

Discovery to Product (D2P) Review Committee Report

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Introduction

The purposes of the review are to assess D2P's accomplishments since its inception as an office in September of 2013, to provide feedback to the D2P leadership to help ensure future success, and to give formal feedback to the Office of the Vice Chancellor for Research and Graduate Education on strategies, services, and metrics that support D2P's mission and subsequent administrative and resource needs of D2P.

Background

Discovery to Product was created on September 1, 2013 through a joint memorandum of agreement (MOU 2013) between UW-Madison and the Wisconsin Alumni Research Foundation (WARF). Both parties agreed to fund one-half of the program's operating budget for three years at a total of \$3.2 million.

The original mission as defined in the MOU was to "Define, implement, and sustain a Chancellor-, faculty-, and partner-supported campus-wide imperative at UW-Madison to:

- I. Transform UW-Madison culture to cultivate entrepreneurship, new company formation and expand the production of innovation with high commercial potential
- II. Ensure IP rights in those innovations are secured timely and in conformance with the Bayh-Dole Act
- III. Accelerate transfer of those innovations to qualified external parties, including both established companies and newly-created startups
- IV. Articulate and proactively drive a coherent, end-to-end vision that reflects both the urgency and immense benefits of technology commercialization to UW-Madison

- V. Fully leverage the existing set of technology commercialization resources available to UW-Madison
- VI. Significantly expand UW-Madison access to key technology commercialization resources that are currently limited, including investment capital and proven entrepreneurial talent, and
- VII. Dramatically improve collaboration between UW-Madison and WARF to achieve the above critical outcomes

Together these will enable UW-Madison research initiatives to deliver greater societal benefits, increased real world impact, expanded jobs creation, and long term growth in IP income that will fuel future innovation.”

To achieve this mission, it was anticipated that D2P, by its third year of operation, would have 3 full-time positions (director, associate director, and an administrative program specialist), 9 part-time interns, 6 half-time mentors in residence, and 9 part-time volunteers. Annual staffing and other program costs were estimated to be \$1,318,600 by the third year. D2P’s current staff level is 2.6 full time employees, 2 mentors in residence (1 full-time and 1 half-time), and 4 student interns.

In November of 2013, the D2P program received a \$2.4 million Incentive Grant from UW System to create “Igniter”. The Igniter program is designed to bring to market, ideas and technology originating within UW-Madison through an intensive five-week program that includes weekly 4-hour workshops and financial awards that could be used for market research, prototype development, and other activities to improve product commercial viability. The UW System Economic Development Grant (EDIG) included a requirement that the funds be used within 15 months. Because of this short time frame, priority was given to hiring staff that had the specific skills and background needed to successfully accomplish the grant’s purpose. Staff time was almost exclusively devoted to the Igniter program.

Key dates in the formation of D2P include:

- September 1, 2013 – MOU between UW-Madison and WARF goes into effect
- November 12, 2013 – D2P launch is announced
- Late October/Early November, 2013 – Campus learns it will receive a \$2.4 million grant to fund Igniter program and financial awards
- Late November, 2013 – Position Vacancy Listing is finalized for director position
- March 17, 2014 – Director is hired
- March, 2014 – First round of Igniter program and grant applications announced
- June, 2014 – First staff person hired

Information Sources

The Review Committee primarily relied on the following sources of information for preparing this report:

- The D2P Strategic Framework prepared by D2P staff (February, 2016)
- Interviews with the D2P staff conducted by committee members (see Appendix)
- Interviews with campus and community leaders conducted by committee members (see Appendix)
- Review of peer institutions (see Appendix)
- An electronic survey distributed by the committee to 7,587 faculty, staff, undergraduate and graduate students, and post-docs
- UW Resource Map created by committee members that identifies related programs and services on campus and the audiences they serve (see Appendix)
- Input from D2P Advisory Board and Igniter Award program recipients through interviews, survey, and participation on the review committee. Committee members Leigh Cagan, Brian Fox and Denise Ney serve on the D2P Advisory Board and William Murphy and Carla Pugh have participated in the Igniter award program.

Accomplishments

As originally defined in the MOU between WARF and UW-Madison, D2P's progress toward its mission was to be measured by a series of goals that are detailed in the Charter Presentation for each of the first three timeframe phases of the program in five major priority areas: UW Inreach, External Outreach, UW Policy Impact, Staffing, and External Funding. As the first two timeframe phases of the program (respectively, Phase I-Startup and Phase II-Towards Critical Mass) were expected to require up to a total of 30 months of D2P operations to complete, the following assessment considers those first two phases and not Phase III-Achieve Critical Mass. Please see Appendix for a list of the phases and their specific objectives.

Overall, the success that D2P has achieved is predominately due to its efforts in support of the Igniter education and grant award program, which engaged 43 projects and contributed to 15 startup companies having been formed or staged for near-term formation. This is a significant accomplishment for a new campus program, with new staff, and vacant positions over such a short time period. A downside to the heavy focus on Igniter, however, is that stakeholders on and off campus see D2P as synonymous with Igniter. To achieve its original mission, D2P will need to shift substantial focus toward the coordination of innovation and entrepreneurship efforts on campus, with affiliated entities, and the broader regional community.

Modest progress has been made (and continued progress should be encouraged) in three of D2P's five priority areas: UW Inreach, External Outreach, and Staffing. In the remaining two priority areas, UW Policy Impact and External Funding, some activity has been expended but actual results have been negligible. It should be noted that while D2P is in a position to bring attention to policy obstacles or the need for new policies, leading such policy change efforts as envisioned in the mission is likely the purview and responsibility of other campus entities.

What follows is a more detailed assessment of D2P's accomplishments in the five major priority areas.

UW Inreach: A number of these goals, including the launch of D2P; creation of a D2P website; coordination with certain WARF programs, such as the Accelerator Program; and training of some graduate student interns, have been accomplished. Engagement with prospective entrepreneurs has to date been limited in scope, but has added real value through Igniter for many of those program participants. Some progress has recently been achieved in the number of D2P staff and mentor engagements with parties on campus who are not Igniter participants, and this should remain an area of continued focus for D2P's staff and mentors. Goals in this priority area where D2P has made limited progress and which require continuing emphasis include coordination of campus resources to engage startups and systematic departmental-level outreach efforts to build awareness of D2P's role and resources.

External Outreach: D2P has made some progress on the goals of a meeting with prospective external partners, and contacting and reviewing other university programs (primarily upper Midwest peer research universities). Some progress has been made toward both the Phase I goal of assembling a reference catalog or matrix of technology commercialization resources and the Phase II goal of connecting startup companies with venture capital firms. Little or no progress has been made toward the Phase II goals of coordinating with other universities and infusing D2P's message of entrepreneurship into faculty recruitment ads. If this faculty recruitment goal remains of value to the campus, then the Office of Human Resources should be tasked with initiating and coordinating this activity.

UW Policy Impact: The primary goal for both Phase I and II in this priority area was to improve recognition for PI contributions toward successful technology commercialization outcomes (including patenting, sponsored research, and founding companies) within the University. D2P has made good progress toward publicizing new startups emerging from the Igniter program and, through broad distribution to the D2P mailing list, some other entrepreneurially-oriented developments in which faculty, staff, and students have been involved. D2P has not made significant progress toward creating or supporting new campus-wide recognition programs that embrace and enhance a larger campus entrepreneurial culture.

