



REPUBLIC OF KENYA



COMMERCIALISATION GUIDELINES TOOLKIT

Kenya National Innovation Agency

Executive Summary

These guidelines on strengthening commercialisation at Universities, TVET's and research institutes has been prepared in the framework of the OACPS R&I Policy Support Facility (PSF). The purpose of these guidelines is to address the challenges that face technology transfer and commercialisation in Kenya to enable the country to get good returns from its investments in R&D activities.

The challenges identified are three levels – National, Institutional, and Individual levels. At the national level, the challenges facing commercialisation include lack of the following: national innovation and commercialisation policy, national innovation fund, national commercialisation strategy, national IP management policy, and a framework for academia-industry collaboration. At the institutional level, the challenges include ineffective and inadequately resourced TTOs, lack of institutional commercialisation strategies, ineffective implementation of IP policies, inadequate focus by senior management on commercialisation, low level of IP applications and grants, low funding of commercialisation, and lack of clarity on how universities can establish and manage spinoffs. At the researchers (individual)' levels, the key challenges include low IP awareness and skills, low level of IP training and education, limited support for IP protection and commercialisation, lack of adequate incentives for IP protection and commercialisation.

These guidelines provide suggestions and recommendations on how these challenges can be addressed. At the national level, the guidelines recommend putting in place the various policies that are lacking. However, it is also recognised that policy formulation is long-term. Therefore, the guidelines also make suggestions on the interventions that can be made in the short-term under the leadership KeNIA to promote commercialisation. Most of the commercialisation challenges at the institutional and researchers' levels can be addressed in the short-term, and these become useful entry points for interventions by KeNIA in close collaboration with universities and research institutes as well as other stakeholders.

The guidelines have specified responsibilities of KeNIA, Senior Managers at universities and research institutes, managers of TTOs and individual researchers in strengthening commercialisation.

1. Glossary

A list of terms and definitions related to the guideline.

Concept	Definition
Assignment	An agreement by the holder of intellectual property rights for the transfer of title and interest in intellectual property to another party.
Commercialisation	The process by which any Intellectual Property assets may be adapted or used for any purpose that may provide any benefit to society or commercial use on reasonable terms. It includes assignment, licensing, and establishment of spin-offs to offer the Intellectual Property as a product or service.
Confidential Information	Any IP, information, or data of a confidential nature, including all oral and visual information or data, and all information or data recorded in writing or in any other medium or by any other method, and all IP, information and data which university is under obligation, whether contractual or otherwise, not to divulge.
Copyright	An original work of authorship which has been fixed in any tangible medium of expression from which it can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device, such as books, articles, journals, software, computer programs, musical works, dramatic works, videos,

	multimedia products, sound recordings, paintings, pictorial, sculpture or graphical works.
Creator/Inventor	Any person, who creates, conceives, reduces to practice, authors, or otherwise makes a substantive intellectual contribution to the creation of IP and who meets the definition of “inventor” as implied in Ghana’s Patent Act of 2003 or the definition of “author” as generally applied in Copyright Law.
Equity	Shares of stock or securities including, but not limited to, stock options, warrants or any other rights to purchase stock or securities. For the purpose of this guideline, equity means shares owned by the university and its Inventors in joint venture companies or other entities arising from commercialisation of the university’s IP rights.
Gross Revenues	All income received by the university arising from commercialisation of IP rights
Industrial Design	Industrial design refers to the right granted to protect the original, ornamental and non-functional features of a product that result from design activity. The right concerns merely the appearance (the ‘design’) of a product, not the product itself. An industrial design has a term of protection of five years. It can be renewed for two consecutive periods of five years.
Innovation	An idea that has been transformed into practical reality. This means doing something new that improves a product, process, or service. Many innovations can be protected through intellectual property rights.

