Briefing Note

DEPARTMENT OF SCIENCE AND INNOVATION/THE ACADEMY OF SCIENCE OF SOUTH AFRICA

INNOVATION FOR INCLUSIVE DEVELOPMENT (IID) SEMINAR SERIES ON

PROTECTION OF INTELLECTUAL PROPERTY FOR GRASSROOTS INNOVATION

October 2019

Summary

The seminar was hosted on 21 May 2019, at Protea Hotel Fire & Ice, Menlyn, Pretoria by the Academy of Science of South Africa (ASSAf) in partnership with the Department of Science and Innovation (DSI). The seminar was centred around the Grassroots Innovation Programme (GIP), which is designed to identify and support innovators and inventors who do not have a formal education or access to formal innovation facilities. The GIP intents to provide grassroots innovators with technical skills development, access to technical expertise and intellectual property (IP) protection, among other things.

The seminar set-out to provide a platform to raise awareness on policies that govern IP for grassroots innovation and to further discuss the importance of IPR, reinforcing national policy dialogues and processes around the interface between Intellectual Property Rights (IPRs) and grassroots innovation, both in South Africa and Globally, with particular interest on India. The seminar also showcased two innovators who shared their journeys, highlighting opportunities and challenges they experienced.

One of the take-home messages was that supporting grassroots innovation is complex and it requires partnership with government and it's agencies, private sector, academia, NGO's and innovators themselves. The 2019 White Paper on Science, Technology and Innovation (STI) requires a system which is responsive, inclusive and supports all forms of innovation, including effective grassroots innovation programme for the country.

Introduction

Grassroots innovation differs from mainstream innovation in that it primarily has a social purpose created at the bottom of the income pyramid, usually due to necessity, hardship and various challenges [Ref 1]. These types of innovations usually emanate from the developing world and as such, grassroots innovators develop solution(s) to a localised problem, usually without a conducive and formal platform, environment or setup. According to the study released by the Information Technology and Innovation Foundation (ITIF) in 2016, a global technology policy think tank, South Africa (SA) is ranked number 30 out of 56 countries in terms of how its domestic policies support worldwide innovation In 2015, the World Economic Forum (WEF) reported that SA's global competitiveness is on the rise as a result of the advancements made in ICT and innovation.

Generally, grassroots innovation is not well understood, not well researched and is characterised by informality, thus is performed outside of mainstream institutions [Ref 2]. Many grassroots innovators use indigenous or traditional knowledge to develop their products or services. Consequently, there is a need to explore appropriate mechanisms to govern and support grassroots innovation processes, including Intellectual Property Rights (IPRs).

Overview of the Innovation for Inclusive Development (IID) Seminar Series

Ms Nonhlanhla Mkhize, **DSI** indicated that the IID seminar series provides a platform and opportunity for stakeholders from various sectors to converge and converse with policy-makers. She further mentioned that the White

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Paper on STI commits South Africa to an inclusive and responsive National System of Innovation (NSI) that is able to support all kinds of innovation. For the first time, the White Paper takes a clear position on supporting grassroots innovation. The IID seminar plans to explore whether existing tools to support innovation are responsive to grassroots innovation. South Africa has now partnered with India in the grassroots innovation initiatives, as India has made tremendous progress in this space.

Session 1: Intellectual Property and Grassroots Innovation: National and International Perspectives

***Mr Mahesh Patel*, National Innovation Foundation (NIF), India**, provided an overview of the state and impact of IPRs on grassroots innovation in India using the Honey Bee Network (HBN) approach. The HBN is a network of like-minded individuals and organisations, including grassroots innovators, including those who believe in the philosophy of sharing knowledge with grassroots innovators.