This priority area (UW Policy Impact) contemplated D2P possibly impacting policy areas such as hiring, retention, and tenure matters so as to consider translational and entrepreneurial contributions. Going forward, these objectives should perhaps be dropped from D2P's priorities as these are matters under the auspices of shared governance and other administrative units.

Staffing: Staffing decisions to date have been focused on the successful implementation of the Igniter program and fulfilling the objectives of the System incentive grant. For D2P to make continued progress toward delivering the entrepreneurial support services and expertise that are so central to its mission, the program must round out its hiring of staff, Mentors in Residence, and graduate student interns to levels more in line with what was planned for the second 12 to 18 months of program operation, and with the skills necessary to achieve the overall mission of D2P, beyond Igniter. Staff PVLs and D2P's organization chart should be reviewed and may need to be adjusted going forward to reflect a transition from Igniter centric activities to D2P's original mission. It should be noted that the committee found that mentors in residence programs, such as that employed by D2P, were found to be a best practice used by many peer institutions. The format of those programs and level of compensation provided to mentors varies

from institution to institution. For example, the Presidential Entrepreneurial Faculty Fellows Program at the University of Washington-Seattle provides faculty fellows with \$5,000 in discretionary innovation funds upon their appointment by the university president. Faculty fellows serve two-year terms and are expected to share their experiences at campus entrepreneurial events and to serve as mentors to other UW faculty and researchers pursuing entrepreneurship.

External Funding: Some effort has been made by D2P staff, subsequent to receipt of the UW System Economic Development Incentive Grant award (EDIG), to develop sources of external funding for D2P to support future Igniter grant award rounds, but actual results have not yielded any funding. A UW Foundation account has been created for directed giving to support entrepreneurial programs and has resulted in a couple of donations from generous alumni. But, this giving option has not been adequately developed. WEDC funding of \$1 million was committed to the UW-Madison Foundation to support exiting Igniter projects and those in need of start-up resources. The funding requires venture-fund style management and a dollar for dollar matching arrangement, which to date has not been developed. Efforts to explore other possible sources of support have been limited in scope and primarily focused on Wisconsin-based sources. This is an area where D2P staff should apply a broader effort going forward, recognizing that securing significant levels of outside funding would likely require support from on-campus and off-campus partners. Further exploration of NSF's I-Corps Program may also be warranted in order obtain additional resources for programming and small grants.

Challenges

A number of challenges have impacted D2P's ability to achieve its overall mission, and to achieve similar programmatic results as those being attained by peer research institutions.

- **Igniter Focus.** As noted in the background of this report, the \$2.4 million UW System EDIG that D2P received, before the office formally opened, presented an opportunity to pilot the Igniter program (educational component and financial awards) but also created a significant challenge. Since the terms of the grant required that the funds be spent within the biennium (this requirement was later relaxed), the focus of the staff quickly became centered on Igniter. The urgency of applying these funds diverted staff resources from the broader mission of entrepreneurial education and development across campus.

The grant awards component of Igniter will soon be depleted and there is no endowment or seed fund for future awards. While not a universally held belief, D2P staff and some other stakeholders are concerned that without a source for future Igniter grant funds, the success of the Igniter program may wane. For example, many survey respondents noted that funding was an obstacle to commercialization or entrepreneurship on campus. Other faculty and university economic development practitioners, however, questioned the need to provide Igniter award grants indicating that if the entrepreneur was sufficiently motivated and the idea was sound that the grant awards were not needed. Based on a review of other institutions, there is evidence that many universities do provide grants of varying sizes through their research foundation or other mechanisms to faculty and students to help bring their ideas to market.

Regardless of whether there are funds available to provide Igniter awards, the educational component of the Igniter program is of value to program participants and could be continued within D2P's staffing and operational budget.

There have been three Igniter award funding rounds. The number of applicants for each successive round has declined. The decline could be the result of a number of factors including a limited level of pent up demand for the program, or a clearer understanding of how the program works. Indeed many of the applicants in the first round did not fully understand the Igniter program and were not eligible for the program.

- Round 1: 170 Applicants and 16 projects selected
- Round 2: 33 Applicants and 10 projects selected
- Round 3: 19 Applicants and 16 projects selected
- **Conflict of Interest.** There was confusion on how to resolve conflicts of interest that might arise when using institutional funds to support commercial activities and how staff and individuals who serve in an advisory capacity or participate in entrepreneurial activities may use the privileged information that they receive in those roles. One survey respondent elaborated on this tension by questioning “whether the entrepreneurship by faculty is a conflict of interest ... or a service to the State of Wisconsin.”

D2P needs to be able to assist innovators and entrepreneurs to better understand, appreciate, and work within current state laws and UW System policies to achieve their entrepreneurial objectives while avoiding inappropriate conflicts of interest. D2P staff did not sufficiently understand or appreciate the conflict of interest rules to fill this role.

- **Funding.** Unlike a number of other peer institutions, D2P does not have a privately funded endowment or ongoing state funding to support its operations or provide grant awards to entrepreneurs. The initial 3-year funding MOU between WARF and UW-Madison for D2P operations is now in its final year. Uncertainty over whether the agreement would be continued has impacted ongoing funding and program decisions.
- **Staffing.** The entrepreneurial skills and knowledge required by many D2P positions were not aligned with current university staff position categories or salary ranges. This resulted in some difficulty and delays in creating appropriate Position Vacancy Listings (PVLs) and hiring mentor in residence staff.

In addition to those challenges, there are more significant issues that are much more intractable, which hindered the short-term effectiveness of D2P relative to our peer institutions, and which will require efforts beyond D2P's immediate control to overcome.

- **Decentralization.** The campus is a large, decentralized organization with decentralized decision making over resources and programming. University affiliated organizations (WARF, University Research Park, and the UW Foundation and Alumni Association), which are key components of successful innovation and entrepreneurship programs at peer universities, are distinct in their governance structures and decision making and are not optimally coordinated around innovation and entrepreneurship.
- **Culture.** Compared to a number of successful technology transfer and entrepreneurial operations at peer institutions, UW-Madison does not have an engrained, deep or broad

entrepreneurial culture, nor does it have seamless, direct engagement with the surrounding entrepreneurial community. One survey respondent observed that there is “a lack of leadership support for entrepreneurship and disseminating UW technologies via commercialization.” Some noted that this lack of leadership support was an issue at the departmental or school/college level. Yet, another respondent noted that entrepreneurial activity is not factored into tenure considerations as it is at some other universities (e.g. University of Michigan and Arizona State University engineering colleges).

There does, however, appear to be growing interest among undergraduates, graduate students, and faculty to strengthen the innovation and entrepreneurial culture. Evidence of this growing interest can be found in the more than 1,300 students who participated in entrepreneurship courses last year and the expanding attendance and participation in the WARF Entrepreneurs events, the Wisconsin Entrepreneurs Boot Camp, and the number of initial Igniter applicants.

- **Size of Madison Area.** It is clear that peer universities located in large metro areas benefit from having larger pools of entrepreneurial resources such as angel and venture funds, experienced entrepreneurial managers and mentors, and a critical mass of large industries. UW-Madison is not embedded within a major metropolitan area with access to a large number of entrepreneurs, experienced senior executives, and potential investors.

