

Memo

To: University of Wyoming Administration

From: Entrepreneurship/Innovation Pillar Task Force

Date: April 7, 2021

Subject: Report on Entrepreneurship Training and Practice

This document is based on the report written by the Entrepreneurship Education Task Force. Membership in this task force included Patrick Kreiser (Task Force Chair, College of Business); Dominic Bravo (Haub School of Environment and Natural Resources); Denny Coon (College of Engineering and Applied Science); Tim Considine (School of Energy Resources); Mariah Ehmke (College of Agriculture and Natural Resources); Leigh Ann Hall (College of Education); George Mocsary (College of Law); Bruce Parkinson (College of Arts and Sciences); Nicole Riner (College of Arts and Sciences); Chris Rothfuss (Honors College); Fred Schmechel (Impact 307); Supporting Member: Kem Krueger (College of Health Sciences and School of Pharmacy). Amendments were made to ensure that the report met the requirements of the Entrepreneurship/Innovation Pillar Task Force.

Scope of Report

- This report offers suggestions regarding the potential creation of a campus-wide academic entrepreneurship and innovation center at the University of Wyoming. The focus would be on the provision of entrepreneurship training and practice, available to all students, faculty and staff, that supports teaching the skills needed to create new companies as well as incubation and creation of new companies. Incubators, part of UW, Impact 307 and across the WIN, would be connected in suitable ways.
- The suggested name for the proposed academic center is the Hub for Entrepreneurship Education and Research. Where this center is housed and how it relates to the Center for Entrepreneurship and Innovation are questions that should be addressed in the future.
- An initial mission and vision for an entrepreneurial education enterprise that is modeled on best practices at top universities in the field has been developed. The vision emphasizes accessibility to Wyoming's community college students and University of Wyoming undergraduate and graduate students (hereafter referred to broadly as "Wyoming college students") and includes experiential learning as a key component of the student experience.
- A start towards realizing this vision has already been implemented via a modified curriculum at the University of Wyoming featuring an entrepreneurship minor only available to non-business majors, and a revamped entrepreneurship major for business majors, increasing the accessibility of entrepreneurship education to all students. Both

programs are approved and were first offered starting Fall 2019. We recommend providing support for other units that would wish to contribute or otherwise participate in curriculum offerings through HEER.

- Current faculty staffing levels have allowed for a modest-sized entrepreneurship minor and major, but course and program capacity are now full. Additional resources are necessary to develop further the structure and capacity of these programs and more for a further strengthened entrepreneurial education enterprise are included in this report. Additional faculty and full-time staff lines are necessary for the success of this center.

Specific Recommendations

Based upon benchmarking of external universities and academic entrepreneurship centers as well as our internal discussions, the Task Force:

1. Recommends the creation of an academic center known as the Hub for Entrepreneurship Education and Research (HEER).
2. Recommends the development of a cross-campus entrepreneurship committee with representation from all University of Wyoming colleges and schools, as well as Wyoming community colleges.
3. Recommends the development of an external advisory board and a student advisory board.
4. Recommends the development of an Entrepreneurship Education and Research Fellows program that encourages, incentivizes, and provides training for University of Wyoming faculty, local entrepreneurs, and faculty from other national/international universities or Wyoming community colleges to contribute to the enactment of the entrepreneurial education and research mission at the University of Wyoming.
5. Recommends the investment of additional resources to enact these various recommendations. These requests are summarized throughout the report and specific financial guidelines are provided in Appendix 3.

Summary Statement

An invigorated entrepreneurial education enterprise easily accessible to and supportive of all Wyoming college students would represent the front door for those seeking to explore opportunities related to entrepreneurship-focused academic programs (including those providing experiential learning opportunities), coursework, events and speakers, clubs and organizations, internships, and business plan competitions.

The proposed Center (hereafter referred to as HEER) will be a significant contributor to the state's entrepreneurial eco-system supporting much needed economic diversification. Keeping our brightest students within the state to live out their entrepreneurial dreams, the creation of new and innovative organizations and customer markets, the increased availability of entrepreneurially-skilled labor, and the fostering of an entrepreneurial mindset as a key component of our academic programs will all help to support innovative business models that will enhance the vitality and diversity of the Wyoming economy.

