



AN INVENTOR'S GUIDE TO TECHNOLOGY TRANSFER AT QATAR FOUNDATION

INVENTOR'S GUIDEBOOK

Presented by Qatar Foundation

Research, Development, and Innovation

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ABOUT

the Office of Industry Development and Knowledge Transfer (IDKT)

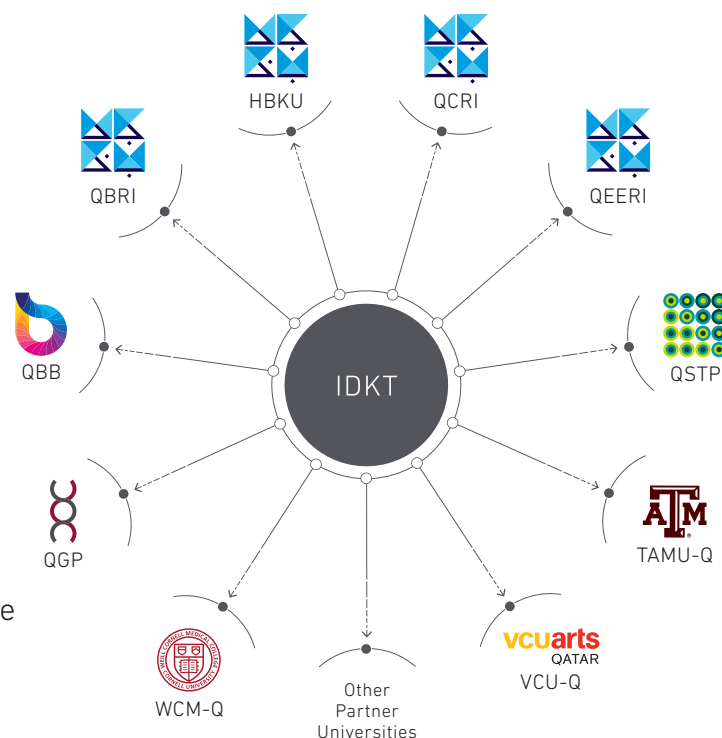


As the gateway to Qatar Foundation's (QF's) Research, Development, and Innovation (RDI) activities, IDKT plays a central coordinating role at the heart of the nation's robust innovation and entrepreneurship ecosystem.

IDKT identifies, protects, and commercializes intellectual property (IP) developed at QF institutions. We also are building a seamless pathway for QF researchers to have impactful interactions with industry.

Our mission is to support mutually beneficial collaborations between the academic/research communities and the private/public sectors that enhance QF's research, development, and innovation activities.

With a commitment to growing Qatar's knowledge-based economy, IDKT looks forward to partnering with QF researchers to turn technologies and other discoveries into market-ready innovations that achieve commercial success while enhancing economic prosperity and societal well-being.



Visit <https://www.qf.org.qa/IDKT> for more information about the IDKT office.



About This **GUIDEBOOK**



QF defines “knowledge transfer” as the sharing of information, technologies, abilities, and ideas with third parties. This guidebook specifically outlines elements related to the transfer of QF technologies. Serving as an easy-to-use, quick resource, this document provides a broad overview of the process and services available for QF researchers and employees with specific focus on technological inventions. Other IDKT guidebooks cover topics related to software, creative works, and entrepreneurship.

More guidebooks as well as formal explication of QF’s policies concerning intellectual property (IP), conflict of interest, and innovation/entrepreneurship can be obtained from <https://www.qf.org.qa/IDKT/info-bank>.

QF policies supersede any differences between them and material contained in this guide.

ABOUT TECHNOLOGY TRANSFER

and Commercialization at QF



Working collaboratively with QF researchers, the Industry Development and Knowledge Transfer (IDKT) office leads technology transfer and commercialization efforts at QF. For the purposes of this guidebook, the term “technology transfer and commercialization” refers to the licensing out of inventions, software, or creative works developed at QF to third parties—usually an established commercial company or a new business startup.

