

A Guide to Starting a Technology-based Company at the University of Wisconsin- Madison



University of Wisconsin - Madison
Discovery to Product (D2P)
<https://d2p.wisc.edu/>

Dear Reader,

This guide is written for UW-Madison faculty who may be interested in starting a new company to develop and commercialize inventions made in the course of their academic research. Although directed toward faculty, the advice presented will be useful for all members of the University community who are thinking about starting a company. Also, while this guide is primarily focused on companies built on patentable technology, the principles discussed will be generally applicable to any kind of new business.

Please use this guide as a reference, only. It is intended to provide a comprehensive list and a high level understanding of the issues associated with starting a new company while a faculty, student, or staff member at the University of Wisconsin–Madison. As a founder of a new UW-Madison startup, you will almost certainly rely on other co-founders, recruited management, and outside legal and business advisors to provide expertise and help you deal with many of the issues, agreements, tasks, and plans discussed in this guide. After reading the guide, you do not need to, nor will you, know everything about all of the topics covered. Please do not think you are, or need to be, an expert in every aspect of company creation and growth. Starting a company takes a team. Build one wisely and you will have every opportunity to be successful in starting your new venture. Remember, it takes a village to raise a child. Have fun!

Sincerely,

The D2P Team

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STARTUP BASICS

The University of Wisconsin-Madison's innovations are flowing at an accelerated rate. Our faculty, students, and staff are transforming their inventions into startups that infuse and drive economic development. This guide attempts to provide a roadmap for University innovators who are thinking about starting a technology company, highlighting the common pitfalls to be expected along the way.

Starting a company is a life-changing event that brings together a breadth of experiences and extreme emotions: from the allure of anticipated wealth and societal impact to the frustrations of continuous set-backs and working with a tight budget. The best entrepreneurs are motivated by the challenges and thrive on the ups and downs. Instead of feeling defeated by a failed attempt, they are eager to get back in the game and start again.

Whether you are a new academic entrepreneur or a serial entrepreneur, Discovery to Product (D2P), together with the Wisconsin Alumni Research Foundation (WARF), can help you navigate the process of forming a new company to commercialize your technology.

Why start a company?

While there are many motivations to start a company, from the commercial point of view there is only one reason: to make profits by selling products or services. In general, academic entrepreneurs are "technology-driven". Investors, who have the money that is essential to build and operate a new company, are "market-driven". With these differences, there exists a dichotomy between academic and corporate cultures, the former, focused on cutting-edge technologies which drive the market, and the latter, focused on how technologies relate to existing market needs. This difference reflects the most essential disconnect between the academic and corporate cultures.

Perhaps the most important lesson to be learned from this guide is that entrepreneurs should ensure that their technology satisfies a need in the market. Investors would prefer to deal with researchers who espouse one of the five **bold-faced** motivations shown in **Table 1**. Such motivations indicate that the researcher is starting a company to satisfy a market need rather than to benefit their academic research.

Table 1: Why Academic Researchers Say They Want to Form New Companies

Motivations	Reasoning	Expectations
A friend's suggestion	He or she heard about my research and suggested that I should look into starting a company.	Forming a company must be easy.
Following others	My research is every bit as good as that of a colleague who has been successful in starting and running a company.	If that person can do it, I should be able to do it too.
Additional grant funding	I sit on a panel that reviews federal SBIR [Small Business Innovation Research] grant applications, and my unfunded regular proposals are better than those that get funded under SBIR. A company might be an easy source of money to support my research, so why not form one?	We'll be able to do a lot more research by tapping into this new source of grant money.
Easy money	Getting investors to pay for my research may be a better prospect than writing federal grants.	Investors are happy to fund good research.
The rest is easy	All the hard work has already been done in my laboratory, so now it's time to turn the project over to a company for product development.	People will want to invest in my company because the remaining work is relatively trivial.
The captive company	A startup will be able to pursue the ideas from my lab through to commercialization. Alternatively: The company will augment my research by doing things that I don't have the time or money for, such as running routine analyses and constructing prototypes.	I'll have this outside company that does whatever I tell it to.
Becoming rich	A startup is a relatively quick way to become rich.	In five to ten years, I'll be really wealthy.
I'm the boss	Starting a new company sounds better than getting a job at an existing one.	I can be chief executive of my own company and not have to work for others.
Persistence	No existing company has wanted to license my technology and I am committed	We'll do what it takes to form a company to get this technology out there.

	to getting it to the marketplace, so it's time to start my own company.	
Market demand	I have been approached by people asking, "How can I get one of those things?"	There appears to be a market for my product.
Niche opportunity, underserved market	This would be an opportunity to have a small operation that sells a product in a niche market.	There's enough of a market there for me to have a nice supplement to my academic salary.
Maximal Impact	Selling commercial products, as opposed to publishing in a journal, increases the chance that my ideas will have a major effect.	We'll be able to hit a much wider audience through the commercial sector.
Seasoned veteran	I didn't get it right with my first two companies, but this time I have a better handle on the market realities.	Given our experience, we should be able to raise adequate investment funds and use them to better advantage.

Are all startups the same?

There are many types of startups. Some are service companies, such as consulting businesses built around domain expertise of one or a few individuals, that require very little incubation, while others, usually product companies, may require years before profits are realized.

Many UW-Madison faculty have created successful consulting firms in areas including engineering disciplines, marketing and other areas of business, and information technology. Because revenue is generated from the sale of "time", the business can get meaningful traction within the span of a few months.

Companies created to develop and commercialize innovation resulting from research at universities, however, typically require many years of R&D before revenue can be generated from the sale of products or the use of processes resulting from those innovations. During the product/process development period, startups need continuous infusions of capital. Any prolonged interruption of funding can deal a death blow to the enterprise.

Technology startups generally fall into one of two broad categories:

- (i) Equity investment companies, which require large sums of capital, usually in the form of equity investment, and:
- (ii) Modest investment companies, whose capital requirements are substantially lower.

In reality, a business can fall into both categories – for example, a modest-investment company may provide shares in the company (equity) to investors – but this one-or-the-other model allows us to make some basic generalizations that are useful for the would-be entrepreneur.

Attributes of a successful startup

A good idea does not necessarily result in a good product or service. A good product or service does not necessarily result in a company.

To succeed, a company needs more than a good idea. Its success is largely due to how the idea is executed and whether it addresses a real market need. A talented staff and management team will ensure that the right decisions are made along the way. Capital is also essential to make everything come together and push the venture ahead. In order for a business to succeed in the long term, it should be able to scale up. One way to scale is to design not one but a pipeline of products. Below, some of the essential characteristics that lead to a successful business are listed.

Innovative products/services. Startups should be based on innovative services or products that bring unique value to the customer. Academic discoveries, however, are usually embryonic concepts and not full-blown products, making it is often difficult to determine the real value in the marketplace. Until that value is determined, it is often necessary to protect the invention. Intellectual property becomes essential for commercialization as a way to provide the monopoly needed to justify the cost of development.

Intellectual property. There is no requirement to have rights to intellectual property (IP) to start up a company. However, if the executive team is seeking significant external financing, it should be aware that most investors will require that the foundation technology upon which the company will be built, if it is patentable subject matter, is protected by patents. IP serves as a barrier to entry

against competing companies that might want to bring the the same product to market, or to use the same, presumably lower cost and/or higher yield process, created by the company. The management team will have to decide whether the market for their product requires this kind of protection.

Patents also allow for easier transactions as the startups enter partnerships, collaborations and multiple funding cycles. Of course, it is the scope and strength of the patent rights controlled by the company that are significant, not just the existence of patent applications and patents. Nevertheless, a business plan with a section listing the company's IP assets is likely to be a more compelling plan to an investor than one that does not.

Some academic companies are founded on intellectual assets that lie within the public domain and for which no patent protection is available. Absent protectable IP, there is no need to secure a license from WARF. Companies without IP assets ordinarily do not attract large amounts of outside investment capital.

It is important to remember that patentable technology is not the only form of intellectual property. Authored works, including software, websites, mobile apps, written materials, artworks, music, etc., are subject matter protected by copyright. For these assets, copyright exists as soon as the created work is expressed in a tangible medium. For most works, such as writing a book, sculpting a statue, or creating a computer program, the result of the creative activity already is fixed in a tangible medium, and so immediately receives copyright protection. Registration of a copyrighted work with the U.S. Patent and Trademark Office (USPTO) is not necessary to ensure protection of the work, but registration provides certain benefits in the enforcement of a copyright against infringers. It is best to consult an experienced IP attorney about protection of copyrightable IP.

Modest-investment companies and most companies built on information technology (IT) and copyrightable works do not need patent protection in order to get off the ground. The importance of patents may become apparent later on, when the company sells the product or service and knock-off competitors arise. To prevent such a situation, young companies should review their technology base for aspects that could impart a significant protection down the road.

Product pipeline. Discoveries that could lead to multiple products or product lines, or "platform technologies," are what many investors look for when funding a

startup. Often, investors ask, "Is it a product or a company?" - implying that single-product ideas (also referred as "one-pony shows") are not suitable for the formation of an equity-investment company. One can certainly start a new business around a single product, but it is unlikely that the company will be attractive to institutional investors unless the product represents a very large market opportunity. For these cases, the inventor might want to consider licensing the product for further development to one or more established companies, rather than creating a startup.