<p>Innovator</p>	<p>A person who transforms ideas into practical reality in the form of products, process or service.</p>
<p>Intellectual Property</p>	<p>All outputs of creative endeavour in any field for which proprietary rights may be obtained or enforced pursuant to any law, including the laws of Ghana, and includes, but is not limited to: Inventions (whether patentable or not), all forms of copyrighted works, designs (whether registered or unregistered), patents, new plant varieties, traditional knowledge, trademarks, know-how, trade secrets, domain names, information, data, discoveries, mathematical formulae, specifications, diagrams, expertise, techniques, research results, computer software, programming code, algorithms, compositions of matter and devices, techniques, processes, procedures, systems, formulations, databases and compilations of information, laboratory notebooks, business and research methods, the name of the UNIVERSITY, badge and other marks associated with the university, Tangible Research Property, and such other property as may be specified by the university in writing.</p>
<p>Invention</p>	<p>The creation of new, useful, and non-obvious ideas and/or their reduction to practice that result in, but are not limited to, new products, devices, processes, and/or methods of producing new and/or useful industrial operations and materials, any article useful in trade or any composition of matter that is industrially useful or that has commercial potential. In order for an invention to be patentable, it must be novel, non-obvious and industrially applicable. All inventions are innovations.</p>

Invention Disclosure	The written submission to the Authorized Office such as Intellectual Property Office (IPO) on the standard or prescribed invention or innovation disclosure forms available from IPO, of a written description of any Invention that an Innovator claims he or she has made.
Inventor	A person who discovers, invents, develops, designs, or breeds
Know-how	Any methods, techniques, processes, discoveries, inventions, innovations, tacit processes, specifications, recipes, formulae, designs, plans, documentation, drawings, data and other technical information and actual human artistic or technical skills derived from experience in working a certain art or technology.
Material Transfer Agreement	A contract covering transfer of physical possession and use of tangible research material into or out of the university.
Net Revenue	Gross revenue received less expenses incurred in protecting or promoting or commercializing the innovation or invention.
Non-Disclosure Agreement	An agreement or section of an agreement that prevents parties to the agreement releasing knowledge or information without the other's permission.
Patent	An exclusive right granted for an invention which provides the inventor with the exclusive right to prevent others from possessing, using, selling, manufacturing and importing the patented invention or offering to do any of these things within a definite geographical area. In Kenya, a patent is granted by the Kenya Industrial

	Property Institute for a period of 20 years from the filing date of application.
Plant Varieties	Comprise of given genotype or combination of genotypes distinguished from any other plant groupings by at least one characteristic. To be protected as intellectual property, the plant varieties must be new, distinct, uniform or stable.
Publications	Books, textbooks, journal articles, booklets, bulletins, circulars, pamphlets, reports, information releases, exhibits, demonstrations, and other scholarly or popular writings regardless of medium.
Royalties	Revenue received by university from a third party that is exploiting university IP rights through licensing agreement.
Start-ups	These are companies created based on innovations developed by people outside universities and research institutes
Spinoff	These are companies established based on research results from a university and research organisation by the people within universities.
Tangible Research Property	Research results that are in a tangible form and have a physical embodiment. Examples of tangible research property include cell lines, software, devices, compositions of matter, biological materials, engineering drawings, integrated circuit chips, prototype devices, circuit diagrams, and equipment irrespective of whether or not protectable under any intellectual

	<p>property regime. Tangible research property may be distributed without securing IP protection by using some form of contractual agreement, such as formal contract, loan agreement, letter agreement, or user license.</p>
<p>Trademark</p>	<p>Any word, phrase, logo, name, symbol, device, sign or any combination thereof, used by a person or which a person has a bona fide intention to use in commerce and uses or applies to register, to identify and distinguish his goods from those of others which includes the container of the products or the packaging.</p>
<p>Technology transfer</p>	<p>This is the process to converting scientific findings into useful products or services to the society. It may also mean transfer of knowhow, innovation, and skills from the owners to the users</p>
<p>Trade Secret</p>	<p>Any device or confidential data, information or compilations used in research, business, commerce, and industry which is not generally known or accessible and confers competitive advantage on one having the right to use it. The information has commercial value because it is secret or confidential. Trade secret protection requires the owner to take reasonable steps to protect the secret such as limiting access to the secret. Trade secret may last indefinitely but will be lost when the information becomes generally known. No filing or registration is required for trade secret protection.</p>
<p>Traditional Knowledge or Indigenous Knowledge</p>	<p>Refers to the knowledge encompassing a wide variety of areas held by traditional, indigenous, or local groups or communities or knowledge acquired in a non-</p>

