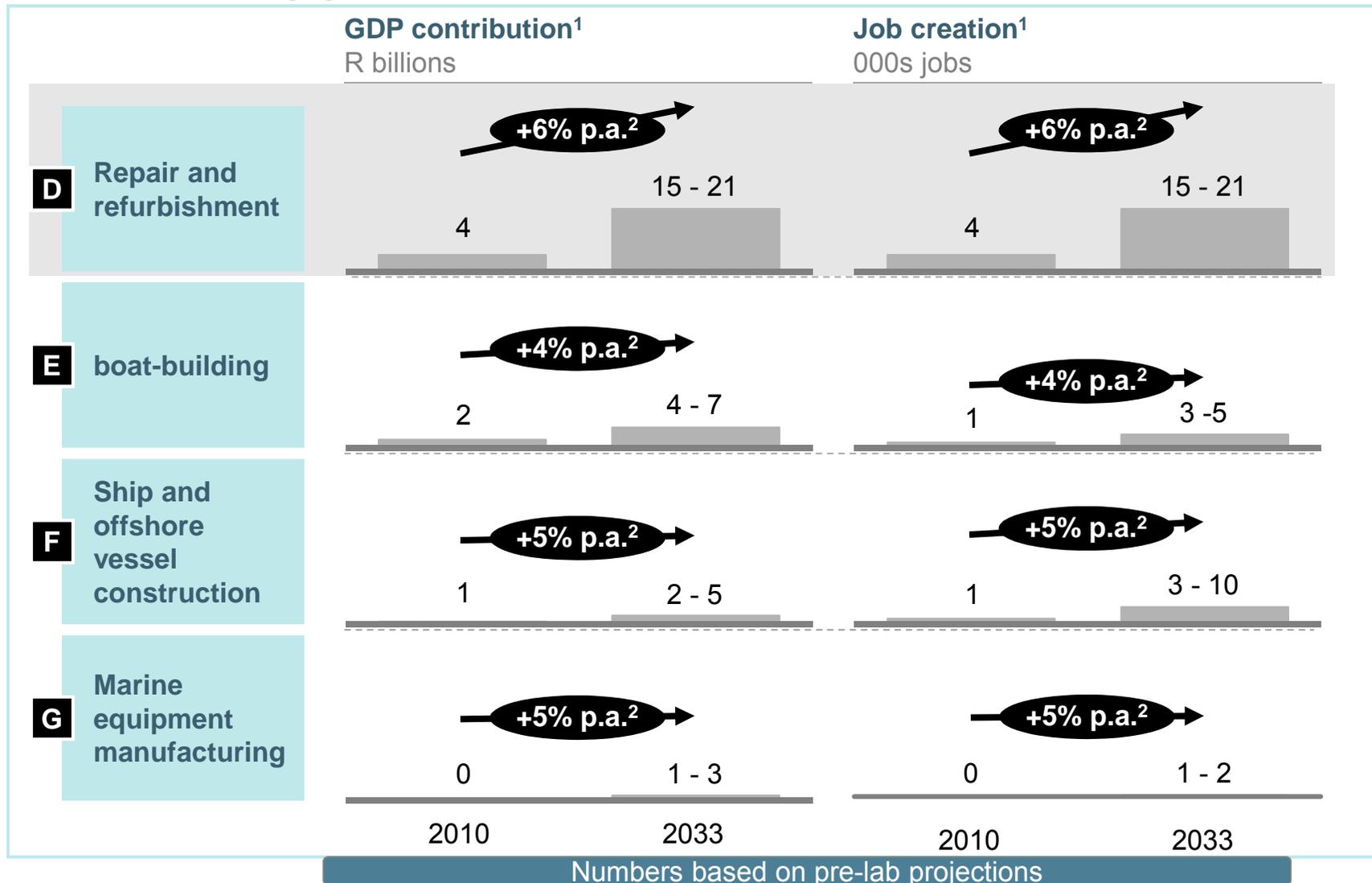
B There are three registry options available for countries that wish to participate in the market

		National registry	International registry	Open registry
Requirements	Vessel registration	<ul style="list-style-type: none"> Vessel registered in same country in which it is majority/wholly owned 	<ul style="list-style-type: none"> Vessel registered in same country as ownership or by foreign citizen/company with some sort of tie to domestic country 	<ul style="list-style-type: none"> Vessels do not have to be owned in flag state Flag state, which would not otherwise benefit, gains additional revenues
	Vessel ownership	<ul style="list-style-type: none"> Vessel must be either majority or wholly owned by domestic citizens 	<ul style="list-style-type: none"> Vessel must be owned by domestic citizen or a foreign corporation under certain restrictions 	<ul style="list-style-type: none"> Vessel does not need to be majority owned locally
	Crew nationality	<ul style="list-style-type: none"> Crew to be of same nationality and/or officers hold mariner credentials granted by nation 	<ul style="list-style-type: none"> Some crew, usually leadership, required to be citizens of flag state 	<ul style="list-style-type: none"> None or minimal
	IMO conventions	<ul style="list-style-type: none"> Adopt all or majority of IMO conventions 	<ul style="list-style-type: none"> Tend to adopt major IMO conventions but not necessarily all 	<ul style="list-style-type: none"> Usually a limited number of IMO conventions are adopted
	Parallel registration	<ul style="list-style-type: none"> Generally not permitted 	<ul style="list-style-type: none"> Parallel registration either not permitted at all or parallel registration into (but not out of) registry allowed 	<ul style="list-style-type: none"> Parallel registration quite fluid, both in and out of registry, but sometimes with time restriction
	Vessel restrictions	<ul style="list-style-type: none"> Generally no limits on vessel age, type, or size 	<ul style="list-style-type: none"> Some limits on vessel age, type, or size 	<ul style="list-style-type: none"> Generally have maximum age restriction or require special survey for vessels over a certain age in some cases
Country examples		<ul style="list-style-type: none"> United States United Kingdom 	<ul style="list-style-type: none"> Greece China 	<ul style="list-style-type: none"> Denmark Norway Panama Liberia Marshall Islands

LONG-TERM POTENTIAL

2 Ship and oil rig repair and refurbishment will be big drivers of marine manufacturing growth

■ Focus of next section



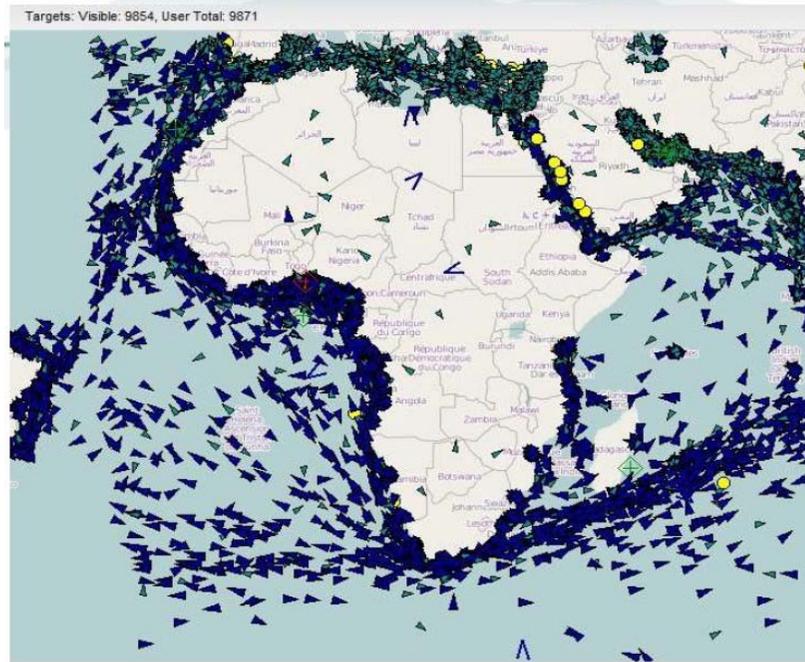
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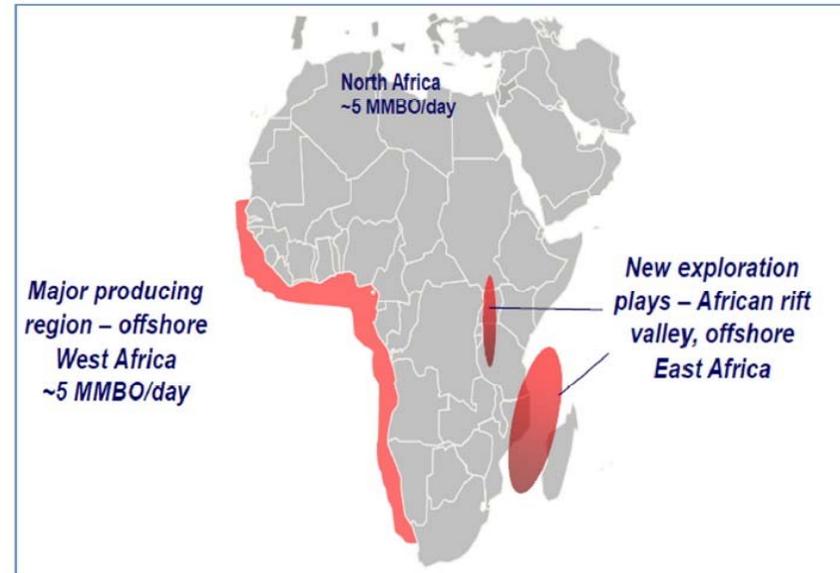
LONG-TERM POTENTIAL

D South Africa is ideally positioned to serve east-west cargo traffic and Africa's offshore oil and gas industry, given the regional potential

Significant maritime traffic exists around both the South African and African coast



Significant offshore oil and gas activity exists along both the east and west African coasts



Of the 80 rigs estimated to be in range of the Western Cape, only 4 (~5%) are serviced per year – offering significant potential for growth

LONG-TERM POTENTIAL

D The country's SOC-managed and controlled ship repair facilities owned by TNPA has potential for this industry

Port	Facility	Type	Dimensions ¹	Water depth ²	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		
	"A" berth	Repairs afloat	275m + 76m	11.8m	
	Repair Quay	Repairs afloat	458m x 2	11.8m	
Saldanha	Mossgas yard	Fabrication yard	35m quay 22ha with workshops	8.0m	
	Berth 204	Multi-purpose berth also used for repairs	61 x 15m 1.778 tons lift capacity		
Durban	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
	Floating Dock No. 3	Floating dock	107 x 27m 3.630 tons lift capacity		1 x 4 tons
	Workshop 24	Machine stop			
	Repair Quays		520m (in 3 sections)	6.1-8.5m	
East London	Dry dock	Graving dock	200 x 25m	8.5m	4 x 4-15 tons
	Workshop 17	Machine shop			
	Repair quay	Repairs afloat	106m	8.5m	1 crane
Richards Bay	No existing facilities				
Port Elizabeth	Main slipway	Slipway	1 200 ton lift capacity		
	Old slipway	Slipway	40 ton lift capacity		
	Workshop 17	Machine shop			
Ngqura	No existing facilities				
Mossel Bay	Slipway	Slipway	30 x 12m 250 tons lift capacity	5.0m	