Market need. Deciding on the company's first product is often very difficult - especially for platform technologies, which may have many different applications. Perhaps the most important criterion is that it serves real-world needs. Individuals starting companies must provide compelling answers to questions such as: What market does this product serve? What value does your product bring to potential customers? What products are already in this market? How is this product different from them? Who are the competitors, and how are their products better or weaker than yours?

Specialized personnel. One of the most common reasons that a startup fails is lack of adequate or capable management. Early stage technologies will invariably encounter many hurdles before they reach commercialization. Being able to manage the hurdles, raise capital while building a motivated team requires experience, a broad network of contacts, and unique business talents.

Specialized facilities. Academic startups often have limited access to space and facilities. UW-Madison researchers often find space outside the Madison campus in such places as University Research Park and 100 State. Please consult with D2P if you need space in the Madison area.

Capital. A startup's appetite for cash depends on the costs to take the product to market. A faculty member creating a modest-investment company in his or her garage, funded by personal savings, does not need to seek investment capital from business "angels" (wealthy private investors) and venture capitalists when the company is first formed. It is possible that such companies may be able grow organically through cash generated from sales of products and/or services ("bootstrapping"), or from investments by friends and family in amounts sufficient to carry the company through to positive, self-sustaining, cash flow. In contrast, a researcher who plans to start a new pharmaceutical company will spend countless

hours trying to secure large amounts of investment capital. Once the company is started and the initial capital is secured, founders will immediately start planning when and how to secure the next "round" of financing. Such firms are voracious in their appetite for cash, as raising money is a never-ending process, and they are at the mercy of the investment community.

The decision on whether to form a *modest-investment* company or an *equity-investment* company is largely dependent on the timeline to launch, the nature of the product, and the resources required to complete development, manufacturing capacity, and sales and distribution functions. While the desire to preserve ownership and control of the venture through a modest-investment company is understandable, many commercial opportunities require extensive partnering, both in investment and strategy, if they are to be successful.

When is it time to start a company?

Researchers can get so excited about the idea of forming a company that they may lose sight of the hard road ahead. It is easy to overlook the fundamentals of building a successful business, including favorable timing. While there is no formula for determining the proper time to start a new company, raising enough capital to cover two to three years of operations may be a good rule of thumb. The "right" time has less to do with the stage of development of the technology than with the state of the economy and capital markets. Academic research discoveries are generally quite far from being products and have increased chances of dying during development. Therefore, the pathway from discovery to product entails risk, which presents a significant hurdle when it comes to raising funds. The more embryonic the discovery, the higher the risk.

In the 1990's, it was easier to start a new technology company, even with very early stage research. Currently, investors prefer investing in companies that are much farther along in product development - for example, those with drugs in human clinical trials, or those with successful beta tests of their software.

Investors can be stratified according to their comfort levels with the associated risks at each of the stages of product development. Those at the early (high-risk) end are often called "seed" investors, and those at the later (lower-risk) stages are called "mezzanine" investors. It is important that the researcher better understand the risks associated with getting their project to the marketplace because it will

enable him/her to assess the current investment climate through existing network contacts. Even with a favorable investment environment, significant and ongoing time and effort will likely be devoted to fundraising.

STEPS TOWARDS A STARTUP

With so many steps involved in the formation of a new company, academic entrepreneurs often inquire about the "right" sequence of steps to take in forming the company. There is not a set sequence in which these tasks should be accomplished, as every new company has its own unique circumstances and needs. Nevertheless, as a guide, a generalized chronology is shown below for starting an academic spin-off company. The list emphasizes compliance with UW-Madison's policies and practices regarding an inventor's participation in a startup. It attempts to minimize early capital expenditures. Please note, however, that in reality many of these events do not unfold one at a time but typically occur in parallel, or may not occur in the sequence below.

Disclose your invention to WARF	The first step in commercializing any UW-Madison invention is submission of a completed Invention Disclosure Report (http://www.warf.org/for-uw-inventors/disclose-an-invention/disclose-an-invention.cmsx-IDR) to WARF.
Talk to WARF and D2P	Talk with your licensing and IP managers at WARF to determine what type of IP protection is available for your invention and for suggestions regarding next steps. Make sure to understand the IP and conflict-of-interest policies. Talk to D2P to get a read on the market potential and value of your technology, as well as getting a preliminary assessment of whether a startup makes sense.
Protect Intellectual Property	For most startups, the intellectual property is the only asset prior to raising money. It is the only tool for

	attracting investment (usually one or more patents and/or substantial software code). A patent application should be filed before any enabling public disclosure is made.
Network/Find a Mentor	Contact WARF and D2P for suggestions on how to network or recommendations for potential participation in University and local programs.
Assign a Business Person	A business lead (or CEO) should be identified and engaged to initiate fundraising efforts and licensing negotiations with the WARF.
Plan the Business	A business plan should be drafted to be able to communicate the market opportunity and vision of the company. The plan should include a market plan and a financial plan.
Execute A Founder's Agreement	This agreement memorializes the terms and conditions which the founders have agreed upon to form the company.
Incorporate	The company needs to become a legal entity in a particular state.
Negotiate the License or Standstill Agreement with WARF	The businessperson leading the startup will negotiate a license for the startup with WARF. In some cases, a short-term standstill, or option, agreement may precede a license to demonstrate to potential funders that the startup has secured the right to negotiate a comprehensive license agreement for the technology.
Fundraise	Commercializing technology is typically a capital-intensive process. Fundraising becomes a non-stop activity until the company is either

	acquired or completes a successful initial public offering (IPO).
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Building the startup

There are many issues that commonly arise when spinning-out a startup from academia. It is wise to start thinking about them early on in the process. These issues range from strategic planning to fundraising to anticipating sources of frustration.

There are two related questions that investors will often ask: *Are you building a one-product company or a platform company?* and *What is your exit strategy?*

Equity-investors like to see technologies that provide the potential to enter multiple markets. That is why they prefer "platform technologies," which are suitable for the creation of multiple products. When reviewing a discovery proposed to be the nucleus of a startup, one of the first questions an investor might ask is: "Is this a product or a company?" Implied in this query is a second question: "What happens if the first product fails?" Without a clear answer to this question, it is unlikely that the company will attract institutional investors.

The product-or-company question also applies to a modest-investment company, though on a more modest scale. If you contemplate building a "garage-based" company to sell a product into a niche market, or a lifestyle business, such as trying to make money from a hobby, you should ask yourself, "If the sales of my lead product slowly ramp up to, say, \$75,000 per year and then flatten out, am I going to be satisfied with all the time and money I spent to get to that position?" If the answer is no, you must consider how the company may bring in additional revenues to justify your investment.

The financial goal of both founders and investors is to make money by selling their stock in a startup company. This is known as an "exit". The two primary exits are an initial public offering (IPO), where the company sells its shares to the general public on an open exchange, for example the NASDAQ or New York Stock Exchange, and an acquisition of the company's stock by a third party. In each case, the founders and investors can sell their stock, hopefully at a high multiple of the price they originally paid to acquire the stock. It is important to think about these two primary exit strategies available to a startup before you start trying raising

money. If you are hoping to use an IPO as an exit, you will need to develop a business plan that will take you through to marketing and sales to generate revenue from your technology. You will need to anticipate potential partners that will help you reach that point, financing strategy, etc.

If your plan is to sell the company after some development or commercialization milestone is reached (for example, after a successful Phase II clinical trial), you might want to start checking potential acquirers' appetite for your technology at an early stage.

The role(s) of the academic founder(s)

Most first-time academic entrepreneurs are uncertain about what role they should play in the formation and operation of a new company, though certain relationships are fairly predictable.

Faculty typically prefer to retain their academic position while working with the new company, while staff, postdocs, and graduate students, when they do not pursue an academic faculty career, ordinarily leave academia to become company employees, in either an existing company or in a new startup company either based on their research or in their technical area of expertise. A faculty member's role in the startup is likely to be proscribed by a number of university policies, including those on conflict-of-interest, conflict-of-commitment, sponsored research, and outside consulting. The typical range of roles that faculty play in conjunction with startups includes:

- Founder/equity holder;
- Consultant;
- Member of the scientific advisory board;
- Member of the board of directors;
- Recipient of sponsored research funding from the start-up company;
- Employee of the startup.

UW-Madison, like most universities, has policies regarding how faculty may participate in new companies. A faculty, staff member, post-doc, or grad student should consult the UW-Madison conflict of interest policy (<https://research.wisc.edu/respolcomp/coioar/>) and discuss with his/her advisor, PI, department chair, and school before starting a company.

Academic researchers provide the technical vision to guide a new company's initial research and development. They are integrally involved in multiple aspects of building a business, including: development and writing a business plan; recruiting an individual to lead the business side of the company; making presentations to potential investors; and hiring initial scientific staff. These activities require a large time commitment. A chief executive officer (CEO) may handle the majority of the early work of building the company, but inevitably the researchers will be pulled into the process. It is important to note that one of the measures used by potential partners and investors in assessing their interest in working with a new venture is the amount of time that the academic founders devote to the endeavor.

Once the startup is launched, the involvement of the founder is often inversely related to the number of employees at the company: as the size of its staff increases, the day-to-day participation of the founder decreases. In established companies, the founder usually remains on the company's scientific advisory board and offers strategic consulting advice.

