UNIVERSITIES SOUTH AFRICA

4th USAf Higher Education Conference



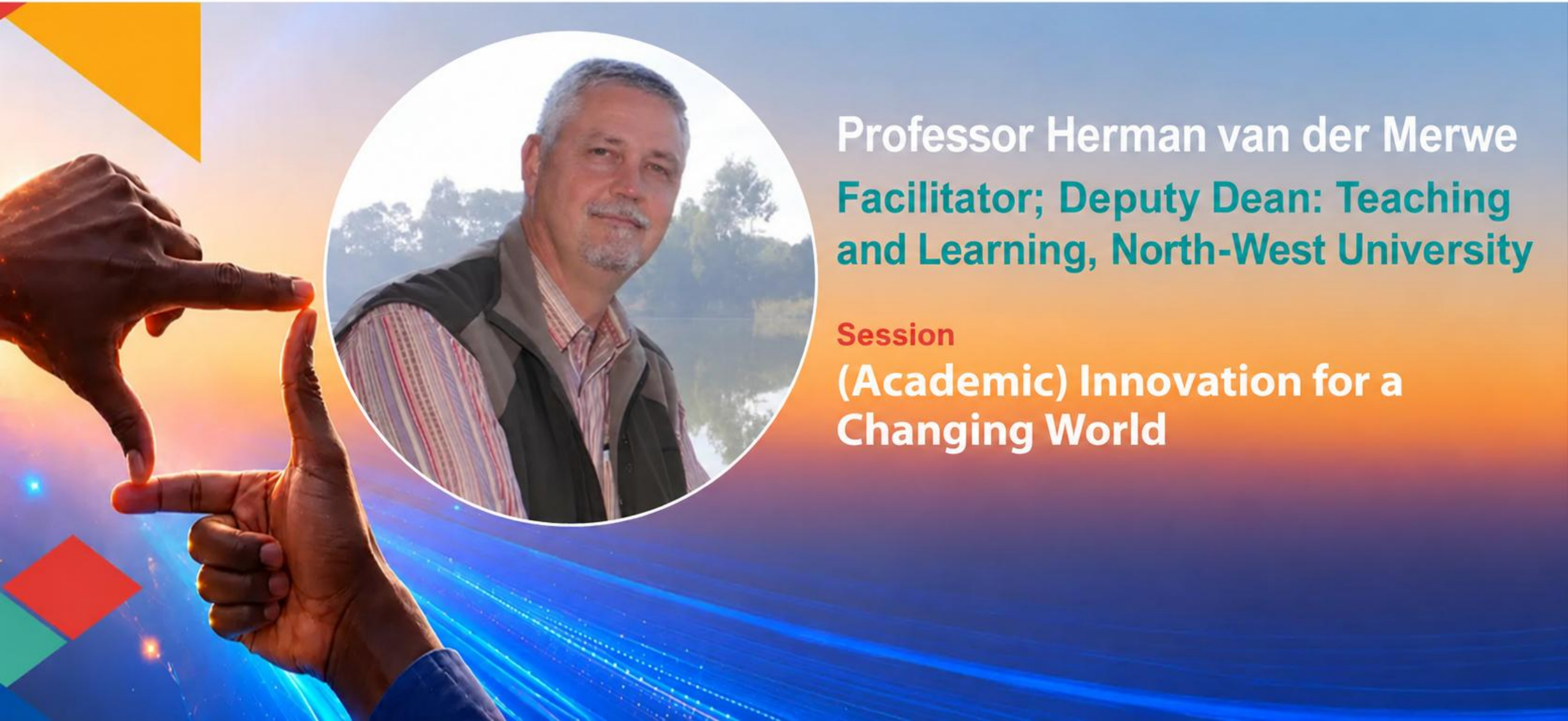
Professor Thobeka Ncanywa, FALF-FREF Research Chair in Entrepreneurshipand Financial Inclusion, Nelson Mandela University

Session

(Academic) Innovation for a Changing World

UNIVERSITIES SOUTH AFRICA

4th USAf Higher Education Conference



Professor Herman van der Merwe

Facilitator; Deputy Dean: Teaching and Learning, North-West University

Session

(Academic) Innovation for a Changing World

UNIVERSITIES SOUTH AFRICA

4th USAf Higher Education Conference



Professor Joey Chifamba

Project Scientist, University of California, Los Angeles (UCLA)

Session

(Academic) Innovation for a Changing World

UNIVERSITIES SOUTH AFRICA

Fourth USAf Higher education conference

(Academic) innovation for a changing world

Joey Chifamba (Ph.D)

