

Intellectual Property Rights



Occasion:

**Science-Business-Society
Dialogue Conference**

Date:

6 December 2016



**science
& technology**

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

NIPMO
NATIONAL INTELLECTUAL PROPERTY
MANAGEMENT OFFICE
An initiative of the Department of Science and Technology

1. IP, Innovation and the NDP
2. IP as a tool for development: the role of the quadruple helix
3. IP Policies: Strategic use of the IP/ IPR system
4. Enhancing the conversion of publicly funded research outputs into innovation outputs
5. IP in action



IP, Innovation and the NDP

- NDP states: “*Innovation is the **primary driver of technological growth** and drives higher living standards*”.
- “Innovation” may be described as a “*multi-stage process whereby organisations transform ideas into **new/improved products, services or processes**, in order to advance, compete and differentiate themselves successfully in the marketplace*”.
- Universally accepted that intellectual property (“IP”) and the associated rights are a **critical aspect to innovation and economic growth**.
- Thus, IP holds (*at least one of*) the key(s) to our future.



IP as a tool for development: the role of the quadruple helix

- **Intellectual property** refers to “creations of the mind”.
- Divided into two categories:
 - **Industrial property** (including inventions, designs, plant varieties, and marks or logos); and
 - **Copyright** (literary works, music, films etc., as well as computer programs).
- **Intellectual property rights** are the “rights given to persons over their creations of the mind”, namely
 - a patent for an invention
 - a plant breeders’ rights for a new plant variety; or
 - a trade mark for a mark.



IP as a tool for development: the role of the quadruple helix

- A functional innovation ecosystem requires a plurality of players with efficient knowledge flows and networks, as well as aligned mandates to transition knowledge created through to innovative products, processes and services.
- The complexity of this system demands that the **triple helix players** (government, business and academia) work closely together such that the fourth party in the quadruple helix, namely society, benefits.
- Most importantly, any innovation ecosystem needs to be **amoebic** in character, capable of ebbing and flowing as required and inclusive in design.

IP as a tool for development: the role of the quadruple helix

- AWARENESS, followed by...
- EDUCATION



- Nuanced for the role of a (*including*):
 - **developer** of IP;
 - **manager** of IP/ IPR;
 - **funder** of IP/ IPR; or
 - **user** (end user or licensee) of IP/IPR.



IP Policies: Strategic Use of the IP / IPR system

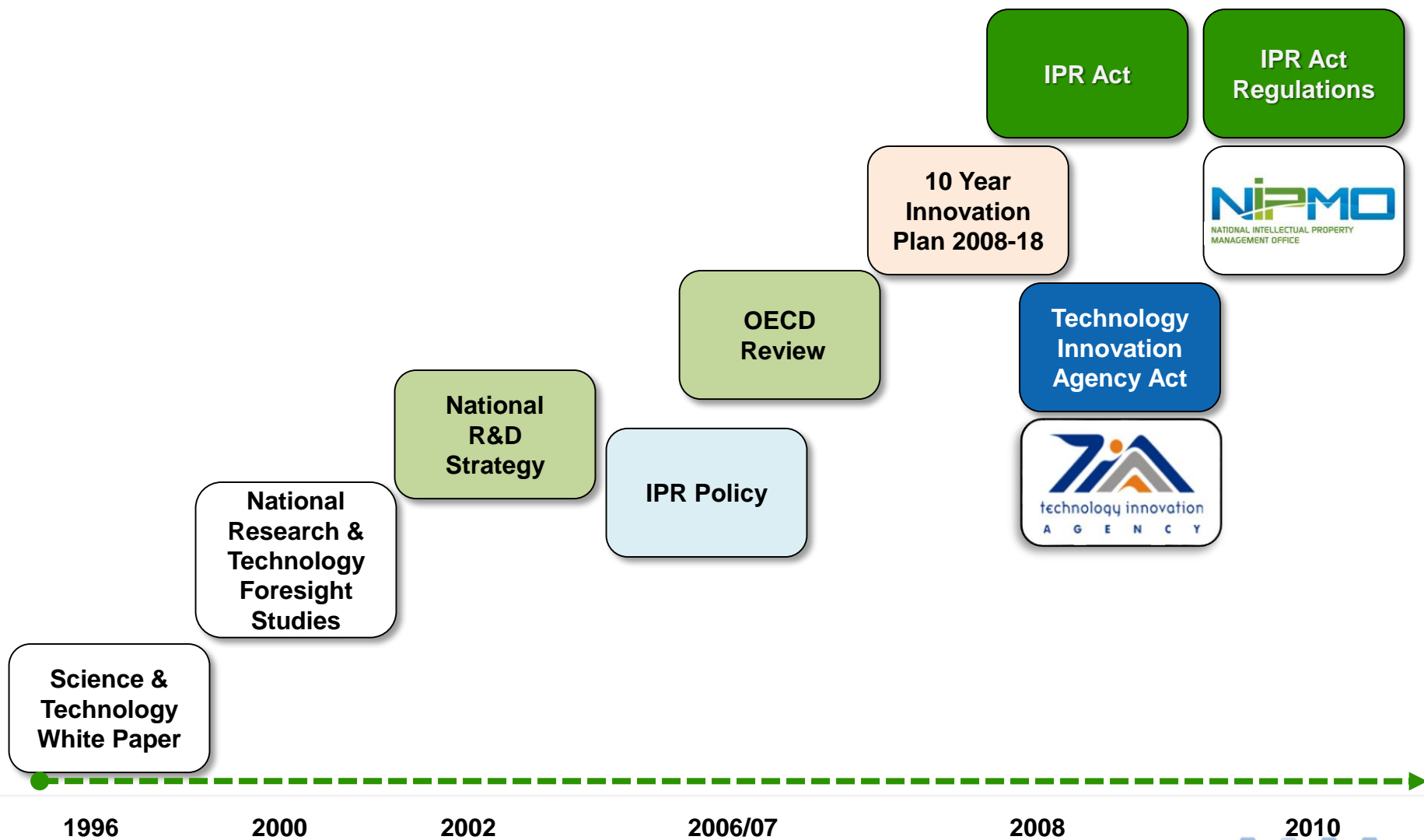
*“Seven of the top ten fastest growing economies in the global economy are African and Africa now offers the **highest return on investment of any region in the world economy**. Africa’s abundant **natural resources**, the growing consumer power of Africa’s emerging middle class and favourable demographics offer enormous potential for sustainable economic growth and development across the continent.”*