Selecting co-founders

Faculty members are often tempted to include their research collaborators and graduate students as founders of a startup, though this decision can later create problems. Because co-founders usually share in the future value of the company—whether in the form of profits, stock holdings, or other arrangements - decisions as to who will be a founder should be made according to the expected contribution of each individual to the enterprise. It is much easier to look back at a scientific study and determine who made the contributions necessary for inclusion as a report's co-author than it is to look into the future to determine who should share, and in what proportion, in value created by the company.

Picking your business partners is a bit like picking a spouse. You want to form relationships with people who you know and trust and who share your values and aspirations. Ideally, you will find a co-founder who has had experience in an early stage company, especially one in your industry, and who is respected by the investment community. Of course, they should be honest, communicate in a straightforward manner, and follow through on what they say. D2P can help identify potential managers for startups.

The founders of a business nearly always retain equity rights. The two most

common forms of equity available to startup founders and early employees are stock and options. The purchase of stock by founders should happen early prior to an external company valuation. Once a share value is established - through a term sheet, for example - there are tax implications for the shareholders. Founders' stock is usually restricted with regard to transfer and reverse vesting. For example, if a founder ends his business relationship with the company, the company has the right to repurchase his/her stock.

The other form of equity, options, provides the holder of the options the right to purchase shares of a company's stock in the future at a specified, low price. These are typically granted to new employees and consultants and vest over time. Sometimes, shares from the startup's option pool are given to founders or employees to reward notable contributions to the company.

Vesting is a process by which stock or options become available to the employee over time according to a predetermined schedule. Vesting is meant to encourage long-term commitment to the company. The length of a vesting schedule is typically three to five years. There are different types of vesting. For instance, cliff vesting is when a person's business relationship with a company must continue for a set period of time (e.g. one year) before that person has a right to purchase stock in the company. Vesting can occur on a monthly, quarterly, or yearly basis. When a company is sold or raises money in a public market, vesting usually accelerates.

Identifying founders and setting up stock plans are matters that an experienced attorney, who is knowledgeable about startup companies and stock-ownership norms in your industry, should help you with during incorporation. Please contact D2P for referrals to attorneys who specialize in startups.

Networking and finding the right mentors

There is much to learn about organizing, funding, and launching a new company from the experience of others. The best way to access the know-how and wisdom of others is through "networking." Ideally, a researcher should aim to find a mentor (or a group of mentors) that will be able to offer qualified advice and help open doors via their network. D2P offers informal, short-term, one-on-one or one-on-some mentoring (consultative advice), and two formal, structured programs designed to mentor innovators who want to move their discoveries toward commercialization. The first program is a one session, classroom-based experience,

designed to help innovators determine the market fit (commercial opportunity) for their technology. The second program is a long-term program consisting of several classroom sessions devoted to various aspects of building a new company to develop and commercialize new ideas, followed by an extended relationship with a D2P mentor-in-residence assigned to support all aspects of the growth and development of a team to create a new company ready to commercialize UW-Madison innovation.

The concept and practice of networking is essential for entrepreneurs. It is through networking that CEO and CSO/CTO (Chief Science Officer/Chief Technology Officer) candidates, consultants, corporate attorneys, potential employees, insurance carriers, bankers and accountants, and potential investors may be identified. Tips on writing a business plan or applying for SBIR and STTR funding may also be gleaned from these interactions. Further, networking with fellow entrepreneurs, provided that they are not direct competitors, is an additional resource, as they can share their own experiences, positive and negative.

Identifying the right CEO

Finding the right CEO might be the most important decision that academic founders will make in building a new company. Founders are often tempted to play that role. The truth is that it almost never works. The skill set that makes you a good researcher or inventor rarely translates to running a business effectively. Fundraising, writing business plans, negotiating leases for facilities, and setting up and managing human-resources, purchasing, accounting, regulatory-affairs, manufacturing, and sales and marketing functions are generally not within the scope of a researcher's experience or interest. An early stage company with a CEO experienced in building and growing new companies has a much better chance at raising money than a company with an inexperienced CEO.

There is a tendency in academia to underestimate the value that the business partner brings to the table. Avoid hiring the first potential CEO you consider. It is important to check references and establish how credible a prospective CEO is with potential investors. Initial conditions in a startup determine the future path of the company. Startups with a less qualified a business lead usually have difficulty raising capital and moving forward.

Defining the market

In order to write a business plan and effectively network with others, you will need to have an "elevator pitch" about your company. This pitch should explain within one minute, about the time for a ride on an elevator, the *raison d'etre* for your company to someone who knows nothing about your technology or target customers. The description should be compelling enough for someone, especially a potential investor, to want to continue the conversation about the opportunity.

The first step in creating your elevator pitch is to have a well-defined market. Be careful, however, not to exaggerate the size of the market or gloss over the critical details. Investors tend to view academic entrepreneurs that talk about a startup with a market size of multiple billion dollars as unrealistic and naive. You should understand the difference between a huge, broad market (ex. all physicians) and your addressable market segment, i.e. that part of the broad market in which you expect to be able to make sales (ex. orthopedic surgeons).

Products should address unmet needs to create a compelling argument for a potential new product. An elevator pitch should describe the unmet need(s), the customers, and why they will be interested in purchasing the product.

In acquiring such understanding about customers and why they will buy what you will be selling, realistic answers to the following questions should be developed:

- What is the unmet need?
- How many people, companies, or other entities currently have this problem? In the United States? Worldwide?
- Is the incidence of the problem growing or declining? At what rate?
- How is this problem currently solved or avoided?
- Who sells products that address this problem? What are their annual sales? What is their estimated share of the market?
- What products for solving this problem are in other companies' development pipelines?
- What are the strengths and weaknesses of existing products in this market?
- How do people make buying decisions in this market?
- Why would a buyer choose your product over the others?

Obtaining this information is not easy. You should plan to devote time to do research from both primary and secondary sources. You will need to spend significant time talking with industry leaders, searching databases, etc. Fortunately, the Wisconsin School of Business at UW-Madison has an excellent marketing department and various resources that can help you collect and analyze relevant information. There are many students at the Wisconsin School of Business with the expertise to do high quality market research and analyses. Some of these students may be willing to provide their services in exchange for the opportunity to be part of a startup.

Building financial models

Not only will understanding your target market, customers, and competitors be central to developing a sales and marketing strategy, but it will provide the foundation for creating reasonable assumptions for developing projected financial models. Financial models are typically comprised of three statements: an Income Statement; a Balance Sheet; and Statement of Cash Flows (sometimes called a Sources and Uses of Funds statement). Financial analysis is extremely useful for ascertaining the overall viability of your potential business enterprise and understanding the business structure that will be necessary to support those operations.

An Income Statement is a summary of revenues earned and expenses incurred by the business over a set period of time (i.e. monthly, quarterly, annually). Through an Income Statement, one can examine the nature of the revenue generated and the costs associated with creating or providing the product or service that generates revenue. Additionally, the Income Statement provides insight into all other expenses that will be incurred in order to support the general operations of the business, including sales, marketing, research & development, and management salaries. The Income Statement provides insight into the amount of sales required to support the business and establishes whether the target market is large enough to sustain those sales.

A Balance Sheet is a snap shot of the assets, liabilities, and value of the equity owned by all of the parties holding an ownership interest in the business. Assets include cash, inventory, and accounts receivable. Durable items, including property, land, and equipment are considered long-term assets. Liabilities include

accounts payable and debt incurred by the company. Equity indicates the ownership shares outstanding and retained earnings generated by the company. The Balance Sheet is useful for understanding the physical and financial structure of the company's business operations. For example, the Balance Sheet will indicate whether the business is capital intensive and requires significant investment in buildings and equipment in order to manufacture or serve its customers. This information can be useful in determining if how much capital the business will need to raise and whether the business model will provide an adequate return on the investment to the founders and outside investors.

Cash is the life-blood of any business. Regardless of the strength and profitability of a business, if it completely depletes its cash reserves, the company will not be able to pay suppliers, employee salaries, and other expenses, and will therefore be unable to operate. Cash can be generated through the sale of product, debt financing, and equity financing. The Statement of Cash Flows is a combination of the Income Statement and the Balance Sheet that allows the business to track and analyze its cash-on-hand. It indicates the amount of cash that is committed to inventory, held by customers (accounts receivable), and owed to suppliers (accounts payable), as well as, capital investment in property, plant, and equipment. Through the Statement of Cash Flows, one can determine the amount of investment necessary to sustain a business until it generates sufficient sales to support itself, or to reach a pre-determined milestone set forth in the business plan.

Writing a business plan

After you have identified your customers and competitors and created a model that demonstrates the financial needs and viability of your business, it is time to write a business plan that will both explain your business to potential investors and guide the company's operations moving forward. You will preferably involve someone who has written business plans in the past when putting together the plan for your new company. Ideally, you will have a CEO on board to assume that role. If you have not yet identified your CEO, there are various places where you can go for help. D2P, WARF, the Business & Entrepreneurship Clinic and the Weinert Center for Entrepreneurship in the School of Business are on campus resources that may be available to UW faculty, students and staff looking to start a business. In the

Madison community, several organizations exist to provide free support to aspiring entrepreneurs. Merlin Mentors, the U.S. Small Business Administration, including the Small Business Development Center, the Center for Technology Commercialization, and the Service Corp of Retired Executives (SCORE), all offer free service to small companies. D2P can connect you with these organizations.

