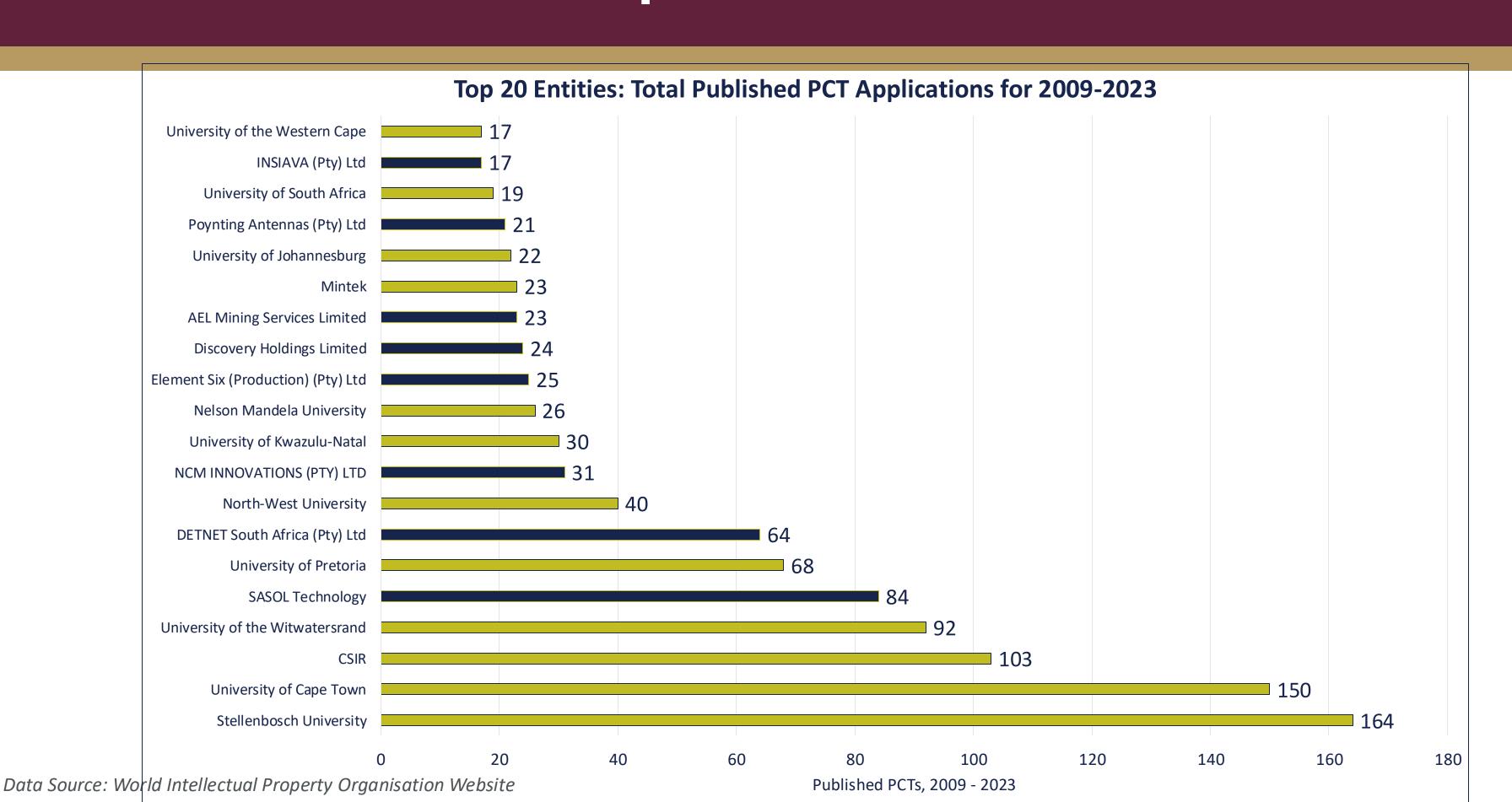


# Commercialising University Technology



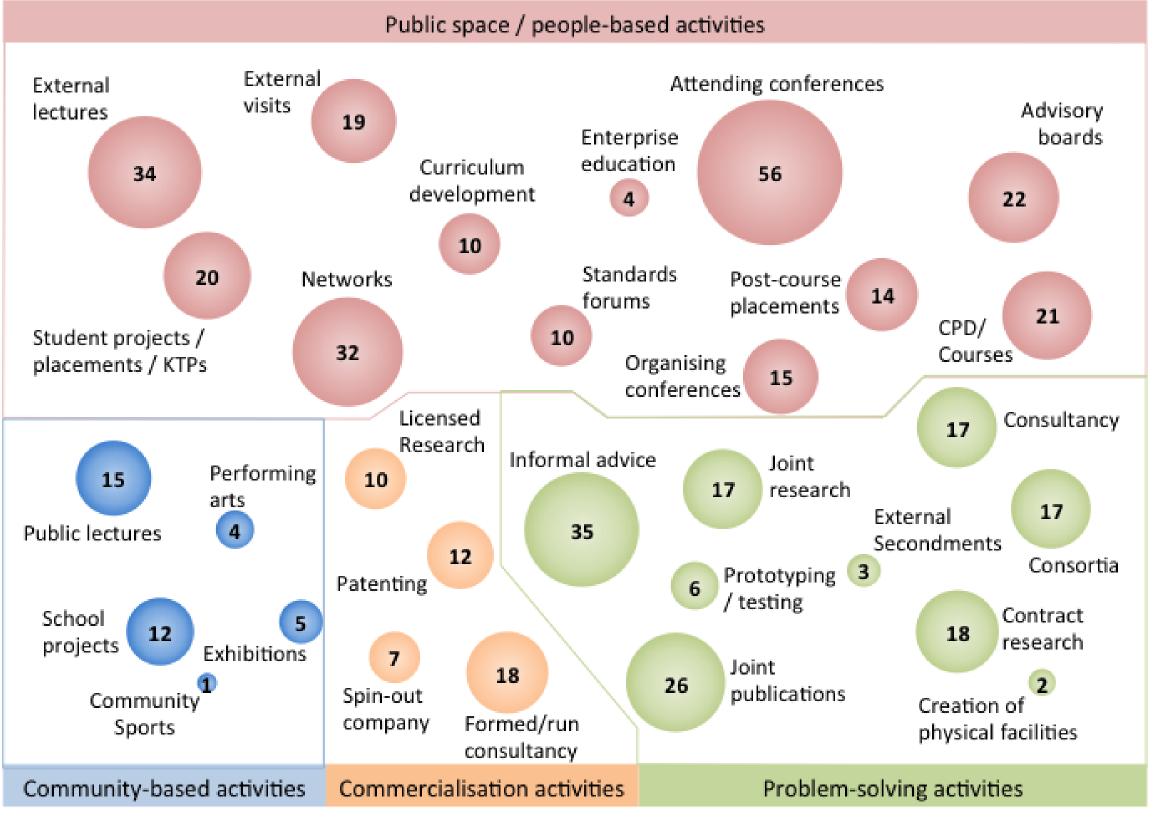
### Most prolific inventors





# **University Industry Interaction**

Nature and scale of knowledge exchange mechanisms between academics and external organisations (UK)



Number in bubbles is the % of academics engaging at least three times over the past three years in that mechanism, or at least once in the past three years for commercialisation activities.



# Partnering for Solutions

- Universities have access to intellectual resources and world-class basic research infrastructure.
- **Companies** usually have practical experience, financial resources, and internship opportunities for students as well as employment opportunities for graduates and students.

# Why partnerships with Industry are important for **Universities**

- Provide funding for research projects
- To test the application of theory
- Better understanding of industry specific needs
- Relevancy of academic programme, research and innovation
- Capacity building allow researchers to expand capacity and ensure student take up in industry
- Improve research outputs academic footprint
- Possibility to license new intellectual property (5th stream income and reputation)





# Why partnerships with Universities are important for **Industry**

- Access to technology and expertise,
- Enhanced reputation and image,
- Skills development,
- The enrichment of corporate values and culture,
- Solutions for specific industry problems:
  - Technology development and testing,
  - Open innovation possibilities & in-licensing of technology
- Incentive programmes in the triple helix context
- Outsource research so that they can focus on their core business
- Capacity building for industry needs:
  - Recruiting, and
  - Employee retention

# Reality No 1 — We are different



## Two Different Worlds

#### **Industry**

- Profit driven (ROI)
- Risk taking
- Quick turnarounds
- Adapts to change Agility
- Often looks at universities for "cheap labour" and source of knowledge to solve problems

