



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

Private Bag X727, PRETORIA, 0001 • DST Building No 53, Scientia Campus, Meiring Naude Road, Brummeria, PRETORIA. Tel: +27 12 844 0222, www.dst.gov.za

INTELLECTUAL PROPERTY AND TECHNOLOGY TRANSFER CAPACITY DEVELOPMENT STRATEGY

2016-2020

OVERVIEW

The Intellectual Property Rights from Publicly Financed Research and Development Act, 2008 (Act 51 of 2008) came into effect on 2 August 2010.

Section 6(4)(a) and (b) of the IPR Act indicates that National Intellectual Property Management Office (“NIPMO”) may, on terms and conditions determined by it, provide assistance to institutions for the establishment of Offices of Technology Transfer (“OTTs”). The assistance may include the **development of appropriately skilled personnel** for the OTT.

TABLE OF CONTENTS

1. CONTEXT.....	4
2. OBJECTIVES FOR THE STRATEGY	5
2.1 Strategic Outcomes	6
2.2 Stakeholder Analysis	7
2.2.1 <i>IP&TT Professionals</i>	7
2.2.2 <i>Innovation and research managers, scientists and students</i>	7
2.2.3 <i>Government and Industry stakeholders</i>	8
3. SKILLS REQUIREMENTS	8
4. CAPACITY DEVELOPMENT INITIATIVES	11
4.1 Curriculum Development and Certification – Level A.....	11
4.1.1 <i>NIPMO – UNISA IP Chair</i>	11
4.1.2 <i>Certified Licensing Professionals</i>	12
4.1.3 <i>Alliance of Technology Transfer Professionals</i>	13
4.1.4 <i>Candidate Patent Attorney/Agent Programme/ Commercialisation Manager</i> .	13
4.2 Workshops, Seminars and Conferences – Level B.....	14
4.2.1 <i>IP Wise™ Initiative</i>	14
4.2.2 <i>WIPO Summer School on IP&TT</i>	14
4.2.3 <i>Technology transfer workshops</i>	15
4.3. Online Courses and Webinars – Level C	16
4.3.1 <i>WIPO online courses</i>	16
4.3.2 <i>Webinars</i>	17
4.4. The pros and cons of the proposed IP management capacity development strategy	18
5. Partnerships for practical learning (internships)	19
6. Creating an OTT Library	20
Annexure A.....	22

LIST OF TABLES

Table 1: Skills requirement.....	10
Table 2: Advocacy and Awareness Initiatives	14
Table 3: WIPO Distance Learning Courses (TISC Agreement)	17
Table 4: Training Pros and Cons.....	19
Table 5: Potential OTT library	21

LIST OF FIGURES

Figure 1: Technology transfer process map depicted from Isis Innovation (Pty) Ltd.....	9
Figure 2: Capacity Development interventions	11

ACRONYMS

ATTP	Alliance of Technology Transfer Professionals
AUTM	Association of University Technology Managers
CIPC	Companies and Intellectual Property Commission
CLP	Certified Licensing Professional
FTO	Freedom to Operate
IPR Act	Intellectual Property Rights from Publicly Financed Research and Development Act, 2008 (Act 51 of 2008)
IP	Intellectual Property
IP&TT	Intellectual Property and Technology Transfer
LLM	Masters Degree in Law
LLD	Doctorate Degree in Law
NIPMO	National Intellectual Property Management Office
OECD	Organisation for Economic Co-operation and Development
OTTs	Offices of Technology Transfer
PGD	Post Graduate Diploma
R&D	Research and Development
SLP	Short Learning Programme
RTTP	Registered Technology Transfer Professional
TIA	Technology Innovation Agency
TT	Technology Transfer
WIPO	World Intellectual Property Organization

1. CONTEXT

The Organisation for Economic Co-operation and Development (“OECD”)¹ indicates that efforts to ring-fence public research in a context of fiscal austerity in many countries – as well as competition from new players in Asia – have increased pressure on universities, public research institutions and governments to increase the economic outputs from and impact of investments in public research. Similarly, South Africa through the Department of Science and Technology has promulgated the Intellectual Property Rights from Publicly Financed Research and Development Act, 2008 (Act no.51 of 2008) (“IPR Act”) to ensure that publicly financed research 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.

Whilst the IPR Act ensures that Offices of Technology Transfer (“OTTs”) are established within institutions, the OTTs have to ensure that they have capacity to perform technology transfer (“TT”) related activities. Section 6(4)(a) and (b) of the IPR Act indicates that National Intellectual Property Management Office (“NIPMO”) may, on terms and conditions determined by it, provide assistance to institutions for the establishment of OTTs. The assistance may include the **development of appropriately skilled personnel** for the OTT. Furthermore, Section 7(1) of the IPR Act denotes that the functions of an OTT must be performed by appropriately qualified personnel, whom, when considered collectively, has interdisciplinary knowledge, qualifications and expertise in the **identification, protection, management** and **commercialisation** of intellectual property (IP) and in IP transactions.

This strategy outlines the NIPMO interventions to ensure that individuals within the OTTs are provided with opportunities to acquire the necessary skills to enable them to effectively **identify, protect, manage** and **commercialise** IP. This strategy is also in line with the OECD indication that building the required institutional capabilities is central to efforts to commercialise public research.

¹ <http://www.oecd.org/sti/outlook/e-outlook/stipolicyprofiles/interactionsforinnovation/commercialisationofpublicresearch.htm>

Capacity development, according to the OECD², can be defined as “*the process by which individuals, groups and organisations, institutions and countries develop, enhance and organise their systems, resources and knowledge to perform functions, solve problems and achieve objectives*”. Capacity on its own is defined as “*the ability for individuals and organisations to perform functions effectively, efficiently and sustainably*”. Strategy is acknowledged as the “*direction that an organisations takes over a certain period in order to meet its long-term objectives and those of the stakeholders it serves*”. Capacity building is therefore not a passive process but part of a continuous active process.