BENEFITS FOR RESEARCHERS

QF researchers benefit from participating in the technology transfer and commercialization process in several ways:

- Make a positive impact on society and help Qatar achieve its National Vision 2030
- Achieve peer recognition
- Receive royalties and other financial rewards
- Advance career development at QF
- Meet the obligations of a research contract
- Attract sponsors for future research
- Create educational and future job opportunities for students

LICENSES

Licenses are contracts that grant the licensee permission to use QF’s intellectual property (IP) according to the terms of the agreement. Those terms usually require the licensee to meet certain performance requirements and to make financial payments to QF. These payments are shared with the inventors and are used to further support other IDKT activities related to innovation creation and development.

REMEMBER

To learn about the options to best leverage the commercial potential of your research, stay in touch with IDKT via IDKT@qf.org.qa or +974 44540818.



CONFLICT OF INTEREST

A conflict of interest can occur when a QF employee has a relationship with an outside organization that puts them in a position to do any or all of the following:

- Influence QF's business, research, or other areas that may lead to direct or indirect personal financial gain
- Adversely impact or influence their employment responsibilities
- Provide improper advantage to themselves or others to the disadvantage of QF

IDKT can advise you on conflict-of-interest issues related to your research and IP commercialization. Contact us at IDKT@qf.org.qa for more information.

REMEMBER

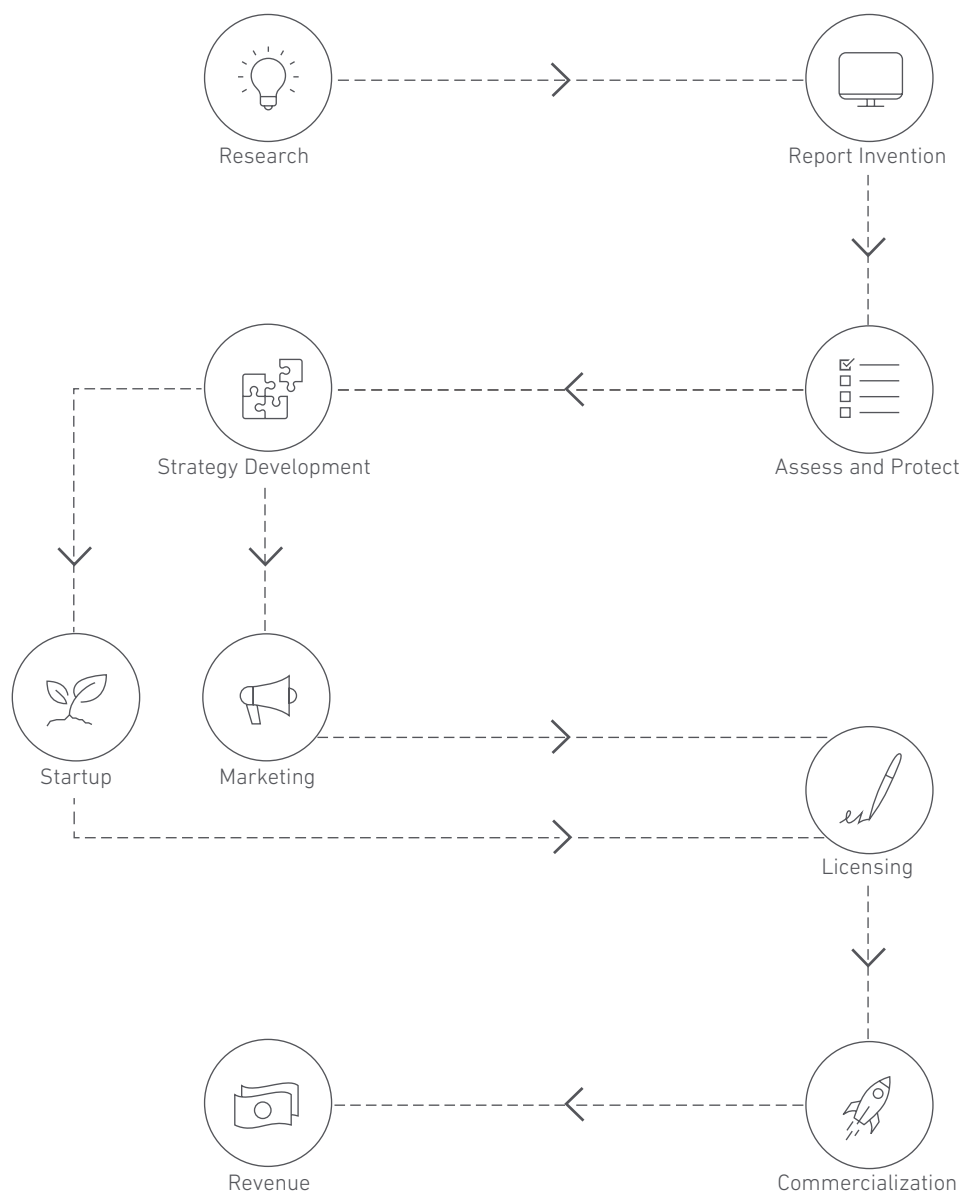
It is the responsibility of the researcher or faculty member to disclose and document any outside arrangements that constitute situations where there is a possibility of a conflict of interest.



