Colorado State University Ventures

Startup Guide 2011

Successfully Starting a New Company With University Inventions
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Introduction

Colorado State University enthusiastically supports entrepreneurship as an integral part of a healthy academic and research enterprise, and necessary to accomplish its mission as a modern land-grant university. Colorado State University Ventures (CSU Ventures) is dedicated to supporting inventors and company founders, promoting regional economic development, and helping the University create a culture of innovation and commercialization throughout the entire institution. The importance of entrepreneurship to the University community is highlighted by the active role that the Office of the Vice President for Research (OVPR) takes in extending University research through private engagement to aggressively achieve regional, national, and global impact, which includes developing the University’s Supercluster® model.

To facilitate movement of inventions from universities to the marketplace, in 1980 the federal government passed the Bayh-Dole Act, which allows universities to own patents on inventions created using federal research funds. State governments also encourage public institutions to commercialize research innovations and create startup companies to assist with state-based economic development. Today, faculty engagement in patenting and licensing their discoveries has become an enduring national movement due to the many benefits it brings to the faculty, the university, private enterprise, and the community.

Companies emerging from the University bring new ideas and excitement to academic research programs and the fruits of research are multiplied when the utility of a scientific discovery is valued in the marketplace. New companies provide a major source of new job creation in our economy; therefore new companies based on the transfer of University technologies are a key driver of economic development for the state of Colorado and the nation as a whole.

As much as founding a startup company is usually new and challenging to Inventors, it can be one of the most rewarding experiences an individual may ever encounter. The excitement of seeing an idea coming to fruition and possibly changing people’s lives for the better is palpable and reinforcing.

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1 The term Inventor will be used to denote any University employee or Member (as defined in Section J of the CSU Faculty Handbook, see page 14) who creates an invention through his or her university responsibilities.

2 This guide will variously use the terms startup, startup company, new company, and company to refer to a company founded for the purpose of further developing and commercializing a University invention.
Launching a startup creates a unique set of challenges for Inventors. In many instances, Inventors who create an early-stage invention are in the best position to launch its development. Not only do they possess unsurpassed technical knowledge about their invention but they often best appreciate and express the promise it holds with matchless optimism and passion. Inventors usually learn about building a business in real-time, which requires them to “wear two hats,” acting both as University employee and company leader. In the first stages of company formation, these dual responsibilities may lead to real or perceived conflicts of interest and conflicts of commitment. In most cases, conflict concerns can be effectively managed when Inventors utilize CSU Ventures support and adhere to the University policies and procedures, which are discussed later in this guide.

The purpose of this guide is to explain how long-standing University policy and procedures are being applied in the area of University entrepreneurship with the two goals of facilitating the development of new technology companies while preserving the unique nature of the University academic research enterprise. We hope this guide offers a useful roadmap for Inventors navigating CSU Ventures and University policies and procedures during the early stages of company formation and helps to ensure that the new company starts off on the right foot.

What constitutes an invention? What is IP?

According to the CSU Faculty Handbook, Section J, inventions are defined as “New, useful, and non-obvious ideas and/or their reduction to practice that result in, but are not limited to, new devices, processes, and/or methods of producing new and/or useful industrial operations and materials; any produced article useful in trade; any composition of matter, including chemical compounds and mechanical mixtures; any plant covered under plant patent laws, the Plant Variety Protection Act, or other methods that provide protection; biological materials including cell lines, plasmids, hybridomas, monoclonal antibodies, and genetically-engineered organisms with commercial potential; many new designs in connection with the production or manufacture of an article including computer software, data bases, circuit design, prototype devices and equipment; and any improvement upon existing processes or systems. An invention may be copyrighted, patented, and/or trademarked.”

Intellectual property (IP) is a term referring to a number of distinct types of creations of the mind for which property rights are recognized. Invention as defined above and IP are generally interchangeable, although this guide uses only invention for consistency’s sake.
Section I: Steps to Creating A Company Based on University Inventions

This section explains how CSU Ventures facilitates and supports the development of startup companies based on research conducted at the University. It also addresses the potential roles, considerations, and opportunities for Inventors. To help Inventors better understand the process of building a new company, CSU Ventures has outlined five major steps for launching a startup company from within the University community. The five major steps are: (1) Propose Company Idea, (2) Develop a Strategy, (3) Form the Company, (4) Find Funding, and (5) Further Research and Development for Commercialization. Although these five steps signify major milestones that almost all Inventors will meet when founding a new company, every startup process is unique. No two experiences will be exactly the same and success is not guaranteed.
1. Propose Company Idea

The first step in the process is communicating the invention and company concept to CSU Ventures, who will then discuss the opportunity with the Inventor.

Invention Disclosure
The process formally begins with the Inventor disclosing his or her invention to CSU Ventures staff. Frequent dialog with CSU Ventures is encouraged at all stages of academic research (even before the research begins!); an Invention Disclosure Form (IDF) will need to be submitted to CSU Ventures. After further discussion, it may be decided that a startup company is a viable option that maximizes value to the Inventor and the University.

