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GENERAL INFORMATION

TITLE OF THE CASE	Generating Warp Speed Effectiveness for University Entrepreneurship Initiatives: The Power of Public-Private Partnerships in Supercharging Results
SALES PITCH	A notable success in building strong public-private partnerships to energize entrepreneurship on campus and well beyond
ORGANISATION(S)	University of Wisconsin System and UW-Extension
COUNTRY / COUNTRIES	United States; China, Japan, Taiwan (Foxconn)
DATE	June 2018
AUTHOR(S)	David Brukardt, Aaron Hagar, Mark Lange & Idella Yamben
NATURE OF INTERACTION	<input checked="" type="checkbox"/> Collaboration in R&D <input type="checkbox"/> Academic mobility <input type="checkbox"/> Student mobility <input checked="" type="checkbox"/> Commercialisation of R&D results in science <input type="checkbox"/> Lifelong learning <input type="checkbox"/> Curriculum development and delivery <input checked="" type="checkbox"/> Entrepreneurship <input type="checkbox"/> Governance <input checked="" type="checkbox"/> Public-Private Partnership
SUPPORTING MECHANISM	<input checked="" type="checkbox"/> Strategic instrument <input checked="" type="checkbox"/> Structural instrument or approach <input checked="" type="checkbox"/> Operational activity <input type="checkbox"/> Framework condition



CASE STUDY PROFILE

1. SUMMARY

The University of Wisconsin System (Wisconsin, USA), with 26 campus locations, represents one of the largest integrated university systems in the United States and one of the most highly respected university networks in the world. This case study will review the expansion of economic and talent development initiatives within the University of Wisconsin (UW) System with an emphasis on Ileadvance, a highly successful entrepreneurial initiative made possible through a three-way, Triple Helix collaboration that encompasses the university, state government, and the business community.

Over the past five years, a wide range of economic development initiatives had been established to raise awareness and commitment to university-business partnerships and to accelerate capital investment in UW-generated innovations and business start-ups. In 2012, the UW System's Office of Economic Development (Office) was created in partnership with state government to connect business and industry with UW researchers, students, innovation, and entrepreneurial energy. The Office is co-funded by the university and the Wisconsin Economic Development Corporation (WEDC), a public-private partnership that serves as the state's primary economic development agency and as its Department of Commerce. This shared financial responsibility has solidified a strong communication structure and a commitment to the creation of wide-reaching activities designed to generate positive outcomes.

In 2013, WEDC and the UW System Board of Regents issued a university-wide call for economic and business development initiatives that would be jointly funded. One of the programs identified through the university's systemwide competitive selection process was UW-Extension's Ileadvance Seed Fund (uwideadvantage.org). In the years since, this program has been reauthorized, refined, and expanded because of its success in supporting faculty and student entrepreneurship.

Ileadvance supports promising ideas no matter the discipline of origin. The program's Lean Startup approach helps to accelerate business model concepts generated on campuses to better match market needs and expectations. Participants present business and product concepts in a confidential and supportive environment where their ideas are refined with the help of experienced business consultants and entrepreneurs. Within the Ileadvance framework, the focus is on strengthening (and shortening) the pathways from initial idea to successful commercialization. Today, Ileadvance has expanded to support alumni entrepreneurs in addition to UW System campus faculty, staff, and students.

This case study provides a review of the Ileadvance structure, process, early results, and lessons learned. It is significant due to the size of the initiative's coverage and scope: 26 separate public university campuses across an entire U.S. state, the collaboration of three major partners (Triple Helix), and the range of activities and collaborations involved.

2. BACKGROUND

The University of Wisconsin has a century-old tradition of connecting with industries in the state through a concept called the "Wisconsin Idea." The concept was first articulated in 1904 by then-university president Charles Van Hise, who believed the boundaries of the university are the boundaries of the state and that each citizen of the state should benefit tangibly from the research, education, information, and inspiration offered through the University of Wisconsin.

