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higher education
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Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA



South Africa University innovation ecosystem mapping results

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Sarah Allison, PhD

Alexandra Bush, PhD

Irene Dal Poz, PhD

Jackie Barnett

Background



“It is paramount that each institution deliberately designs the ecosystem that best suits its needs and its conditions.”¹

Professor Ahmed Bawa

Innovation ecosystem mapping

Purpose

- Understand the current barriers and enablers of the 26 South Africa university innovation ecosystems.
- Support research and innovation capacity strengthening across all public Higher Education Institutions (HEI's) in South Africa

Outputs

- Inform the creation of the National Policy Framework on Entrepreneurship Development in South African Higher Education
- Provide USAf and the British Council with insights and evidence for future collaborations in cross cutting themes of research, innovation, entrepreneurship, and commercialisation

1. National University Entrepreneurship Ecosystem baseline report, February 2020

Introduction

Impact generation through commercialisation of academic research in South Africa



An opportunity for,
and pathway to,
economic growth in
South Africa

*"...critical for
introducing new
products into the
market...." 2*

Using research
outputs for societal
benefit



Making a difference in the world



"...bring academia and private sector research and development closer through knowledge transfer."

National University Entrepreneurship ecosystem baseline report (2020)

Start a business
to scale up your idea

Public Engagement
with research
(changing perceptions or behaviours)

Industry Engagement
Collaborate with industry on research, to create more impactful, applied results

Policy Impact
Policymakers adopt your recommendations

Use of
University
Infrastructure
and Facilities

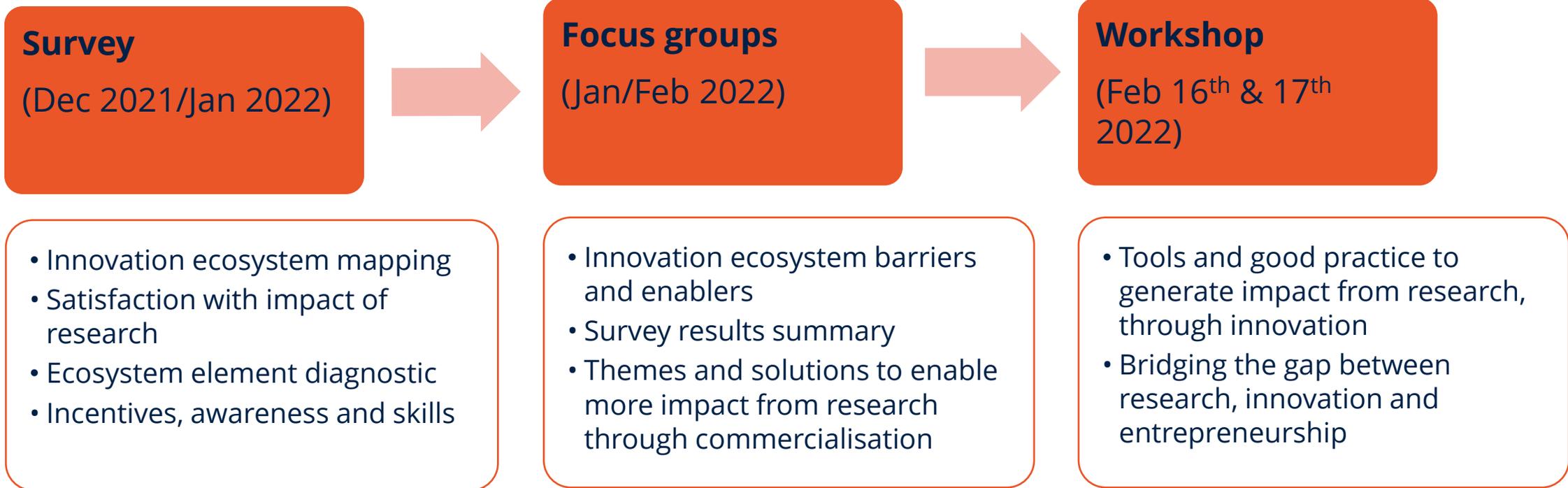
License your invention to a company who can get it to more people

Continuing professional development
(CPD)

South Africa Innovation Ecosystem Mapping



- Identifying innovation ecosystem barriers and enablers and working towards solutions to increase impact through innovation



