



Ocean Sciences Strategy

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Office for Institutional Strategy
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Overview



Section 1: About Nelson Mandela University

Section 2: Our Ocean Sciences Strategy

Section 3: Our Ocean Sciences Capabilities

SECTION 1:

About Nelson Mandela University

Our vision



OUR VISION
is to be a
dynamic African
university,
recognised for its
leadership in
generating
cutting-edge
knowledge
for a
sustainable
future.

Our core messages

NELSON MANDELA
UNIVERSITY



CORE PURPOSE

IN THE
SERVICE
OF SOCIETY

CORE OUTCOME

CO-CREATE A
SUSTAINABLE,
SOCIALLY JUST WORLD

ATTRIBUTES

Provide
transformative,
lifelong learning
experiences that
liberate human
potential

Pursue impactful
research,
innovation &
internationalisation
to promote
sustainable futures

Engage with
all publics in
equalising
partnerships that
advance agency &
promote the
co-creation of
African-purposed
solutions

BENEFITS

Cultivate socially
conscious, globally
connected citizens who
serve the public good

Contribute to
changing the
world through
discovery,
scholarship &
innovation

Foster a more equal,
inclusive & just society
through action &
stewardship

Vision 2030 strategic framework



VISION

A dynamic, African university recognised for its leadership in generating cutting-edge knowledge for a sustainable future.

MISSION

To offer a diverse range of life-changing educational experiences for a better world.

STRATEGIC
FOCUS AREAS



STRATEGIC
ENABLERS

Ethical governance and leadership

Values-driven institutional culture and empowered employees

Innovation

Digitalisation and modernised infrastructure

Sustainability and responsible resource stewardship

FOUNDATIONAL
VALUES

Excellence

Integrity

Ubuntu

Respect for diversity

Social justice & equality

Sustainable stewardship

GRADUATE
ATTRIBUTES

FOUNDATIONAL
KNOWLEDGE AND
LITERACIES

LEARNING AND INNOVATION
COMPETENCIES

LIFE AND CAREER SKILLS

About the University

More than **32 800** students

Nearly **2 500** staff

89% undergraduate students

11% postgraduate students

3% international students from **57**
different countries

84% success rate

7 campuses

Faculty profile



Humanities



Business &
Economic
Sciences



Education



Engineering,
Built Enviro
& Technology



Health
Sciences



Law



Science

Ocean sciences strategy draws on contributions of all faculties

Our strategic trajectories & research themes

Strategic trajectories

- Medical School
- Ocean Sciences
- Revitalisation of the Humanities and fostering transdisciplinarity
- Expansion of the African footprint

Six institutional research themes

- Ocean and coastal sciences
- Social justice and democracy
- Environmental stewardship and sustainable livelihoods
- Innovation and the digital economy
- Origins, culture, heritage and memory and
- Humanising pedagogies



Campus profile



Only dedicated Ocean Sciences campus in South Africa



Times Higher Education Impact Rankings: 2021



Life below water

Conserve and sustainably use the oceans, seas and marine resources for sustainable development



Life on land

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss



Good health and well-being

Ensure healthy lives and promote well-being for all at all ages



Partnerships for the goals

Strengthen the means of implementation and revitalise the global partnership for sustainable development

Rank	Name	Best scores by rank				Overall
301–400	Nelson Mandela University South Africa	14 75.2	15 44.5 62.6	3 43.1 57.4	17 73.5 83.8	66.3–70.9

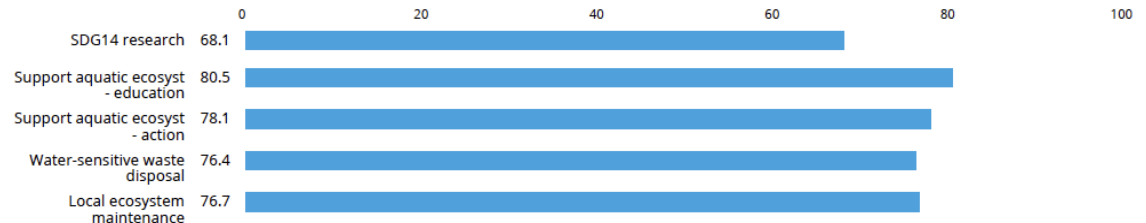
[SDG Descriptions](#)