2. OBJECTIVES FOR THE STRATEGY

Since the inception of the IPR Act, ongoing capacity development initiatives have been implemented. This was aimed at ensuring that individuals working on TT related matters at the institutions are well resourced and capable of dealing with IP matters referred to them.

There are approximately a hundred (100) TT professionals, in South African publicly financed research and development (R&D) institutions.³ On average there are two to three OTT personnel within the 36 publicly financed research institutions (26 Universities and 10 Schedule 1 Institutions). Some of these individuals require different kind of capacity development interventions to assist them in effectively executing the TT mandate.

The legislative requirement for institutions to establish and maintain an OTT or a TT function brought a capacity challenge taking into consideration that TT is a fairly new focus for most institutions. The OTT functions are to be performed by suitably skilled individuals despite the fact that there are no formal qualifications in TT and some institutions have limited understanding of the potential benefits of proper IP management.

²<https://stats.oecd.org/glossary/detail.asp?ID=7230>

³ This figure is based on the Needs Analysis Survey conducted by NIPMO in April 2014

To assist with IP related capacity development, institutions have implemented research chairs initiatives (University of South Africa, Stellenbosch University, University of Cape Town and University of Pretoria). Some institutions have also introduced post graduate qualifications such as Innovation and Technology Management (Stellenbosch University, University of Pretoria, University of the Witwatersrand and Tshwane University of Technology). All these are, however, not specific for TT professionals. There are also short courses offered by the Southern African Research and Innovation Manager Association (SARIMA) and Licensing Executives Society (LES) that assist in assisting TT professionals within the South African space.

The objective for this Intellectual Property and Technology Transfer (IP&TT) capacity development strategy is to implement programmes that:

- Have relevance to practical issues in IP& TT management;
- Provide avenues for IP&TT professionals in acquiring formal qualifications;
- Enable continuous professional development and skills improvement;
- Provide information sharing platforms to enable effective IP management and keeping up with latest IP management trends and developments; and
- Provides local and international training opportunities.

Different sets of interventions are explored at different levels to meet the above mentioned objectives and these include: awareness sessions, seminars, workshops, conferences, courses, exchange/residence in training programs, social media, professional affiliations for transferring best practices and formal training programmes.

2.1 Strategic Outcomes

The strategy is effective from April 2016 and is to be implemented over a five year period (2016 to 2020).

2.2 Stakeholder Analysis

The strategy is aimed at developing upcoming IP&TT professionals and further equipping the existing professionals in OTTs within institutions and stakeholders in government and industry.

2.2.1 IP&TT Professionals

The IP&TT expertise in an institution generally resides within the OTT. Since this office is responsible for driving and directing institutional IP&TT advocacy and awareness initiatives, it is important for the TT practitioners to maximise opportunities that contribute to the development, management and exploitation of IP within an institution.

The TT professionals act as intermediaries between university and industry. They are required to be multi-skilled and to have the ability make informed decisions at across the TT value chain. In addition to training initiatives, platforms are required for TT professionals to engage with their peers on how to deal with related challenges.

2.2.2 Innovation and research managers, scientists and students

The success of TT activities within institutions relies on the willingness of researchers to disclose their ideas to the OTT. It is therefore imperative that researchers and students are aware of institutional policies, processes and procedures for the management of IP and various stages of R&D, starting from conceptualisation of an idea to commercialisation. Throughout this TT continuum, there are legal, business and regulatory processes that require input from the researchers. To optimise this interaction and to ensure that research activities do not compromise but rather facilitates effective TT, researchers and students need to keep abreast of industrial and national developments as well as to prioritise research programmes with the prospect of socio-economic impact and the ability to address industry or government needs.

Researchers and students that have a basic knowledge of idea protection are empowered in their academic and research journey. They end up better suited to advise TT professionals on who a potential licensee may be and the potential technology applications from the IP literature searches they might have conducted prior to embarking on their research.

2.2.3 Government and Industry stakeholders

Government officials are required to understand national IP&TT needs as they are required to implement policies and strategies that support IP&TT initiatives as well as provide platforms that promote South African IP. IP advocacy and awareness is important for policy makers to understand the importance of IP. This will ensure that policies that support institutional arrangements for IP&TT management are implemented.

It is also imperative for industry stakeholders to have a basic knowledge of the IPR Act and its implications for their research and development engagements with universities and science councils.

3. SKILLS REQUIREMENTS

TT demands highly trained individuals across the whole value chain from research discovery through to IP portfolio maintenance.

The TT process map⁴ indicated below, shows a summary of TT activities, requiring different skills sets at different levels. The capacity development interventions to be implemented are to take all that into account.