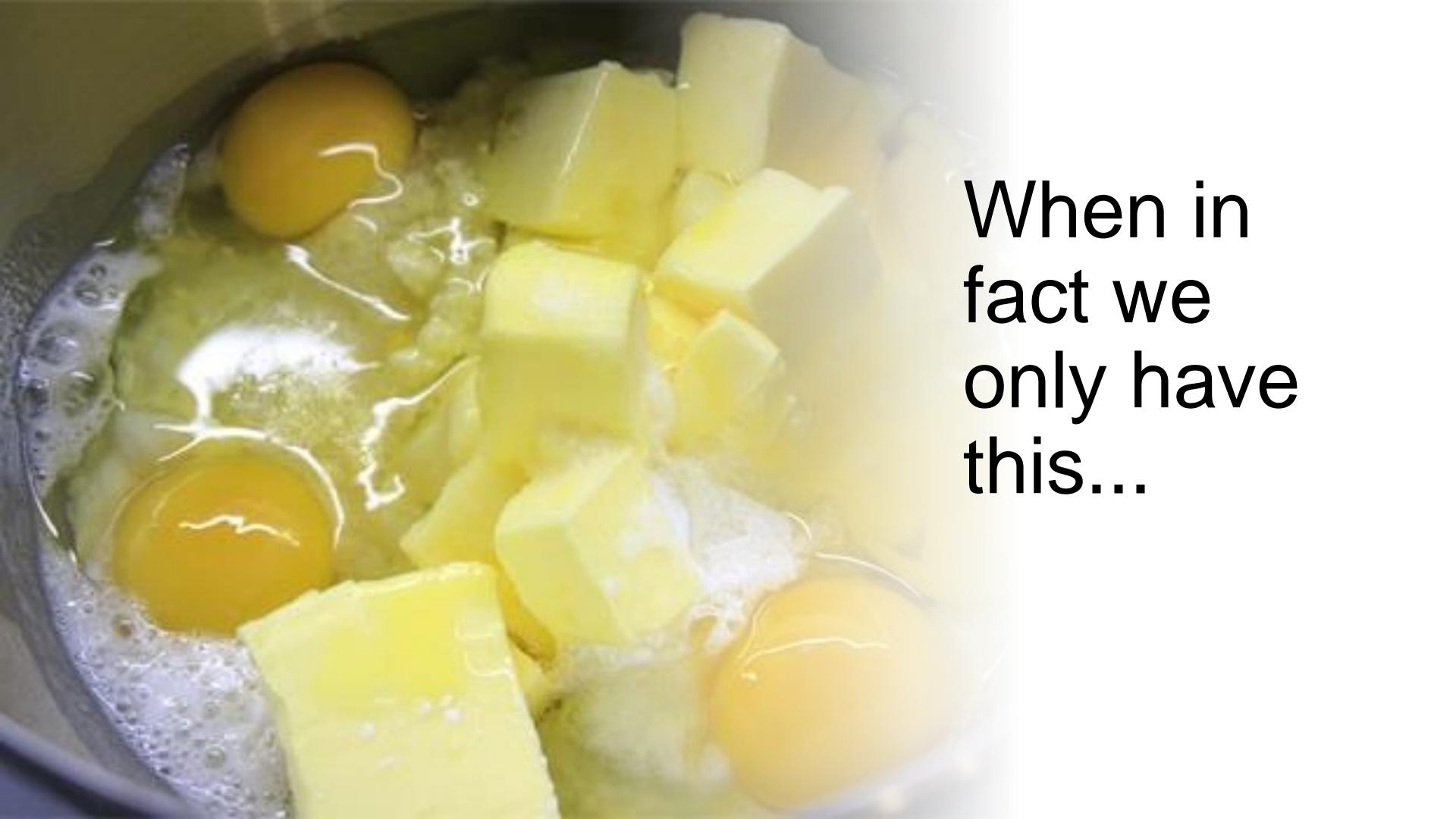
#### Academia

- Driven by research and education
- Academic cycle (Masters or PhD)
- Risk averse
- Time and money less important
- Create and disseminate knowledge
- Provide solutions to social problems

# Reality No 2 — Tech is early stage

Industry often thinks that Universities have many of these on our shelves...









# But sometimes we have a prototype...

Challenges of Commercialising University Research Output

"As a researcher or a professor, your job is to make one of something, and that's cool to you.

But to commercialize, you need to make thousands or millions of something, and the practical reality of going from one to thousands tends to be underestimated."

- Joël Fink, MIT

#### Challenges of Commercialising University Research Output

- Discovery seldom occurs as a single event; it takes years of research and experimentation.
- Inventions seldom occur within the context of a well-defined problem; rather it is typical for faculty to develop technology "solutions" independent of market-defined needs or problems.
- Most university IP is considered "raw technology"; it is incomplete, unrefined, and years from being formulated into products or services ready for commercial markets.
- Faculty inventors optimise their research for publications, peer review and funding sources, which is typically different than commercial drivers.
- As in research where a small fraction of faculty are responsible for most funded projects, in technology licensing a small fraction of faculty are responsible for marketable inventions = 20:80 principle

Adapted from source: www.cu.edu

# Reality No 3 — It is not working



- USA has long had a strong focus in its national policies on entrepreneurship and technology transfer
- UK and Europe caught in the "European Paradox" Trap –
  competitive/innovative economies with strong
  university/research systems but seem to fail at translating
  scientific inventions into marketable innovations
- South Africa: Industry not mature enough to absorb and develop early-stage University technologies



- Licensing business as usual
- BUT ringfence suitable projects with willing champions in a spinout company
- Raise funding to develop technology and service a global market from SA
- Keep as close as possible to lab it emanated from
- Give these spinout companies the best possible support
- Reduce risk as far as possible



# Providing Support

- University Technology Fund
- LaunchLab Business Incubator
- Instant Startup
- Spinout Concierge

