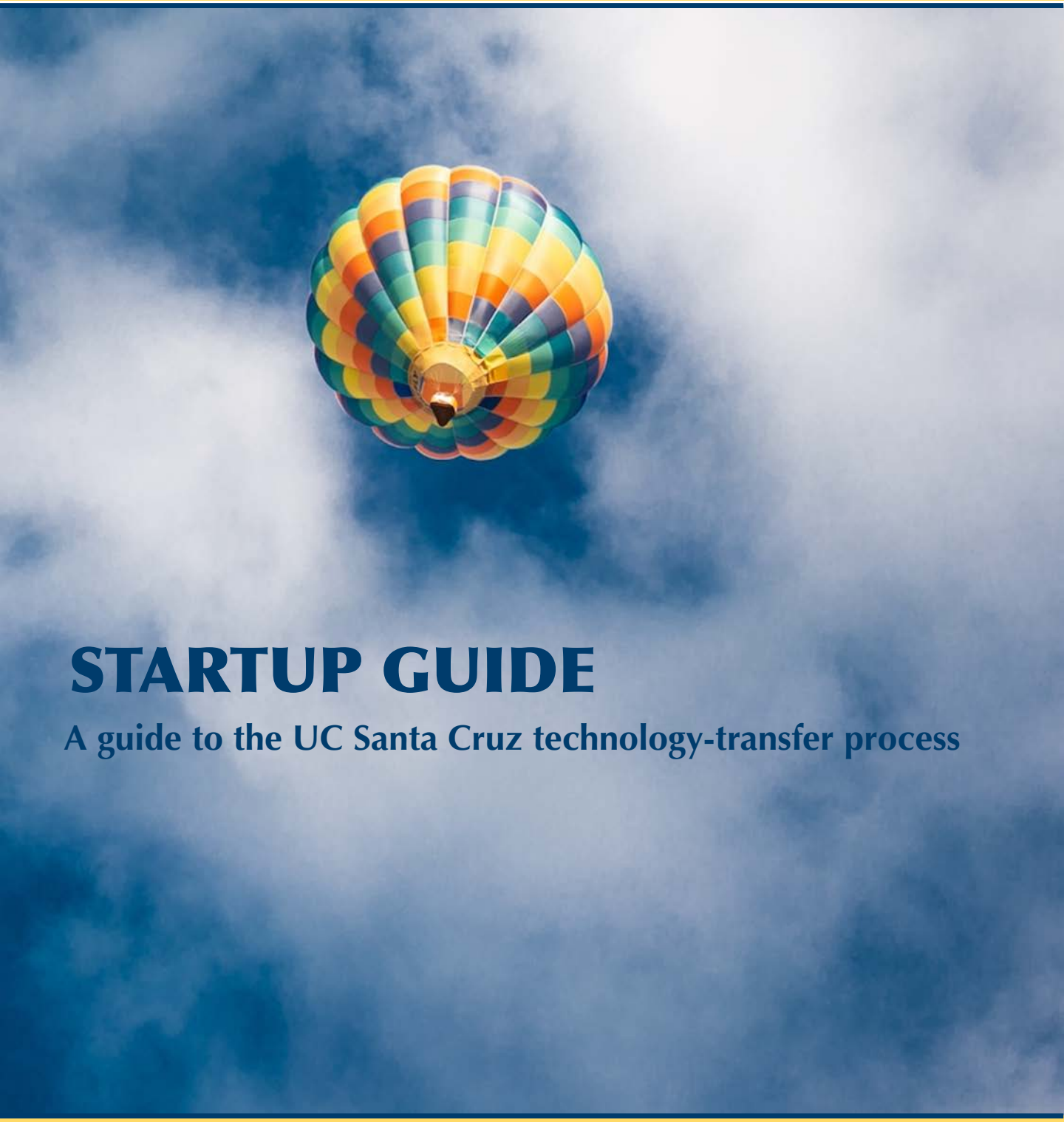
IATC | INDUSTRY ALLIANCES & TECHNOLOGY COMMERCIALIZATION



STARTUP GUIDE

A guide to the UC Santa Cruz technology-transfer process

UNIVERSITY OF CALIFORNIA SANTA CRUZ

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Table of Contents

The **Industry Alliances & Technology Commercialization** (IATC) office functions as the bridge from campus to our local and global communities, bringing UC Santa Cruz innovation into the forefront of the commercial marketplace.

Beginning in 2016-17, the Office of Research has embarked on the first phase of a new, comprehensive, and integrated approach to supporting our faculty research industry relations/technology transfer.

Objectives

- Expand the UCSC intellectual property (IP) portfolio in research areas that currently have high commercial interest or societal benefit, have not historically engaged IATC, or are significant research strengths for UCSC

- Increase the number of opportunities for UCSC students and faculty to collaborate with a wide spectrum of industry partners

- Accelerate the commercialization of innovations resulting from UCSC research through licensing and startups benefiting the local economy

IATC serves campus through four primary functions:

Intellectual Property Management
Supports campus researchers with strategic management of their patents, copyright and tangible research property.

