

**University of Northern Iowa**  
**Grow Iowa Values Fund Proposal for FY 2010**  
**Total - \$855,000**

**Overview:** The University of Northern Iowa (UNI) respectfully submits this request for fourth year support from the GIVF. UNI proposes a continued focus on the five economic development projects previously supported in part through the GIVF. Each project has achieved substantial outcomes and leveraged private and federal support. Specific details are included for the following five projects:

- Technology transfer and business incubation,
- Rural entrepreneurship,
- Market research,
- Regional development and
- National Ag-Based Lubricants Center.

**Project 1: Technology Transfer and Business Incubation ♦ \$288,000**

UNI continues to advance intellectual property evaluation and protection, commercialization of campus innovations through licensing/strategic partnerships, and new business development. Several proposed projects for FY 2010 directly impact these efforts, including the Innovation Incubator and the UNI MyEntreNet initiative. These coordinated efforts will result in strong, broad-based linkages between the University and the greater Iowa business community. Specific priorities for FY 10 are:

**Area 1: Business Incubation:**

UNI opened the Innovation Incubator in the fall of 2007 and achieved full occupancy during 2009. The first tenant, with six employees, graduated from the incubator in late 2008; soon after, construction of the unfinished shell space began, which will increase incubation space by 25%. The new space is expected to open by late summer 2009 and immediately begin accepting new incubator tenants. The goal for 2010 is to fill these expanded suites with faculty spin offs and area entrepreneurs. The student business incubator has been at full tenancy throughout 2009 with another 38 student businesses served virtually. Several businesses will soon be graduating from the student business incubator and we expect to quickly fill those temporary vacancies.

**Area 2: Intellectual Property Development:**

With assistance from the Office of Intellectual Property and the Office of Sponsored Programs, UNI faculty and staff have generated an average of 16 new, marketable inventions per year over the past three years; 14 more inventions were recorded during FY09. Due to the 20% GIVF cuts in FY09, fewer faculty research projects could be funded. UNI hopes to rebuild the pipeline of commercially-viable faculty research in 2010 and secure 2-3 new license agreements. The estimated economic benefit of these efforts to Iowa businesses has been approximately \$5 million per year. Funds provided through the GIVF and Battelle initiatives for internal, competitive research grants have been vitally important to advancing applied research by UNI faculty and staff, both for direct support of research efforts and as cost share required for federal grants. The Office

of Intellectual Property, the Office of Sponsored Programs, and Business and Community Services will continue to promote and administer these highly successful competitive grants to spur intellectual property development.

**Matching Funds:** Federal Funds from the Department of Energy, SBA, UNI Research Foundation and program income.

**Results/Metrics:** Tenancy in the newly expanded Innovation Incubator and Student Business Incubator will reach 100% occupancy by the end of the fiscal year. At least 15 intellectual property disclosures will be received with 2-3 licensing agreements executed under patent or trade-secret provisions and 4-5 new late-stage research projects awarded to UNI faculty.

### **Project 2: Rural Entrepreneurship ♦ \$180,000**

MyEntre.Net is an entrepreneurship development system that has served entrepreneurs since 2003, linking them with advanced technical and marketing assistance (in part through technology) and developing community support networks and financial resources to help entrepreneurs create, successfully operate and expand businesses in Iowa. Through a competitive selection process, MyEntre.Net regions also receive local capacity building assistance to support entrepreneurial development.

Several fundamental economic changes have impacted entrepreneurship development in the state over the past 24 months. As a result of the 2008 natural disasters, the subsequent national economic downturn and the emergence of improved broad band access in rural regions, new critical needs have surfaced among rural small business owners. In response to these needs MyEntre.Net is evolving. In 2009-2010, UNI will re-launch MyEntre.Net as *Iowa's Online Community for Small Business and Entrepreneurs*, to expand in-community outreach to multiple clusters of Iowa counties, and to continue the collaboratively-planned statewide conference for small business owners known as EntreFest! for a 3<sup>rd</sup> successful year.

We propose to address the following critical areas of entrepreneurial development in the coming year:

#### ***Area 1: Launch of a new MyEntre.Net website statewide, as Iowa's Online Community for Small Business Owners and Entrepreneurs:***

In May of 2009, MyEntre.Net was re-launched and expanded as *Iowa's Online Community for Small Business and Entrepreneurs*. Central to this re-launch was a first-in-the-nation approach of a peer to peer business network, customized specifically for one state (Iowa). Other features of the new site include business and personal profiles, business classifieds, messaging and blogging, a Chat Café, industry group discussion forums, a business library and interactive Webinars. Approximately 3,000 primarily rural entrepreneur registrations have been transferred to the new online community from the original website and a phone, mail, email and online campaign to re-acquaint these previously engaged business owners with the new community is underway. This will continue into 2009-10. A second, statewide campaign to identify and engage new,

young, technologically-savvy innovators will begin in July of 2009. In addition, a new peer-to-peer lending section and an expansion of the “Buy-Sell Iowa Companies” section is envisioned for the coming year.

