

# Patent inventorship and ownership with respect to university inventions and their implications for technology transfer



# Africa

---

Youngest Continent – 50% of population < 20 years old

---

The current population of **Africa** is **1,394,732,640**

---

Africa population is equivalent to **16.72%** of the total world population

---

Only 42% of 20–24-year-olds have secondary education



# Why Stellenbosch?

- 20th highest concentration of USD millionaires in the world
- HQ of 20% of market cap of the Johannesburg Stock Exchange
- Dozens of deep tech businesses based here
- 40 minutes to Cape Town
- 20 minutes to various beaches
- Summer training hub for athletes from across the globe
- Surrounded by beautiful mountains and vineyards
- World-renowned wine region



# Stellenbosch University



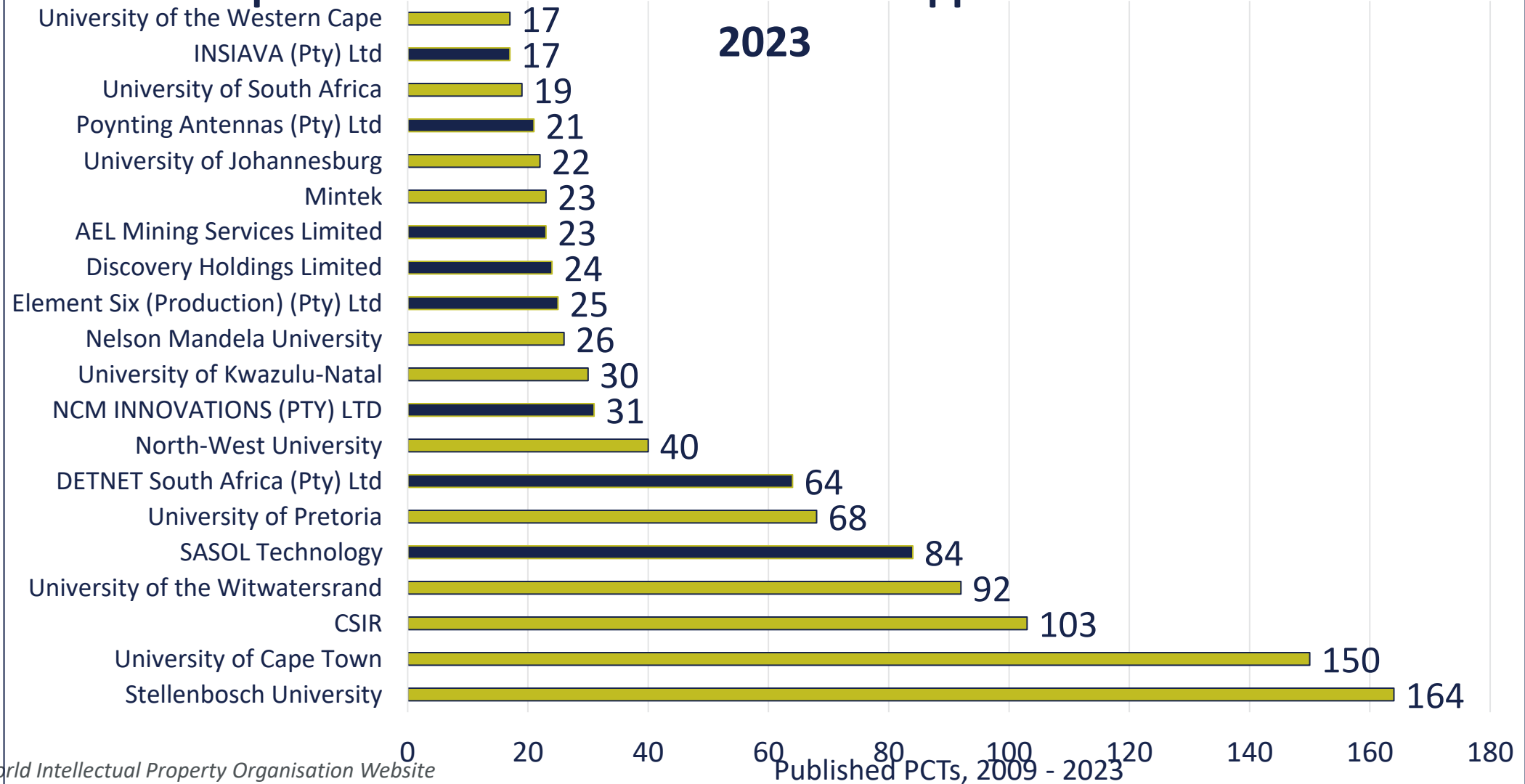
- Ranked among the top 350 universities in the world\*
- Top 3 on African continent
- >35 000 students
  - 33% are postgraduate
  - >4300 international students from >100 countries
- Research intensive university
- 10 Faculties on 5 campuses
- >4300 staff (>1000 academic)