Business plans come in a wide variety of forms and sizes. There is no one "right" format for a business plan. Presented below is an outline, with brief comments, of one possible business plan that would be provided to prospective investors. While the organization of the information is not the only reasonable format, the content suggested for inclusion is typical across all industries and types of businesses. A more complete guide to writing a business plan is in process and will be available on the D2P website as soon as it is completed. In the mean time, as you are thinking about forming a company, you should include the following subjects in your thought process:

Business Plan Outline

1. Executive Summary

The summary tells your whole story, in about one page. Your summary should be a concise, high level description of what your business will be, in terms of the market opportunity, the technology, the investment required, and the rewards associated with the project. It is often best to write your summary after you have completed the rest of the plan.

2. Introduction

Your introduction should give a description of the core technology and how it can and has been used. You set out marketing goals and objectives and what you are offering to reach those goals and objectives. You can give a history and the current status of the research that led to the technology that is the foundation for your company, and why that technology is different/better than other ways your customers might have for addressing the problem you intend to

solve, or to access the opportunity you see. It can be helpful to discuss the intellectual property – both yours and others – that will be relevant in your target market.

3. Market Analysis

The marketing plan (along with the financial statements) is the most important part of a business plan. You need to demonstrate a thorough understanding of customers and their needs, and your competition (any alternative approach to what your business is offering) for those customers. It is important to have a market focus, and not try to do too many things at once. The number of customers, what percentage of customers you plan to capture, and how much each customer will pay for your product or service need to be quantified, as does your approach for convincing customers to buy from you need to be well thought out and explained.

4. The Product/Service

This section provides a concise explanation of the needs of your target market (as identified above) and describes how your business will meet those needs. This is accomplished through a clear description of your product and/or service, with significant features. Most importantly, you will describe the benefits of those features to your prospective customers.

5. Strategy

Your business strategy represents the synthesis of all of the factors that will determine the success of your company. A strategy provides a plan to enter and capture customers in your target market in what either is, or will be, a competitive environment. Three general ways you can position your business are: 1. be the low cost supplier; 2. offer something different than what is otherwise available to your prospective customers; or, 3. segment the market and go after only a portion of the total market on either a cost or differentiation basis, or some combination thereof. These are only broad strategies, and are not the only possibilities. Whatever your approach, the strategy you

develop needs to be consistent with respect to all internal and external factors related to your business.

6. Management Team

While your marketing plan and financial statements are the most important part of your business plan, the management team is the most important component of your business. Management is responsible for executing the business plan. The team should inspire confidence in potential investors that they can accomplish what is presented in the plan. Understanding of, and experience in, the company's core technology, all facets of business, and small business operations should be represented on the team. Be prepared, and open, to having outside members, who can, among other things, help facilitate strategic partnering, raise money, and provide general guidance to company management. You might also want to consider establishing a technical advisory board, which can give credibility to the company's technology platform and advise in development of both current and future innovation.

7. Capital Recapture/Exit Strategy

This section of your business plan answers the question, "how do investors get their money out of your business, with their desired return, in roughly 3-5 years? Options include selling shares/company stock in a venture capital financing round or a public market, such as the NASDAQ or NYSE, a buyout of investor shares buy management or the company, the sale of the business to another firm, or dissolution of the business, with proceeds from the sale of assets going to the investors. In thinking about an exit strategy, you will want to try find out how companies similar to yours paid back their investors. If you do not plan on having investors, you will not need this section in your business plan.

8. Risk & Risk Management Plan

As Scottish poet Robert Burns noted, "the best laid plans of mice and men often go awry". No matter how well you have researched and

planned your business, the one thing you can expect with certainty is that things will not go exactly as you had hoped. Risk areas must be identified for all aspects of the business. In addition, you want to give some thought as to how these areas of risk might be dealt with, or contained. Examples of risks you may want to consider include intellectual property risk (your patent is not allowed, or issues with narrower claims than you expected), market risk (ex. your customers don't adopt your product or service as quickly as you planned), financial risk (ex. you need more money earlier than you planned), technology risk (ex. you run into unanticipated technical hurdles in developing your product or production capabilities), and management risk (ex. you are unable to hire a key employee when you need him or her). Investors are usually more favorably disposed toward a business where the management is aware of potential problems downstream and has given thought about how to mitigate those risks.

9. Financial Statements

An Income Statement, Balance Sheet, and Statement of Cash Flows provide, respectively, information about your revenue streams and the costs associated with generating those revenues, with calculations of the various profit margins you plan to generate, the company's assets, liabilities, and ownership interests, and the various ways that money will come into and go out of the company. They should convey a complete financial picture of what your business looks like at the present time and going forward. The assumptions you have made in preparing the financial statements are a critical part of the statements, and should be explicitly included in your plan. It is a good idea to examine the effect of changing your assumptions on the financial statements. You do not need to include analysis like this, but you should be prepared to discuss the subject. In addition to providing information to potential investors, financial statements will serve as a check for the company's management going forward to see if things are going according to the plan. Most university researchers do not have the background to put together financial statements for a business plan, so you will want to find help in doing so. D2P can help you with this and can direct you to other resources for assistance in creating financial statements.

ESTABLISHING A COMPANY

You have your plan. You have your team. It's time to start your company. You now have a variety of issues to be addressed, all of which require input from a knowledgeable corporate attorney who understands all aspects of starting a new company. Therefore, your first step should be to identify and engage a corporate attorney to help you think through the relevant issues and help you create and finalize all relevant agreements and legal documents. In selecting your attorney, you should look for someone who has a network that would be useful to you moving forward. Potential investors, corporate partners, customers, service providers (ex. accountants and insurance companies), and management talent might all be a part of an attorney's network of contacts. If you aren't familiar with attorneys in Madison who specialize in helping entrepreneurs start new technology companies, D2P and the University's Law & Entrepreneurship Clinic can introduce you to experienced attorneys. In addition, the Law & Entrepreneurship Clinic may be able to provide you free advice before you find your corporate counsel.

For-profit or non-profit?

UW-Madison's researchers have developed both for-profit and non-profit companies. The decision of whether to establish one over the other is usually driven by the mission of the firm, and often, the values of the company founder's.

The missions of non-profits usually center on "societal good" of the community, nation, and/or the world. Non-profits do not pay taxes, but they also cannot use their funds for anything other than the missions for which they were formed. It is important to remember that non-profit organizations may make a profit, but it must be used solely for the operation of the organization, or, in the case of a foundation, granted to other non-profit organizations. When a non-profit goes out of business, any remaining assets must be given to one or more other non-profit. The Wisconsin Center for Education Products & Services (<https://www.wceps.org/about.html>) is an example of a UW-Madison non-profit spinout.

The most common spinouts at UW-Madison are for-profit technology-based

spinouts. The mission of for-profit startups is to create value (wealth) for its shareholders. For startup companies, value can be created by successfully reaching technology and business development milestones, which reduces the risk of eventually bringing its technology to market. At this stage, an increase in a company's value is reflected in an increase in the value (price) of its shares. Ultimately, value in an ongoing for-profit company is created from profits generated from its commercialization activities. Profit is the goal and the business pays taxes on any profit. When a for-profit company goes out of business, its assets can be liquidated and the proceeds distributed to the owners or shareholders.

Virtual or "bricks and mortar"

Virtual companies run their businesses through the Internet. They typically do not have headquarters, an office space, or research facilities, and run with a very small staff. Most aspects of their business, including research and development, and sales and marketing, are typically outsourced. The primary roles of the virtual company are to raise money and monitor and manage the outsourced activities. By obviating the need for its own infrastructure ("bricks and mortar"), the virtual company can keep its costs, and the rate that it "burns" through any investment in the company, low.

In general, a virtual company is formed at the start of a company's existence. There are numerous examples of startups that never graduated from the virtual mode and ultimately withered and died. Success in the virtual mode requires a well thought-out business plan with achievable technical milestones within a realistic and reasonable timeline. When the milestones are achieved, the entrepreneurs should, in theory, be able to successfully sell their startup idea to investors. However, technical milestones can be difficult to achieve in a timely fashion within the academic environment. This is one reason why virtual companies often fail.

Incorporating the company

From the moment of its inception, a new company takes on its own identity, but for legal purposes a business is not "real" until it is formally incorporated in a

particular state. There are numerous how-to manuals on incorporation, and it is possible to incorporate on your own for a relatively small filing fee. While this option saves money in the near term, it is important that you get qualified advice from an attorney. The money will be well worth it and will likely save frustrations in the long run. The latter is something to be avoided, as one of the primary motivations for incorporating is to protect the principals from being held personally liable for the company's debts. A good attorney will ensure that accurate filings are fulfilled.

Please contact D2P for referrals to corporate attorneys with experience in incorporation strategy and structure, as well as other legal matters of importance to early stage companies. The Law & Entrepreneurship Clinic at UW-Madison (<https://www.uwle.org/>) is also available to entrepreneurs on campus for advice on this topic.

Choosing a corporate attorney

If the prospect of company formation is nearing, a founder will need to consider seeking legal advice before making decisions that may impact the business throughout its existence. In the context of starting up a business out of the University, the first decision is likely centered on remaining a center within the University or creating a start-up company and moving off campus. To become a customary University "business", a principle investigator will connect with a University adviser, be it at UW or WARF or elsewhere. Founders starting their own company will need private counsel.