⁴ Adapted from Isis Innovation

A summarised TT process map:

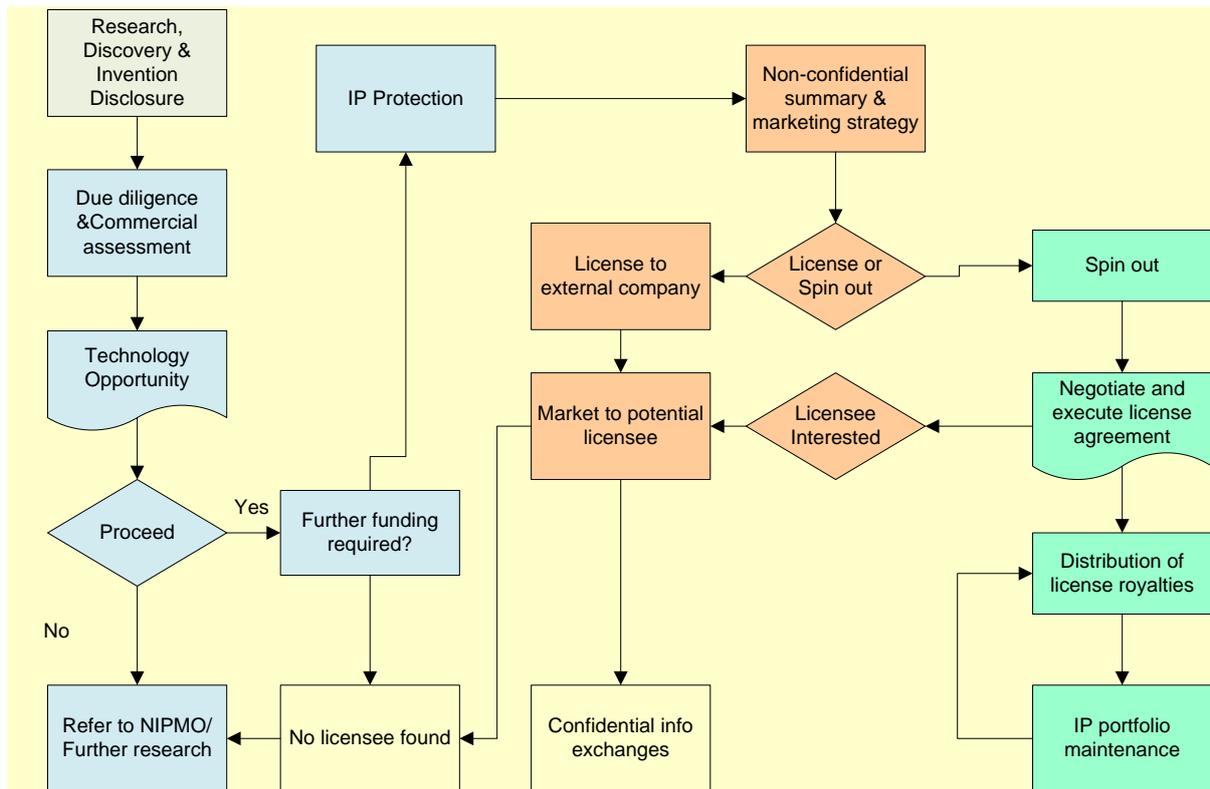


Figure 1: Technology transfer process map adapted from Isis Innovation (Pty) Ltd

TT professionals could be classified according to the functions they perform within the OTT. These functions include but are not limited to the following:

- IP&TT management;
- Commercialisation; and
- Technology development support.

The IP&TT capacity development initiatives will have to be aligned to the above mentioned functions.

Table 1: Skills requirement

CATEGORY	FUNCTION	POTENTIAL CAPACITY DEVELOPMENT INTERVENTION
Advocacy and Awareness	<ul style="list-style-type: none"> ▪ Internal and external marketing of the OTT ▪ Awareness of institutional IP policies and IPR Act ▪ IP Scouting 	<ul style="list-style-type: none"> ▪ <i>IP Wise</i>TM ▪ Webinars, ▪ Presentations
IP Management	<ul style="list-style-type: none"> ▪ Screening invention disclosures ▪ IP analysis including Freedom To Operate (FTO) searches ▪ Coordinating patent specification information packs between researchers and patent attorneys ▪ Coordinating patent filings ▪ Managing the patent portfolio ▪ Conducting IP Audits ▪ Drafting IP strategies for the IP portfolio ▪ Managing all TT related agreements 	<ul style="list-style-type: none"> ▪ <i>IP Wise</i>TM ▪ Webinars ▪ Courses⁵ ▪ Formal training programs⁶ ▪ Workshops ▪ Seminars
Commercialisation	<ul style="list-style-type: none"> ▪ Liaising with industry on OTT IP portfolio ▪ Sourcing potential licensees ▪ Negotiating license agreements ▪ Crafting heads of agreements for licenses ▪ Managing spin-outs ▪ Collecting royalties from licensees ▪ Business plans for IP with spin-out potential ▪ Analysing the markets for technologies 	<ul style="list-style-type: none"> ▪ Webinars ▪ Workshops⁷ ▪ Short Courses⁸ ▪ Seminars
Support for Technology development	<ul style="list-style-type: none"> ▪ Technical analysis of invention disclosures ▪ Technology evaluation and assessment of IP for technical readiness levels ▪ Project Management ▪ Sourcing funding for the technology 	<ul style="list-style-type: none"> ▪ Residence in training programs⁹ ▪ Workshops ▪ Short Courses

⁵ WIPO Academy and SARIMA

⁶ UNISA IP Chair Short Learning Program

⁷ LES/SARIMA/AUTM etc.

⁸ LES/SARIMA/AUTM etc.

⁹ Local and International

4. CAPACITY DEVELOPMENT INITIATIVES

Capacity development interventions are structured according to three levels namely as per Figure 2:

- i. Level A: Professional Development (Formal Qualifications - Curriculum Development and Certification).
- ii. Level B: Workshops, Seminars and Conferences
- iii. Level C: Distance Learning/ Online Courses and Web based seminars.