Commercial Viability and New Company Concept
CSU Ventures will work with the Inventor to make an initial assessment concerning patentability, technical feasibility, commercial potential, and the opportunity to create a new company based on the University invention. If appropriate, other individuals may be consulted for additional input, although confidentiality must be carefully managed at this early stage.

When does CSU Ventures encourage a startup company?
This will depend on many factors, including the invention, the founding team, and the target market. Platform technologies (inventions that could support multiple applications and numerous products) and disruptive technologies (inventions that will lead to products that are radically different from existing products) are often well suited to startup companies. Inventions that lead to more incremental improvements, have a very specialized focus, or that can be readily implemented into an existing service or product line are often best licensed to existing companies that have the commercialization infrastructure already in place. CSU Ventures will also consider whether the size of the target market is sufficient to support a new company.

Much of the decision will also be based on the skills, dedication, and ambition of the founding team. CSU Ventures recognizes that University inventions are frequently early-stage and that the Inventor is often in the best position to further the invention’s development. If the Inventor displays a real commitment to forming a startup company and the invention is appropriate, CSU Ventures will fully support the startup.

Managing confidentiality
Confidentiality regarding inventions may be important to startups for a variety of reasons. A primary motivation is that startups based on technological innovation need to protect their invention rights. Confidentiality is a concern in this regard because inventions that have been publicly disclosed will not be eligible for full patent protection (unless the patent application is filed before public disclosure). A confidentiality agreement will allow conversations to take place without constituting a public disclosure. CSU Ventures can advise on and execute these agreements.
2. Develop Strategy

Although occasionally the path forward may seem clear, often more information will be needed to identify the most promising business opportunity and commercialization strategy. Arrangements can be made for CSU Ventures to delay pursuing other licensing opportunities while the Inventor gathers more information, identifies likely business partners, and further assesses the commercial opportunity. The Inventor should also notify his or her Department Head/Chair and begin the conflict of interest management process with the University. At the end of this stage, the Inventor and CSU Ventures will have enough information to make a “go/no go” decision on the startup.

Standstill or Option Agreement

As University policy requires invention rights to be assigned to the University (see Section J of the CSU Faculty Handbook) and then transfers these rights to CSU Ventures, the new company will need to obtain from CSU Ventures the legal rights to further develop and commercially use the invention. Ultimately, this will be accomplished using a License Agreement; but in the early stages, other formal arrangements with CSU Ventures can be worked out. These include a Standstill Agreement and an Option Agreement. The end result of each is that CSU Ventures will agree to reserve the intellectual property rights for the Inventor’s startup company for some limited period of time, and the Inventor will agree to further mature the company idea.

A Standstill Agreement is one available strategy for the Inventor at this point in the process. As per the Standstill Agreement, during the defined standstill period, CSU Ventures agrees not to license the invention to another party while the Inventor agrees to further develop the business opportunity (with CSU Ventures’ help). A Standstill Agreement is an appropriate choice when there are still too many uncertainties to justify the time and expense of forming a company. At the end of the Standstill Period, the Inventor should be able to complete the Startup Checklist, a brief document that highlights the most crucial information needed at this time to realistically evaluate the possible business opportunity. A standstill period typically is from 3 to 9 months in duration but may be influenced by patenting deadlines.

Another strategy would include an Option Agreement; this agreement requires the company to be legally formed (see Section 3, Form the Company). In this case, the new company will already exist but will not be ready to negotiate an Exclusive License. The Option Agreement provides the company with an Option to an Exclusive License. The Option may be exercised by the company at any time prior to the expiration of the Option Agreement and assures the company that CSU Ventures will...

How long does it take to get a patent?

Obtaining a patent takes many years. After a provisional application is filed, a regular U.S. application and any foreign applications must be filed within one year of the provisional filing date.

Once a regular U.S. application is filed, it usually takes approximately two years before the USPTO begins its review. Once the application is under review, it can take another one to three years before the patent issues, depending on the outcome of the examination of the application. After the patent is issued, it will be in force for 20 years from the priority filing date (typically the date of the first application filed). During that time, maintenance fees must be paid at 3½, 7½, and 11½ years to keep the patent in force.

If foreign rights are also pursued through the filing of a PCT application, follow-on applications in each foreign country must be filed within 2½ years (30-31 months) from the filing date of the provisional application. Then each foreign application is examined separately, a process that can take anywhere from one to five years before the foreign patent is issued.
not license the invention rights to another party while the Inventor’s company continues to develop (e.g. further refines a business plan, looks for funding, assembles a business team). Like a Standstill Agreement, the Option Agreement preserves the startup’s ability to license the invention. However, an Option Agreement provides a stronger guarantee, as the decision to enter negotiations for an Exclusive License is solely up to the new company if it meets the basic obligations outlined in the Option Agreement. A startup may also claim that it has “exclusive rights” to the invention during the Option Period, which is often critical when seeking investors and/or strategic partners.

