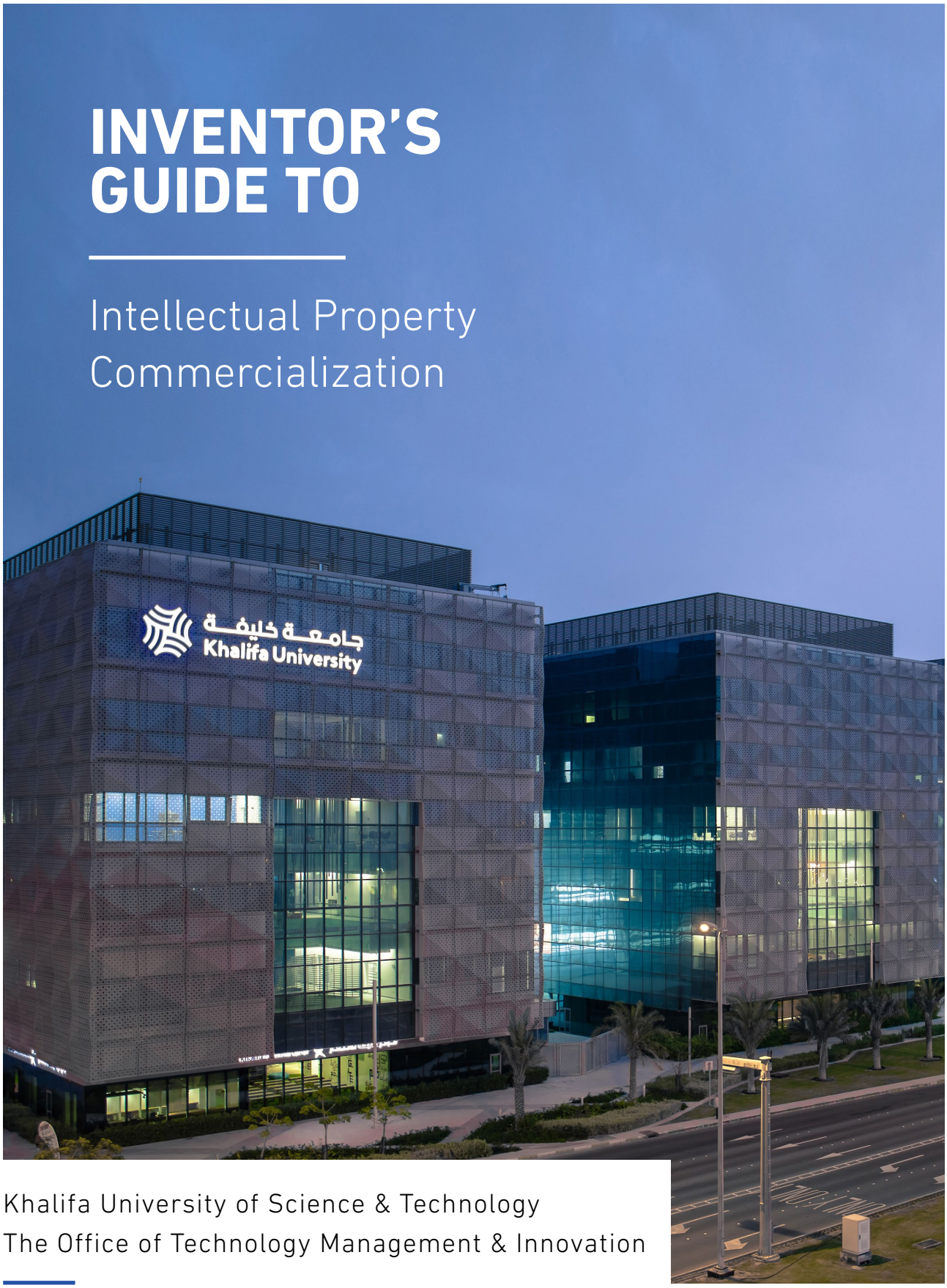
جامعة خليفة
Khalifa University

INVENTOR'S GUIDE TO

Intellectual Property Commercialization



Khalifa University of Science & Technology
The Office of Technology Management & Innovation

WE ACKNOWLEDGE TECHNOLOGY TRANSFER OFFICES OF THE UNIVERSITY OF MICHIGAN & MIT FOR USING SOME CONCEPTS AND STRUCTURES IN THEIR "INVENTOR'S GUIDE TO TECHNOLOGY TRANSFER"

ABOUT

The Office of Technology Management & Innovation is responsible for the protection, management and commercialization of the University's research discoveries. We work closely with faculty, researchers and students to identify transformational inventions and translate these inventions into viable business opportunities and commercial products through the formation of startups and/or technology licensing to industry partners.

We support the entrepreneurial research-driven innovation ecosystem in the University to actively contribute to UAE's knowledge-based economy.

VISION

To be a recognized leader for best practices in management and commercialization of intellectual property resulting from the university's scientific and academic research.

MISSION

To accelerate the commercialization of the university's research inventions and intellectual property to:

- achieve the widest public benefit,
- promote economic development in Abu Dhabi and UAE; and
- raise the visibility of the University as a pivot of innovation in science

Office of Technology Management & Innovation

Sas Al-Nakhl Campus
Building 5 – Level 2
Rooms: 228, 252 and 256

ip@ku.ac.ae

“NO MATTER HOW MANY BUILDINGS, FOUNDATIONS, SCHOOLS AND HOSPITALS WE RAISE, ALL THESE ARE MATERIAL ENTITIES. THE REAL SPIRIT BEHIND THE PROGRESS IS THE HUMAN SPIRIT, THE ABLE MAN WITH HIS INTELLECT AND CAPABILITIES.”

TABLE OF CONTENTS

This Inventor's Guide outlines the essential elements of translating research ideas and discoveries into commercial and business opportunities at Khalifa University of Science & Technology.

The Guide tries to answer most common questions that we typically receive from researchers. By answering these questions we hope to provide a practical overview of how an idea moves from the laboratory to the market. What are the steps? What are the considerations at each step.

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OVERVIEW

WHAT IS INTELLECTUAL PROPERTY COMMERCIALIZATION?

Academic and scientific research are important pillars at Khalifa University. The university shares and exchanges knowledge resulting from scientific research through different ways such as teaching, publication in scientific journals or presentation in technical conferences. In parallel, the university recognizes that scientific research can result in novel inventions and discoveries. These inventions and discoveries can be translated into valuable intellectual property that can be further developed and commercialized. Commercialization of intellectual property generated by research allows the university to maximize the value of research discoveries and inventions via creation of viable technologies and market products that benefits the public.

This can be achieved through different routes and methods and is dependent on many factors including on the nature of the invention, status of the technology and stage of the discovery... The commercialization of intellectual property is usually accomplished by licensing the technology or discovery to 1) a startup or 2) industry partner or 3) through further research collaboration. This Guide will address best practices that can be followed in any of the above mentioned routes to maximize the value of research discoveries in a seamless and effective manner.

WHY DO RESEARCHERS WANT TO COMMERCIALIZE THEIR INVENTIONS?

The reasons are unique to each researcher and may include:

- Making a positive impact on society
- Feeling a sense of personal fulfillment
- Achieving recognition and financial reward
- Generating additional funding
- Meeting the obligations of a research agreement/contract
- Attracting research sponsors
- Creating educational opportunities
- Entrepreneurs looking for starting new business

HOW IS INTELLECTUAL PROPERTY COMMERCIALIZED?