Benchmarking Data

In order to generate and synthesize the recommendations contained in this report, the Task Force benchmarked several aspirant entrepreneurship programs as well as several peer programs at universities similar in size and scope to the University of Wyoming. The primary guiding post used in our analyses were the entrepreneurship programs housed within the Johnson Center for Entrepreneurship and Innovation (JCEI) at **Indiana University**. Similar to the University of Wyoming, Indiana University is a flagship public university and the JCEI is “is recognized as the focal point for entrepreneurial educational development within any discipline at Indiana University.” The programs at Indiana University are inter-disciplinary in nature and focus on the cultivation of entrepreneurial mindset in students across campus. The entrepreneurship programs at Indiana University have received numerous awards, which include being named the #1 Undergraduate Business School for Entrepreneurship---Public Universities (U.S. News & World Report), the #1 Graduate Business School for Entrepreneurship---Public Universities (U.S. News & World Report), and the #1 Entrepreneurship Program in the United States---Public Universities (Fortune Magazine). These rankings and awards were accurate as of 2020; some may have changed in the intervening months.

In addition to Indiana University, some of the aspirant entrepreneurship programs used in compiling the information in this report were:

- **Babson College** (#1 Undergraduate Business School for Entrepreneurship---All Universities, U.S. News & World Report; #1 Graduate Business School for Entrepreneurship---All Universities, U.S. News & World Report).
- **University of Utah** (#10 Undergraduate Business School for Entrepreneurship---All Universities, U.S. News & World Report; #12 Graduate Business School for Entrepreneurship---All Universities, U.S. News & World Report).
- **Syracuse University** (#19 Undergraduate Business School for Entrepreneurship---All Universities, U.S. News & World Report; #3 Global Entrepreneurship Research Productivity Rankings).

Some of the peer entrepreneurship programs similar in size and scope to the University of Wyoming used in compiling the information in this report were:

- **University of Missouri-Kansas City** (Exceptional Activities in Entrepreneurship across Disciplines, Global Consortium of Entrepreneurship Centers; Outstanding Contributions to Enterprise Creation, Global Consortium of Entrepreneurship Centers).
- **Iowa State University** (#26 Undergraduate Business School for Entrepreneurship, Princeton Review).
- **Oklahoma State University** (#24 Undergraduate Business School for Entrepreneurship, Princeton Review; #24 Graduate Business School for Entrepreneurship, Princeton Review).
- **University of Louisville** (#22 Graduate Business School for Entrepreneurship, Princeton Review).

- **Ohio University** (#1 Outstanding Emerging Entrepreneurship Program, United States Association of Small Business and Entrepreneurship).

Hub for Entrepreneurship Education and Research (HEER)

Center for Entrepreneurial Education and Research Mission - To support all Wyoming college students in cultivating and honing an entrepreneurial mindset, and developing entrepreneurial skillsets and competences relevant to success in their chosen field; and to support rigorous and relevant academic research, teaching, and other engagements focused on entrepreneurship phenomena.

Center for Entrepreneurial Education and Research Vision - The vision underlying the plans and actions in entrepreneurship education at the University of Wyoming and throughout the state is grounded in the understanding that developing entrepreneurial and innovative thinking is not only reserved for the business student, engineer, or eventual business leader. Entrepreneurial thinking is of value to people in all walks of life, especially as we enter what is certain to be an increasingly disruptive economic age. The vision for entrepreneurial research is to provide a shared platform for discovery among faculty and students to further understand and facilitate the entrepreneurial process, particularly within Wyoming.

Strategic Objectives---Center for Entrepreneurial Education and Research

1. To develop and support curriculum (undergraduate and graduate) available to **all** Wyoming college students. The curriculum currently includes, but is not limited to, a cross-campus UW entrepreneurship minor as well as a UW College of Business entrepreneurship major. The development of additional undergraduate programming (such as the music entrepreneurship program) and relevant graduate coursework related to entrepreneurship should be considered. Further, HEER should help support entrepreneurship-focused curriculum efforts and degree programs at Wyoming's community colleges.
2. To provide experiential learning opportunities to create pathways for Wyoming college students to discover and exploit relevant career opportunities, which may include the creation of a start-up enterprise, providing innovative and creative solutions within an existing organization or family firm, or pursuing entrepreneurial endeavors that tie back to the student's discipline. The broad emphasis is on cultivating an entrepreneurial mindset within all Wyoming college students.
3. To promote and support faculty-led academic research and knowledge creation in entrepreneurship.
4. To support relevant economic development activities within WIN, including faculty expertise, educational programming, student interns, and other areas to be determined as WIN advances.