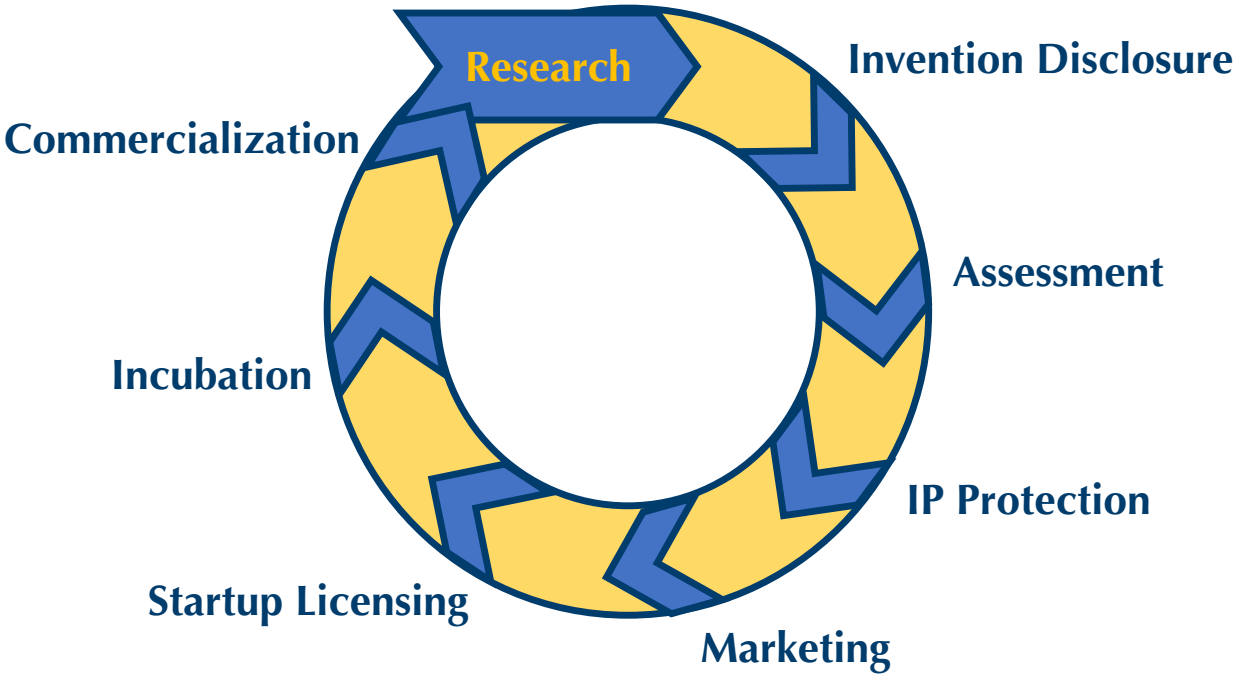
Industry Alliances & Licensing
Identifies potential industry partners for research sponsorship and collaboration, and transacts IP license agreements.

Industry Agreements
Transacts the legal contracts with research sponsorship and collaboration partners.

Commercialization Services
Provides a variety of entrepreneurship support programs to help launch campus entrepreneurs and technologies to market.

An overview of the technology-transfer process:

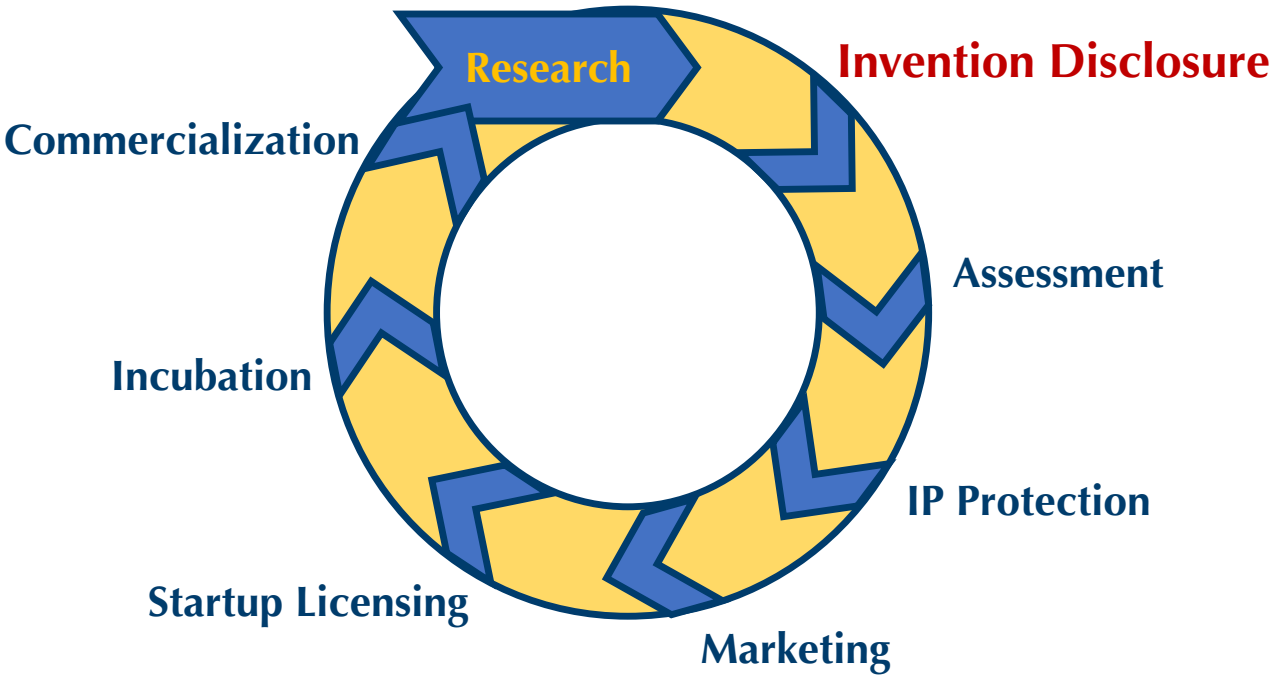
The high-level view of understanding the process of licensing university-owned intellectual property can be equated to a circle in which an invention brought forth out of research is commercialized with the intent to return support back to research and education. This is true whether an established company or a startup licenses the invention.