Deciding when to hire a lawyer for your startup, who to select, and how to make the selection, can be a challenging and daunting experience. For example, one should consider taking advice before any public disclosure (including public presentations, news releases, or talking to journalists), before mentioning the sale of shares or other securities (there are strict securities regulations to protect investors), or before entering into external relationships (including with consultants, research collaborators, or anyone offering brokering services). Loose, informal, or ambiguous verbal arrangements can result in costly disputes later. Compromising on the filing of a patent application (particularly a PCT "World" application), the ownership of IP, or ending up with a claim by a broker for a percentage of a deal or a finder's fee are also potential pitfalls of early stage startups. Most importantly, the nascent company should strive to be free from any legal

complications from the outset. As such, founders should consider hiring a lawyer early.

Firm Size: Small or Large

It is worth giving careful thought whether to go with a small local law firm, or with the local office of a larger (possibly national) firm with deeper legal resources, and most likely, higher fee rates. While some would recommend retaining only the best, high-rate, firms, the legal needs of the start-up may not be able to support the high costs of doing so. However, if the startup's needs are likely to require substantial amounts of capital from institutional investors, strategic partnerships with national or global corporations, an IPO on an established stock exchange, or legal work associated with an anticipated acquisition, then a larger firm's services may be more appropriate.

How to pay for services?

A founder that is bootstrapping is likely to be minding every cent. Your law firm might assuage the cash-flow strain by offering services at a reduced rate for a period of time, hoping to benefit from the company's later success. Depending on the firm, the company can pay in cash, defer payment by agreement, issue equity, or combine any of the above.

Selection Process

Aside from size, cost, and payment structure, there are other considerations in selecting a law firm, including:

- How many partners are in the firm?
- Does the firm specialize in a specific field of law or is it a one-stop shop for all of the services the company will require?
- What depth of expertise and experience do they have?
- Are they local, regional, or national?
- What is their reputation?
- What is their expertise and experience with the type of company/industry being created (start-up experience, and experience with the types of deals you are likely to do)?

- What deals – start-ups, financings, collaborations, IPOs, M&A deals, etc. – have they advised upon? Advisers who have significant experience with the appropriate types of deals should provide the most efficient services and have a substantial pool of benchmark information about deal terms, and proven ways to structure deals and draft agreements.
- Outside of their area of personal focus, who would they bring in (from their own firm, or recommended external providers) to meet the company's other legal needs?
- If the firm provides a legal team to support the business, who will do the actual work? You will want the right level of attention from the senior partner, but will want more routine work to be done by competent junior lawyers, at lower fee rates.
- How active are they in your trade association? Do they attend conferences? Do they publish white papers, articles, updates of interest to the company's industry sector? Are they opinion leaders, evidenced by their public profile, invited presentations, public recognition, etc.?
- What are the fee rates per team member? What extras will be billed? How will they bill the company? What will they accept as payment?

Having a legal question or two to ask may also be very enlightening regarding how the firm approaches the answer, and how interested the firm is to give you an answer. The purpose of asking these types of questions is not to receive free legal advice, but to analyze the way they respond.

Once you engage a law firm, you will likely work with an individual lawyer and his/her team. The founders will want to assess whether this person/team is compatible with the company's management team – not only with respect to personal chemistry, but to having a good understanding of company needs, and risk tolerance. Remember, entrepreneurs take calculated risks to exploit opportunities, while lawyers seek to remove or minimize risks.

Part of the lawyer's pitch might be the added value they can bring – access to their network of investors, etc. A good level of skepticism is appropriate. If this is delivered, it is a bonus. The company's priority should be on satisfying its specific legal needs.

Executing a Founders Agreement

Forming a company is a tremendously complicated process on many different levels. The information contained in this section represents important considerations that founders of a new startup company should discuss and agree to before moving forward to create the company. The essence of this conversation is to talk through a number of key points regarding the role and level of involvement of each founders in the operation of the new company, the ownership interests (equity) of each founder, and other important company governance matters. It is highly recommended that the founders will retain the services of an attorney to prepare a Founders' Agreement. This document memorializes the terms and conditions agreed to by the founders.

D2P recommends that the founders work through this process at the same time the entity is being formed, typically with the same attorney that assists with the incorporation.

In a typical, and preferred, scenario, at least one Academic Founder ("AF") and one Non-Academic Founder ("NAF", and, collectively, the "Founders") will create an entity to commercialize and grow a business around intellectual property ("IP") owned by WARF or an AF, and which the AF had a hand in creating (ex. an inventor of patentable invention or author of a copyrighted work). What follows is information related to important issues addressed in a Founders Agreement and other agreements governing the structure and operation of the startup.

Founders Agreement

1. Founders' Roles

At the outset, the Founders should begin to think through and frame out each Founder's initial contribution to the company, as well as their expectations regarding future contributions and roles going forward. Such evaluation should include:

A. Relatively detailed listing of each Founder's initial and anticipated responsibilities to the company (e.g. business development, marketing, operations, raising outside capital, filling out the management team, software development, creation of

additional intellectual property, etc.);

B. Anticipated time commitments of each Founder to the company. Will each Founder be working with the entity on a full-time basis, either paid or unpaid, or will one or both of the Founders maintain separate full-time or part-time employment or engagements?

The foregoing expectations, once mutually-agreed between the Founders, will likely serve as the basis for each Founder's "sweat equity" interest in the company.

2. Initial Ownership

Cash Investment: Cash contributions in most IP-based businesses are typically minimal at this stage, but to the extent either or both Founders will be contributing capital to the company, the Founders should allocate a portion of the initial equity ownership towards those investments. For example, if both Founders will be making an initial capital contribution of \$25,000 to the company, maybe the Founders will deem 10% of the equity to be issued to each Founder to be fully "earned" and "vested" as of the date of that contribution (with the remaining 80% to vest as described below).

Sweat Equity: Beyond any cash investments in the company, the AF will likely be contributing a combination of intangible/intellectual property resulting from ongoing technology development efforts, as well as unpaid time/"sweat" to the company, while the NAF will likely be contributing time or "sweat" to the entity, in a capacity such as (i) serving as CEO/President, (ii) accessing contacts in the relevant industry, and (iii) overseeing business development and marketing functions during the early stages.

(a) The Founders will first need to determine overall equity ownership based on the assumption that each Founder remains with the entity for a pre-determined period of time and adequately performs all of the responsibilities agreed to in the section above. For example, assuming the NAF is highly

qualified and experienced in the company's industry, the Founders may allocate equity on a 50/50 basis. The initial ownership interest of such an experienced NAF typically ranges from 20% to 50%.

(b) The next step after carving up the equity is to determine what will be required of each Founder to "earn" the equity which is being issued as compensation (as opposed to equity issued as consideration for a cash investment in the company). There are many options here, one of which is to vest one portion of the Founder equity over time (e.g. quarterly over a 3-year period), and the remaining portion based on either the company or the applicable Founder achieving specific measurable milestones (e.g. unique users, prototype development, licensees, revenues, etc.). Regardless of any vesting schedules, to avoid adverse tax consequences (both on future vesting dates and upon a sale of the company), each Founder should work with his or her accountant to ensure an 83(b) election is filed with the IRS no later than 30 days from the date of issuance of any compensation equity to that Founder.

3. Equity Repurchase Rights

There are various scenarios under which the Founders will want, or be required, to provide the company with the ability to repurchase or recapture some or all of the equity issued to a Founder. Some of the more common repurchase rights, each of which merit discussion between the Founders at the outset, are as follows:

A. Termination of Employment or Consulting Arrangement - In the event either Founder either voluntarily leaves the company or is terminated by the company, the company will often be entitled to repurchase all equity held by such Founder;

B. Death of a Founder - Often unvested equity will be forfeited and vested equity is subject to repurchase from the deceased Founder's estate for "fair market value"; and

C. Divorce or bankruptcy of a Founder - In these "involuntary transfer" situations, to the extent the applicable judge/trustee elects to award equity to someone other than the Founder, unvested equity will be forfeited to the Company and vested equity will often be subject to repurchase at "fair market value".

There are a number of related issues which sometimes come into play in this area, including (i) how to address a situation where one or both Founders are not full-time with the entity, as it sometimes becomes difficult to ascertain whether or not a Founder has terminated his or her relationship with the entity, (ii) the right of the company to pay a portion of any purchase price by issuance of a promissory note, (iii) the purchase of key man life insurance policies to support the repurchase of equity upon the death of a Founder, and (iv) accelerated or partial-accelerated vesting upon any sale of the company and/or in the event a Founder is terminated by the company without "cause" (to be defined within the investment documents).

4. Management

While not required by the State of Wisconsin limited liability company statutes, it is often a good idea to set up the entity such that it is manager-managed rather than member-managed. In such a structure, the "Board of Managers" would be the strategic/high-level decision making body, while officers can be designated to handle the day-to-day operating affairs of the company.

In a 50/50 scenario, where there are two Founders with equal ownership interests in the company where those combined interests represent a majority of the total ownership interest of all members (equity holders) in the company, the Founders should discuss how they will make decisions on matters where they cannot reach agreement on an issue. Possible options for making such decisions include:

A. Mediation or arbitration;

B. Submission of issue to other members, if there are other equity holders who have the full trust of the Founders; and

C. Simply requiring that the Founders work through the issue before any decision is made (often the case in very early stage businesses).

