The purpose of the Inventors Guide is to answer the most common questions regarding inventions, patents and technology commercialization. The guide is designed to provide a broad overview.

What is technology transfer?

Technology transfer is the movement of knowledge and discoveries from the university environment to the general public. This can occur through publications, educated students entering the workforce, exchanges at conferences and relationships with industry. For the purposes of this guide, however, technology transfer ("commercialization") refers to the process of developing innovations, protecting intellectual property and licensing the intellectual property for commercial application.

Why does Boise State care about technology transfer?

Boise State is engaged in technology transfer for six reasons:

1. To promote the application of the results of scientific research for the public good;
2. To comply with federal law and sponsored research contracts;
3. To recruit, reward and retain faculty interested in seeing their technologies further developed;
4. To provide opportunities for exchanges of information and materials with industry;
5. To promote economic development; and
6. To generate an income stream for reinvestment into research and teaching.

In the ideal case, developing new intellectual property into products and services desired by the public can improve health and quality of life for many, create jobs,
increase government revenues through taxes, and provide revenue to the Inventor and University.

**I'm An Academic, Why Should I Be Interested in Technology Transfer?**

Technology transfer assists with supporting academic research and managing the results of academic research.

Where any portion of research funding comes from the United States government federal law requires the University to disclose inventions, protect intellectual property and engage in technology transfer activity. Invention disclosure requirements also apply to funding from private foundations and commercial sponsors. The invention disclosure process is the first step in meeting those requirements.

All researchers are responsible to disclose all intellectual property that could constitute inventions to the Office of Technology Transfer. This is accomplished through completion of an Invention Disclosure Form.

**What is the Bayh-Dole Act?**

At the close of World War II, the United States government evaluated how money spent on basic research was benefiting the general public. Following years of political debate, it was determined that while intellectual property is important to capture and develop, it was also apparent that the government is ill equipped to manage intellectual property generated from its broad diversity of funded programs. Ultimately, the Bayh-Dole Act was passed in 1980 to create a uniform patent policy for all organizations accepting federal money. The Bayh-Dole act allows universities and other non-profit institutions to have ownership rights to discoveries resulting from federally funded research provided certain obligations are met. The universities are required to protect and commercialize the discoveries, submitting progress reports to the funding agencies. The Bayh-Dole act is credited with stimulating interest in technology commercialization activities and generating increased research, educational opportunities and economic development.
What does the Office of Technology Transfer do?

The Boise State Office of Technology Transfer is responsible for the invention disclosure review, protection of intellectual property and commercialization. The Office of Technology Transfer assists faculty with pre-award and post-award intellectual property issues, supports industry collaboration and sponsored research, participates in economic development related activities on-campus and in the community, manages compliance with post-award sponsor intellectual property reporting, and markets and manages the existing intellectual property portfolio. The Office of Technology Transfer facilitates licenses of intellectual property to commercial entities.

What is an Invention Disclosure? How do I submit an Invention Disclosure?

When an Inventor believes that they have made a discovery that qualifies as an invention, they need to reveal the information to the Office of Technology Transfer by completing a document known as an Invention Disclosure Form. This disclosure should list all sponsors of the research and should include all the information necessary to pursue protection and commercialization activities. It is critical that you complete every section of the disclosure in as much detail as possible or its processing can be delayed. You should also note the date of any upcoming publications or other public disclosure describing the invention. An electronic copy of the Invention Disclosure Form disclosure may be e-mailed to our office. The Office of Technology Transfer will need a signed copy mailed to our office before we can begin to process the Invention Disclosure Form. The Invention Disclosure Form will be treated as confidential. You will be contacted by the Office of Technology Transfer shortly after your submission to discuss the invention. The Invention Disclosure Form is available at://www.boisestate.edu/research/tech/
What right does a research sponsor have to any discoveries associated with my research?

The sponsored research contract or grant agreement should specify the intellectual property rights of the sponsor. In the case of federally sponsored research, the federal agency maintains non-revocable non-exclusive license to use the technology. For commercial sponsored research the sponsor and Boise State may both share an interest in some intellectual property rights resulting from the sponsored research. However, the best outcome is that the sponsor chooses to obtain a license to the intellectual property arising from the research. A sponsored research contract may allow the sponsor a limited time to negotiate a license for any patent or intellectual property rights developed as the result of research. Even so, the sponsor generally will not have contractual rights to discoveries that are clearly outside the scope of the research (and which do not use funds from the research contract). Therefore, it is important to define the scope of work within a research contract.

Sponsored research contracts are handled by the Office of Sponsored Programs. The Office of Technology Transfer works closely with Office of Sponsored Programs on intellectual property issues in sponsored research contracts.