The smaller size of our metro area means that UW-Madison must employ some “home-grown” strategies to attract the necessary assets. Those strategies will likely depend on the coordination and cooperation of decentralized assets on campus, and with university affiliated organizations. There is also largely untapped potential to partner with adjacent, larger metropolitan areas and their entrepreneurial resources, such as the medical device industry in Minneapolis and the finance and entrepreneurial resources in Chicago. Deeper engagement with our entrepreneurial alumni who have relocated to larger metropolitan areas may also provide opportunities.

Key Findings and Recommendations

1. **Key Finding:** D2P has focused almost exclusively on its Igniter program, not its broad mission.

D2P’s original mission is broad in terms of the scope of activities it is expected to perform and entities it is expected to connect and coordinate. Those entities include the activities of internal and affiliated organizations (WARF, University Research Park, and the UW Foundation and Alumni Association). For example, the mission includes directions to “[t]ransform the UW-Madison culture to cultivate entrepreneurship” and to “proactively drive a coherent, end-to-end vision” for reflecting the benefits of technology commercialization.

The focus of D2P, understandably, became predominately focused on its Igniter education and grant program after the campus received the \$2.4 million UW System Economic Development Incentive Grant (EDIG), which was to be used in 15 months. The EDIG provided an opportunity to pilot the impact that grant awards, combined with

entrepreneurship education and mentoring, can have to help achieve the campus' objective to commercialize more campus innovation. After two rounds of Igniter education, mentoring, and grant awards, Igniter has proven to be a successful pilot, based on the companies created and survey results. Of those individuals who participated in Igniter and responded to the committee's survey, 50% indicated that they were extremely satisfied with the Igniter program and another 18% were somewhat satisfied. Of those same individuals 68% indicated that they were extremely satisfied with mentorship provided by D2P and another 5% were somewhat satisfied. Half of the same respondents were satisfied with the funding provided (36% were extremely satisfied and 14% were somewhat satisfied).

While successful, the committee also recognizes that many campus entrepreneurial programs, such as the Wisconsin Entrepreneurial Bootcamp and various business competitions, operate at a fraction of the cost of what was spent on Igniter grant awards. While costs and benefits differ, a full spectrum of programs and resources is needed to improve the entrepreneurial climate and commercialize more research and innovation.

D2P successfully launched the Igniter program, coordinated and awarded the EDIG, and assisted in developing new products and companies derived from University innovation and research through Igniter. A downside to the heavy focus on Igniter is that most individuals who commented on D2P's mission as part of the survey or stakeholder interviews, see D2P as synonymous with the Igniter program, rather than a place to go for comprehensive advice and access to services.

Recommendation: Refocus on Mission. First and foremost, there is a need to refocus D2P on its original mission (MOU 2013) which includes leading the development of a more innovative and entrepreneurial campus culture and a seamless, coordinated set of resources on and off campus.

Recommendation: Remove Two Original Priorities. Two of D2P's original priorities appear to be the purview of shared governance and other administrative units on campus. The committee recommends removing these priorities which are: "With UW stakeholders, assess and, as needed, develop proposed policy considerations to improve recognition for PI contributions toward successful technology commercialization outcomes, including patenting, partnership with industry, and new company formation." and "Faculty recruitment ads will all carry messages of entrepreneurship".

- 2. Key Finding:** Premier research innovation and commercialization operations at peer public and private institutions rely on seamless coordination of technology transfer operations; alumni engagement; space and equipment; funding; and campus personnel, policies, and programs. A seamless, coordinated innovation and entrepreneurship approach has not been achieved at UW-Madison.

Some peers have made their institution the central resource for entrepreneurial education and outreach in the local community, which promotes collisions and collaborations between fledgling and experienced entrepreneurs and also promotes partnerships between the institution and outside entities. An illustrative example is MIT, where the university,

and its long-term financial support for commercialization, has become a central focal point of technology entrepreneurship in the Boston area.

The decentralized nature of the campus and its affiliated organizations (WARF, University Research Park, and the UW Foundation and Alumni Association), the timing of the Igniter grant, and the focus of the staff on Igniter activities have hindered the achievement of this objective. Going forward, it is important that there be a mechanism to coordinate the resources, planning, and services of on-campus and campus affiliated organizations.

Interviews and the stakeholder survey indicate that there is not a clear understanding of the complete mission of D2P. For example, 74% of survey respondents to a question about D2P noted that they did not have a clear understanding of the role of D2P. In response to a question about barriers to commercialization, one respondent commented that “The current infrastructure seems fragmented. In other words, programs seem to have been put in place to fill an apparent gap in the process rather than thinking about the process as a whole.”

Recommendation: Create a Council. The creation of a coordinating council, which is empowered and supported by campus leadership and the leaders of affiliated organizations, may be needed to assist D2P in achieving its mission. The council could include campus (e.g. the School of Business, D2P, Office of Corporate Relations, and Law and Entrepreneurship Clinic) and university affiliated organizations (WARF, University Research Park, and the UW Foundation and Alumni Association) who play, or could play, an important role in the innovation and entrepreneurship process and culture on campus.

Recommendation: New D2P Framework. The committee was asked to provide insight and recommendations on “What services and expertise should D2P provide within the broader context of campus, WARF, and community entrepreneurial and technology transfer programs and activities”. The committee recommends that D2P adopt a new framework for university innovation and entrepreneurship, which is aligned with the original D2P mission and clearly articulates the vision, strategies, and services for a coordinated innovation and entrepreneurship program. This D2P framework, which requires the support of the coordinating council, might focus on 5 Major Strategies: Champion, Connect, Mentor, Accelerate, and Invest.

Some of these strategies such as “Champion and Connect” would impact large portions of the university, while mentoring may only benefit a smaller number of entrepreneur minded students, faculty, and staff. The last two strategies, “Accelerate and Invest” are longer term possible strategies, which are employed by other successful peer institutions. These strategies would require significant financial and organizational resources, might have large payoffs, and probably directly involve a smaller number of innovators and entrepreneurs. The Council, recommended above, could serve an important function in helping D2P accomplish the “Champion and Connect” strategies as those strategies involve larger numbers of students, faculty, staff, and organizations across campus. D2P might play a more prominent role in “Mentor, Accelerate, and Invest” where the number of engagements will be much smaller.

The committee's initial thinking on this potential new framework is included in the Appendix and includes supporting rationale for the recommendations included in the report.

- 3. Key Finding:** It is difficult to see how D2P, as currently positioned and staffed, could facilitate the transformation needed to achieve its original mission.

Because there was only 15 months to complete the EDIG program, priority was given to hiring staff that had the specific skills and background needed to successfully accomplish the grant's purpose. Staff time was almost exclusively devoted to the Igniter program. As such, the Igniter and Pre-Igniter programs are particularly well suited to the strengths and interest of the D2P director and staff. Interviews with D2P staff and the Strategic Framework document they prepared, indicated an almost exclusive focus on helping faculty, staff, and students start companies, with a significant focus on the Igniter award program. There has not been a concerted effort, or focus, on coordinating entrepreneurship efforts, identifying gaps, or building a broad campus entrepreneurial and innovation environment.