1 Dock dimensions are length between caissons and width at cope level

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

SOURCE: MTM Lab analysis

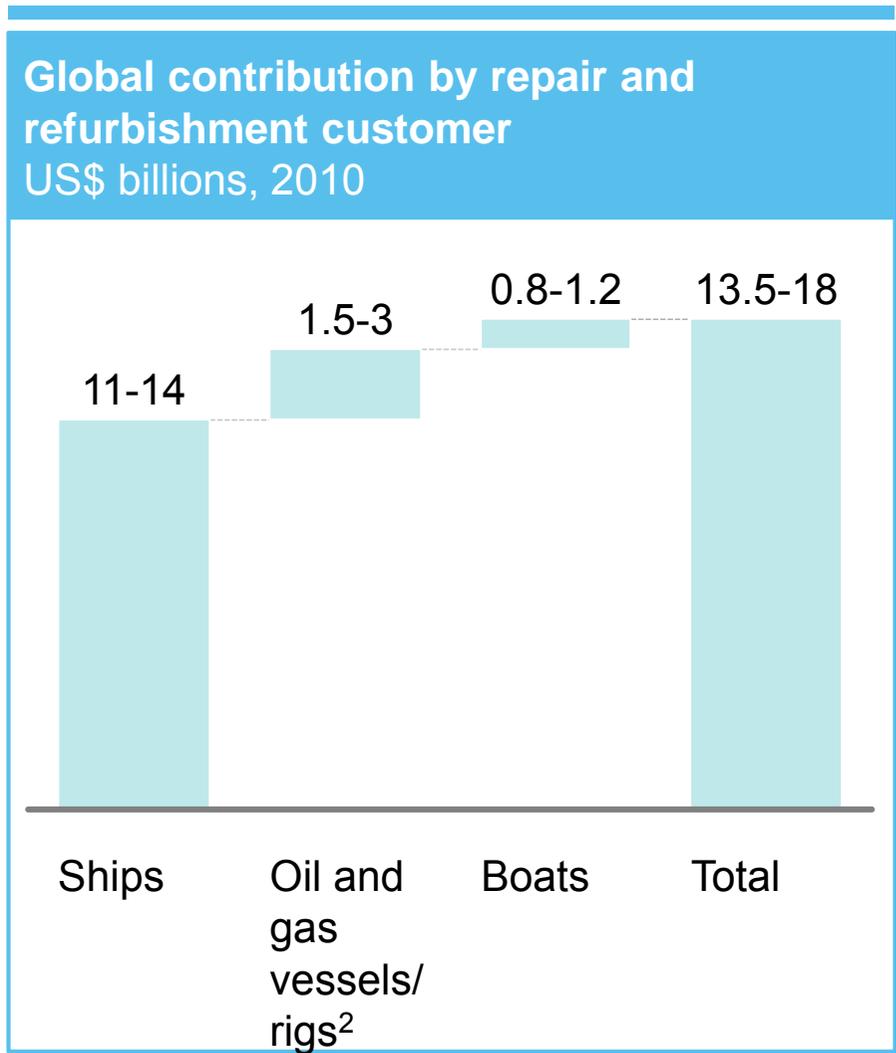
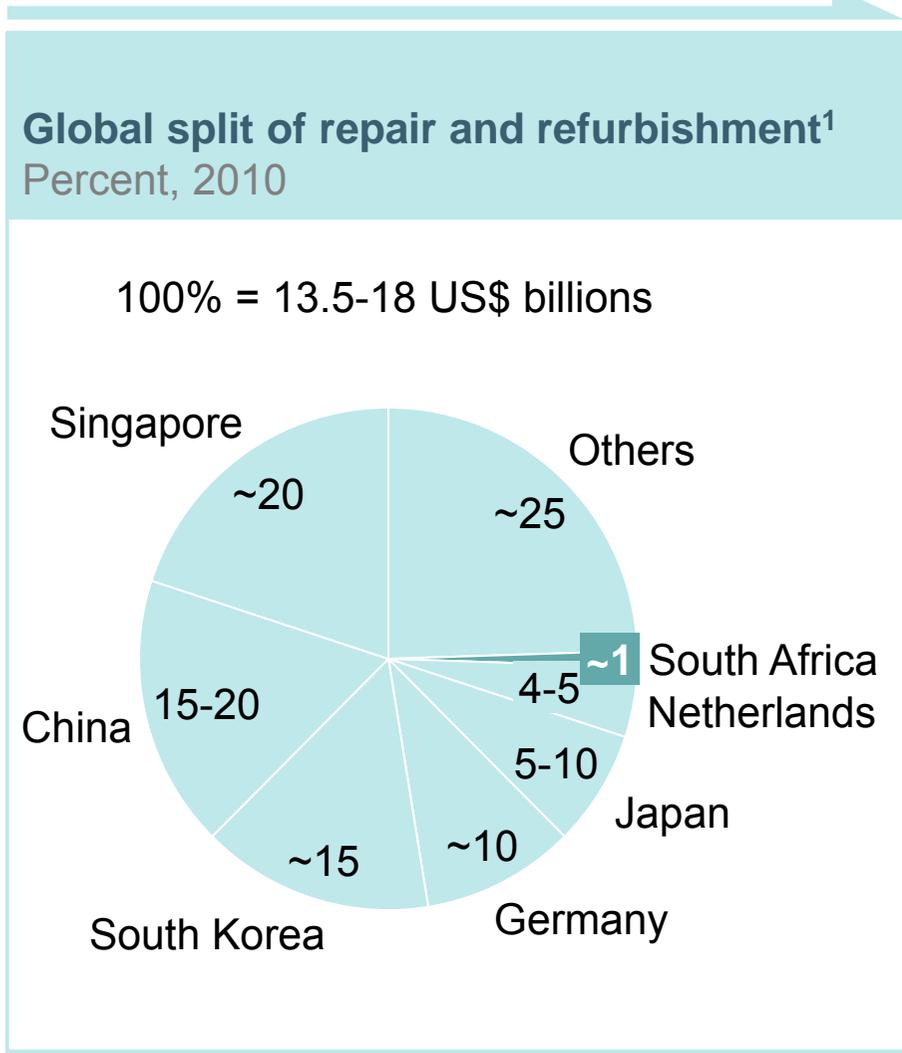
D A wide range of repair and refurbishment work can be undertaken at most of South Africa’s ports

Marine repair and refurbishment services required	Description	Examples of South Africa’s capabilities
Hull cleaning	<ul style="list-style-type: none"> Removal of sea life and dirt that affect hydrodynamic efficiency of vessel 	<ul style="list-style-type: none"> Cleaning services such as high-pressure water washing, grit blasting, tank cleaning and asbestos removals
Engine repair	<ul style="list-style-type: none"> Large diesel engine and propeller repair 	<ul style="list-style-type: none"> Ability to repair wide range of marine engines
Large vessel dry dock	<ul style="list-style-type: none"> Structural repairs and painting of hull 	<ul style="list-style-type: none"> Ships exceeding 300m in length can be repaired
Electronic system repairs	<ul style="list-style-type: none"> Navigation, monitoring and electrical equipment 	<ul style="list-style-type: none"> Majority of onboard electrical systems can be serviced
Offshore oil and gas vessel/rig repair	<ul style="list-style-type: none"> Maintenance, repair and inspection of offshore oil vessels 	<ul style="list-style-type: none"> Sophisticated wet work on offshore vessel/rigs can be completed

- Wide range of services available, e.g., structural, mechanical and electronic in dry and wet docks
- Services are available at most ports in South Africa

D However, South Africa only captures up to 1% of the global repair and refurbishment market

ESTIMATES



1 Includes upgrade and conversion

2 Includes FPSO, FSO, drillships, semis, jackups

SOURCE: Clarkson, Konzept Analytics, OECD, Press search, "The Offshore Drilling Industry and Rig Construction in the Gulf of Mexico", McKinsey analysis

D South Africa’s high traffic location, low cost and service sophistication make the industry globally competitive

	Advantage	Competitor example
High traffic location	<ul style="list-style-type: none"> South Africa is ideally positioned to service: <ul style="list-style-type: none"> – East-west cargo traffic that is too large for the Suez canal – African offshore oil and gas vessels/rigs that are drilling in Mozambique and Namibia 	<ul style="list-style-type: none"> Singapore – Around half of all container traffic passes through the Far East and Asia, making Singapore a convenient location for repairs and refurbishment
Low cost	<ul style="list-style-type: none"> Total repair costs are driven by labour (~60%) and South Africa competes favourably when compared to its EU counterparts 	<ul style="list-style-type: none"> China – Input costs are comparatively low due to large supply of labour (i.e., low labour cost) and government subsidies
Service sophistication	<ul style="list-style-type: none"> South Africa can undertake a wide range of repairs, e.g., ship repairers in Durban can undertake an extensive range of repairs on vessels in excess of 300m and are supported by specialised local firms 	<ul style="list-style-type: none"> Germany – In addition to a wide range of high-quality repair and refurbishment services, support services are also offered, e.g., repair and refurbishment brokerage

LONG-TERM POTENTIAL

D The captured market for ship repair is largely in the public sector, where local companies complete 100% of maintenance

	SA Government and SOCs type of Vessels						Total
	Tugs	Research	Fishery patrol/ patrol	Dredger	Pilot	Other ²	
DoD (SAN)	2		5			7	14
DAFF		2	4				6
Transnet (TNPA)	30	4		5	9	7	55
DEA		2					2
SAPS			3				1
DAC ¹						2	2

¹ Robben Island

² Including submarines, mine hunters, frigates, work boats

SOURCE: SA Shipping Register 2014; SA Navy website

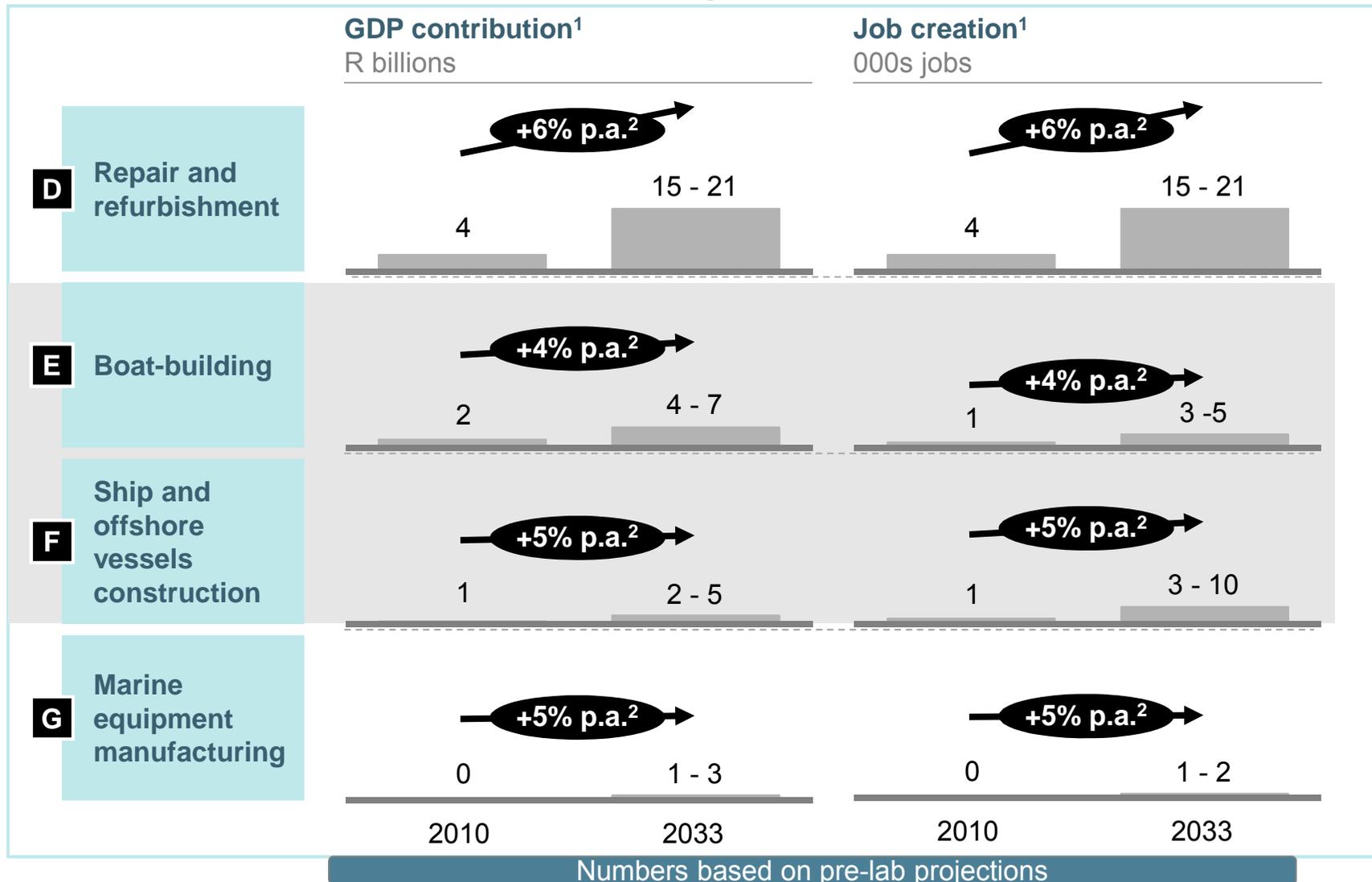
LONG-TERM POTENTIAL

D The potential for this industry grows when the number of ship calls at South African ports is considered