Benefits to Wyoming - Consistent with these strategic objectives, and in alignment with the blueprint for the Wyoming Innovation Network (WIN), HEER will offer several direct and identifiable benefits to the Wyoming economy. First, offering enhanced curriculum and experiential learning opportunities for students within the state's community college system and UW will significantly increase the probability that students remain in Wyoming after graduation. Fostering an entrepreneurial mindset within our students, many of whom would like to stay in Wyoming but do not currently believe it is possible to do so, will help them to realize that they

can create profitable business opportunities and live out their dreams right here in Wyoming. Second, as a corollary to the first point, HEER will result in the creation of more businesses and increased jobs within the state. Although it is impossible to predict exact numbers, the creation of new ventures in Wyoming is expected to increase significantly as a result of the efforts of HEER. Third, existing businesses in Wyoming will benefit from enhanced access to Wyoming college students for internships and applied class projects, increased availability of skilled labor, and the opportunity to leverage entrepreneurial-minded students that can deliver innovative approaches in expanding existing goods and services. Fourth, HEER will enhance the efficacy and relevance of existing programs such as the Kickstart Wyoming program sponsored by the Wyoming Business Council as well as Wyoming Workforce Service's Workforce Development Training Fund's Chapter 5 Internship Grants and will contribute to the plans underway through WIN. Taken together, these various benefits help to illustrate the positive influence that HEER will offer to economic diversification within the state.

Relationship with Wyoming's Community Colleges – HEER should also support entrepreneurship education efforts at Wyoming's community colleges in order to cultivate an entrepreneurial mindset in college students throughout the state. Wyoming's community colleges could play a vital role within HEER. This could include support related to such things as curriculum, experiential learning opportunities, and student competitions. Enhanced promotions, campus visits, and targeted advertising could all be used to facilitate community college integration with existing student competitions. Further, student competitions held exclusively on community college campuses could serve as a feeder into these broader existing student competitions. An annual entrepreneurial summit integrating community college faculty and students with UW faculty and students, as well as Wyoming businesses, should be explored. As mentioned previously, community colleges should have representation on the cross-campus committee that supports HEER's mission. Finally, community college students should serve as part of the HEER student advisory board discussed later in the report. The partnership university/community college opportunities that are exemplified through HEER are also in alignment with the goals of WIN.

Inter-Disciplinary Focus – HEER should have a core focus on inter-disciplinary initiatives. Every University of Wyoming college and school as well as Wyoming's community colleges may play a role in developing a robust and thriving entrepreneurial eco-system across campus and throughout the state. HEER should have a cross-campus committee with membership representation from all colleges and schools, University Extension, as well as Wyoming's community colleges. A key role of this committee would include providing Center guidance and support. The committee also would have a role in developing and approving proposals for new entrepreneurship courses and supporting inter-disciplinary learning opportunities for Wyoming college students. Appendix 1 includes a description of the role that each University of Wyoming college and school could play in an eco-system represented through HEER.

Experiential Learning Opportunities / Student Competitions – If this vision is pursued, entrepreneurial education activities will include creating and offering meaningful and enriching experiential learning opportunities for Wyoming college students in colleges and schools across campus and community colleges throughout the state. This involves working with local, regional and national clients, facilitating internship opportunities, supporting applied class projects,

inviting guest speakers, etc. The emphasis would be on providing Wyoming college students with ‘hands-on’ opportunities to experiment and develop critical thinking capabilities related to their chosen fields. HEER could also help to promote the various University of Wyoming student competitions related to entrepreneurship, such as the Ellbogen \$50K Entrepreneurship Competition in the College of Business and the Fisher Innovation Launchpad carried out through Impact 307. Appendix 2 includes further information about potential experiential opportunities that could be offered through HEER.

Relationship with the Impact 307 – A strengthened entrepreneurial education enterprise will demand a close relationship between HEER and Impact 307. Three business incubators operate under the umbrella of Impact 307. A strong partnership between HEER and Impact 307 will afford students experiential educational opportunities by being placed within the operations of emergent businesses. Impact 307 has already proven to be a resource for promoting experiential learning opportunities by helping administer student competitions that help prepare students for real-world engagement, including with potential investors. To consider is further incorporating Impact 307 as a resource to enhance curricula. Envisioned is the development of courses grounded in experiential learning that can only be obtained in real business formation settings.