HBN operates according to four guiding principles: (i) the identity of the innovator must be acknowledged; (ii) any knowledge collected from the people or innovators and any benefit derived from this knowledge must be shared with them in the language they can understand; (iii) ideas must be shared openly among the community; and (iv) any income or monetary incentives generated through the innovation must be shared in part with the innovator. HBN offers various support and incubation mechanisms for the innovators (comprising mainly of untrained individuals from the informal sector) either at the NIF incubator or R&D institution. The NIF incubation process includes: (i) scouting of grassroots innovators or innovation through various platforms; (ii) validation of the innovation by selected institutions; (iii) connection of innovators with investors; (iv) IPR protection; and (v) commercialisation. The network has successfully helped with patenting of several inventions and has obtained funding to scale some of these inventions globally.

***Prof Malebakeng Forere*, Wits**, gave an overview of the IPRs framework and its impact on innovation at grassroots level in South Africa. Prof Forere outlined the main IP legislation relevant to innovation in South Africa namely: Patents Act 1978; Medicines & Related Substances Control Act; Copyright Act 1978; Intellectual Property Laws Amendment Act 2013 and the Protection, Promotion, Development and Management of Indigenous Knowledge Bill. She further alluded that IP legislation does not favour grassroots innovation in most cases.

An overview of the South African IP legislation for grassroots innovation reveals that: the Patents Act, in particular, does not promote grassroots innovation; the standards for demonstrating innovation are less stringent with the Designs Act than with the Patents Act; and that there is a need to refine legislation in order to provide for utility models. These models need to be adopted in order to promote innovation for inclusive development, especially in developing countries such as South Africa which are in dire need of technology and innovation. Furthermore, the utility models are advantageous in that they permit existing technologies to be used to solve different problems (which may be novel but not necessarily inventive); registration is less complicated, costly and timely; there is no examination; and the terms of protection are seven to ten years.

Session 2: Protection of Intellectual Property for Grassroots Innovation: South African Setting

Roundtable Discussion

***Mr Ashley Bhugwandin*, CSIR**, presented on the Grassroots Innovation Programme (GIP) piloted by the Technology Localisation and Implementation Unit (TLIU) in 2014/2015 under the directive from the DSI. Grassroots innovation was a relatively new topic in South Africa, and the partnership with India on grassroots innovation was being established. TLIU discovered that grassroots innovators had innovative ideas but not at a commercial scale; they needed some form of protection; many did not have a formal education or access to facilities; and mostly tend to be very protective of their environment as they believe that their ideas will be stolen by potential competitors.

The initial concern was to give them

sufficient protection to allow them to discuss their ideas with potential developers. Many grassroots innovators do not have a formal education and lack understanding of the law and therefore need a level of comfort, trust and flexibility in the application of the law and processes. A large percentage of the South African population are innovating without adequate protection. The initiation has since established a database of thousands of ideas.

Ms Thamaray Govender, **TIA**. Following the success of the pilot program by TLIU, TIA has now been commissioned to implement the GIP program on behalf of the DSI. IP is paramount in promoting innovation, technology transfer, R&D and ultimately industrial development and economic growth. South Africa therefore needs a balanced and coordinated approach that provides effective protection of IP rights to support small institutions and vulnerable individuals in society, including grassroots innovators. The IP should also nurture and promote a culture of innovation by enabling creators and inventors to reach their full potential and contribute towards industry.

One such approach that the State is considering in promoting IP rights is the implementation of the utility model or petty patent to support the registration of patents by small business and historically disadvantaged individuals who operate in the informal sector

Ms Lungelwa Kula, **NIPMO**. NIPMO is responsible for the implementation of the IPRs from Publicly Financed R&D, which makes provision that IP emanating from publicly financed R&D is identified, protected, utilised and commercialised. Legislation states that preferential access should be provided to SMMEs and BBBEE entities when commercialising IP. The IPR Act would apply to grassroots innovation funded through TIA (since this will constitute as publicly funded R&D), if the R&D is not funded on a full-cost basis.

There are various measures for incentivising the IP creator, e.g. in terms of the IPR Act, the IP creator is entitled to at least 30% of the first million (gross) accrued from commercialisation of the IP, thereafter 20% of the net revenue. The IPR Act may also apply where science councils and higher education institutions work together. NIPMO is currently under review and the outcome of the review may inform the amendments of the legislation.