	Cape Town	Saldanha	Durban	East London	Richards Bay	Port Elizabeth	Mossel Bay	Total
General cargo	323	80	670	8	273	31	3	1 388
Dry bulk	364	291	631	26	1 093	106	4	2 517
Containers	1 028	2	1 783	66	23	504	1	3 407
Tankers	255	9	538	39	196	60	64	1 151
Passenger vehicles	28	0	68	8	15	11	3	133
Car carriers	7	0	293	101	0	117	0	518
RoRo	13	0	69	1	9	0	0	92
Other deepsea	10	1	83	9	12	0	0	115
Coastal	60	5	61	42	10	42	29	249
Fishing vessels	823	40	136	27	72	375	1 027	2 500
Other	252	22	75	13	21	25	396	804
Total	3 163	450	4 407	340	1 724	1 273	1 527	12 884

2 Boat-building growth opportunities are concentrated in accessing SA public procurement and building small vessels

■ Focus of next section



¹ Only direct potential (i.e., multiplier effect ignored) from the Exclusive Economic Zone (EEZ) considered; ² Growth rate per annum (p.a.) is based on the projected base 2033 value

LONG-TERM POTENTIAL

E South Africa has the capability to build and repair various types of vessels up to 140 metres long

Patrol vessels



Ferries



Tug boats



Bunker barges



Navy vessels



Research vessels

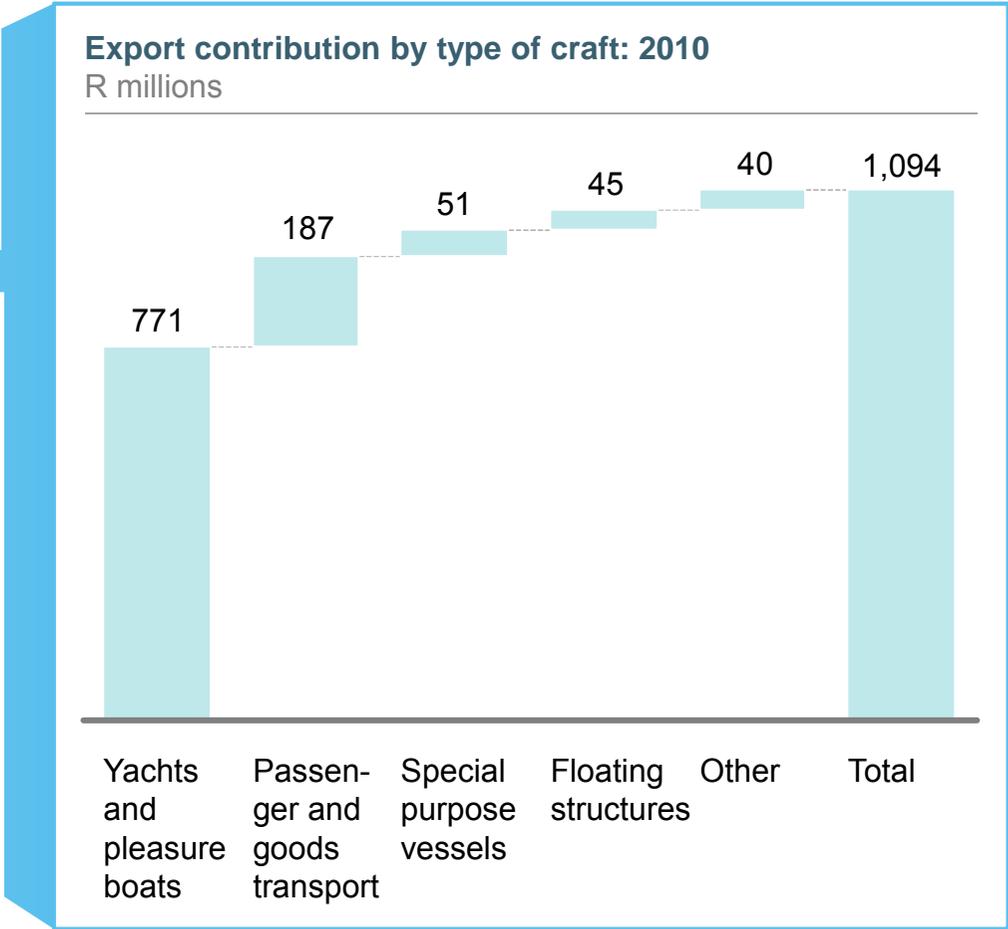
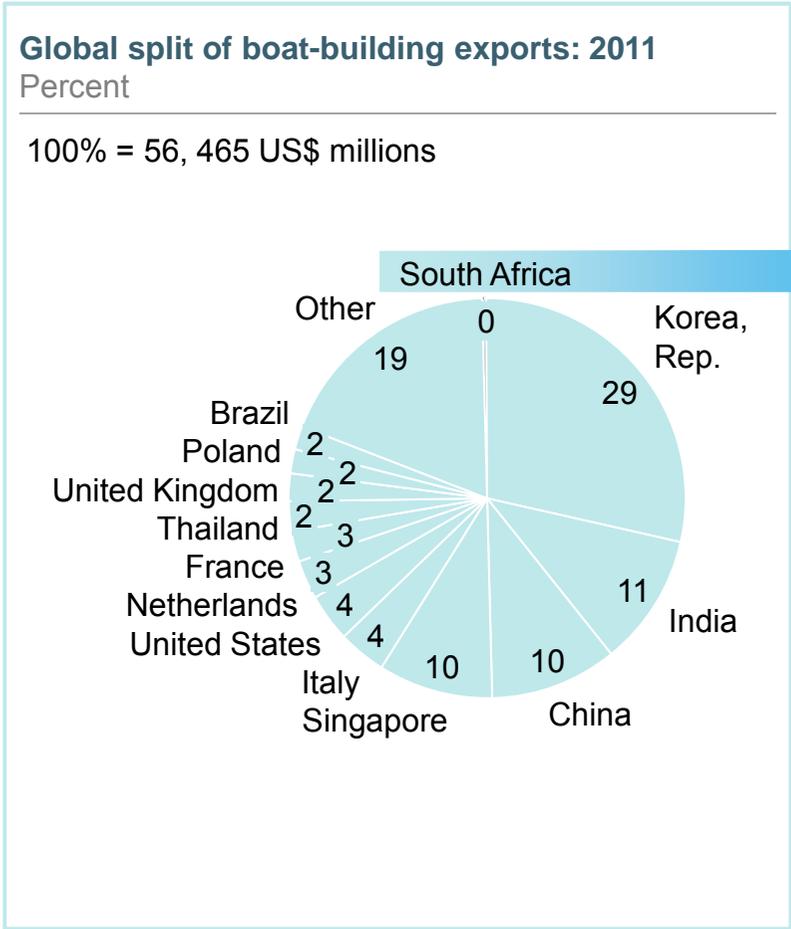


FPSOs



LONG-TERM POTENTIAL

E South Africa contributes just 0.24% to the global export market, mainly in the area of luxury craft, e.g., catamarans



SOURCE: World Integrated Trade Solution – World Bank and UNCTAD; Wesgro

E South Africa’s geographic location and expertise in building of small vessels provide a competitive advantage

South Africa has a strategic advantage in boat-building

	Description
Location	<ul style="list-style-type: none"> The growing offshore oil and gas industry (in Mozambique and Namibia) has provided an opportunity for local suppliers of patrol and support vessels
Design customisation	<ul style="list-style-type: none"> South African boat builders offer highly customised products to consumers
Value for money	<ul style="list-style-type: none"> South African boat-building has a global reputation for quality and dependability at competitive prices

There is potential for sustainable growth

Assumptions	
2010 SA production value	~R1.6 bn
Historical export growth rate of boats globally	~4% ¹
Industry experts’ view of projected growth rate	~5-10%
Conservative view of projected growth rate	~4-7%

Total value 2033: R 4-7bn

Growth projection supported by:

- DTI public procurement for all state vessels provides a guaranteed domestic market
- Currently untapped high potential markets, e.g., Angola, Kenya
- Growing demand for boats from BRIC countries, particularly India

¹ Experts claim that growth rate was stunted by global recession and could have been as high as 6%

LONG-TERM POTENTIAL

E The SA government and SOCs are currently planning to procure 18 vessels over the next three to five years

Department	Vessel description	Number	Estimate value, R	Local content requirement ¹
▪ Navy	▪ Hydrographic survey	▪ 1	▪ R900mn	▪ 55%
▪ Navy	▪ Inshore patrol vessel	▪ 3	▪ R1.2bn	▪ 60%
▪ Navy	▪ Offshore patrol vessel	▪ 3	▪ R2.4bn	▪ 60%
▪ Transnet	▪ Tug	▪ 9	▪ R1.45bn	▪ 55%
▪ SAMSA	▪ Salvage	▪ 2	▪ R1bn	▪ 60%

Ensuring local content in these procurement processes will drive significant value for MTM production

SOURCE: DTI's Proposal for the designation of working vessel Sept 2013

1 Components: Hull construction; pipe fitting, electrical fitting, outfitting, (carpentry, carpets, beds, bunks, plumbing) , small components (pumps)

KEY CHALLENGES

MTM will focus on resolving specific problems within these focus areas

1

Infrastructure

- Current ship repair facilities are in a state of disrepair
- High rental/tariff cost and short tenure of leases for marine manufacturing
- Inadequate port facilities and operational infrastructure for marine manufacturing



2

Regulatory environment

- Onerous immigration regulations
- Delays in insertion of rebate item in Customs and Excise Act to remove VAT and excise duty
- Unfavourable tax regime for coastal shipping can raise costs by ~30%



3

Skills and capacity

- Inadequate workplace-based training limits supply of work-ready skills for the industry
- Insufficient occupational-specific practical learning occurring within the college system
- Classification of learners in the workplace as employees increases costs of placement and discourages private sector participation



4

Market growth

- No integrated strategy for public sector procurement to develop local industry
- No mandatory local content requirement
- No alignment of BEE codes in petroleum or mineral resources that would encourage the use of local transport/shipping companies
- No SA-flagged ships executing international shipping or coastal operations
- Lack of institutional support for market growth



There are three major constraints to providing adequate infrastructure at affordable cost

- **The current ship repair facilities are in a state of disrepair**
 - Outdated infrastructure built during World War II
 - Maintenance and upgrades have been neglected for an extended period and this compromises efficiency and safety.
 - Ability to capture only 5% of the available market in ship repair; South Africa has had to turn away business.

- **High rental/tariff cost and short tenure of leases for marine manufacturing**
 - High rental charges of port land or facilities, water space and dry docking charges or tariffs as well as overstated asset values creates a risk of pricing the industry out of the market (Cape Town is one of the most expensive dry docks in the world; port land in Namibia and Mozambique has 1/3 of the rental costs of Durban).

