

Undertaking Catalytic Research and Moving Beyond Publication Numbers in Coastal, Marine and Maritime Domains

Presentation Made During the IORAG Gauteng Roadshow at the Albert Luthuli Auditorium, NRF, Pretoria, 11 March 2026

UNISA



institute for sustainability
and corporate citizenship

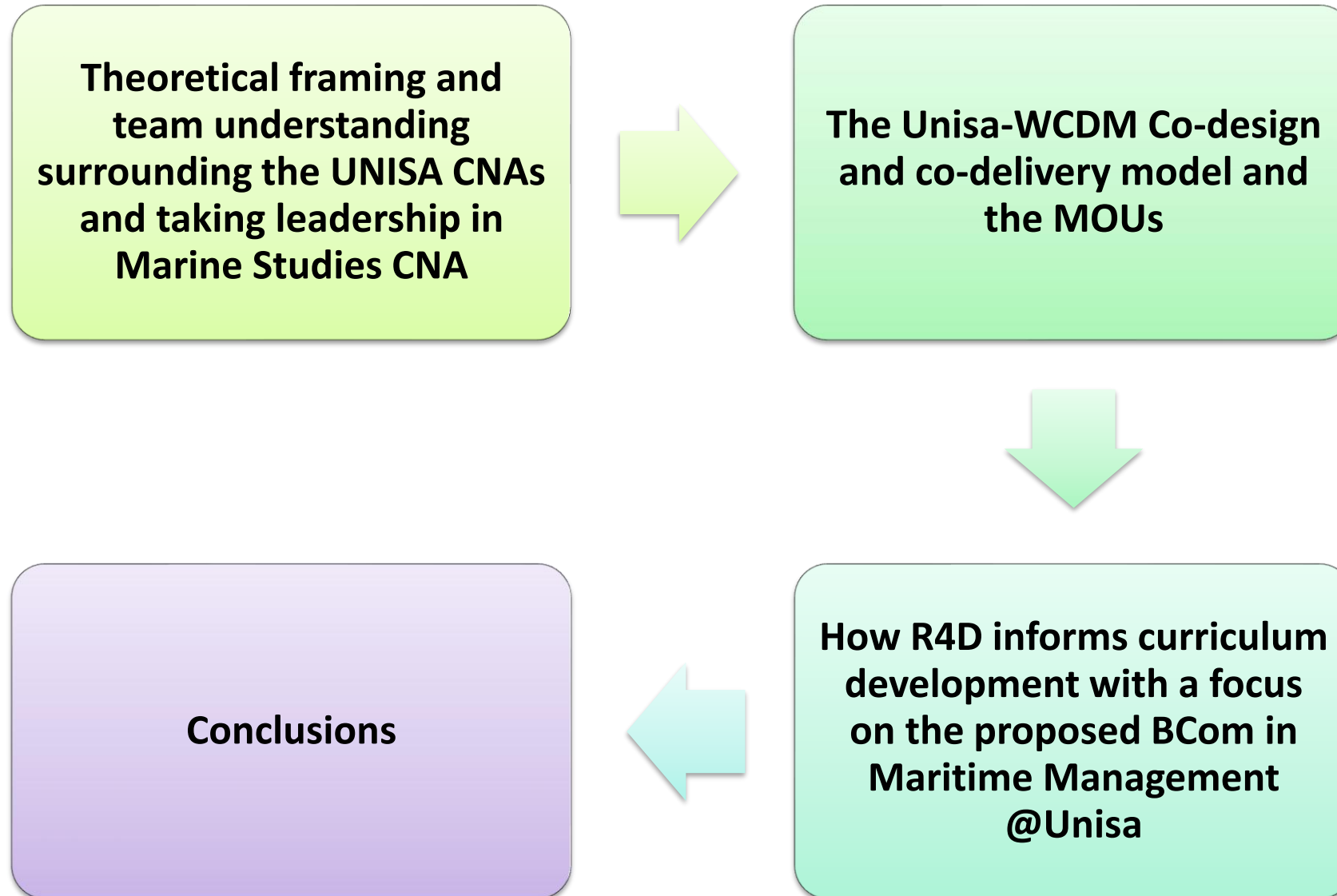
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Presentation Outline