\*Times Higher Education (300-350) and QS Ranking (283)

# Invention Landscape in South Africa

## Top 20 Entities: Total Published PCT Applications for 2009-

2023



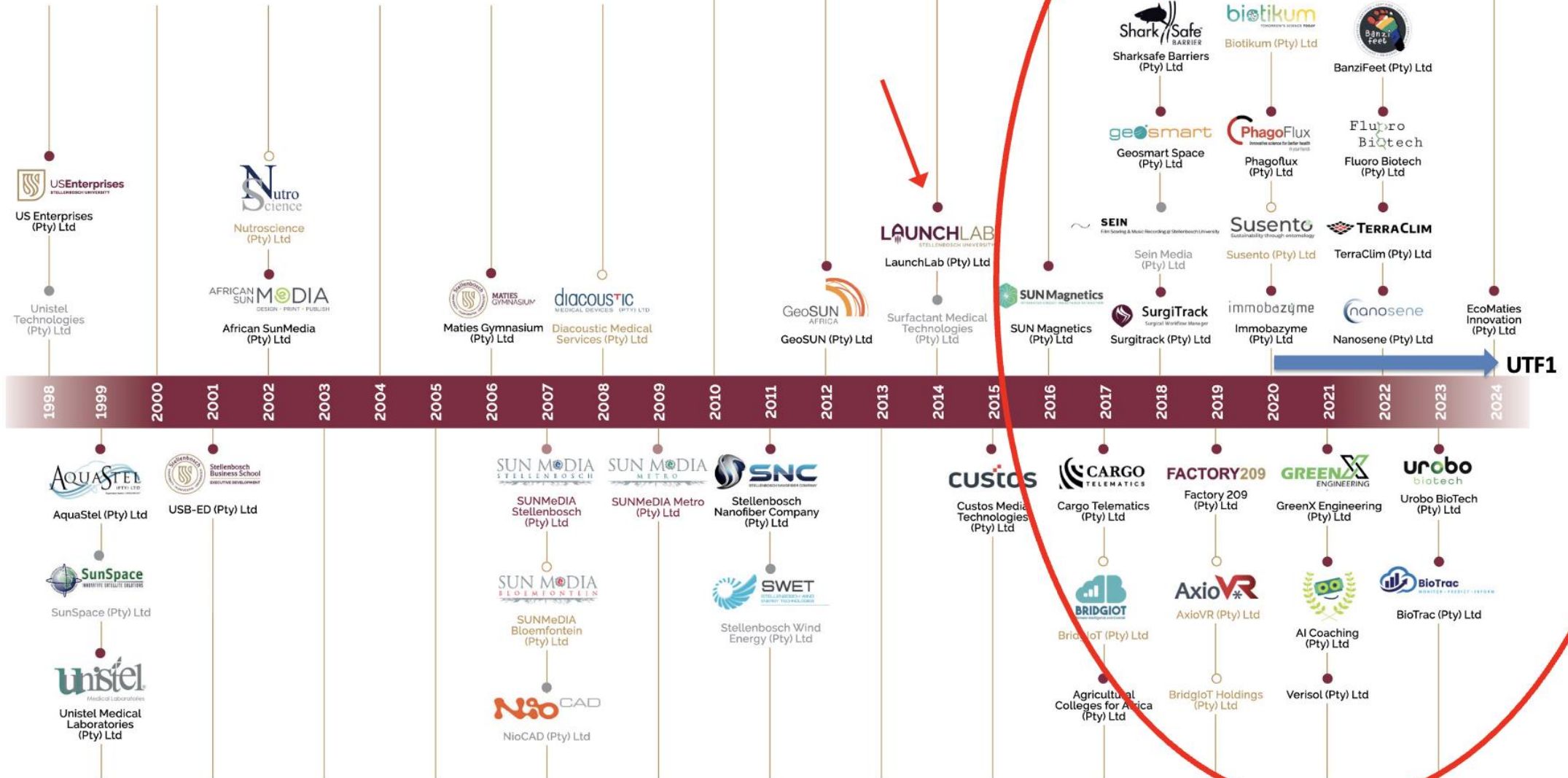
# SU Group of Companies



**USEnterprises**  
STELLENBOSCH UNIVERSITY

Timeline 1998 – 2024

- Active
- Exited
- Merger
- Deregistration



**What my boss thinks I do**



**What the researchers think I do**



**What my friends think I do**



**What I really do**





# Legislation: IPR Act

---

# Global Comparison

USA – Bayh-Dole Act (1980)

UK – IP Ownership Decentralisation Efforts (1980's)

Switzerland – Technology Transfer Law (1991/9)

Japan – Technology Licensing Organisations (1998-2004)

Republic of Korea – Technology Transfer Promotion Act (2000)

Germany – Law on University Employees' Inventions (2002)

Brazil – Innovation Law (2005)

Philippines – Technology Transfer Act (2010)

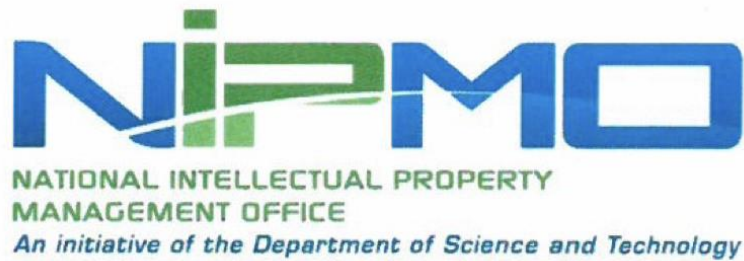
South Africa – IPR from PFRD Act (2010)



# Intellectual Property Rights from Publicly Financed Research and Development Act, 2008 and Regulations

---

- Promulgated in 2010
- “The object of the Act is to make provision that IP emanating from publicly financed research and development is:
  - identified;
  - protected;
  - utilised and commercialised
- for the benefit of the people of the Republic”



- **National Intellectual Property Management Office**
  - Administrative Agency under the DST
  - Supporting role
    - Facilitating, coordinating and capacity building
    - Guidelines on IP transactions and related matters
    - Intellectual property fund management
  - Regulatory and enforcement role