HOW TECHNOLOGY TRANSFER and Commercialization Works



The flow chart below presents an overview of the technology transfer and commercialization process. IDKT partners with researchers and participates with industry throughout the process, serving as a valuable liaison to form a win-win relationship.



REMEMBER While some aspects of this process will require significant participation on your part, IDKT will strive to make efficient use of your valuable time.



RESEARCH

Observations and experiments during research activities often lead to discoveries and inventions. An invention is any useful process, machine, composition of matter, or any new or useful improvement. Sometimes multiple researchers will have contributed to the invention.

If you use others' intellectual property (IP) or material in your research, document the date and conditions of use carefully—its use may influence the commercialization potential of your subsequent research results. Contact IDKT@qf.org.qa to find out if you need a Material Transfer Agreement (MTA) or open source software agreement.

As you conduct your investigations, consider how the results of your work can address a need in the market. Knowing the limitations of current solutions helps ensure your work is better than what already exists, increasing the chances of successful commercialization.

REMEMBER

While IDKT will never intentionally jeopardize your ability to publish your research, publication affects patenting rights. Trade secrets also need to be kept confidential. So, it is best to report your inventions and trade secrets to IDKT well before publicly presenting or communicating about them. (For more about patents, see [page 12](#).)

REPORT INVENTION

As your work yields new or improved processes, methods, tools, techniques, machines, materials, research tools, and so on, report your invention through our online submission system. Similarly, you should also report software and creative works. These reports give IDKT the opportunity to protect QF ideas and begin the process of maximizing their impact through technology transfer.

Visit <https://qf.wellspringsoftware.net/kms/auth/login/> to report your inventions, software, and creative works. If you do not already have an account, email IDKT@qf.org.qa to request one.

The online submission should fully document your work so that the options for commercialization can be evaluated and pursued. List all contributors to the ideas leading to the discovery, even if they are not QF employees. Also include companies and contacts you believe might be interested in your work or who may have already contacted you about it.

Complete all of the fields as best you can. The report is—and will remain—a confidential document. For more information about confidential information, visit <https://www.qf.org.qa/IDKT/info-bank> and review QF's intellectual property (IP) policy.

Feel free to contact us at IDKT@qf.org.qa if you have questions.

REMEMBER

Contact IDKT as soon as you believe you have a scientific or technical observation with potential commercial or research value. Even if you are not sure of its value, report the invention **well before** publicly discussing/presenting it or submitting a manuscript about it for publication.



ASSESS AND PROTECT

IDKT determines your invention's commercialization potential by analyzing the market and competing technologies. This assessment provides valuable guidance as we decide whether/how to protect the intellectual property (IP). Patents are a common legal protection method for IP; other options include copyright, trademark, and trade secret. (See the sidebar on [page 12](#) for more information.)

IDKT's assessment is also informed by the Q-Team, which is an advisory committee composed of members from the originating center or institute, as well as industry and legal experts. The Q-Team provides a recommendation on whether or not resources should be invested to protect the IP.

One key criterion in making our decision for an invention is its Technology Readiness Level (TRL). TRL indicates a technology's maturity—

from the observation of basic principles to full commercial application. For a company to be interested in licensing and commercializing an invention, its maturity must be at least TRL 5. Visit <https://www.qf.org.qa/IDKT/info-bank> for more information about TRL.

