A new company is one way to further develop and commercialize discoveries made at the University of Illinois. A start-up can be a preferred route for commercialization because it can provide the professional guidance and development needed to demonstrate commercial viability, and thus improve the chances that an early-stage technology will get to market.

Numerous resources exist within the University system to support the development of new businesses commercializing University intellectual property. For example, IllinoisVentures is a premier seed and early-stage technology investment firm focused on research-derived companies that was conceived and launched by the University, and has been consistently named by Entrepreneur magazine to its national list of the top 100 venture capital firms. IllinoisVentures’ professionals often collaborate with OTM professionals to assess the viability of a start-up path and are available to consult with faculty and students on topics related to business launch and entrepreneurship. In addition, research park and incubation facilities on both campuses provide physical space and the environment to foster start-ups.

Many factors are involved in the decision of the OTM to license a technology to an existing company or to a start-up company. Considerations include optimization of stakeholder positions (University, faculty, etc.), improving the probability that the technology reaches market and how best to accomplish further commercial development outside the research laboratory. The licensing or optioning process begins with somewhat standardized templates that tend to provide both equity and royalty consideration to the University in exchange for commercial rights to the technology.

When a start-up includes one or more University faculty members, a “conflict of interest management plan” will be required. That plan outlines the relationship between a faculty member’s activities with the company and his/her research and teaching responsibility. The plan identifies and mitigates possible areas of conflict, such as those related to conflict of commitment and/or conflict of interest and lays out a plan for disclosure and management of these conflicts. To initiate a conflict of interest management plan, contact the Office of the Vice Chancellor for Research.

The University licenses to start-ups are structured so as not to overburden the company financially during the first years.

A start-up company is a new business entity created to market a specific invention. It is an alternative to licensing an invention to another, already existing company.

The inventor usually serves as a consultant or adviser to the new company. That role may change as the company develops. However, much more time is required early in the process of establishing the company.

What is a start-up company?

What role does the inventor play in the start-up company?

What support does the university provide to start-ups?
Below is a guide to the process of forming a start-up company to license University technology.

- **Review the company’s business model** with professionals to determine whether a viable business case is possible. IllinoisVENTURES and the Offices of Technology Management can help with the review.

- **Let your Office of Technology Management know you are interested in forming a start-up.** You may then want to enter into a standstill or option agreement to ensure the University won’t license the technology to any third party. This allows time for an individual or a company to develop a business plan and satisfy other licensing requirements.

- **Develop a preliminary business plan** and submit to your OTM. The business plan should identify product(s), business model, markets (size, competition, fields), management, development process and timeline, financial costs, capitalization or funding required and financial projections for five years. The plan should also identify what technologies are needed and their benefits to the company. The business plan needs to be specific enough that the OTM and the company can begin to negotiate the deal framework and to identify meaningful milestones for the license.

- **Negotiate license deal framework** with the OTM. The deal terms represent a package whose value depends upon the type and significance of the technology being licensed and external market factors. Components of the package include exclusivity, field of use, equity, royalty rates, sublicense sharing, diligence milestones, minimums and other payments. The terms are interrelated, and there is trade-off among terms in arriving at the entire deal. Equity is typically taken in start-up company deals in exchange for lessening the cash burden on the company in the early years.

- **Conflict of interest management plan** approval. When a start-up company involves a University faculty member, a plan is developed describing the relationship between the company and the faculty’s University research and students. This plan identifies and mitigates potential conflicts of interest and should be initiated as early as possible with the Office of the Vice Chancellor for Research.
• **Establish company as a legal entity.** A license for a technology will only be granted to a company demonstrating the capability of developing the technology into a commercial product. Documentation needed includes Articles of Incorporation, by-laws and founders agreements or the equivalent.

• **Finalize the license agreement.** License drafts are exchanged and the final deal terms and contract language is negotiated and agreed upon.

• **Complete a business plan** acceptable to the University.