In any event, in a 50/50 scenario it is often beneficial to find a third board member at the appropriate time to, among other things, avoid decision-making deadlocks.

A Forced Buy/Sell arrangement (either Founder can submit a dollar figure to the other Founder, and the other Founder can either buy the submitting Founder's equity at that price or sell to the submitting Founder at that price) included in the incorporation agreements can be a useful final solution in the event two equal Founders regularly disagree on company matters.

If one Founder will control the voting/decision-making within the entity, the other Founder may request that certain material actions not be permissible without "super-majority vote", such as, for example, (i) going into a different line of business, (ii) selling the company, (iii) paying compensation in excess of \$_____ to any individual, and (iv) issuing incentive equity beyond a pre-agreed amount.

Other agreements

The Founders should enter into an agreement with one another to govern various other aspects of the business during the early stages (**an Operating Agreement for a limited liability company or a Stockholders' Agreement for a corporation**), including:

1. Future Capital Needs - The Founders will each likely want preemptive rights to ensure both can, at their option, participate in future capital raises to maintain their relative ownership percentages in the entity.

2. Capital Calls - If the Founders know that capital is going to be required in the short term (in advance of an outside round), they should address the investment expectations relative to each Founder and the repercussions a Founder will face in the event such Founder does not meet his or her capital call obligations.
3. Sales of Equity - Presumably, at a minimum, the company and/or the other Founder will have a right of first refusal to purchase any equity proposed to be sold by a Founder (sometimes such sales will simply be prohibited without board approval).
4. Tag Along/Drag Along - The Founders may want to ensure that to the extent they are not 50/50 owners at some point in time, the smaller owner(s) do not have the ability to block an otherwise approved sale of the company's equity while the larger owner(s) do not have the ability to sell just their equity leaving the smaller owner(s) behind with a new and potentially undesirable partner.
5. Allocations/Distributions - Depending on the form of entity selected by the Founders, there may be annual profit / loss allocation decisions to be made, and regardless of the choice of entity, the Founders will want to think through expectations regarding dividends/distributions over time (most often profits in an early stage business are re-invested in the entity to promote growth).
6. Outside Activities - What will each Founder be entitled to do outside of providing services to the company (e.g. similar or competitive businesses, academic engagements, other boards of directors, etc.).
7. Non-disclosure/Non-compete – Non-disclosure agreements are also a tool that dissuades founders from individually discussing company matters outside of the scope of their role with the company. Non-compete agreements prevent founders from prematurely leaving the company, establishing their own company or joining a competitor, and employing the same technologies, methodologies, and strategies against the start-up.

8. Survivorship – In the absence of an agreement, in the event of the death of a founder/owner, the ownership of equity in the company will likely be included in the decedent’s estate and be distributed to that person’s friends and family. Through a survivorship agreement, founders can determine how their equity is to be redistributed among the other founders up their death.

9. Assignment/License of Technology – If a company is reliant on a specific type of technology in creating a competitive advantage, then, for any rights owned individually by a founder, an agreement assigning ownership or exclusively licensing the technology to the company will be important. Assignments and licenses will prevent other companies from using the same technology and competing with the start-up.

Choosing the startup legal entity

Choosing a startup legal entity can be confusing. There are three major considerations to address when establishing a company formation strategy:

- 1) Limitation of liability;
- 2) Tax implications; and
- 3) Financing expectations

Limitation of liability. Without formally registering your company with the Wisconsin secretary of state, your company will be classified as either a sole proprietorship or partnership (if there are multiple founders/owners) and treated as such for the purposes of treating and assigning liability to the company and its founders/owners. Notably, for sole proprietorships and partnerships, founders/owners may be held personally liable for the full extent of damages that may arise from the activities of the company or its agents.

Through formal formation of a company, typically as either a corporation or a limited liability company (LLC), founders/owners can cap their exposure to liability. From a liability standpoint, there is very little difference between a corporation and an LLC. With few exceptions, both entities will shield its owners from personal liability and limit their exposure to the amount of their ownership or investment in the company.

Tax Implications. Differences between corporations and LLC's arise when considering the tax implications associated with each type of company. Corporations, for tax purposes, are treated as individuals that have the ability to generate personal income. As such, they are subject to a corporate income tax upon the recognition of income. Thereafter, should the company decide to distribute dividends to its owners (shareholders), those owners are subject to a personal income tax. Ultimately, money generated through corporate activity will be taxed twice by the time it reaches shareholders.

LLC's are treated differently by the tax code. Unlike corporations, LLC's are not a taxable entity. Instead, income and losses are passed through to the company's owners (members). Income is only subject to income taxes once they are received by the company members at their personal income tax rate. As a result, money generated by the LLC is only taxed one time as it is distributed to the shareholders.

Financing Expectations. Also factoring into the decision of the type of company to be formed are considerations associated with how the start-up will be financed. Specifically, to the extent that the founders can anticipate the source of the funding to be used to support the start-up's activities, the company form should reflect those expectations. For example, if the founders anticipate seeking investment from venture capital firms, then they are likely going to register the company as a corporation. Because many venture funds are supported by institutional investors, including non-profit entities, insurance companies, and pension funds, they do not want to report additional income, as a result of passed through earnings from a portfolio LLC. As such, venture funds typically require that portfolio companies are corporations rather than LLC's.

On the other hand, angel investors may prefer LLC's as investment opportunities so they can benefit from the pass through of a tax credit resulting from the likely net losses incurred by a start-up company. As a result, these investors would be able to offset their personal income with any net losses passed through the LLC to them.

Generally, there are four possible business structures, as outlined in **Table 2**. Usually, sole proprietorship is not appropriate for technology companies due to liability concerns and limitations on raising capital. The C Corporation is the

structure preferred by most venture capitalists. When the to-be-venture-funded startup is a C Corporation, various administrative and other burdens are minimized for the venture firm, allowing them to transfer capital more easily and focus on developing the startup.

Table 2: Common Legal Entities for Corporations

	Sole Proprietorship	C-Corp	S-Corp	Limited Liability (LLC)
Requirements	None	Must File with State, small fee required	Must File with State, small fee required	Must File with State, small fee required
Personal Liability	Unlimited liability	Shareholders are not held liable	Shareholders are not held liable	Members are not held liable
Governance	Relatively few requirements	Election of board of directors/officers, annual meetings, and annual report filing requirements	Election of board of directors/officers, annual meetings, and annual report filing requirements.	Few Requirements.
Management	Full control	Shareholders elect directors who manage business activities	Shareholders elect directors who manage business activities	Members can set up structure as they choose
Term	Terminated when proprietor ceases doing business or upon death	Perpetual: can extend past death or withdrawal of shareholders	Perpetual: can extend past death or withdrawal of shareholders	Perpetual, unless state requires fixed amount of time
Taxation	Entity not taxable. Sole proprietor pays taxes.	Taxed at corporate rate	No tax at the entity level. Income passed through to the shareholders.	No tax at the entity level. Income passed through to members
Transferability of Assets	No	Shares of stock are easily transferred.	Yes, observing IRS regulations	Depends on restrictions outlined in operating agreement
Fundraising	Individual provides capital.	Shares of stock are sold to raise capital (Securities laws apply)	Shares of stock are sold to raise capital. Limitations prevent S corp stock ownership by corporations	Subject to operating agreement (Securities laws apply)

Fundraising

The type of investor(s) that you seek for the company will depend on the type of company that is being built, the stage of development, and the short-term and long-term capital needs. The most common types of investors in early-stage, technology companies are:

Sweat equity, friends & family. Usually, the founders each put some of their personal funds into the enterprise during its early days to help with expenses such as travel and incorporation. More committed entrepreneurs, especially those without co-founders, may put a considerable amount of their own money into the company, frequently using credit-card and home-equity debt as an adjunct.

Often, entrepreneurs will tap their friends and families as mini-angels to provide initial funding. Asking for money from family and friends can be difficult. It is wise to be forthright and clear about your goals and intentions. Some sort of a written agreement or contract is highly recommended to minimize bad feelings, or worse, if things do not work out as anticipated for the company.

Non-profit grants. Non-profit organizations are often good places to seek funding if the mission and goals of your company align with the missions and goals of a non-profit. Occurring more frequently in healthcare and social issues, entities such as the Cystic Fibrosis Foundation, which has funded cystic fibrosis research in both industry and academia, and the Muscular Dystrophy Association, which invests in research related to cures and treatments for muscular dystrophies, including clinical trials, are examples of non-profit funding to advance medical innovations.

SBIR & STTR. Small Business Innovation Research (SBIR) and Small Business Technology Transfer Research (STTR) are competitive federal grant programs that fund research and development in companies with fewer than 500 employees. These programs recognize that much of the United States' innovation occurs within the small-business sector, and they seek to stimulate further innovation in select areas of research. Over \$2,000,000,000 in grants are provided each year by agencies of the federal government under published solicitations. Awards have three phases: Phase I (up to

\$150,000), in which new concepts are explored; Phase II (up to \$1 million) 1,000,000) in which projects are moved close to commercialization. Neither SBIR nor STTR programs include Phase III funding, but non-SBIR/STTR funds, as well as various government resources, may be available and contracts for products, processes or services intended for use by the U.S. Government may be awarded.