Mr Mehluli Ncube, **CIPC**, alluded that patents in their nature exclude people such as grassroots innovators, whose main goals are to address societal problem. Mr Ncube advised grassroots innovators not to consider patents to protect their innovation as there are many gaps with regards to patents, for instance, patent applications cannot be lodged directly by the applicant but have to go through a patent attorney, who drafts the specifications and makes the submission on behalf of the applicant. It would be considered improper to treat grassroots innovators the same way as corporates are treated, as the innovators would not be able to afford patent attorneys.

Session 3: Case Studies

The case studies provided an opportunity for two female innovators/entrepreneurs to showcase, in practical terms, what their journeys entailed, highlighting opportunities and challenges they experienced.

Ms Sandiswa Qayi, **AET Africa (East London)**. AET Africa is an innovator and manufacturer of energy-efficient products. The idea started in 2013 with an informal research by a small team in Stutterheim. The team presented their idea to the newly launched Science and Technology Park in East London, where their first prototype was tested. The park provided technical expertise to develop the proof of concept, however, funding was required to complete the entire process. The team approached and leveraged on various funding mechanisms for various activities, such as The Innovation Hub, TIA's Grassroots Innovation Programme, TIA's Global Cleantech Innovation Programme, TLIU and IDC. The factory has since been operating commercially from October 2018. There are still challenges of developing a fully-fledged IP strategy and to continuously improve the product and stay competitive. It is evident that to succeed as a grassroot innovator, support from various stakeholders is paramount.

Ms Nathacia Olivier, **Indoni Beauty Range**. Indoni is a skin and haircare range manufactured from food compounds, edible oils and essential oils with heading properties. Ms Olivier started with an idea to develop

soothing products to heal her own skin condition, without knowledge or understanding of the process of innovation. She entered a competition at Tshwane University of Technology (TUT), which she won, and was subsequently introduced to The Innovation Hub which provided her with funding opportunities to develop a prototype of the product, as well as publicity on radio and television. Some of the challenges experienced included lack of information on IP, mechanisms for protection of ideas, designing and packaging skills. The product is now commercially available and the team currently consisting of 32 women from various communities, who are involved in the production and sales of the product.

Way Forward and Recommendations

Delegates were invited to submit their thoughts and recommendations to address and find solutions for the topic of discussion. The following ideas were put forward:

1. Define, develop and standardise the definition of a grassroot innovator/grassroots innovation.
2. Create awareness of innovation within the informal setting and improve the scope of education toward grassroots innovation at all levels of society, e.g. communities, schools, university, business, etc. Create forums and provide a one-stop shop to support grassroots innovators.
3. Increase awareness and provide training on processes, programmes and policies pertaining to grassroots innovation and ensure that they are less laborious. IP Act and other policies need to be reviewed based on informed knowledge to allow grassroots IP commercialisation.
4. Policies should be inclusive to minimise potential creation of monopolisation with respect to grassroots knowledge.
5. Form better and effective collaborations between government agencies such as DBE, DHET, the dti, DSI, NIPMO, CIPC, TIA. Involve youth agencies such as NYA in the dialogues. Consider including IP as part of the school curriculum.
6. Provide better coordination of funds/funders in the grassroots innovation space.
7. Provide an effective scouting mechanism for innovation and consider poaching of students or entrepreneurs like other states.
8. Provide resources and solutions in a language that innovators understand. Information should be made available in remote areas, particularly in areas with limited or no access to the Internet.
9. Develop advocacy strategies and mechanisms for communities and innovators.

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Glossary

BBBEE	Broad-Based Black Economic Empowerment
CIPC	Companies and Intellectual Property Commission
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
ICT	Information and communication technology
IDC	Industrial Development Corporation
IPRs	Intellectual property rights
ITIF	Information Technology and Innovation Foundation
NIPMO	National Intellectual Property Management Office
R&D	Research and development
SMME	Small, medium or micro enterprise
STI	Science, Technology and Innovation
TIA	Technology Innovation Agency
TUT	Tshwane University of Technology

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