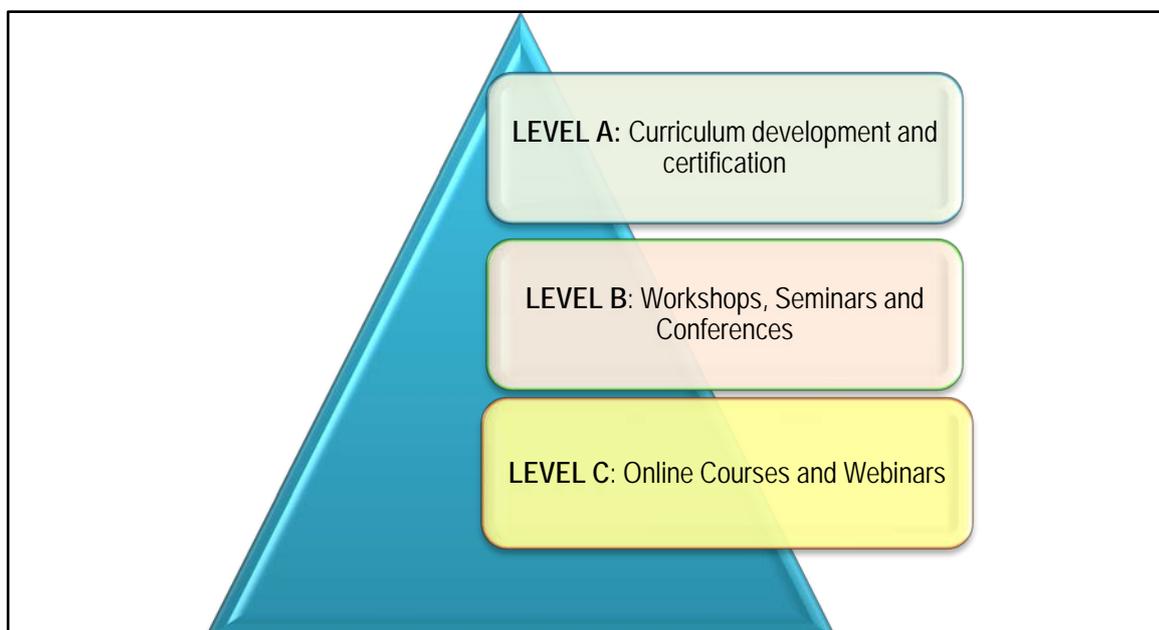


Figure 2: Capacity Development interventions

4.1 Curriculum Development and Certification – Level A

4.1.1 NIPMO – UNISA IP Chair

NIPMO has partnered with University of South Africa (UNISA) to provide certified IP&TT training. The NIPMO supported UNISA IP Chair is used as the main curriculum development and certification project. The courses offered by UNISA are designed for professionals with practical experience who wish to strengthen their IP knowledge and expertise. The courses are further focused on effective management

of IP. Yet, furthermore, they enable professionals to have formal qualifications in IP management which never existed before.

Through the assistance of the UNISA IP Chair the following has been developed:

- a. Advanced Short Learning Programme (SLP) on IP Management and Innovation; and
- b. A Post Graduate Diploma (PGD) in IP Management.

The Advanced SLP on IP management and Innovation is offered on a six month certificate program whilst the post graduate diploma is to be offered over a twelve month period. These qualifications cover various aspects of TT such as: IP management, technology commercialisation and technology development. The courses should attract individuals from a diverse background such as science/engineering, legal and commerce backgrounds.

Information and intake on the SLP available on www.unisa.ac.za/slp

The PGD is scheduled to be implemented in 2017.

4.1.2 Certified Licensing Professionals

The Certified Licensing Professionals, Inc. administers the Certified Licensing Professional (CLP) programme for professionals in TT.

This certification is a credential that distinguishes professionals that have demonstrated experience, proficiency, knowledge, and understanding of licensing and commercialisation of IP through involvement in patenting, marketing, negotiation, legal and intellectual asset management.

Information on the CLP is available on www.licensingcertification.org/

4.1.3 Alliance of Technology Transfer Professionals

The Alliance of Technology Transfer Professionals (ATTP) is the international body for professionals engaged in TT.

ATTP was established to recognise and promote individuals with these core competencies and to provide approved training for individuals wishing to acquire these skills and become Registered Technology Transfer Professionals (RTTP).

The RTTP programme reflects the highest quality expectations defined by the profession and will provide individuals wishing to acquire these skills the opportunity to be recognised as RTTPs.

Information on the ATTP is available on attp.info/

4.1.4 Candidate Patent Attorney/Agent Programme/ Commercialisation Manager

The previous Innovation Fund, developed IP management skills through a Patent Attorney Development Programme. It is acknowledged that individuals posing such skills are required in the TT field. The need for a number of candidates as qualified lawyers is subject to debate and instead two programmes are proposed:

- a. A Patent Attorney development programme (Minimum 4 year duration).
- b. A Patent Agent development where the individual is not required to have a law degree (minimum 2 year duration).

These programmes are proposed together with a variety of IP training interventions including contract drafting, negotiation and company formation.

The Technology Innovation Agency's CHUMA commercialisation programme is acknowledged and deemed as an important and essential capacity development intervention in the technology transfer space.

4.2 Workshops, Seminars and Conferences – Level B

4.2.1 IP Wise™ Initiative

NIPMO has generated an advocacy and awareness initiative termed *IP Wise™* which is aimed at equipping researchers and research and innovation managers with basic IP management skills when engaging in R&D activities.

There is, however, a need for awareness targeted at different stakeholders as indicated in the table 2 as well as through a number of possible interventions.