How do I know if I have an invention?

“Discovery consists of seeing what everybody has seen and thinking what nobody has thought.”

Albert Szent-Gyorgyi, Nobel Prize 1937

An invention is "the discovery or creation of a new material (either a new manufactured product or a new composition of matter), a new process, a new use for an existing material, or any improvements of any of these."

What is intellectual property?

Intellectual property are legal property rights over creations of the mind, both artistic and technical, and the corresponding fields of law. Under intellectual property law,
owners are granted certain exclusive rights to a variety of intangible assets, such as musical, literary, and artistic works; ideas, discoveries and inventions; and words, phrases, symbols, and designs. Common types of intellectual property include copyrights, trademarks, patents, industrial design rights and trade secrets.

**What does the University do with intellectual property?**

Boise State actively manages intellectual property to maximize its value to the inventor, the university and society. After the initial assessment of a new invention and the determination of its potential intellectual and commercial value, the Office of Technology Transfer will work to enhance marketability of the intellectual property. When intellectual property is ready for marketing, the Office of Technology Transfer will either license a technology to an existing company or a new company.

**What's in it for me?**

It directly benefits an Inventor to create and protect intellectual property in four ways. First, the Inventor benefits under the University's intellectual property policy by sharing in the financial rewards of licenses. Second, licensing efforts often either establish or strengthen ties to industrial firms, and these reinforced relationships can directly improve opportunities for additional sponsored research. Third, this is good way for inventions to be used for the public good. Fourth, creating intellectual property adds prestige to the Inventor and the University.

**What is a patent?**

According to the United States Patent and Trademark Office (USPTO), “a patent is a property right granted by the Government of the United States of America to an inventor ‘to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States’ for a limited time in exchange for public disclosure of the invention when the patent is granted.”
What is the United States Patent and Trademark Office (USPTO)?

The USPTO is the federal agency, organized under the Department of Commerce that administers intellectual property specifically, copyrights and patents, on behalf of the government. The USPTO employs patent examiners skilled in all technical fields in order to appraise patent applications. The USPTO also issues federal trademark registrations.

Does submitting an Invention Disclosure Form secure patent protection?

Submitting an Invention Disclosure Form does not directly result in any form of protection. The Office of Technology Transfer will access a technology for commercial applicability and then makes a decision about filing for patent protection. You will be kept informed of the process and should the Office of Technology Transfer decide to not seek patent protection for your technology, upon request, you may be given the opportunity to pursue protection on your own.

Will I be able to publish the results of my research and still protect the commercial value of my intellectual property?

Yes, but since patent rights are affected by public disclosure activities it is best to submit an Invention Disclosure Form well before any public communication or disclosure. There are significant differences between the United States and other countries as to how early publication affects a potential patent. Whenever public disclosure occurs, the inventor loses international patent rights for that invention. Additionally, there is only a one-year window after public disclosure to obtain patent protection in the United States. Please plan to contact the Office of Technology Transfer prior to public disclosure to make sure your work is appropriately protected.

What constitutes public disclosure?

There are some gray areas to this question, but public disclosure includes journal publications, website publications, and presentations at conferences, posters, dissertation/master thesis or abstract publication; more generally when the intellectual
property is made publicly available and accessible to those skilled in the art to which the invention relates.

**Can you publish while applying for a patent?**

Publishing and applying for patent protection are not mutually exclusive: they can be done simultaneously under the proper circumstances. United States patent laws allow one to apply for a patent no later than one year after a public disclosure, such as a published paper, a widely available abstract, or an offer of public sale. Grant applications, once awarded, are put into the public domain and may also constitute a public disclosure. Electronic transmission of abstracts, articles or research reports is also a form of publication or public disclosure. Scientists should be aware that many journals and scientific societies often place material on the World Wide Web prior to written publication, creating an increased potential for loss of patent rights. The moment a public disclosure or publication is made, rights to foreign patents are lost unless a United States filing has been made within the preceding twelve months. Foreign protection is important to many international licensees, so Inventors are urged to use discretion, take advantage of Non Disclosure Agreements available from the Office of Technology Transfer, and file invention disclosures with the University well in advance of presentations or publications.

**What happens to the Invention Disclosure Form after it’s submitted to the Office of Technology Transfer?**

Each complete Invention Disclosure Form is logged by the Office of Technology Transfer and assigned a file number. The Office of Technology Transfer will contact the primary inventor to review the novelty of the invention, review the sponsor reporting requirements, if any, discuss the timing of public disclosure, search the depth of competing technologies, conduct an intellectual property search to determine the likelihood of protection and determine the market potential of a future product or service, including the amount of time and money required for further development.
If the invention has potential for intellectual property protection, the Office of Technology Transfer will coordinate with the Boise State Patent Committee to ensure its review. The Patent Committee advises the Office of Technology Transfer on patentability.