The University's mission is to capture the full value of IP and ensure product development is realized for society's benefit. See the University of California's Patent Policy for more information.

Invention Disclosure

As a public university funded by tax dollars, it is an obligation for faculty, staff and graduate students to disclose an invention, which is governed by the Patent Acknowledgement Agreement signed during employment orientation. Undergraduate students that are not employees are not bound by this agreement and therefore generally retain IP ownership.



An **Invention Disclosure** to IATC is a confidential document describing the invention, specifically the solution and its advantages over other solutions that have attempted to solve the same or a similar problem.

Invention Disclosure: Submission

IATC has made it simple and easy to submit an electronic Invention Disclosure.

Publication or public presentation of an invention prior to filing a patent application will adversely affect patent rights. Disclosure well in advance of any publication will assure the full rights are maintained. Feel free to contact IATC at any time and our staff will follow up to help you evaluate, we're here for you.

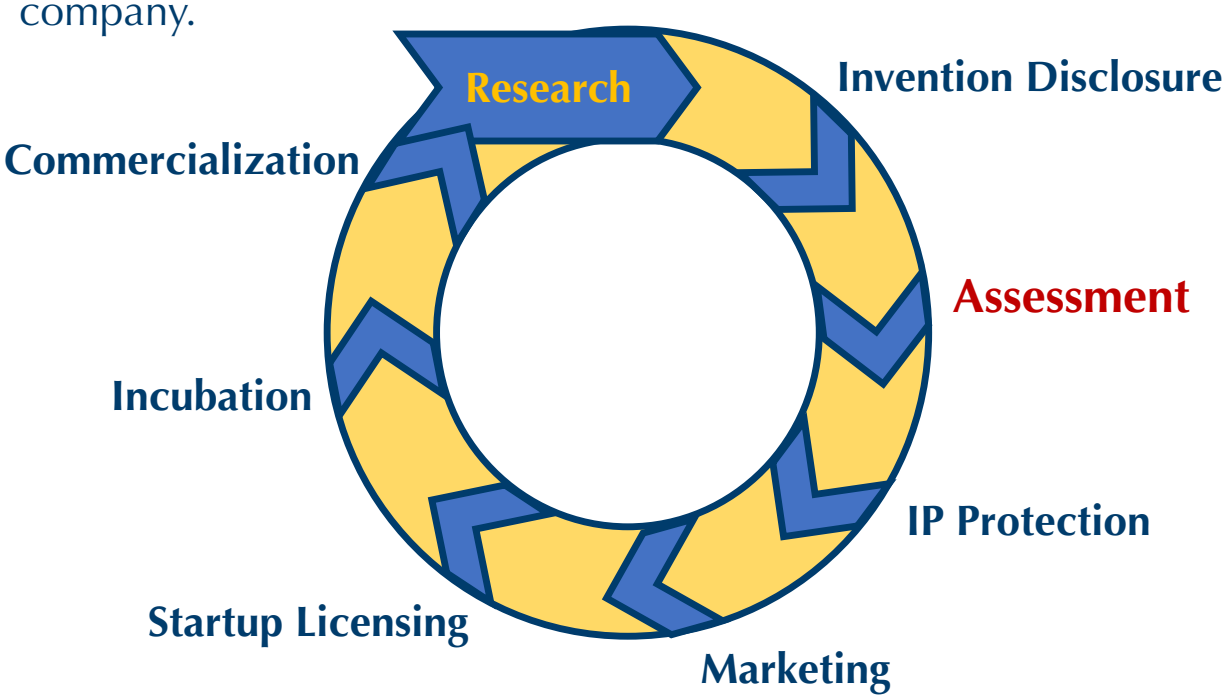
The Invention Disclosure involves:

- A **short description** of the invention including what technical problem(s) the invention solves, key features that result in the solution(s), and any advantages the invention has over other attempts to solve the problem(s).
- **Funding sources and/or other resources** that were used in the creation of this invention, i.e. a grant or other sponsored research agreement.
- Your **public disclosure timeline**, e.g. presenting at an anticipated conference talk or professional meeting.

