DURBAN MARITIME SUMMIT
DEVELOPING MARITIME HUMAN CAPITAL
FOR A SMART PORT CITY
VISION:
*Delivering integrated learning and development solutions for business results*

MISSION:
*Improve capabilities and capacity of business through Training and Development in the Maritime and Terminal Operations environment*
MARKET DEMAND STRATEGY

• Spend on training and up-skilling our people R7.7 billion, which includes R4.7 billion on bursaries and grants, between now and 2019.

• Over the past three years, Transnet has invested more than R2, 2 billion in skills development.

• A key focus on engineering, technical and sector-specific skills has resulted in more than 3 000 artisans and 1 000 technicians entering training.

• Transnet awarded 492 engineering bursaries to undergraduate, masters and doctoral students.

• Sector-specific skills development focused on marine, rail and cargo handling remains a key priority and more than 5 900 learners were taken on over the three-year period.

• This is in addition to various management and leadership development programmes and courses which are made available to Transnet employees.
The Transnet Human Resource strategy also aims to achieve the following:

- Create and develop core skills
- Create a productive working environment
- Drive performance

The following measures will ensure that the MDS business requirements are successfully met:

- Increase headcount by 10.3% by 2020/21 by filling essential vacancies, retaining scarce skills, managing succession planning and building technical skills
- Drive socio-economic transformation by achieving employment equity targets, broadening skills development and creating jobs for the youth
- Increase the effectiveness of human capital service delivery by consistently applying policies and procedures and aligning roles, responsibilities and performance
Centers of Excellence

Transnet focuses on the development of skills to support Regional Integration by delivering the required skills.

Maritime School of Excellence
- Based in Durban with Satellite Campuses in Durban, Cape Town and PE
- Training:
  - Marine Pilot
  - Tug-master
  - Vessel Traffic services
  - Marine Global Best Practice
  - Operators of lifting equipment
  - Cargo Coordinators

School of Rail
- 8 Campuses Nationally spread
- Rail operations training e.g:
  - Train Drivers
  - Train Control
  - Yard operations

School of Engineering
- About 22 Campuses across the country
- Artisans
- Trade hands
- Process workers
- Technical rail engineering

School of Pipelines
- Campus in Pinetown
- Pipeline operations training e.g:
  - Technical Pipeline Operators
  - Pipeline Controllers
  - Coordinators
  - Planners

School of Security
- Main campus in Esselenpark and Bloemfontein
- Training of:
  - Protection Officers
  - Firearm training
  - Investigations

School of Leadership
- Main campus in Carlton
- Executive leadership Development
- Management Development
- Supervisory Development
- Customised courses
- Business Training/Support
- Commercial
Key Considerations

- Shipping in and around Africa is growing at a significant pace
- The Offshore Industry in Africa is growing
- Increased age of maritime professionals
- Global shortfall of seafarers
- Need to retain maritime skills
- Decreased number of recruits
- Remittance – Seafarers & related jobs (example of Philippines/Indonesia/Sri Lanka)
- Technology advancements
- Need for an integrated Maritime Skills Development Strategy
- Institutional Capacity to deliver
- SAMSA Skills Study
- Transnet Market Demand Strategy
- Transnet Cross Border Strategy
There are four dedicated ports and maritime institutions in the SADC region:

- Kenya Bandari College (Mombasa)
- Dar Es Salaam Maritime Institute (DMI),
- Namibia’s Maritime and Fisheries Institute (NAMFI)
- Angolan Maritime Training Centre

Maritime training schools in Southern and Eastern Africa

- Angola
- Congo
- Mozambique
- Namibia
- Kenya
- Tanzania
TRANSNET STRATEGY ON SKILLS DEVELOPMENT

- Position the Transnet schools as a learning and development hub for Sub-Saharan Africa
- Collaborate with other training institutions in the region
- Use the schools to promote alignment of regional transport policy
- Position training as a valued added product for the Export Sales and Geographic Expansion drivers
### Curriculum and Training Delivery

**Marine Operations**
- Marine Pilot training programme
- Tug master training programme
- Skipper Port operations
- Vessel traffic service (VTS)
- Motorman grade II
- 2nd Engineer port operations
- Chief Engineer port operations
- Dredging training programme
- Coxsain
- Shore hands
- Steering and lookout
- Ordinary Seaman Deck
- Bridge Resource Management
- Master Port Operations
- Ordinary Seaman Engine
- General Purpose Rating
- Berthing master