- **Inadequate port facilities and operational infrastructure for marine manufacturing**
 - Lack of dedicated and purpose-built infrastructure to serve industry needs – new areas to be made available for industry growth, new entrants and transformation

Regulatory constraints hinder growth

- **Onerous immigration regulations**

- In line with IMO regulations, the Department of Home Affairs has in the past interpreted an oil rig as a marine vessel. The Department of Home Affairs now regards an **oil rig as a refinery**. This requires crew to be in possession of a visa to disembark or transfer to another destination.
- South African ports are not classified as ports of entry from an immigration perspective in the offshore oil and gas industry (e.g., crew changes). This makes it complicated to do business with rig/vessel/helicopter operators

- **Delays in inserting the rebate item in the Customs and Excise Act to remove VAT and excise duty in marine manufacturing**

- The amendment to the current Customs and Excise Act to allow **goods imported or cleared for new manufacture** does not cover temporary imports for refurbishments or beneficiation of equipment for export.

- **Taxation on coastal vessels means that SA-registered ships cannot compete favourably**

MTM faces constraints to ensuring adequate skills (1/2)

Limited cross-organisational endorsement and funding for an occupational team system to drive education and learning development:

- There is limited cross-cutting and sector-relevant development taking place in learning programmes and curricula that should support South Africa's growth targets.
- This leads to pockets of excellence forming where support and funding exists, and low learner uptake by industry once they enter the job market.
- The ageing trade workforce (average age of an artisan is 55 years) increases the urgency of equipping more persons with the right knowledge and practical experience in time to support potential market demands.

Inadequate and insufficient implementation of an appropriate RPL system prevents many capable people from becoming formally qualified and certified to act as mentors:

- Artisan development requires a 1:2 mentor-to-learner arrangement: South Africa needs more mentors to teach more learners.
- The method of the knowledge assessment portion of the current RPL system is mismatched with the aptitude of RPL candidates and causes incorrect articulation between candidate and assessor.

High demand for skilled labour on rig repair projects leads to importation of labour. When Cape Town, Saldanha Bay and Ngqura are full, there is insufficient SA labour to meet demand and foreigners must be hired.

MTM faces constraints to ensuring adequate skills (2/2)

- **The bureaucratic and legislative environment prevents workplace-based training from taking place, especially for the trades:**
 - An 18-month work place experiential learning programme is a mandatory requirement in terms of the 7-step Artisan Development Model.
 - However, the over-rigorous SETA/sectorial workplace accreditation and approval system dissuades companies from offering training to TVET College graduates prior to them being trade-tested.
 - Current status of learners in the workplace (Section 200 (a) of LRA and Section 18 (2) of SDA) discourages industry, as the graduate is not certified or experienced to undertake tasks (independently) and requires monitoring by a mentor. **Learner throughput to industry???????**

- **MTM industry requires a diverse range of skills and specialisations:**
 - Under-investment in specialised facilities (workshops, equipment, materials and lecturers) limits opportunities for focused interventions to address the skills needed and the existing base (RPL).
 - Education and training institutions must become specialists in their fields and be closely networked and partnered with industry to ensure the appropriate exposure to work places, equipment and technology developments, and ultimately ensure learner throughput to industry.

- **South Africa supplies few seafarers to the global market:**
 - The general public has limited awareness of seafarer opportunities
 - Insufficient capacity at training institutions and insufficient training berths
 - Lack of coordination between relevant institutions
 - No clear career pathways or support for research

MTM faces constraints to growing its market

- **No integrated strategy for the procurement of public sector maritime fleet to develop local industry**
 - For example, DAFF, DEA, DOT, SAPS, Transnet, Petro SA, SANDF, etc., all procure maritime fleet individually from different suppliers, thus losing out on economies of scale and the opportunity to create demand for the local ship building industry
 - Compliance to the DTI boat-building designation

- **No mandatory local content requirements for private companies**
 - The current aging fishing fleet of +/- 900 represents a potential market opportunity for the SA boat-building industry that could be lost if mandatory local requirements are not linked to fishing licences
 - Oil and gas exploration licences do not have any local content requirement (services, fabrication)

- **No SA-flagged ships executing international cargo shipping or coastal operations**
 - UNCTAD¹¹ allows 40% of cargo to be shipped by SA-flagged ships, but currently 0% is shipped
 - Coastal cargos carried by foreign-flagged ships do not support transshipment/short-sea shipping
 - Limited support for production and employment of SA seafarers in the global market

- **Lack of institutional support for market growth:**
 - No integrated value proposition for strategic market penetration
 - Inadequate use of existing bilateral/multi-lateral instruments to promote intra-Africa trade in the sector
 - Lack of sector specific funding to grow and sustain the industry

To drive MTM growth, the Lab focused on three key areas

Description

Infrastructure and operations

A



- Create a new funding and revenue model to help reduce infrastructure costs
- Refurbish and optimise operations of existing facilities
- Efficiently appoint operators for new and existing facilities
- Commit to target dates to implement key priority infrastructure investment projects (Saldanha Bay, Richards Bay, East London) to unlock economic growth

Skill and capacity building

B



- Accelerate the establishment of marine transport and manufacturing occupational teams (OTs) to deliver specific curricula and lecturer training materials
- Establish centres of specialisation to facilitate implementation of the new curricula, lecturer development and partnerships with industry and others
- Train and prepare maritime semi-skilled people, artisans, professionals and seafarers to take up the jobs that will become available

Market growth

C



- Implement and ensure compliance to the local content designations for all maritime procurement by government and SOCs based on the DTI designations
- Condition of licensing (fishing or oil and gas exploration) must include the local content and shipping requirements to support the creation of a national registry
- Implement developmental funding and special incentives to promote industry growth
- Develop a strategic campaign to market South Africa as an integrated maritime hub regionally and globally

INITIATIVES

The Lab recommends the following 18 initiatives for MTM

A Infrastructure and operations	B Skills and capacity building	C Market growth
<ul style="list-style-type: none">1 Create supportive funding and revenue model2 Establish purpose-built oil and gas port infrastructure by appointing facility operators – Saldanha Bay3 Align on implementation of government policy4 Prioritise Transnet and TNPA funding allocation towards marine manufacturing5 Maintain and refurbish existing facilities6 Unlock investment in new and existing port facilities7 Implement a Strategic Prioritised Project – Richards Bay8 Implement a Strategic Prioritised Project – East London	<ul style="list-style-type: none">9 Train 2,550 TVET College graduates on an 18-month workplace-based experiential learner programme in scarce and critical trades over the next 5 years10 Create dedicated OTs for the MTM sector (professional, trades, operators and seafarers)11 Establish trade RPL, CBMT or centres of specialisation in Saldanha Bay and Richards Bay12 Train 18,172 learners as artisans, semi-skilled workers and professionals over the next 5 years13 Increase usage of ESSA system and targeted career awareness services as a high-value recruitment tool for MTM14 Increase capacity to develop skills for ~1,200 ratings and ~720 officers per year	<ul style="list-style-type: none">15 Create and implement a public procurement and localisation programme16 Develop a strategic marketing campaign and value proposition for target markets17 Propose inclusion of a preferential procurement clause in the African Maritime Charter18 Support local registry of vessels through incentives and legislation of using SA-flagged ships for cargo and coastal operations (based on UN Conference on Trade and Development and African Maritime Charter guidelines)

i. TNPA – Transnet National Ports Authority

ii. ESSA – Employment Services of South Africa

iii. TVET – Technical and Vocational Education and Training

iv. RPL – Recognition of Prior Learning

v. CBMT – Competency-based Modular Training

INITIATIVES

For each initiative, the Lab developed a detailed implementation plan, budget and set of KPIs

Implementation plan

Initiative 6: Unlock investment in new and existing port facilities

Detailed Activities	Length of Activity (yrs)	Responsibility
<ul style="list-style-type: none"> Submission to BADC to approve operating model ('take or pay' and 'turnover' clauses do not facilitate transformation) Implement operating model 	4 23	<ul style="list-style-type: none"> TNPA
<ul style="list-style-type: none"> Complete a suite of RFP documents Present to the marine manufacturing market Appoint operators for different facilities Operators obtain approval for facilities investment Agree on performance targets and sign agreements 	24 8 3 12	<ul style="list-style-type: none"> TNPA
<ul style="list-style-type: none"> Develop leadership and administrative capacity in respect of S&S agreements and termination Set time frames to ensure efficient turn around targets are achieved too 	4	<ul style="list-style-type: none"> TNPA DPE
<ul style="list-style-type: none"> DOA of TNPA, OE to be reviewed in accordance with the National Ports Act DOA to be cascaded to execution level 	16 8	<ul style="list-style-type: none"> DPE TNPA

Includes milestones, major activities, timelines and responsibilities

Budget

Budget template – Skills & Capacity Building
Total budget, Rm

#	Initiative	2014/15	2015/16	2016/17-2018/19	Total
9	Train 1123 T-VET College graduates (an 18-month Workforce-Learner Programme in science & critical Trades for ITTI)	Govt: 0 Non Govt: 0	Govt: 0 Non Govt: 0	Govt: 0 Non Govt: 0	Govt: 0 Non Govt: 0
10	Create dedicated Occupational Training for ITTI Sector (Professionals, Trades/Artisans, Controllers & Seafarers)	Govt: \$0.54 Non Govt: 0	Govt: 0.12 Non Govt: 0.07	Govt: 0.54 Non Govt: 0.22	Govt: \$1.42 Non Govt: \$0.81
11	Specialisation in Sebaste Bay and S.28 Richards Bay	Govt: \$28 Non Govt: 0	Govt: 11.14 Non Govt: 0	Govt: 0 Non Govt: 0	Govt: 16.40 Non Govt: 0
12	Train 732 seafarers as Artisans over the next 5 years	Govt: 4 Non Govt: 0	Govt: 437 Non Govt: 0	Govt: 466 Non Govt: 0	Govt: 908 Non Govt: 0
13	Increase usage of EESSA system as a high value recruitment tool for ITTI	Govt: 0.2 Non Govt: 0.2	Govt: 2.2 Non Govt: 5.4	Govt: 5.6 Non Govt: 14.8	Govt: 8 Non Govt: 20.6
14	Position ITTI sector as an attractive job market for seafarers (targeting Gnd 9 – T-VETs, Gnd 12 – Universities)	Govt: 0 Non Govt: 0	Govt: 147.6 Non Govt: 0	Govt: 334.1 Non Govt: 334.1	Govt: 481.7 Non Govt: 0
TOTAL		Govt: 60.2 Non Govt: 0.2	Govt: 596.3 Non Govt: 3.3	Govt: 808.9 Non Govt: 9.8	Govt: 1463.9 Non Govt: 13

Includes CAPEX and OPEX required by year for each initiative, broken into government and non-government spend

KPIs

...with specific performance indicators for the each sector (1/6)

KPI Description	SP Owner	Deadline	2014/15	2015/16	Target	2016/17	2017/18	2018/19
Overall Key Performance Indicator								
1.1 Develop Maritime Campaign	Department of Transport	12/2014	1 call per week for 1 year	1 call per week for 1 year	1 call per week for 1 year			
1.2 Develop Maritime Campaign	Department of Transport	12/2014	1 call per week for 1 year	1 call per week for 1 year	1 call per week for 1 year			
1.3 Develop Maritime Campaign	Department of Transport	12/2014	1 call per week for 1 year	1 call per week for 1 year	1 call per week for 1 year			
1.4 Develop Maritime Campaign	Department of Transport	12/2014	1 call per week for 1 year	1 call per week for 1 year	1 call per week for 1 year			
1.5 Develop Maritime Campaign	Department of Transport	12/2014	1 call per week for 1 year	1 call per week for 1 year	1 call per week for 1 year			
1.6 Develop Maritime Campaign	Department of Transport	12/2014	1 call per week for 1 year	1 call per week for 1 year	1 call per week for 1 year			
1.7 Develop Maritime Campaign	Department of Transport	12/2014	1 call per week for 1 year	1 call per week for 1 year	1 call per week for 1 year			

Includes a description, owner and timeline for each KPI by initiative

More details for each initiative are available in the detailed Lab report

Initiative 1 – Create supportive funding and revenue model

For the marine manufacturing industry to establish itself, grow and compete, the enabling infrastructure at a globally competitive price is required urgently. The design of a model should achieve this goal without undermining Transnet’s financial sustainability.