Table 2: Advocacy and Awareness Initiatives

STAKEHOLDERS	TYPE OF INTERVENTION	STRATEGIC PARTNER/PARTNER
OTT Related	<ul style="list-style-type: none"> ▪ Hosting by NIPMO ▪ Development of Practice Notes ▪ Development of Guidelines ▪ Development of NIPMO Interpretation Notes 	N/A
Researchers/research and innovation managers and institutional legal offices	<ul style="list-style-type: none"> ▪ Awareness Workshop ▪ Advert/Flyer in Lab Book ▪ World IP Day 	OTT
SMMEs	<ul style="list-style-type: none"> ▪ Awareness Workshops ▪ World IP Day 	Funding Agencies/CIPC
Government Funding Agencies and Departments	<ul style="list-style-type: none"> ▪ Workshops/Seminars 	Government Departments
IP education and awareness	<ul style="list-style-type: none"> ▪ Curriculum Development ▪ Communication Strategy ▪ Awareness Activities 	CIPC/ Department of Basic Education
Legal Fraternity	<ul style="list-style-type: none"> ▪ Workshops/Seminars ▪ Guidelines/Practice Notes 	Law Firms

4.2.2 WIPO Summer School on IP&TT

The NIPMO has fostered relationships with the World Intellectual Property Organization (WIPO) to host the Summer School on IP&TT. The objective of the two-week Summer School on IP is to provide an opportunity for senior students and young professionals to acquire deeper knowledge of IP, and to gain an appreciation

of IP as a tool for economic, social, cultural and technological development and the role WIPO plays in the global administration of IP. A total of fifty places are made available for local and international senior students (graduate and postgraduate students) and young professionals from any field of study or discipline. The target is to train at least 200 individuals through the Summer School programme over a five year period.

WIPO currently supports ~10 African participants and waives fees of 5 South African participants. NIPMO further supports 5 South African participants (Support could be course fees and/or flights and/or accommodation).

4.2.3 Technology transfer workshops

Another focus area for level B is the hosting of workshops where internationally recognised experts are invited to give lectures on IP management and TT issues to local stakeholders. Examples of local and international partner institutions to be considered are:

- a. Southern African Research and Innovation Managers Association (SARIMA).
- b. Licensing Executives Society (LES).
- c. Companies and Intellectual Property Commission (CIPC).
- d. South African Department of Trade and Industry (the **dti**).
- e. European Patent Organisation, United States Patent Office, Japan Patent Office, BRIC (Brazil, Russia, India and China) Patent Offices.
- f. Genopole in France (a Bio-cluster that has been established 13 years ago and spins out 10 companies on average a year with competencies in IP strategies and venture creation).
- g. International Universities' Offices of Technology Transfer (e.g. Waikatolink - New Zealand; Isis - UK; Cambridge University - UK and Emory University - USA).
- h. Association for University Technology Managers (AUTM).
- i. World Intellectual Property Organisation (WIPO).
- j. World Trade Organisation (WTO).
- k. Japan International Collaboration Agency.
- l. Flynders and Partners.

- m. PIPRA Davies.
- n. Opteon (Australia).
- o. Alliance for Technology Transfer Professionals (ATTP).

4.3. Online Courses and Webinars – Level C

4.3.1 *WIPO online courses*

WIPO through its Academy offers a wide range of distance learning courses. These entail on-line teaching techniques that utilise the internet for teaching and training purposes. Distance learning courses bring teachers specialising IP issues closer to students and other interested parties from all corners of the world through virtual means. This method allows students to follow a range of educational programs in IP at their own pace and in their own space.

NIPMO has entered into a service level agreement with WIPO for the implementation of a Technology and Innovation Support Centre (TISC) initiative. Members of TISC host institutions are provided scholarships to enrol for WIPO Academy distance learning courses as indicated in Table 3.

Table 3: WIPO Distance Learning Courses (TISC Agreement)

Code	Description	Duration	Cost
Basic Courses			
DL001	Primer on Intellectual Property	3 hours	Free
DL101	General course on Intellectual Property	55 Hours	Free
Intermediate			
DL201	Copyright and Related Rights	120 Hours	Sponsored
DL203	Intellectual Property, Traditional Knowledge and Cultural Expressions	70 Hours	Sponsored
DL301	Patents	120 Hours	Sponsored
DL302	Trademarks, Industrial Designs and Geographical indicators	120 Hours	Sponsored
Advanced			
DL317	Arbitration and Mediation Procedures under WIPO Rules	60 Hours	Sponsored
DL318	Patent Information Search	120 Hours	Sponsored
DL320	Basics of Patent Drafting	120 Hours	Sponsored
DL450	Intellectual Property Management	120 Hours	Sponsored

4.3.2 Webinars

Online professional development courses have been identified through the Needs Analysis report of April 2014 as another mechanism of training. There are professional associations offering online professional development courses designed especially for those in the TT field, from TT through to senior professionals.

NIPMO had previously engaged with AUTM for web based seminars focusing on the following topics:

- Negotiation of License Agreements,

- Market Research: Information Sources and Approaches to Find Customers, and
- Office Operations: Budgets and Royalty Tracking.

Furthermore the Needs Analysis Survey (conducted in 2014) identified the following topics of interest:

- Benchmarking;
- IP Management, Marketing and Commercialisation
- Industry Linkages; and
- IP Valuation.