Not everything is owned by the University, there are circumstances in which you may own the IP. It is in everyone's best interest to clarify ownership, and IATC can certainly help to make that determination when you submit a disclosure.

Assessment

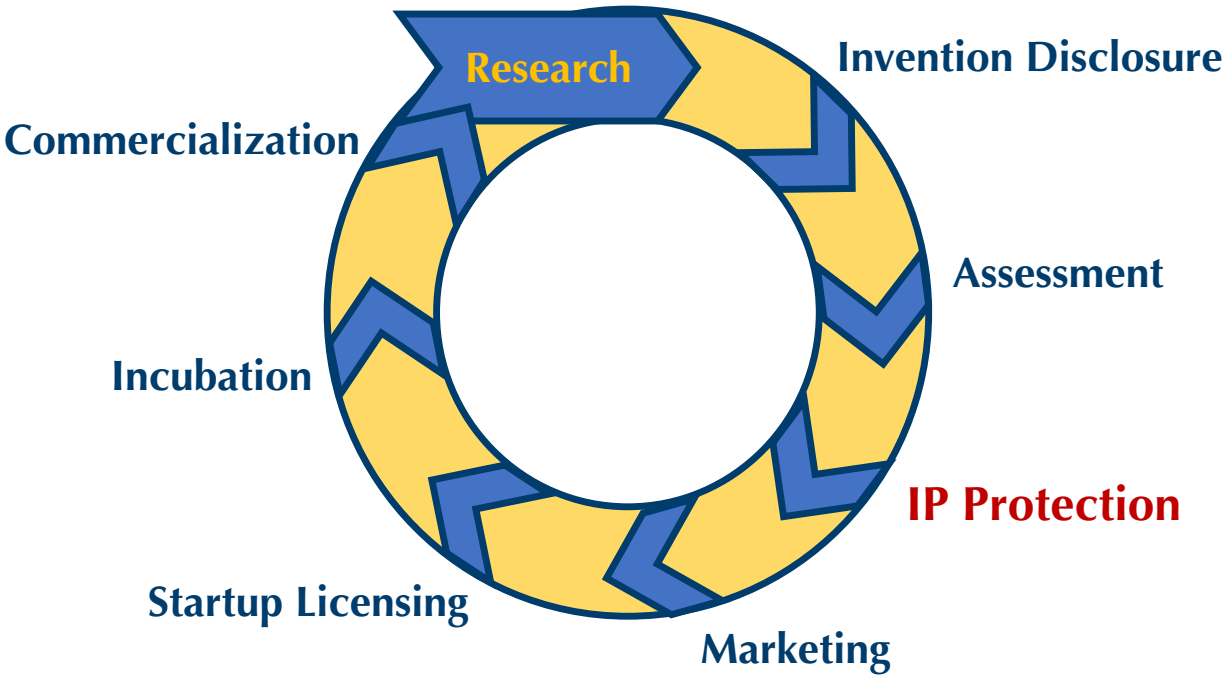
IATC's IP Management team receives the Invention Disclosure and will first meet with the inventors to determine UC ownership and/or identify any third-party obligations. Once UC ownership is confirmed, together we'll begin the initial assessment and develop an IP protection strategy. This is a good time for inventors to identify that they may be interested in starting a company.



Marketing the invention also serves as a point of assessment. Feedback from recipients of the marketing materials will help to inform the IP protection process.

IP Protection

Intellectual Property takes several forms, of which patents typically come to mind. However, protectable IP can take many forms and are successfully licensed. For example, Copyrightable IP, such as **software**, and tangible research products (TRP), e.g. **biological materials** such as antibodies, are common forms of IP licensed by the University.



Open Source Software does not equate to unpatentable or unlicensable. In fact, all open source relies on Copyright licenses to keep it open. If you create something others may use, regardless of whether or not you want to release it under an Open Source license, submit a disclosure and come talk to us.

IP Protection: Patent FAQ's

What is a patent?

A patent is document issued by the federal government containing a written recipe to create or reproduce an invention, and the recipe is made up of a set of **claims** that define the invention. The patent owner is permitted to exclude others from making, selling or using the invention for a period of time.

Obtaining a patent (also known as an **issued patent** or patent grant) is a challenging process. The claims must meet patentability requirements such as novelty, usefulness and non-obviousness, as defined by the U.S. Patent and Trademark Office (USPTO). The process is initiated by filing a **patent application** with the USPTO and, potentially, other foreign patent offices. Shortly after a patent application is filed, a formal dialog and process to examine the claims between the USPTO and the University will begin, which often lasts several years and costs thousands of dollars. This is what's known as the **patent prosecution**.