	systematic way which has significance and relevance not only to its holders but also to the rest of humanity.
Utility Model	An invention that is new and industrially applicable and is usually sought for technically less complex inventions or for inventions that have a short commercial life and normally do not meet the patentability criteria. A utility model has a term of protection of seven years which cannot be renewed.

Introduction

A brief overview of the purpose of the guideline and what it contains.

These guidelines focus on addressing challenges that face technology transfer and commercialisation at Kenyan universities and research institutes. Kenya deserves a better return on investment in R&D activities. Research outputs not taken further down the pipeline to production happen too frequently in Kenya. Therefore, Kenyan universities, research institutes and businesses are missing out on opportunities to commercialize Kenyan research in ways that benefit the economy and address societal challenges. Links between innovation, economic growth and productivity being globally documented, evidence reveals that science and innovation are receiving greater policy attention across countries globally. All major theories and all empirical analyses of economic development treat innovation as the key explanatory factor in growth. Hence, it is important that Kenya attains an innovation support framework that is suitable for the changing needs of universities, research and industry which is accessible, cost-effective, visible and well-coordinated.

Alignment of action plan to national priorities with focused investment in sectors (Agriculture, Micro, Small and Medium Enterprises, Housing and Settlement, Healthcare, and Digital Superhighway and Creative Economy) where Kenya can build scale and have a real impact is required. The increase in the rate of commercialisation of intellectual property at universities and research globally has important performance and policy implications. Universities and research must

play a bigger role in the economy, by increasing collaboration with industry to develop the next generation of Kenyan product.

These guidelines lay out a comprehensive set of reforms to boost collaboration between universities and industry and to drive commercial returns. This will be achieved through new initiatives, complimented by Government's support which will act as catalysts for change. It will also be driven by changes within the current systems to ensure that incentives and indicators are all appropriately aligned.

Best practices

Recommendations and tips for using the tools in the guideline effectively and efficiently.

National

For the support of innovation commercialisation at universities and research institutes the following initiatives need to be undertaken at the national level;

Development of National Innovation Commercialisation Policy and Strategy

The STI Act 2013 gives KeNIA the responsibility to develop a national innovation commercialisation policy. Thus, KeNIA in collaboration with universities, research institutes and other relevant stakeholders, will initiate the development of a National Innovation Commercialisation Policy and Strategy to provide a framework for the development of the Kenyan Innovation Ecosystem. The policy will cover amongst other:

- (a) provision of funding mechanisms for technology transfer and commercialisation.
- (b) support to the growth of venture capital industry.
- (c) enhancement of access to government procurement by innovators, and
- (d) enhancement of access to relevant information by innovators.

Development of National Intellectual Property Policy

The three STI agencies (NACOSTI, NRF, and KeNIA) in collaboration with Kenya Industrial Property Institute, should mobilize resources to update the existing draft National IP Policy and finalize its development. The policy should, amongst other:

- a.** Make it mandatory for universities, research institutes and TVETs to have an institutional intellectual property policy.

- b.** Provide support to researchers, innovators and inventors with IP related protection fees.
- c.** Make it mandatory that innovation arising from government funded projects must be protected, and those with commercial potential to be commercialized by universities and research institutes, failing which to be taken up by KeNIA on behalf of the government.
- d.** All innovations generated by the universities and research institutes must be reported annually to Kenya National Innovation Agency.