This method of outreach continues today. Over the past five years, for example, the University of Wisconsin System analyzed opportunities for increasing its connection with business and industry. From a policy standpoint, in 2012, the governing body of the UW System had created a permanent committee, the Research, Economic Development, and Innovation Committee (REDI), charged with:

- ▶ Adopting policies and developing strategies designed to strengthen the UW System's overall contribution to the economic development of the state – and designed to support professional development, outreach, and research at all UW System institutions;
- ▶ Considering matters related to the UW System's role in enhancing its applied and basic research enterprise in an effort to bolster the state's economy; and
- ▶ Highlighting successful research and economic development efforts, partnerships, and innovations involving UW System institutions.

The importance of the university's policy and programmatic support for its "third mission" of outreach (alongside its primary missions of teaching and research) continues to become more apparent, as the state of Wisconsin is projecting unfavorable demographics with an aging population and a flat trending workforce-aged population. The need to foster an entrepreneurial culture and to develop and attract new business and new talent is critical.

The university's partnership with WEDC provides numerous avenues for collaboration, partnership, and joint initiatives across a wide range of industry sectors, community-based initiatives, international trade outreach, and within the start-up culture growing across the state and across the UW System campus network.

As a result of these efforts, initially funded through a series of economic development incentive grants during the 2013-2015 budget cycle, 134 additional internships were generated, 173 jobs were created, 251 businesses assisted, and the largest investment of \$22.5 million in capital in economic development projects attracted an additional \$7.9 million in matching grants from external collaborations. The development and roll-out of Ileadvance occurred as part of this effort and is the focus of this narrative.

3. OBJECTIVES

Co-funded by UW System and WEDC, and administered by the UW-Extension Center for Technology Commercialization, Ileadvance helps entrepreneurs focus on refining key, go-to-market activities. The program helps to eliminate flaws in business plans that will not survive first contact with customers. The program encourages entrepreneurs to move "out of the building and into the streets" to connect with customers and prospects, thus offering opportunities for pre-testing and pre-qualifying of business concepts before moving forward with business plan implementation.

Key Program Objectives:

- ▶ Ideadvance funds the commercialization of ideas across all disciplines.
- ▶ Grants are paid out incrementally, based on completion of milestones.
- ▶ Entrepreneurs are guided by dedicated, experienced business professionals.
- ▶ Support teams help entrepreneurs identify local resources on campus and in the community to move ideas forward (Triple Helix alignment and collaboration).
- ▶ Grants are available to part-time or full-time staff, faculty, and students in the UW System, and to alumni.
- ▶ Grants cannot support ventures in real estate, direct consumer retail, hospitality, or restaurants.
- ▶ If an idea creates jobs, if it is competitive and scalable, and if it contributes to Wisconsin's "knowledge economy," then generally, it will qualify.
- ▶ Ideadvance grants do not fund research.

4. RESPONSIBILITY

Ideadvance is led by Idella Yamben, Ph.D., who serves as the program's New Idea Concierge. Dr. Yamben works with each participating program team to help fine-tune proposals and concepts in advance of presenting them to the Ideadvance funding committee. About 40% of Ideadvance program applicants receive Stage 1 funding. However, with the milestone-based approach, about 45% of awardees do not complete all funding milestones. This approach helps to maximize the number of entrepreneurs trained and rewards ideas and teams with the greatest potential to commercialize their products and services.

Awards are determined by an Investment Committee with members from UW System, WiSys Technology Foundation, UW-Extension, WEDC, plus outside entrepreneurs affiliated with eligible UW campuses. The committee selects proposals that articulate the significance of the market problem and recognize the learning needed to help reduce risks in the proposed business model. Notably, the committee also focuses on the management and leadership skills of each applicant team and how well prepared they may be to tackle their learning challenges.

Ideadvance encourages teams to try out new ideas as part of a fail-fast, pivot, and move-on strategy. As a result of focusing less energy on executing and more time embracing learning from failure, program participants consistently point to the benefit of personal growth as a valuable, intangible reward nearly as often as they mention the tangible success of their own startups.