What is the average cost of a patent?

Depending on many factors, a U.S. patent can range from $10,000 to more than $30,000. This includes both attorney and USPTO fees.

IP Protection: Patent FAQ's (cont.)

What's the difference between a provisional and non-provisional patent application?

A provisional patent application is a one-year application that expires on the anniversary of its filing date. It serves as a **priority date** with the USPTO for which any **prior art** (material evidence that your invention is already known) is judged against the application content. Any references published after the provisional filing date will not affect the patentability of the invention. The provisional application is ***not*** examined by the USPTO.

At the end of the one-year provisional term, a non-provisional application must be filed with the USPTO on or before the provisional expiration date or the provisional application is abandoned. The **non-provisional application is examined by the USPTO** through a process (patent prosecution) often lasting years. If the non-provisional application meets all requirements of patentability, a patent is issued. A non-provisional application can be filed without first filing a provisional, however, it is difficult to add new information to a non-provisional patent application. New information can be readily added to the application during the term of the provisional application.

The foreign patent application process is different; contact IATC's IP Management team for more about foreign prosecution.

IP Protection: Patent FAQ's (cont.)

What is the difference between a patent inventor and a manuscript author?

Unlike a manuscript, the named order of inventors on a patent or patent application has no implication of importance. Also, unlike a manuscript author, not everyone who contributed to the work is an inventor. Inventorship is a legal determination. For example, a lab technician may have performed the hands-on work in characterizing a compound, but did not have any contribution to what the structure of the compound would be. However, if the lab technician overcame a hurdle in the synthesis of the compound, that lab technician may then be considered an inventor. Inventors must have made an **intellectual contribution** to at least one claim on a patent.

Marketing

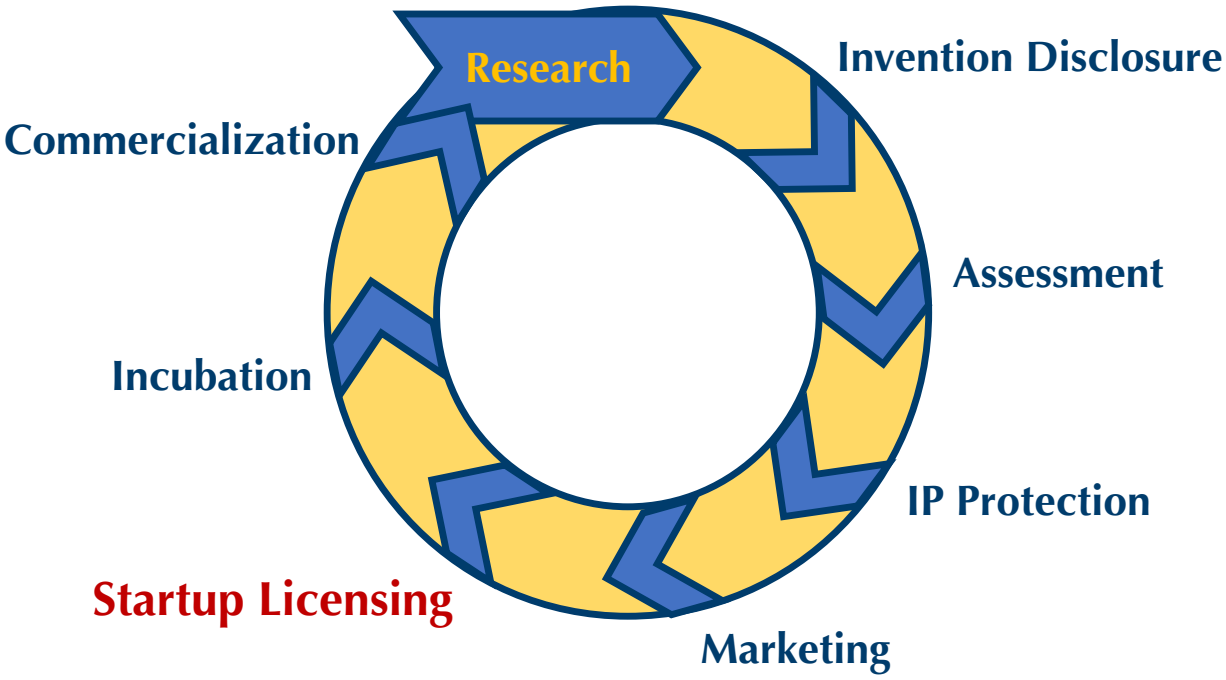
Once IP protection strategy is determined and with your input, we create a non-confidential summary, known as a **Non-Confidential Disclosure (NCD)**, of the invention to distribute to potentially interested parties. We strive to identify and connect with potential companies and investors within the relevant market that may have the capabilities and/or resources to develop the IP. To do this, we perform market reports and actively reach out to contacts at the companies and firms we identify. We also distribute NCDs to relevant contacts at corporate events and meetings.

All available technology for licensing have an NCD and are available for browsing on both the Licensing Opportunities and TechFinder webpages.