Recommendation: Continued D2P Funding. UW-Madison's entrepreneurial and innovation culture and support resources are continuing to grow but their coordination and connectivity falls well short of many peer research institutions. The committee recommends that there be continued funding for the original comprehensive mission of D2P, but that the overall budget be reviewed in terms of the mission, programmatic priorities, and goals that are set for D2P. In longer term, if the situation warrants it, the University may want to consider a future request for state support or donor support for operations or grant making. Georgia Tech has experienced over 36 years of sustained state support for operations and the University of Chicago has recently announced a \$50 million gift to support their new Polsky Center for Entrepreneurship and Innovation. Many other universities use a combination of institutional and philanthropic resources to support their entrepreneurship and innovation programs.

Recommendation: Consider a New Budget and Staffing Model. A new budget and staffing model should be considered to achieve this more robust, repositioned mission including providing support for the coordinating activities of the new council. Budget justification should include staff and other line items such as website development and communications.

Because D2P staff have been hired and the office configured primarily to support D2P's Igniter program, a review of current position descriptions and the office's organizational structure is recommended in order to ensure their proper alignment with the broader D2P mission.

- 4. Key Finding:** Key D2P staff are not as familiar with state, federal, and campus conflict of interest, personnel, and research policies and procedures as their positions require.

The lack of knowledge and appreciation in areas such as conflict of interest and research effort reporting has created issues for some Advisory Board members and entrepreneurs.

Recommendation: More Policy and Regulation Awareness. While D2P is not a policy making entity, D2P staff do need to be fully aware of relevant laws, regulations, and policies that may impact the innovators and entrepreneurs they work with so that D2P activities and advice do not lead to potential conflicts or risk.

5. **Key Finding:** New milestones and metrics are needed to guide D2P in the next phase of its operations so that within two years a more robust, coordinated innovation and entrepreneurship culture and program, in line with our peers, is underway.

Recommendation: Develop New Milestones. New milestones and metrics, which are aligned with D2P's original mission, should be created to help guide the next phase of D2P. A set of possible metrics is included in the Appendix.

Appendix

Please note that the appendix includes answers to the questions posed to the committee in its charge by the Vice Chancellor for Research and Graduate Education. Those questions and answers inform the committee's report, and result in considerable duplication of information in the appendix that was presented in the report.

Answers to Charge Questions

What progress has been made in fulfilling the mission contained in the original MOU?

As originally defined in the MOU between WARF and UW-Madison, D2P's progress toward the mission was to be measured by a series of goals that are detailed in the Charter Presentation for each of the first three timeframe phases of the program in five major priority areas: UW Inreach, External Outreach, UW Policy Impact, Staffing, and External Funding. As the first two timeframe phases of the program (respectively, Phase I-Startup and Phase II-Towards Critical Mass) were expected to require up to a total of 30 months of D2P operations to complete, the following assessment considers those first two phases and not Phase III-Achieve Critical Mass.

UW Inreach: A number of these goals have been accomplished, including the launch of D2P; creation of a D2P website; coordination with certain WARF programs, such as Accelerator Program; and training of some graduate student interns. Engagement with prospective entrepreneurs has to date been deeper than it has been wide, largely as a result of administering the Igniter EDIG award in connection with 42 projects, and has contributed to 15 startups having been formed or staged for near-term formation. Although slow to start, over the last year some progress has been achieved in the number of D2P staff and mentor engagements with parties on campus who are not Igniter participants and this should remain an area of continued focus for D2P's staff and mentors. Goals in this priority area where D2P has made limited progress, and which require continuing emphasis include coordination of campus resources to engage startups and systematic departmental-level outreach efforts to build awareness of D2P's role and resources.

External Outreach: D2P has made good progress on certain goals, such as meeting with prospective external partners and connecting to other university programs (primarily upper Midwest peer research universities). Some progress has been made toward both the Phase I goal of assembling a reference catalog or matrix of technology commercialization resources and the Phase II goal of connecting startup companies with venture capital firms. Little or no progress has been made toward the Phase II goals of coordinating with other universities and infusing D2P's message of entrepreneurship into faculty recruitment ads. If this latter particular goal remains of value, then D2P should be tasked with initiating and coordinating this activity with the University's Human Resources operation, which is responsible for these activities.

UW Policy Impact: The primary goal for both Phase I and II in this priority area was to improve recognition for PI contributions toward successful technology commercialization outcomes (including patenting, sponsored research, and founding companies) within the University. D2P has made some good progress toward publicizing new startups emerging from the Igniter

program and, through broad distribution to the D2P mailing list, some other entrepreneurially-oriented developments in which faculty, staff and students have been involved. D2P has not made significant progress toward creating or supporting new campus-wide recognition programs that embrace and enhance a larger campus entrepreneurial culture.

As initially developed, this priority area contemplated D2P possibly impacting policy areas such as hiring, retention, and tenure matters so as to consider translational and entrepreneurial contributions. Going forward, such a goal should perhaps be dropped or modified if it is deemed to be outside the charter for D2P. Alternative goals might include: (1) identifying potential policies or practices that appear to hinder innovation and entrepreneurship because they are poorly understood or ambiguous, and to find new methods to clarify and work within the said policies and programs (e.g. conflict of interest and federal effort reporting) and (2) develop or coordinate campus programs and practices that could be implemented across campus in order to improve the overall campus innovations and entrepreneurship culture (e.g. Chancellor's Faculty Mentors Program for Innovation and Entrepreneurism or a Chancellor's Innovation and Entrepreneurship Award program). At a minimum, D2P staff need to be aware of relevant laws, regulations, and policies that may impact innovators and entrepreneurs working with and within the University and avoid situations that are in conflict with them.

Staffing: The primary goals for this priority area have been partially achieved by D2P as it staffed up for Igniter, although with less speed than called for in the staffing plan that drove the D2P spending plan in the Charter Presentation and MOU. For D2P to make continued progress toward delivering the entrepreneurial support services and expertise that are so central to its mission, the program must round out its hiring of staff, Mentors in Residence, and graduate student interns to levels more in line with what was planned for the second 12 to 18 months of program operation, and with the skills necessary to achieve the overall mission of D2P, beyond Igniter.

External Funding: Some effort has been made by D2P staff (subsequent to receipt of the UW System EDIG award) to develop sources of external funding for D2P to support future Igniter rounds, but actual results to date have been limited. As a result of D2P Advisory Board outreach through Chancellor Blank to the UW Foundation, a UWF account number for directed giving to support entrepreneurial programs was established, resulting in a couple of welcome donations from generous alumni. But this giving option has not been sufficiently developed by D2P, has very limited visibility, and has not been adequately promoted. WEDC funding of \$1M was committed to UW-Madison to support exiting Igniter projects and those in need of start-up resources, but requires venture-fund style management and a matching arrangement, which to date has not been developed. Efforts to explore other possible sources of support have been limited in scope, focused primarily on Wisconsin-based sources. This is an area where D2P staff and the campus should apply a broader effort going forward recognizing that securing additional levels of outside funding would likely require support from on-campus and off-campus partners.

Although any assessment of D2P needs to give significant consideration to the immense unplanned impact of administering the EDIG grant—a resource-intensive commitment that was never a part of the original charter and goals for D2P—progress has been made (and continued progress should be encouraged) in three of D2P's five priority areas, as they mostly relate to

Igniter: UW Inreach, External Outreach, and Staffing. In the remaining two priority areas, UW Policy Impact and External Funding, although some activity has been expended, actual results have been negligible. While D2P is in a position to bring attention to policy obstacles or the need for new policies, leading such policy change efforts as envisioned in the mission is likely the purview and responsibility of other campus entities.