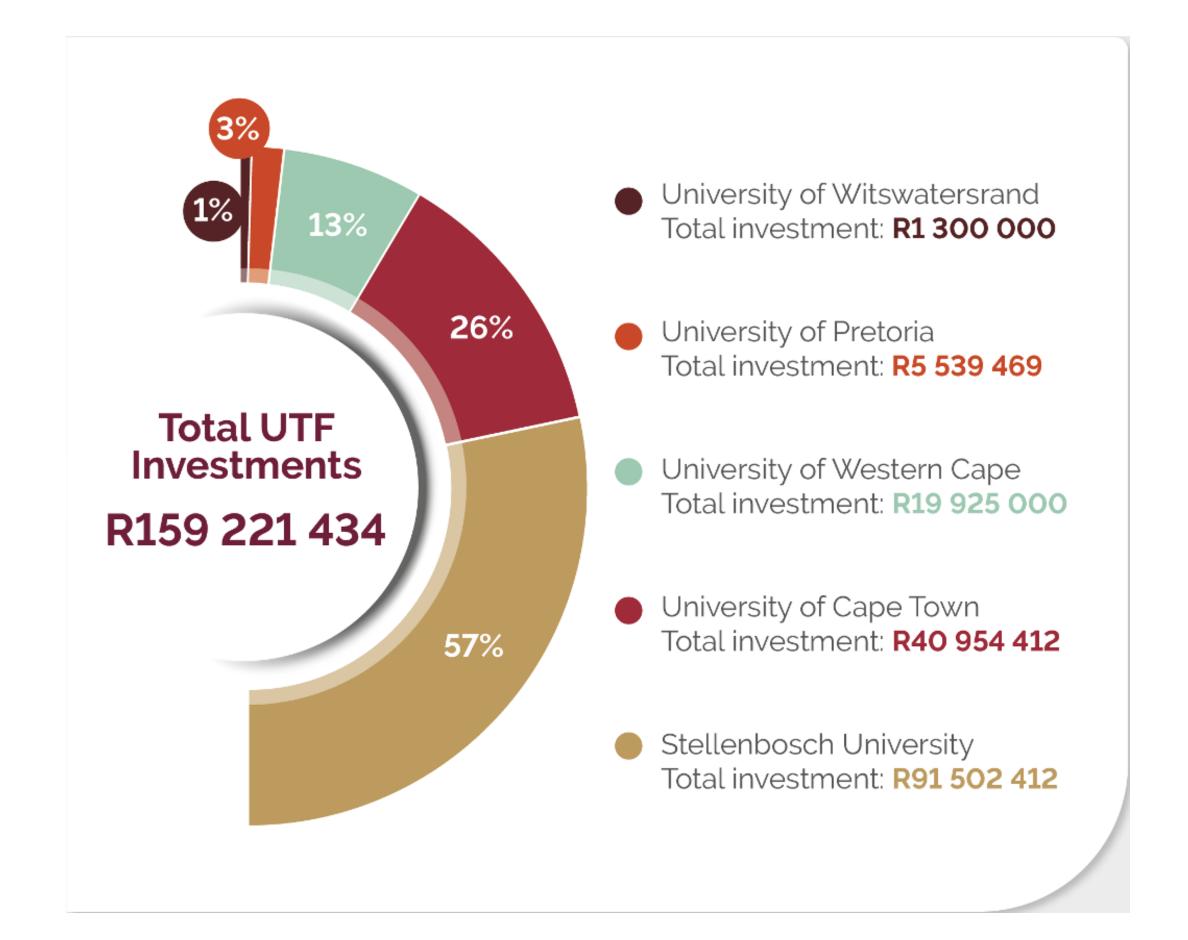






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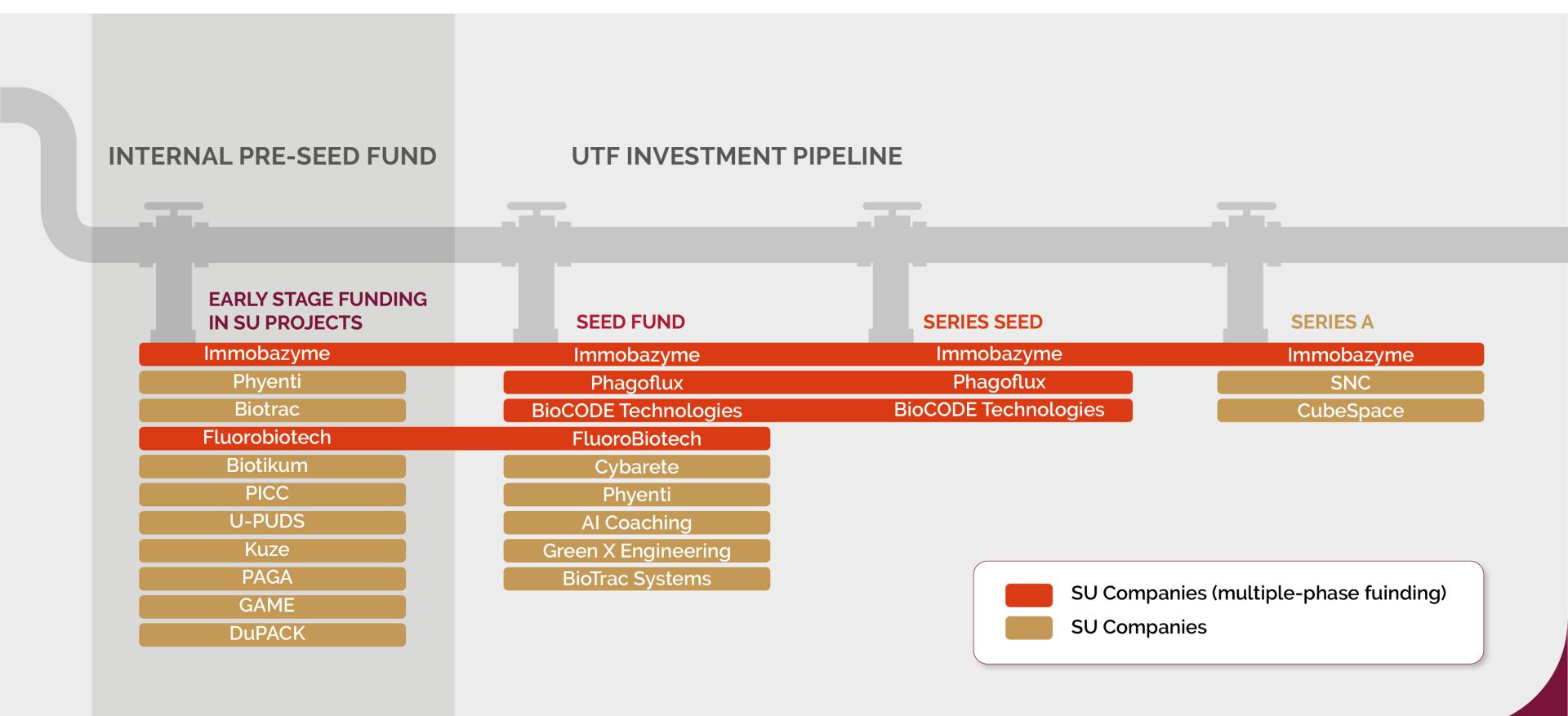






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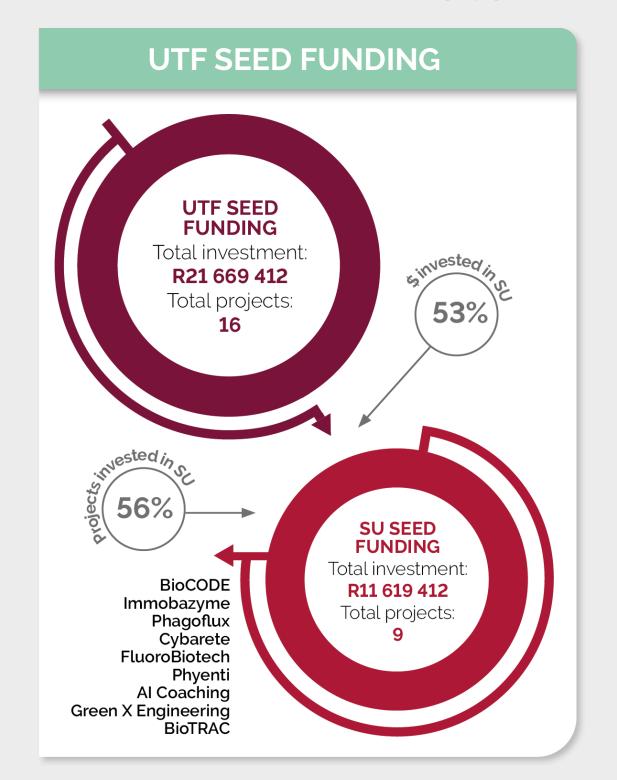


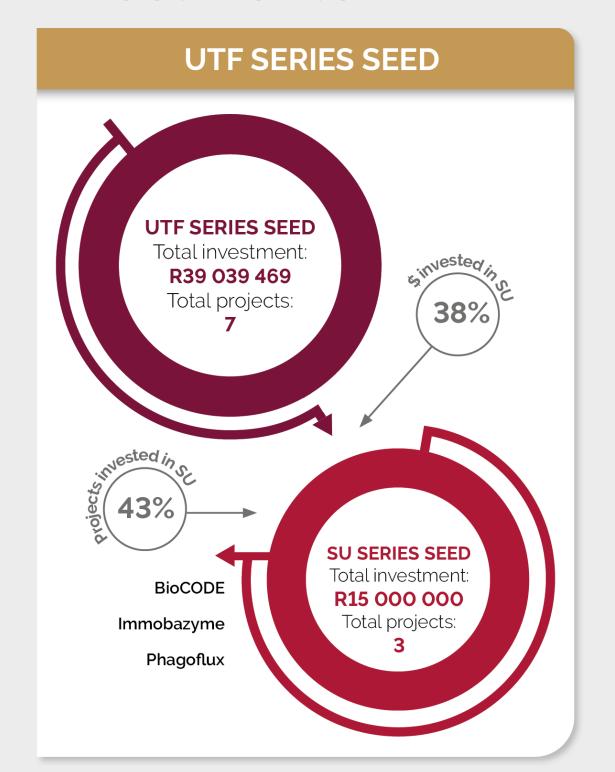


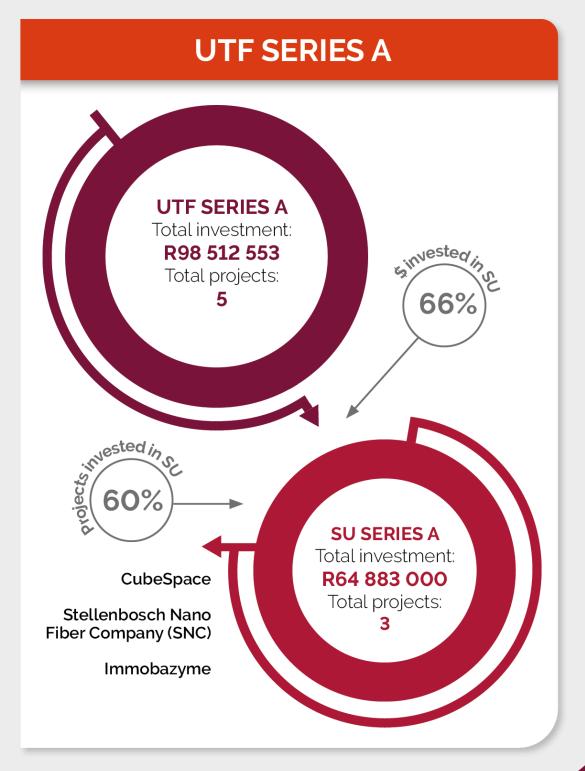
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#### Total UTF Investments R159 221 434