As a general rule, QF owns inventions, software, and creative works made by its employees, postdocs, and graduate students while working under a grant or contract to QF or using QF resources. Visit <https://www.qf.org.qa/IDKT/info-bank> or contact IDKT@qf.org.qa for clarification on QF's policy regarding ownership of IP.

If IDKT through the Q-Team process decides not to pursue IP coverage or commercialization of your work, you may request a reassignment (transfer) of ownership to yourself as the inventor. As owner, you will be responsible for payment of all costs for any IP protection, further development, and marketing you might choose to pursue on your own.

REMEMBER

Do not discuss your work with people outside the QF community until **after** IDKT has protected the IP. If you need to discuss it with someone before the IP has been protected, we will provide you with a Non-Disclosure Agreement (NDA) for them to sign first.



Understanding IP Protection Terminology

Intellectual Property (IP): All valuable creations of the mind are IP.

Patent: A patent gives the holder the right to exclude others from making, using, selling, offering to sell, and importing the patented invention.

Patent Claim: The claims are the most important part of a patent. They define, in technical terms, the patent's scope of legal protection. Drafting the claims accurately is critical to ensuring complete protection for your invention, so IDKT uses specialized IP attorneys to draft them. They will work with you during this process to accurately capture the scope of your invention.

Patent Application: If your technology is selected for patenting, IDKT will file a patent application with the Qatar Patent Office, the U.S. Patent Office, and/or potentially other countries' patent offices, as appropriate.

Provisional Patent Application: Because obtaining a patent requires several years and tens of thousands of Qatari riyals, IDKT may begin with a provisional patent application to secure the priority date. This essentially extends the time to file a costly full patent by a year while IDKT further determines its commercialization potential. If a full patent application is not filed within 12 months, the provisional will lapse.

PCT Application: A Patent Cooperation Treaty (PCT) application provides a streamlined filing procedure in which the applicant can file one patent application in multiple countries (members of the treaty) simultaneously to reduce the cost of filing individual applications nationally.

Patentability Requirements: To be patented, an invention must be novel, inventive (or non-obvious), and have industrial applicability.

Enabling Disclosure: To be enabling, a public disclosure must teach someone of ordinary skill in the art how to duplicate the invention. Enabling disclosures—whether through

a journal publication, poster, seminar, or discussion with even a single person—destroy the invention's novelty and therefore its patentability in most countries. If you plan to discuss your invention with non-QF members, contact IDKT@qf.org.qa to establish a Non-Disclosure Agreement.

Copyright: Copyright protects published and unpublished original works of authorship, including literary, dramatic, musical, artistic, and certain other intellectual works as well as computer software. Unlike patents, which must be applied for, copyright occurs automatically once the work is fixed into a tangible medium, such as a book, notes, software code, or a painting. The copyright owner generally has the exclusive right to conduct and authorize various acts, including reproduction, public performance, and creation of derivative works. QF members should ensure all copyrighted works to be disclosed, published, and presented outside the QF community bear the following copyright notice:

Copyright © [year of publication] Qatar Foundation. All Rights Reserved.

Trademark/Service Mark: A trademark is a recognizable sign, phrase, or symbol that denotes a product/service and legally differentiates it from all others of its kind. The QF Office of General Counsel has compiled a database to manage trademarks registered under QF. QF members should not alter the QF name, trademark, or logo to designate or endorse any third-party goods or services without the prior approval of the QF Office of General Counsel and their respective communication departments.

Trade Secret: A trade secret is information known by the owner (but not generally known or easily discoverable) that usually provides the opportunity to gain an economic advantage over competitors who do not know or use it. It can include a formula, pattern, compilation, program, device, method, technique, or process.



STRATEGY DEVELOPMENT

This is the stage when IDKT, with your assistance, develops the strategy for either marketing the technology to an existing company or pursuing commercialization via a new business startup.

Some technologies lend themselves to non-exclusive licensing, while others require an exclusive license (only one licensee) in order to successfully reach the commercial marketplace. IDKT will develop the appropriate commercialization strategy based on the results of the market and IP analyses for your invention and will give due consideration to any recommendations you provide.