Overall, the success that D2P has achieved is predominately due to its efforts in support of the Igniter program. In many respects, stakeholders on and off campus see D2P as synonymous with Igniter. To achieve its original mission, D2P would need to focus significant energy toward the coordination of innovation and entrepreneurship efforts on campus, with affiliated entities, and the broader regional community.

What are the appropriate metrics for evaluation of the future success for D2P, including any new directions suggested by the workgroup?

Potential D2P Metrics

1. # of projects D2P worked with by year (need to define the intensity of effort to qualify)
2. # of projects becoming startups by year
 - a. Amount of funding raised (seed/angel/VC/SBIR/STTR/other) (cumulative over time)
 - b. Number of jobs created (cumulative over time)
3. # of projects becoming licensing deals by year
4. # of effort hours by category
 - a. # of program/education hours (defined as # of attendees times # of hours of program/education)
 - b. # of outreach/marketing/entrepreneurial culture hours (defined as # of audience member's times # of hours of outreach/events)
 - c. # of mentor hours (defined as # of individuals mentored times # of staff hours spent with each individual)
5. # of introductions/connections made including
 - a. Key talent identified for roles
 - b. Investor introductions
 - c. Customer introductions
 - d. Partner introductions
 - e. Other connections
6. Percent of campus users reporting:
 - a. Recognition of D2P brand
 - b. Awareness of D2P mission/services
7. Satisfaction with D2P by users

Which D2P strategies and activities are working well and need to be sustained and leveraged?

The D2P mentors in residence have a wealth of knowledge and expertise that are extremely valuable to UW faculty, researchers and entrepreneurs that are seeking guidance on transitioning

their ideas into a commercial product or new company. Sustaining the mentors would be critical to the success of D2P. They facilitate a keen awareness of napkin to marketplace issues for specific product development areas; they are well connected in the greater Madison and Wisconsin area and they have been invaluable in helping entrepreneurial teams find a CEO and navigate the finances of starting a company.

One of the most important activities that should be sustained through the D2P program is the group learning experience for entrepreneurs through Igniter. When UW faculty, researchers and entrepreneurs compete for the privilege of being part of a cohort of learners, this increases accountability and builds a strong foundation of like-minded supporters that can provide guidance, advice and networking.

What services and expertise should D2P provide within the broader context of campus, WARF, and community entrepreneurial and technology transfer programs and activities?

D2P has made substantial progress in several areas, but opportunities to institutionalize its gains and expand its reach and influence remain as it strives to position itself at the center of a distributed network of technology commercialization and entrepreneurship resources spread across the University.

D2P has managed to mentor, accelerate and even invest in a select group of high-potential project and venture ideas, but it should consider deepening its expertise in some areas in order to deliver services that: (1) strengthen and shape the campus culture, (2) meet the education and training needs among some under-served populations within the campus community, and (3) support technology development efforts.

GAP FOCUS AREAS

1.) Culture, Coordination, and Connections

Focus on activities that build the innovation capacity and strengthen the entrepreneurial climate on campus. Investments in D2P's administrative capacity might enable it to tackle: (1) convening and staffing a coordinating body of campus leaders to improve the quality, amount, and rate of information flows among key entrepreneurship and innovation program leaders on campus; (2) executing "signature events" that raise awareness of commercialization efforts and entrepreneurial success at the university; and (3) developing additional tools for faculty, staff, and students to navigate technology assessment and *commercialization* resources that attacks the fragmentation that has frustrated some faculty and staff (survey results).

Possible service extensions/growth areas for D2P | **Culture, Coordination, and Connections**

* Convene a body of leaders on campus to help disseminate information about programs across campus, increase odds for productive collaborations between key contributors to the campus innovation and entrepreneurial climate, and advocate for policy reforms. D2P might look to previous efforts under the Kauffman Foundation Campus Initiative for a possible model in how to construct, convene, and support such a body.

- * Recognize and celebrate faculty with notable success (1) licensing discoveries to industry and (2) scaling startup companies. The D2P leadership team, with appropriate staffing, might assume responsibility for, and possibly expand, the Entrepreneurial Lifetime Achievement Awards annual reception.
- * Develop and maintain a guide to commercialization resources for faculty. This resource might resemble the Entrepreneurship Guide developed by OCR, WARF, INSITE and other partners while drawing inspiration from industry-leading guides developed at Duke, NYU and other peer institutions.

2.) Human Capital: Education and Outreach

Focus on underserved populations, notably graduate students in “STEM” disciplines that are likely to (1) generate discoveries with commercial and other forms of value and (2) likely to seek employment opportunities in industry rather than academia. Create a cadre of “business-aware” bench scientists and other creative professionals may help to improve: (1) the quality and/or amount of applied research on campus informed by market opportunities, (2) legitimize technology commercialization and entrepreneurial efforts at the university, and (3) improve placement outcomes among graduate students.

While D2P provides non-credit instruction for a variety of audiences, it might seek to offer programs and skill-building workshops relevant for a broader swath of campus faculty, staff, and students seeking to become more mindful of industry and market opportunities that could inform their research enterprise, protect their discoveries, and pursue a pathway to the marketplace. Much of this knowledge is resident on campus, but areas of opportunity remain.

Possible service extensions/growth areas for D2P | **Human Education: Education and Outreach**

Education - Conceptual Knowledge

Leverage business, MS in Biotechnology and other faculty with relevant experience

- * Intellectual property and commercialization pathways
- * Product development
- * Entrepreneurship

Education – Skills

Leverage Small Business Development Center and other campus resources where appropriate

- * Overview of campus policies on COI, related
- * Technology assessment
- * Patent searching
- * Grant prospecting, preparation, and reporting
- * Project management and budgeting

3.) De-risking Innovations

Continue to focus on de-risking scientific discoveries with commercial potential by deploying a combination of a “commercialization gap fund” and mentors with appropriate domain knowledge. Many programs on campus and within the Madison community educate, fund, invest, or otherwise support entrepreneurs among the faculty, staff, and students. Experimental

funds and advisory services for de-risking scientific advances that have commercial potential, however, is relatively unfunded. D2P might look to peer institutions and the WARF Accelerator program (which de-risks innovation from a scientific point of view) for additional best practices.

D2P might support the development of innovations with commercial potential through a range of stages in technology development through development and administration of a fund, perhaps with similar characteristics as the Igniter Award program, in combination with mentorship and/or education and training. Peer institutions identified in this review have deployed such funds, often through their Provost's Office (e.g. UCLA and Iowa). While WARF and private sector parties, such as accelerator programs, angel networks, and venture capital firms exist to fund companies (including UW-Madison startups), investment in de-risking emerging technologies to evaluate product-solution fit might further bolster commercialization efforts and startup activity.

D2P might also advocate that the UW Foundation and Alumni Association evaluate an evergreen fund for university startups that would bring the university in line with leading practices at other institutions like the University of California System (\$250 million for university-affiliated startups) and University of Illinois (\$100 million, general revenue fund). D2P might both advise on the development of such a fund and suggest/screen possible candidates given its portfolio of technology experts and business mentors, as well as experience working with emerging technologies and startups from across the campus.

Possible service extensions/growth areas for D2P | **De-Risking Innovations**

- * Technology development with training, mentorship and technology development funding
- * Allocation of funds by the UW Foundation and Alumni Association to deepen pool of risk capital available to university startups

Does D2P's organizational structure, staffing, strategies, services, or funding need to be altered given these suggested services and expertise?