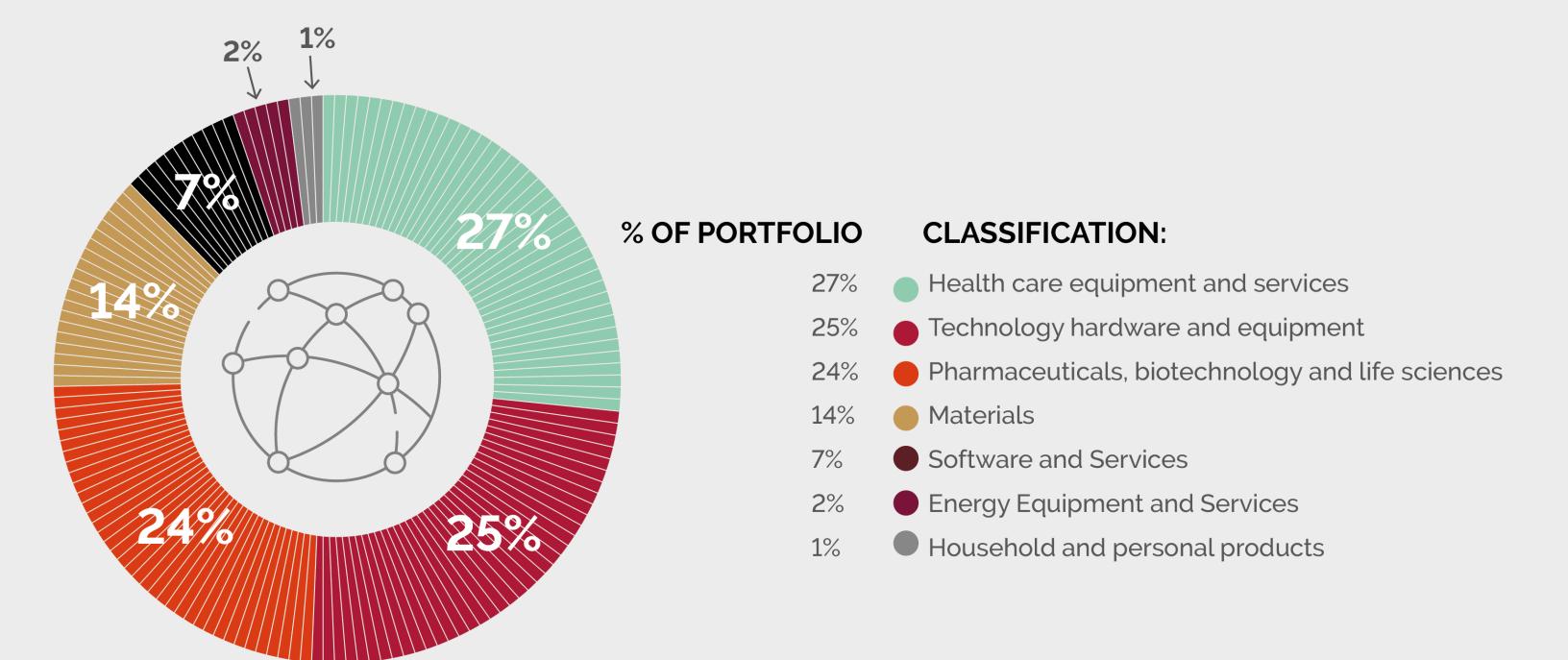




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#### **Global Sector Classification:**

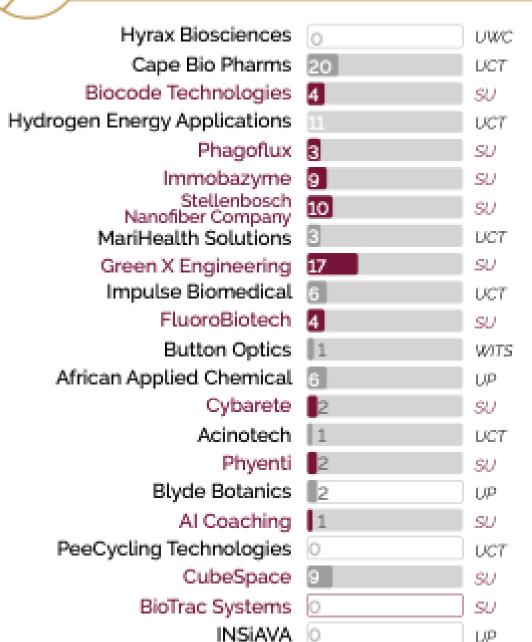




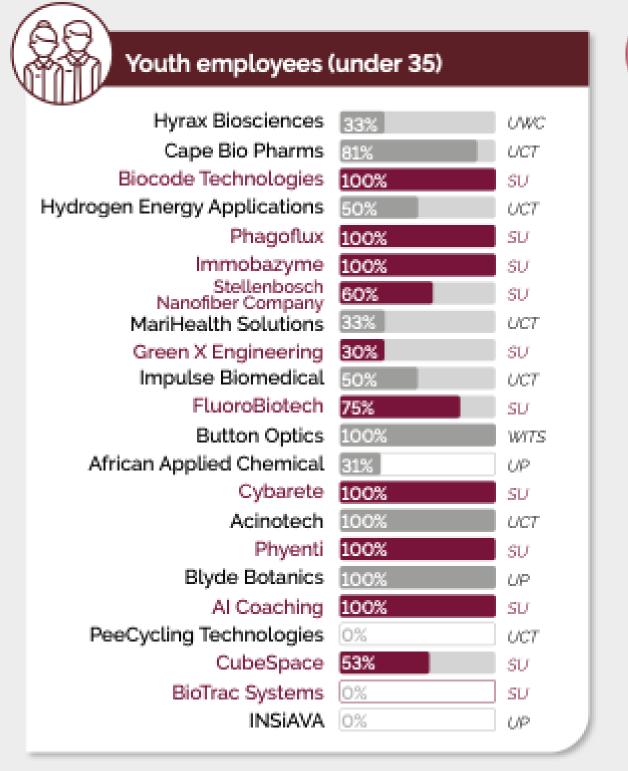
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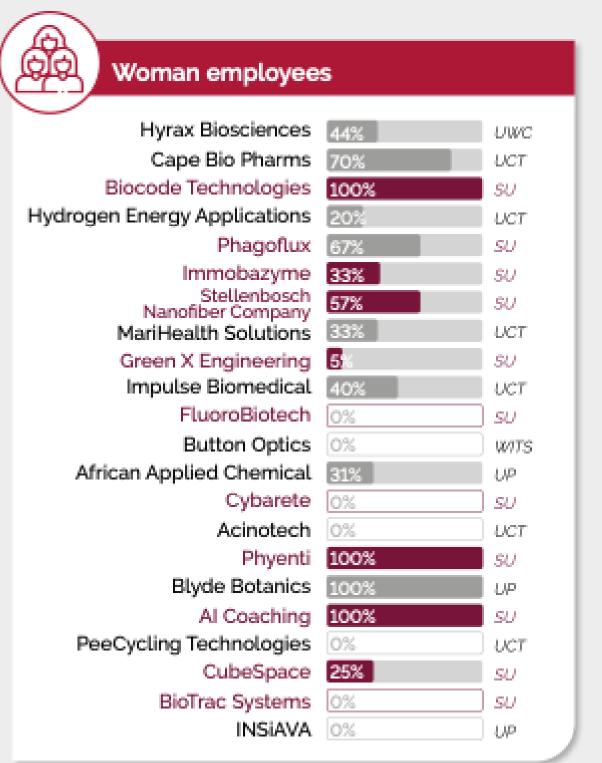


#### Employment created with UTF funding



#### **UTF Demographics**







Innovation and Commercialisation Ukusungulwa kwezinto ezintshanokurhweba Innovasie en Kommersialisering



#### **UTF Demographics**

Employment created with UTF funding		
Hyrax Biosciences	0	UWC
Cape Bio Pharms	20	UCT
Biocode Technologies	4	SU
Hydrogen Energy Applications	11	UCT
Phagoflux	3	SU
Immobazyme	9	SU
Stellenbosch Nanofiber Company	10	SU
MariHealth Solutions	3	UCT
Green X Engineering	17	SU
Impulse Biomedical	6	UCT
FluoroBiotech	4	SU
Button Optics	1	WITS
African Applied Chemical	6	) UP
Cybarete	2	SU
Acinotech	1	UCT
Phyenti	2	SU
Blyde Botanics	2	) UP
Al Coaching	1	SU
PeeCycling Technologies	0	UCT
CubeSpace	9	SU
BioTrac Systems	0	SU
( OOO ) INSIAVA	0	) UP
Total employment created with UTF funding	111	



# SU LaunchLab Offerings

Inspiration & Ideation

**Validation** 

Creation

Acceleration

**MatiePreneurs** 

**EDHE Intervarsity** 

**Student Internships** 

Entrepreneur Mindset Workshops Ideation Workshops

**SU Hackathon** 

**Researcher Bootcamp** 

Translational Fellowship

Mentorship

Countdown

Lift-Off

Cruise

instant startup

Turning ideas into business



**SU LaunchLab Community** 

Orbii

# Incubation Overview

We take teams through several programmes and provide <u>precision incubation</u> services through our team, mentors and curated services providers