STARTUP

In some cases, a technology or other IP is best brought to market via a startup rather than by an established company. A startup is a new business entity formed specifically to commercialize one or more related intellectual properties. Sometimes the inventor is a founder of the startup, while other times the inventor participates as a technical advisor or consultant to another entrepreneur.

If your technology meets the criteria for startup formation, IDKT will discuss your case with the Qatar Science & Technology Park (QSTP). IDKT and QSTP work collaboratively to assist startup founders in planning, creating, and finding funding for ventures based on QF technologies.

If you are interested in participating in—or taking the lead in launching—a startup company, visit <https://www.qf.org.qa/IDKT/for-entrepreneurs> to learn more about the process and resources available to you.

REMEMBER

As we determine the best way to position your technology for successful commercialization, you play a valuable role by sharing your ideas and network of contacts as leads for potential licensees. Inventors are critical to the successful commercialization of any technology.

REMEMBER

Not all research is suitable for commercialization as a new business. Visit <https://www.qf.org.qa/IDKT/info-bank> to access a copy of IDKT's *Entrepreneur's Guidebook: Roadmap and Resources for the Startup Journey*.

MARKETING

With your assistance, IDKT reaches out to relevant companies to determine their interest in licensing your technology. Your involvement in identifying and responding to potential licensees can dramatically enhance our marketing efforts. You are the best person to describe the details of the invention and its technical advantages to a potential licensee.

It can take months and sometimes years to locate a potential licensee, depending on the attractiveness of the invention and the size and stage of development of the market. Early-stage technologies require substantial commercialization investment, which can make it more challenging to attract a licensee.

The most successful technology transfer results are obtained when the inventor and the IDKT licensing professional work together as a team to market and promote use of the technology.

REMEMBER

Companies will want to discuss the extent of the inventor's know-how to better understand the technology and development risk before entering into negotiations.

LICENSING

A license grants permission to use the protected IP, sometimes restricted to a particular application (field of use) and/or region of the world. Licenses may be exclusive to only one company or they can be issued non-exclusively to multiple companies.

IDKT will negotiate with the licensee to specify their rights to use your technology (without relinquishing QF's ownership) as well as their financial and other obligations to QF. License agreements usually stipulate that the licensee must diligently seek to bring the IP into commercial use for the public good. The agreement also seeks to provide a reasonable return to QF and the inventors.

In some cases, the interested company might first enter into an evaluation agreement, which allows them access to the QF technology for a limited time before executing a commercial license.

REMEMBER

Successful technology transfer usually requires technical insight from the inventor, so the license agreement will specify your ongoing involvement. Please be forthcoming with IDKT about any questions or concerns as the license agreement terms are being negotiated.

COMMERCIALIZATION

The licensee will continue to develop the invention in order to make a market-ready product/service—enhancing the technology, reducing risk, proving reliability, and satisfying the market requirements for adoption by customers. These efforts may include additional testing; prototyping for manufacturability, durability, and integrity; and improving performance and other characteristics.

As the technology gets closer to market introduction, the licensee may conduct benchmarking tests to demonstrate its advantages and to position it in the market. They also may develop documentation for training, installation, and marketing.

REVENUE

A licensing agreement's terms may specify revenue-related requirements at various time points—from upfront fees paid when the license is signed to royalty payments years later when there are sales of the products/services that use the licensed IP.

Most licenses' upfront fees are very modest, particularly for startups. An alternative to cash licensing fees is equity (or ownership shares) in the startup company. If equity terms are included in the license, they generate revenue if a successful equity liquidation event occurs, such as a public stock offering or a sale of the company.