LIFE BELOW WATER

QUALIFYING SDG - 26% OF OVERALL

SCORE **75.2** RANK **40** out of 379 institutions



SDG 14 Life Below Water:
Position 40 out of 379
Score: 75.2



SECTION 2:

Context of Nelson Mandela University's Ocean Sciences Strategy

Global to Local

Sustainable Development Goals 2030

1 NO
POVERTY



2 ZERO
HUNGER



3 GOOD HEALTH
AND WELL-BEING



4 QUALITY
EDUCATION



5 GENDER
EQUALITY



6 CLEAN WATER
AND SANITATION



7 AFFORDABLE AND
CLEAN ENERGY



8 DECENT WORK AND
ECONOMIC GROWTH



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



10 REDUCED
INEQUALITIES



11 SUSTAINABLE CITIES
AND COMMUNITIES



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



13 CLIMATE
ACTION



14 LIFE
BELOW WATER



15 LIFE
ON LAND



16 PEACE, JUSTICE
AND STRONG
INSTITUTIONS



17 PARTNERSHIPS
FOR THE GOALS



African Union Agenda 2063



AGENDA 2063 The Africa We Want

Aspiration 1

A prosperous Africa based on inclusive growth and sustainable development

Aspiration 2

An integrated continent, politically united and based on the ideals of Pan Africanism and the vision of Africa's Renaissance

Aspiration 3

An Africa of good governance, democracy, respect for human rights, justice and the rule of law

Aspiration 4

A peaceful and secure Africa

Aspiration 5

An Africa with a strong cultural identity, common heritage, values and ethics

Aspiration 6

An Africa where development is people-driven, unleashing the potential of its women and youth

Aspiration 7

Africa as a strong, united and influential global player and partner



*The Future
we want for Africa*

AGENDA 2063
Unity, Prosperity & Peace



Africa's Integrated Maritime Strategy 2050

AFRICAN UNION
الاتحاد الإفريقي



UNION AFRICAINE
UNIÃO AFRICANA

www.au.int/maritime



2050 AFRICA'S INTEGRATED MARITIME STRATEGY (2050 AIM STRATEGY®)*

"Together, let's navigate the future ... now! Keep an eye on www.au.int/maritime, and swim with us on Twitter and Facebook in Arabic, English, French, Portuguese and... Kiswahili. Fair winds!"
(End of year email sent on 16 Dec. 2011, by H.E. Mr. Erastus Mwencha, Deputy Chairperson of the AUC to all Staff in Addis and around the world, all Member States and Partners.)

AU, Version 1.0, 2012.

54 African states: 38 have a coastline 6 are islands



2050 AIM Strategy provides a broad framework for the protection and sustainable exploitation of the Integrated African Maritime Sector Domain for wealth creation

What informs our Ocean Sciences Strategy?

NDP, AGENDA 2063 AND SDGs

Long term plans that provide a shared development vision for all stakeholders within the country, in the continent and the world



NDP VISION 2030

Fight poverty, inequality and unemployment



AFRICA AGENDA 2063

Prosperous Africa based on inclusive growth and sustainable development



SDGS 2030

End poverty, protect the planet and ensure prosperity for all

Mutually reinforcing agendas: Agenda 2063 focus also relate to the AU's Pan-African drive, African cultural identity, common heritage, values and ethics; the African Renaissance; and the strong focus on the security agenda

Operation Phakisa: Ocean economy



Marine transport and manufacturing



Offshore oil and gas exploration



Aquaculture



Marine protection services and ocean governance



Small harbour development



Marine and coastal tourism



Operation Phakisa: Ocean Economy



Eastern Cape Provincial Development Plan



agriculture

oceans
economy



tourism

renewable
energy



light
manufacturing

automotive
industry



SECTION 3:

Key Ocean Sciences Capabilities

Pillars of ocean sciences strategy

**Transdisciplinary
postgraduate research
& innovation – “where
art meets science”**

**Sustainability – coastal
livelihoods, economic
development &
marine protection**

**Quadruple helix &
collaborative
partnerships**

**Leading ocean
sciences university on
the African continent**

Ocean sciences capabilities

**Ocean cultures and
heritage**

**Ocean governance
and law of the seas
in Africa**

**Marine spatial
planning**

**Marine
engineering,
robotics and
innovative
technologies**

**Oceanography and
marine food
security**

**Climate and global
change**

Marine biodiversity

Ocean resources

**Shallow water
ecosystems &
estuaries**

Transdisciplinary research niches

Sustainable livelihoods for coastal communities

- Including aquaculture; artisanal fishing and livelihoods of poor coastal communities; coastal paleontology; history, heritage, cultures of coastal communities; coastal and marine tourism; ocean, coastal and marine education and literacy; health and wellness

