Unlocking the economic potential of South Africa’s Oceans
“The first implementation of Operation Phakisa will be led by the Department of Environmental Affairs. It will focus on unlocking the economic potential of South Africa’s oceans, which are estimated to have the potential to contribute up to one hundred and seventy seven billion rand to GDP by 2033 compared to fifty four billion rand in 2010.”

H.E. President J.G. Zuma, July 2014
Four growth areas were selected to be discussed in the Operation Phakisa Labs:

1. Marine transport and manufacturing

2. Offshore oil and gas exploration

3. Aquaculture

4. Marine protection services and governance
MARINE TRANSPORT AND MANUFACTURING
South Africa has an opportunity to develop the marine transport and manufacturing industry.

- **~30 000 vessels passing by South Africa’s waters** every year
- **~13 000 vessels dock in South Africa ports** every year and we only do maintenance on ~5% of them
- **80 rigs estimated to be in range of the Western Cape**, only 4 (~5%) are serviced per year – offering significant potential for growth
- **300 tonnes of cargo** on foreign owned and crewed vessels shipped

SOURCE: Transnet
Through Operation Phakisa, our vision is to double the size of the Marine Transport and Manufacturing (MTM) sector

### Initial Lab vision

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>▪ Accelerate the sector’s GDP contribution</td>
<td>▪ ~R15bn</td>
<td>▪ New revenue: ~R18.8bn in the first five years</td>
</tr>
</tbody>
</table>

### Job creation

<table>
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<tr>
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<tbody>
<tr>
<td>▪ Increase total employment</td>
<td>▪ ~15 000 jobs</td>
<td>▪ Direct jobs: ~15 220 (with an additional 39-46 000 more through the employment multiplier)</td>
</tr>
</tbody>
</table>
OFFSHORE OIL AND GAS EXPLORATION
The oil and gas industry can create large value to host countries

1. Potentially enormous economic benefits…
   Example 1: Abu Dhabi in 1960

2. Which take time to materialise
   Norway oil and gas production

A Timeline of failure, patience and success
- 1958: Norwegian Geological Survey says: “The chances of finding…oil…off Norwegian coast can be discounted”
- 1963: Norway asserts rights over North sea acreage
- 1966: Exploration drilling starts; initial wells are dry
- 1969: Ekofisk found (enormous discovery)
- 1971: Ekofisk begins production
South Africa has possible resources of ~9 bn barrels of oil and ~60 tcf of gas offshore, but uncertainty is high.

South Africa’s offshore reserve basin:
South African Coastal Province: Coastal land and adjoining water to depths of at least 2,000 m

9 bn barrels of oil

Equivalent to 40 years of South African oil consumption

60 tcf of gas

Equivalent to 375 years of South African gas consumption

At current level: 595 kb/d oil consumption and 160 Bcf/y gas consumption

SOURCE: Petroleum Agency SA, EIA
The lab aspired to determine the extent of South African offshore oil and gas reserves, through exploration

**South Africa should ...**

... create an environment that *promotes exploration* ...

... in order to *drill 30 exploration wells* in the next 10 years ...

... while simultaneously *maximising the benefits for South Africa*
Globally fish stocks are declining and wild capture fisheries will not be able to meet the increasing demand for fish products.

Global trends point to an increasing role for Aquaculture in fish production.
South Africa has the coastline to support aquaculture

<table>
<thead>
<tr>
<th>Country</th>
<th>Share of aquaculture production</th>
<th>Coastline length</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>61.7%</td>
<td>14,500 km</td>
</tr>
<tr>
<td>India</td>
<td>6.3%</td>
<td>7,000 km</td>
</tr>
<tr>
<td>Vietnam</td>
<td>4.6%</td>
<td>3,444 km</td>
</tr>
<tr>
<td>Indonesia</td>
<td>4.6%</td>
<td>54,716 km</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>2.6%</td>
<td>580 km</td>
</tr>
<tr>
<td>Norway</td>
<td>2%</td>
<td>25,148 km</td>
</tr>
<tr>
<td>Thailand</td>
<td>1.9%</td>
<td>3,219 km</td>
</tr>
<tr>
<td>Chile</td>
<td>1.6%</td>
<td>6,439 km</td>
</tr>
<tr>
<td>Egypt</td>
<td>1.5%</td>
<td>2,450 km</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1.38%</td>
<td>1,930 km</td>
</tr>
<tr>
<td>South Africa</td>
<td>0.00003424%</td>
<td>2,798 km</td>
</tr>
</tbody>
</table>