A typical Option Agreement generally provides the startup with a six month time frame within which CSU Ventures will not license the invention rights to others. When the new company fulfills the Option Agreement requirements, it can exercise the license Option. If the new company does not fulfill the requirements of the Option Agreement, CSU Ventures may either consider granting additional time or may decide to pursue other licensing alternatives.

It is important to note that the patenting process has certain timeframes and windows of opportunity for filing patent applications. As such, Option Agreement and Standstill Agreement timelines will need to take into account relevant patent deadlines so that all parties can make an informed decision when considering a commitment to the significant expense of patent prosecution. (The approximate cost of a single U.S. non-provisional patent application filing may typically be in the range of $10K-$15K plus an additional $5K if patents in other countries are desired. Note that these costs can vary and do not include the total costs to see a patent through to issuance.)

Alternatively, if considered strategically appropriate, the startup can go directly to a License Agreement. Neither the Standstill nor Option Agreements are required, although often the Inventor will want the time provided by these agreements to further evaluate the business opportunity and prepare a suitable commercialization strategy.
Conflict of Interest Management
While the University supports Inventor-founded startups, the University has policies designed to ensure that potential individual and institutional conflicts of interest are managed properly. First and foremost, all Inventors have an obligation to the University to report their intention of becoming involved in the company. Inventors must work with their Department Head/Chair and their college’s Research Associate Dean to address potential conflicts of interest and/or commitment. A Roles and Responsibility Survey (i.e., disclosure) must be submitted in order to evaluate the potential for real or perceived conflict of interest and/or commitment. Conflict of interest and/or commitment concerns are most frequently mitigated through the development of a Conflict of Interest Management Plan with the University. Additional considerations may apply such as external sponsor notification and/or amendment of approved regulatory protocols, as applicable.

CSU Ventures will not enter into a License Agreement with a startup company until the University is satisfied that any potential conflicts of interest are being appropriately managed.

Preparing for a License Agreement
Before entering negotiations for a License Agreement (either initially or at the end of a Standstill or Option period), the Inventor will need to lay a strong foundation for the startup. CSU Ventures is available to assist and has compiled a Startup Checklist (see Appendix) as a resource for this purpose. In particular, CSU Ventures highly recommends that the Inventor:

- establish a defined role for the Inventor,
- prepare a business and/or technology development plan,
- recruit an experienced business driver and/or management team,
- determine needs and formalize facilities (space and/or equipment) arrangements, and
- obtain both initial funding and solid prospects for accessing additional capital as needed to commercialize the invention and execute the business plan.

CSU Ventures will discuss the proposed startup company with the Inventor. Provided that a reasonable business case exists, the decision will be made to found a company and GO FOR IT!
Once the decision has been made to pursue a new company commercialization strategy, the Inventor will found the company and assemble a suitable team of advisors, officers, and employees. The company will then secure its legal rights to the invention using either an Option or a License Agreement as discussed previously. It is also generally necessary to formalize a business plan that will guide company strategy and be used to attract outside investment.

**Found Company**
CSU Ventures staff will collaborate with the Inventor and other proposed founders to determine if establishing a new company is the optimal approach and assist with determination of the appropriate level of founder participation in the new company. At a point when the founders, including the Inventor, and CSU Ventures staff determine that the proper blend of skills, knowledge, experience, and personalities are evident in the startup team, a new company will be formed by the founders at their own expense, but with the assistance and advice of CSU Ventures personnel if desired.

Founding members are responsible for properly establishing the company as a legal entity. Although certain initial steps can be performed quickly and inexpensively online, the details of company formation are complex and can dramatically influence a company’s decision-making for years. When considering the startup’s legal entity, the founding team should consider the current and future needs of the business in regards to fundraising, use of equity, taxes, accounting, and corporate governance.

Consequently, CSU Ventures strongly recommends that the founders seek professional legal counsel from the outset. Ultimately, the selection of law firm, corporate structure, and other details of company formation are decisions for the founding team to make. CSU Ventures has knowledge and experience with several law firms and is available to assist in the process of company formation. In particular, CSU Ventures should be consulted when deciding upon a corporate structure, as not all structures are suitable for the terms typically required in licenses to University inventions. For example, S- or C-corporations are often preferable to limited liability companies (LLCs) when CSU Ventures is to acquire equity in the new company.

**What does it mean to be a company founder?**

Generally, founders are considered to be the individuals (or legal entities) that are assigned ownership of the company upon its formation. Inventors who form a startup company will therefore be part of the founding team, which may also include other persons such as investors, entrepreneurs, and other strategic partners. Although most companies will issue equity to other persons (or organizations) subsequent to the founding event, future equity holders will not be considered founders.