Ocean governance and global change

- Including marine spatial planning; fisheries crime prevention; climate change and sea level rises; ocean acidification; sea and ocean observation and monitoring; international relations; ocean governance, public policy and marine/maritime law

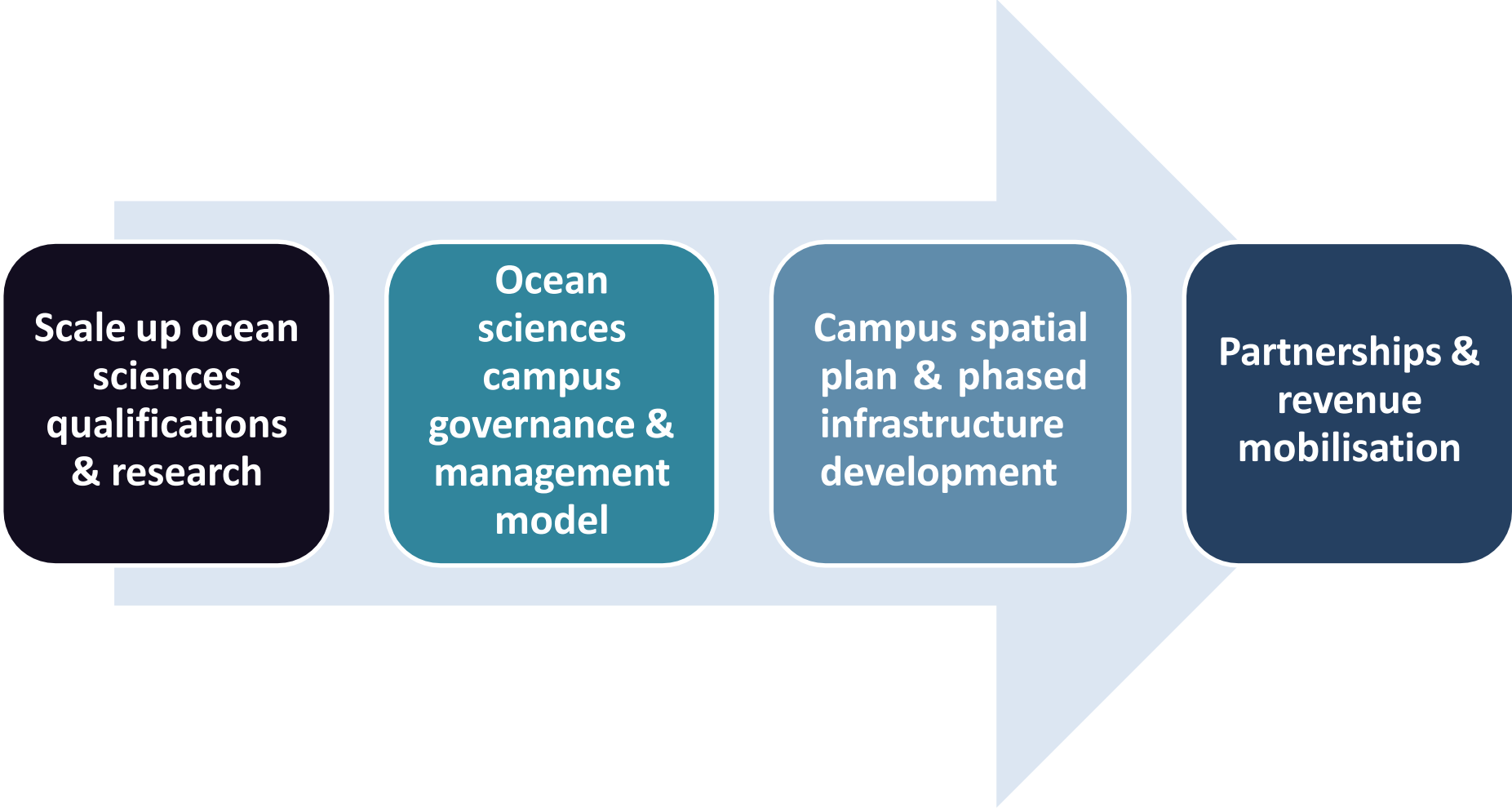
Marine technologies and infrastructure

- Including robotic/autonomous underwater research vessels; satellite technologies; high-performance cloud computing and big data processing; composites, vessel construction and repair; ocean observation and surveillance technologies; marine materials and manufacturing processes; coastal infrastructure and port logistics