Relationship with the Business Resource Network – The Business Resource Network (BRN) provides pre-formation and post-formation company support and is comprised of four units (including Impact 307, described above). With resources provided by the Wyoming Business Council, the U.S. Department of Commerce, UW, and in the case of the business incubators, communities, the range of services offered by the BRN units is wide. Internship and experiential learning opportunities can be promoted by HEER within Impact 307 as well as the other three BRN units: the Tech Transfer and Research Products Office (legal aspects of intellectual property protection and licensing); the Small Business Development Center (bringing supportive resources to small businesses); and Manufacturing Works (helping Wyoming manufacturers optimize manufacturing processes).

Relationship with Extension – The College of Agriculture and Natural Resources’ Extension offers a variety of training and educational programs to entrepreneurs in the agriculture, food, and natural resource sectors. Such educational programs include food safety training, small farm management tools, and community leadership training. Extension provides substantial support to small businesses in terms of business planning, financing, product development, potential markets and regulatory compliance. Over the past year, UW provided assistance to over 800 businesses. In addition, state 4-H team members have training in developing youth entrepreneurship. There is significant opportunity for HEER to tap into networks of current and potential entrepreneurs through Extension.

Relationships with Existing UW Entities – Several existing entities on the University of Wyoming campus represent resources for HEER. These would include the Center for Design Thinking (CDT), the Center for Business and Economic Analysis (CBEA), the Health and Bioscience Innovation Hub, the Entrepreneurship and Business Law Practicum, the various campus Makerspaces, University of Wyoming Extension, and WyoVentures. This report assumes that these entities will continue to be funded, either from their current funding sources

or in conjunction with HEER. Appendix 3 contains information regarding these various indirect costs.

Advisory Boards – HEER should have two advisory boards: An external advisory board and a student advisory board. The external advisory board would consist of external stakeholders who offer guidance, support, and legitimacy to HEER. The student advisory board would consist of select entrepreneurship students across the University of Wyoming campus as well as Wyoming’s community colleges.

Faculty Research Support – HEER should help to support faculty in producing new knowledge related to entrepreneurship. As such, research support should be provided to aid faculty in conducting such research. An Entrepreneurship Education and Research Fellows program could be useful in providing enriched research opportunities for faculty. Further, faculty travel (such as to academic conferences) should be supported through HEER. Appendix 3 contains more detailed information about proposed research support.

Faculty Teaching/Curriculum Development – HEER should provide support for faculty engaged in teaching entrepreneurship across the campus. This could include but is not limited to monetary stipends for developing new courses, seminars on curriculum development, and support related to classroom technology and best practices. Appendix 3 contains more detailed information regarding proposed support for teaching/curriculum development.

Additional Faculty / Staff – HEER would require a faculty member to serve as its Executive Director. To consider is this director reporting to the various Deans, with informal guidance/communication from Academic Affairs. Additional staff and/or faculty members would be necessary in order to provide support related to student advising, career placement, curriculum leadership, internships, marketing and promotions, and research, among other things. Additional faculty will be required to deliver instruction and enhanced experiential learning opportunities for students, as well as to provide service to HEER. Appendix 3 contains more detailed information regarding these proposed positions.

Dedicated Space for Entrepreneurship – There should be dedicated space developed to augment the student experience. Ideally, this can include some cross-disciplinary collaborative space (perhaps at Coe Library) as well as some dedicated space in the College of Business for *both* ENTR Minors and ENTR Majors. Further, the possibility of an entrepreneurship learning community, such as could be supported through space in dormitories, should be considered.

Appendix 1 – Role of Each UW College and School in an Entrepreneurial Eco-System

The sections below provide the thinking of each unit, as of 2020. There may be additional roles that could be taken within each unit as the HEER and the WIN emerges.

College of Agriculture and Natural Resources: The College of Agriculture and Natural Resources (CANR) has a number of different resources to leverage for academic-focused entrepreneurship education and research. The potential heart of such education is the Department of Agricultural and Applied Economics (AAE). Currently, there is a formal course in Agribusiness Entrepreneurship offered to seniors as a capstone course. This course was created after unsuccessful adaptation of a more general agribusiness strategy course imported, in part, from Midwestern land grant university models. Such a Midwestern model is based on the notion students are aspiring to be the next CEO of Cargill or ADM was not a successful approach in AAE since this approach did not meet the needs of agriculture in the State of Wyoming or agribusiness across the region. While there are a few students with such aspirations, the majority are often aspiring to own their own business or become a manager in a small family business. Thus, the Agribusiness Entrepreneurship class was created. It has been very successful over the years, but does lack integration with other courses in the entrepreneurship sphere at the university. HEER will serve as a hub for such integration.