It is also important to realize that founders do not need to be involved in the day-to-day operations of the company. Although the founders’ roles are typically more active in the beginning, most companies will utilize consultants and/or hire executives and other employees to manage many aspects of the business. This allows the founders to contribute their time and expertise to the company as their interest and other obligations allow.
Obtain Invention Rights – License Agreement

The new company will need to obtain rights to use the invention created by the Inventor as these rights will be held by CSU Ventures. It is advisable to designate someone other than a CSU employee to negotiate with CSU Ventures for a license to the invention rights for the new company. This license must be put into place prior to any use of the invention by the startup.

License Agreements vary in scope and complexity. The Bayh-Dole Act, University policy, and prudent University risk management provide a simplified framework and standard provisions for each License Agreement with CSU Ventures These standardized, non-negotiable terms include the following:

- the University’s retention of the right to practice the invention for non-profit research and educational purposes (thereby allowing the Inventor to continue his or her academic research),
- the University’s right to publish research results,
- the requirement that the company indemnify the University and CSU Ventures,
- the absence of warranty and provisions that indemnify the company, and
- limitations on the use of CSU Ventures, and the University’s names.

Other provisions of the license agreement, while negotiable, have been standardized by CSU Ventures taking into account the average level of technology maturity, legal expenses incurred, and typical R&D foundations (e.g. prior federal funding) leading up to the invention. These terms include but are not limited to:

- fields of use,
- the right to grant sublicenses,
- business development diligence,
- commercial milestone requirements,
- the company’s right to prosecute patent applications on the invention, and
- the timing of fees, payments, reports, and royalty payments.

Most startup licenses are exclusive, meaning that CSU Ventures cannot grant another party the same access to the licensed invention rights. The scope of the license can be broadly defined to include all applications and industries if the company can articulate that need. Otherwise the definition can be narrowed to specific applications, markets, and/or geographic regions, according to the company’s business plan. In most cases, CSU Ventures can be flexible to accommodate the company’s needs, although CSU Ventures must also consider how best to maximize the impact of the invention, which may mean licensing to other entities those applications that the Inventor’s company does not plan to pursue.

What is equity?

Put simply, equity represents ownership in the company. Equity is typically counted by shares or membership units, but the actual number of these units is less important than the percent of ownership. The greater the percent of ownership, the more influence the equity holder has in company decisions and the larger his or her share of company value and profits.

In the early stages of a startup, equity may be the primary currency available to the company when seeking early investment, negotiating licenses, compensating executive management, etc. Although the Inventor should expect that the company will need to offer significant amounts of equity several times over its growth cycle, it is important that equity not be given away casually or at too low of a price. In the beginning, the Inventor is advised to consult with CSU Ventures or other trusted advisors before making large offers of equity to others.
In exchange for a license to the commercial invention rights, the License Agreement will typically require the new company to provide a percentage of equity to CSU Ventures and pay a nominal cash fee. As a result, CSU Ventures receives an ownership interest in the startup. For example, if the startup is formed as a corporation, CSU Ventures receives stock in the corporation. The University views equity as an important portion of the compensation from the startup company for the considerable investment and support that the University has made in the invention. It also allows the usually cash-strapped startup company to avoid paying the large upfront licensing fees that would otherwise be required. The percentage of equity that CSU Ventures receives in a new company under a License Agreement is typically 10-20%, carries voting rights, and is usually subject to dilution (as is the Inventor’s equity). Any revenue received from an equity cash-out is treated the same as royalties and distributed as per University policy (see “Section J of the CSU Faculty Handbook” for more information).

The Inventor should anticipate that the new company will not generate revenue quickly. It is common for new companies to take considerably longer and need more initial capital than expected to achieve an early revenue target. Given extensive experience with startups, CSU Ventures also understands this and follows three principles to support startup growth when negotiating the financial terms of the License Agreement.

• First, CSU Ventures wants to see some level of financial commitment of the founding team to the company.
• Second, CSU Ventures will not seek significant funds from the company during the development period. Large fees (with the exception of patent reimbursements and reasonable milestone fees) are seldom due prior to product/service sales or external investments into the company of several hundred thousand dollars, including government funding.³
• Third, license agreements are amended from time to time. CSU Ventures recognizes that the new company is still nascent at the time the license is executed and will need flexibility as it progresses towards being a successful business. As long as the startup is displaying true

While CSU Ventures is committed to serving the best interests of the University, CSU Ventures works hard to ensure successful negotiations are characterized as win-win situations. Although it is important for the startup to secure its own legal counsel to assist with company formation and incorporation, the standardized CSU Ventures startup license template is well established and is used in similar form at other institutions. As a result, negotiations should be direct and simplified.

³ This does not preclude the University from appropriate reimbursement of expenses incurred through University specialized facilities or space use, sponsored agreements, etc.

What is dilutive financing?
What is non-dilutive financing?