**Theoretical framing and team understanding
surrounding the UNISA CNAs and taking
leadership in Marine Studies CNA**

2021: UNISA VC Proclaimed the 10 Catalytic Niche Areas (CNAs)



Marine Studies



Aviation and Aeronautical Studies



Automotive



Energy



Space Study and Square Kilometer Array



Fourth Industrial Revolution and Digitalisation



Natural Sciences (Biotechnological studies)



Health Studies/ Medicine



Feminist, Womanist, Bosadi Theorisations



Student Support and Co-Curricular Activities



Catalytic research (Working definition)

- Research that triggers sustained change beyond academia
 - Accelerates action and reduces friction between science and society
 - Connects disciplines and stakeholders around real problems
 - Produces usable solutions, not only outputs
 - Builds capacity and platforms that outlive the project
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The Catalytic Research Flywheel

This Model is also Applicable to Curriculum Development

Catalytic Research Flywheel





Why Coastal, Marine and Maritime Research is inherently catalytic?

- ❑ Coastal zones are multiplier spaces: climate, livelihoods, governance, and infrastructure collide
- ❑ Risks are rising: sea-level rise, extreme events, pollution, biodiversity loss
- ❑ Inequality is exposed: marginalised communities face disproportionate impacts
- ❑ Marine systems link local realities to global agendas (SDGs, Ocean Decade, Paris Agreement)

About the UNISA Marine and Coastal Studies CNA Strategic Document



- In February 2024, an inter-college working group to develop a strategic document for the Marine CNA was established through the CGS Marine CNA awareness series.
- Following extensive consultations with both internal and external key stakeholders, especially the Department of Forestry, Fisheries and the Environment (DFFE), the UNISA Marine Studies CNA documents was finalized.
- One key recommendation that came out was for UNISA to embark on a Trans, Inter- and Multi-disciplinary approach, and to place the Marine Studies CNA as the 'Mother of All CNAs'.

Authorship & Coordination: Marine Studies CNA Strategic Document



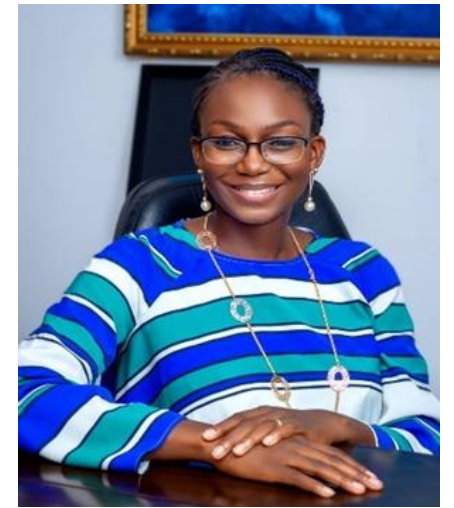
Prof Jessica Murray: Catalytic Niche Area Optimisation Champion, CGS