**What can be patented?**

An invention is patentable if it is novel, useful and non-obvious. Novel means new. Non-obvious is achieved is someone who is skilled in the art would not have thought of the idea easily. A new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement may be eligible for patent protection. Methods making use of concepts and ideas may be eligible for patent protection. On the other hand, concepts and ideas per se are not patentable.

United States patent law states that patents may be granted on a new and useful process, machine, article of manufacture, composition of matter, or any improvement on these. In addition, patent law also requires an invention to meet the following three criteria:

1. **Novel:** The invention must be demonstrably different from any existing prior art. This means it cannot be described in prior public disclosures, which include publications and/or availability of the invention to the public, as in a commercial product.
2. **Useful:** The invention must be useful in ways that represent improvements over existing products and/or techniques.
3. **Non-obvious:** The invention cannot be obvious to a person of "ordinary skill" in the art. Non-obviousness usually is demonstrated by showing that practicing the invention yields surprising, unexpected results.

Each of the previous criteria is open to the judgment and interpretation of the patent examiner.

Finally, patent law states that inventions may be patented if they have been reduced to practice, even if a physical embodiment of the invention has not been realized ("constructive" reduction to practice).
What is “Conception” and “Reduction To Practice”?

The term conception describes the intellectual act of creating a complete inventive concept, and includes methods for making and using the invention. The term reduction to practice is defined either as (a) constructive reduction to practice, which means completing a written, formal description of an invention in a patent application, even though physical embodiment of the invention may not have been realized; or (b) actual reduction to practice, which means making a physical embodiment of an invention and using it successfully for its intended purpose.

Who is responsible for patenting?

While the Office of Technology Transfer is responsible for the patenting process, it outsources the specialized legal aspects of patent protection to outside patent counsel. During the entire patent process the Inventor(s) work directly with the patent counsel in drafting the patent applications and responses to patent offices in the countries in which patents are filed.

What is "prior art" and how do I find it?

Prior art refers to anything regarding the potential invention that has come before. Remember that a patent has to be novel and non-obvious. Journal publications, foreign patents, issued U.S. patents and patent applications are all areas that can contain prior art. Since the Inventor knows better than most what the invention entails, he or she should be familiar with much of the prior art regarding the invention space. Searches of the Internet, journal articles and patents are helpful examples of place to perform prior art searches. Researchers can search the patent office at www.uspto.gov. The Office of Technology Transfer is available to assist with searches for prior art.

Is a patent application confidential?

The USPTO hold patent applications confidential until published by the USPTO, 18 months after initial filing of the application.
How long does it take to obtain a patent?

Generally patents are issued within two to five years after application. During this period a patent is pending.

Does it cost anything to file a patent?

USPTO filing fees and associated attorneys costs for filing and prosecuting a patent in just the United States can cost between $10,000 and $30,000. International patent filings are even more expensive as they cover a larger number of countries and often involve foreign attorneys and translators. Additionally, there are annual maintenance fees for all patents, increasing the cost over the lifetime of a patent.

What is a maintenance fee?

All utility patents issued are subject to the payment of maintenance fees which must be paid to maintain the patent in force. These fees are due at 3 1/2, 7 1/2 and 11 1/2 years from the date the patent is granted.

How long does the technology commercialization process take?

The process of protecting the technology and finding the right licensing partner may take months - or even years - to complete. The amount of time will depend on the development stage of the technology, participation by the inventing faculty, competing technologies, the amount of work and investment needed to bring a new concept to market and the resources and acceptance of potential licensees.

What is a license?

A license is permission granted by the owner of intellectual property that allows another party to act under all or some of the owner’s rights, usually under a written license agreement. Boise State’s license agreements usually stipulate the licensee must diligently seek to bring the intellectual property into commercial use for the public
good. The agreement also seeks to balance the value to the licensee and provide a reasonable return to the inventor and Boise State.

**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 Office of Technology Transfer does not have multiple potential licensees bidding on an invention.

**Is the inventor involved in technology licensing?**

Studies have shown that 70% of licensees were known to the Inventors. Thus research and consulting relationships are often valuable sources for licensees and Office of Technology Transfer encourages the participation of Inventors. The more involved and interested the inventor is in technology licensing the higher the chances are that successful licenses will be secured. Normally the Inventor is the first and best source of information on what companies would be interested in licensing the technology. 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 Office of Technology Transfer work together as a team to market and promote use of the intellectual property.

**What can I expect to gain if my patent is licensed?**

According to Boise State policy, a share of financial return 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 very positive outcome of the licensing process.