Dilutive financing are methods by which the equity in the company is exchanged for cash, goods, or other services. Essentially, an investor contributes to the company now and defers compensation until later, when the equity shares have (hopefully) increased in value. These investments are termed “dilutive” because the ownership interests of the previous shareholders (e.g., founders, other investors) are decreased (when expressed as a percentage) when stock is issued to a new investor. However, it is important to realize that dilutive financing can still increase the value of the previous shareholders’ interests.

Non-dilutive financing are methods by which the company can raise money or receive goods or services without giving up equity in return. These investments can be harder to find but offer the advantage of increasing the value of the shareholders’ equity without diluting their ownership percentage. Government grants are an example of non-dilutive financing available to small technology companies.
An Inventor’s chosen role and equity in the new company must not adversely affect the process or the outcome of the negotiations. Even if the Inventor is actively involved (in terms of an official company role) or financially vested, it is advised that he or she does not directly engage in the negotiations or advocate for any specific terms which would put the Inventor in direct conflict with his or her responsibilities to the University.

The process from invention disclosure to founding the company and execution of the License Agreement can take anywhere from weeks to months. The more closely aligned the Inventor’s expectations are to CSU Ventures standardized license framework, the faster the time to license execution. CSU Ventures standardized license framework for startups represents an Inventor-friendly alternative to the license typically offered to more mature companies.

Business Plan
A business plan is a formal document that illustrates the startup’s business model and outlines the near- and long-term strategy of the company. Although business plans are continually revised, these documents are invaluable for attracting outside investment and may also be used to guide daily decision-making. For these reasons, CSU Ventures strongly recommends that a startup develop a solid, professional business plan, or at least a well-developed executive summary. In the process of developing the business plan, the founding members will develop and communicate the startup company’s value proposition and think beyond the invention and towards the actual business strategy with regards to the operations, marketing, and financing.

Typically, business plans are drafted by an experienced entrepreneur either in the company or engaged as a consultant. CSU Ventures can assist the founding team to find advisors with the expertise to formulate and create an effective business plan. CSU Ventures has also been working with the CSU School of Business and other University graduate programs to provide programmatic business plan assistance to our startups. Contact CSU Ventures for more information.
4. Start Up Capital and Early Stage Financing

Every new company needs money. University inventions are typically early-stage technologies that require significant initial investment for further product research and development before they can begin generating revenue. Fortunately, there are a variety of funding sources available to startup companies emerging from institutions of higher education. Understanding, selecting, and pursuing the appropriate financing opportunities requires a mix of sophistication, experience, persistence, and good fortune. The amount of time, effort, and talent required for finding funding should not be underestimated and can sometimes be arduous.

SBIR/STTR Grants
Small Business Innovation Research (SBIR) grants, Small Business Technology Transfer Research (STTR) grants, and other non-dilutive sources of funding provide excellent opportunities for startups as they will not decrease the percentage of founder ownership of the company. However, SBIRs/STTRs are only offered in certain technology areas and at specific times of the year.

Bank Loans
Another non-dilutive source of funding, a bank loan may be an additional possibility for startup capital. However, early stage technology-based startups are usually considered too risky to qualify for bank loans. Moreover, typically banks will not lend to new companies without two to three years of financial statements and proof of owner’s equity in the business. Almost all bank loans will require personal guarantees and collateral to back the loans. Home equity is one common form of bank collateral.
Friends & Family, Angel Investors, and VCs

So-called “friends & family” (FF), angel investors, venture capitalists (VCs), and other sources of dilutive investment offer a means to trade equity in the company in exchange for funding. Angels and VCs provide access to much larger amounts of funding than other sources and typically play a key role in most successful technology startup companies because, in addition to capital, they often provide access to experienced executive management and substantial business networking resources. In return, investors of this type will expect an equity share in the company and will also frequently require some degree of control and oversight of company operations, such as a seat on the company’s board of directors. Although this may seem like a high price to pay, if carefully negotiated, these investments allow the company to grow its operations and increase its chances of success, which raises the value of all company shares, including the Inventor’s. Investments of this type are a long term relationship and care should be taken from the outset of negotiations.

University Community and Affiliates

There are also several ways in which the University and CSU Ventures may directly assist a startup with financing. Example programs are the University Supercluster seed grants and the Bioscience Discovery Evaluation Grant Program, both of which provide small non-dilutive funding for research and other early stage company activities. Another option is the CSURF Commercial Opportunity Investment Program (COIP), which offers a small convertible note up to approximately $20,000 (depending on availability of funds) with flexible repayment options.

CSU Fund I, LLC is a seed and early stage investment fund associated with Colorado State University. Companies with an established business relationship to the university are eligible to apply. Typical investment amounts of $50,000 to $250,000 are possible for high growth, solid return-on-investment (ROI) opportunities. Established business relationships include: having an active CSU Ventures license or Sponsored Research Agreement with the University, being a part of a CSU Ventures joint venture, or being a University startup company.