Intellectual property is typically commercialized through a third party; this third party can be an industry partner or a start-up. By way of a license, Khalifa University grants third parties use the university's intellectual property rights as claimed in a patent application or as represented in a copyright registration or in other forms of intellectual property. Without a license agreement the third party is prohibited from using university's intellectual property for any purpose.

WHO IS RESPONSIBLE FOR INTELLECTUAL PROPERTY COMMERCIALIZATION IN THE UNIVERSITY?

The Office of Technology Management & Innovation is responsible for protecting, managing and the commercialization activities of Khalifa University's Intellectual Property. The office manages the University's inventions, registration of patent applications, licensing, and business development opportunities. The office also tasked with establishing relevant agreements such as confidentiality, material transfer, inter-institutional and other agreements associated with research commercialization.

For clarification or questions, please contact the office at:
ip@ku.ac.ae

WHEN DO I CONTACT THE OFFICE OF TECHNOLOGY MANAGEMENT & INNOVATION?

We would like to encourage you to contact the office anytime throughout the progress of your research, even though there are the times or circumstances, as shown below were we typically receive queries:

- I have interesting discovery?
- Can I file a patent on my discovery?
- Is it ok to publish or present my invention?
- Can I talk to industry and external parties about my research?
- How can I send my research samples or data to an external party?
- I have an idea for a business plan for a start-up, what should I do?

PROCESS

STEPS TO COMMERCIALIZATION

The steps to commercialization begins with scientific or academic research activities and experiments during which observations and unexpected results occur.

This can be achieved by individual researcher or multiple researchers.

RESEARCH

INVENTION DISCLOSURE

ASSESSMENT

PROTECTION

LICENSING

- Start-up
- Industry

REVENUE

01

RESEARCH

A research discovery can be considered as invention if it is novel, useful and non-obvious. The office is tasked with helping to assess your invention once it is submitted.

02

INVENTION DISCLOSURE

Early contact with the Technology Management & Innovation Office (ip@ku.ac.ae) to discuss your invention is important. The office will begin the process that information be disclosed the invention in confidence by way of an Invention Disclosure Form. The form must be completed and signed by all inventors. Once the office receives the completed form it will be docketed in the university intellectual property database and assigned a reference number.

As an inventor, you are always advised to quote this reference number when communicating with the office.

03

ASSESSMENT

Once the completed invention disclosure form is received and acknowledge by the office, the submission is assigned to a licensing officer, who will immediately begin reviewing the content and will conduct a prior art search. The office also conducts a market assessment to determine the usefulness of the invention and its commercial potential.

The office will share the outcomes of this assessment with inventors which, in turn, will guide our strategy on the next steps. The time frame for an assessment is between 3 to 4 weeks.

04 PROTECTION

Once the commercialization potential and usefulness of the invention are confirmed, the office will determine the best strategy for protecting the invention. The action plan may be to pursue and encourage adoption and commercialization by a third party, such as a start-up or existing partner, or, in some cases, external funding for further research development. The office begins the process of protection with the filing of a patent application, either with the local patent office, or if appropriate, in with a foreign jurisdictional patent office. Once the patent application is filed inventors will be informed of the filing particulars such as the patent application number and priority date.

It must be noted that the patent process from filing to the issuance of a patent is long and very expensive. Our office will endeavor to keep inventors updated on the progress of filed patent applications. Other protection options the office might pursue include, but is not limited to copyright and trademark registrations.

05 LICENSING

With inventors' involvement and support, the office will develop commercialization strategies to enable development and adoption of the technology by the public. The commercialization efforts might entail development of a proof-of-concept, further research collaboration with other research institutes or industry partners, formation of a start-up, or licensing to existing industry.

The office will work closely with you to market the intellectual property; providing the right commercialization agreements, expertise, resources, and business networks in order to bring the intellectual property to market; Additionally, the office will share industry valuation to develop appropriate financial terms for the use of the intellectual property. In order for a start-up or industry to use the university's intellectual property, a license agreement is required.

06 REVENUE

Revenues received by the university from intellectual property licenses are distributed between inventors, departments, and the university as per the university's IP policy. The policy can be retrieved using the link below

https://cas.kustar.ac.ae/cas/login?service

HOW LONG DOES INTELLECTUAL PROPERTY COMMERCIALIZATION TAKE?

The process of protecting a technology and finding the right licensing partner may take months or years. There is no one size that fits all. The amount of time may depend on many factors, such as the development stage of the technology, the market for the technology, competing technologies, the amount of work needed to bring a new concept to "market-ready" status, as well as the resources and willingness of the licensees and the inventors.

HOW CAN THE RESEARCHER HELP IN THE COMMERCIALIZATION OF AN INTELLECTUAL PROPERTY?

Contact the Technology Management & Innovation Office at ip@ku.ac.ae if and when you believe you have a scientific or technical idea with potential research or commercial value.

Complete and submit the Invention Disclosure Form before publicly disclosing your invention or contacting a publisher with a manuscript.

- If a patent application has not been filed, avoid the risk of losing priority rights to an invention and possibly hindering the opportunity to market your invention by contacting our office before holding any discussions with individuals or entities outside the university we will provide you with a Non-Disclosure Agreement for the party receiving the information to sign before engaging in any discussion or exchanging information.
- On the Invention Disclosure Form, please include companies and contacts you believe might be interested in your intellectual property (IP) or who may have already contacted you about your invention.

Respond in a timely manner to the office's requests and emails as intellectual property prosecution and commercialization are time sensitive in nature and often requires an immediate response.

Keep the office informed of upcoming publications or interactions with companies related to your intellectual property.

CAN THE RESEARCHER PUBLISH THE RESULTS AND STILL PROTECT THE COMMERCIAL VALUE OF INTELLECTUAL PROPERTY?

Yes and no. Since patent rights are affected by these activities, you are encouraged to submit an Invention Disclosure form well ahead of any public disclosure. There are significant differences with countries as to how early publication affects a patent protection. Once an invention is publicly disclosed (published or presented in some form), an invention may have restricted or minimal patent protection.

Our Licensing Officer will be able to guide you on steps to take regarding any imminent or prior presentation, lecture, poster, abstract, website description, research proposal submission, dissertation/ master's thesis, publication, or other public presentation of the invention.

INTELLECTUAL PROPERTY
AGREEMENTS
PROTECTION & COMMERCIALIZATION

The university's mission is to conduct cutting-edge scientific research and disseminate knowledge resulting from research and academic activities. This is more effective when knowledge is delivered through the right channels not only to ensure the maximum use of the knowledge but also the appropriate use. Often the disseminated knowledge in itself comprises of intellectual property or can lead to generation of intellectual property.

This is why a researcher must protect potential intellectual property contained in any scientific knowledge that is disseminated or shared with external parties. This information can be shared in the form of discussions, documents, research samples, etc. Similarly, in the spirit of research collaboration and open innovation, a researcher might want to receive information with potential intellectual property from an external party such as a research institute, industry or hospital. In these cases, it is the responsibility of the researcher and the university to ensure the appropriate use of such information.