**Functional Training**
- Cargo Coordinator- Containers
- Cargo Coordinator- Break Bulk
- Cargo Coordinator- Roro
- Rubber tyred Gantry Crane
- Container reach stacker
- Rail mounted Gantry
- Container Straddle Carrier
- Ship to Shore cranes
- Empty container handler
- Container High reach Stacker
- Mobile Harbour Crane
- Counterbalance Lift truck (F1-F4)
- Wharf side Jib Crane
- Driver Articulated Vehicle
- Planner Training- containers
- Bulk ship Loader
- Woodchip Loader
- Triple Charger
- Bottom Discharger
- Hopper
- Reclaimer
- Bulk Stacker
- Tripper Car
- Scrapper Reclaimer
- Truck Loading Station
- Conveyors and Moving heads
- Tracktor-trailer combination
- Overhead electrical traveling crane
- Mobile elevating work platform

**Port and Commercial Training**
- Supervisory Development Programme
- Port worker Development programme
DEVELOPMENT MODEL

- Instructor-led – classroom based
- Blended learning and facilitation
- Coaching and/or mentoring
- Simulation training
- Computer Based training
- Practical training: day and night
- Train the trainer
- Assessments
- Recognition of Prior Learning
OPERATION PHAKISA INITIATIVES

• Implementation of Marine Spatial Planning

• Addressing skills maritime skills gap

• South Africa aims to capture the benefit of growing volumes of cargo handling, sea and coastal shipping

• Supporting transport activities such as storage and warehousing

• South Africa can utilize its location and expertise to increase its share of the global marine manufacturing market, including ship building, and repair, rig repair and refurbishment and boat building
CHARACTERISTICS OF SMART PORT CITIES

- Collaborative efforts between stakeholders across the industry;
- Strategic partnerships;
- Ensuring buy-in and action from relevant drivers within the industry;
- Understanding successes and shortfalls and strengthening feedback loops;
- Information that is up-to-date, relevant and accessible to the industry;
- Good communication to raise awareness and market service offerings, as well as effective service offerings.
- A comprehensive talent development and fund-ing model and implementation plan;
Findings relating to skills across maritime industries in South Africa suggest that in terms of technical skills there is an explicit “ability deficit” that needs to be addressed. It is not only the absence of training options but the quality of training that leads to capacity deficits.

- Mismatch between the available pool of employees and the market demand for specific qualifications and expertise - the foundation of South Africa's skills crisis - has been attributed to a number of causes, one of the most prominent being the state of the education system.

- The lack of correlation between training institution curricula and employability has been attributed in part to the lack or incompleteness of information on the demand and supply dynamics of the labour market, as well as poor collaboration between the private enterprise and the education sector in determining optimal content for curricula, for example: there are +/- 14 institutions offering seafaring courses accredited by SAMSA that lead to certification, and they might be only producing 35/40 junior offers per annum due to a number of challenges affecting demand and supply. Considering the officer shortage being reported by industry this number is woefully inadequate.

- Accredited short courses for boat/ship building specific skills, for example, laminating, welding, marine electrical etc. are not currently catered for and this is needed to up-skill the existing workforce. Recognition of prior learning is also a priority. In-house training continues to be the back-bone of skills training in the boat building workplace. This is due to the pressures of production, the lack of technical short courses and the red tape involved in accessing SOL funds for training.
SKILLS DEVELOPMENT GAP

• A comprehensive skills development strategy for the maritime sector would need to incorporate skills development requirements in all seven clusters. The three primary industries are each equally important for growth of South Africa's maritime sector. This study has revealed the need for additional research focused on each of the primary industries to better understand the skills supply and demand dynamics and accurately determine the number of skills required so as to better inform the maritime skills development strategy.

• A key finding is that all primary industry clusters (shipping; resources and leisure) serve global industries and there is a need for the skills development model to align local training and certification requirements with international standards. For each industry the key challenge is the gap in middle-management and supervisory skills and each industry has emphasised the gap between schooling and formal training structures and what is being demanded in the workplace.

• In terms of collating accurate statistics, data within each industry and across all industries is scattered, with no central database with a set of standard reporting requirements. SETA information can currently not be verified. The difficulty in obtaining accurate numbers for skills within the maritime sector is indicative of the need to do proper data collection and centralise data with defined standards.
A number of trends and key issues can be identified globally across international maritime skills studies. These include the following:

- global shortfall of seafarers;
- increasing aggregate age of maritime professionals;
- difficulties in retaining skills within the maritime sector;
- decreasing numbers of recruits to the sector;
- limited management skills;
- poor quality of shipping services delivered by personnel with no seafaring experience; and
- impact of technological innovation
## SCARCE AND CRITICAL MARITIME SKILLS