Innovation ecosystem mapping: project overview



Survey

- 28 respondents (19 universities)
- 14% of respondents were academic researchers, the remainder technology transfer managers or innovation directors
- 60% indicated that their university supported social sciences, arts and humanities (SSHA) commercialisation
- 89% indicated support for science, technology, engineering and maths commercialisation
- Most felt neutral or unsatisfied with the economic and social impact of academic research on the wider community

Focus groups

- Interactive online sessions with jamboards
- 5 focus groups, 1.5 hrs each
- 3 - 9 participants per group
- Universities grouped by type
 - Universities of technology
 - Newer and comprehensive
 - Research universities (large)
 - Research universities (small)
 - Rural-based universities

Existing drivers of research commercialisation

- Increasing numbers of researchers interested in extending the impact of their research through commercialisation
- Enthusiasm and motivation to drive innovations forwards
- Government funding and support
- Continued sharing of good practice between universities
- Emerging awareness and drive to embrace commercialisation of social sciences, arts and humanities including generating impact from traditional knowledge



Key Findings



- **Level of commercialisation activity** - Majority of respondents felt neutral or unsatisfied
- **Impact on wider society** - Majority of respondents felt neutral or unsatisfied
- **Motivation, skills & knowledge, and awareness** – tend to be neutral or low for academics and students, with students slightly more engaged
- **Other barriers** – Funding to support pre-seed innovations, communication between key innovation ecosystem stakeholders and culture were cited as lacking



- **Research** – Increasing numbers of researchers interested in extending the impact of their research. Enthusiasm, commitment and motivation to drive innovations forwards
- **Incentives** – Overall a wide variety of incentives used, with prizes, competitions, funding and incubators were cited as effective drivers for innovation
- **Opportunities to increase impact** – These ideas included awareness raising on the benefits of impact through commercialisation and more funding to support early-stage innovations

Opportunities to increase impact

Building partnerships with industry



A need to form more relationships, connections and partnerships with industry and non-governmental organisations

- Too few industry links
- Difficulty forming relationships
- Lack of platforms to access industry

Funding



More funding needed to support early-stage, pre-seed innovations

- Difficulty accessing funding
- Uneven distribution of funds across the 26 universities in South Africa

Culture and incentives



Culture and incentives needed to support, motivate and encourage research

- Lack rewards and recognition for academic researchers to commercialise early-stage research
- More incentives needed to encourage industry-university partnerships

Recommendations to strengthen research commercialisation capacity and ensure sustainability



Increasing incentives for research commercialisation

- Recognition and rewards for academic researchers to commercialise their research, are lacking
- A need for incentives to encourage university-industry partnerships

We recommend:

Dissemination of the findings of the survey, focus groups and workshop to provide individual universities with examples of incentives

Additional funding

- Not enough funding
- Unequal distribution of funding amongst universities
- Need for strategic targeting of funds towards certain priority application areas

We recommend:

A review of government and non-governmental funding to identify areas of need

Metrics: measuring impact from research commercialisation

Metrics to measure and assess impact from research unclear

Importance to recognise all forms of impact generation

We recommend:

Ensure key stakeholders are aware of the findings of this project and other key developments, to achieve a common understanding of metrics and 'what good looks like'

Recommendations to strengthen research commercialisation capacity and ensure sustainability



Build on each university's strengths

There is significant variation in research commercialisation capacity across South Africa

Need an individualised approach

Are there opportunities for inter-university partnerships of mutual benefit?

We recommend:

Support each individual university to carry out a review of their current strengths and areas of need

Further support for SSHA

Stimulate more widespread social sciences, arts and humanities (and local knowledge) research commercialisation

We recommend:

A programme of research commercialisation training as part of a wider capacity strengthening programme

Creation of a community and platform to support SSHA commercialisation

Research commercialisation culture strengthening

Cultivate a culture of research commercialisation, originating from the senior university stakeholders, at all of the 26 universities in South Africa

We recommend:

Bring together academic and offices of technology transfer (OTT) communities

- Networking
- Addressing common challenges

Sarah Allison

Sarah.allison@oxentia.com

Alexandra Bush

Alexandra.bush@oxentia.com

Irene Dal Poz

Irenedalpoz@oxentia.com

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Innovation Consultancy



Thank you for listening!