Agreements are the conduit to disseminate information/knowledge, while protecting potential intellectual property of any scientific knowledge. In all cases, researchers are always encouraged to consult with the Technology Management & Innovation Office to help with ensuring the appropriate agreement is in place to protect the information to be shared to prevent the undesired disclosure of any intellectual property.

PROPERTY FROM OTHERS IN MY RESEARCH?

Yes, but it is important to carefully document the date and conditions of use so that we can determine if this use may influence the commercialization potential of your subsequent research results. If you wish to obtain materials from outside collaborators, the university requires the use of an incoming Material Transfer Agreement (MTA). Please contact tmi-agreements@ku.ac.ae for more information on incoming MTAs.

WILL I BE ABLE TO SHARE MATERIAL, RESEARCH TOOLS OR INTELLECTUAL PROPERTY WITH OTHERS TO FURTHER THEIR RESEARCH?

Yes. As stated above, it is imperative to carefully document items that are to be shared with others and the conditions of use. If you wish to send materials to an outside collaborator, the university requires the use of an outgoing Material Transfer Agreement (MTA) for this purpose. It also may be necessary to have a Non-Disclosure Agreement (NDA) completed to protect your research results or intellectual property. Please contact tmi-agreements@ku.ac.ae for assistance in completing outgoing NDAs or MTAs.

WHAT TO DO IF I NEED TO SHARE MY RESEARCH DETAILS OR PROPOSALS WITH EXTERNAL PARTY?

Researchers are always encouraged to collaborate with external parties to attract research funds or further their scientific endeavors and research. This entails sharing documents, proposals or research results and presentations. In this case, researchers are advised always to highlight shared documents or emails with the word: CONFIDENTIAL. Please note however, this is not enough, and the researcher must ensure that a Non-Disclosure Agreement (NDA) is in place with the party receiving the research information. Contact tmi-agreements@ku.ac.ae to assist you with completing either an incoming or outgoing NDA.

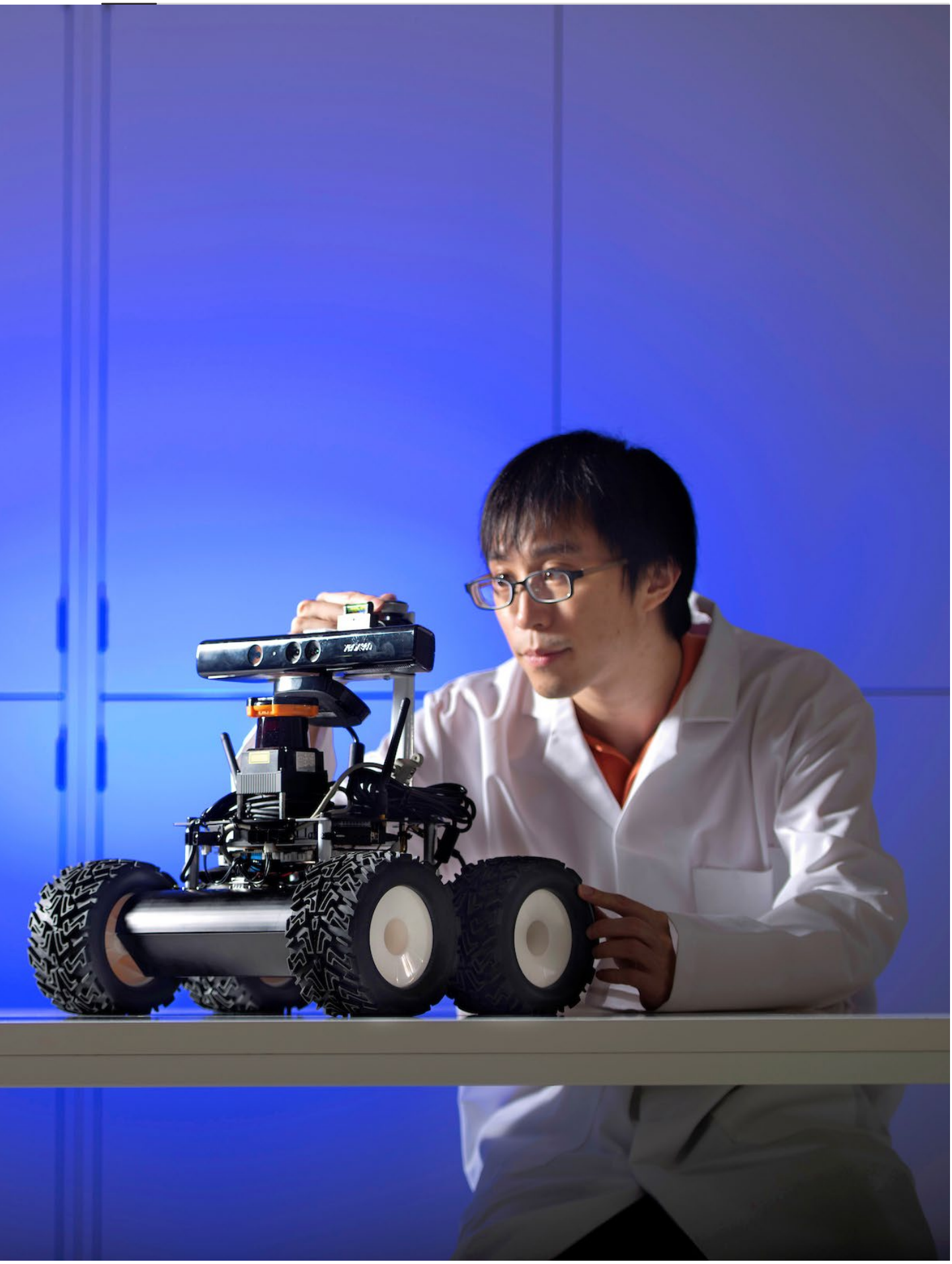
WHAT TO DO IF THE INTELLECTUAL PROPERTY IS DEVELOPED WITH ANOTHER UNIVERSITY?

In some cases, researchers would like to collaborate with other universities and research institutes. It is always advisable for researchers to approach the Technology Management & Innovation Office to have an Intellectual Property Inter-Institutional Agreement (IIA) in place. This agreement creates a foundation for how the shared intellectual property, if created, will be managed and prosecuted. It is always preferable to have such agreement in place prior to conducting any collaborative work with any research entity. Please contact tmi-agreements@ku.ac.ae with any questions.

WHAT ABOUT CONSULTING?

When researchers enter into consulting agreements (for work to be done without the use of university facilities or resources), they are deemed to be acting outside of the scope of their employment. Researchers who enter into consulting agreements should familiarize themselves with university policies relevant to consulting activities.

It is the researcher's responsibility to ensure that the terms of the consulting arrangement are consistent with policies, including those related to IP ownership, employment responsibilities and use of intellectual property. This prevents any conflict of interest. The Technology Management & Innovation Office is available to provide informal advice on how your consulting agreement may relate to intellectual property in your portfolio.



INVENTION DISCLOSURE

WHAT IS AN INVENTION DISCLOSURE?

An Invention Disclosure Form is a document used to provide a description of your invention or research development. The Disclosure document should list all sponsors of the research and should include any other information necessary to begin pursuing protection and commercialization activities. It is critical that the date of any upcoming publication or other public disclosure describing the invention be provided. To initiate the process, please email a signed Invention Disclosure to our office at: ip@ku.ac.ae. This document will be treated as "Confidential." Once received, you will be contacted by the assigned Technology Licensing Officer shortly thereafter to discuss the invention and its potential commercial applications.