Basic Research Grants

External grants to the Inventor’s university laboratory for basic research may continue to yield inventions of value to the startup. These inventions may be licensed to the Inventor’s startup company in the same manner that CSU Ventures licenses University inventions to other companies.
Most inventions arising from University research are early stage and require further research and/or product development before the startup company can begin generating revenue. There are several possible avenues that a startup may take to accomplish this task. In addition, significant time and energy will need to be devoted to business development activities, which seek to build vital relationships with a diverse array of investors, strategic partners, and other stakeholders.

Product Development and Business Development
A startup company should plan to invest significant resources in developing its product as well as its business. Product development may include further research but will almost certainly include product engineering, design, and scale-up activities that often require specialized expertise. Business development will generally focus on building relationships with prospective customers, clients, investors, strategic partners, and other key stakeholders. Although many Inventors have a tendency to focus on the technical challenges facing a startup with respect to the product, business development is a practiced art that often requires just as much time and effort and is at least as critical to the ultimate success of the business.

Continue Research at the University or Elsewhere
A company may elect to perform all or some of its product development research in its own company offices and/or laboratory. The company will also need appropriate facilities for business development activities. Space for both product and business development may be rented from the University, a local incubator such as the Rocky Mountain Innovation Initiative (RMI\(^2\)), or anywhere else considered appropriate by the founding members. It is often possible to utilize the Inventor’s university lab space for company activities. CSU Ventures may also be able to offer space in the Research Innovation Center (RIC) for approved companies, which is equipped with both lab and office space. Arrangements to use University space, including the Inventor’s university laboratory and the RIC, require payment and are typically formalized through a Master Research and Development Agreement between the University’s Office of Sponsored Programs and the company, although other lease arrangements may be possible.

What is a value proposition? What is a business model?
A value proposition is the tangible benefit that a customer receives by using a business’s products or services. Without a clear value proposition, it is unlikely that a customer would choose to purchase a product or service and therefore unlikely that a business would succeed. Although an invention may enable a new capability or product, there will need to be a clear value proposition for the invention to be successfully commercialized.

A business model describes the manner in which the new company will operate and bring in revenue. Example decisions addressed in a business model include:

- Will sales be direct to the user or through a distributor?
- Will products be sold or licensed?
- What level of product support will be offered?

Will users be given free access and fees collected for advertising?
Section II: Considerations When Working With CSU Ventures, the University, and Beyond

This section explains how CSU Ventures facilitates and supports the development of startup companies based on research conducted at the University. It also addresses the potential roles, considerations, and opportunities for Inventors. To help Inventors better understand the process of building a new company, CSU Ventures has outlined five major steps for launching a startup company from within the University community. The five major steps are: (1) Propose Company Idea, (2) Develop a Strategy, (3) Form the Company, (4) Find Funding, and (5) Further Research and Development for Commercialization. Although these five steps signify major milestones that almost all Inventors will meet when founding a new company, every startup process is unique. No two experiences will be exactly the same and success is not guaranteed.
1. University Relationship to the Inventor

**Sponsored Research**
Under proper disclosure, a current Conflict of Interest management plan, and an active Sponsored Research Agreement (SRA), the University will typically permit companies in which the Inventor has an ownership interest to fund sponsored research in his or her University laboratory. Given the potential conflict of interest this situation presents, conflict of interest management is paramount and proper safeguards will be necessary.

The standard industry SRA provides the opportunity for the sponsor (e.g. the Inventor’s startup company) to secure rights to any inventions resulting from the research (including patent rights, copyrights, and data). This agreement also includes provisions protecting the ability of the involved University researchers to publish the results of the research, subject to certain review rights of the sponsor.

When an ongoing research relationship between the startup and the University is expected, a Master Research and Development Agreement (MRDA) is the preferred mechanism to sponsor research at the University. The MRDA enables the startup to negotiate all of the standard SRA terms upfront, contains provisions for use of university facilities (if desired), and allows each subsequent research project to be easily submitted as a Task Order without the need for repeated negotiations or excessive paperwork.

**Consulting Arrangements**
The opportunity for faculty and staff to accept occasional professional consulting engagements helps disseminate University research findings and promote technological advancement. This is as true when consulting for an Inventor’s own startup as it is for organizations unaffiliated with the University. As long as University policy is followed, an Inventor may enter into a paid or unpaid consulting relationship with his or her own startup.

University policy requires that, prior to engaging in any consulting or business activity with a third party, including a company they have founded, University employees should make a full written disclosure (excepting the amount of compensation) to his or her immediate supervisor. In addition, University obligations must be made clear to the other party.
While CSU Ventures cannot negotiate the consulting agreement between the Inventor and the company, CSURF and CSUV staff can provide guidance on these matters to help ensure compliance with University policy, including:

- Invention ownership and rights,
- Use of University facilities, personnel, and other resources,
- Use of University name, and
- Use of University students.