    - Disclosures
    - Offshore IP transactions
    - Government walk-in rights
    - Full-costing of research approval

# IP Ownership (1)

- Recipient of public funds owns IP
  - i.e. the university or science council
- Must obtain statutory protection
  - where applicable and if IP can be commercialised or has benefit to SA
- If recipient doesn't want to own
  - Pass on to NIPMO
  - Then pass onto IP creators / funders

# IP Ownership (2)

- Co-ownership possible where:
  - there has been a contribution of resources by private entity which may include background IP;
  - there is joint intellectual property creatorship;
  - appropriate arrangements are made for benefit-sharing for IP creators; and
  - an agreement for commercialisation of the IP is concluded

# IP Ownership (3)

- If R&D funded “at full cost” by private entity
  - Not publicly financed
  - Therefore, not regulated by the Act
- Full cost is determined by the institution – can be direct costs plus 25% to 170%
- Key things to remember:
  - “Full cost R&D” does not mean IP belongs to private entity – just means it falls outside Act!
  - Ownership will depend on negotiations with institution
  - Institutions have to justify the cost basis to NIPMO

# Benefit Sharing

- IP creators and their heirs are entitled to:
  - At least 20% of gross revenue for first R1 million
  - Thereafter at least 30% of the net revenues
- Revenues include income and other benefits, including non-monetary benefits e.g. shares in a company
- Benefits must be shared in equal proportions between IP creators or heirs unless otherwise agreed between creators or determined in accordance with institutional policies