Researchers within the Agricultural and Applied Economics Department have active research programs pertaining to entrepreneurship, including negotiation analysis, agricultural risk management, and supply chain coordination. In other areas of the college, research activities contribute to new production processes, plant breeding innovations, invasive species reduction, advances in animal genetics, and human development. In the past, such work has contributed to new ventures in the areas of hydroponic agriculture, forest conservation, animal traceability, early childhood education and blockchain. As researchers continue to work on such technologies, HEER will provide additional opportunities to examine entrepreneurial practices in agribusiness and biotechnology ventures and best practices to develop such businesses in Wyoming.

College of Arts and Sciences: The College of Arts and Sciences contains the highest diversity of disciplines at the University of Wyoming and as such will have diverse needs from and interactions with HEER.

The students from the more technical areas, such as biology, chemistry, geology, mathematics and physics will need mentoring in aspects of entrepreneurship related to transitioning from experimental breakthroughs and novel ideas to commercialization via formation of start-ups or innovating in a larger corporate environment. Intellectual property will be one specific aspect where students will need to be educated to properly transition to the business world as well as marketing, business plans and financial aspects of technology commercialization.

One of the hallmarks of performing arts training at UW is that students learn to work both collaboratively and independently, often in leadership roles. Graduates have opened their own private studios, worked as urban freelance artists, and gotten jobs in marketing, fundraising and in arts leadership positions. The Department of Music has been approved to begin a Music Entrepreneurship certificate focused on providing opportunities for students to learn about

marketing principles and practical, hands-on experience that allows one to enter the workforce with a marketable skill set in the areas of arts promotion and management. Music also maintains a "hire a musician" program to help students find freelance work in the community. Additional, university-wide support for developing meaningful internships, engaging with the community, and exploring such practical interests as self-publication, copyright and contract laws, and grant writing skills would be wonderful additions to what the performing arts faculties are teaching their students.

College of Business: The College of Business aims to support the entrepreneurship eco-system at the University of Wyoming through curriculum development and enhanced experiential learning opportunities for students. The College of Business offers a new entrepreneurship major as well as a cross-campus minor as part of its AACSB accredited undergraduate business programs. This includes the creation of several new courses as part of both degree programs: ENTR 2700 (Entrepreneurial Mindset), ENTR 3700 (Innovation, Ideation, and Value Proposition), ENTR 4700 (Business Model Creation and Launch), and ENTR 4750 (Theories of Entrepreneurship). Further, the College of Business is actively involved in providing experiential learning to students, both in the classroom and outside the classroom. Inside the classroom, experiential learning is interwoven into each ENTR course. Outside the classroom, the College of Business supports experiential learning through supporting activities such as the Ellbogen \$50K Entrepreneurship Competition.

College of Education: The College of Education believes that students can benefit from the adoption of an entrepreneurial mindset. Educators from all walks of life can think and act entrepreneurially in terms of curriculum design, teaching style, pedagogical innovations, and assessment techniques. There is potential within the college to embed entrepreneurship concepts in coursework, particularly at the graduate level. In addition, the College could potentially help with a symposium or conference that includes educational entrepreneurship. Students in the BA in Elementary Education are encouraged to pursue a minor, and the Entrepreneurship Minor is an option for them. Faculty and staff members in the College of Education could benefit from mentoring in entrepreneurship and innovation, so that applications can be made to coursework, research, and other engagements.

College of Engineering and Applied Science: The College of Engineering and Applied Science's role in HEER includes five approaches: Integration of entrepreneurship topics into existing engineering coursework, the continuation of the existing Entrepreneurship for Engineers elective, an entrepreneurship focus for experiential learning internships, participation in the College of Business Entrepreneurship Minor, and collaboration of College of Engineering and Applied Science resources. The integration of entrepreneurship topics into existing engineering coursework formalizes a customer focus in both FYS courses and capstone design courses. The existing Entrepreneurship for Engineers course can be coordinated with the College of Business courses to offer enhanced value and more effective use of resources for both colleges. All engineering majors have the option of experiential learning for academic credit through internships. Engineering majors are paired with an entrepreneur, which provides a valuable internship experience for engineering majors. All engineering majors have the option to pursue the Entrepreneurship Minor. The structure of the minor lends itself well to the technical elective

structure and accreditation requirements of engineering majors. Lastly, two resources housed with the College of Engineering and Applied Science, the Maker Space and the Center for Design Thinking, are well aligned with entrepreneurial education. These two resources offer significant potential to enhance the interdisciplinary activities in entrepreneurial education.