Ensure Coordination of Agencies Responsible for Innovation and Commercialisation

- a.** The innovation policy and strategy is supposed to give a clear framework for effective coordination of all agencies responsible for innovation (Kenya National Innovation Agency-KeNIA, National Research Fund-NRF and National Commission for Science Technology and Innovation -NACoSTI) in Kenya.
- b.** The planned National Research priorities (2022-2026) is meant to provide for coordination mechanism for funded research priorities as well as commercialisation of output in a coordinated manner to ensure maximum impact to the priority sectors.

Institutional

Institutional Framework for the establishment of Technology Transfer and Commercialisation offices

The framework for technology transfer and commercialisation guidelines should focus on Technology Transfer Offices, by providing clarity and direction on matters as indicated below:

- A.** Legal requirements for their establishment

Mandatory TTO with IP Policy

- i.** The Commission for University Education is supposed to consider reviewing its minimum requirements for registrations and functioning of universities to include presence TTO and IP policies.

- ii. NACOSTI is supposed to consider reviewing its minimum requirements for registrations and functioning of research institutes to include TTO and IP policies.

B. Mandate

- i. TTOs should be Mission oriented that is provide support to universities and research institutes with skills of effective technology transfer and knowledge, thereby contributing towards socio economic development of the country.
- ii. TTOs should be Income generating units so as to generate additional revenue to supplement grants from the government and other donors. Generated revenue to be distributed in accordance with existing IP policy.

C. Functions

With dual mandates, TTOs are expected to pursue both revenue generating and non-revenue generating functions. The actual function will vary from one organisation to another, taking into consideration unique contexts. Functions of TTO's may include the following:

- i. TTOs to spearhead the development and implementation of the IP policy.
- ii. TTOs are supposed to manage IP disclosures, protection process where necessary, drafting of IP protection applications, filing for protection, management of renewals and maintenance thereof.
- iii. TTOs need to be capacitated to facilitate development and implementing of a strategy for commercialisation and technology transfer, as well as ensuring transparent revenue sharing model as guided by the existing IP policy.
- iv. TTOs are supposed to develop and implement an IP training plan, first for staff working at TTO's and thereafter to include the research community.
- v. TTOs need to develop and implement an IP outreach programme to increase IP awareness amongst the research community.
- vi. TTOs are supposed to market the capacity of the university and research institutes for consultancy services to manage projects where required.

- vii. TTOs are supposed to market the capacity of the university and research institutes to provide specialized laboratory services to industry and the public.
- viii. TTOs can also Offer a range of integrated guidance and support services for innovators and researchers projects which ought to include commercialisation services, IPR services, gap funding applications, access to testing, accreditation and incubation facilities, and access to private funding, angel investors and crowd funding.
- ix. TTOs are supposed to be a point of contact for industry partners, guiding internal and external marketing, forming networks and partnerships for methodically advertising and marketing technologies.

D. Performance indicators for Technology Transfer Office

The commercialisation guidelines proposes the following performance indicators for Technology Transfer Offices

- i. Number of patent applications filed
- ii. Number of granted applications
- iii. Number of technologies licensed
- iv. Number of spinoffs established
- v. Number of staff trained
- vi. Percentage increase in IP awareness
- vii. Number of consultancy projects brokered
- viii. Number of laboratory services brokered
- ix. Level of awareness of research community on IP policy
- x. Amount of revenue generated
- xi. Placement with the institutions' structure
- xii. Training of commercialisation professionals

G. Career progression guidelines for commercialisation professionals

KeNIA, in collaboration with universities and research institutes, will seek to develop a generic career progression guideline for technology transfer professionals.

H. Minimum staffing and skills of TTOs

- i. TTOs should be headed by a Director who is to be appointed from amongst the lecturers/researchers as other heads and directors of

academic departments are appointed. Such person would initially spend 20–30% of his/her time working at the TTO and 70–80% teaching and research. Such person would be entitled to allowances same as heads of departments and directors and should be a member of senate. Some universities in Kenya are already practicing this.