Prof Godwell Nhamo: Lead Author/Project Leader, CEMS



Dr Lazarus Chapungu: Co-author, CEMS



Dr Olubunmi Ayodele Afinowi, Co-author, CEMS



Prof Linda Jewell: Content Reviewer, CSET



Prof Memory Tekere: Content Reviewer, CAES

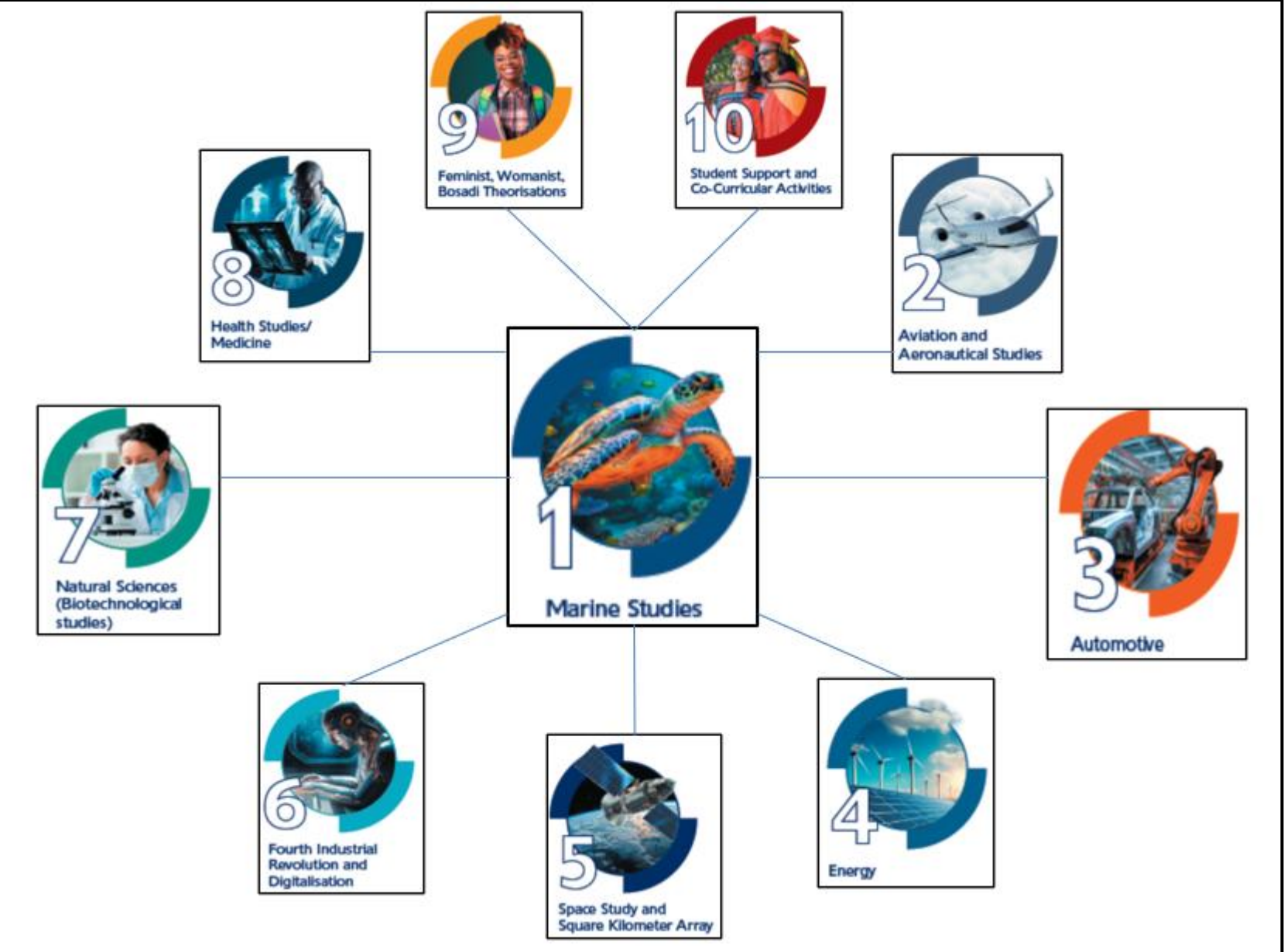


Prof Kevin Mearns: Content Reviewer, CAES

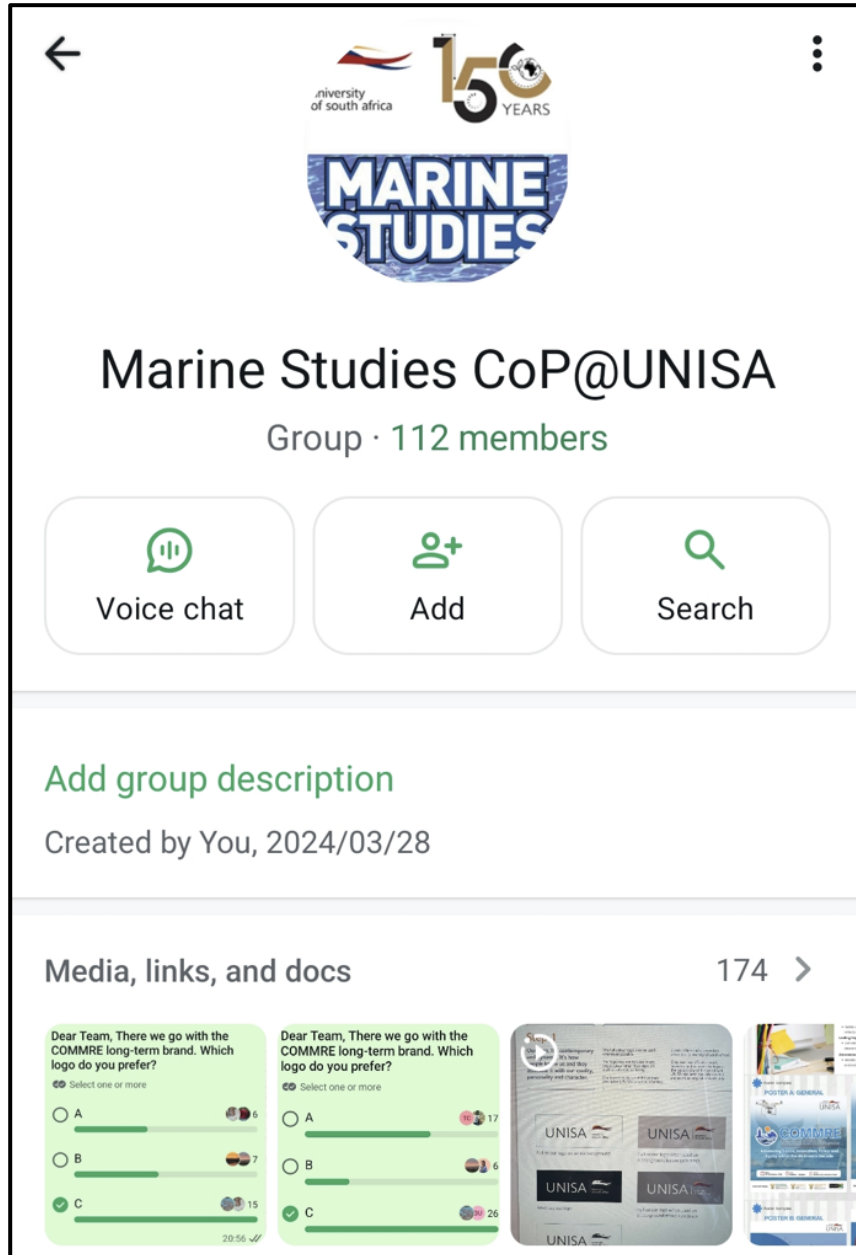


Prof Anthoni Van Nieuwkerk: Content Reviewer, TM School

Recommended Approach/Model: Marine CNA in the Nine (9) CNAs

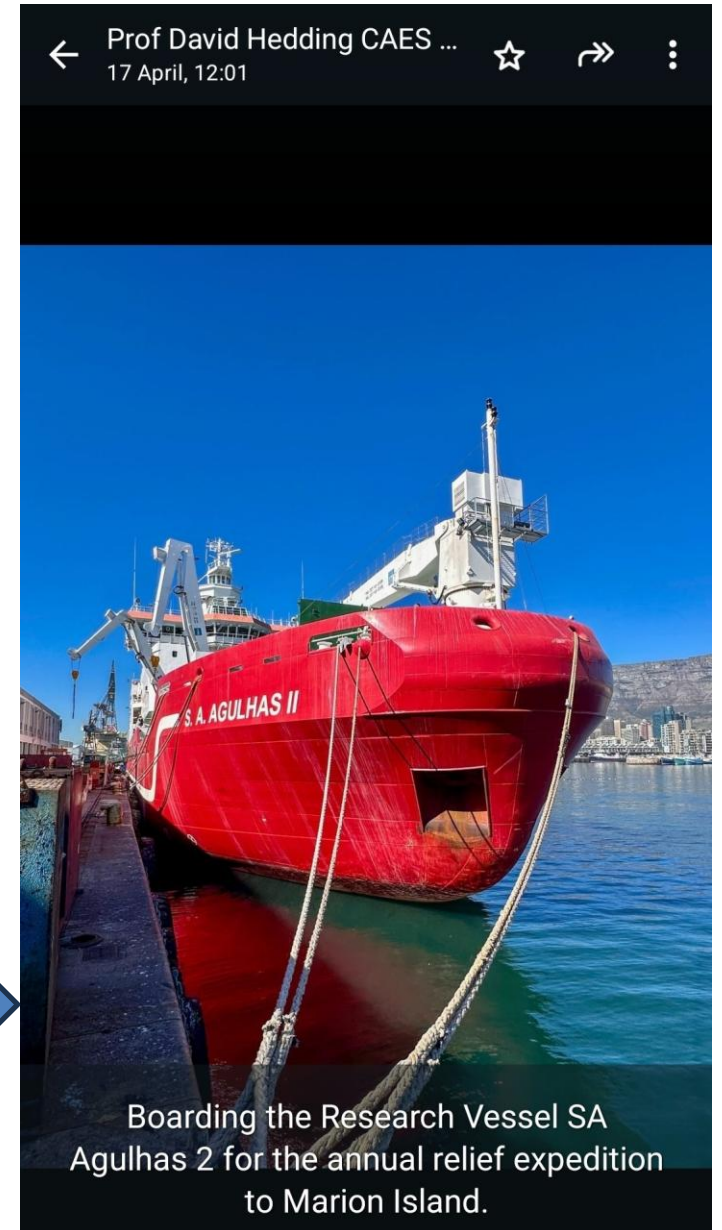


The UNISA Marine Studies CNA Community of Practice (CoP)



Should you wish to join the CoP, please email your WhatsApp number to: nhamog@unisa.ac.za