College of Health Sciences / School of Pharmacy: The College of Health Sciences houses the Wyoming Health and Bioscience Innovation Hub through the sponsorship of the School of Pharmacy. The HUB will strength the bioscience ecosystem in the state of Wyoming and aims to impact the state through an increase in bioscience employment, by providing opportunities for fellowships and internships, and by sponsoring companies establishing a footprint in Wyoming. A major component of the ecosystem with be the SPARK Wyoming program operating within the SPARK Global network. The SPARK program provides funding, guidance, and education to faculty/student bioscience research teams with the goal of advancing their efforts towards commercialization. Additional HUB components are the Biotech Venture Capital fund now in development and the Healthcare Living Lab. These two entities and the SPARK program, along with a network of faculty and industry-experienced advisors, will cooperate to build and strengthen the bioscience ecosystem in the state.

College of Law: The College of Law's role in the University's ENTR program would continue to focus on students while, as a beneficial size effect, providing benefits to the public. As part of the program, the Entrepreneurship and Business Law Practicum would continue to be offered to law and law-dual degree students. Practicum students learn about entrepreneurship along multiple dimensions. First, they learn about setting up a law office of their own. In the process, they learn from guest speakers about a range of topics related to starting small business more generally. They engage in drafting exercises, starting with business plans, and moving to actual legal documents for actual clients. (The students are supervised by the Practicum's instructor, who is admitted to the Wyoming State Bar.) Students also attend community events related to entrepreneurship to learn networking skills and to start to become embedded in the Wyoming entrepreneurial ecosystem. These events range from e2e (Entrepreneur to Entrepreneur) gatherings, various seed-funding pitch days, investor conferences, the WyoHackathon, and the like; in addition to instructor-endorsed events, students are encouraged to suggest events to attend. The students also provide presentations to the public about various legal topics important to entrepreneurs and small businesses, like legal-entity choice, employment law, and the like.

Haub School of Environment and Natural Resources: The Haub School of ENR has continuously put the entrepreneurship mindset at the forefront of the school, the faculty and the students. There are many opportunities for growth in the natural resources, outdoor recreation and tourism industry and the ability for the school to have synergies with the ENTR program is critical. Many of the entrepreneurship concepts might be in the service component of the industry, but there are numerous possibilities in advanced manufacturing and technology in this industry also.

School of Energy Resources: The School of Energy Resources (SER) has a number of multi-disciplinary research initiatives underway in their centers of excellence that could provide opportunities for students interested in entrepreneurship. Many of these projects are intended to spur development of new business enterprises in Wyoming and could provide opportunities for

undergraduate students from SER, COB, LAW and Engineering. Specifically, ENTR students could study economic, commercial, and legal issues involved with the commercialization of energy technologies via internships or special study courses with faculty and research staff affiliated with SER. In addition, SER undergraduate programs produce landmen, right-of-way agents, and environmental scientists who often have opportunities to become entrepreneurs. Professional land management students from SER have established their own LLCs upon graduation because they've accepted an opportunity as a contract landman.

Appendix 2 – Experiential Learning Opportunities

Wyoming college students have much to offer to Wyoming companies, and vice versa. Essential to cultivating an entrepreneurial mindset, an eco-system ripe in applied learning opportunities provides Wyoming college students the prospects to crystalize what they have learned in the classroom. Additionally, by launching or joining a start-up company, students learn the value of a multi-disciplinary approach to their education.

Competitions

Ellbogen \$50k Entrepreneurship Competition

Administered by the College of Business, the primary outcome of this competition is the academic exercise of thinking through the launch of a start-up company. Open to any college student in the state of Wyoming. Timeline coincides with the Academic Year. Funded by the Ellbogen Foundation and First Interstate Bank

Fisher Innovation Launchpad

Administered by Impact 307, the primary outcome of this competition is the launch of innovative & viable start-up companies that can utilize UW generated intellectual property. Open to any UW student or Post-Doc. Timeline has historically coincided with Calendar Year, though events of 2020 present opportunity to collaborate with Ellbogen. Funded by the Donne and Sue Fisher Endowment and School of Energy Resources (SER).