• **Finalize the investment agreements.** Investment documentation and agreements are reviewed and approved by the University and should be ready for signing:
  
  - Charter (Articles/Certificate of Incorporation)
  - Purchase Agreement
  - Investor Rights Agreement/Registration
  - Rights Agreement
  - Stockholders Agreement

• **Have experienced management** on board at the time of signing the license agreement. If that management is on an interim basis, specify assembly of a qualified management team within a period of time after execution of the license agreement.

• **Provide a capitalization plan and capitalization table.** A start-up must disclose the current levels of financing, equity value or capitalization at the time of license signing and must reach specified levels of such financing within an agreed-upon time.

• **Sign license and investment agreements and provide stock certificate.**

• **Monitor agreements.** The company, the University and the investors monitor company progress toward commercialization obligations and milestones.

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**CONFLICT OF INTEREST FACULTY RESPONSIBILITIES:**

- Obtain prior written approval to engage in non-University income-generating activities
- Disclose such activities annually, whenever a substantial change occurs or when required by granting agencies
- Refrain from spending so much time on external activities that they interfere with University responsibilities
- Refrain from advancing one’s own interest or the interest of family members to the detriment of the University’s interest
- Disclose involvement of University students or employees in one’s external activities
- Work with the department head to identify and evaluate potential conflicts, and manage or eliminate them
IllinoisVENTURES

The Board of Trustees of the University of Illinois created IllinoisVentures, which was launched in 2002, to catalyze the creation and development of research-derived companies in information technologies, physical sciences, life sciences and clean technology, particularly those deriving from the University of Illinois and other Midwestern Universities and federal laboratories. Under the guidance of a world-class board comprised of leaders from all phases of the investment community as well as academia, IllinoisVentures has created a state-of-the-art environment for new company formation via a unique public/private partnership that is a valuable resource for those interested in starting up a company. In 2004 IllinoisVentures raised their first venture fund, the Illinois Emerging Technologies Fund, in recognition of the limited presence of seed and early-stage technology investors actively committing capital in Illinois.

To date, IllinoisVentures has formed and supported an array of companies in multiple business domains throughout the region, which have attracted substantial third-party co-investment from leading investment firms across the nation. The long-standing collaborative experience of the team working together in early-stage new enterprise formation is the basis of that success.

With offices in Champaign and Chicago, IllinoisVentures professionals are available to consult and advise researchers and entrepreneurs in entrepreneurship and business development, and to help mold concepts, vision, intellectual property, sweat and passion into breakthrough, high-growth companies. IllinoisVentures professionals provide guidance to faculty in early market assessment, competitive analysis, business strategy and other activities necessary to create high potential, venture-ready businesses. The firm also provides funding through all stages of business creation and development.
Research Parks and Incubator Facilities

In addition to the support from the Offices of Technology Management and IllinoisVentures, the University of Illinois Research Park and the Chicago Technology Park are operated in partnership with the University of Illinois to nurture start-up companies and catalyze commercialization of University technologies.

- University-associated research parks and incubators at Urbana-Champaign and Chicago support and nurture the growth of these early-stage companies, encourage research and development collaboration between the University, private industry and public agencies and attract established companies that benefit from close working relationships with University faculty and students. These research parks provide critical infrastructure space for early-stage companies that require wet and dry laboratory capacity for product research and development.

- The Research Park at the University of Illinois in Urbana-Champaign provides an on-campus environment where technology-based businesses can collaborate on research and development with faculty and students and enjoy access to the campus’ vast intellectual resources and research infrastructure. The Research Park is now home to a range of companies employing many people in high technology careers.

- EnterpriseWorks is a technology business incubator in the University of Illinois Research Park and has been the launching pad for more than 70 start-up companies since it opened in 2003. EnterpriseWorks provides an affordable, high-tech environment with lab and office space as well as access to business development services. EnterpriseWorks can house as many as 30 companies at any given time and offers short-term flexible leasing options.