WHY SHOULD I SUBMIT AN INVENTION DISCLOSURE?

When you disclose your invention to the Office of Technology Management & Innovation, it starts a process that could lead to the commercialization of your technology. This is also considered as the beginning of the process for legal protection and identifying outside development partners. Pursuant to the university's Intellectual Property Policy, you are required to promptly disclose to the TMI office via the Invention Disclosure Form any conception of what is deemed as an invention in the field. Similarly, if you work under research sponsorship agreement this requires disclosing inventions conceived under this research agreement.

How do I know if my discovery is an invention? You are encouraged to submit an Invention Disclosure for all developments that you feel may solve a significant problem and/or have significant value. If you are in doubt, contact the office (ip@ku.ac.ae) to discuss the potential invention. We can also advise and guide on alternatives to protection and licensing.

WHEN SHOULD I COMPLETE AN INVENTION DISCLOSURE?

You should complete an Invention Disclosure whenever you feel you have discovered something unique with possible research or commercial value. This should be done well before presenting the discovery through publications, poster sessions, conferences, press releases, or other communications. Once publicly disclosed (i.e., published or presented in some form to non-university listeners), patent protection for the invention may be restricted or have minimal intellectual property protection.

SHOULD I DISCLOSE RESEARCH MATERIALS?

Depending on the nature of research materials, some materials such as antibodies, vectors, plasmids, cell lines, mice, and other biological materials used in the research process may not be protected by virtue of their natural existence. They however should not be exchanged with other outside the university without a Material Transfer Agreement (MTA). Other research materials in form of databases, algorithms or other mathematical representations can be protected under copyright intellectual property. Research materials such as processes and equipment developed or modified in laboratories may be patentable. It is important to note research materials do not necessarily need to be protected by patents in order to be licensed to commercial third parties and generate revenue. In all cases, it is important to contact ip@ku.ac.ae if you have research materials that you believe to be valuable, the office will work with you to develop the appropriate protection and commercialization strategy.

HOW DO I SUBMIT AN INVENTION DISCLOSURE?

Please download the Invention Disclosure Form from the TMI office link: or by contacting the office at ip@ku.ac.ae.

WHAT IF I CREATED THE INVENTION WITH SOMEONE FROM ANOTHER INSTITUTION OR COMPANY?

Generally, the invention will be jointly owned between the university and the other institution or company. Each inventor must assign his or her rights to their respective employer. The Office of Technology Management & Innovation will work with the other institution on management of the invention. If the other employer is a university or research institution, we will enter into an "inter-institutional" agreement that will decide on which institutions to take the lead in protecting and licensing the invention, cost sharing on expenses associated with the patenting process and allocation of licensing revenues.

OWNERSHIP
OF INTELLECTUAL PROPERTY

WHAT IS "INTELLECTUAL PROPERTY"?

The World Intellectual Property Organization defines Intellectual property as creation of the mind; inventions; literary and artistic works and symbols, names and images use in commerce. IP may be industrial property such as patent the patent, trademark and/or copyright covering literary works.

Intellectual property rights are like any other property right. They allow creators, or owners, of patents, trademarks or copyrighted works to benefit from their own work or investment in a creation. These rights are outlined in Article 27 of the Universal Declaration of Human Rights, which provides for the right to benefit from the protection of moral and material interests resulting from authorship of scientific, literary or artistic productions.

WHO OWNS WHAT I CREATE?

Ownership depends upon the employment status of the creators of the invention and their use of university facilities and resources.

Considerations include:

- what is the source of the funds used to produce the invention?
- what was the employment status of the creators at the time the invention was conceived?
- what are the terms of any agreement related to the creation of the intellectual property?

By virtue of your employment at Khalifa University and the use of Khalifa University's resources to develop your innovation, Khalifa University owns the rights to whatever you invent while in their employment. Additionally, Khalifa University also owns whatever you invent while working under a grant or contract to Khalifa University or using university resources. When in doubt, it is best to contact the office for advice (ip@ku.ac.ae).

WHERE CAN I FIND THE INTELLECTUAL PROPERTY POLICY ON OWNERSHIP OF INVENTIONS?

The policy is stated in the Guide to the Ownership, Distribution and Commercial Development of University Intellectual Property, which can be located on our website at:
https://cas.kustar.ac.ae/cas/login?service

WHO OWNS RIGHTS TO DISCOVERIES MADE WHILE I AM CONSULTING?

Inventions made while consulting for an outside company must be disclosed to that company office to determine their relevance to the scope of research you conducted under employment contract. It is important to clearly define the scope of work within consulting contracts to minimize any issues or conflicts with inventions from university research. If you have questions, the office is available for informal advice.

All contributors to the ideas leading to a discovery should be mentioned in the Invention Disclosure Form, even if they are not Khalifa University employees. The office will determine the rights of such persons and institutions. It is prudent to discuss with the office all working relationships (preferably before they begin) to understand the implications for any subsequent inventions.

CAN A STUDENT CONTRIBUTE TO AN INVENTION?

Absolutely, a student can even be the sole contributor or inventor. The policy for ownership of an invention developed with or by a student is the same as for any other member of the university. It depends on:

- whether the invention was created by a student in a capacity as university student,
- whether the invention was created using university resources, and
- whether the invention was created under a contract or grant.

ASSESSMENT
OF INVENTION DISCLOSURES

HOW DOES THE OFFICE ASSESS INVENTION DISCLOSURES?

Technology Licensing Officers, with the help of inventors, prior art search specialists or a technology assessment specialist, will examine each invention disclosure received for novelty, development stage of the technology, the invention's usefulness, obviousness and marketability, as well as competing technologies. At this stage, it is important to have a clear understanding of the invention's potential reaching the marketplace. For example, some technologies can reach the market on non-exclusive licensing (licensing to multiple third parties), while others will only reach the commercial marketplace when licensed exclusively.

WE TRY TO ACCOMMODATE INVENTORS'

commercialization wishes that are consistent with the obligations to sponsors or other third parties, marketability of potential products or services, relevant market size and growth potential, relationship to related intellectual property, and amount of time and money required to bring a viable product to market.

HOW DOES THE OFFICE DECIDE HOW TO COMMERCIALIZE THE INVENTION DISCLOSURE?

A Marketability landscape analysis is an important criterion in any assessment done by the office. The commercialization strategy might include further development of the invention with industry partners,

exploring pre-existing rights associated with the intellectual property (IP), potential competition from other products/ technologies and licensing directly to industry partners.

The assessment may also include consideration of whether the IP can be the basis for a start-up. The office can support exploring start-up opportunities with the Khalifa Innovation Center (KIC), which is an excellent incubator and accelerator for potential start-ups. In all of the above, the office will support inventors through marketing of the technology, linking technologies with industry partners, initiating preliminary business plans for start-ups, and designing proof-of-concept projects.

CAN I LICENSE MY SOFTWARE TO ALL POTENTIAL USERS?

The office works closely with the inventor to develop the appropriate commercialization strategy for the invention. Software and database developers lend traditionally an "open source" license for their software or database.