- ii. TTOs will require an IP Management Officer ,a person with good training in intellectual property rights and capable of undertaking functions related to IP disclosure and protection.
- iii. TTOs This will require staffing with a Commercialisation Officer , a person with in-depth IP knowledge and experience in translating innovation into products and businesses.
- iv. The IP Management Officer and Commercialisation Officer should be full-time officers .

I. Job Description of commercialisation professionals

The persons holding the portfolio of a commercialisation officer should have the capacity to :

- i. Facilitate collaboration between academia and industry.
- ii. Interact with academic and industry partners to find solutions that meet both needs.
- iii. Forge successful relationships with academics, faculty members' industry players, investors, entrepreneurs and legal professional and to facilitate creation of relations between connections.
- iv. Act as an alliance manager for maintaining collaborations and facilitating efficient exchange of technology and ideas between the two parties.
- v. Assess commercial potential of innovation
- vi. Advertise and promote the scientific invention to the public for success in commercialisation.
- vii. Conduct competitive analysis to understand the value or advantage of an innovation over existing technologies

J. Virtual Technology Transfer Offices

- i. It is appreciated that given the different levels of development of the universities and research institutes, not all are able to put a place where one can find all the skills required for a fully functional TTO. This is because the

current level of patenting of most universities may not make it cost-effective to establish and manage fully functional TTOs. Therefore, there is need for such institutes to be supported to access skills externally as and when needs arise.

- ii. The Kenya National Innovation Agency will establish a data bank of existing IP and Commercialisation experts (IP drafting, IP valuation, IP auditing, IP licensing, IP marketing, Technology brokerage) in the country and within the region and sign with them service agreements. These experts can be made accessible to universities and research institute at a fee for technology transfer services.

Training of professionals for IP protection and commercialisation

- i. The Kenya National Innovation Agency will develop training programs for Managers for the purpose of developing future staff to fill the current gaps.
- ii. For such trainings to be affordable and easily accessible, KeNIA will establish a hybrid approach of physical and virtual academy to offer these training courses
- iii. For enhancement of the reputation of the trainings, KeNIA, in collaboration with global Association of Technology Transfer Managers and other partners will develop a certification for Technology Transfer Managers.
- iv. For the address of the low level of patent application conversion to grants, the Kenya National Innovation Agency in collaboration with other partners, including the WIPO to develop a training program on patent drafting and capacity building for TTO managers.

University Organogram with TTO placement

- i. University need to consolidate functions related to IP management, commercialisation, and technology transfer, irrespective of the name assign to it. The advantage of centralized functions is the undivided attention at institutional level, thereby cost-effectiveness in terms of resources.
- ii. To ensure uniformity university to ensure offices undertaking these functions should be named Technology Transfer Office.
- iii. To start off, IP management to be the minimum function for a Technology Transfer Office at a university. As time goes by, the TTOs to expand functions to other areas to strengthen capacity.

- iv. At the Universities ,the Office of the Deputy Vice Chancellor responsible for Research, innovation, outreach and extension services, will be the ideal reporting line for a TTO.
- v. At Research institutes ,the Office of Director responsible for innovation, outreach and extension services will be the ideal reporting line for a TTO.

Institutional Policies and Strategies for Technology Transfer and Commercialisation

The commercialisation guidelines provides a policy framework for technology transfer and commercialisation as follows :

- A. Innovation and commercialisation strategies/masterplans
 - i. KeNIA, in collaboration with other stakeholders, will develop a National Commercialisation Strategy focusing on universities, research institutes and TVETs.
 - ii. All universities, research institutes and TVETs will be required to develop and implement commercialisation strategies of which KeNIA will develop a methodology of support.
 - iii. Each university and research institute is encouraged to put in place a strategy/masterplan to provide for a coordinated and goal-oriented approach to commercialisation. The strategy will inform the various commercialisation efforts for departments, laboratories, and centres. For the process of developing such a strategy refer to the guidelines for the steps:
- B. Intellectual property policies,
NACOSTI, in collaboration with KeNIA, NRF and KIPI, is required to:
 - i. Provide support to develop or review existing IP Policies. Ensure adequate attention towards innovation commercialisation standardisation with minimal focus to individual acceptations, for distribution of uniform funding mechanism.
 - ii. Ensure that universities and research institute implement the benefit sharing mechanism as provided by policy.
 - iii. Support TVET to develop and implement IP policies.
 - iv. Support TTO Managers to ensure that newly developed IP policies have an implementation plan and budget. They are also required to prepare and

implement a plan for publicity of the IP policies. For the areas the IP policy is to cover refer to the guidelines.