Countdown-Validate your business idea

6 weeks

**Lift-Off-Create your venture** 

• 12 weeks



Cruise-Continue to grow through our network

Adhoc advisory and mentorship

**Orbit-Give back** 

- No longer actively advising
- Offers mentorship and speaks at events



# INTRODUCING THE INSTANT STARTUP

A proud initiative of Stellenbosch University, Innovation and Commercialisation, Innovus

# Gearing your *idea* into *business*



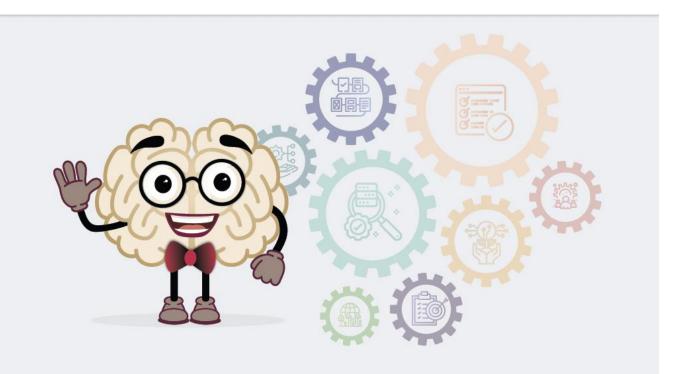


# Imagine a well-oiled machine that will turn your business ideas into real action.

This machine will help you and your team get all the gears in place to start and build a successful business.



CONTACT



## Blog



1 December, 2023 • 3 min read

### Cultivating a Startup Utopia: The Symphony of Collaboration and Networking

Hello, trailblazers of Instant Startup, and welcome to our entrepreneurial haven! Today, we're diving into the artistry of cultivating a...



1 December, 2023 • 3 min read

### Directing the Symphony: Unraveling the Fiduciary Duty of Directors

Greetings, maestros of Instant Startup!

Today, we're diving into the symphony of fiduciary duty, exploring why it's the melody every...



1 December, 2023 • 2 min read

### Cracking the Compliance Code: A Light-hearted Dive into the What, Why, When, Where, and How

Greetings, trailblazing entrepreneurs of Instant Startup! Today, we're unraveling the mysteries of compliance, the secret sauce that keeps your startup...

## Gearing your idea into business

Instant Startup brings together fundamental startup guides, good governance practices, templates and iinformation to entrepreneurs can focus on what matters when commercialising their business.



The Instant Startup will help you with essentials like:

- 01. A pitch deck
- 02. A business plan
- 03. Due diligence
- 04. Legal documents
- 05. HR neccesities

## What other entrepreneurs have to say

This platform made all the difference in starting up our business. It was easy to use and the whole team could work seamlessly together.

\*\*\*\*

Ross

It was easy to use and the whole team could work seamlessly together.
Would recommend it to any entrepreneur!

\*\*\*\*

Brandon

Such a pleasure to have a system where you can build your ou business plan!



Doris



# What's Inside?



11 Modules

38
Learning Activities

# **Entrepreneurial Journey Modules**

















COGs consist of stages across a typical entrepreneurial journey. As insights are gained modules should be revisited and updated to reflect the most relevant startup position.



Self Managed Tool

Startup team works independently on the Instant Startup



Instant Startup's
business coach
provides online
feedback to the
populated templates



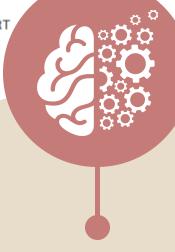
**Refinement Tool** 

Teams attend the
LaunchLab
entrepreneurial
programs to refine
their entrepreneurial
assumptions



**Commercial Tool** 

Teams work with
LaunchLab to progress
across the
entrepreneurial
journey using the
Instant Startup as core
tool.



Repository platform

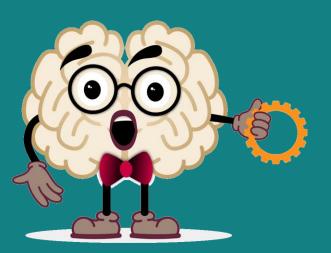
Instant Startup is a repository from initial ideation state through to the operational maturity of the business



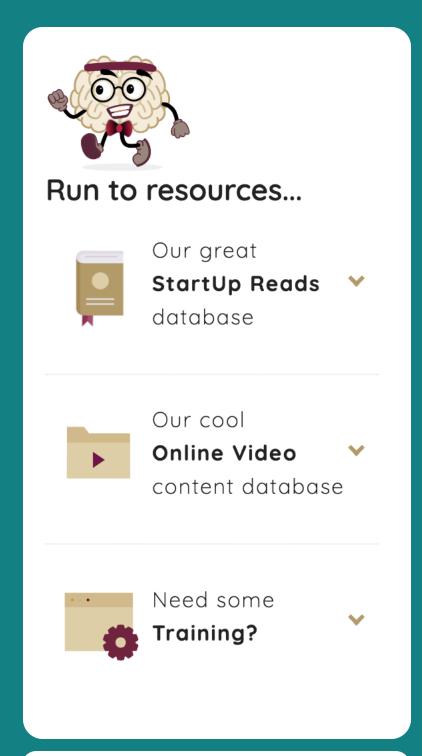
# In every Module

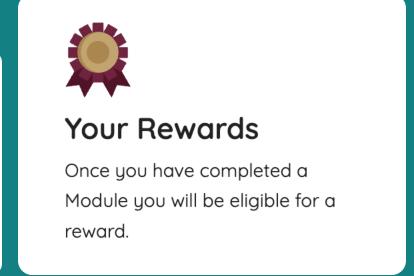
We have included a set of standard practices visible across every module. This includes links and documents from various sources. All components can be modified to align with any needs or learning objectives.

- Startup Reads articles relating to the module
- Online Video links to online content discussing specific components
- Training links to curated training material
- Your Rewards an incentive space
- Thinking style gives the entrepreneurial team a taste of the aim and content of the module
- Time expected an estimated timeframe for teams to complete each module to flexibly plan their work time.
- Binky notes short reminders relevant to the topic being learned!











## Compile a Business Idea Summary

Recap all the technical work you have done in a commercial checklist and define:

What is this business idea?

Start Now



### Building a lean Business Model Canvas

Follow the industry startup standards by completing the business model canvas to create a visual presentation of your "business model", presenting a holistic overview of your business.

**Start Now** 



#### Create a Customer Profile

Define your **target customer's experience** with the business problem along with the solution you are offering, to better understand market expectations.

**Start Now** 

# **Learning Activities**

Each module has learning activities that the entrepreneur group must complete.

- Form sections for each activity has questions
- <u>Document</u> These sections combined creates one document that can be uploaded to the group's Data Room
- Guiding Audio every activity has audio to guide the entrepreneur through the section

**Business Idea Summary** 

Key assumption about the problem

Start with "We believe" to highlight an assumption that addresses a business problem. If you can add a customer dimension, that is even better.

Will be prepopulated. This is currently in a view... will move to separate modules.