Initiative concept/details/highlights

- Growth in industrial sectors is key to building a sustainable economy, providing stable job opportunities for skilled people and diversifying the export basket
- The SOCs have both a financial sustainability and developmental mandate. However, in the context of SOC self-funding ambitious investment programmes, there is no mechanism to secure investments to unlock the growth of immature industrial sectors.
- To close this gap, levers include the shareholder compact (e.g., return on assets), the DTI incentives, National Treasury subsidy, asset valuation methodologies for purposes of tariff setting, rentals, tenure and total operational costs.
- In addition, re-align valuation of port assets in line with realistic port costs for MTM

Infrastructure investment mechanisms to unlock growth in the marine manufacturing industry

Implementing agency

- the DTI

Key stakeholders identified

- | | |
|-------------------|--------|
| ▪ DPE | ▪ DoF |
| ▪ TNPA | ▪ IDZs |
| ▪ Ports Regulator | ▪ DPME |
| ▪ DFIs | ▪ DoT |

Required resources

- Dedicated DPE/the DTI/DOT/TNPA Project Team with expert support
- Investment: R1 mn

Implementation timeframe

- Start date: 18 Aug 2014
- End date: 30 Jan 2015

Key performance indicators

- 2015: Ministerial approval of the model that enables Industries to be competitive

Initiative 1 – To accomplish this, South Africa must develop port facilities with a focus on private sector funding to drive commercial activity

Key enablers:

- Create a favorable policy environment:
 - PSP
 - PPP
- Secure private sector funding for port development in addition to public sector funding, e.g.:
 - Establish favourable tax incentives

Examples

- Offshore patrol vessel fabrication facility (Saldanha)
 - 10-year contract (secured) for 50+ new-build OPVs valued at approximately R8,9bn
 - Private sector infrastructure investment and other support towards the implementation of contract is valued at an additional R4bn
- Riser pipe fabrication and rig repair facility (Saldanha)
 - Contract value is approximately R600mn
 - Private sector infrastructure investment is an additional R450m
- Subsea pipeline fabrication (Coega or Saldanha)
 - Contract for 400km subsea pipeline is valued at approximately R1bn
 - Private sector infrastructure investment is an additional R450m

Initiative 2 – Establish purpose-built oil and gas port infrastructure and appoint facility operators – Saldanha Bay

A flagship oil and gas services hub is required urgently to position South Africa strongly in the rapidly growing regional oil and gas market

Initiative concept/details/highlights

- In 2012 South Africa serviced 4 rigs out of a possible market of 80 along West Africa shores. Their contribution to GDP was R1.2 bn.
- The proposed infrastructure investments at Saldanha will enable the repair of a minimum of 12 rigs per annum from 2018, and the provision of additional manufacturing supporting services through the IDZ
- Berth capacity will not be available to service rigs until 2018
- Once the enabling infrastructure is in place, modelling indicates that 42,650 jobs inclusive of a multiplier factor (including 7,970 new) will be created
- Develop a rig repair facility and a jetty to service supply vessels and manufacture offshore vessels in line with priority projects
- Operators (industry or users) are provided with incentivised access to port facilities in exchange for developmental commitments (e.g., investment, job creation, skill development, supplier development/transformation and use or pay)

Accelerated GDP growth and job creation through investment in the oil and gas services sector

Implementing agency

- TNPA

Key stakeholders identified

- Manufacturing and services industry
- the DTI, DPE, DoT, SLD IDZ, development funding agencies

Required resources

- Investment R13.2bn (public – TNPA - R9.6 bn and private R3.6 bn)

Implementation timeframe

- Start date: 1 May 2013
- End date: 31 Dec 2017

Key performance indicators

- 2016: Industries take up S56 concession
- 2017: Commissioning of Quay 205 and Mossgas Jetty
- 2017: Commissioning of support services in the IDZ

Initiative 7 – Implement Strategic Prioritised Projects – Richards Bay

A flexible and exploratory approach needs to be taken to Richards Bay to allow the private sector to grow the market

Initiative concept/details/highlights

- Quantify and unlock opportunities in oil and gas, ship or rig repair and maritime vessel-building in line with market requirements in Richards Bay
- Allow the market to implement low-risk, flexible capacity for ship or rig repair at Richards Bay
- Implement facilities for maritime vessel-building in Richards Bay
- Explore the feasibility of establishing a Liquid Natural Gas cluster at Richards Bay
- Enhance container handling capacity
- Allocate waterfront land to IDZ in support of maritime manufacturing

Pragmatically unlocking the development of marine manufacturing clusters in Richards Bay through the port

Implementing agency

- DoT

Key stakeholders identified

- Industry
- RCB IDZ
- Transnet
- DTI, DoT
- Development funding agencies

Required resources

- Investment: R550mn public (TNPA), R350mn private

Implementation timeframe

- Start date: 2015
- End date: 2017

Key performance indicators

- 2015: Operator appointed

Initiative 8 – Implement Strategic Prioritised Projects – East London

Unlocking boat-building in East London will provide significant synergies with the existing motor industry cluster

Initiative concept/details/highlights

- Develop, support and grow the maritime vessel industry at East London
- TNPA refurbishes existing the slipway facility and industry makes the necessary investments
- The boat- or ship-building Industry is provided with incentives in exchange for developmental commitments (e.g., investment, job creation, skills development, supplier development)
- Preferential access to IDZ land in support of boat- or ship-building

Unlocking the development of the boat- or ship-building industry in East London through the port

Implementing agency

- TNPA

Key stakeholders identified

- Industry
- DoT, DPE
- DTI
- Development funding agencies

Required resources

- Investment public R215 mn (TNPA), private R300 mn

Implementation timeframe

- Start date: Sep 2014
- End date: Aug 2015

Key performance indicators

- 2015: Operator appointed

Initiative 9 – Train 2,550 TVET graduates on an 18-month workplace-based experiential programme in scarce and critical trades by 2019

Ensure graduates will be taken up easily by industry when demand increases by focussing on the provision of acceptable and relevant workplace experience and programmes

Initiative concept/details/highlights

- Workplace-based training is a compulsory requirement before undertaking a trade test and a crucial milestone to increasing employability, but SA still experiences high attrition in programmes and high failure rates in the trade test.
- In addition, industry has historically under-committed to taking on graduates due to the constrained economy and overly bureaucratic regulatory framework.
- Levers available:
 - Accelerate approval and implementation of the drafted Workplace-Based Learning Programme Agreement (WPBLPA) regulations between DoL and DHET
 - Focus on accessing the pivotal learner grants to fund the programme and pilot systemic changes needed in industry
 - Make accessing opportunities simple for learners: an integrated national DoL ESSA system and NADSC⁴ for recruitment and selection
 - Assign implementing agents to conduct the programme on behalf of Government to SETA standards, with full-time oversight, problem-solving, facilitation and financial administration
 - Run short train-the-trainer courses to capacitate more people as mentors in host companies
 - Target both the public and private sector to place learners

Improving competence will increase employability and deliver on GDP and Job creation targets

Implementing agency

- DHET and OPOCT¹

Key stakeholders identified

- Trade OTs
- SETAs², NSF, DoL UIF and other funders
- SAOGA, MIASA³ and host companies
- SEIFSA
- Provincial Government (KZN and WC)

Required resources

- Investment: R730mn (SETAs, NSF, DOL)

Implementation timeframe

- Start date: 24 Nov 2014
- End date: 31 Mar 2019

Key performance indicators

- No. of graduates placed and passing trade test
- No. of workplaces accredited
- No. of trade-tested graduates employed in industry

1. OPOCT: Operation Phakisa Occupational Coordinating Team 2. SETAs are MERSETA, TETA and CHIETA
 3. SAOGA and MIASA are Industry Association bodies 4. NADSC: National Artisan Development Support Centre

Initiative 12 – Train 18,172 learners as artisans, semi-skilled workers and professionals by 2019

The new curricula developed by the OTs must be implemented; Operation Phakisa provides the incentive to drive and pilot these innovative developments

Initiative concept/details/highlights

Artisans

- The new curricula developed by the OTs for the trade occupations will be piloted in the COSs to foster an industry-responsive and effective skills pipeline in the artisan sector.
- Lecturer development on new curricula and exposure to industry is

Semi-skilled workers

- Semi-skilled workers form a large component of the ship-building and repair, rig repair and boat-building industries.
- It presents a big opportunity to equip large numbers of people **quickly** with basic trade knowledge and increase their employability
- It also offers an opportunity to access the formal education system and stimulate awareness of careers and options.

Professionals

- MTM requires electrical¹ and mechanical² engineers, naval architects, project managers³ and managers – 3 of these occupations are on the Top 100 Scarce Skills List issued by the DHET
- Operation Phakisa must initiate an accelerated drive to provide for these occupations within our universities, universities of technology and others

Skills development is a direct enabler to economic growth and job creation and is one of the national strategic objectives

1. Ranked 1 on National Scarce Skills List: Top 100 Occupations in Demand, DHET, 24 May 2014

2. Ranked 3 on above,

3. Ranked 5 on above

Implementing agency

- OPOCT

Key stakeholders identified

- Public and private education and training institutions
- Intermediate bodies
- SAQA quality councils,
- SAOGA, MIASA and host companies
- Local and provincial government (KZN and WC)

Required resources

- Investment: R2,375mn

Implementation timeframe

- Start date: 22 Dec 2014
- End date: 03 May 2019

Key performance indicators

- Number of students trained and placed with host companies
- Number of training programmes undertaken

Initiative 14 – Increase capacity to develop skills for ~1,200 ratings and ~720 officers per year

Given the limited number of seafarers to support vessel manning and management, there is a need to create a skill development pipeline for seafarers

Initiative concept/details/highlights

- Ensure capacity to produce 720 officers annually
 - Increase production of maritime students (navigation and engineers) from institutions of technology (DUT and CPUT) from the current 240 to 480
 - Commission NMMU to supply 240 maritime students
- Ensure capacity to produce 1,200 ratings annually
 - Accelerate training capability at prioritised TVETs
- Ensure availability of training berths to meet the ratings and officer throughput
 - Grow the number of ships providing training berths
- Ensure maritime education and training (MET) is coordinated
 - Establish a dedicated institute for MET coordination, including research
- Continue to drive awareness of career opportunities
- Develop and sustain a skills fund

- Production of 720 officers per year
- Production of 1,200 ratings per year

Implementing agency

- DHET

Key stakeholders identified

- DoT, SAMSA
- DST, SAASTA
- NSF, TETA, DoL, UIF
- Industry, TVETs, HEIs, public/private partnerships

Required resources

- Investment: R5,200mn

Implementation timeframe

- Start date: Sept 2014
- End date: annual

Key performance indicators

- 720 officers and 1,200 ratings employed per year from 2016

Initiative 15 – Create a public procurement and localisation programme

Develop a procurement programme for government departments and entities that prioritises local content to grow the South African market

Initiative concept/details/highlights

- Increase local manufacturing capacity to 80% through local procurement (based on demand and supply side analysis) and feed these into the DTI designation process
 - Design and implement a series of supply side support measures (tariff regime, infrastructure, skills or finance) – DTI or DPE - due in March 2016)
- Develop a support programme to roll out the maritime designation for boat-building
- Develop a centralised procurement planning agency for government to ensure the sustainability of the industry
- Investigate how fishing licences and a fishing fleet renewal programme can feed into the local development strategy

Prioritise local content in public procurement programme to grow the SA market

Implementing agency

- DTI

Key stakeholders identified

- SAPS; SANDF; SARS
- Transnet; Petro SA
- DWAS; DAFF; SARS; DEA; the DTI

Required resources

- Investment: R5.2mn

Implementation timeframe

- Start date: on adoption of Lab results by government
- End date: 29 March 2019

Key milestones

- 2016: Complete 5-year target, designation implementation plan and 100% recapitalisation of SA fishing fleet
- 2017: Central fleet management agency in place

Initiative 16 – Strategic marketing campaign

South Africa has less than 1% of the global (accessible) market share of ship-building, and ship and rig repair. It is strategically located, with 134, 000 vessels including oil rigs passing its shores a year. A strategic marketing campaign with an attractive value proposition will help penetrate the African market.