UCLA College | Physical Sciences Chemistry & Biochemistry

UNIVERSITY OF ZIMBABWE

University of Venda

CNSI California NANOSystems Institute

AFRICAN M·R·S

Innovations Incubation and translation

CNSI AT UCLA

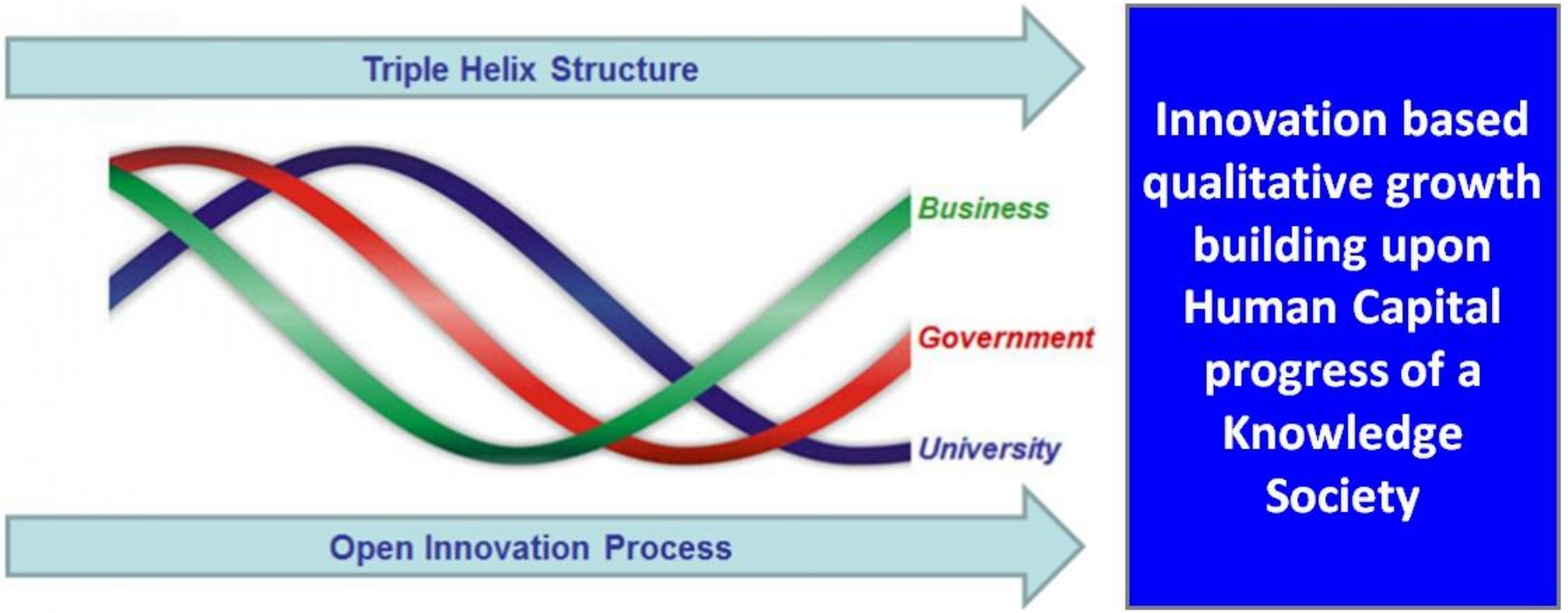
Still Labs



ATRIC BIOSCIENCES
Applied Translational Research & Innovation centre
630 Churchill Dr, Mt Pleasant, Harare, Zimbabwe

- **Though from diametrically different environments and circumstances, both hubs face pressures in translating academic research into commercialisable innovations in a (changing) world shaped by unpredictable tech advancement, systemic bias, shifting social norms & demographics as well as rising public expectations .**