In particular, inventions in which the University may have an ownership interest may not be transferred by University employees while engaged in outside consulting or part-time employment. Accordingly, University employees should not assign or agree to assign their ownership interest in any invention of which they are an inventor to any third party unless they have disclosed the invention to CSU Ventures and received a letter of determination by which the University disclaims ownership to the invention. Clauses in consulting agreements (including clauses on confidentiality and ownership/transfer of inventions) must be consistent with the policy of the University and with University commitments under sponsored research agreements as well as federal law. Consulting agreements should also contain the company’s acknowledgement that to the extent the consulting agreement is incongruent to the University employee’s obligations to the University, the employee’s obligations to the University shall prevail.

Compensation for Inventors who are University Employees

Colorado State University faculty or staff who produce inventions that are licensed to their own startup company are likely to receive personal income and other compensation from three places: 1) from the University, 2) from the company licensing the invention rights, and 3) from CSU Ventures.

An Inventor receives a salary and benefits from the University in exchange for continuing to satisfy his or her ongoing faculty or staff duties. If his or her invention is licensed into a startup company, the Inventor will likely receive ownership in the company and may also receive consulting fees or salary from the new company in exchange for their time and effort on its behalf. In addition, the Inventor is entitled to receive a portion of the net licensing income paid by the company to CSU Ventures, in accordance with Section J of the CSU Faculty Handbook (see next section).

Each of these separate sources of income provides compensation for separate and distinct contributions the Inventor has made or will make. The Inventor may also be a PI on Sponsored Research Agreements.
between their company and his or her University laboratory, subject to conflict of interest and/or commitment considerations.

**Section J of the CSU Faculty Handbook**

Section J is the portion of the CSU Faculty Handbook that addresses ownership rights of all forms of inventions created at the University or by University employees. Section J defines Members as “University academic faculty members, administrative professionals, state classified staff, student employees, and anyone affiliated in a professional capacity with the University and using University resources who are inventors and creators of inventions, academic materials, publications, and other creations.” In particular, Members are required to assign ownership rights to inventions developed in the course of their University research responsibilities to the University, which then transfers those rights to CSU Ventures pursuant to an operating agreement.

Section J also addresses how revenue resulting from University-created inventions is distributed. After recoupment of all patent, licensing, marketing, and other commercialization expenses paid by CSU Ventures, Section J provides that all financial consideration received under a license agreement (including proceeds from the liquidation of equity received) be distributed as follows:

- 35% is paid to the Inventors personally (essentially as supplemental income);
- 15% is paid to the University’s Office of the Vice President for Research;
- 10% is paid to the college within the University that contains the Inventors’ departments; and
- 40% is paid to CSU Ventures.

**Effect of Startup Activities on Academic Evaluation**

Within the University community there have been ongoing discussions about the effect of the Inventor’s commitment to their new endeavor and the impacts it may have on tenure and performance evaluations. Inventive activity is generally encouraged at the University and is considered to fall within the public service mission of the University. Nonetheless, at many U.S. research universities, inventive activity is not always an explicit criterion in the promotion and tenure process. Accordingly, an Inventor should talk to departmental colleagues and proactively contact his or her Department Head/Chair to assess the implications of involvement with entrepreneurial activities. CSU Ventures can assist with defining roles and business structures to create a situation that allows an Inventor to fulfill his or her academic responsibilities with minimal disruption.
2. Startup Responsibilities

Legal Counsel
Although CSU Ventures may be able to offer limited legal assistance to a startup, the Inventor should realize that a new company will require its own legal counsel and that these costs will be the responsibility of the company. In addition to the paperwork involved in forming a new legal entity, a startup company should consider legal counsel for many of its ongoing operations, including: employee and consulting agreements, research and development agreements, partnering arrangements, freedom-to-operate analyses, tax and liability issues, board resolutions and actions, and incentive stock option plans. The Inventor should also be aware that the cost of obtaining a patent will be borne by the company (and not CSU Ventures) and that these costs will amount to considerably more than just the upfront filing fees before a patent is actually granted by the USPTO.

Selection of Board Members and Executive Officers
Unless requested by the Inventor, CSU Ventures will generally not play a role in matters of company formation, founder ownership and vesting, founder duties, and other company governance issues such as board composition and voting rights (except as may be pursuant to the license agreement with CSU Ventures, see below). However, it is important to ensure that the structure of the company is one amenable to growth, which typically means external investment, additional shareholders and securing the services of key managerial and technical talent.

Many startup companies will initially consist of founders, a board of directors, executive management, and often outside advisors. The board of directors is a body of elected or appointed members who jointly oversee the activities of the company. Initially, it is up to the founders to select the board members, although CSU Ventures License Agreements with University startups typically require that CSU Ventures be granted a voting board seat on the company’s board of directors. However, future investors will generally also require board representation and it is anticipated that as the company proceeds through multiple rounds of financing, the CSU Ventures board seat will be relinquished at the appropriate point in time. The number of shareholders, the split of the controlling interests, and the goals, interests, and personality dynamics of the shareholders and board members are all strategic factors that can have lasting impact on the value and sustainability of a company – each of these should be given due consideration when founding the company and establishing a board of directors.