IMPLEMENTATION & FUNDING

5. STRATEGY & ACTIVITIES UNDERTAKEN

Ideadvance grants support specific commercialization steps and milestones intended to reduce the business risk for entrepreneurial ideas. This approach ultimately helps make nascent businesses more investor-ready. Stage 1 provides seed funds of up to \$25,000 (U.S.) per company and focuses on helping to reduce the risk by determining which product or service features will solve real customer needs. Stage 2 provides seed funds of up to \$50,000 (U.S.) per company and focuses on developing a business model that effectively delivers solutions to customers and prepares the idea(s) for investment.

After Stage 1, participants may apply for Stage 2 funding. At this level, applicants also must provide a 1:1 funding match, of which 50 percent may be provided through in-kind matches. To focus on the mission of commercialization, awards are not disbursed in a lump sum, but are incrementally issued based upon successful completion of commercialization milestones towards a customer acquisition strategy and follow-on funding avenues.

Throughout the business development process, Ideadvance cohort companies receive additional mentoring through the UW-Extension Center for Technology Commercialization (CTC), the Small Business Development Center Network (SBDC), and the University of Wisconsin Law and Entrepreneurship Clinic. These efforts are coordinated by the Ideadvance team's Lean Startup consultant. Each company engages in a seven-session, virtual, Lean Startup protocol that details how to assess and test the riskiest assumptions in a business model. To date, participating Ideadvance teams have conducted more than 3,000 customer interviews in an effort to test more than 100 individual business-model assumptions.

Ideadvance Stage 1 companies are eligible for \$25,000 grants, and 2017 awardees included:

- ▶ Forsythe & Storms Technologies, which devised an innovative, less-lethal self-defense device for law enforcement and corrections.
- ▶ VetNEX, which assists veterans and advocates in the Veterans Administration Service Connected Disability Claims process by providing validated medical documents to support the link to service.

Stage 2 companies are eligible for up to \$50,000 in matching funds within a 12-month period by capturing follow-on funding and developing and executing a customer acquisition strategy. During 2017, Stage 2 awardees included:

- ▶ Pivot Interactives, which makes innovative educational modules that teach scientific reasoning and critical thinking skills essential to today's learners through interacting with a customizable, video-interface design.
- ▶ Northern Star Fire, which developed a multi-directional compass to aid firefighters through disorienting conditions. The Northern Star Fire product also received the 2017 Wisconsin State Governor's Business Plan award competition.

Additionally, an earlier Ideadvance participant Grypshon, an undergraduate-student-led company, was featured on the nationally televised series “Shark Tank” for the startup’s innovative Grypmat product which secures and safeguards mechanical tools in sensitive military and industrial applications.

6. MONITORING AND EVALUATION

A major objective of any UW System collaboration is transparency and accountability to the public and to its funders. An on-line, interactive dashboard provides a dynamic picture of economic activity within the entire state of Wisconsin and represents the impact of the University of Wisconsin system economic development activities.

In addition, for Ideadvance and other university co-funded projects, WEDC requires annual reports on the business success metrics for all entrepreneurship support programs. This helps track program effectiveness and overall economic value generated by the startup company participants. Programs achieving stated objectives and positively impacting the state’s early-stage businesses are eligible for continued support.

For Ideadvance, grant recipients submit annual reports for up to five years, including updates that describe the extent to which the company has advanced, including quantitative and qualitative measures of success, including jobs created, wages and revenue generated, and outside funding secured, among other metrics.

Sustainability measures

Funding and program popularity for Ideadvance remain at high levels. Longer term, however, the program partners will need to discuss and consider the infusion of outside funding assistance from a variety of public and private resources. Because the program structure allows it to be scalable in terms of size, Ideadvance has the flexibility to adapt participant intake to reflect changing funding or market conditions.

Discussions with faculty mentors over the past two years have additionally led to consideration and testing of “micro” grants which have the potential to attract a wide range of student participants who are put off by the current grant parameters. Such smaller awards could lower the “psychic” bar for entry and perhaps encourage the entrepreneurially timid to connect with the program, prompting them to introduce a promising new idea or concept that otherwise might go untested. While some potential applicants indicate a “fear” of having to step up to the \$25,000 project entry threshold, this fear is in fact more virtual than real, since grant funding comes in apportioned, smaller payouts, in any case.