Ocean resources and marine biodiversity conservation

- Including ocean resource economics; ocean renewable energy (tidal current and wave); off-shore oil and gas; marine biotechnologies and novel pharmaceuticals; protecting and managing coastal and marine ecosystems; marine protected area planning and management; marine living resources; water quality and pollution monitoring;

Key strategic enablers



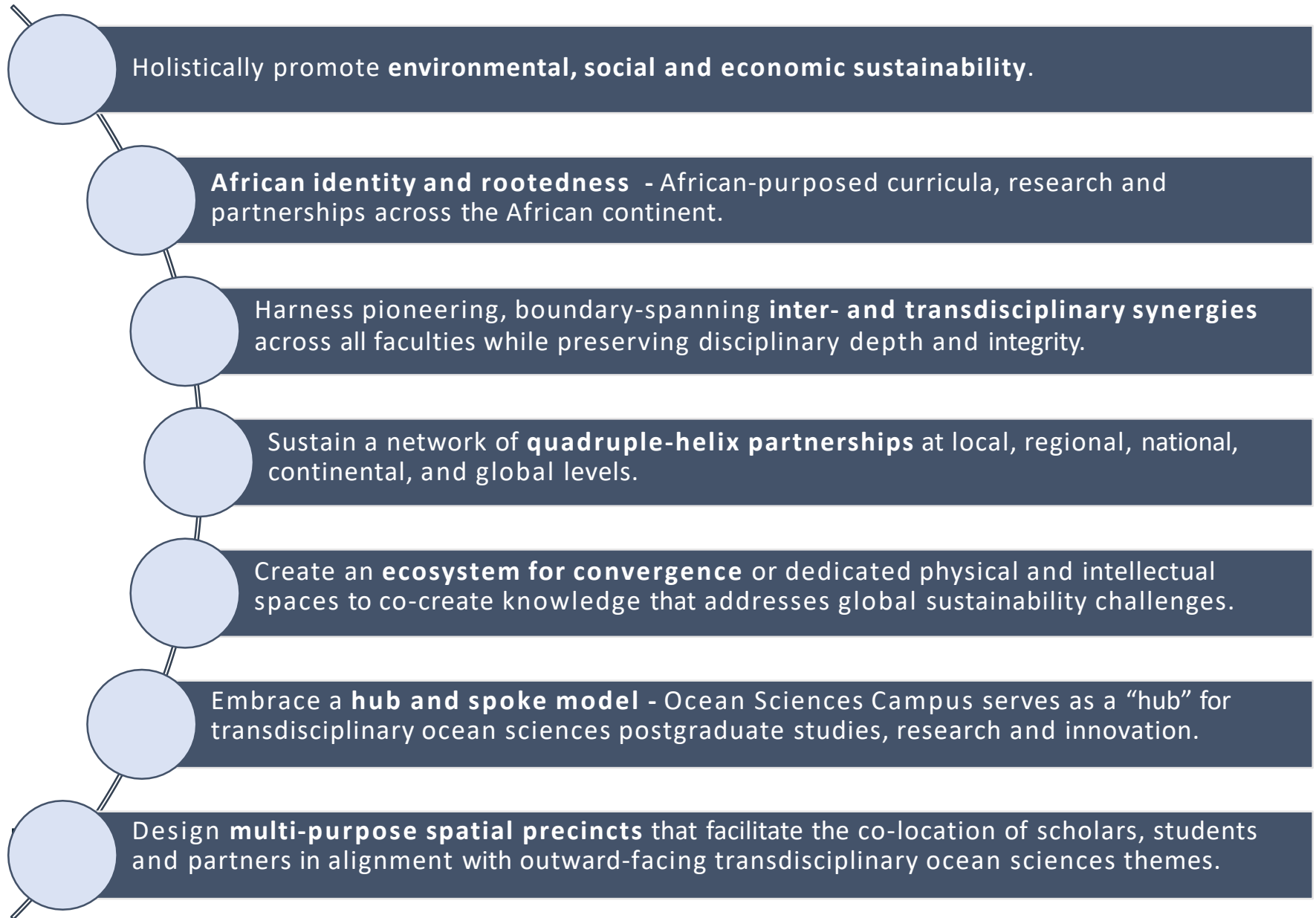
**Scale up ocean
sciences
qualifications
& research**