# Implications

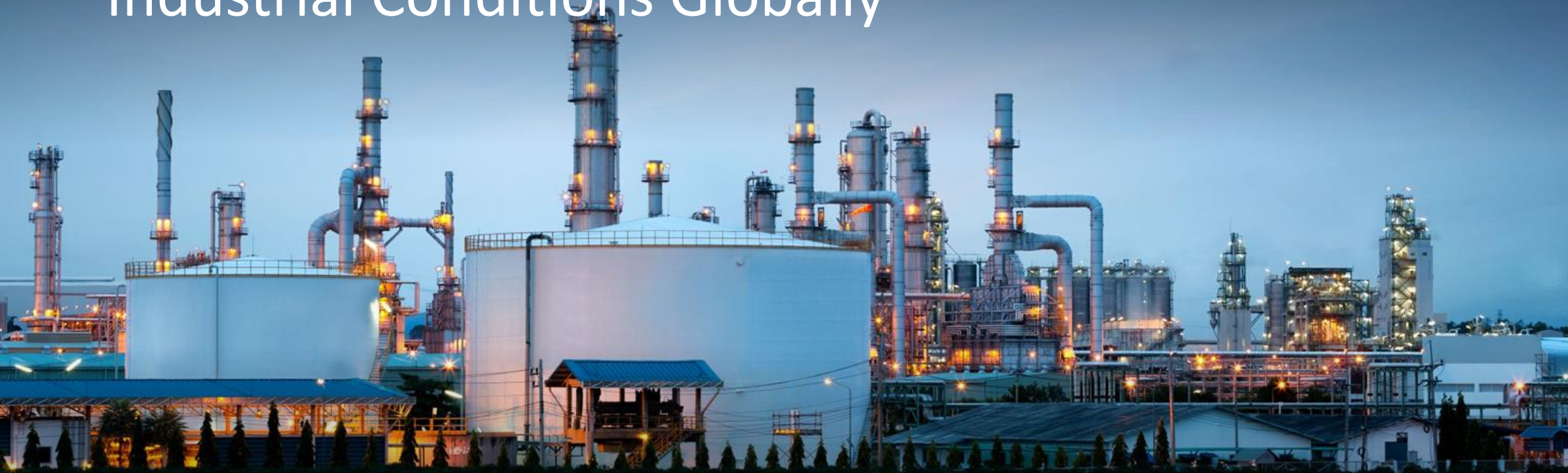
- Every university and science council must have an IP Policy and TT function
- Government claimed more innovation but rather shift in ownership of IP?
- For the TTO: Enormous amounts of reporting
- Negative perceptions about university IP ownership
- Expectations from University Management

# Complications

- Research often takes years (even more than a decade) to culminate in a patentable invention with numerous contributors and postgraduate students.
- Who are the inventors?
- It is often nearly impossible to identify every individual who contributed to the invention along the way
- Compounded by cross-border collaboration where university strategies and legislative contexts differ

---

# Absorptive Capacity and Wider Industrial Conditions Globally



- **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



# Adjusting Focus

- Licensing – business as usual
- BUT ringfence suitable projects with willing champions in a spinout company
- Access to IP (ownership)
- **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

# Spinout Companies and IP

- Assignment IP in Licence Agreement (triggered by some events)
- Need approval from NIPMO to assign IP
- Approval mostly granted on basis of getting equity in return
- Postpone for as long as possible but investors are not well educated
- Once assigned “washed clean” from the Act and no reporting required
- May not compete with the university for research funding
- Right to improvements?

Anita Nel, RTTP

Chief Director: Innovation and  
Commercialisation  
CEO: US Enterprises (Pty) Ltd

Email: [ajnel@sun.ac.za](mailto:ajnel@sun.ac.za)

[www.innovus.co.za](http://www.innovus.co.za)

[www.launchlab.co.za](http://www.launchlab.co.za)

[www.sun.ac.za](http://www.sun.ac.za)



Thank you  
Enkosi  
Dankie