General Comments

The Strategic Framework FY18-FY20 proposed 10.3 FTEs within 16 positions. With the exception of two student hourly (SH) positions, all positions report to the D2P Director (see attached organizational chart from 06/02/2016). The largest impact on the overall staffing level is the future of Igniter funding. In addition to Operations, the proposed operating budget delineated six areas within Communications, Commercialization and External Engagement. The Igniter area, within Commercialization, required 30% of the proposed staff or 3.11 FTE. Thus, if it was determined to discontinue funding Igniter, the need for some or all of the 3.11 FTE would require additional discussion. Likewise, if it was determined any of the six areas were not within the D2P mission, the corresponding FTE would need to be evaluated.

Assistant Director

A substantial (60%) component of the responsibilities of the D2P Assistant Director position include managing networking and recruiting functions. More specifically, connecting D2P-mentored projects with outside mentoring help and C-level talent. Concern was expressed

about D2P serving a role in executive recruitment. A more appropriate role may be to provide projects with tools or guidance for successful talent recruitment.

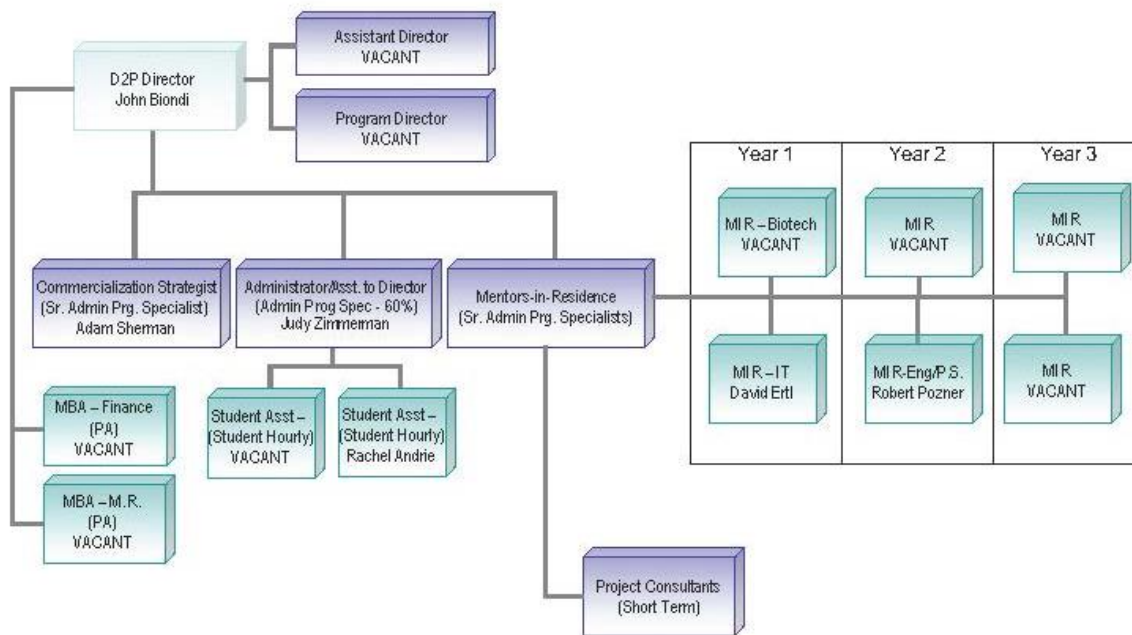
Department Administration

D2P recently completed the successful recruitment and hire of a Department Administrator. The academic staff (AS) position was posted and hired at a 0.60 FTE with roughly equal split of duties in the areas of Business Services (financial, travel, and purchasing), Human Resources (recruitment, leave, payroll, and benefits), Assistant to the Director (scheduling, correspondence, and office management) and Project Management/Communications (project tracking, social media, website). As mentioned above, the Department Administrator supervises two SH which provide an additional 30 hours of Operations support. Given the size of budget, FTEs and number of accounts and transactions, the combined AS and SH FTE may be high. If the FTE is determined to be high, the logical place to reduce would be SH hours.

Organizational Structure

The current structure is extremely flat with essentially all staff reporting to the D2P Director. It probably would be a worthwhile exercise to determine if there is a more optimal structure whereby direction and supervision is shared among the Director and 1-2 other “senior” team members. In addition to increasing effectiveness, a new structure could/should reduce the risk associated with concentrating institutional (D2P) knowledge with a single person.

D2P Organization Chart



Updated 6/2/2016

What can be learned from other research institutions regarding strategies that could improve acceleration of campus technology innovation and commercialization? How does the relatively small size of the Madison metro area impact which strategies to pursue or their implementation?

Successful campus programs for innovation development and commercialization, such as those at Georgia Tech and Carnegie Mellon, have several features contributing to their success. These include:

1. A pervasive campus culture that embraces and supports discovery, and its translation to improve the human condition, often resulting in commercialization.
2. A campus environment where faculty, staff, and students are accustomed to an interdisciplinary and multidisciplinary approach across department and schools/colleges to solve problems.
3. Consistent state funding to leverage the resources of a research institution to facilitate innovation and commercialization.
4. A network that reaches across the state to connect the business community with the campus.
5. Active engagement with alumni.

Our view is that UW-Madison is strong in 2; needs improvement in 1 (akin to Wisconsin Idea), 4 and 5; and has a big challenge with 3, consistent state funding.

Interviews of D2P staff

D2P Staff: Director John Biondi, Robert Pozner, Trevor Twose, Adam Sherman, Will Robus, and David Ertl

Individual Interviews of Campus and Community Leaders

1. D2P past Advisory Board members and community investors: Paul Shain and Fred Robertson
2. UW-Madison faculty and staff entrepreneurs
 - a. Experienced entrepreneurs: Mark Cook and Rock Mackie
 - b. New entrepreneurs:
3. UW-Madison stakeholders/partners
 - a. Weinert Center for Entrepreneurship: Jon Eckhardt
 - b. Business and Entrepreneurship Clinic: Mike Williams
 - c. Law and Entrepreneur Clinic: Anne Smith
 - d. Office of Corporate Relations: Susan LaBelle
 - e. VCRGE: Petra Schroeder
4. D2P Igniter participants:
 - a. Faculty: Carla Pugh and Bill Murphy
5. WARF: Carl Gulbrandsen
6. UW-Madison: Paul DeLuca
7. Community
 - a. WEDC: Aaron Hagar

- b. Gernerstor: Maggie Brickerman
- c. Wisconsin Investment Partners: Michael Thorson

Review/Interviews of Peer Institutions

Carnegie Mellon University
Georgia Tech
MIT
North Carolina State University
Northwestern University
Oklahoma State University
Purdue University
Stanford University
SUNY-Albany
University of Illinois – Urbana-Champaign
University of Iowa
University of Maryland – College Park
University of Michigan
University of Minnesota
University of Washington

Survey

- Distributed electronically to 7,587 faculty, students, and staff
- 822 total responses: 367 faculty, 142 staff, 70 post-docs, 231 graduate students, 3 undergraduate students, 3 emeritus, 6 other
- 368 elected to complete the full survey which included 13 total questions
- Respondents included experienced entrepreneurs, new entrepreneurs, investors, and patent, license or copyright holders.
- In addition, 20 D2P Igniter program participants responded to the survey