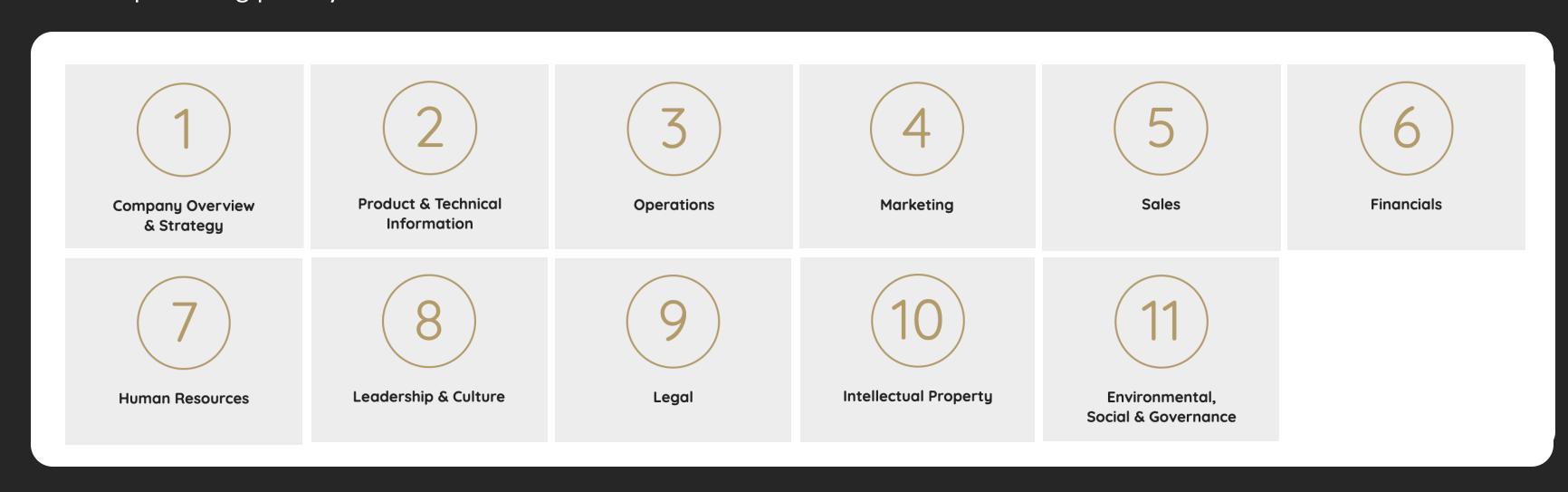
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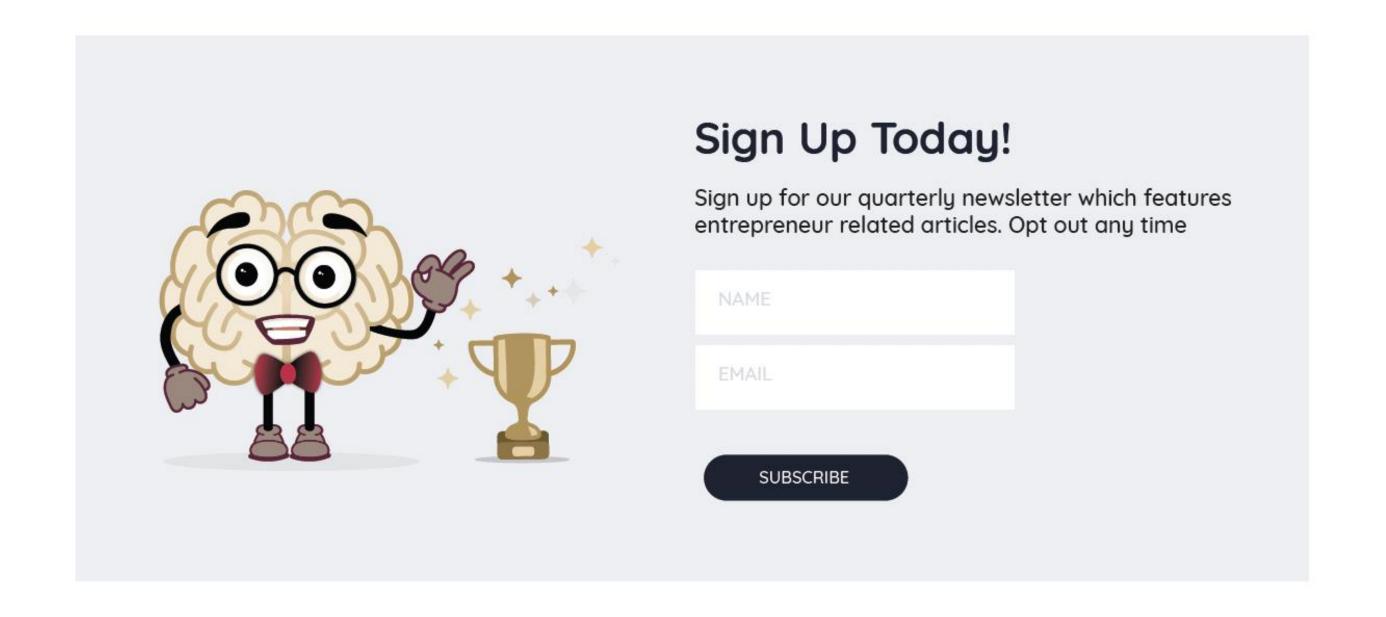
Update

# Data Room

## A SAFE SPACE FOR ALL IMPORTANT DOCUMENTATION

- Education we have provided explanations and guidance about what is to be included in a data room.
- Requirements the Due Diligence Sample Checklist helps teams to continuously improve the data room content and outlines the requirements for each folder within their data room
- Sharable Currently \*WIP\* we are investigating tools that allow teams to share their room with external stakeholders without compromising privacy.





A proud initiative of Stellenbosch University, Innovation and Commercialisation, Innovus.



Instant app

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Terms and Conditions



- Negotiates discounts on behalf of 30+ spinout companies with service providers
  - Web developers, legal services, bookkeeping and payroll services, University Gym
  - Nearly 400 employees in spinout companies were admitted free of charge on University
     Wellness Programme
- Sets up the company
  - Registers domain names, appoint directors, etc
  - Opens bank accounts in record time and assigns a dedicated banker
  - Insurance (assets, liability, key person, etc)
  - Ensures that there is a basic website and logo
  - Installs Xero bookkeeping software and provide training
  - Institute of Director training

- Assists with HR, payroll and admin
- Free Company Secretarial Services (to ensure corporate governance) for new start-ups:
  - 2023: 3-4 board meetings and an AGM's for 13 start-ups
- Assists CEO's with various urgent matters
  - Included registering a company on the USA System Acquisition Management database
- Arranges an annual CEO event for 30+ spin-out companies' CEO's, university directors, investors, service providers, academic founders, etc.



# Impact

# Western Cape attracts the most start-up funding in SA

Globally competitive talent helps province account for more than half of overall venture capital activity

#### Mudiwa Gavaza

Technology Correspondent

The Western Cape continues to attract the most start-up funding, findings by the Southern African Venture Capital and Private Association (Savca)

Savca recently released a report showing that capital flow to SA start-ups in 2023 reached R3.28bn, driven by investment into local technology businesses. The report, which covers the state of the 2023 venture capital (VC) ecosystem in SA, says it was the highest total capital flow to start-ups since the launch of the survey 14 years ago.

SA's venture capital asset class, which excludes small business support by the government, development finance and a number of corporate investprogrammes, had RIO.73bn invested across LIO6 active deals.

Active portfolios containing Western Cape-based companies dropped marginally from 53.7% in 2022 to 49% in 2023, by value. By deal volume, things remained steady at 55.6%.

As such, "this province thus continues to account for more than half of the overall VC activity in SA, with Gauteng making up one in three VC deals," Savca says.

Gauteng, dominated by Johannesburg, was second at 30.4%, comprising 32.6% of all deals by number.

Cape Town has gained the reputation of being SA's Silicon Valley, with some referring to it as the "Silicon Cape".

Factors driving tech development in the city are the availability of globally competitive talent and funders based in the province.

Some of the country's biggest start-ups to emerge from the region in recent years include payment businesses Yoco and Ozow, agriculture player Aerobotics, developer marketplace OfferZen, and gaming company CarryIst.

#### UNIVERSITY

Additionally, it helps that there are learning institutions that support and grow start-ups.

In June, Immobazyme, a Stellenbosch-based biotech start-up, secured R24.5m in venture funding to expand its enzyme immobilisation and precision fermentation platform. The funding round was led by the University Technology Fund a private sector initiative set up by the SA SME Fund, and University of Stellenbosch Enterprises, Immobazyme aims to double its facility size and "dramatically scale its high-



Innovation:

With the inclusion of venture debt. venture inflows to Africa last year clocked in at \$4.5bn across 603 deals, which was \$2bn less than the previous year /123RF/Pop Nukoonrat

by deal number, reflecting a steady decline from 70.5% in 2022 and 73.1% in 2021, and a "clear demonstration of an increase in follow-on funding into own portfolios in 2023", Kobile said.

While venture funding grows in SA, the country has continued to trail behind Kenya and Nigeria in attracting capital, despite having the continent's most developed economy and industrial ecosystem.

#### **NIGERIA**

Data from the African Private Capital Association (Avca) shows that in 2023 West Africa attracted the largest proportion of venture capital deal volume in Africa, at 26%. It was driven by Nigeria, the most active country by volume at 19%.

With the inclusion of venture debt, venture inflows to Africa last year clocked in at \$4.5bn across 603 deals, which was \$2bn less than the previous year. Avca said.

The total for Africa is a paltry amount compared with the \$144.3bn worth of venture capital that flowed through the US.

The bright spot for SA is that while overall venture funding shrunk on the continent, flows to the local start-up ecosystem grew during the period.

gavazam@businesslive.co.za

value proteins and enzyme production capabilities".

Earlier in 2024, CubeSpace, a satellite component manufacturer started at Stellenbosch University, received R47m through a funding round led by the University Technology Fund and co-investor Savant Venture Fund to expand its operations beyond SA.

Last week, the manufacturing company said it had secured R47m in venture capital funding. Access to funding does not

guarantee success for a venture. In late 2023, mobility startup WherelsMvTransport closed down after having failed to secure additional funding to keep operating.

Founded in Cape Town, WhereisMyTransport cialised in mobility technology. mapping formal and informal public transport networks. The noted that while the value of deals and investment had risen. the number of deals had not. because a third were earmarked for additional investment. These companies have thus received

multiple rounds of funding.

company is said to have raised a

total of \$27m from backers.