4.4. The pros and cons of the proposed IP management capacity development strategy

In summary, the chosen IP management capacity development strategy by NIPMO focuses on three levels one as indicated above. This approach aims to cover some of the three important areas in training and development, i.e. formal qualifications, informal qualifications and online/distant learning. The pros and cons of the interventions are summarised on Table 4:

Table 4: Training Pros and Cons

TYPE OF TRAINING	PROS	CONS
Level A: Curriculum development and certification	<ul style="list-style-type: none"> ▪ A formal qualification leading to professionalization of technology transfer. ▪ Course content is detailed and the learning is intense- South African Qualifications Authority accredited. ▪ Direct access to lectures and other learning resources. 	<ul style="list-style-type: none"> ▪ Trainee absent from work at times to attend class. ▪ Training might be costly. ▪ The course content might not be aligned with the institution's needs.
Level B: Online courses/web based seminars	<ul style="list-style-type: none"> ▪ Flexible learning schedule. ▪ Trainee can be situated anywhere and may not necessarily need time off work. 	<ul style="list-style-type: none"> ▪ The webinars may be after hours due to time difference with other countries e.g. United States ▪ Lack of direct access to lectures.
Level C: Short learning courses	<ul style="list-style-type: none"> ▪ Trainees absent from work for a short period of time. ▪ Trainees can learn a sufficient amount of relevant topics in a short space of time. 	<ul style="list-style-type: none"> ▪ Knowledgeable service providers are costly. ▪ Time may not be sufficient to deliver the intended message.

5. Partnerships for practical learning (internships)

In order to fast track required skills in the TT area, local and international internship, secondment programmes for practical training and mentoring at various international and local private and public sector organisations are required. Practitioner in residence programmes could range between two (2) to five (5) weeks.

Other avenues to be considered that offer residence in training include the National Institute of Health (NIH) OTT in the United States of America which has mentoring opportunities available to scientists, managers and other qualified personnel with

background in the fields of law, business, or life sciences. The goal of this programme is to enable candidates to combine their legal, business, or life science background with training and experience in the TT field. Candidates are assigned tasks in IP Basics, International TT & Global Health Issues, and Introduction to Licensing and Exposure to Negotiation Practices, Marketing of Technology, Technology Assessment, Monitoring of Technology Development, and TT Policy. Previous programmes were implemented with ISIS Pty, the TT company of Oxford University in the United Kingdom and WaikatoLink, the TT and commercialisation arm of the University of Waikato in New Zealand.

Local institutions that have long been in the TT space will be encouraged to offer practical training to TT professionals and host them where necessary.

6. Creating an OTT Library

NIPMO is also looking at building TT related library resources. A set of TT library books intended to enable NIPMO with provision of guidance and informed advice to institutions on OTT operational issues have been identified for procurement.

The TT library book series is deemed to offer topic-specific reports covering the most critical challenges facing TT professionals. The set of TT library have been identified for case studies, best practices, expert guidance, and how-to strategies in eight critical areas of TT. The book titles and their objectives are indicated in Table 5.

Table 5: Potential OTT library

BOOK TITLE	OBJECTIVE
1. IP Marketing Strategies and Tactics	Contains proven strategies that will help OTTs market their IP more effectively to corporations and investors and bring in more patent-worthy research.
2. Legal Issues and Strategies	Gives guidance that will help OTTs avoid roadblocks, patent and licensing disputes, and regulatory barriers.
3. Performance Improvement, Efficiency, and Staffing Strategies	Increase the flow of innovations and invention disclosures by implementing program management strategies that will boost the overall performance of TT staff and the OTT.
4. Portfolio Management Strategies	Offers creative approaches for streamlining the commercialisation process, triaging and prioritising of IP.
5. Faculty Outreach and Education	Education and outreach strategies that can potentially enhance the OTTs relationships with researchers and increase the flow of innovations within their program.
6. Early-Stage Funding Strategies	Creative gap funding ideas needed to move promising technologies out of the lab and on a path to the commercial market.
7. Contracting and Negotiating Strategies	Strengthen licensing, royalty, start-up, and partnership agreements.
8. Start-up Strategies	Contains strategies of technology managers who've been through the start-up process — their best practice recommendations as well as their blunders.

Annexure A outlines the Strategy Implementation Plan.

Please do not hesitate to contact NIPMO (info@nipmo.org.za; 012 844 0222) should you have any questions with regards to any matter in this strategy.



DR KERRY FAUL

HEAD: NIPMO

DATE: 23 FEBRUARY 2016

Annexure A

INTELLECTUAL PROPERTY AND TECHNOLOGY TRANSFER CAPACITY DEVELOPMENT STRATEGY IMPLEMENTATION PLAN

2016-2020

This implementation plan outlines the NIPMO interventions to ensure that individuals within the OTTs are provided with opportunities to acquire the necessary skills to enable them to effectively **identify, protect, manage** and **commercialise** IP.

Skills requirements as outlined in the Capacity Development Strategy

Table 1: Skills requirement

CATEGORY	FUNCTION	POTENTIAL CAPACITY DEVELOPMENT INTERVENTION
Advocacy and Awareness	<ul style="list-style-type: none"> ▪ Internal and external marketing of the OTT ▪ Awareness of institutional IP policies and IPR Act ▪ IP Scouting 	<ul style="list-style-type: none"> ▪ <i>IP Wise</i>[™] ▪ Webinars, ▪ Presentations
IP Management	<ul style="list-style-type: none"> ▪ Screening invention disclosures ▪ IP analysis including Freedom To Operate (FTO) searches ▪ Coordinating patent specification information packs between researchers and patent attorneys ▪ Coordinating patent filings ▪ Managing the patent portfolio ▪ Conducting IP Audits ▪ Drafting IP strategies for the IP portfolio ▪ Managing all TT related agreements 	<ul style="list-style-type: none"> ▪ <i>IP Wise</i>[™] ▪ Webinars ▪ Courses¹⁰ ▪ Formal training programs¹¹ ▪ Workshops ▪ Seminars
Commercialisation	<ul style="list-style-type: none"> ▪ Liaising with industry on OTT IP portfolio ▪ Sourcing potential licensees ▪ Negotiating license agreements ▪ Crafting heads of agreements for licenses ▪ Managing spin-outs ▪ Collecting royalties from licensees ▪ Business plans for IP with spin-out potential ▪ Analysing the markets for technologies 	<ul style="list-style-type: none"> ▪ Webinars ▪ Workshops¹² ▪ Short Courses¹³ ▪ Seminars
Support for Technology development	<ul style="list-style-type: none"> ▪ Technical analysis of invention disclosures ▪ Technology evaluation and assessment of IP for technical readiness levels ▪ Project Management ▪ Sourcing funding for the technology 	<ul style="list-style-type: none"> ▪ Residence in training programs¹⁴ ▪ Workshops ▪ Short Courses