- The Chicago Technology Park has supported companies involving drug discovery and delivery, medical devices and testing, genomics and nanotechnology. The 56-acre Research Park is located within the Illinois Medical District. It has graduated more than 25 firms into the local economy, with an average growth rate of 200 percent in the past four years.

The Chicago Technology Park provides resources including:
- Job bank program
- Internship programs
- Informal networking sessions
- Bioinformatics program
- Access to UIC library and to UIC facilities and resources
The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs provide qualified small businesses, including faculty start-ups, with opportunities to propose innovative projects that meet specific federal needs. These programs offer more than $2 billion dollars annually to support the research and development of technology by small businesses across the nation. Awards are based on small business qualifications, degree of innovation, technical merit and future market potential.

SBIR funds support research by a business with or without an academic partner. STTR funds are also awarded to a business but recipients must have a U.S. research institution as a collaborative research partner. The SBIR/STTR programs are structured in three phases, the first two of which are supported by SBIR/STTR funds.

**Phase I.** The objective of Phase I is to determine the scientific or technical merit and feasibility of the proposed R/R&D efforts. The Phase I period concentrates on the R&D efforts that prove the scientific or technical feasibility of the approach or concept and that which are a prerequisite for further support in Phase II. Phase I awards are for periods up to six months in amounts up to $100,000.

**Phase II.** The objective of Phase II is to continue the research or R&D effort initiated in Phase I with approaches that appear sufficiently promising because of Phase I. Phase II awards are for periods up to two years in amounts up to $750,000.

**Phase III.** An objective of the SBIR/STTR program is to increase private sector commercialization of innovations derived from Federal R/R&D. During Phase III, the small business concern is to pursue commercialization with non-SBIR/STTR funds.

**SBIR/STTR Program**

May a portion of an SBIR award be used to pay for outside services or assistance from a university or other nonprofit research institution?
Yes: Phase I, up to one-third of the award can be used for outside assistance, and in Phase II, up to one-half of the award.
Both the SBIR and STTR programs have specific eligibility criteria for participation.

Small businesses must fulfill the following criteria to participate in the SBIR program.

- American-owned and independently operated
- For-profit
- Principal researcher employed by business
- Company size limited to 500 employees

Small businesses must fulfill the following criteria to participate in the STTR Program.

- American-owned and independently operated
- For-profit
- Principal researcher need not be employed by small business
- Company size limited to 500 employees

While there is no size limit for a nonprofit research institution, the nonprofit research institution must also meet certain eligibility criteria.

- Located in the U.S.
- Nonprofit college or university or
- Domestic nonprofit research organization or
- Federally funded R&D center

The agencies participating in the SBIR/STTR programs have differing requirements for program involvement, and it is very important to understand and comply with these individual requirements. Each agency publishes a proposal solicitation at least annually. These solicitations can be viewed on their individual Websites accessible at:

http://www.zyn.com/sbir/

A competitive program supported by the state of Illinois Department of Commerce and Economic Opportunity is available to technology-based entrepreneurs including faculty members interested in submitting an SBIR/STTR grant. Those supported through the program receive approximately 30 hours of assistance with identifying, advancing, preparing and/or reviewing SBIR/STTR Phase I proposals from experienced grant-writing consultants. Contact your Office of Technology Management for more information.

What federal agencies participate in the STTR program?

Each year, five federal departments and agencies reserve a portion of their R&D funds for award to small business/nonprofit research institution partnerships. These agencies include:

- Department of Defense
- Department of Energy
- Department of Health and Human Services
- National Aeronautics and Space Administration
- National Science Foundation

For STTR awards, what is the minimum percentage of research that can be conducted by the small firm and institution receiving an award?

Small business must perform at least 40 percent of the work and research institutions must perform at least 30 percent.

When are the proposal deadlines?

They vary depending on the agency. Information on solicitations and proposal deadlines can be found at:

http://www.zyn.com/sbir/