Excerpt from an address by the Honorable Minister Davies, CDIP Conference

IP Policies: Strategic Use of the IP / IPR system

- Sustainable growth requires transition from a commodities-based economy to a **knowledge-based economy**, coupled with large-scale industrialisation
- IP and IPR sit at the core.
- An IP Policy (on a national level) should at least address:
 - Alignment with the **development needs** of the country (noting the value of mimicry/ copying) to develop local capacity offset against the need to attract **FDI**;
 - Access to the system for **local innovators** (including preferential treatment where relevant without infringing on TRIPS provisions, as well as a tiered approach);
 - Mechanisms to protect **indigenous resources** (including TK, and GR).

Enhancing the conversion of publicly funded research outputs into innovation outputs



Enhancing the conversion of publicly funded research outputs into innovation outputs

Objects of the IPR Act:

- IP emanating from publicly financed R&D is **identified, protected, utilised and commercialised** for the benefit of the people of the Republic, whether it be for a social, economic, military or any other benefit.
- **Human ingenuity and creativity** must be acknowledged and rewarded.
- **Small enterprises & BBBEE entities** have preferential access.





IP in action: Limpopo

A method of *in vitro* propagation of Strelitzia:

Problem: No successful mass propagation of some Strelitzia species, such as the popular *S. reginae*, has been achieved by tissue culture.

Solution: Researchers at University of Limpopo optimized the *in vitro* culture conditions to minimise oxidative browning.

IP: Patent applications filed in SA, ARIPO, AUS, IN and Europe.

Impact: The method identified is commercially viable and allows for rapid mass propagation of Strelitzia.





IP in action: Western Cape

Lumkani fire detector:

Problem: Informal settlements are prone to rampant shack fires.

Solution: UCT developed a low cost fire-detection device which is coupled with a radio-frequency alert service.

IP: Provisional patent protection filed, and copyright protected in the form of software

Impact: Safety, financial security, and quality of life.





IP in action: Eastern Cape

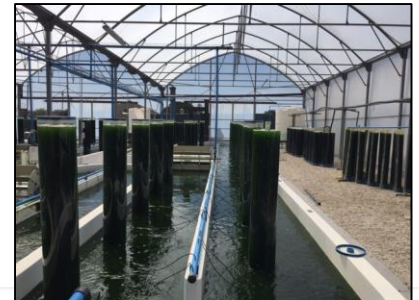
Coalgae™ technology:

Problem: Energy security is a challenge, with coal dust going to waste.

Solution: Produce algal biomass and use the resultant algae for fuel production.

IP: A number of **patent applications** have been filed for the photobioreactor, and the process for cultivating the microalgae, and purifying the coal fines; as well as trade marks

Impact: Coalgae™ composites may be used as a substitute in applications that require coal.





Siyathokoza
Re a leboga
Dankie
Ro livhuwa
Thank you
Siyabonga
Enkosi
Ha khensa