C. Policy on screening of IP prior to publication.

To reduce possible loss of innovation and technologies from research projects and enhance the conversion ratio of research outputs into IP applications and grants:

- i. Universities are to include in research and/or IP policies the requirement of screening of publications and dissertations for technologies and innovations before being uploaded on virtual libraries.
- ii. The KeNIA National Innovation Agency, in collaboration with the Kenya Industrial Research and Development is required to develop a training program on technology mining and build capacity of TTO.
- iii. Universities to put in place a system of screening students' final year projects for commercial potential and supporting incubation. Part of the internal funding should be directed towards commercialisation.

Strengthening Public-Private Partnerships

PPP frameworks and structures

- i. KeNIA, in collaboration with universities, research institutes and other stakeholders is expected to develop a framework for academia-industry collaboration.
- ii. KeNIA, universities and the Kenya Industrial Research and Development Institute, is to develop a framework for improving MSMEs performance and productivity and to enhance the technical and managerial skills of employees of MSMEs through a consultative approach by university graduate students in collaboration with their supervisors.
- iii. KeNIA, in collaboration with NRF, universities, research institute and other strategic partners is required to develop and implement a framework for Technology Readiness Level, to assist in identifying technologies and innovations at universities and research institute to be supported with seed funds before being passed over to the private sector for investment.
- iv. KeNIA in collaboration with NRF, universities, and research institute will promote co-authorship of scientific publications between universities and industry to encourage long-lasting research collaborations.
- v. KeNIA in collaboration with other partners is to strive to create clusters to promote collaboration and encourages the establishment of shared

facilities such as clean rooms, incubation, testing and small-scale manufacturing plants.

- vi. KeNIA in collaboration with other stakeholders, will lobby for the creation of tax concessions to companies collaborating with universities and research institutes using local technologies and innovations.
- vii. KeNIA in collaboration with other stakeholders, will lobby for the setting up of industrial parks near universities and research institutes to promote staff interactions through the involvement of industry employees in academic programmes and regular visits by researchers to industry.
- viii. KeNIA and NRF will work with Universities Funding Board to implement a new funding criterion for universities and research institutes that include performance indicators such as number of applications and grants for intellectual property rights, number of start-ups and spinoffs, patent license income as well as number of prototypes developed and rolled out into the market.

B: Funding PPP for commercialisation of innovation

- i. The three agencies established by the STI Act (2013) – NACOSTI, NRF and the Kenya National Innovation Agency, will develop a R&D funding framework to ensure that at least 30% of the available R&D funds projects that involve industries as follows:
 - a. There will be Funding of MSc and PhD research programs that are industry-based, co-funded, and joint supervision by university academic and industry partner.
 - b. Technology transfer partnership projects involving industry, academic and graduate students will be Piloted.
 - c. Emphasis will be put on the uptake of commercialisable research outputs from previously funded projects.
 - d. Establishing and funding research consortia consisting of university-research institute and industry that require matching funding by government and industry. For example, two RI and two industries submitting a joint proposal under a competitive process, on projects initiated by industry partners. Associated IP commercialisation framework would be designed to incentivize industry to participate.

- ii. University and research institute are required to strive to set aside up to 30% of research budget on innovations commercialisation.
- iii. Researchers will strive to ensure that when preparing proposals for external research funding, that at least 30% of their budget should fund activities related to innovations commercialisation. Researchers should ensure, where relevant, include budget lines for protection of intellectual property and prototype development, when developing proposals for funding by international and regional institutes.