SBIR/STTR awards are made to a small business, but, in the case of SBIR, a portion of the funds may be subcontracted to a university laboratory, which can be a great source for managing proof-of-concept projects without having to pay for expensive infrastructure such as instrumentation in a private sector laboratory. In the case of STTR awards, a portion of the funds must be used at a non-profit research organization. SBIR/STTR awards are attractive to academic startups for two reasons: proposals play to the grant-writing strengths of academic researchers; and they are outright grants, not equity investments (e.g., you don't have to give a piece of the company away to get the money). The major downside to the awards is that there can be a significant lag between Phase I and Phase II awards, and it may be difficult to keep research teams together (i.e. meet payroll) while the Phase II application is pending. Intellectual property issues may need to be addressed, as well.

Many academic researchers have been tempted to use the SBIR/STTR programs to extend their academic research instead of using the funds to build a company and develop products. Funding agencies use expert panels to review each grant application for both technical and commercial merit. Applications that are academically focused are generally not accepted. But used in their intended manner, SBIR/STTR awards are excellent ways to fund early research in a new company, and the Phase II awards are robust. Still, a company trying to build its entire line of products from SBIR/STTR grants without other investment is not likely to secure sufficient funds to manufacture and bring new products to market.

For more information on SBIR/STTR programs, including participating U.S. Government agencies participating in each program, go to <https://www.sbir.gov/about/about-sbir>.

Angel investors. Angel investors are individuals who invest their personal

money in new companies. An angel investor is often someone who has made their fortune by leading the launch and development of a new company, followed by a successful exit. Angel investors often form groups, so potential investments can be better evaluated, more investments made (reducing the risk for each investor in the group), and larger amounts can be invested in individual projects. Each angel typically invests between \$25K- \$100K. If a group pools their money, the total amount of investment in any given project can reach over \$1 million dollars. Angel investors usually come in at an earlier stage of a new company than venture capitalists.

Equity investors receive stock in the company, with the amount dependent on the value ("valuation") of the company in proportion to how much they have invested. The cash value placed on a new company ("pre-money valuation") is subject to negotiation, with entrepreneurs usually thinking higher and investors lower. It is inevitable that after multiple rounds of equity investment, the investors will own a majority of the shares of the company. Academics often view this outcome, the shift of majority ownership from founders to investors, as "losing control" of the company (often called "founder's syndrome"), but without external investment, the company would not be able to move forward.

Industry Partnerships. A startup may also develop a strategic partnership with a larger company under which the partner helps the young company with research or product development, generally in the form of cash or collaborative assistance. Partnerships are an excellent source of non-dilutive capital and also usually have an impact on the company's valuation because they may validate the startup's technology. Specifics of partnerships are dependent on the stage of the startup's product development and often have performance milestones as part of the arrangement. Depending on the arrangement between the partners, certain rights (ex. rights to use or sell the startup's technology in specific applications or geographic areas), may be provided to the larger company in return for its financial support. Care must be taken that these relationships do not alter the core company focus and are not structured in a way that will hamper future fundraising or a possible sale of the company.

Venture capital. Venture capitalists (VCs) are professional investors and money managers who raise, manage, and invest a pool of money from high

net worth individuals and institutional investors who are looking to diversify their investment portfolios to include investments with the potential to yield higher returns than a stock market average. There are a multitude of venture firms, with each firm usually specializing in a particular industry. There are more VCs focused on high tech than life sciences, because an IT firms usually require less invested capital and offer the prospect of a faster exit than life science companies, which need to complete clinical trials and secure regulatory (FDA) approval before marketing their products.

Venture investment provides significant value to a startup company beyond the invested funds. Many VCs were former entrepreneurs who launched and managed successful companies, so they can provide valuable advice and guidance. In addition, when a VC invests, the company gets access to their entire network of friends, investors, and others that can help a new company grow and succeed.

In addition to returns VCs realize one one of their portfolio companies is acquired or goes public, VCs make money by charging a management fee, a percentage of the managed funds they raise from wealthy individuals and institutional investors. It is in a VC firm's best interest to make money for their investors because their reputation and ability to raise money for additional investments in the future is on the line. Their reputation is based on their investment track records. If managers have below average success rates; investors are likely to choose different firms for their future high-risk investment commitments.

Equally important as selecting the right CEO, is the selection of the right investors. Investors play a critical role in shaping the company, building a business network, and identifying and recruiting the best management for the company at each stage in its growth. The quality of your early investors will play a key role in attracting future investments. Sometimes, the entrepreneur is in such desperate need for funding that he/she accepts investments from inexperienced investors. These investors often have unrealistic expectations, little industry-specific network, and little credibility with follow-on investors. It can be very difficult for a startup to raise additional capital after taking early money from an inexperienced seed investor.

TIPS FOR UW-MADISON ENTREPRENEURS

An important step in starting a company is to clarify the role that the academic entrepreneur wants to and will be able to play and the steps to move the invention(s) to the company. These issues can vary widely depending on the nature of your startup and your own background, desires and interests. However, there are a few things to keep in mind as you consider starting this new venture.

Working with UW-Madison and the Wisconsin Alumni Research Foundation (WARF)

Unlike corporations where employees are unable to start a company with information gained while employed, academia is markedly different. University employees who want to found new companies based on their research are not perceived by their employers as potential competitors. Thus, university employees are typically not required to leave their academic employment in order to found a company.

UW-Madison, like all academic institutions, has a variety of policies that may be applicable to a researcher's plans to start a company, including those related to intellectual property, conflict of interest, conflict of commitment, sponsored research, and outside consulting. UW System and UW-Madison research policies are accessible at <https://research.wisc.edu/respolcomp/>. Of particular importance when contemplating a startup are the UW-Madison IP Policies and Forms (<https://research.wisc.edu/projectagreementsip/intellectualprop/ippolicies/>).

The first step for members of the University community contemplating the formation of a new company based on their research is to disclose the invention: and familiarize themselves with WARF's licensing agreements.

Invention disclosure. UW-Madison inventors have an obligation to disclose all inventions created while carrying out University duties, using any University funding, or using University premises, supplies, or equipment (<https://kb.wisc.edu/gsadminkb/page.php?id=32996>) The obligation to disclose is fulfilled by completing an Invention Disclosure Report, which is submitted to WARF. If this is your first interaction with WARF, it may be helpful to consult with a WARF licensing manager who handles similar technologies in advance of submitting the

disclosure. Please contact WARF (608-263-2500; info@warf.org) to be directed to the appropriate licensing manager for your technology. WARF will determine whether there is protectable intellectual property (IP) associated with the discovery and whether they feel there is a significant commercial opportunity for the innovation. Invention Disclosure Reports can be downloaded or completed and submitted electronically to WARF at: <http://www.warf.org/for-uw-inventors/disclose-an-invention/disclose-an-invention.cmsx> - IDR.

In the event WARF decides that your invention is patentable, has commercial value, and resulted from research funded by federal grants or corporate or foundation sponsored research under agreements with intellectual property provisions, WARF may elect to secure ownership in the invention, in which case each UW-Madison inventor will assign their ownership interest in the invention to WARF. In this case, WARF will pursue patent protection for the invention and act to fulfill all obligations to the U.S. Government and/or other sponsors of the research. If WARF decides not to pursue IP protection, WARF will relinquish all rights to the disclosed invention. In this case, for inventions resulting from federally funded research, UW-Madison inventors, with the assistance of the Office of the Vice Chancellor of Research and Graduate Education (VCRGE), may petition the funding agency to secure ownership in their invention. For inventions where such petitions are granted, the inventor will be free to pursue it on his/her own, subject to the rights of the U.S. Government and an assumption of all obligations to the U.S. Government associated with owning the invention. The inventor will also be responsible for the legal costs associated with IP protection and costs associated with the startup. If WARF decides to protect the invention, it will file a patent application and cover the legal costs associated with the application, as well as retaining the responsibility to fulfill all obligations related to owning an invention resulting from Government-sponsored research. The startup will be required to provide WARF with periodic input relating its activities associated with the development and commercialization of the invention. The startup will need to license the technology and patent rights from WARF to secure development and commercialization rights. This process is broadly described as "technology transfer".

Disclosing information

Once you decide to start a company, it is important to be careful how much information is disclosed to the public. Public disclosures could limit your ability to

obtain patent rights. In addition, someone could try to copy your idea, and competitors would have an early alert to your plans, allowing them time to prepare a response that could make market entry more challenging for you.

If you are planning to start a company around potentially patentable technology created at UW-Madison, please disclose your invention to WARF, and contact your WARF invention manager before making any public disclosures. The invention manager will let you know if signing a Confidential Disclosure Agreement (CDA), also known as a Non-Disclosure Agreement (NDA) is needed before any disclosure of any information not covered by an issued patent or a pending patent application. Prior to incorporation, WARF will negotiate and sign an agreement with the party to whom the information will be disclosed. For technology not owned by WARF, D2P can provide you a CDA/NDA and can help you negotiate any terms that a third party might want to change. If the other party you want to talk with about non-WARF technology prefers to use their own agreement, D2P is available to review the agreement with you and help you negotiate any provisions that need to be revised.