SOURCE: FishStatJ, DAFF, FAO 2014 State of World Fisheries; CIA World Factbook
The Lab aspired to catalyse growth in the sector by scaling up the sector as an initial step to sector development

**Headlines 2019: SA economy reaps the rewards of Operation Phakisa**

“…to Aquaculture in South African has shown strong growth in 5 years, with production from 2014 up 5 fold to 20 000 tonnes…….”

“…”exciting momentum built in Operation Phakisa evidenced by Aquaculture’s inclusive growth…”

“…”experts estimate the revenue contributed by Aquaculture to South Africa’s economy to be as much as R3 bn…”

“…”The Aquaculture sector in South Africa now employs 15 000 people in direct and full time jobs…..“

“…”Jobs in Aquaculture sector seen as quality jobs, improving livelihoods in rural communities….“
Deep dive: 24 projects have been selected and sequenced for implementation across 3 phases

- **Phase 1**
  - Hatchery expansion - Paternoster - Oyster
  - Expansion - East London IDZ - Kob
  - Expansion - Hamburg cluster - Oyster
  - Expansion - Ventersdorp - Catfish
  - Expansion - Jacobsbaai Sea Products
  - Expansion - Abagold
  - Expansion - HIK Abalone

- **New - Amatikulu - Kob**
  - Expansion - Amatikulu - Ornamentals
  - Expansion - DST Abalone Hatchery
  - New - Hamburg cluster - Kob
  - New - Saldanha Viking Cages - Trout
  - ADZ - Ventersdorp - Catfish
  - Doring Bay Abalone
  - New - Saldanha Viking Cages - Salmon
  - Expansion - Saldanha Blue Ocean Mussels - Mussel
  - Expansion - Saldanha Bay Oyster Company - Oyster
  - New - Saldanha Southern Atlantic Sea Cages - Salmon
  - New - Algoa Bay Sea Cage Farming - Yellowtail
  - New - Richards Bay Sea Cage Farming - Dusky Kob
  - New - Diamond Coast Abalone Ranching - Abalone
  - New - Van der Kloof - Trout
  - New - Matzikama Brenner Dietrichs - Abalone
  - New - Buffeljachts - Abalone

- **Coastal provinces**
  - Coastal provinces

- **Inland Provinces**
  - Inland Provinces
MARINE PROTECTION SERVICES AND OCEAN GOVERNANCE
South Africa has more ocean space than land, and our ocean jurisdiction will increase should the extended continental shelf claim be successful.

- South Africa is responsible for managing an oceans space that is greater than the land territory.
- Extended continental shelf claim will double the size of the ocean geographic extent.
With such a large ocean jurisdiction, effective governance is critical but will be challenging given the size and complexity of our oceans.

- ~3,900 kilometres of coastline (including the Prince Edward Islands)
- ~20 Key departments and institutions in the marine environment with distinct roles and maritime policies
- ~50 National Acts regulating marine governance
- 4 Coastal provinces with their own socio-economic context and development goals

SOURCE: DEA, Defence Web
The Lab proposed the implementation of 10 key initiatives to achieve these targets:

**Integrated Framework and Governance**
1. Secretariat to Govern Activities
2. Enhancement of Legislation into the Integrated Coastal and Oceans Management Act or Oceans Act
3. Review of ocean-related legislation and international instruments
4. Accelerated Capacity Building Intervention in Ocean Governance

**Ocean Protection**
5. Enhanced and Coordinated Enforcement Programme
8. Creation of a Marine Protected Area Representative Network
9. Marine Protected Area / Marine Spatial Planning Discovery, Research & Monitoring Programme

**Marine Spatial Planning**
10. Marine Spatial Planning Process

**Initial short-term targets:** First Results by March 2016
Thank You