7. COSTS/FUNDING

Through the initial 2013-2015 biennial budget cycle, the UW System and WEDC’s Entrepreneurship & Innovation Division each invested \$1.0 million (U.S.) in economic development grants to support Ideadvance. Of the \$2 million (U.S.) total, \$40,000 was allocated for operational support, including website development and marketing outreach. In the 2015-2017 biennium, both partners contributed an additional \$0.5 million in recognition of the program’s ongoing success and to continue its effectiveness and operating capability going forward. Of the total \$2.5 million investment, more than 95% is directly awarded to campus-connected entrepreneurial projects.

Ileadvance programming and logistics support is provided by staff within the Center for Technology Commercialization (CTC), ad-hoc consultants, and volunteers. CTC staff and operations are mostly supported through their key strategic partnership agreement with WEDC's Entrepreneurship & Innovation Division. Consultants are leveraged through the \$1,000 Lean Startup fee each awardee pays as part of the Stage 1 award requirements. Some funding is also received through state and federal technology partnership grants.



OUTCOMES & IMPACT

8. OUTCOMES AND IMPACTS

Interest in Ileadvance continues to be strong. In 2017, Stage 1 saw applications rise to 23, up from 14 the previous year and the most since launching in 2014. Stage 2 drew seven applications, and all three awardees had already completed Stage 1, although this is not a requirement. Additionally, 2017 was the first time Ileadvance eligibility was opened to UW System alumni, further broadening its reach and attractiveness to Millennial entrepreneurs.

WEDC has expressed that by helping faculty and student entrepreneurs turn their ideas into new businesses, Ileadvance represents a high-impact component of Wisconsin's innovation climate. WEDC's Aaron Hagar has observed that high-profile, private-sector business leaders and entrepreneurs who serve on the Ileadvance selection committee volunteer significant time and effort each year to help young companies successfully launch and grow their startups in Wisconsin.

As evidence of its commitment, WEDC has designated the UW-Extension Center for Technology Commercialization (CTC) as a Key Strategic Partner. As such, CTC operates as an extension of WEDC, further solidifying the strength of the university partnership with its WEDC public-private partner.

From its beginning in 2012, the joint operational framework of the Office of Economic Development, which oversees Ileadvance, was developed to ensure that with efforts to recruit new businesses into the state of Wisconsin and foster entrepreneurship, the UW System is an equal partner in providing the key resources, expertise, and research capabilities needed to attract and retain such enterprises, particularly with regard to high-growth industries.

Some early results of this unique, public-private partnership with the university include the following:

- ▶ Since its inception, 50 Ileadvance participants have received \$1.8 million (U.S.) in grant funding to support their startup initiatives and have attracted an additional \$1.4 million (U.S.) in additional capital through investments and crowdfunding support. Applications for intellectual property protection through WiSys have increased significantly over the same time period and licensing income exceeds \$150,000 (U.S.).

- ▶ To further support growth and outreach, in late 2017, the UW System and WEDC added a second jointly funded position for a Talent Initiatives Director to further the outreach to young professionals, alumni, and others who are needed to support the 21st century workplace in an era of increased retirements and related demographic challenges.
- ▶ In mid-2017, Foxconn Chairman Terry Gou cited the global standings of the university system in Wisconsin as one of the key reasons for his company's decision to locate its North American manufacturing operations in the state. The Foxconn plant will be adjacent to the University of Wisconsin–Parkside campus.
- ▶ Overall, the state of Wisconsin has increased its level of business attractiveness. The magazine *Chief Executive*, through its annual analysis of the "Best States for Business," has placed Wisconsin in the top 10 (out of 50) in 2017, up from 41st in 2010.