Savca CEO Tshepiso Kobile

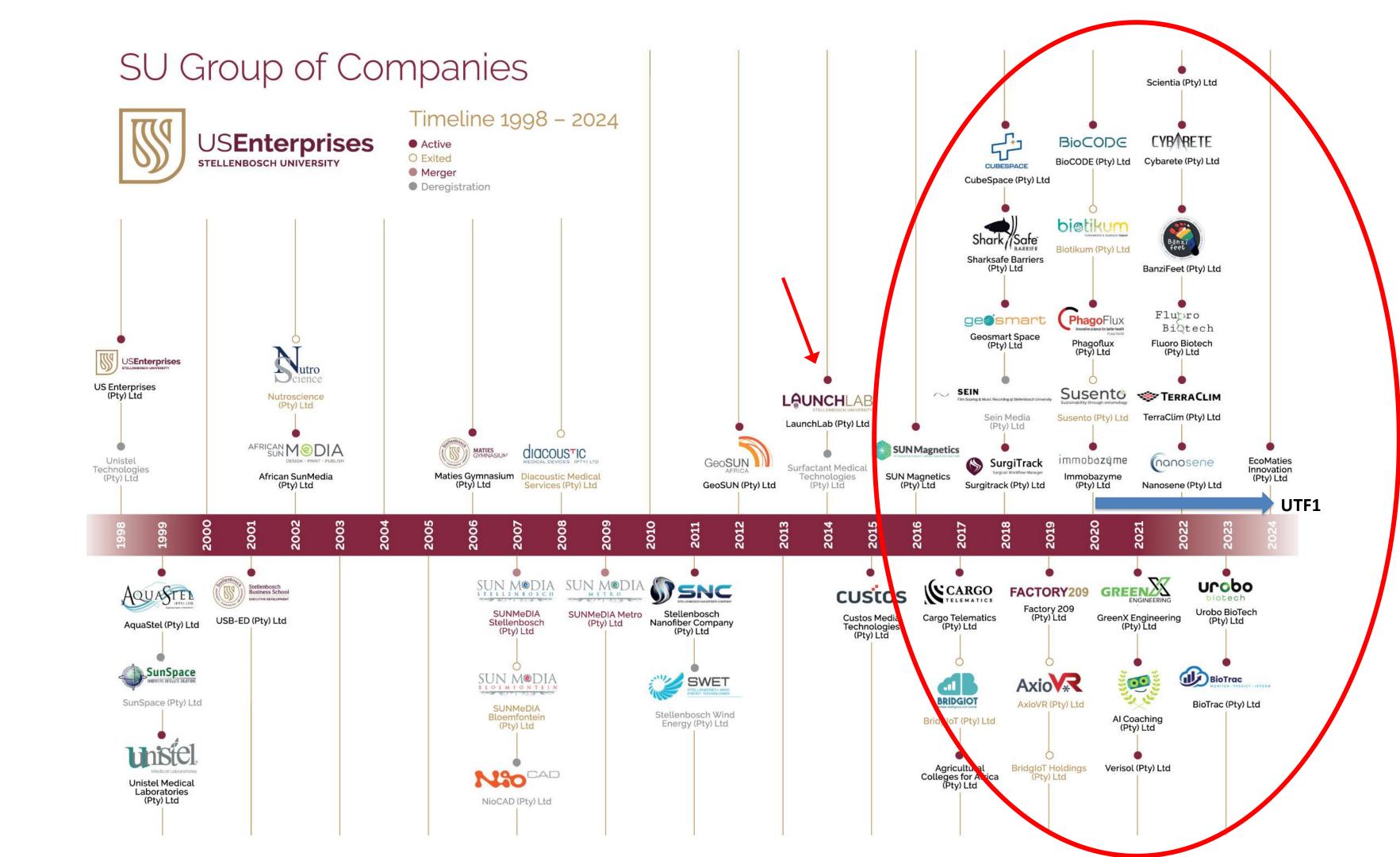
including Naspers.

New deals amounted to 64.6% of all active deals to date

**Title:** Western Cape attracts the most start-up funding in SA Publish date: 29 Jul 2024

**Publication:** Business Day - Companies

**Page: 10** 









## US ENTERPRISES (PTY) LTD



















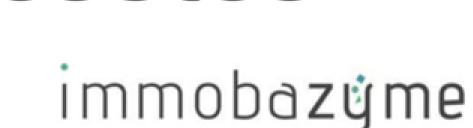




















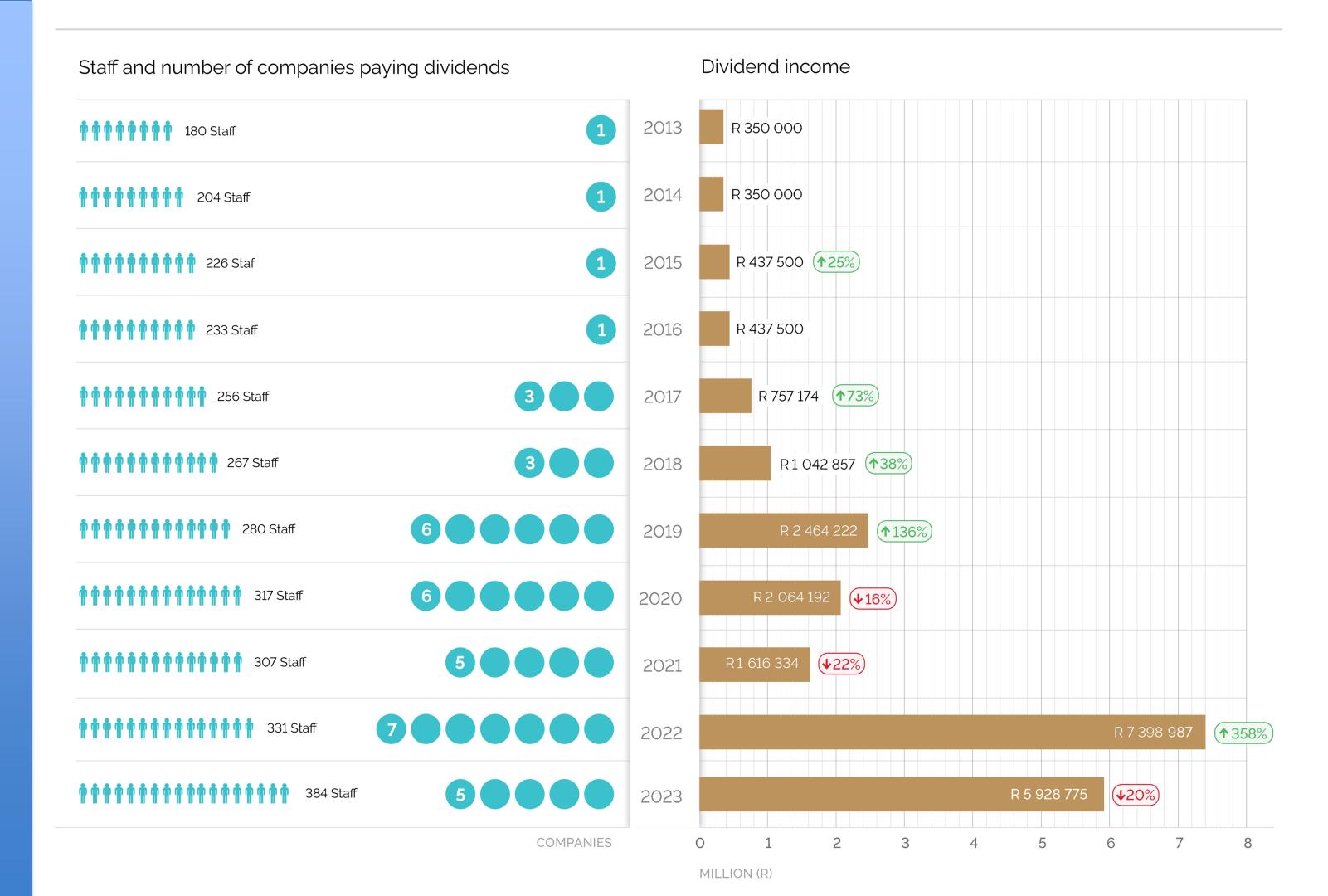








# Impact



## Stellenbosch University Group of Companies

Directors: AJ Nel IUSE Representativel.

T Southey, A van Niekerk, A Verhaeghe,

(Company Secretary), I van Zyl (Alternate

Director), Gerard Martin (Alternate Director).