Prof David Hedding from CAES – Geography Department Reporting to the CoP onboard SA Agulhas II on the 17th April 2025




2026 International Conference has Loaded!


UNISA university of south africa
Define tomorrow.


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 **COMMRE**
INTERNATIONAL CONFERENCE ON
COASTAL, MARINE AND MARITIME RESEARCH


Theme:
Advancing Science, Innovation, and Equity within the UN Oceans Decade

 **Date**
27-30 October 2026

 **Location**
Durban ICC
Durban, South Africa

 Call for Papers

 Programme

 Registration

62

Abstracts received as
of 11 March 2026



COMMRE

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Oceans Decade*

Date : 27-30 October 2026

Time : 08:00 - 16:00

Venue : Durban ICC, Durban, South Africa

For more information email:
commre@unisa.ac.za

Visit our website

<https://www.unisa.ac.za/COMMRE-2026>



2026 International Conference has Loaded!

- **Six (6) Themes Identified and Solidified**
 - Climate Change, Coastal Adaptation and Displacements
 - Integrated Coastal Zone Management (ICZM)
 - Ocean Observation, Technology and Governance
 - Sustainable Blue/Ocean Economy and Maritime Issues
 - Ocean Accounting, Blue Financing and Coastal Sustainability
 - Marine Biodiversity, Coastal and Marine Tourism