¹⁰ WIPO Academy and SARIMA

¹¹ UNISA IP Chair Short Learning Program

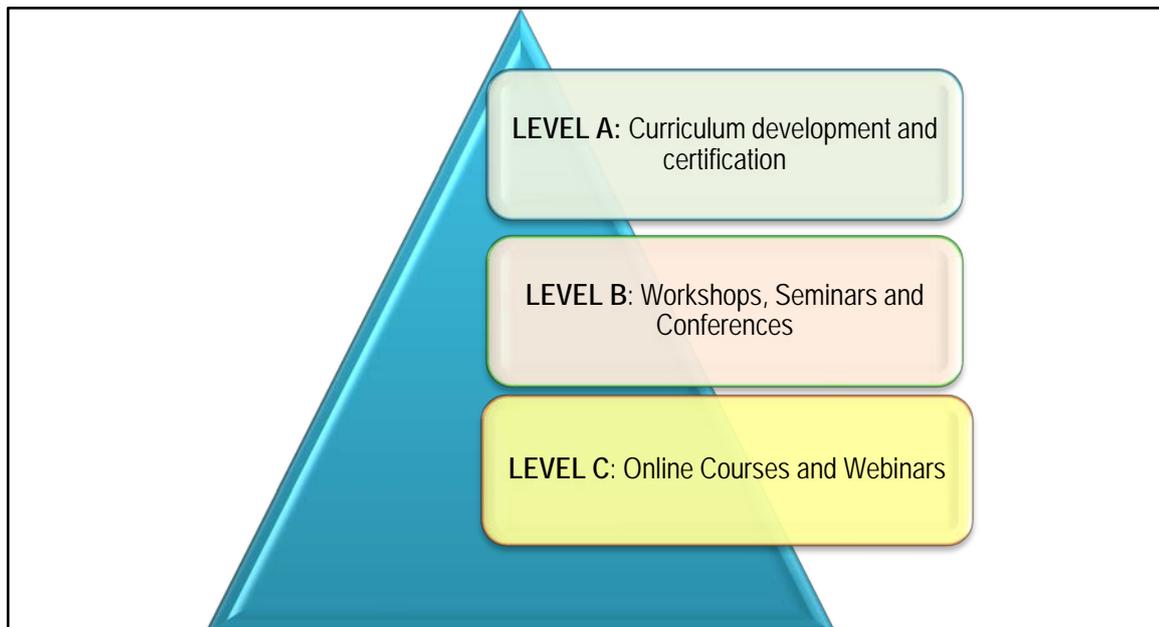
¹² LES/SARIMA/AUTM etc.

¹³ LES/SARIMA/AUTM etc.

¹⁴ Local and International

Capacity development interventions are structured according to three levels as follows:

- iv. Level A: Professional Development (Formal Qualifications - Curriculum Development and Certification).
- v. Level B: Workshops, Seminars, Conferences and Residence in training programs
- vi. Level C: Online Courses and Web based seminars.



Level A: Curriculum Development and Certification

Intervention	Programmes	NIPMO Action	Individuals to be supported per annum	Cost
NIPMO-UNISA IP Chair	Advanced Short Learning Program on IP Management and Innovation	NIPMO support for OTT officials	10	R6000 per person
	Post Graduate Diploma on IP Management ¹⁵	NIPMO support for OTT officials	5	To be determined
Certified Licensing Professionals	Certified Licensing Professionals ¹⁶	Collaboration with Licensing Executives Society for CLP examination	3	To be determined
Association for Technology Transfer Professionals	Registered Technology Transfer Professionals ¹⁷	Collaboration with Southern African Research and Innovation Managers Association for RTTP examination	3	To be determined
Candidate Patent Attorneys Development Program	Candidate Patent Attorneys Development Program ¹⁸	Collaboration with Technology innovation Agency and the Department of Trade and Industry	2	To be determined
Candidate Patent Agents Development Programme	Candidate Patent Agents Development Programme ¹⁹	Collaboration with Technology innovation Agency and the Department of Trade and Industry	2	To be determined
Curriculum Development	Incorporation of IP into the Basic Education curriculum ²⁰	Collaboration with CIPC and Department of Basic Education	N/A	N/A