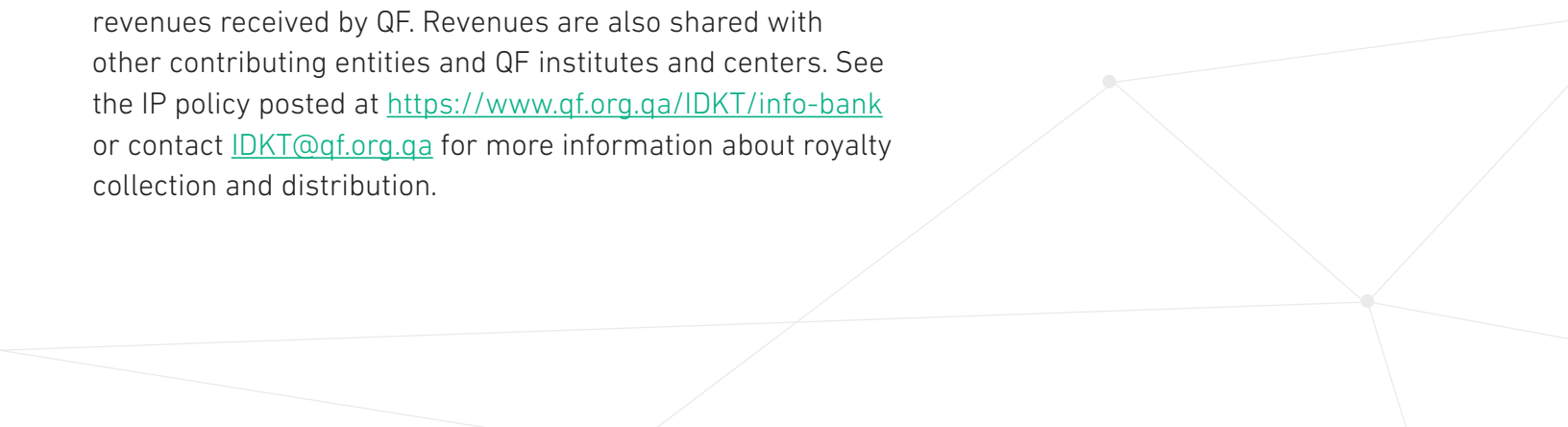
Licensing revenues can reach hundreds of thousands of Qatari riyals. As inventor, you receive a portion of these revenues received by QF. Revenues are also shared with other contributing entities and QF institutes and centers. See the IP policy posted at <https://www.qf.org.qa/IDKT/info-bank> or contact IDKT@qf.org.qa for more information about royalty collection and distribution.

REMEMBER

Your role will depend on your level of interest and expertise, the interest of the licensee in utilizing your services, and any collaborators with IP interests related to the license or any personal agreements. Contact IDKT@qf.org.qa if you have questions.

REMEMBER

Most licenses do not yield substantial revenues. The rewards of an invention reaching the market are often more significant than the financial considerations alone.



Other Opportunities to Participate in **COMMERCIALIZATION AT QF**



Depending on your level of interest in participating in commercialization of your research, the following QF programs may be appropriate. Application processes apply for each program.

INNOVATION FELLOWSHIP

Designed for pre-commercialization technology advancement, this innovation support mechanism for RDI activities enables QF researchers to take time off from their regular employment duties to assist in de-risking technologies prior to potential startup activities. These efforts might involve increasing the readiness level of the technology, addressing regulatory matters, or developing demonstration prototypes or presentations.

TECHNOLOGY DEVELOPMENT FUND (TDF)

This fund provides QF researchers the opportunity to advance a technology from prototype to the ready-for-market level within 6 to 12 months. To be eligible, you must have submitted a technology disclosure with IDKT and be selected to apply for funding.

INNOVATION COUPON

Innovation Coupon funding program is a QF RDI initiative that supports grassroot ideas of Qatar's researchers as well as entrepreneurs who are willing to develop a business around an innovative technology or new tech product or service. The program provides the financial and technical support to help them scale their ideas and make them market ready. To learn more visit <https://www.qf.org.qa/innovation-coupon>.

ENTREPRENEURIAL LEAVE

In some cases, a startup may need to utilize QF researchers for certain strategic activities. The Entrepreneurial Leave program enables QF research staff to step away from their normal duties to help with the smooth transfer of technology and knowledge to increase the commercialization success of the product/service.

For more information about these programs, visit <https://www.qf.org.qa/IDKT/for-researchers> or email IDKT@qf.org.qa to discuss your interests with us.



Acknowledgements

This booklet is based on the University of Michigan's Inventor's Guide to Technology Transfer and the Massachusetts Institute of Technology's (MIT's) Inventor's Guide to Technology Transfer, with adaptations for QF. We are grateful to the University of Michigan and MIT for permission to use their copyrighted material.

