



**Equality** 

Sustainability

# Valorisation of Indigenous Knowledge Systems for Global Bioeconomy

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African Knowledge-Based Bio-Innovation Programme

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#### GIB Principles-Based Contents

African Knowledge-Based Technology Innovation Sector Strategic Mandate and uBu-Ntu Bio-Innovation Model Research, Development, Innovation and Commercialisation Decadal Plan Outlook 2033 – Pan-African Agenda 2063

Political Will and Scientific Innovation Capacity
Untapped African Knowledge Systems
Mega-Biodiverse with \$4 Trillion Market Potential















# Strategic Imperatives

- Mainstream and interface African Knowledge Systems into the South African NSI for Instutionalisation
- Enhance inclusive innovative research programmes in natural products for social and economic development
- Facilitate local technology transfer, acceleration and manufacturing for competitive commercialisation
- Support enterprise development and commercialisation programmes for thriving societies
- Strengthen local and international partnerships for the industrialisation and improved global quality of life



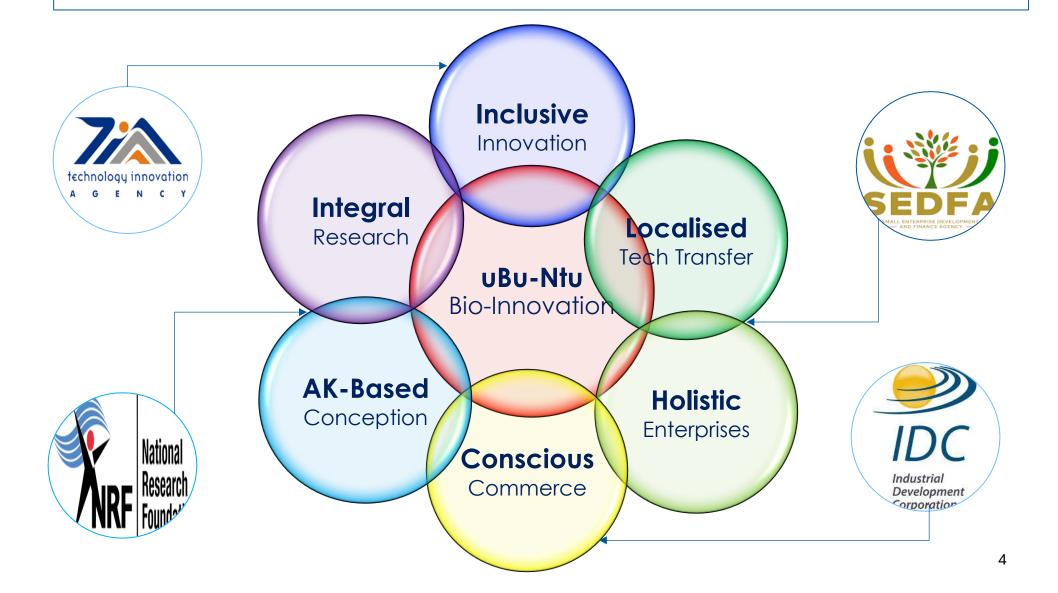








#### uBu-Ntu-Based Bio-Innovation Model







# Value Chain-Based Ecosystem

Inter-Governmental Structures and Royal Authorities and Municipalities

DSTI, DOA, DLRRD

DSTI, NDOH, DLRRD

DSTI, DSBD, DFFE

DSBD, DTIC



Integral
Research and
Discovery

Inclusive Grassroots Innovation

**Local**Technology
Transfer

Holistic
Business Dev
Branding

Conscious
Commerce
Enterprising

Sustain

Benefit
Sharing

Academia

Councils

**MSMEs - Precincts - Business** 



Meaningful Participation of IK-Holders throughout the Value-Chain



# African Knowledge-Based RDIC Priorities

African Natural (Herbal) Medicines

Cosmeceuticals (Health and Beauty)

Nutraceuticals (Food and Nutrition)

Health Infusions (Health - Well-Being)

Technology Transfer (Manufacturing)

Commercialisation (Entrepreneurship)

#### Emerging and Re-Emerging Infections

Respiratory Infections
HIV/AIDS
Tuberculosis
Malaria

#### **Non-Communicable Diseases**

Cancers
Diabetes
Hypertension
Skin Diseases
Nutrition-Deficiencies

#### **Neuro-Degenerative Diseases**

Stroke Pain

Mental Health Challenges

Poverty, Hunger, Depression





## African Knowledge-Based RDIC Processes

African Ontologies, Cosmologies and Epistemologies

Agronomy and Agro-Processing Initiatives

African Medicines Pharmacopeia and Materia Medica

Pre-Clinical and Clinical Trials

Product Innovation and Process Development

Manufacturing and Commercialisation

Health Systems and Enterprise Development





#### Interfacing Phase and Bio-Cultural Protocols



RDIC Partnership Agreements
(NDA, ITA, MTA)

Ownership and Equity Agreements







#### High-End Infrastructure and Agroprocessing



30 (+ 18) Pieces of Land
(Good Agricultural Practices)
15 Dedicated Laboratories
(Good Laboratory Practices)



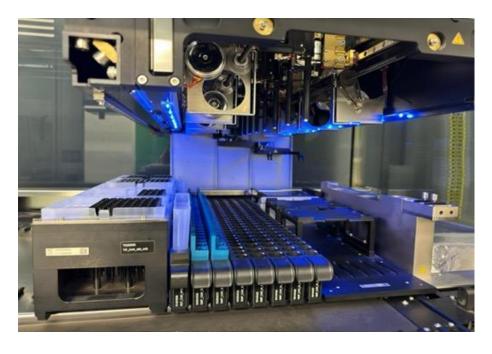








#### Preclinical and Clinical Research Centres







4 Pre-Clinical Laboratories and 4 Clinical Trials Centres

Good Clinical Trials Practices - Multi-Centre Clinical Trials Facilities



#### Product Development and Manufacturing











4 Incubation Centres - Technology Transfer - 4 Accelerators

75 Enterprises + 700 Decent Jobs + Regulatory Advisory





## Enterprise Development and Commercialisation



















Over 200 Commercial Products - 12 Patents at PCT Level





## Curriculum Development and Integrative Health







Scholarships Support for 50 Post-Graduate IK Students Per Annum

B - PhD IKS Degrees - Medical Curriculum Development





#### International Collaboration

















Partner Organisations - Bilateral - Multilateral



#### Mainstream IKS Beyond G20 South Africa 2025











Thank you