The office supports those software developers who choose to essentially give their programs away through open source mechanisms, provided that Khalifa University retains the right to distribute the program freely and that "open sourcing" is consistent with obligations to third parties, such as sponsors. However, inventors and developers must realize that there are many different varieties of "open sourcing," so, we recommend that you contact our office (ip@ku.ac.ae) to obtain advice on the appropriate "open source" license to pursue and notices that should be placed on your open-sourced software or database.

IS AN INVENTION EVER REASSIGNED TO AN INVENTOR?

If the office decides not to pursue patent protection and/or chooses not to actively market the invention, the university may, upon request by the inventor(s), reassign the invention to the inventor(s). Reassignment of inventions requires the approvals from Senior Management.

Among the key factors in deciding to reassign inventions are; whether additional resources or private resources could best improve marketability and whether all inventors agree with the reassignment plan. Upon reassignment, the inventor(s) will be responsible for paying all prior patent related costs.

The inventors will assume responsibility for all costs associated with further development, patenting and marketing expenses for the invention. The university may also require that any revenue derive from the commercialization of the invention be shared with the University. Also, if additional university resources are used to further develop the invention, the university will have the option to reassert its ownership interest in the invention.

PATENTS

AND OTHER LEGAL PROTECTION

WHAT IS A PATENT?

A patent gives the holder the exclusive right to exclude others from making, using, selling, offering to sell the invention for a set period. The term for a patent is 20 years from the date of filing. A patent document typically includes a specification, drawings, and claims. The claims are an important component of a patent because they describe the scope of the patent holder's exclusionary rights. The patent fully discloses the enablement of the invention to the public upon issuance of the patent. Patent claims are the legal definition of an inventor's protectable invention.

Please note that a patent does not guarantee Freedom to operate, Regulatory Approvals or the lawfulness of the patent invention.

WHAT TYPE OF SUBJECT MATTER CAN BE PATENTED?

Patentable subject matter includes processes, machines, compositions of matter, articles, some computer programs, and methods (including methods of making compositions, methods of making articles, and even methods of performing business).

CAN SOMEONE PATENT A NATURALLY OCCURRING SUBSTANCE?

No, not in its natural state. However, in some instances, a naturally occurring substance that has never before been isolated or known, may be patentable, but only in its isolated form.

A variation of a naturally occurring substance may be patentable if an inventor is able to demonstrate substantial non-obvious modifications that offer significant advantages in using the variant.

WHAT IS THE DEFINITION OF AN INVENTOR ON A PATENT AND WHO DETERMINES THIS?

Under UAE law, an inventor is a person who is part of the conception of the idea(s) that is claimed in the invention. Thus, if there are several inventors on an application, the inventorship of a patent application may change as the patent claims changed during prosecution of the application. An employer or person who furnishes money to build, supervise or practice an invention is not an inventor. Inventorship requires an intricate legal matter and determination is usually made by the patent attorney prosecuting the application.

WHO IS RESPONSIBLE FOR PATENTING?

The Office of Technology Management & Innovation contracts with outside patent counsel for patent protection, thus who employ patent attorneys and specialists who are experts in diverse technological areas. Our Patent Counsels will work with inventors to draft applications as well as questions from patent examiners in various jurisdictional offices where patent applications are filed.

to review an application before it is filed and will also inquire about inventorship of the application claims. At the time an application is filed, the inventor(s) will be asked to sign an Inventor's Declaration as well an Assignment where the inventor(s) assigns his/her rights in the patent to the university.

When an application is filed, more often than not, the Patent Office initially rejects the application because of formalities deficiency, or the claims are not patentable over some "prior art" (anything that other in the field have made or publicly disclosed in the past). The letter sent by the Patent Office advising on the rejection is referred to as an Office Action or Official Action. If the application is rejected, the Technology Management & Innovation Office must file a written response, usually within three to six months.

Generally, the attorney may amend the claims and/or point out why the Patent Office positions need to be clarified. This procedure is referred to as patent prosecution. Often, it will take two to three Official Actions and two responses by the patent attorney and, sometimes more, before issues with the application are resolved. Once there is a resolution and the application is allowable; in other words, the Patent Office agrees to issue a patent, the jurisdictional patent office will send written notice advising us that the application and its claims have been accepted as patentable . During the prosecution process, input from the inventor(s) is often needed to confirm the patent attorney's understanding of the

technical aspects of the invention and/or the prior art cited against the application. Since the response period is time sensitive, we implore inventors to respond to our queries on these matters expeditiously. The Patent Office holds patent applications confidential until published which is 18 months after initial filing. The time between the initial filing of the patent application and the issuance of the patent is the "patent pending" period.

IS THERE SUCH A THING AS A PROVISIONAL PATENT?

It is very important to note the difference as there is NO Provisional Patent, however, there is a provisional patent application, which is described below.

WHAT IS THE DIFFERENCE BETWEEN A PROVISIONAL PATENT APPLICATION AND A REGULAR (OR "UTILITY") PATENT APPLICATION?

In certain circumstances, U.S. provisional patent applications can provide a tool for preserving patent rights while temporarily reducing costs and perhaps providing extra time to prepare a regular application. This occurs because the application is not examined during the year in which it is pending and claims are not required. A regular patent application and related foreign applications must be filed within one year of date the provisional application is filed in order to receive the benefit of the provisional application's early filing date. However, since an applicant only receives the benefit of the earlier filing date for material that is adequately described and enabled in the provisional application, we may still need you to work with a patent attorney even when an application is filed as a provisional.

WHAT'S DIFFERENT ABOUT FOREIGN PATENT PROTECTION?

Foreign patent protection is subject to the laws of each individual country, although in a general sense the process works much the same as it does in the UAE. In most foreign countries, however, an inventor will lose any patent rights if he or she publicly discloses the invention prior to filing the first (or "priority") application in one country. In contrast, the United States has a one-year grace period after publication in which a patent may be filed. Jurisdictions as Europe and others does not provide a grace period.

IS THERE SUCH A THING AS AN INTERNATIONAL PATENT?

Although an international patent does not exist, an international agreement known as the Patent Cooperation Treaty (PCT) provides a streamlined filing procedure for most nations. For UAE applicants, a PCT application is generally filed one year after the corresponding patent application (either provisional or regular) has been submitted. The PCT application must later be filed in the national patent office of any country in which the applicant wishes to seek patent protection, generally within 30 months of the earliest claimed filing date.

WHAT IS GAINED BY FILING AN APPLICATION UNDER THE PCT?

The PCT application provides two advantages. First, it delays the need to file costly foreign applications until the 30-month date, often after an applicant has the opportunity to further develop, evaluate and/or market the invention for licensing. Second, the international preliminary examination often

allows an applicant to simplify the patent prosecution process by having a single examiner speak to the patentability of the claims, which can save significant costs in prosecuting foreign patent applications. Another important international treaty called the Paris Convention permits a patent application filed in a second country (or a PCT application) to claim the benefit of the filing date of an application filed in a first country, provided that a so-called "convention applications" is filed in foreign countries (or as a PCT) within one year of the first filing date.

WHAT IS THE TIMELINE OF THE PATENTING PROCESS AND RESULTING PROTECTION?

Currently, the average U.S. utility patent application has a pending status for about three years, though inventors in the biotech and computer fields should plan on a longer waiting period. Once a patent is issued, it is enforceable for 20 years from the initial filing of the application that resulted in the patent, assuming that jurisdictional -mandated maintenance fees are paid.