**Ocean
sciences
campus
governance &
management
model**

**Campus spatial
plan & phased
infrastructure
development**

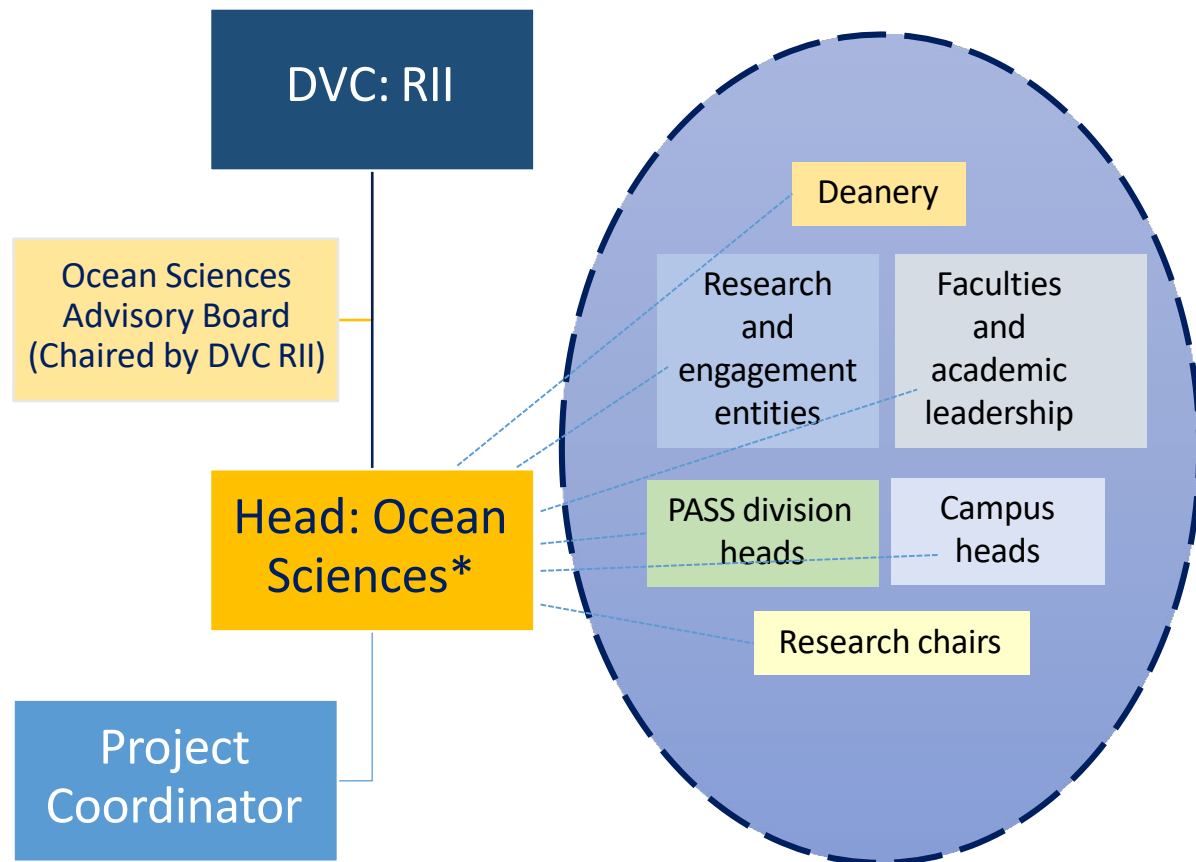
**Partnerships &
revenue
mobilisation**

Key principles



Ocean sciences governance and management model

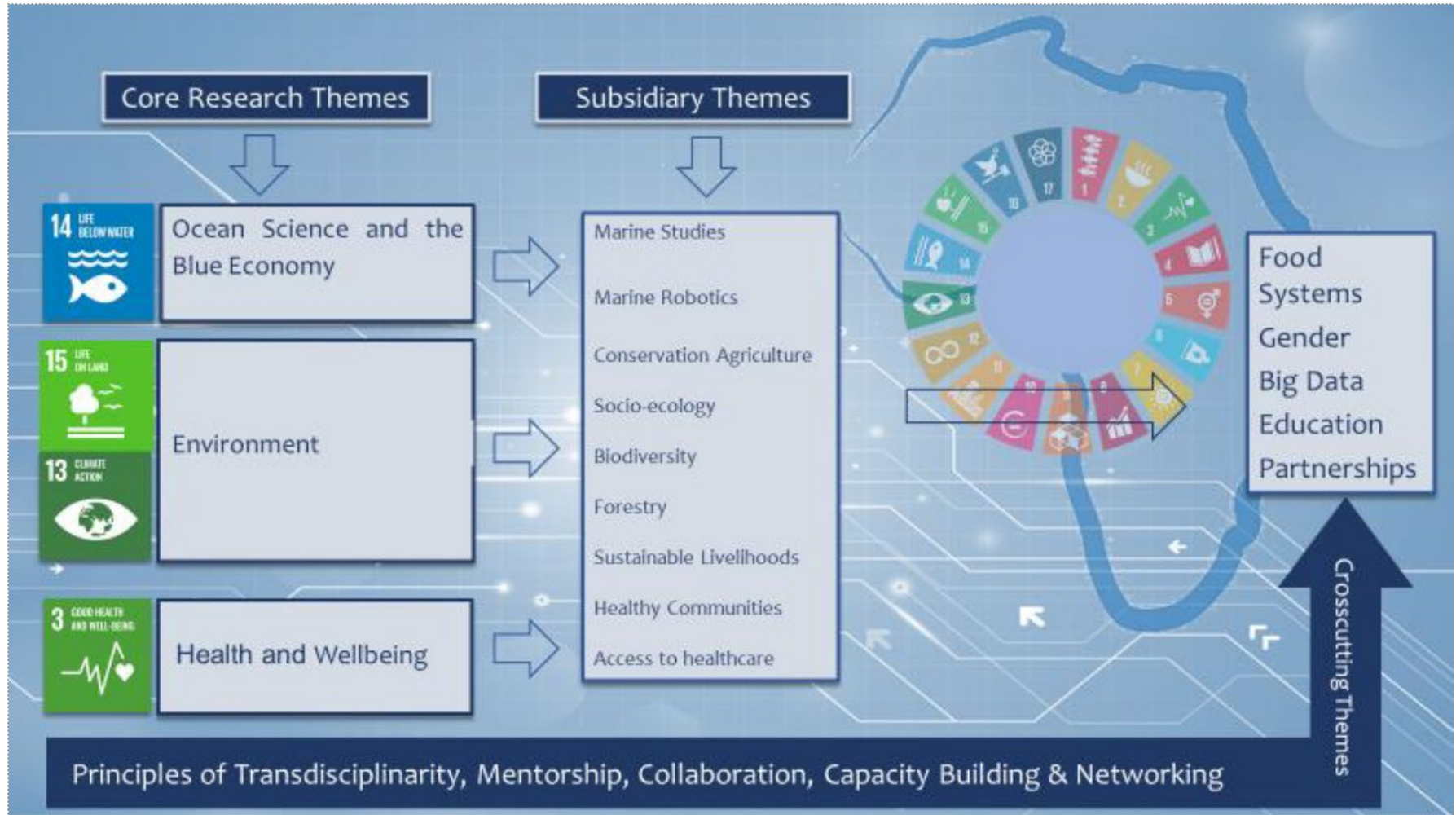
The Head of Ocean Sciences will fulfil the role of leveraging existing and emerging institutional capabilities to foster innovative, transdisciplinary collaboration to position the University as a premier destination of choice for ocean sciences. This will be brokered and facilitated through a networked model in close collaboration with all faculties, as well as relevant research and engagement entities and research chairs.



*Note:

The Head: Ocean Sciences will have a reporting line to the DVC Research, Innovation and Internationalisation, but dotted reporting lines to the DVCs Learning and Teaching, Engagement and Transformation, and People and Operations for ocean sciences matters pertaining to these portfolios. The designation of the Head: Ocean Sciences will be determined by the job analysis, position profile and job evaluation processes.