¹⁵ To be implemented with effect from 2018

¹⁶ To be implemented with effect from 2018

¹⁷ To be implemented with effect from 2018

¹⁸ To be implemented with effect from 2018

¹⁹ To be implemented with effect from 2018

Level B - Workshops, Seminars and Conference

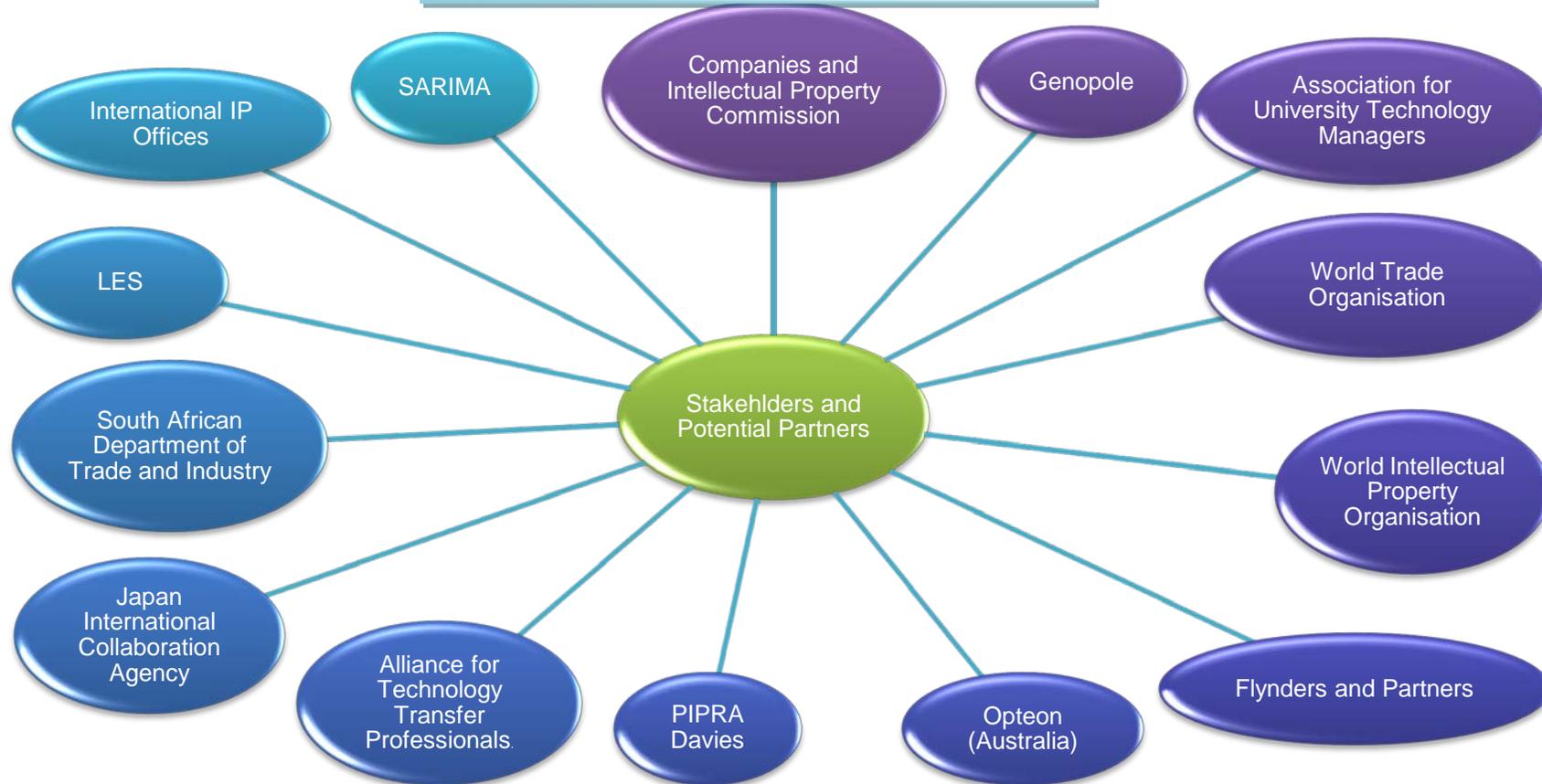
Intervention	Programmes	NIPMO Action	Individuals per annum	Cost/annum
Advocacy and Awareness	<i>IP Wise</i> TM	University/Science Council Focus (Information Sharing Sessions, Seminars, Training Workshops, Practice Notes, Guidelines)	500	Budget R1m
		Government Department Focus (Information Sharing Sessions)		
		SMMEs Focus (Information Sharing Sessions)		
	Legal Fraternity (Information Sharing Sessions, Practice Notes, Guidelines)			
	World IP Day	Awareness Workshops, Exhibitions, (Information Sharing Sessions)		
Workshops	Technology Transfer related workshop	Collaboration with an International Organisation	1 workshop per annum -target 50 individuals	R500k
	TISC related workshop	Collaboration with WIPO	1 workshop per annum -target 50 individuals	R150 k
WIPO Summer School	Summer School on IP&TT	Collaboration with WIPO/CIPC and a tertiary institution	1 summer school per annum -target 50 individuals ⁰	R500 k
Residence in training Programs	Local and/or International OTTs	Collaboration with interested parties for hosting of TT professionals	To be determined	To be determined

²⁰ To be implemented with effect from 2018

Level C - Online Courses and Web Based Seminars

Intervention	Programmes	NIPMO Action	Individuals per annum	Cost
World Intellectual Property Organisation (WIPO) Distance Learning Courses (Through the Technology and Innovation Support Centre (TISC) Initiative)	DL101 - General Course on Intellectual Property	NIPMO/CIPC Agreement with WIPO for Scholarships - TISC host institutions	50	WIPO TISC Scholarship
	DL201 - Copyright and Related Rights			
	DL203 - Intellectual Property, Traditional Knowledge and Traditional Cultural Expressions			
	DL301 - Patents			
	DL302 - Trademarks, Industrial Designs and Geographical Indications			
	DL318 - Patent Information Search			
	DL320 - Basics of Patent Drafting			
DL450 - Intellectual Property Management				
Web based seminars	Freely available Webinars	Identification of Webinars	2	R0

Stakeholders and Potential Partners



Please do not hesitate to contact NIPMO (info@nipmo.org.za; 012 844 0222) should you have any questions with regards to any matter in this capacity development implementation plan.

A handwritten signature in black ink, appearing to read 'Kerry Faul', with a stylized flourish.

DR KERRY FAUL

HEAD: NIPMO

DATE: 23 FEBRUARY 2016