The feedback we receive from outside parties is extremely valuable not only to help inform our IP protection strategy, but also to guide next steps for further development. The University recognizes that most inventions are very early stage, and may require more development before reaching a commercially ready state. We are also here to help support your research development effort through active outreach to potential corporate sponsors and collaborators. Please contact our Industry Alliances team for more information about how we can support your corporate research partnerships.

Startup Licensing

IATC utilizes a variety of IP licensing options depending on the circumstances of the opportunity. We will work with potential licensees to ensure diligent commercialization of the licensed technology and to establish licensing terms that are appropriate for the industry sector, the licensed technology and the needs of the licensee.



Startup Licensing: Option Agreement

To begin the process of licensing university-owned IP, schedule a meeting with IATC's Licensing team. Discuss you general plan for the company, IP product development and timelines. We'll talk to you about what you can expect from the **License Agreement** and process, and provide agreement templates for you to review.

You may not be ready to provide a **Business Proposal** right away, but we will require this before building and negotiating the agreement. Here's what a business proposal entails:

- A formal business plan
- Incorporation documents
- Potential or existing financial partner information
- Place of business address

Often for startups with little to no capital, an **Option Agreement** is a useful, initial step in securing the IP for your startup company. An Option Agreement is a placeholder-like agreement that reserves the right to negotiate an **Exclusive License Agreement** for the IP, for a short period of time up to 18 months. At the end of the **Option Period**, the **Licensee** (your company) agrees to negotiate, within a set period of time typically 30 or 60 days, the **Term Sheet** for the Exclusive License. The Term Sheet captures the major considerations of the Exclusive License.

Startup Licensing: Option Agreement (cont.)

You do ***not*** need to provide a Business Proposal to execute an Option Agreement, nor are you required to being reimbursing patent expenses. Though there is a small, standard, quarterly fee, the Option Agreement delays your financial obligations and can enable you to begin to raise capital from investment firms. For example, investors often want to be confident your company has clear "**freedom to operate**" and therefore has licensed any required rights to any IP before investing. However, without an investor, often the capital to obtain these rights is not all there. Investors typically recognize the validity of the Option Agreement, and your commitment to securing the IP and freedom to operate.

It is IATC policy that the Primary Investigator or any named inventor of the IP intended for license cannot negotiate any contract agreement with the University on behalf of the company. This helps to clear any potential conflict of interest in the negotiation process.

Any faculty or university employee with involvement in any company outside their university appointment should consult the University's policy on **Conflict of Interest (COI)** and **Conflict of Commitment (COC)**, and review the **Academic Personnel Manual (APM)**.

Startup Licensing: Other Considerations

It is important to the University that the IP is developed for society's benefit, and not withheld for defensive purposes. Therefore, **Diligence Milestones** are a significant factor in an Exclusive License Agreement.

Patent expense reimbursement is a standard consideration anticipated with exclusive licensing. UC Santa Cruz remains the Patent Attorney client, but consults with the Exclusive Licensee at every step of the way. IATC understands the importance of every claim within a licensed patent/patent application to the Licensee, and behaves accordingly in partnership with the Exclusive Licensee.

The university retains the right to use the patent for research purposes only. This is standard language among university-owned license agreements.

If the IP was developed in-full or in-part by a government grant, the government retains rights to the invention. This is a standard, non-negotiable right. Also if government supported, the Licensee must manufacture the IP within the United States; this is a standard, non-negotiable obligation as well. There is a government waiver form to request release of the manufacturing requirement if your company can demonstrate significant necessity and make a strong justification for release.

Startup Licensing: Business Plan

Part of the Business Proposal is the Business Plan. Every Business Plan is different, but here are some **typical components of a good business plan:**

- Description of company and business objectives
- Management team roles and relevant background
- Current market and competitive landscape, including financial potential such as sales and revenue forecasts
- Patent/IP landscape related to the market of entry and university's invention, and competitive advantages
- Potential risk factors and mitigation strategies
- IP development goals, timelines and budget estimates
- Short- and long-term financial plan, including marketing and sales strategy

The Business Plan is obtained under strict confidentiality by IATC, and we recommend you also secure confidentiality among potential investors.

Startup Licensing: Term Sheet

Once an Option Agreement has expired, the Licensee has a certain window of time to complete negotiation of the License **Term Sheet** with the University. The Term Sheet lays out the financial terms and diligence milestones that will be included in the corresponding Exclusive License Agreement. Developing the Term Sheet can be complicated and usually results in a lot of back-and-forth discussion between the Licensee and the University. The values of the Term Sheet are developed using information from the Business Proposal as well as IATC's internal business and market valuation. It is IATC's intention to consider all the elements of the business and technology to ensure the terms are fair and reasonable. We want your company to be successful; IATC will work to establish licensing terms that will not create a barrier to your success.

Executing the Term Sheet is an important milestone itself as it provides a roadmap for productization and commercialization of the IP.

Startup Licensing: Term Sheet (cont.)