9. INVOLVED STAKEHOLDERS AND BENEFICIARIES

The university's "Triple Helix" Public Private Partnerships (P³) extend to a wide range of industry, non-profit, and governmental stakeholders. One of the most recent and wide-ranging initiatives, UW Career Connect, for example, represents a statewide effort to connect employers with university talent for internships and employment. The program's strength and visibility come from six key statewide partners with an aggregate membership that exceeds more than 150,000 members and constituents.

The partners who have endorsed Career Connect include the Wisconsin Economic Development Association (WEDA), WEDC, Wisconsin Manufacturers & Commerce (WMC), the Wisconsin State Council of Human Resource Managers (SHERM), Wisconsin Technology Council (WTC), and the Wisconsin Department of Workforce Development (DWD).

From an overall perspective, economic development activities within the University of Wisconsin have been integrated at the highest levels (the governing board of the university and cabinet secretary level in state government). This better ensures the prospects and alignment for continued growth and funding of strategic economic development initiatives that support undergraduate research, entrepreneurship, and innovation, thereby enriching student success and fostering 21st century workforce preparedness and leadership development. Ideadvance is a key tangible component of this strategy and the program continues to grow.

10. AWARDS / RECOGNITION

In October 2016, the University of Wisconsin System earned national recognition from the University Economic Development Association (UEDA) for promoting economic prosperity by helping students and alumni build career connections with business and industry partners. The UW System was one of four finalists in the UEDA Awards of Excellence innovation category from nominations submitted throughout North America. The project was characterized as an innovative, scalable, and sustainable solution that should be replicated.

UW System President Ray Cross said, "The UW System is proud to be recognized for developing innovative partnerships and building effective networks statewide to connect

talented students and alumni with businesses looking to employ them.”

The university’s principal governmental collaborator further commented: “We are pleased to be partnering with the UW System to support entrepreneurship and build careers for Wisconsin residents,” said Tricia Braun, WEDC Deputy Secretary and Chief Operating Officer of the Wisconsin Economic Development Corporation. “This work reflects our collaboration with the UW System and our partnerships with its campuses across the state.”

The UEDA evaluators included these factors in naming the UW System a finalist:

- ▶ Policy and program leadership through the Board of Regents’ Research, Economic Development, and Innovation (REDI) Committee
- ▶ The success of Ideadvance (uwideadvance.org) a jointly funded public-private partnership initiative that combines early-stage grants with business mentoring to encourage the development of innovative ideas and potential startups from UW System faculty, staff, and student entrepreneurs; and
- ▶ Specialized technology transfer capabilities offered by the WiSys Technology Foundation (wisys.org) to support the undergraduate research and innovation.



LESSONS LEARNED

11. PRIMARY CHALLENGES

Fostering a sustainable culture of change related to the third element of the university’s three-part mission of teaching, research, and community service requires engagement and buy-in from all levels of the academic organization. Although university systems do not typically operate at the speed of business, a compelling case can be made for building nimble and flexible partnerships across the academic/business cultural divide that benefit students and can integrate research and learning with career success.

Discussions at the UW System board level (with business, government, and educational leaders and partners as represented in this case study) have highlighted the challenges encountered and finesse required to successfully create a climate of acceptance and partnership and have helped to foster bridge-building efforts.

Faculty who have received recognition for work done in this context provide inspiration to others and have helped to strengthen connectivity among students, business, and government partners in more meaningful and authentic ways.

Ideadvance draws from existing operations infrastructure and business experts, thus saving money on infrastructure and personnel, and resulting in more pass-through dollars to teams. A case for success is the unique role of UW-Extension and its statewide service to the Wisconsin Idea. The Center for Technology Commercialization and the Division of Business and Entrepreneurship are campus-independent and can focus across the system. Through this organizational structure, it is possible to pay teams for their work directly. While this

arrangement precludes the buyout of faculty time, it does allow faster payments to work teams, thus promoting speed of learning and commercialization.

As UW System leaders pointed out to the WEDC board of directors in July 2016 during an overview of UW System Triple Helix Initiatives, the organization has made significant progress toward support of the university's important mission of entrepreneurial outreach, but there are still "miles to go" to achieve the desired result.