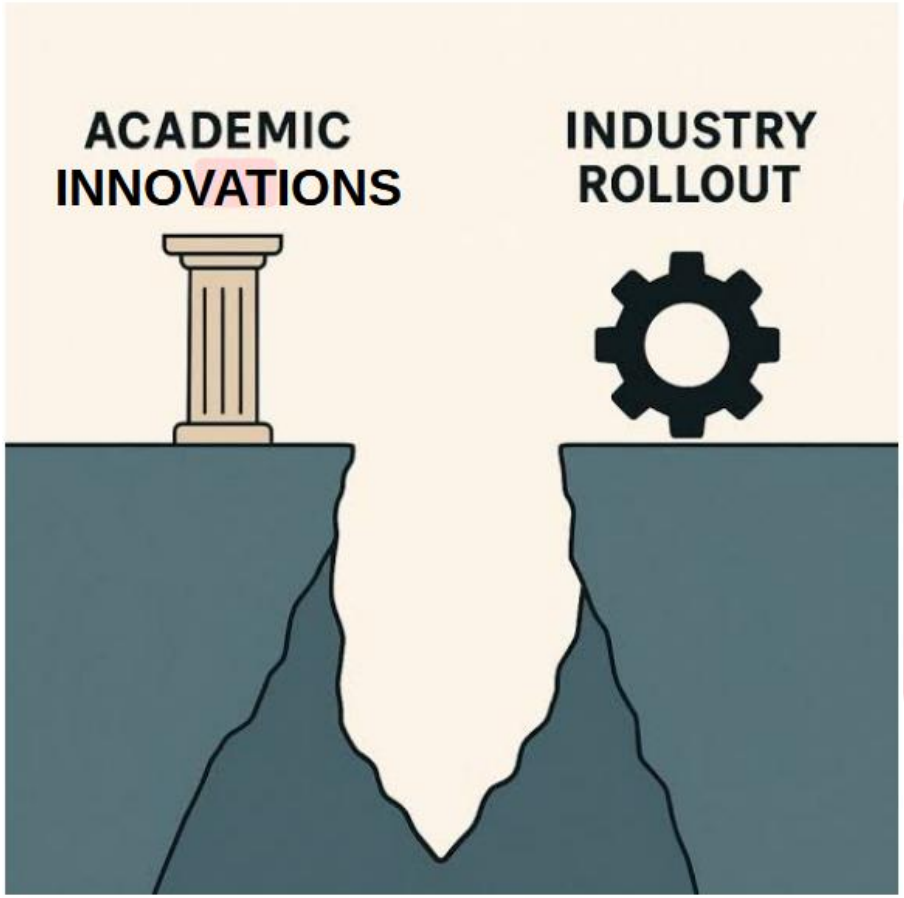
UNIVERSITIES SOUTH AFRICA



- **Translating inclusive academic research into fit for purpose innovations is a necessity for sustaining relevance of academic research and building resilience**
- **The triple helix model of academic research is only anchored on translatable research**
- **Basic Research is not translatable : Only research and development is translatable**

UNIVERSITIES SOUTH AFRICA

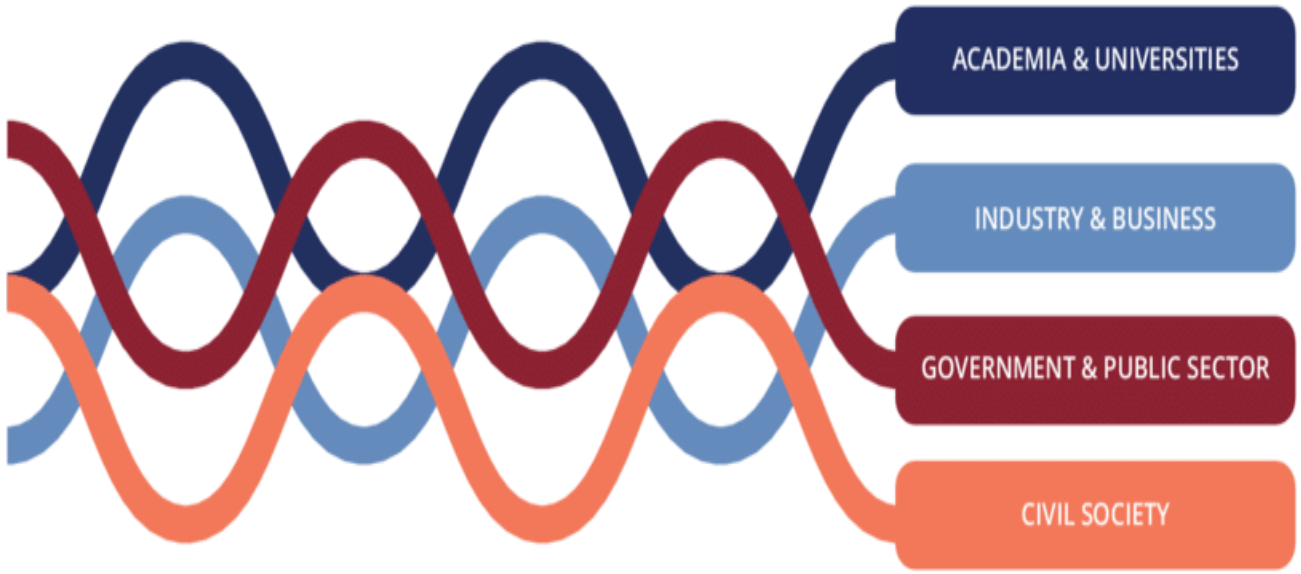
Academic research and the ‘deployment chasm’