Initiative concept/details/highlights

- Develop a strategic marketing campaign targeted at developing maritime nations that South Africa has bi- and multi-lateral trade agreements with to increase South African market share by 100%.
- Package an integrated maritime value proposition constituting ship building, ship repair, rig repair, port management and operations, training for the developing maritime nations. The target countries for are Angola, Ghana, Kenya, Mozambique, Namibia, Nigeria and Tanzania.
- Produce a timetable and identify a delegation to execute the campaign
- Execute the strategic maritime campaign

Create awareness of SA maritime capability and increase market share by 100% in 2019

Implementing agency

- DTI

Key stakeholders identified

- DIRCO
- Transnet
- Industry players

Required resources

- Investment (0 mn) – all marketing activities will be undertaken by existing DTI initiatives

Implementation timeframe

- Start date: 01 Sept 2014
- End date: 31 March 2016

Key performance indicators

- 2016: Launch of a strategic marketing campaign targeted at 7 developing maritime nations to promote SA maritime capability and increase SA market share by 100%

Initiative 18 – Support local registry of vessels through incentives and by encouraging the use of SA-flagged ships

SA is allowed to carry at least 40% of its trade to market. This amounts to at least 60 vessels; at 72 crew per vessel this amounts to 4,320 direct seafarer jobs

Initiative concept/details/highlights

- The current regulatory and tax policy is largely favourable for a national ship registry, but at risk for requisition or charter on demand
- SA has STCW-guaranteed seafarer competency
- ILO 147 on minimum standards for seafarers' working condition
- Opportunity for greater control over SA's foreign trade
- A solution to flag-hopping ensuring protection of resources in SA EEZ
- **Ensure that cargo carrying requirement at least 40% allocated to SA flagged ships???**
 - Promote industry-wide participation (e.g., freight forwarders)
 - Add a new requirement to **ship SA??** during the process of mining licence application
 - Link the Mining BEE Charter to the Transport BEE Charter
 - Ensure that all coastal vessels and vessels supporting marine operations in the EEZ fly the SA flag and are manned by SA seafarers
 - Invoke cabotage requirements on all coastwise cargo including the supply and operation of offshore support vessels and the regional and continental waters (e.g., cabotage policy)

40% of SA minerals allocated to SA- flagged ships. All Coastal operations on SA-flagged vessels manned by SA seafarers

Implementing agency

- PetroSA, DMR

Key stakeholders identified

- DoT
- DTI
- Treasury
- Chamber of Mines or mining houses

Required resources

- Investment : R1,300mn

Implementation timeframe

- Start date: Sept 2014
- End date: Sept 2017

Key performance indicators

- 2016: 5% of minerals on SA Ships, 100% of coastal operations by SA

14 of the 18 initiatives are quick wins

Phase I: Quick win

First results by Mar 2016

- 1 Create supporting funding model
- 2 Establish purpose-built O&G infrastructure – Saldanha Bay
- 3 Align on **implantation???** government policy
- 4 Prioritise Transnet and TNPA funding allocation
- 5 Maintain and refurbish existing facilities
- 6 Unlock investment in port facilities
- 7 Implement strategic prioritised projects – Richards Bay
- 10 Create dedicated OTs
- 12 Train learners as artisans
- 13 Increase usage of ESSA system
- 14 Capacity for seafarers
- 15 Public procurement and localisation programme
- 16 Strategic marketing campaign
- 17 Preferential procurement in the African Maritime Charter

Phase II: Medium term

First results by Mar 2019

- 8 Implement prioritised projects – East London
- 9 Train 2550 TVET college graduates
- 11 Establish trade RPL/centres in Saldanha Bay and Richards Bay
- 18 Support local registry of vessels through the incentive of using SA-flagged ships

Phase III: Long term

First results by Mar 2025

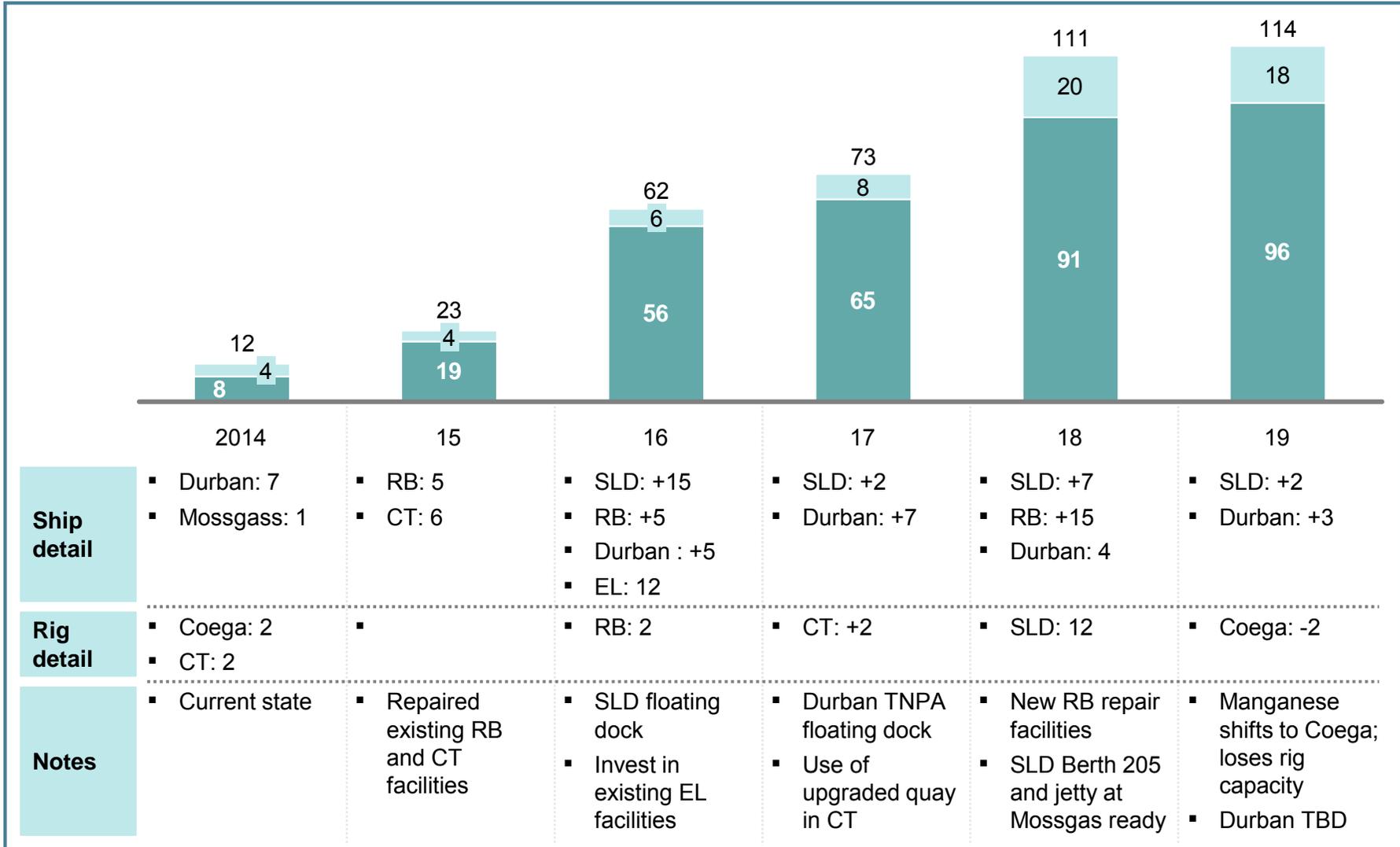
- none

INITIATIVES

Bringing the new facilities online will greatly increase capacity to repair ships and rigs (2014-2019)

■ Rig
■ Ship

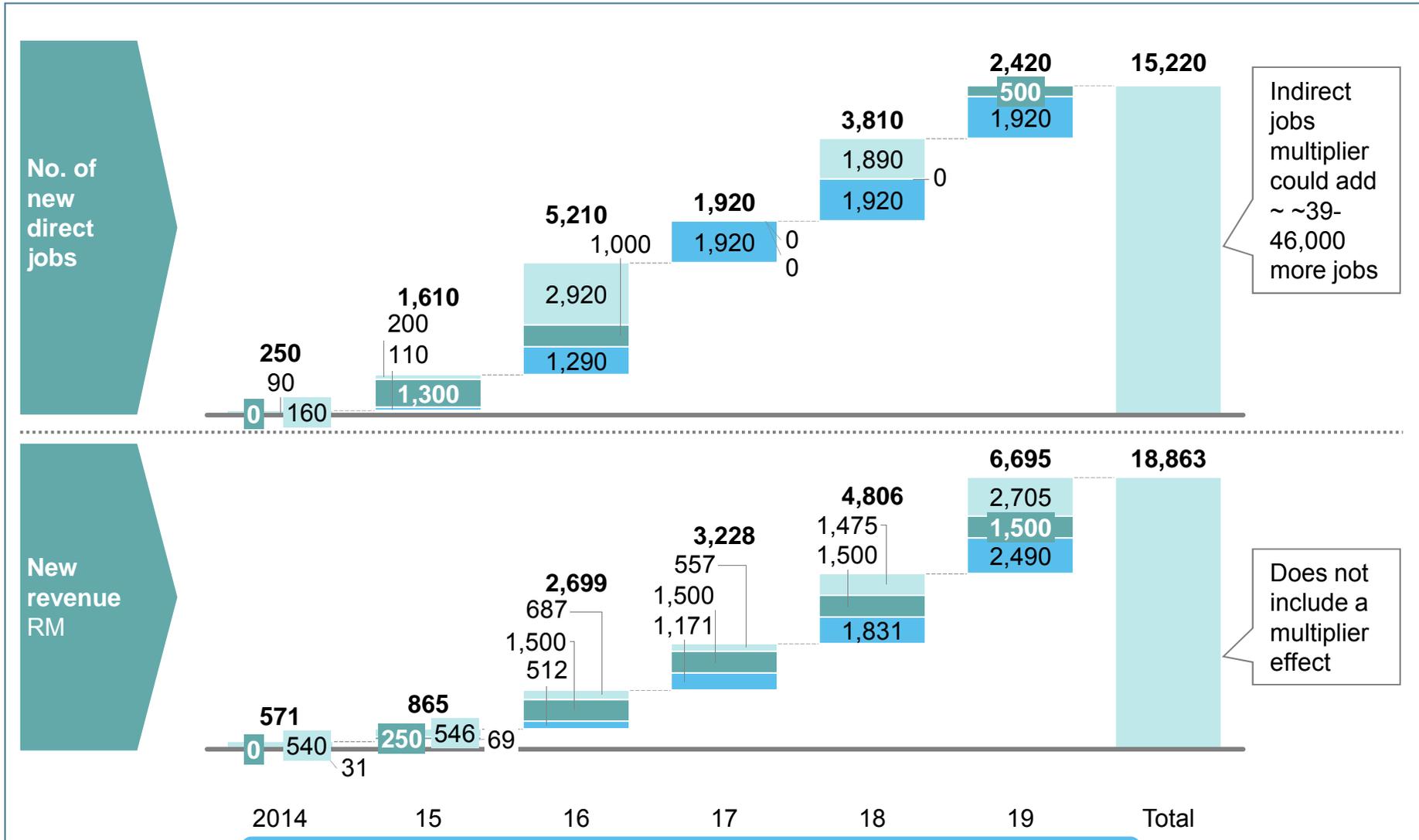
Number of vessels annual capacity



INITIATIVES

The 18 initiatives will create ~15 000 new direct jobs and ~R18.9 billion in new revenue