Some of the terms defined within the Term Sheet may be:

- **Territory** – geographical area for license.
- **Field of Use** – commercial market for license.
- **Issue Fee** – this is the fee for entering into the license.
- **License Maintenance Fee(s**) – outlines the annual fees due to maintain the license, and amount can vary overtime.
- **Earned Royalty** – this is the royalty rate paid to the university on Net Sales of Licensed Products (whether by Licensee or potential Sublicensee).
- **Minimum Annual Royalty** – a minimum payment due creditable towards Net Sales.
- **Sublicense Income** – often in the form of a royalty rate on Licensee's earned income from any Sublicensing activity.
- **Commercial Milestones** – financial payments on Net Sales milestones.
- **Diligence Milestones** – product development milestones.
- **Patent costs** – any accrued patent expenses.
- **Change of Control Fee vs. Equity** – An Exclusive Licensee can expect the University to require equity in the company and/or a change of control fee.

Startup Licensing: Patent FAQ's

Who owns any follow-on patent application(s) once the original patent or patent application has been licensed?

Ownership follows inventorship; if the follow-on patent application is based on work done at UC Santa Cruz by UC Santa Cruz employees, the University owns it, and likewise if the work was done at the company by company employees, the company owns it. If the work was done by both university and company employees, the invention will be jointly owned. We recommend circumstances of company involvement by a university employee remain clearly defined; IATC and other university administration can help advise to make sure your activities are in line with policy according to **Academic Personnel Manual (APM)**.

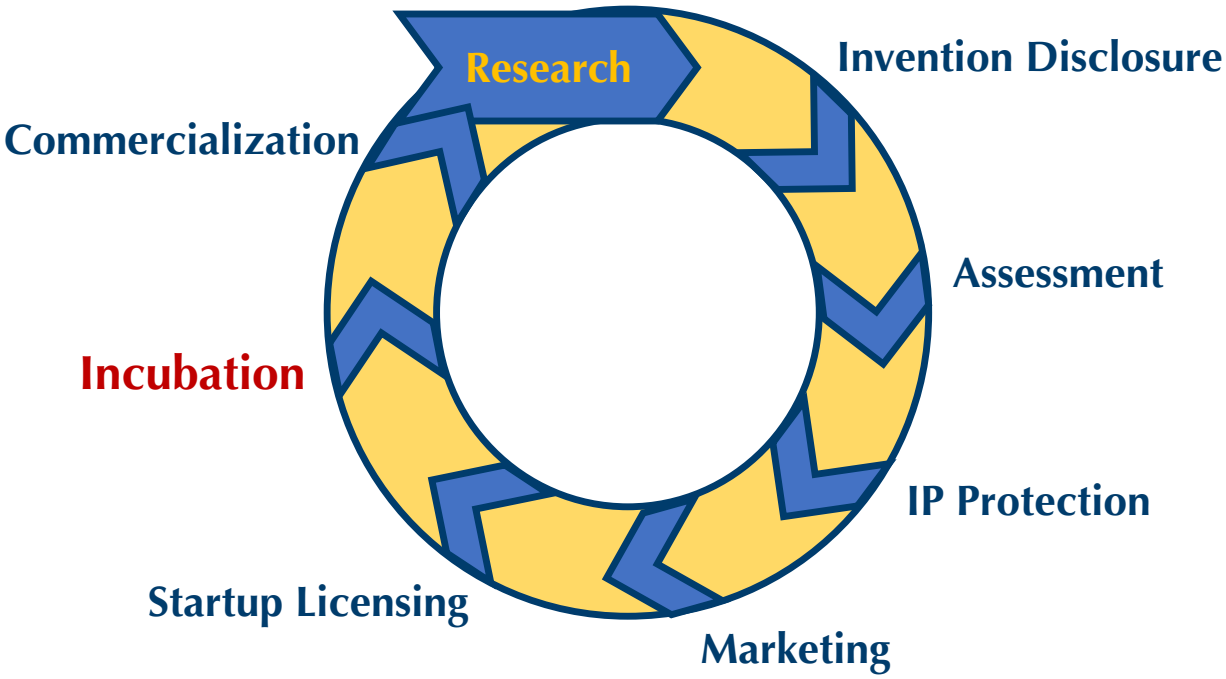
Any follow-on patent applications wholly owned by the Licensee must be filed by a different law firm than the original patent that was filed by the university. Patent attorneys must avoid conflict of interest and cannot represent the Licensee and University.

Once the patent or patent application is licensed, who manages the patent prosecution?

The University remains the client of the attorney, but will work together with the Licensee every step of the prosecution and will instruct patent counsel with the Licensee's best interest in mind.

Incubation

Getting a new company off the ground is a long and winding road, and takes passion and unwavering commitment to persevere. There are some known key components of a successful startup, and the university is committed to supporting you in learning and obtaining the resources to increase your odds of success.



Incubation: Pursuing Funding

Starting a company is a challenge and depending on the technology and your resources, initial **Seed funding** can come from a variety of sources. Typically venture capitalist (VC) firms do not invest in seed rounds and instead get involved in later-stage funding rounds. Seed funding will often come via "Friends and Family," Angel Investors and Government Grants.