It is often desirable for an outside scientific advisory board to be recruited and established. Scientific advisory boards are comprised of scientists and other technical experts who provide objective advice on technology development strategies and lend credibility to the startup company.

Death and taxes
While incorporation allows companies to cheat death and survive in perpetuity, all companies must still pay taxes. Some company structures allow taxation to be passed through to the owners but others do not. Even before a startup company begins earning revenue, taxes must be filed annually. (In the beginning, however, a startup company may even lower the personal tax burden of the Inventor!) Of course, it is up to the company (and not CSU Ventures) to ensure that all tax obligations are met. Consultation with legal counsel and an accounting firm is strongly advised.
Nearly all startups seek qualified executives (e.g., CEO, COO, CFO) who have the experience, skills, and time to perform the everyday duties vital to startup success. Assembling an appropriate team of talented and experienced executives is of critical importance to the startup’s credibility and viability for long term success. Some recommended key assets would include: a business driver who can communicate the mission and vision of the company to potential partners and investors, an industry veteran with experience and an established network, and someone experienced with business operations and familiar with the financial and accounting details of the new company. These recommended qualities can be found in one or many people, and it is the Inventor’s responsibility to form the team according to the company’s needs. However, if desired, CSU Ventures can assist and has a broad network of potential executives across Northern Colorado and access to a variety of networking groups from which to recommend talent. Also, as investors and acquirers are sensitive to the issue of stock dilution, CSU Ventures recommends that the founders establish a stock option “pool” at the time of incorporation, usually around 15%, which will be used in the future as incentive for key employees and managers.

**Differences between Academic and Industrial Research**
Most inventions licensed by a startup company will require further development, but the Inventor should be aware that the research activities of the new company will need to be conducted in a different manner than typical academic research.

First and foremost, commercial research differs from academic research in that the desired outcome is a proprietary, marketable product or service. To reach this desired outcome, commercial research is typically structured as a series of short-term, practical deliverables or milestones with the expectation that the pace of progress will be very rapid. Since the financial support of the company is often dependent on reaching each milestone, the new company will be operating under considerable pressure to meet the specified timelines. In this environment, commercial research is generally very practical and typically affords few opportunities to advance more fundamental lines of inquiry, which are usually best left to academic research.

Another difference is that company strategy may include the development of proprietary trade secrets and know-how, meaning that it may not always be in the company’s best interest to publish research results. Since all sponsored research agreements (SRAs, MRDAs, etc.) that the University negotiates will reserve the right to publish research results, a startup company will need to decide what product development may be done in the Inventor’s university lab and what will need to be done elsewhere. In making this decision, a company must bear in mind that even if the

**What is a stock option pool?**
A stock option pool is an amount of a startup’s common stock reserved for future issuances to employees, directors, advisors, and consultants. The option pool is formalized via a written plan in which the startup designates a specific portion of its authorized common stock to be issued as compensation for the above types of services.

Having a formal stock option pool makes it easier for current and future equity holders to calculate the percent ownership that they will have after a startup receives the anticipated services requiring equity compensation (i.e. all parties can see how their interests are likely to be diluted). Greater clarity in this regard is a significant advantage when seeking additional investment or executive management and CSU Ventures highly recommends that a startup considering forming a stock option pool at the outset.
Inventor is willing to forego publication of research conducted in his or her laboratory, the University typically expects publication of work involving graduate students, post-docs and other researchers whose careers are benefited by such activities.

It should also be noted that the best practices in the academic laboratory may not always be sufficient in a commercial setting. One example of this is laboratory notebooks. A startup company based on technology and innovation will often use invention rights as the cornerstone of the company and laboratory notebooks play a key role in supporting those rights (particularly patent rights), especially during litigation. As such, companies will want to ensure that their researchers are keeping accurate laboratory notebooks in accordance with best industry practices in order to maximize the ability of the invention rights to withstand intense scrutiny from investors and potential competitors. Put another way, the Inventor should realize that laboratory notebooks in commercial research need to meet the needs of attorneys as well as those of the researchers.

Concluding Remarks
Founding a new company with University inventions can be an exciting and rewarding endeavor. CSU Ventures hopes that this Startup Guide will serve as a useful overview of this process and will alleviate some of the confusion that Inventors often experience in the beginning. Although each startup opportunity is unique and will require some amount of flexibility, the steps and considerations outlined herein are generally applicable to most startups founded with University inventions. CSU Ventures is always happy to discuss opportunities with Inventors and to provide guidance on how to best proceed given the individual requirements of each startup company.

This Startup Guide is meant to be supplemental to, and not a replacement for, frequent dialog with the University and CSU Ventures. We look forward to the next discussion and wish you “Good luck!” in the meantime.