WHY DOES KHALIFA UNIVERSITY PROTECT SOME INTELLECTUAL PROPERTY THROUGH PATENTING?

Potential commercialization partners (licensees) often require patent protection to de-risk the commercial partner's sizable investment, which is often required to bring the technology to market. Due to the expense associated with filings, pursuing patent applications are not possible for all of the university's intellectual property.

We carefully review the commercial potential for an invention before investing in the patent process. However, because the need for commencing a patent filing usually precedes finding a licensee, we look for creative and cost-effective ways to seek early protection for as many promising inventions as possible.

WHO DECIDES WHAT GETS PROTECTED?

The Office of Technology Management & Innovation and the inventor(s) together discuss relevant factors in deciding whether or not to file a patent application. Ultimately, the office makes the final decision on filing.

WHAT DOES IT COST TO FILE FOR AND OBTAIN A PATENT?

The cost of filing a regular U.S. patent application to issuance with maintenance fees is in excess of $45,000. Filing and obtaining issued patents in foreign countries cost much more since translation costs if applicable must be factored into the costs as well as yearly maintenance fees.

WILL THE UNIVERSITY INITIATE OR CONTINUE PATENTING ACTIVITY WITHOUT AN IDENTIFIED LICENSEE?

Often the university accepts the risk of filing a patent application before a licensee has been identified. After university's rights have been licensed, the licensee generally assumes the patenting expenses. At times, if the university's fails in its attempt to identify a licensee for a particular invention, a decision will be made to cease to continue further patent prosecution. When that decision is made, the inventor(s) will be informed of the decision.

COPYRIGHT

COPYRIGHT

What is a copyright and how is it useful? Copyright is a form of protection provided by the laws of the UAE and other countries to the authors of "original works of authorship." This includes literary, dramatic, musical, artistic, and certain other intellectual works as well as computer software, and in some cases, databases. This protection is available to both published and unpublished works.

The Copyright Act generally gives the owner of copyright the exclusive right to conduct and authorize various acts, including reproduction, public performance and making derivative works. Copyright protection is automatically secured when a work is fixed into a tangible medium such as a book, software code, video, etc. In some instances, the university registers copyrights, but generally not until a commercial product is ready for symbol, device, or combination that is used, or intended to be used, in commerce to identify and distinguish the services of one provider from those of others, and to indicate the source of the services.

HOW DO I REPRESENT A PROPER UNIVERSITY COPYRIGHT NOTICE?

Although copyrightable works do not require a copyright notice as it can be registered at any time. However, we do recommend that if you feel the work you are developing mounts to copyrightable material to use you use the following notice: "© 202X Khalifa University of Science & Technology. All Rights Reserved."

For any clarification you can contact:
ip@ku.ac.ae

TRADEMARK

WHAT IS A TRADEMARK OR SERVICE MARK AND HOW IS IT USEFUL?

A trademark or service mark includes any word, name, symbol, device, or combination, that is used in commerce to identify and distinguish the goods of one manufacturer or seller from those manufactured or sold by others, and also to indicate the source of the goods. In short, a trademark is a brand name.

A service mark is any word or name to identify the service a manufacturer provides. However, it is not necessary to register a trademark or service mark to prevent others from infringing upon the trademark.

Trademarks generally become protected as soon as they are adopted by an organization and used in commerce, even before registration. With trademark registration, the registrant is presumed to be entitled to use the trademark throughout the UAE for the goods or services for which the trademark is registered.

WHAT IS TRADEMARK REGISTRATION?

Trademark registration is a procedure in which the UAE and other jurisdictional Trademark Offices provides a determination of rights based upon legitimate use of the mark.

START-UP COMPANY

CONSIDERATIONS

WHAT IS A START-UP AND WHY CHOOSE TO CREATE ONE?

A start-up is a new business entity formed to commercialize one or more related intellectual properties. Forming a start-up business is an alternative to licensing the IP to an established business, usually an industry partner.

A few key factors when considering a start-up company are:

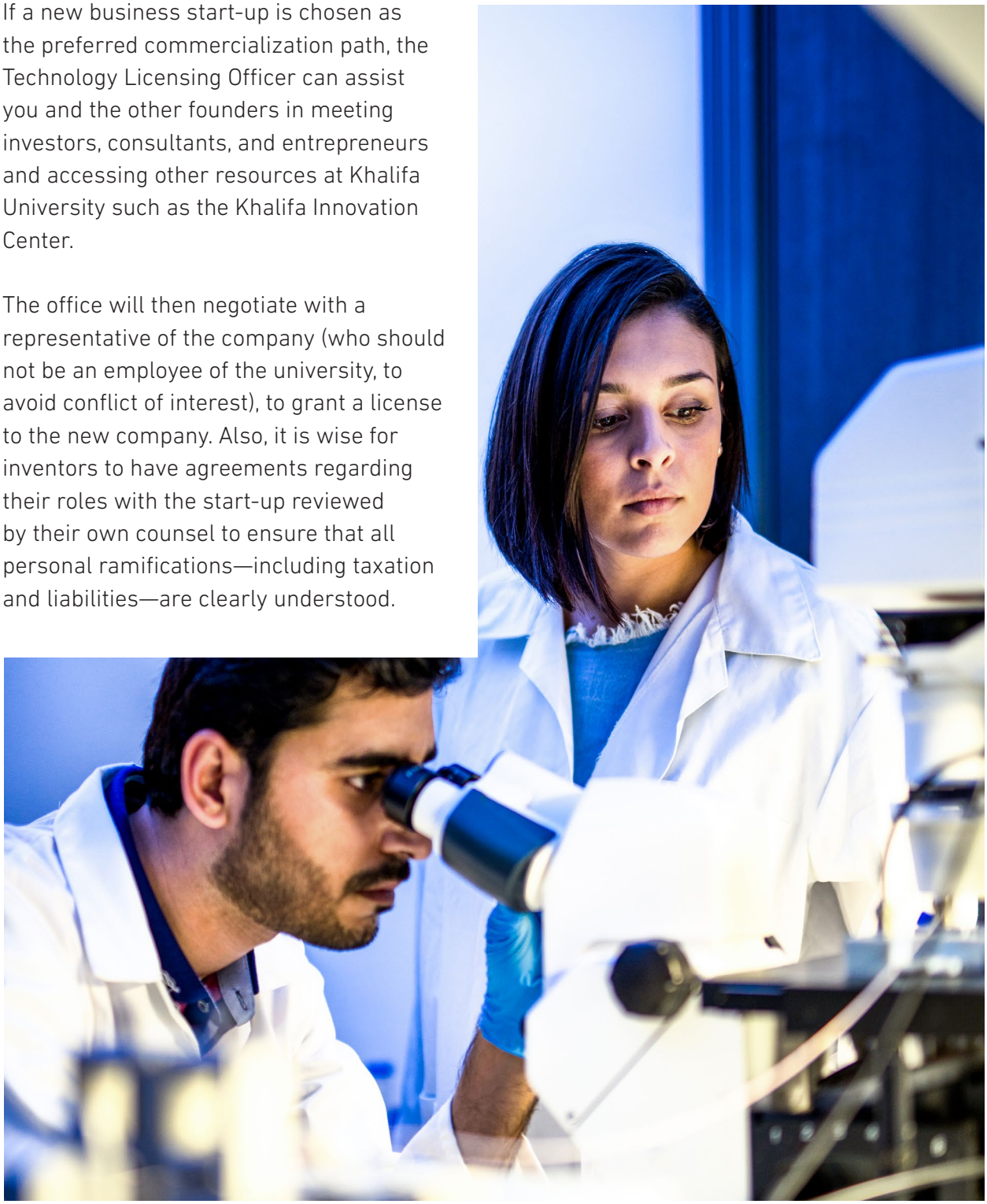
- development risk (often large companies in established industries are unwilling to take the risk for unproven technology)
- development costs versus investment return (Can the investors in the startup obtain their needed rates of return?)
- potential for multiple products or services from the same technology (few companies survive on one product alone)
- sufficiently large competitive advantage and target market
- potential revenues sufficient to sustain and grow a company
- The Office of Technology Management and Innovation can help evaluate these and other factors

WHO DECIDES WHETHER TO FORM A START-UP?