C: Enhancing industry access to academia innovations

Universities and research institutes, will be required on a yearly basis to generate information on innovation and submit the same to KeNIA. KeNIA will create a one-stop innovation platform where this information can be made accessible by local industries and the public.

D: Linking research to need of industry

- i. KeNIA, in collaboration with the NRF, Kenya Association of Manufacturers and the Kenya Private Sector Alliance, on an annual basis will undertake technology needs assessment to inform research programs of universities and research institutes in specific sectors.
- ii. Universities and Research Institutes are required to reorient research programs as follows:
 - a. Increase focus on industry needs, rather than blue-skies research.
 - b. Emphasis more on innovation than research, by creating significant links to universities, Research Institutes and industry.
 - c. Engage more in market needs requirement.
 - d. Emphasis on the establishment of technology start-up companies.

E: Industry access to specialized university laboratory resources

- i. Universities and research institutes are expected to make available to industries and SMEs existing facility and resources for product test and development at affordable rates.

- ii. Similarly, NACOSTI and NRF are expected to document specialized laboratory resources for use by industry and SMEs at reasonable fees for product test and development for commercialisation.

F: Performance indicators for government funded PPP projects

The key performance indicators for projects supported by government in collaboration with private and public sectors, to include:

- i. Revenue growth and export market development of project partner companies.
- ii. Employment growth in existing companies or in new companies that are created through university–industry partnerships.
- iii. New product launch stemming from project partnerships with industry stakeholders and or private/public sectors.
- iv. The total of new foreign investment secured by companies attributed to project partnerships.

G. University and Research Institutes commitment to promote Public Private Partnership

Top management of universities and research institutes are expected to commit themselves to the following to promote Public Private Partnership:

- i. Prioritize commercialisation and technology transfer, not only for the purpose of generating additional income to supplement the grant from the exchequer but also contributing to the realisation of their mandate of using research for economic development and thereby enhancing their relevance to the society.
- ii. To keenly follow the progress and implementation of developed commercialisation strategy and regularly demand to be informed on progress made. Mandatory reports on commercialisation progress should be reported to top management as each phased is achieved.
- iii. To invest in publicizing all achievements made and success stories related to IP management and commercialisation of innovations.
 - i. TTOs to constantly showcase Research and Development competency and innovation prospects between the university, research institutes and industry sectors.
 - ii. Escalate the profile-raising and awareness of successful business–industry partnerships and technology commercialisation from

research output, to motivate institutes to increase a forward-thinking innovation culture.

- iv. To set aside up to 30% of research budget on innovations commercialisation.
- v. To develop and implement an industry engagement strategy.
- vi. To set aside fund of IP protection in their annual budgets.

Individual

Promoting Commercialisation at the Researchers' Level

IP Awareness and Outreach Strategy

Enhanced IP awareness will increase innovation and creative activities, raise the number of applications of IP rights, improve on commercialisation of IP rights and strengthen enforcement of IP rights. Improved IP awareness amongst the decision makers at universities and research institutes i.e Heads of Departments, Deans, Directors, Deputy Vice Chancellors, and Vice Chancellor will enable them prioritize issues to do with intellectual property and commercialisation. Thus universities and research institutes are required to develop and implement an IP awareness outreach program to help raise the level of awareness of the research community. For the steps of developing IP Awareness and Outreach Strategy refer to the guidelines.

IP Training and Education

IP training and education is key to the realisation of capacity building programs. Therefore:

- i. KeNIA, in collaboration with KIPI and TTO managers will prepare short courses on IP that can be implemented at respective universities. Such courses will target students, lecturers, managers of laboratories, production units, and libraries.
- ii. Universities required to consider inclusion of Intellectual Property Education within the curricula.

Supporting Researchers on Commercialisation Issues

- i. TTOs are required to provide a mechanism of screening research proposals during their development, to identify potential intellectual property assets and provide specific support to the researcher for possible commercialisation implementation process.
- ii. TTOs are expected to estimate the commercial potential of innovation timeously, in order to decide on whether to register protection or not.