■ Rig and ship repair
 ■ Boat-/ship- building
 ■ Seafarers



Achieving these jobs and GDP will also require developing skills and building demand through market growth

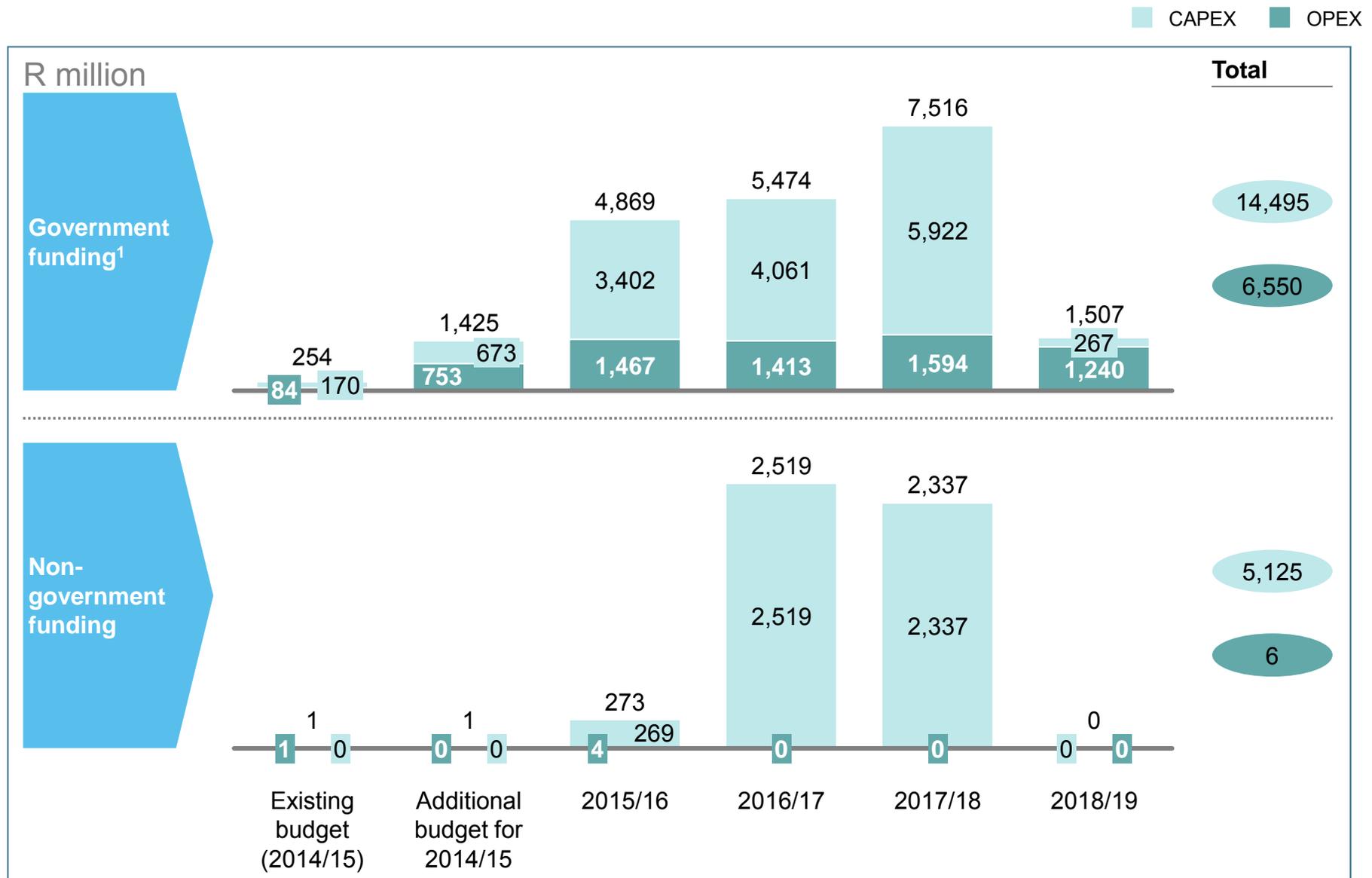
INITIATIVES

The Lab has identified initiatives that create tangible results within the next 12 months

	Description	Outcome
 <p>Increase local manufacturing capacity</p>	<ul style="list-style-type: none"> Supplier development initiatives to increase production of raw materials such as SART, propulsion units 	<ul style="list-style-type: none"> 10% increase in local components used for boat- and ship-building in
 <p>Increase ship repair capacity at Richards Bay</p>	<ul style="list-style-type: none"> Refurbishing the repair quay and installing a floating dock will significantly enhance ship repair capacity 	<ul style="list-style-type: none"> Generate 200 new jobs through construction and new repair orders
 <p>Create a dedicated OT for MTM</p>	<ul style="list-style-type: none"> Establish an OT within DHET to drive alignment between theoretical and workplace learning 	<ul style="list-style-type: none"> Focused teams committed to increasing critical skills in MTM
 <p>Increase the amount of minerals exported on SA ships</p>	<ul style="list-style-type: none"> Enforce 40% of mineral trade on SA-flagged vessels 	<ul style="list-style-type: none"> Generate 4,320 direct seafarer jobs Enable greater control over SA's foreign trade

BUDGET

The programme will cost ~R14.5 bn in CAPEX and ~R6.6 bn in OPEX



1 Does not include employee compensation

SOURCE: MTM Lab projections

BUDGET

Detailed budget – Infrastructure and operations

Total additional budget, R million

#	Initiative	2014/15	2015/16	2016/17- 2018/19	Total
1	Create supportive funding and revenue model	0	0	0	0
		Govt: 0	Govt: 0	Govt: 0	Govt: 0
		Non-govt: 0	Non-govt: 0	Non-govt: 0	Non-govt: 0
2	Establish purpose-built oil and gas port infrastructure by appointing Facility Operators – Saldanha Bay	70.00	1615.37	11486.98	13172.35
		Govt: 70.00	Govt: 1614.72	Govt: 7880.40	Govt: 9565.12
		Non-govt: 0	Non-govt: 0.65	Non-govt: 3606.58	Non-govt: 3607.23
3	Align on implementation of government policy	0	0	0	0
		Govt: 0	Govt: 0	Govt: 0	Govt: 0
		Non-govt: 0	Non-govt: 0	Non-govt: 0	Non-govt: 0
4	Prioritise Transnet and TNPA funding allocation towards marine manufacturing	0	0	0	0
		Govt: 0	Govt: 0	Govt: 0	Govt: 0
		Non-govt: 0	Non-govt: 0	Non-govt: 0	Non-govt: 0
5	Maintain and refurbish existing facilities	0	322.85	730.81	1053.65
		Govt: 0	Govt: 322.85	Govt: 730.81	Govt: 1053.65
		Non-govt: 0	Non-govt: 0	Non-govt: 0	Non-govt: 0
6	Unlock investment in new and existing port facilities	3.56	275.02	901.65	1180.23
		Govt: 2.76	Govt: 2.97	Govt: 0	Govt: 5.73
		Non-govt: 0.80	Non-govt: 272.05	Non-govt: 901.65	Non-govt: 1174.50
7	Implement strategic prioritised project – Richards Bay	0	430.46	463.24	893.70
		Govt: 0	Govt: 430.46	Govt: 115.81	Govt: 546.27
		Non-govt: 0	Non-govt: 0	Non-govt: 347.43	Non-govt: 347.43
8	Implement strategic prioritised projects – East London	0	215.23	0	215.23
		Govt: 0	Govt: 215.23	Govt: 0	Govt: 215.23
		Non-govt: 0	Non-govt: 0	Non-govt: 0	Non-govt: 0
TOTAL		73.56	2858.93	13582.68	16515.15
		Govt: 72.76	Govt: 2586.23	Govt: 8727.02	Govt: 11386.00
		Non-govt: 0.80	Non-govt: 272.70	Non-govt: 4855.66	Non-govt: 5129.15

BUDGET

Detailed budget – Skills and capacity-building

Total additional budget, R million

#	Initiative	2014/15	2015/16	2016/17- 2018/19	Total
9	Train 2,550 TVET College graduates on an 18-month workplace-based experiential learner programme in scarce and critical trades over the next 5 years	Govt: 0	133.83	Govt: 133.83	729.65
		Non-govt: 0		Non-govt: 0	
10	Create dedicated OTs for MTM (professional, trades (artisans), operators and seafarers)	Govt: 11.19	12.04	Govt: 12.04	65.15
		Non-govt: 0		Non-govt: 0	
11	Establish trade rpl/centres of specialisation in Saldanha Bay and Richards Bay	Govt: 3.69	3.70	Govt: 3.70	122.42
		Non-govt: 0		Non-govt: 0	
12	Train 18,172 learners as artisans, semi-skilled workers and professionals over the next 5 years	Govt: 425.79	749.91	Govt: 749.91	2374.62
		Non-govt: 0		Non-govt: 0	
13	Increase usage of ESSA system as a high-value recruitment tool for MTM	Govt: 3.28	3.95	Govt: 3.95	23.13
		Non-govt: 0		Non-govt: 0	
14	Increase capacity to develop skills for ~1,200 ratings and ~720 officers per year	Govt: 940.36	1167.81	Govt: 1167.81	5200.43
		Non-govt: 0		Non-govt: 0	
TOTAL		Govt: 1384.30	2071.25	Govt: 2071.25	8515.40
		Non-govt: 0		Non-govt: 0	

BUDGET

Detailed budget – Market growth

Total additional budget, R million

#	Initiative	2014/15		2015/16		2016/17- 2018/19		Total	
15	Create and implement a public procurement and localisation programme	2.39	Govt: 2.39 Non-govt: 0	2.19	Govt: 2.19 Non-govt: 0	1.12	Govt: 1.12 Non-govt: 0	5.70	Govt: 5.70 Non-govt: 0
16	Develop a strategic marketing campaign and value proposition for 0 target markets	0	Govt: 0 Non-govt: 0	0	Govt: 0 Non-govt: 0	0	Govt: 0 Non-govt: 0	0	Govt: 0 Non-govt: 0
17	Propose inclusion of preferential procurement clause in the African Maritime Charter	0	Govt: 0 Non-govt: 0	0	Govt: 0 Non-govt: 0	0	Govt: 0 Non-govt: 0	0	Govt: 0 Non-govt: 0
18	Support local registry of vessels through incentives and by encouraging the use of SA-flagged ships for cargo and coastal operations (based on UN Conference on Trade and Development and African Maritime Charter guidelines)	0	Govt: 0 Non-govt: 0	280.88	Govt: 280.88 Non-govt: 0	1024.53	Govt: 1024.53 Non-govt: 0	1305.41	Govt: 1305.41 Non-govt: 0
TOTAL		2.39	Govt: 2.39 Non-govt: 0	283.07	Govt: 283.07 Non-govt: 0	1025.65	Govt: 1025.65 Non-govt: 0	1311.11	Govt: 1311.11 Non-govt: 0

Appendix

Initiative 3 – Align on implementation of government policy

Alignment and commitment on the growth of the maritime engineering sector as a national priority