12. TRANSFERABILITY

As a guide for considering adaptation of certain elements of the UW System initiatives described, several key factors will enhance the prospects for success. First, leadership support is critical at the highest levels of the university structure for economic development initiatives to be embraced and to gain traction across a diverse series of departments, colleges, and campuses.

Second, it is essential to have buy-in for key strategic initiatives from a broad range of partners both inside and external to the university. Finally, it is important to execute on a small number of tactics that can generate early successes and build momentum and to recognize and reward faculty and business partners who invest time, talent, and resources in these projects.

In conclusion, the Ideadvance program helps the university embody its third mission of outreach and the "Wisconsin Idea." Ideadvance has proven to be a catalyst in supporting students, faculty and alumni in their efforts to move ideas more quickly and efficiently to commercialization. Ideadvance also helps to reduce market entry-barriers by leveraging the lean start-up model approach at little initial cost to the entrepreneur. The public-private partnerships that have been formed as a result of Ideadvance have helped to foster a more vibrant entrepreneurial environment on UW campuses, and have helped to create a solid foundation for future collaborative efforts that connect higher education with industry.



FURTHER INFORMATION

13. PUBLICATIONS / ARTICLES

Buss, D. (2017, April 26). CEOs rank the best and worst states for business. *Chief Executive*. <https://chiefexecutive.net/2017-best-worst-states/>

Cross, R. (2015, December 9). Remarks on talent development initiative. *The Future Wisconsin Conference*. Monona Terrace, Madison, Wisconsin. www.wmc.org/programs/the-future-wisconsin-project/

Gou, T. (July 27, 2017). Chairman Terry Gou explains company's \$10 billion plan for Wisconsin. *Milwaukee Journal Sentinel*.

www.jsonline.com/story/money/business/2017/07/28/foxconn-chairman-terry-gou-explains-10-billion-plan-wisconsin/518765001/

New Wisconsin Valley website launched to support Foxconn historic investment in Wisconsin.
<https://inwisconsin.com/blog/new-wisconsinvalley-website/>

Romell, R. (2013, Nov. 12). UW addresses entrepreneurship. *Milwaukee Journal Sentinel*.
www.jsonline.com/business/uw-madison-launches-32-million-program-to-encourage-entrepreneurship-b99140674z1-231590761.html

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wisconsin.edu/economic-development/download/February-2018--REDI---3-pager.pdf

Van Galen, D. et al., (2015, Spring). Undergraduate research and economic development: A systems approach in Wisconsin. Chapter 4, Enhancing and expanding undergraduate research: A systems approach. In *New Directions in Higher Education*. Malachowski, M. et al. (pp. 39-49). San Francisco. Jossey-Bass.

WiSys (December 2017) *Eureka Isn't a Moment. It's a Process*. WiSys helps great ideas—born on University of Wisconsin System campuses—reach the wider world by connecting inventors and businesses with the resources they need. wisys.org

14. LINKS

UW System Accountability Dashboard: wisconsin.edu/accountability/

UW System Career Connect – Internship Portal for Students and Employers:
wisconsin.edu/career-connect/

UW System Economic Development Web Portal: wisconsin.edu/economic-development/

UW-Extension Division of Business and Entrepreneurship:
uwex.edu/about/business-entrepreneurship.html

UW-Extension Ideadvance Lean Startup: uwideadvance.org

UW System Economic Development Web Portal:
wisconsin.edu/economic-development/

UW System *Research in the Rotunda: Showcasing the Work of UW Undergraduates*:
wisconsin.edu/research-in-the-rotunda/

UW System: wisconsin.edu

Wisconsin Economic Development Corporation (WEDC): inwisconsin.com and wedc.org

15. KEYWORDS

Innovation, entrepreneurship, cooperation, Ideadvance, industrial partnership, public-private partnership, strategic business development, Triple Helix, University of Wisconsin System, Wisconsin Economic Development Corporation (WEDC)

16. PUBLIC CONTACT DETAILS

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