- iii. TTOs are required to engage the researchers throughout the commercialisation process.
- iv. Universities and research institutes are expected to review their promotion criteria to include IP generation, protection and commercialisation.
- v. Universities and research institutes to develop and implement a framework that encourages establishment of spin-off by researchers, scientists, and engineers that produce tangible outcomes.

Documenting and Publicizing Success Stories on Commercialisation

- i. TTOs are expected to strive to document and publicize milestone realized by individual researchers on commercialisation.
- ii. The Kenya National Innovation Agency will populate a database for documenting success stories on commercialisation, by interviewing researchers to capture experiences.

Incentives to Strengthen Academia-Industry Linkages

The following incentives are recommended to strengthen academia-industry linkages:

- i. Development and implementation of a consultancy policy that allows staff to consult with industry and private institutes.
- ii. The planned commercialisation strategy to include work integrated learning for both university and industry researchers alike.
- iii. Universities and Research Institutes are expected to review existing policies on sabbatical to accommodate time at the industry
- iv. Development of a strategy for mature researchers to be used to improve university-industry linkages.

2. Conclusion

A summary of the main points covered in the guideline, and any final recommendations or thoughts.

3. Additional resources

A list of additional resources, such as websites, books, or forums, that can be used to learn more about the guideline.

A commercialisation toolkit can be a valuable resource for businesses and organisations looking to bring their products or services to market. Here is an outline of what a typical commercialisation toolkit might include:

1. **Market analysis:** An overview of the target market for the product or service, including demographic information, purchasing habits, and competition.
2. **Business plan:** A comprehensive plan for how the product or service will be developed, marketed, and sold. This should include financial projections, marketing strategies, and a timeline for implementation.
3. **Intellectual property strategy:** A plan for protecting the company's proprietary technology, trademarks, and other intellectual property.
4. **Regulatory compliance:** Information on the regulatory requirements that must be met in order to bring the product or service to market, including any certifications or approvals that must be obtained.
5. **Sales and distribution strategy:** A plan for how the product or service will be sold, including the channels of distribution and the target customers.
6. **Marketing materials:** Marketing materials such as brochures, flyers, and videos that can be used to promote the product or service.
7. **Branding and positioning:** A strategy for establishing and promoting the brand, including a distinctive logo and tagline, and a plan for how the product or service will be positioned in the market.
8. **Customer support:** A plan for providing customer support, including a process for responding to customer inquiries, resolving customer complaints, and addressing technical issues.
9. **Ongoing market research:** A plan for ongoing market research to help the company stay informed about trends and customer needs, and to make informed decisions about future product development.

A commercialisation toolkit for a national government might include the following components:

1. **Policy framework:** An overview of the government's policies and regulations related to commercialisation, including tax incentives, funding opportunities, and intellectual property protection.
2. **Market analysis:** An analysis of the national and international markets for commercialisation, including a study of the competitive landscape and potential target customers.
3. **Business incubation and acceleration services:** Information on the government's business incubation and acceleration services, including mentorship programs, funding opportunities, and access to expert advice and resources.
4. **Technology transfer and commercialisation support:** Information on the government's technology transfer and commercialisation support, including assistance with patent protection, licensing agreements, and technology commercialisation.
5. **Industry clusters and sector initiatives:** Information on the government's initiatives to support specific industry clusters and sectors, including tax incentives, funding opportunities, and special programs.
6. **International trade and investment:** Information on the government's international trade and investment initiatives, including trade missions, investment promotion, and access to international markets.
7. **Infrastructure and support services:** Information on the government's infrastructure and support services, including access to research and development facilities, innovation hubs, and shared workspaces.
8. **Stakeholder engagement and outreach:** Information on the government's outreach and engagement efforts, including regular consultations with industry and academia, and opportunities for public-private partnerships.
9. **Evaluation and monitoring:** Information on the government's evaluation and monitoring processes, including metrics for measuring the success of commercialisation initiatives and opportunities for feedback from stakeholders.