In general, it is wise not to provide too many details of an invention when communicating with an external party. Even when common interests are clear, and further, more serious discussion is indicated and desired, it is not necessary to provide all the details about the invention or your new company. Most investors often do not want to learn confidential information until they have moved onto the stage of "due diligence" and are seriously contemplating an investment. At that point, if the startup has already been formed and has optioned or licensed technology from WARF, they should already have a template NDA/CDA, which can be provided by your corporate attorney.

Does my startup need a standstill (option) or license agreement for my IP?

Ultimately, in order to develop and commercialize WARF-owned intellectual property, a startup will need to enter a license agreement for the IP with WARF. For startups based on WARF-owned intellectual property, inventors wishing to start a new company to commercialize their invention may request a standstill period, usually 6 months, during which WARF will not make available the technology of interest to any third party. A standstill agreement with WARF allows inventors to gain additional time to evaluate the commercial potential of the technology and

develop a full business plan before entering negotiations for a license agreement to their technology.

Assuming there are not multiple potential licensees competing for a technology, WARF is generally willing to enter a standstill agreement at no cost to the company. At the end of the standstill period, including any mutually agreed upon extensions of the original standstill period, the startup must submit a complete business plan to WARF for their approval, prior to entering negotiations with WARF for a definitive license agreement to the technology.

What to expect with a startup license

Inventor input is important in licensing decisions by WARF. However, because of the inventor's potential conflicts-of-interest when starting a company, he/she needs to negotiate with WARF at "arms-length". Agreements with faculty-initiated companies need to be reviewed carefully to ensure that WARF is justified in granting rights to the technology to the startup (as opposed to a larger company). The startup needs to demonstrate that they are well positioned to commercialize the technology, relative to existing companies. In general, WARF gives priority to startups founded by UW-Madison researchers.

It is important for the UW-Madison founder(s) and the business lead of a startup to be familiar with the general WARF license agreement template and financial terms for startups. This information, and other materials related to standstill agreements and requirements for securing startup rights to inventions from WARF, is available at the WARF website startup page (<http://www.warf.org/home/for-startups/startup-documents/startup-documents.cmsx>). The time required to complete negotiation of a license agreement varies. In general, the length of the negotiation depends on the experience of the management team in transferring technology out of the university environment into a startup.

Under federal law, Universities are required to include diligence terms in license s to IP created under U.S. Government sponsored research. The purpose of such terms is to ensure that the licensee is making significant progress towards commercialization of the invention. To fulfill this obligation, WARF requires companies desiring to license IP they own to create a startup company intended to commercialize that IP to submit a business plan describing how the new company will move the technology to market. Business plans need to include information

such as: the company's purpose, a description of the technology, opportunity, market, and competitive analyses, technology development plans with timelines, milestones, and a financing plan. The business plan is not a procedural manual but a document explaining the company's vision of how it will develop and commercialize its technology, and the resources (human, financial, and temporal) required to do so. Because business plans are subject to frequent revision as directions change, they are a snapshot of the company at a particular point in time. The exercise of writing the plan is itself invaluable in that it makes the entrepreneur confront the key aspects of building a new business and form realistic expectations of why he or she believes the company will be successful.

Once the license agreement is executed, the licensee will reimburse WARF for their legal costs associated with protecting the invention. These costs include the time paid for an attorney to prepare and file U.S. and non-U.S. (if any) patent application(s), and any prosecution of these applications that occur prior to execution of the license agreement. If, for some reason, extraordinary legal expenses have been accrued during the prosecution of the intellectual property, a reimbursement plan will be established to help the startup.

Some terms to expect and understand in the license agreement include:

- Field of use and/or geographic limitations, since a startup company often cannot develop all potential applications or geographic markets for an invention;
- Performance milestones expected by the company which may include initial management team in place; product development achievements; clinical and/or market testing; initial rounds for financing; commercial product introduction ("first commercial sales"); and/or minimum revenue targets;
- Equity, milestone payments and royalties as consideration of the use of University resources (salaries, space, etc.) invested in research leading to the creation and development of the licensed technology prior to licensing from WARF;
- Minimum royalty payments to ensure that the company is serious about developing the invention;

- Sublicensing rights and payment obligations for consideration received from any sublicensees; and
- Requirement of sufficient insurance, as specified by WARF.

For more information, including WARF's standard license agreement for startup companies, see the WARF website startup page (<http://www.warf.org/home/for-startups/startup-documents/startup-documents.cmsx>).

Leading sources of frustration for the academic entrepreneur

A startup moves at varying speeds, alternating between dizzyingly fast periods at high energy and periods when progress in creating the company, acquiring rights to technology, development of the technology or target markets, raising money, or any of the myriad of things that need to happen to be successful, seems stalled. These latter periods are the ones that entrepreneurs usually find frustrating. Much of the frustration is the result of unrealistic expectations. Some of the leading sources of frustration among academic entrepreneurs are listed below.

Raising capital. A company without a clearly articulated and credible business opportunity (the so-called "value proposition") will not be able to raise money. Even federal grant programs such as SBIR and STTR require a viable product-commercialization plan for Phase II awards. Academic entrepreneurs must make sure that the company is pursuing markets, not technology.

Frustrations with the WARF IP assignment. You thought that you owned the IP you created and upon which your company is to be based. Unless your research findings are already in the public domain, the company may need to negotiate an IP license with WARF. Please remember that the validity of a patent covering your invention could be challenged if it is not appropriately assigned to WARF. Failure to assign rights to an invention that should rightfully be assigned WARF would certainly lead to an embarrassing situation with prospective investors when they complete their due diligence on your IP. For all IP assigned to WARF, it is important to make full disclosures of your plans to WARF before going too far down the road in starting your company.

Frustrations with the University - COI. Conflicts-of-interest review and approval entail more than checking a few boxes on a form. Full disclosure, often in face-to-

face meetings, will likely be required.

Relationships with business partners become difficult or dissolve. Being partners with people in a business is not the same as having a research collaboration. The pressures associated with a business may bring out behaviors in friends and colleagues that you wish you had never seen. A frayed personal relationship can be one of the most difficult things to endure in a startup, especially when you are legally still partners with the individual (e.g. through stock ownership). It is thus essential that you understand the motivations, visions, and goals of your co-founders, both on the science and the business sides, before you enter into partnership with them.

You have to replace the CEO - again and again. Do not pick your CEO merely by the fact that he or she has had "business experience". All too often, the business person in a nascent company lacks the right experience or skills to run a startup in the company's particular industry. Replacing the CEO not only takes a great deal of time, but also may dissipate any momentum the company has built, as well as depress employee morale.

The CEO's and your visions for the company are at odds. No matter who is right in such a situation, if the investors in the company decide to back the CEO your vision is unlikely to prevail. Thus, you may have to compromise "for the good of the company" in order to remain a key player. The fundamental role of compromise in a young company's success is a departure from the academic culture, which typically rewards independence. If the business is to be successful, you must be willing to listen, communicate effectively, and trust the expertise and business acumen of your partners.

Relationships with investors sour. Sometimes inventors and investors think that academic discoveries are much closer to the market than they actually are. They may not have the patience for the ups and downs of an extended period of R&D. This disconnect may result from the investors' lack of familiarity with the industry (so-called "dumb money") or their having been given an unrealistically optimistic plan for product development. It is, therefore, very much in the academic entrepreneur's interest to be as realistic as possible about R&D timelines when courting investors.

Verbal promises have not been kept. In the heady days of forming a new company,

when everyone is excited about growing a new venture, a plethora of items are discussed and many promises are made. All too often, however, promises are not documented. A year or two later, those who made them either claim they do not remember doing so or are disinclined to make good on them. Handshakes are nice, but you should get such matters in writing, especially when related to money or stock.

Starting and growing the company are consuming too much time. Do not underestimate how much time it will take to form a new company. With the initial vision for the company, the founder will be called on to impart that vision to CEO candidates, potential investors, and numerous other people as the company is being formed. Because of the host of responsibilities that founders have, it would be wise to talk with founders of other companies about the amount of time you will need to devote to the enterprise.

You fear losing control of the company. Capital infusions from outside investors are a double-edged sword. On the one hand, they are the lifeblood that allows the company to move forward, but on the other, they result in the transfer of ownership interests. In a company requiring significant investment, it is almost inevitable that the company's founders will eventually become minority shareholders as their shares get diluted by the issuance of significant amounts of stock to investors. A company requiring relatively limited investment, however, may have a greater chance of remaining under the founders' control. At numerous times in the life of a company, choices will have to be made with regard to accepting the money of others. How important is the investment capital? Is it worth the investors' input and possible control of the venture?

UW-MADISON ENTREPRENEURIAL RESOURCES

UW-Madison supports a growing, vibrant community of faculty, students, staff, and alumni entrepreneurs. For an up to date list of available commercialization resources available to UW-Madison entrepreneurs on campus, in Madison, and beyond, please go to the "Entrepreneur" tab at the D2P website (<https://d2p.wisc.edu/entrepreneurs-2/>).

About Discovery to Product

Founded in 2014, D2P inspires and nurtures a culture of innovation, bridging UW-Madison research with its practical use for public benefit.

For more information, contact D2P:

email: engage@d2p.wisc.edu

phone: 608-890-0904

<https://d2p.wisc.edu/>

This guide is based on a similar document prepared by the Innovation and New Venture Office at Northwestern University, who most graciously authorized D2P's use of their guide as a starting point for our own.