<table>
<thead>
<tr>
<th>Maritime Sub-Sector</th>
<th>Critical Skills</th>
<th>SETAs</th>
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</thead>
<tbody>
<tr>
<td>Shipping, Ports and Logistics</td>
<td>Navigation Officers; Engineers; Engine and Deck Ratings; Hydrographers; Oceanographers; Maritime Technologists; Marine Ecologist; Meteorologists; Firefighters; Transport and Logistics management; Maritime Project Management; Vessel Traffic Management; Sea-watch and rescue operators</td>
<td>TETA; MERSETA; BANKSETA; FASSET; THETA</td>
</tr>
<tr>
<td>Offshore Oil and Gas</td>
<td>Geologists/Geophysicists; Engineers,( Chemical, Geotechnical, Drilling, Structural, Marine, Mechanical); Deck Officers; Artisans</td>
<td>TETA; CHIETA; FOODBEV; HWSETA; INSETA; ISETT; MERSETA; MQA</td>
</tr>
<tr>
<td>Fisheries and Aquaculture</td>
<td>Aquatic Health or Aquaculturalist; Deck Officers; Marine Engineers; Artisans; Ratings, Engine</td>
<td>TETA; AGRISETA; BANKSETA; FASSET; FOODBEV; THETA; W&amp;RSETA</td>
</tr>
<tr>
<td>Vessel Construction &amp; Repairs</td>
<td>Naval Architects; Production Managers; Designers; Electricians; Electronics; Metal fabricators; boiler makers and welders; Riggers; Technicians</td>
<td>TETA; MERSETA; INSETA</td>
</tr>
<tr>
<td>Commercial Services</td>
<td>Marine Attorneys/Lawyers, Marine and Environmental Lawyers; Maritime Economists; Marine Financiers/Underwriters; Maritime Consultants, Crewing, Training, Research and innovation, business</td>
<td>TETA; MERSETA; INSETA; BANKSETA</td>
</tr>
<tr>
<td>Marine Tourism</td>
<td>Hospitality Officers (Chefs, Stewards, etc.); Marine Conservation Officers; Dive Videographers/Photographers</td>
<td>TETA, MERSETA; CATHSSETA; CACHETA; W&amp;RSETA</td>
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ESTIMATED 2030 SKILL GAP BY COMPETENCY

2030 -SKILLS GAP

- ABLE BODIED SEAMEN: 2600; 14%
- SKIPPER: 893; 5%
- WATCHKEEPER: 985; 5%
- PIFR AND PISC: 17; 0%
- ORDINARY SEAMEN: 365; 2%
- OILER: 688; 4%
- MATE/ CHIEF MATE: 358; 2%
- DECK OFFICERS: 1021; 6%
- EFFICIENT COOK /GENERAL: 882; 5%
- ENGINEERS: 1740; 9%
- FISHING: 1900; 10%
- MASTER: 1177; 6%
- LIFERAFTS/SURVIVAL CRAFT: 2077; 11%
- WIPER: 139; 1%
The establishment of Skills development partnerships between training institutions and industry, independent of the skills development system, is already bearing fruit.

- A prominent example is the collaboration between SAMTRA and a number of shipping companies to increase the availability of training berths for candidate officers.

- Lessons can be drawn from this initiative in order to replicate the models of public-private collaboration in skills development in other sub-sectors of maritime industry.
The South African maritime and education training is largely dominated by the following players:-

• In-house training providers for the various shipping companies

• Private training providers

• Public institutions

There is a need for greater/more sophisticated collaboration
INTEGRATED APPROACH TO DEVELOPING HUMAN CAPITAL

• The Maritime Skills Development Strategy should be steered by SAMSA in collaboration with strategic public private partnerships including stakeholders from government (including other Department of Transport agencies), Industry, Sector Education and Training Authorities (SETAs), education and training providers as well as regional and global stakeholders.

• Key pillars of the Strategy should include: (1) a Maritime Talent Development Model, (2) a Maritime Competency Framework, (3) an informed Sector Skills Plan, (4) a sustainable Funding Model, (5) strategic Public Private Partnerships that include all maritime clusters, (6) Public and Private Training Provision (7) a Sustainable Talent Pool
INTEGRATED APPROACH TO DEVELOPING HUMAN CAPITAL

• Creating and nurturing local and international partnerships.

• Conducting maritime awareness campaigns.

• Developing maritime retention strategies.

• Ensuring maritime qualifications meet international convention standards.

• Benchmarking against leading global maritime nations.

• Increase recruitment and training.

• Develop a national maritime skills database.
CONCLUSION

• For South Africa's maritime sector to grow, there is a need to create a social / educational environment that is aligned to the international convention standards and a legal environment that is attractive to international maritime nations.

• The current challenge for maritime industries does not seem to be the need for additional numbers of skilled people rather than the need for skilled people capable of providing a quality service.

• Improving the quality of basic and tertiary education will be critical to minimise the gap that exists between the trained population and the requirement in the workplace.
Thank You