Both VC's and angel investors typically exchange capital for equity in your company. VC's will often exercise their ownership control, and like to guide corporate growth with their choice of management expertise. Every VC firm is different, and we encourage you to do your research to understand which firms may be interested in seed funding, and in your technology and/or market of entry. It's important to approach the right people that will be interested in what you are doing and at the stage you are doing it. Be sure to ask a lot of questions too; identifying an investor is an important partnership for the health and success of your company.

In some cases, startup companies choose to "bootstrap" operations until reaching a particular technical milestone. Taking advantage of government research grants such as the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) is another viable strategy.

Incubation: UC Santa Cruz Programs and Resources

There are many great resources available on campus and in the surrounding community to help guide you on a path towards commercialization. The University has invested in the following campus and community incubator-accelerator programs to support you:

Startup Sandbox – a UCSC-sponsored incubator in Santa Cruz located near campus that offers business and legal mentorship and training, in addition to dry-lab and fully outfitted BSL1 and BSL2 wet-lab facilities. The Sandbox also works in affiliation with the Natural Bridges Venture Fund.

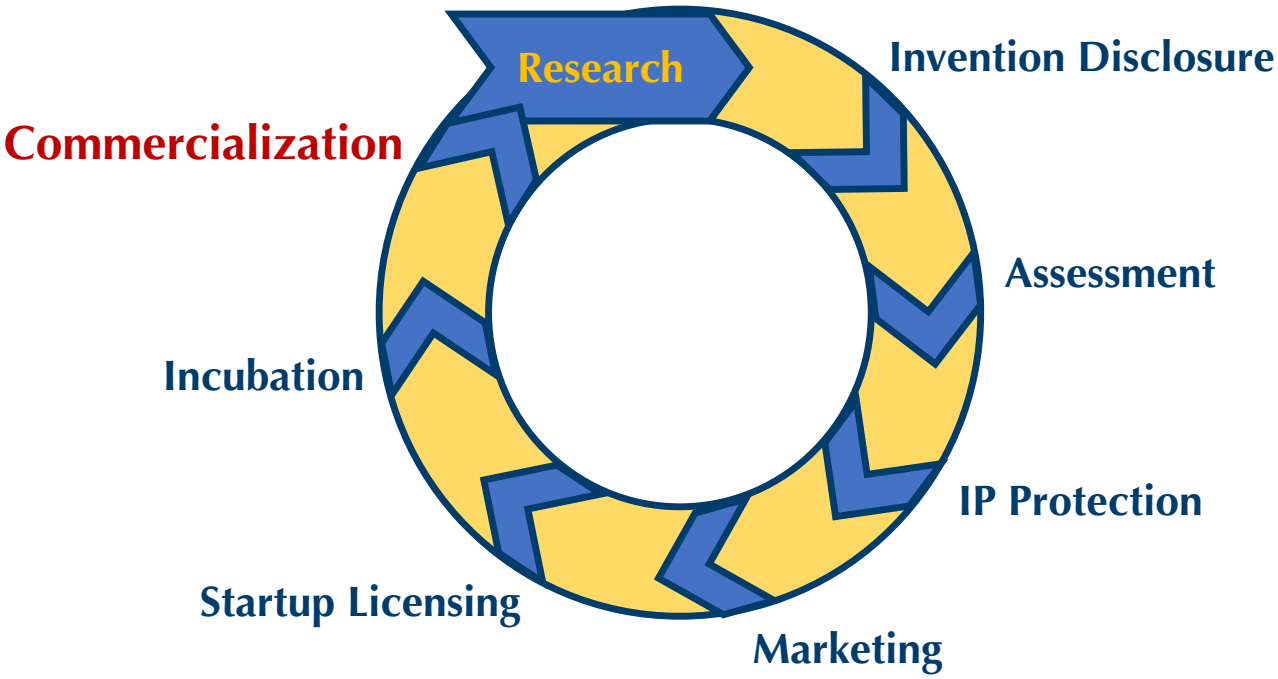
SV Link – an incubator-accelerator co-working space and training program with access to a strong network of investors. Located in Santa Clara at our Silicon Valley campus.

Santa Cruz Works Accelerator – a training program that aims to support early-stage startups to achieve viability in Santa Cruz County.

For more opportunities to leverage your success, please check out our Services and Resources webpages, and contact our Commercialization Team. We are here for you.

Commercialization

University-owned IP is very early stage and often requires years of continued research; a Licensee is expected to reach the Diligence Milestones, and IATC will continue to work with your company as research and development activities continue over time.



Royalty returns provide personal income to the inventors, as well as additional research funds for the University and are a positive contribution to campus growth.

Remember, we're here for you!

IATC looks forward to supporting your innovative and entrepreneurial journey. Please **contact us** with any questions you may have about our policies, processes and programs designed to help you achieve success.

Industry Alliances & Technology Commercialization
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