Internship Opportunities

Internships represent a unique opportunity to catalyze growth in Wyoming-based start-up companies and create recruitment opportunities that can lead to full-time positions in Wyoming for Wyoming college students.

Placed directly with a company/start-up

Presented on a case-by-case basis and typically performed for academic credit. Potential funding for these internships comes from a variety of on campus sources, but the Department of Workforce Services Chapter 5 Internship Grants has been created to assist placement of Wyoming college students with start-up companies.

Placed with Impact 307

Impact 307 maintains a pool of 10-12 interns throughout the year with students from most colleges. Internships tend to focus on projects for start-up companies that align with or are orthogonal to the student's major with a goal of experiential learning and assisting the start-up. Focus is on building business leadership skills of students and providing them opportunity to launch their own company or become a critical early employee of another start-up. Assignments shift dynamically with demand, resulting in further experiential breadth.

Other Activities

Applied entrepreneurship happens most frequently in a critical mass of like-minded innovators. Impact 307 and other campus programs create opportunities for this critical mass to happen and provide students avenues of mentorship, guidance, and opportunity.

e2e Wyoming

Impact 307 entrepreneurial networking event in downtown Laramie every 3rd Tuesday of the month. Presented in partnership with LCBA.

Impact 307 Networking

Impact 307 client and stakeholder networking event held in Impact Laramie building every 4th Thursday of the month. Intended as a peer-to-peer forum. Students are always welcome to attend.

Impact 307 Student Entrepreneurship Coworking Space

Located on the second floor of the incubator, Impact 307 Coworking space is open to use of any UW or LCCC Albany County Campus student free of charge to begin their start-up. The space provides access to business counselors, technical advisors, and is equipped with Adobe Creative Cloud and SolidWorks.

Start-up Weekends/Boot Camps

Inclusive and intensive weekend experience focused on building the basic skills of Laramie community entrepreneurs including Wyoming college students. Administered by faculty from Colleges of Business and Engineering in recent past.

Appendix 3 – Necessary Resource Requests: Financial Breakdown

In order to implement the various initiatives outlined in this report, there are resources that the Task Force considers necessary to achieve HEER's mission and vision. These resources were identified through benchmarking academic centers at other universities and discussing necessary resources amongst the members of the Task Force. We have outlined these resource requests as it relates to (1) faculty positions, (2) staff positions, (3) operating expenses, and (4) indirect expenses. We have separated these resource requests into the initial resources that the Task Force considers as a bare minimum to get HEER up and running (i.e., areas of immediate need), as well as long-term resource requests that will be necessary as HEER becomes more established five years from now. Finally, we have included a discussion of possible funding sources, which establishes a long-term goal of HEER to become increasingly self-funded over time.

Resource Needs: Faculty Positions

Initial Faculty-related Resources: The Task Force identified, at minimum, three faculty positions that would be immediately necessary as part of HEER. These faculty positions could be filled in three primary ways: (1) The recruitment of current UW faculty to fill the role (which would require either supplemental salary and/or course releases, to be determined as part of each role); (2) Using current faculty searches to help fulfill these various roles, or (3) Creating new faculty lines to fulfill these various roles.

1. **Executive Director:** HEER would need a Director to oversee formulation and implementation of the Center's over-arching strategic vision.
2. **Curriculum, Assistant Director:** HEER would need a faculty member to oversee its education-focused mission.
3. **Research, Assistant Director:** HEER would need a faculty member to oversee its research-focused mission.

Long-Term Faculty-Related Resources: Over time, additional faculty would be necessary in order to further enhance the mission of HEER. This would include a specific need for faculty who are able to teach in courses offered through HEER, as well as faculty who could help to provide experiential learning opportunities for students. Further, faculty should be recruited to help perform meaningful and impactful research related to entrepreneurship-focused topics. The creation of additional endowed chair and named professorship positions in multiple Colleges/Schools would help to fulfill the inter-disciplinary objectives of HEER.

Resource Needs: Staff Positions

Initial Staff-related Resources: The Task Force identified, at minimum, three full-time staff positions that would be necessary in order to support HEER.

1. **Student Advising/Career Placement/Internships/Experiential Learning:** A staff member focused on student engagement and student learning would be necessary to

oversee student advising, career placement, internships, and experiential learning related to HEER.