The choice to establish a new company for commercializing intellectual property is a joint decision made by the Office of Technology Management & Innovation and the inventors or interested partner.

If a new business start-up is chosen as the preferred commercialization path, the Technology Licensing Officer can assist you and the other founders in meeting investors, consultants, and entrepreneurs and accessing other resources at Khalifa University such as the Khalifa Innovation Center.

The office will then negotiate with a representative of the company (who should not be an employee of the university, to avoid conflict of interest), to grant a license to the new company. Also, it is wise for inventors to have agreements regarding their roles with the start-up reviewed by their own counsel to ensure that all personal ramifications—including taxation and liabilities—are clearly understood.



MARKETING
TO FIND A LICENSEE

HOW DOES THE TECHNOLOGY MANAGEMENT & INNOVATION OFFICE MARKET MY INVENTIONS?

The office uses many sources and strategies to identify potential licensees and market inventions. Sometimes existing relationships inventors and other researchers have with others are useful in marketing an invention. Market research can also assist in identifying prospective licensees. In addition, the office also examines other complementary technologies and agreements to assist licensing efforts. Faculty publications and presentations are often excellent marketing tools as well.

HOW ARE MOST LICENSEES FOUND?

Studies have shown that 70% of licensees were known to the inventors. Thus research and consulting relationships are often a valuable source for licensees. Licensees are also identified through existing relationships of the TMI staff. We attempt to broaden these relationships through contacts obtained from personal networking, industry partners, organizations and events, from website inquiries, market research and the cultivation of existing licensing relationships.

HOW LONG DOES IT TAKE TO FIND A POTENTIAL LICENSEE?

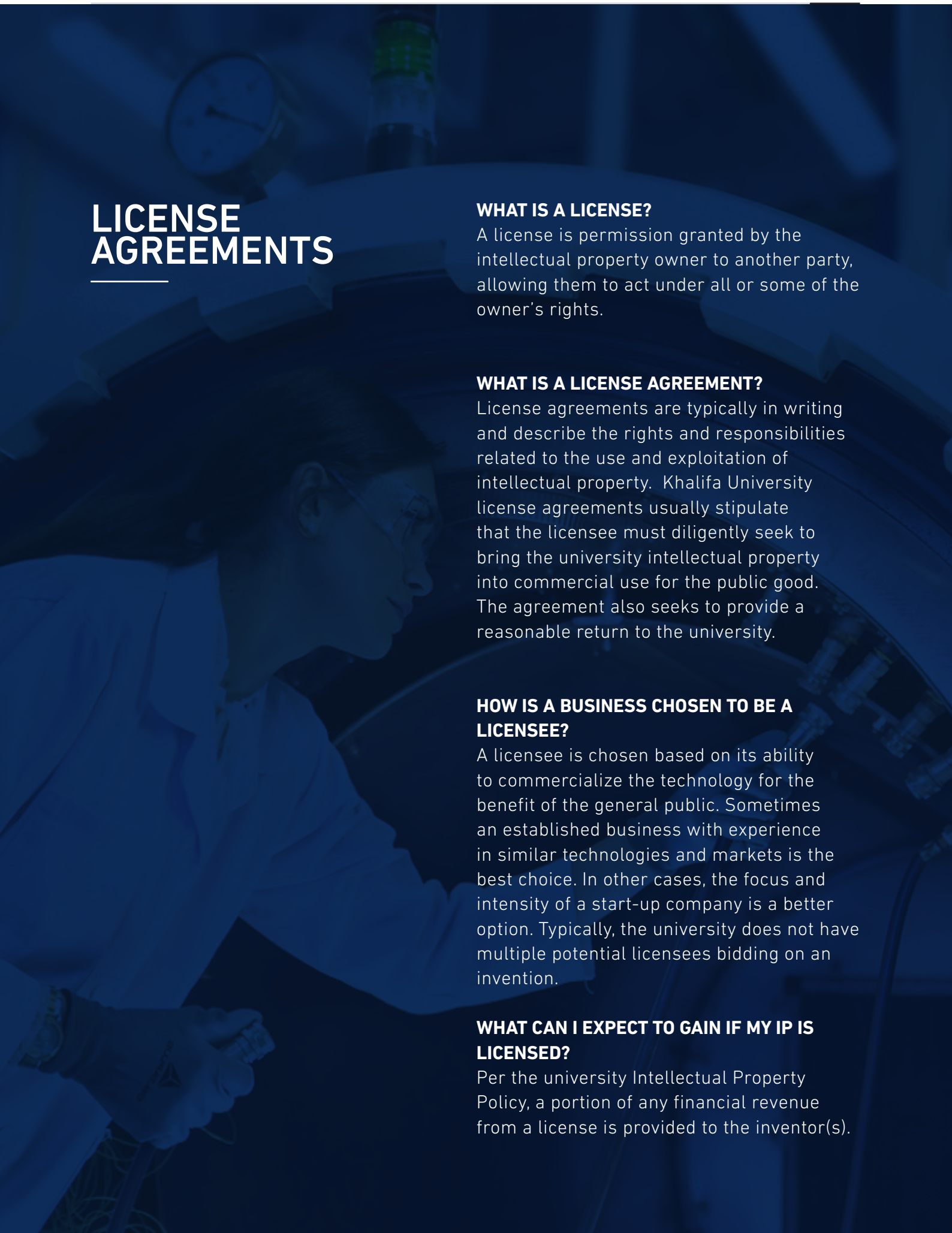
It can take months and sometimes years to locate a potential licensee, depending on the attractiveness of the invention, the stage of development and size of the market. Most university inventions tend to be in the early stage in the development cycle and thus require substantial commercialization investment, making it difficult to attract a licensee.

HOW CAN I ASSIST IN MARKETING MY INVENTION?

Your active involvement can dramatically improve the chances of matching an invention to an outside company. Your research relationships are often helpful in both identifying potential licensees and technology champions within companies. Once interested companies are identified, the inventor is the best person to describe the details of the invention and its technical advantages. The most successful technology transfer results are obtained when the inventor and the licensing professional work together as a team to market and promote use of the technology.

CAN THERE BE MORE THAN ONE LICENSEE?

Yes, an invention can be licensed to multiple licensees, either non-exclusively to several companies or exclusively to several companies, each only for a unique field- of-use (application) or geography (territory).