- The translation of academic research into real-world applications and prototypes faces a steep "deployment chasm"
- Most universities are systemically, structurally and operationally misaligned with the requirements of dynamic, market-driven environments.
- Academic innovation ecosystems must shift from passive technology transfer to active, agile deployment through translational research fundamentals

UNIVERSITIES SOUTH AFRICA

The Quadruple helix collaborative model of academic research for the KBE



- **Fostering translational research : Modern academic institutions are increasingly adopting entrepreneurial roles, encouraging the development of startups from their innovations (research)**
- **Transformational universities " evolve into ecosystems that support the identification, development, and commercialization of innovative ideas from students, staff, and alumni, ultimately fueling relevance and resilience**

UNIVERSITIES SOUTH AFRICA

Translatable academic research for innovations in a changed world



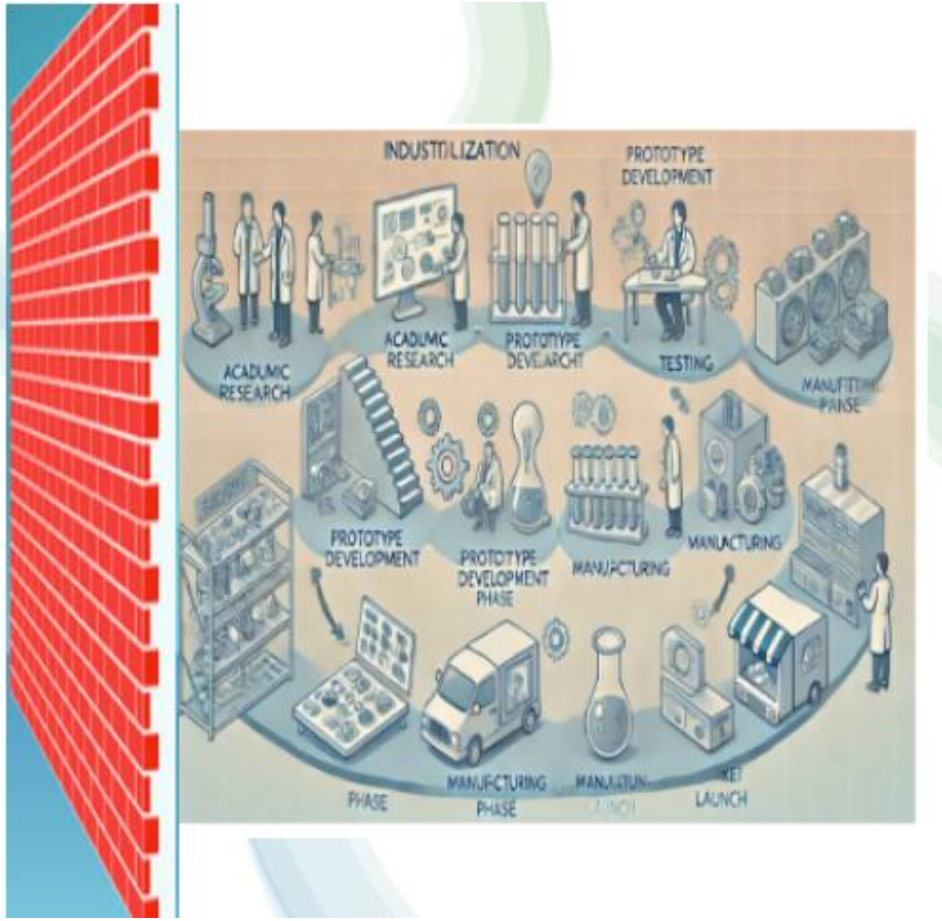
- In the KBE academic research can only drive human progress by creating sustainable innovations that can cope with the technological mudslide in areas such as

- Artificial Intelligence and Machine Learning:
- Emerging Green Technologies:
- Healthcare Breakthroughs:
- Agricultural Resilience and precision farming

- Academic research cannot escape the fact that knowledge no longer resides in books, systematic training or brilliant minds
- Knowledge now exists as a rational pattern of networks and it is very easy to loose relevance in this new paradigm
- The traditional 'peer review' academic system (a club of like minded friends) will struggle to yield sustainable innovations for the KBE because there is no external consideration

Concerns for academic research translation into commercialisable innovations

- **Institutional & Structural Constraints**
  - Funding void
  - Misaligned incentives
  - Rigid hierarchies
- **Operational & Capability Misalignment**
  - Deployment chasm
  - Deficit in soft skills external to researchers
  - Functional model lock in
- **Cultural Friction & Status Quo Bias**
  - Non commercial orientation of curricula
  - Risk avoidance and inertia
  - Zero sum and internal focus



UNIVERSITIES SOUTH AFRICA



THANK YOU

UNIVERSITIES SOUTH AFRICA