2. **Marketing/Public Relations/Fundraising:** A staff member focused on marketing and public relations would be necessary to promote HEER across campus as well as to external stakeholders.
3. **Budgeting/Financial/Office Manager:** A staff member focused on budgeting, financial analysis, and general administrative functions would be necessary to oversee administrative aspects of HEER.

Long-Term Staff-Related Resources: Over time, the expectation would be that these various staff functions would split apart into multiple additional positions. For example, a staff member focusing on student advising/career placement and a staff member focusing on internships/experiential learning would be advisable as HEER continues to grow.

Resource Needs: Operating Expenses

Initial Operating Expenses: The Task Force identified initial annual operating expenses that would be necessary for HEER to achieve its education and research-related mission. These initial operating expenses total **\$130,000 per year**.

1. **Research Budget for Existing UW Faculty:** The Task Force recommends **\$50,000 per year** as an initial research budget for HEER. Existing UW faculty could apply for funding related to data collection, research design, software, and other financial needs related to entrepreneurship-focused research. The proposed Assistant Director of Research would oversee the allocation of this budget, with input from the Executive Director.
2. **Teaching/Curriculum Development Budget:** The Task Force recommends **\$25,000 per year** as an initial budget teaching/curriculum budget for HEER. This could include but is not limited to monetary stipends for developing new courses, seminars on curriculum development, and support related to classroom technology and best practices. The proposed Assistant Director of Curriculum would oversee the allocation of this budget, with input from the Executive Director.
3. **Entrepreneurship Education and Research Fellows Program:** The Task Force recommends **\$25,000 per year** as an initial budget for the proposed Entrepreneurship Education and Research Fellows Program. The program would encourage and incentivize University of Wyoming faculty, local entrepreneurs, and faculty from other national/international universities to contribute to the enactment of the entrepreneurial education and research mission at the University of Wyoming. This estimate include five (5) fellows at \$5,000 per year. The Executive Director would oversee this program, with input from the two Assistant Directors.

4. **Faculty Travel Budget:** The Task Force recommends **\$15,000 per year** as a travel budget for UW faculty engaged in supporting the mission of HEER. This could include, but is not limited to, travel related to academic conferences (both research-related and teaching-related), data collection, and site visits at other programs. This Executive Director would oversee this program, with input from the two Assistant Directors.
5. **Internships:** In addition to programs already offered in various colleges/schools, the Task Force recommends **\$15,000 per year** as a budget supporting cross-disciplinary student internships related to entrepreneurship.

Long-Term Operating Expenses: Over time, the amount of resources devoted to operating expenses would increase as HEER continues to grow. As an aspirational point, after five years, it would be expected that operating expenses would approach **\$800,000 per year**. As a benchmark, the Regnier Institute for Entrepreneurship and Innovation at the University of Missouri-Kansas City (an Institute with a similar size and scope as HEER as detailed in this report) has an annual operating budget of \$900,000 (not including faculty/staff salaries). Further, as detailed below, there is an expectation that HEER would become increasingly self-funded over time.

Resource Needs: Indirect Resources

The resource requests laid out above are presumed to be in addition to existing resource support related to the Center for Design Thinking (CDT), the Center for Business and Economic Analytics (CBEA), the Health and Bioscience Innovation Hub, the Entrepreneurship and Business Law Practicum, the various campus Makerspaces, University of Wyoming Extension, and WyoVentures. The Task Force deems it critical that existing support is continued for these important entities.

Sources of Funding

Initial Funding: At inception, HEER would be heavily reliant on university funding related to the resource requests detailed in this report. However, this reliance would be expected to decrease over time.

Long-Term Self-Funding: Over time, HEER would be expected to become increasingly self-funded. Opportunities for self-funding include, but are not limited to: (1) Funding derived from available grant programs, (2) Fundraising and endowments related to HEER, (3) Potential naming rights for HEER, (4) Matching programs, and (5) Private donations. It is the expectation of the Task Force that, after 5 years, HEER would derive approximately 50% of its necessary operating expenses from self-funding (not including faculty/staff salaries).

Task Force Report - Summary: Thank you for taking the time to read through this report. We are confident that the recommendations contained herein have the potential to exert a positive lasting impact on the University of Wyoming and throughout the state by instilling an entrepreneurial mindset in our students and faculty, as well as promoting entrepreneurial progress throughout the state of Wyoming. We welcome your feedback and support.