LICENSE AGREEMENTS

WHAT IS A LICENSE?
A license is permission granted by the intellectual property owner to another party, allowing them to act under all or some of the owner's rights.

WHAT IS A LICENSE AGREEMENT?
License agreements are typically in writing and describe the rights and responsibilities related to the use and exploitation of intellectual property. Khalifa University license agreements usually stipulate that the licensee must diligently seek to bring the university intellectual property into commercial use for the public good. The agreement also seeks to provide a reasonable return to the university.

HOW IS A BUSINESS CHOSEN TO BE A LICENSEE?
A licensee is chosen based on its ability to commercialize the technology for the benefit of the general public. Sometimes an established business with experience in similar technologies and markets is the best choice. In other cases, the focus and intensity of a start-up company is a better option. Typically, the university does not have multiple potential licensees bidding on an invention.

WHAT CAN I EXPECT TO GAIN IF MY IP IS LICENSED?
Per the university Intellectual Property Policy, a portion of any financial revenue from a license is provided to the inventor(s).

In addition, inventors enjoy the satisfaction of knowing their inventions are being deployed for the benefit of the general public. New and enhanced relationships with businesses are another outcome that can augment one's teaching, research and consulting.

WHAT IS THE RELATIONSHIP BETWEEN AN INVENTOR AND A LICENSEE, AND HOW MUCH OF MY TIME WILL IT REQUIRE?

Most licensees need some active assistance by the inventor to facilitate their commercialization efforts. The frequency of the contact can range from frequent, infrequent and informal to a more formal consulting relationship. Working with a new business start-up can require substantially more time, depending on your role in or with the company and your continuing role within the university. Your participation with a start-up is governed by the university conflict of interest policies.

WHAT OTHER TYPES OF AGREEMENTS AND CONSIDERATIONS APPLY TO TECH TRANSFER?

- Non-Disclosure Agreements (NDAs) are often used to protect the confidentiality of an invention during evaluation by potential licensees. NDAs also protect proprietary information of third parties that researchers need to review in order to conduct research or evaluate research opportunities. The NDA provides a mechanism for discussing subject matter while preventing use of information outside a narrowly permitted purpose. The office enters into NDAs for university proprietary information shared with someone outside the university.
- Material Transfer Agreements (MTAs), used for incoming and outgoing materials at the university, are administered by the office. These agreements describe the terms under which university researchers and outside researchers may share materials, typically for research or evaluation purposes. Intellectual property rights can be endangered or lost if materials are used without a proper agreement in place.
- Inter-Institutional Agreements or Intellectual Property Management Agreements describe the terms under which two or more institutions (e.g., universities or industry) will collaborate to assess, protect, market, license, and share in the revenues received from licensing jointly-owned intellectual property.
- Option Agreements, or Option Clauses within research agreements, describe the conditions under which the university preserves the opportunity for a third party to negotiate a license for intellectual property. Option clauses are often provided in a Sponsored Research Agreement to corporate research sponsors at university; option agreements are entered into with potential licensees wishing to evaluate the technology prior to entering into a full license agreement.

COMMERCIALIZATION

WHAT ACTIVITIES OCCUR DURING COMMERCIALIZATION?

Most licensees continue to develop an invention to enhance the technology, reduce risk, prove reliability, and satisfy the market requirements for adoption by customers. This can involve additional testing, prototyping for manufacturability, durability and integrity, and further development to improve performance and other characteristics. Documentation for training, installation and marketing is often created during this phase. Benchmarking tests are often required to demonstrate the product/service advantages and market position of the product.

WHAT IS MY ROLE DURING COMMERCIALIZATION?

Your role can vary depending on your interest and involvement, the interest of the licensee in utilizing your services for various assignments and any sponsored research related to the license or any personal agreements.

WHAT REVENUES ARE GENERATED FOR UNIVERSITY IF COMMERCIALIZATION IS SUCCESSFUL?

Most licenses have licensing fees that can be very modest (for start-ups or situations in which the value

of the license is deemed to warrant a modest license fee) or can reach hundreds of thousands of dollars. Royalties on the eventual sales of the licensed products can generate similar or greater revenues, although this can take years to occur.

Equity, if included in a license, can yield similar returns, but only if a successful equity liquidation event (public equity offering or a sale of the company) occurs. Most licenses do not yield substantial revenues. A recent study of licenses at U.S. universities demonstrated that only 1% of all licenses yield over US$1 million. However, the rewards of an invention reaching the market are often more significant than the financial considerations alone.

WHAT WILL HAPPEN TO MY INVENTION IF THE START-UP COMPANY OR LICENSEE IS UNSUCCESSFUL? CAN THE INVENTION BE LICENSED TO ANOTHER ENTITY?

Licenses typically include performance milestones that, if unmet, can result in termination. This subsequent creates licensing opportunities to another business. However, time delays and other considerations can hinder this re-licensing of technologies.

CONFICT OF INTEREST

CONSIDERATIONS

HOW DOES KHALIFA UNIVERSITY DEFINE CONFLICT OF INTEREST?

A conflict of interest can occur when a university employee, through a relationship with an outside organization, is in a position to:

- influence university's business, research or other areas that may lead to direct or indirect financial gain,
- adversely impact or influence his or her research or teaching responsibilities, or
- provide improper advantage to others, to the disadvantage of the university.

WHEN SHOULD I SEEK GUIDANCE ON CONFLICT OF INTEREST?

If ever a question or uncertainty arises, please seek guidance from the Office of Research Services. For intellectual property-related issues, please contact the Office of Technology Management & Innovation on intellectual property-related issues.

WHAT ARE EXAMPLES OF A CONFLICT OF COMMITMENT?

A conflict of commitment may exist if duties, assignments or responsibilities associated with a technology license or outside business arrangement have a negative impact on your ability to meet commitments associated with your employment.

The best approach is to fully disclose all outside interests and commitments to your department head and discuss, if applicable, any implications for your job responsibilities.

HOW DOES THE UNIVERSITY MANAGE CONFLICTS OF INTEREST?

The Office of Technology Management & Innovation Technology can advise you on conflict of interest issues related to IP issues only, and the Office of Research Services can advise on conflicts related to research.

It is the responsibility of the researcher or faculty member to disclose and document any outside arrangements that constitute ambiguous situations or interests as described in the university conflict of interest policies.

REVENUE DISTRIBUTIONS

HOW ARE LICENSE REVENUES DISTRIBUTED?

The Office of Technology Management & Innovation is responsible for managing the expenses and revenues associated with technology agreements. Per university policy, revenues from license fees, royalties and equity minus any unreimbursed patenting expenses are shared with the inventors.

For purposes of revenue distribution, "inventors" are defined as named inventors on patents or authors of copyrighted materials.

WHAT IF I RECEIVE EQUITY FROM A COMPANY?

If an inventor has or will receive equity directly from a licensee of technology, the KU IP policy states that the inventor will not receive any of the revenues received by the university in connection with that license. Equity includes stock and/or stock option or stock warrants.

HOW ARE INVENTOR REVENUES DISTRIBUTED IF THERE ARE MULTIPLE INVENTORS AND/OR MULTIPLE INVENTIONS IN A LICENSE?

The "inventors' share" of royalties is divided equally among all inventors unless all inventors agree (among themselves) in writing to another distribution formula of their collective choices.

Please refer to KU's IP Policy for further information

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