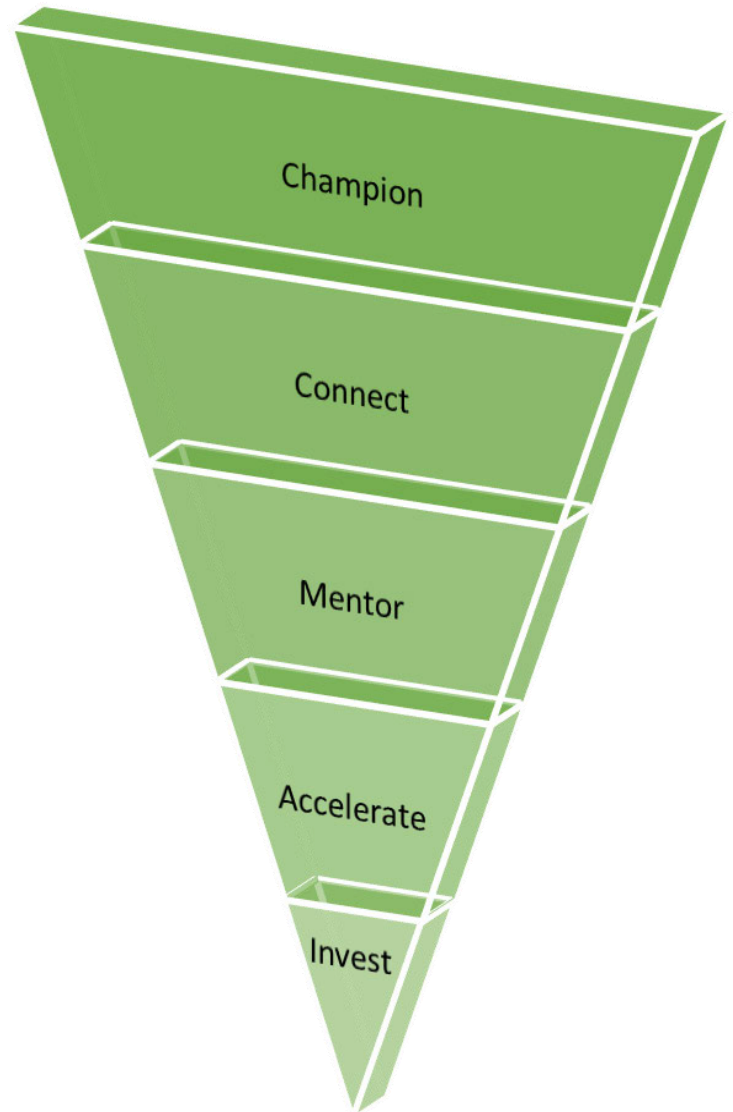
Possible New D2P Framework

While this possible new framework requires additional study, it appears to be supported by the comments that the committee heard from campus and community stakeholders and the information garnered from a review of programs at peer institutions. On the next several pages are initial thoughts on the framework information that was collected and supports the above recommendations.

Potential Framework for Idealized D2P

Representative Activities

1. **Champion – Build a culture of entrepreneurship at UW-Madison**
 - Build awareness
 - Build partnerships
 - Outreach/engagement
 - Workshops
2. **Connect – Make it easier for UW entrepreneurs to connect with resources**
 - Interactive website
 - Presentations/outreach
 - Identify promising projects
 - Referrals to partners
 - Facilitate Angel/VC investments/SBIR grants
3. **Mentor – Offer value-added services for high-potential companies/projects**
 - Offer Mentors-in-Residence
 - Offer second-level workshops
 - Run a UW accelerator program
4. **Accelerate-Help a small number of companies/projects make substantial progress**
 - Extend accelerator program
 - Connect project with C-level talent
 - Igniter
5. **Invest – Help fund UW companies to create long-term benefits for UW**
 - Create an evergreen equity fund (e.g., The Badger Fund)



The number of individuals impacted is proportional to the block size. The “Champion” strategy includes a larger proportion of individuals whereas the “Invest” strategy includes the smallest amount.

Champion – Build a culture of entrepreneurship at UW-Madison

A common thread in why other institutions tend to be more successful with their innovation and entrepreneurial activities is that they have developed an engrained innovation and entrepreneurial culture that permeates the academic and research missions of their universities. Many UW-Madison stakeholders felt that the campus innovations and entrepreneurial climate is improving, but a long way from where it needs to be. One survey respondent identified that an obstacle to commercialization is the lack of “an academic environment that rewards and recognizes the value of commercialization as a means of propagating knowledge and science to [a] greater public”.

The committee heard many ideas for how the culture could be improved including:

- Have a contact in each school/college who understands entrepreneurship and research initiatives in that area in order to serve as a resource both to faculty entrepreneurs and potential investors. One survey respondent commented that the University should “provide funding for department and research centers to hire staff or engage with external organizations with specific expertise in supporting entrepreneurial activities”.
- Continue to build awareness and promote more success stories of campus entrepreneurial efforts
- Address tenure and entrepreneurship
- Use entrepreneurial impact as one metric for evaluating the success of campus departments, institutes, and centers
- Have a one-year leave of absence for faculty (or a designated time per week) to start a company (Stanford University offers similar opportunities)
- One survey respondent suggested the need to “hold more highly visible competitions for students” and that the University should “identify, nurture, and help faculty engaged in [entrepreneurial] activities”.

These, and other activities, would require coordination and cooperation of many entities on campus. D2P and a new coordinating council could champion ideas such as these through the development of supporting information/documentation of success stories at peer institutions and outreach to schools, colleges, departments, and others.

Connect – Explore additional ways for UW entrepreneurs to connect with resources

The review committee heard from many stakeholders and observed from peer institutions the need to broaden the current focus (umbrella) of operations beyond current D2P activities to connect/coordinate and provide outreach campus-wide. There is a need for a “front door” for a faculty or staff member who wants to start a venture/has an innovation, but does not know where to begin (a type of “concierge” service). Specific ideas included:

- Focus on efforts where D2P can make a difference and where there are gaps in services or resources and connect stakeholders to additional resources on campus and in community—avoid duplicating existing resources.
- Develop an interactive website to help seamlessly connect stakeholders to a comprehensive set of resources and information that are specific to their needs and easy to use. (Duke University, Purdue University, MIT, and the University of Washington have more comprehensive, interactive websites.)
- Create, coordinate, or connect to more programs and resources that address the educational needs of faculty to develop entrepreneurial and business knowledge for those who are not entrepreneurs nor “business aware”. (see UW Resource Map)
- Create or coordinate more programs or resources that address the connectivity needs of faculty to human and financial resources.

As with “Champion”, some of these activities would require coordination and cooperation of other entities on and off campus. For those items, D2P could champion and coordinate the activities to help bring them to fruition.