**Co-design and co-delivery model
adopted with the WCDDM**

WCDM & Matzikama Municipality Workshops



Research Agenda Setting (Co-creation Process)

Problem Identification and Mapping



Research Ideation



Research co-designing



Research implementation strategies

The WCDM as a Case Study



Towards a Smart and Resilient West Coast District Municipality (Project Weskus)

- Transboundary challenges (social, economic and environmental): air quality, wildfires, tourism corridors and security issues.
- Sports tourism, the use of rivers, agriculture, and other natural attractions; and other possible partnerships.
- Sustainable and climate-resilient infrastructure, such as roads and transportation.
- Community information management systems.
- Innovations in Integrated Development Planning processes and models of public participation.
- Solid waste and wastewater management, especially within **informal settlements**.
 - Dealing with informal settlements, community safety and coastal infrastructure vandalism.
 - Safety of lives at sea, increased incidences of boat mishaps and accidents at sea.
 - Limited coastal Access owing to private ownership rights.

Significant Steps

- Co-develop MoUs with West Coast local Municipalities.
- Establish joint working groups for WCDM–UNISA collaboration.
- Open channels of communication with Communities and Stakeholders.
- Finalise thematic clusters for **Project Labuan (SBM)**, **Project Phambili (Matzikama)** and **Project Smart Weskus(WCDM)**.
- Initiate pilots for each project cluster.
- Capacity building and knowledge exchange.
- Strengthening citizen science and local monitoring networks.
- Facilitating cross-municipality learning (SBM ↔ MM ↔ WCDM).
- Supporting community initiatives aligned with the research objectives in actualising resilient, inclusive and sustainable coastal and inland communities.

How R4D Informs Curriculum Development: A case of the Proposed Unisda BCom Maritime Management



Why Maritime Management?

❑ The programme was not developed “because it sounded good.” It emerged from a development need:

The maritime sector is expanding, but management and commercial skills were not being produced at the scale and quality needed.

❑ South Africa and the region face:

- Growing maritime economic opportunities (blue economy)
 - Skills shortages in maritime business and management
 - Fragmented training (technical focus, limited business integration)
 - Need for a structured qualification aligned to industry and development priorities
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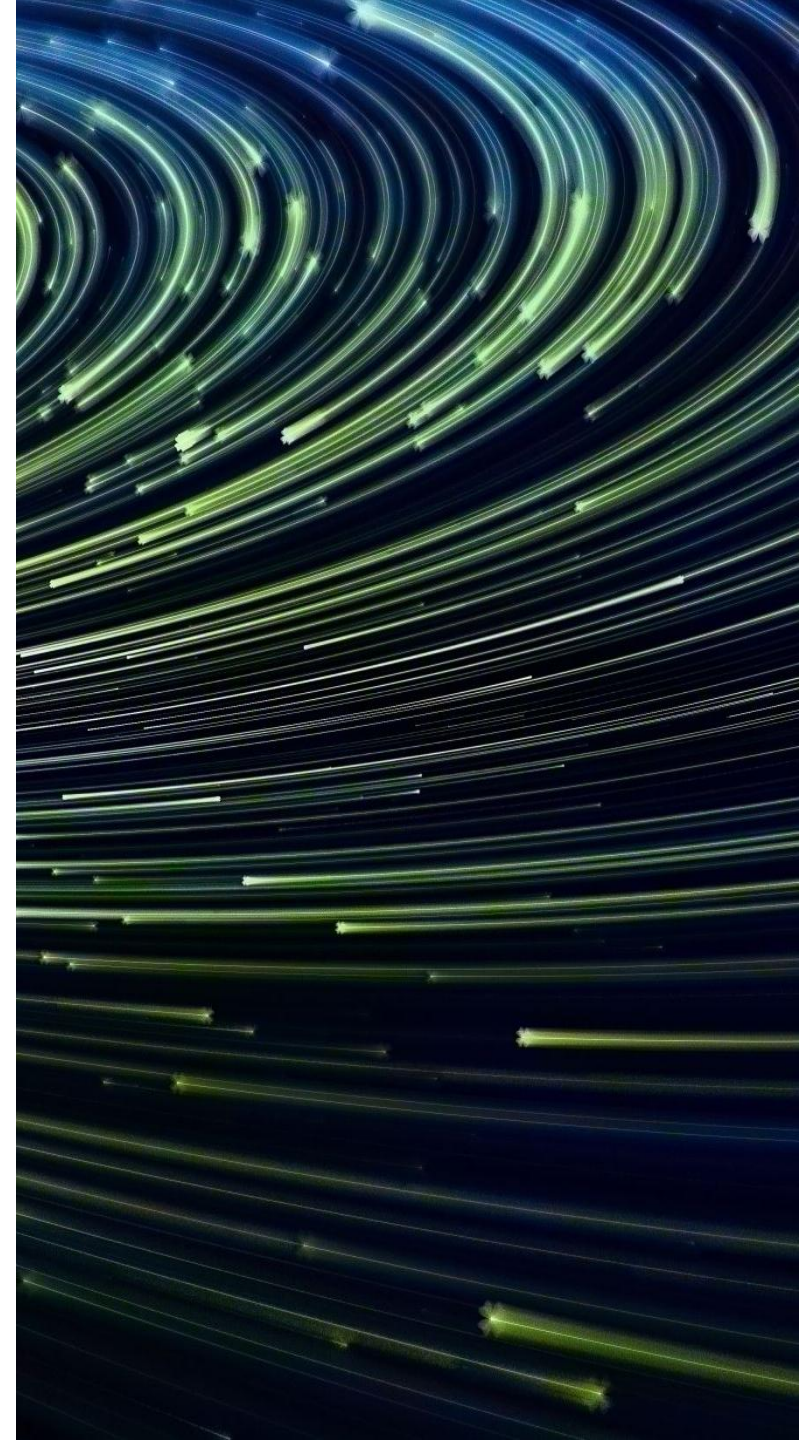
Why Curriculum Needs R4D

Curriculum development often fails when it is:

- Based only on ideology or politics
- Imported without context
- Too content-heavy
- Designed without teachers and learners

R4D helps curriculum become:

- **Relevant** to local needs
- **Inclusive** for diverse learners
- **Feasible** for teachers
- **Effective** in improving outcomes



The R4D Logic Used in the UNISA Case





Co-Design with Stakeholders

Stakeholders were involved in:

- Defining programme purpose and graduate profile
- Identifying core knowledge areas and competencies
- Reviewing modules for relevance and sequencing
- Ensuring industry alignment and employability focus

Stakeholder groups included

- Maritime industry practitioners
 - Academic experts
 - Sector bodies and regulators (where relevant)
 - Internal UNISA structures and curriculum committees
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Validation, Alignment & Feasibility

The programme was strengthened through:

- Internal academic quality assurance processes
 - External relevance checks through stakeholder feedback
 - Alignment with UNISA's Marine Studies Catalytic Niche Area
 - Consideration of implementation in an ODeL environment:
 - learner support needs
 - scalable teaching approaches
 - assessment feasibility
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Development Value

The BCom Maritime Management contributes to:

- Strengthening maritime human capital
 - Supporting sector growth and competitiveness
 - Expanding access through ODeL
 - Supporting transformation in maritime participation
 - Building capacity for policy, governance, and management in the blue economy
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Key Takeaways

UNISA's BCom Maritime Management demonstrates that:

- R4D can guide curriculum development effectively
 - Evidence and stakeholder engagement improve relevance
 - Co-design increases ownership and implementation readiness
 - Curriculum becomes a tool for development impact
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Thank You

Be Blessed!