Mandela Institute for Sustainable Futures



Institute for Coastal and Marine Research

Marine Apex
Predator Research
Unit (MAPRU)

Research Diving
Unit (RDU)

Faculty
Membership

International Links

Research &
Professional
Associates; Fellows

Research Chairs

Law of the Sea and
Development in Africa

Marine Spatial Planning

Ocean Cultures and
Heritage

Ocean Science and Marine
Food Security

Shallow Water Ecosystems

Identities and Social
Cohesion in Africa

Stakeholders & Partners

Government

Nelson
Mandela Bay
Maritime
Cluster

Industry
Consultants
& Non-
Governmental
Organisations

Department of Marine Engineering

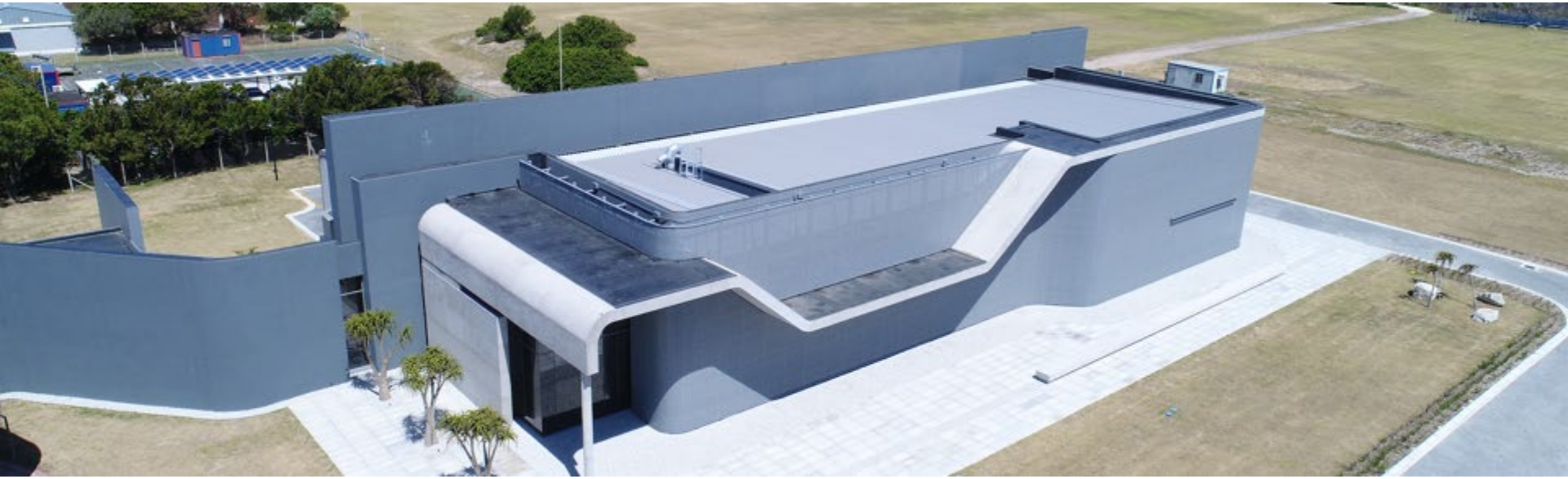
Marine Engineering, Naval Architecture and Nautical Science

Marine Engineering



NELSON MANDELA
UNIVERSITY

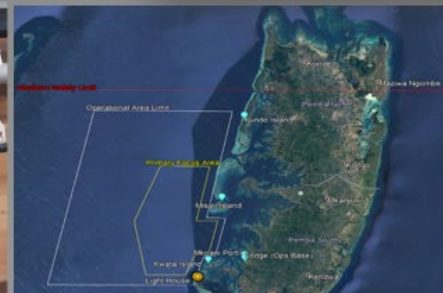
Marine Engineering



- 250m2 of Wärtsilä/merSETA laboratory space
- Expandable/dividing classrooms
- State of the Art AV
- Live training and instruction from Finland and Netherlands in real time (Train the Trainer)



Marine Robotics Centre





FishFORCE

- Reduce poverty through the training of law enforcement officers.
- Advance economic development by increasing the capacity of selected countries to investigate and prosecute fisheries crime.
- Promote the sustainable utilisation of marine living resources.



SAIMI

SOUTH AFRICAN INTERNATIONAL
MARITIME INSTITUTE



- PARTNERS IN GROWING THE BLUE ECONOMY -



MISSION

To help unlock South Africa's oceans and maritime socio-economic opportunities by catalysing education, skills development, training, research and innovation initiatives through broad based collaborative partnerships and networks.

VISION

A highly skilled, knowledge-intensive and sustainable oceans sector

Thank you!