M Rademeyer (Chairperson), D Peters





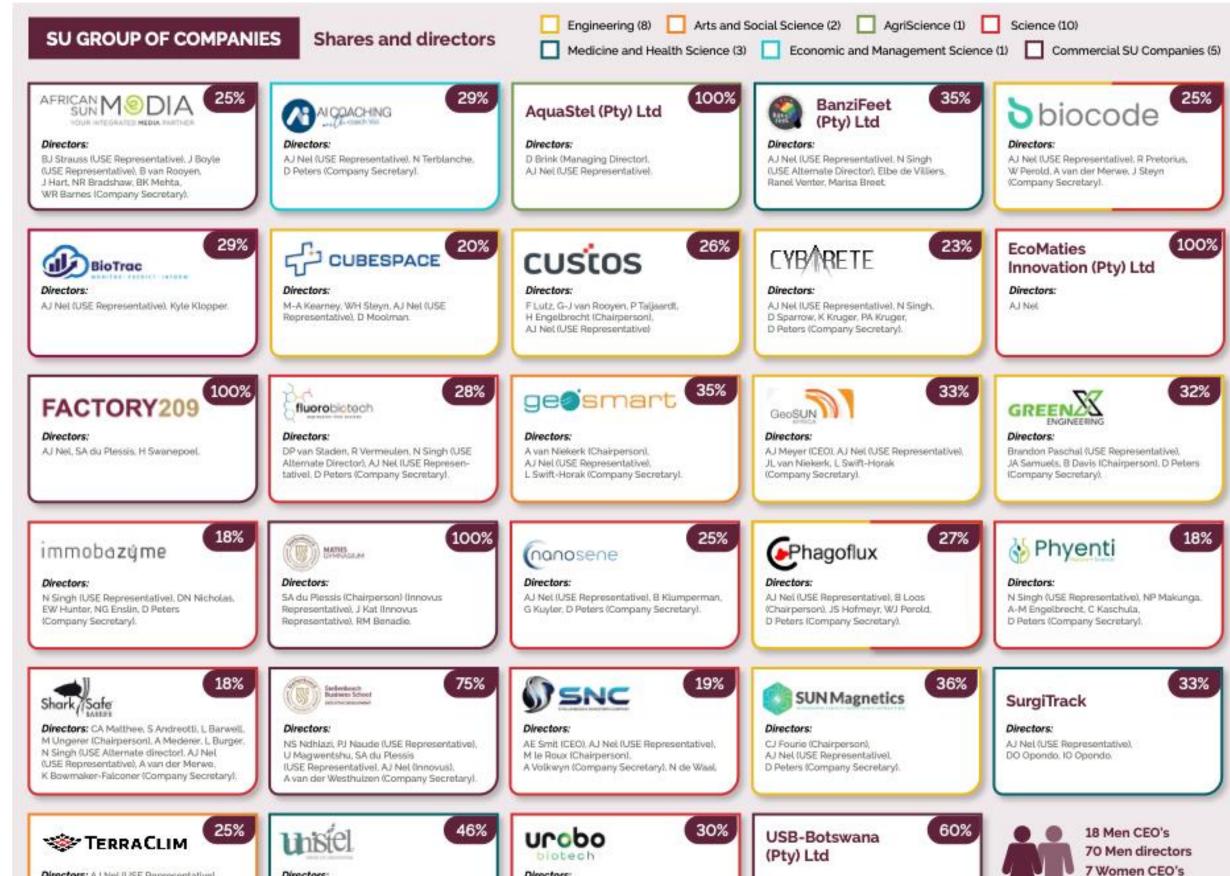
#### Dormant, Exit and **Deregistered Companies**

Unistel Technologies (Pty) Ltd; SUNTrack Analytics (Pty) Ltd

NioCAD (Pty) Ltd (9.47%); BridgloT Holdings (Ptv) Ltd: Bridgiot (Ptv) Ltd: AxioVR (Ptv) Ltd; Biotilium (Pty) Ltd.

#### Deregistered

Stellenbosch Information Systems (Pty) Ltd; Vulamanz Membrane Technologies (Pty) Ltd; Surfactant Medical Technologies (Pty) Ltd; SEIN Media (Pty) Ltd; Cargo Telematics (Pty) Ltd.



Directors:

AJ Nel. IUSE Representativel.

12 Women directors

USE representatives on

each pty: 39

Women directors including

C Wynne, L Theart (CEO), J Marx, GJ Nel

Grindlay-Whieldon (USE Representative),

(Chairperson), AM de Villiers, Brendon

AJ Not (Alternate USE director).

## Stellenbosch University Group of Companies





Verisol (Pty) Ltd

Agricultural Colleges for Africa (Pty) Ltd

### Dormant, Exit and Deregistered Companies

#### Dormani

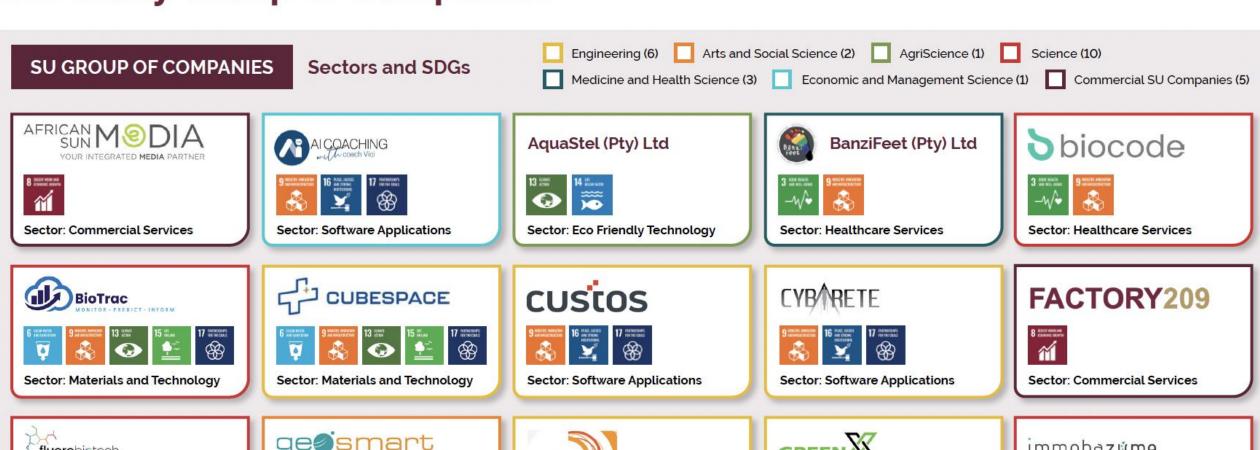
Unistel Technologies (Pty) Ltd; SUNTrack Analytics (Pty) Ltd

#### Evitad

NioCAD (Pty) Ltd (9.47%); BridgIoT Holdings (Pty) Ltd; Bridgiot (Pty) Ltd; AxioVR (Pty) Ltd; Biotikum (Pty) Ltd

#### Deregistered

Stellenbosch Information Systems (Pty) Ltd; Vulamanz Membrane Technologies (Pty) Ltd; Surfactant Medical Technologies (Pty) Ltd; SEIN Media (Pty) Ltd; Cargo Telematics (Pty) Ltd.















































# Raising UTF2

# FUND 2 OPPORTUNITY INTRODUCTION

UTF Fund 2 builds on the success and foundation established by UTF Fund 1, the first VC Fund of its type in Africa.

## **UTF Fund 2 brings with it:**

- Expanded mandate including Alumni of South African universities and university spinout companies. Slightly later (later than Fund 1) investment mandate.
- Sector-experienced team with established relationships & credibility
- Existing pipeline of potential investments
- De-risked asset class
- LP Commitment of R222 million
- Existing professional Investment Committee
- Target IRR 30%



## UTF FUND 2 KEY DIFFERENTIATORS

- LP investment commitment of R222 million
- Existing proprietary pipeline
- Established, reputable team with specific asset and sector experience
- Registered FSP Fund Manager
- UTF Fund 1 track-record
- Access to Deep-Tech South African universities are the continent's leaders
- Local founders Access, relationships, and track record within the university alumni and extended ecosystems
- Established ecosystems The South African university startup, investor, and alumni ecosystems are established



# THE UTF FUND 2 OPPORTUNITY



The University Technology Fund (UTF Fund 1) is a commercial independent early-stage venture capital fund launched in 2020 with the specific mandate to invest in the commercialization of technology and intellectual property developed at South African universities – investing in university "spin out" companies.

## The UTF Fund 1:

- Is the first of its kind venture capital (VC) fund in Africa
- Completed 13% of all venture capital investments in South Africa by number of deals in 2023.
- Is almost fully deployed with a forecast unrealized portfolio growth of over 79%
- Is managed by an experienced operator VC fund manager registered as a Financial Services Provider (FSP)
- Has proven the asset class in South Africa

The team is finalizing a second University Technology Fund (UTF Fund 2) with a broader mandate. The team has successfully reached the First Close target of R200 million with R222 million LP investment commitment from existing UTF Fund 1 LPs and new LPs.

# UTF FUND 1 ACTIVITY

The UTF has made 24 equity investments from incorporation in 2020 until Sept 2024.

If the South African data had been included in this statistic the UTF would have ranked #8 compared to the countries listed – for a much shorter timeframe

Table extracted from Parkwalk & Beauhurst report Sept 2024 Top nationalities of funds by number of equity deals participation into spinouts, excluding UK (2014-H1 2024)