Mentor – Continue to offer value-added services for high-potential companies/projects

The Madison metro area has had a long standing need for more CEO and senior executive talent to provide mentoring and run startups. D2P staff have often cited this as a hurdle that needs to be addressed and the issue surfaced in many conversations with stakeholders. For example, several survey respondents noted that the lack of experienced entrepreneurs to help set up an organization properly is a significant roadblock to commercialization or entrepreneurship on campus. Ideas that surfaced relative to mentoring and finding CEO talent include:

- Some universities have a model where a university affiliated foundation owns and operates businesses based on faculty or student IP. Inventors are compensated for their IP and the foundation hires and pays a CEO to run the business. The faculty member or student may be asked to provide continued subject matter or scientific guidance for which they are also compensated. This frees up the inventor to continue to innovate and create new commercial opportunities.
- MIT provides frequent “collisions” with operational entrepreneurial talent in the Boston area to increase mentorship opportunities and connections that may lead to senior level talent joining new startups.
- Stanford University and University of Michigan leverage alumni networks for mentors, CEOs etc.
- UW-Madison alumni could be a significant resource for expanding mentorship and the pool of senior level talent for local startups. Several years ago a study of UW-Madison alumni indicated a strong interest of some alumni in management positions in the possibility of returning to Madison. They could be a good senior management pool to help mentor

or run local start companies.

Accelerate – Help a small number of companies/projects make substantial progress

As a longer term strategy, the university might consider seeking funds from donors, state government or other entities to fund an accelerator award program. This would extend the value of D2P's Igniter program and WARF's accelerator activities and better position entrepreneurs for investor funding. A number of universities like the University of Michigan and Carnegie Mellon University have large endowments for entrepreneurial activities. Other universities, such as the University of Illinois Urbana-Champaign and Georgia Tech have received large state allocations to accelerate product and business development.

Even without a funded award program, D2P's Igniter education program could play an important role in accelerating commercial opportunities. Some potential entrepreneurs/innovators will become enthusiastic after exposure to the culture that is CHAMPIONED and become CONNECTED to the right resource to take the first step(s). They may receive MENTORship from D2P staff (or other resources they are CONNECTed with) and that advice may lead them to pursue a more intensive program to ACCELERATE their progress. This could be from an outside program such Gener8tor, gBETA, Techstars, Y Combinator, Madworks Accelerator, etc. or it could be internal to the UW such as the Wisconsin Entrepreneurial Bootcamp or a D2P program. D2P, through the efforts of the Mentors-In-Residence, could continue to offer an intensive accelerator-style program to members of the UW community that need, want, and qualify for it.

Invest – Help fund UW companies to create long-term benefits for UW

As a longer term strategy, consider creating an evergreen equity fund (i.e. Badger Fund) to fund companies and generate financial returns. The University of Illinois-Urbana Champaign has a \$100 million general revenue fund.

This could also be done on a smaller scale by raising the \$1 million match to WEDC to get a \$2 million seed fund together. WEDC would require \$333,333 of their funds to be spent in the form of grants. This would allow D2P/UW to use the remaining funds to invest in grants or equity positions. Such a fund could also create wonderful "real world" opportunities for students to learn by either assisting in investment management (due diligence, valuation, negotiating term sheets, accounting, etc.) or helping portfolio companies with business issues (HR, marketing, strategy, etc.).

UW Resource Map (see next page)

(This grid was created by committee members and identifies related programs and services on campus and the audiences they serve.)

D2P UW-Madison Innovation/Entrepreneurship Resource Map

	University Cultural Orientation, General Awareness, Human Capital (knowledge, networks)	Idea Generation	Research and Development	Technology Transfer and IP Protection	Product Development and Launch	"Valley of Death"	Market Performance (e.g. product sales success)	Organizational Performance (leadership, strategy, capitalization, office space, etc.)
AUD ENCE: "Business-aware" bench scientist	Advocacy Consortium for Entrepreneurs (policy, talks)							
	WARF Entrepreneurs (talks)							
	Wisconsin Entrepreneurial Boot Camp (grad. students)							
AUD ENCE: Enterprising faculty focused on commercialization	Advocacy Consortium for Entrepreneurs (policy, talks)		Center for Technology Commercialization (STTR, faculty focus)					
	WARF Essentials (talks on P)		Wisconsin Technology Innovation Initiative (SMPH)					
				WARF (P assistance)	WARF Accelerator Program			
AUD ENCE: Faculty, staff and student entrepreneurs	UW-Madison Campus Events Calendar	100 Hour Challenge (student contest)		Wendt Library Patent Search				Business & Entrepreneurship Clinic
	Wisconsin Technology Council, Wisconsin Innovation Network (talks)	Hub (student org.)						Law & Entrepreneurship Clinic
	Distinguished Entrepreneurs Luncheons (students)	Transcend (student org., contest)			Transcend (student org., contest)			Wisconsin Angel Network
	WARF Entrepreneurs (talks)	NEST (student contest)			NEST (student contest)			MERLN (mentoring)
	Entrepreneurship degrees, certificates, phd minor (students)	Arts Enterprise (student org.)			New Arts Venture Challenge (student contest)			Wisconsin Women's Business Initiative
	Fellowship in Enterprise Development (grad. student)	Wisconsin Energy & Sustainability Challenge (student contest)			Wisconsin Energy & Sustainability Challenge (student contest)			Governor's Business Plan Contest
	Wisconsin Entrepreneurial Boot Camp (grad. students)	Sector 67 (makerspace)			Madworks (accelerator, co-working)			
	Bioforward (trade ass'n)			Law & Entrepreneurship				University Research Park
	Biotech Happy Hour	VentureWell/ Garage Physics (student makerspace, grants)						Madison Development Corporation (venture debt)
	Capital Entrepreneurs (networking)		Ideadvance Seed fund (staff, faculty and students who are part of the UW System but NOT UW-Madison)					Qualified New Business Venture (accreditation)

D2P UW-Madison Innovation/Entrepreneurship Resource Map (continued)

University Cultural Orientation, General Awareness, Human Capital (knowledge, networks)	Idea Generation	Research and Development	Technology Transfer and IP Protection	Product Development and Launch	"Valley of Death"	Market Performance (e.g. product sales success)	Organizational Performance (leadership, strategy, capitalization, office space, etc.)
<p>Doyenne Group (networking)</p> <p>Forward Technology Festival</p> <p>High Tech Happy Hour</p> <p>Startup Grind (events)</p> <p>WARF Entrepreneurs (talks)</p> <p>WARF UpStart Program (minority/women entrepreneurs)</p> <p>1 Million Cups (networking)</p>	<p>Entrepreneurship Residential Learning Community (students)</p>	<p>Center for Technology Commercialization (SB R, faculty entrepreneurs)</p>		<p>Dream Big Awards (ERLC residents)</p> <p>American Family Insurance (accelerator, Starting Block)</p> <p>Generator/gBeta (accelerator)</p> <p>Madcelerator</p>		<p>Small Business Development Center (advisory)</p> <p>Madison SCORE</p> <p>Weinert WAVE Program (student instruction, potential investment)</p>	<p>Brighstar Foundation (investment)</p> <p>Madison Region Economic Partnership (funding, real estate)</p> <p>Myriad angel groups, venture capital firms</p> <p>Wisconsin Economic Development Corporation</p> <p>Madventures (co-working)</p> <p>Cresa (co-working)</p> <p>100 State (co-working)</p> <p>Horizon (co-working)</p>
		<p>Color key</p>	<p>Leadership primarily from community</p>	<p>Leadership primarily from university and related institutions</p>			

*The phrase "valley of death" commonly refers to the difficult period for start up organizations launching a new product or service where: (1) they have invested in research, development, and/or technology licensing to bring it to market, but (2) sales are not sufficient to attract professional investors to cover the further costs of product development or the growth of the business. Some studies suggest that 90% of entrepreneurial businesses that do not attract venture capital at this stage fail shortly after (Gomper & Lerner, 2002).