Initiative concept/details/highlights

- Complete implementation of existing government policy through synergy between the constituent government departments
- Coherent prioritisation of the marine transport and manufacturing sector by all government departments
- Develop government administrative capability to improve efficiency (personnel, skills and performance)
- DPME publish targets, monitor progress and delivery against target dates
- Minister DPE and Minister DoT give directive to Transnet Board to sit as authority for TNPA on a number of operational issues, that include the fast-tracking of infrastructure investment at ports; longer-term leasing and the agreement on an appropriate model for rental cost to the private sector

Public policy implementation to achieve increased investment, growth and development targets

Implementing agency

- DOT

Key stakeholders identified

- DTI, DPE, DoF
- Ports Regulator
- DPME
- Industry associates/IDZs

Required resources

- Investment :

Implementation timeframe

- Start date: July 2014
- End date: Sept 2014

Key performance indicators

- 2014: Ministers sign-off Phakisa Lab project plans as operating policy
- 2015: Achievement and reporting of targets measured by DPME

Initiative 4 – Prioritise Transnet and TNPA funding allocation towards marine manufacturing facilities

Alignment and commitment on the growth of the marine transport and manufacturing sector as a national priority

Initiative concept/details/highlights

- DPE as the executive authority must provide Transnet with a directive to prioritise and execute investments identified in Phakisa in marine manufacturing facilities
- Re-align the Shareholder Compact
- Transnet Corporate Plan to be aligned accordingly
- DPME to publish targets, monitor progress and delivery against target dates

Aligned funding allocations that unlock growth in marine manufacturing facilities

Implementing agency

- DPE

Key stakeholders identified

- DOT, DTI
- DPME
- Ports Regulator
- Transnet/TNPA

Required resources

- Investment:

Implementation timeframe

- Start date: July 2014
- End date: Nov 2014

Key performance indicators

- 2014: Transnet investment plan prioritises marine engineering; execute Phakisa-identified projects

Initiative 5 – Maintain and refurbish existing facilities

Existing facilities are in a state of disrepair that hampers the sector’s competitiveness and growth

Initiative concept/details/highlights

- Execute maintenance and upgrade plan for existing facilities to increase market share
- Assess and determine scope of repairs
- Develop project plan/schedule for repairs
- TNPA to approve funding and execute works
- Monitoring and reporting mechanism for asset availability and utilisation

Existing facilities maintained and refurbished to market requirements

Implementing agency

- TNPA

Key stakeholders identified

- Transnet
- DTI and DOT
- Industry associates

Required resources

- Investment: approximately R1bn

Implementation timeframe

- Start date: June 2014
- End date: Nov 2016

Key performance indicators

- 2014: Plan and funding in place
- 2016: Facilities adequately maintained and refurbished.

Initiative 6 – Unlock investment in new and existing port facilities

The creation of new businesses depends on the efficient appointment of facility operators by the Port Authority

Initiative concept/details/highlights

- Efficiently appoint operators for existing and new port facilities
- Shareholder approval on ownership and operating model for existing ship repair facilities
- Execute s56 to appoint suitable operators
- Building TNPA administrative capability to manage s56 implementation
- Review TNPA delegations of authority (and streamline s56 processes)
- Monitoring and reporting mechanism for ensuring rapid turn-around time
- Resolve allocation of facilities to support aquaculture (e.g., sea water intake at Ngqura)

Operators appointed to unlock investment and growth in oil and gas, ship repair, boat-/ship-building industries

Implementing agency

- TNPA

Key stakeholders identified

- Industry associates
- Transnet
- DPE, DTI, DOT and DoF
- Development funding agencies
- Competitions Commission

Required resources

- Investment R10.9bn public (TNPA) and R4.9bn private

Implementation timeframe

- Start date: Oct 2014
- End date: Mar 2015

Key performance indicators

- 2015: Operators of facilities appointed

Initiative 10 – Create dedicated OTs for MTM (professional, trades (artisans), operators and seafarers)

OTs would address problems of curriculum relevance and alignment between institutional (theoretical) and workplace (practical) learning, and work placement problems at a systemic, national level

Initiative concept/details/highlights

- Core Functions of OTs:
 - Determine why there are shortages, and what and where are the major challenges
 - Recommend solutions for challenges at each step along the learning pathway, i.e., for ‘theory’, ‘practical’, ‘workplace’ and ‘assessment’.
 - Prepare reports to feed into ‘mainstream’ planning and resourcing
 - OTs do not implement; that is the responsibility of the OPOCT
- An OT consists of at least one person from each step along the learning pathway for an occupation BUT they must network with all those in their constituency who share their interest. In other words, we should have a ‘convener’ from each constituency – as in the Technikon Advisory Committees.
- The OT methodology requires, in addition, Intermediate Bodies (IBs) per “occupational cluster” to identify common challenges across all occupations in their cluster and generic solutions to address them. The IBs work with the OPOCT to implement activities.
- OTs require dedicated operational funding to make research and broad consultation as inclusive as possible to drive innovation and delivery for each occupation.

Note: All operational funding across all Operation Phakisa MTM skill initiatives under this Initiative has been allocated here.

Operation Phakisa needs a coordinated and aligned means to drive education and industry for collaboration

Implementing agency

- OPOCT¹

Key stakeholders identified

- DHET
- Industry associations
- TVET Colleges, HEIs, NSF
- Intermediate bodies: Council for Built Environment, SSETA, Indlela, TETA
- Provincial government (KZN & WC)
- SETAs²

Required resources

- Investment: R65mn

Implementation timeframe

- Start date: In Lab
- End date: 31 Mar 2019

Key performance indicators

- No. of occupations identified as scarce and critical
- No. of OTs formed by year end 2014.
- OPOCT established by year end 2014

1. Operation Phakisa Occupational Coordinating Team
 2. SETAs are MERSETA, TETA and CHIETA

Initiative 11 – Establish Trade RPL/CBMT/Centres of Specialisation in Saldanha Bay and Richards Bay

Build an industry-relevant body of knowledge and specialisation expertise, with the aim of transferring this knowledge and expertise in an effective manner, thus increasing the quality of education and learning and SA’s skilled workforce, and enhancing economic, environmental, social and personal development

Initiative concept/details/highlights	Implementing agency
<ul style="list-style-type: none"> ▪ Centres of specialisation (COSs) could be via university chairs, colleges, training centres, etc., to deliver the occupation programme required to support Operation Phakisa. <ul style="list-style-type: none"> – The occupations are defined by the OTs ▪ COSs must be closely networked and partnered with the industry they target as the curricula and programmes MUST be relevant to industry needs and delivered locally ▪ COSs must have multi-dimensional strategies to service a diverse cohort for RPL services and further development/learning opportunities ▪ COSs must build an industry-relevant body of knowledge and improve curricula and programmes as this knowledge is built. COSs may also play an advocacy role to advocate for the sectors and increase awareness. ▪ Re-skilling/training of lecturers/trainers at COSs is required to deliver the intended knowledge and practical components of the occupational qualifications effectively ▪ COSs can be made self-sustainable by allowing collaboration and joint ventures with private education and training institutions and providers – especially as the curricula and facilities would be highly specialised 	<ul style="list-style-type: none"> ▪ OPOCT
<p>“RPL is vital in the promotion and delivery of a national ‘returning to learning’ strategy for unemployed and under-qualified youth and adults.”¹</p>	<p>Key stakeholders identified</p> <ul style="list-style-type: none"> ▪ Public and private education and training institutions ▪ Intermediate bodies ▪ SAQA², quality councils, SETAs ▪ Trade unions ▪ Employers ▪ Local and provincial government (KZN & WC)
	<p>Required resources</p> <ul style="list-style-type: none"> ▪ Investment: R122mn
	<p>Implementation timeframe</p> <ul style="list-style-type: none"> ▪ Start date: 22 Dec 2014 ▪ End date: 03 May 2019
	<p>Key performance indicators</p> <ul style="list-style-type: none"> ▪ No. of COSs established/built by 2017. ▪ No. of people placed in RPL & CBMT programmes in the COSs ▪ Bursary/internship model established by end of 2015

1. Ministerial Task Team on a National Strategy for the Recognition of Prior Learning (RPL), January 2013
 2. South African Qualifications Authority

Initiative 13 – Increase usage of ESSA system and targeted career awareness services as a high value recruitment tool for MTM

Comprehensive marketing of the ESSA system to employers and job seekers will remove the entry barriers to work or learning opportunities. Cross-organisational endorsement of ESSA within government will further eradicate this challenge.

Initiative concept/details/highlights

- DOL's ESSA system is not fully utilised by individuals and companies/organisations (public and private) to register and search for opportunities
- Operation Phakisa must encourage utilisation of the service and the other value-added services offered by DOL (psychometric testing, shortlisting, qualification verifications, etc.)
- This presents a unique opportunity to link the ESSA marketing campaigns with an appropriate career awareness and development services exercise to position MTM as an attractive career choice
- **Quick win:** ESSA and the NADSC systems must be incorporated to obtain a truly holistic one-stop service for trades in particular. These can then be advocated to all education institutions to assist with learner management processes
- **Quick win:** Implement a mandatory minimum of 30% for additional recruitment of unskilled and semi-skilled workers and trades from ESSA on all public procurement tenders issued pertaining to Operation Phakisa activities

An inclusive, free, transparent and impartial recruitment & selection system will bring knowledge of opportunities to every South African.

Implementing agency

- DOL

Key stakeholders identified

- OPOCT, Intermediate bodies, OTs
- DHET, SAQA, SETAs
- Industry associations
- Local and provincial government (KZN and WC)
- Community groups
- SBIDZ, RBIDZ, TNPA
- National Treasury

Required resources

- Investment: R20mn

Implementation timeframe

- Start date: 24 Nov 2014
- End date: 31 Mar 2019

Key performance indicators

- MOA between DOL and DHET by year end
- No. of people registered to ESSA
- No. of organisations registered on ESSA
- Ratio of success to placements

Initiative 17 – Propose inclusion of preferential procurement clause in the African Maritime Charter

Development and adoption of preferential procurement in the African Maritime Charter to create intra-regional maritime capacity and markets for African countries that seek to trade with each other

Initiative concept/details/highlights

- South Africa to draft a position paper to propose inclusion of the preferential procurement clause in the African Maritime Charter by 2016
- A position paper must be submitted to AU subcommittees/structures on maritime for consideration and adoption by the ministers and presidents of the AU member states
- SA to use this clause to actively pursue specific trade agreements covering, ship-building, ship repair, maintenance, oil rig repair/maintenance with targeted member states on the continent

A legislative environment that fosters regional and local trading

Implementing agency

- DIRCO

Key stakeholders identified

- DOT
- DTI
- Industry

Required resources

Nil (using existing resources: baseline budgets of implementing departments, i.e., DIRCO and DTI)

Implementation timeframe

- Start date: 18 Aug. 2014
- End date: 31 July 2017

Key performance indicators

- 2016: Successful inclusion and adoption of preferential procurement in African Maritime Charter
- 2017: No. of bilateral agreements concluded that include maritime procurement

Initiative 18 – Support local registry of vessels through incentives and by encouraging the use of using SA-flagged ships

There is zero participation in vessel ownership due to lack of access to ship financing. Access to affordable ship finance would enable competitive participation in the shipping market

Initiative concept/details/highlights

- Ensure that there is available funding for acquisition of ships to service cargo and marine support contracts
- Ensure South African DFI capability to fund shipping transactions
- Pilot funding of a government vessel (DOT) by DBSA
- Invoke cabotage requirements on all coastwise cargo
- Implement a tax waiver for coastal shipping operations similar to the international regime
- Ensure cost-efficient maritime administration

- All SA Government t replacement vessels and fishing fleet DFI funded
- Commercial banks create products for shipping finance

Implementing agency

- DBSA

Key stakeholders identified

- DOT
- DTI
- Treasury
- SAMSA

Required resources

- Investment: R1.2bn

Implementation timeframe

- Start date: Sept 2014
- End date: Sept 2017

Key performance indicators

- 2015: 2 ships funded by DBSA
- 2017: 1 ship per year funded locally