**Area 2: Cluster Expansion:**

In response to service provider partner requests in Southwest, East Central and Northwest Iowa, the competitive selection process for new MyEntre.Net regions will be set aside in favor of collaborative cluster expansion into multiple counties surrounding existing MyEntre.Net regions in several areas of the state. These expanded clusters generally follow the Iowa Department of Economic Development’s Regional Marketing Clusters, providing a working group of service providers already engaged in collaborative planning and program implementation. As many as 8-12 new counties may be served through this expansion approach as compared to the 2-4 new counties selected through the previous annual competitive selection process. Within these new clusters, EntreBash events will be scheduled and rural entrepreneurs will be identified, recruited and engaged online and in their home communities. Master calendars containing events and resources tailored specifically to small business owners within a particular region will be compiled and distributed throughout these clusters each year. In addition, entrepreneurship impact data will be collected, compiled and shared with peer providers, stakeholders and the public twice annually.

**Area 3: UNI will lead a consortium of 15-20 service provider and private partners in the delivery of the third annual EntreFest!, Iowa’s statewide conference for small business:**

Beginning with the first EntreFest! in 2008 in Cedar Falls, hundreds of small business owners in Iowa have been touched by this statewide event dedicated to their unique business and networking needs. More than 60% of all attendees at the 2008 conference and 40% of the 2009 EntreFest! conference participants had never attended a business conference before. Continuing this important work is critical to engaging, serving and networking upcoming Iowa innovators. In FY 2010, the EntreFest! conference will take place once again - this time in central Iowa.

**Matching Funds:** Regional Business Center client fees and Federal funds (SBA)

**Results/Metrics:** In fiscal year 2009, MyEntreNet’s online community will grow by 25% to 4,000 engaged Iowa small business owners. At least 500 small business owners will attend a regional EntreBash! in Iowa and 400 will go on to attend one or more events supported by a service provider partner who participates in the MyEntreNet master calendar. Those served through this systems approach will generate 125 new or expanded businesses and create 300 new full time jobs. 250 entrepreneurs representing 50 Iowa counties will attend the 3<sup>rd</sup> annual EntreFest! statewide conference for small business in March of 2010.

**Project 3: Market Research ♦ \$90,000**

In the past year UNI Strategic Marketing Services (SMS) has seen a substantial increase in the number of individuals exploring the possibility of starting a business. Additionally, economic

conditions and technological advancements are forcing more existing businesses, communities, and business-related organizations to rethink how their operations. SMS offers these organizations greater “market intelligence” by gathering and analyzing market data, essentially helping them make the best decisions possible. Lack of accurate, unbiased information about the market conditions can lead to poor decisions, business failure and economic decline. GIVF funding in support of market research projects helps to directly stimulate economic growth in the state by supporting the start-up, expansion and reorganization of both new and existing businesses.

Quality market intelligence significantly increases the opportunity for success. SMS will use and leverage GIVF support in six primary areas:

**Area 1: Market research projects for established Iowa companies**

This area of activity will receive priority for funding. Market research project costs will be split between the client and GIVF investment, with maximum GIVF support of \$10,000 per project. The logic behind this approach:

- Funding to support market research projects is extremely limited and must be leveraged, and
- Established businesses should be willing to pay at least one-half of the project cost in order to be fully committed towards implementing the results.

Priority will be given to businesses in the state’s target industry clusters.

**Area 2: Market research projects for Iowa associations and local governments**

This area of activity will be devoted to communities/organizations seeking to use market research to help grow the economic base of their community or the state. Potential projects could include: 1) a state association might seek information to grow its membership or provide services that would better Iowa’s economy; 2) a community may seek to become a regional center for specialized medical services by attracting medical specialists; 3) a community may seek to capitalize on its growing senior population to maintain or stimulate the local economy and support workforce development initiatives. GIVF support will be used to cover half the costs for projects in Area 2 with the client paying the remaining half.

**Area 3: Low-cost market research to support Economic Gardening**

"Economic gardening" is a concerted effort to grow jobs through entrepreneurial activity as opposed to recruiting them from outside the community. This movement has recently gained the attention of Iowa economic development groups, especially those representing small rural communities. To support this effort in Iowa, SMS will provide top-quality secondary market research services to entrepreneurs/small businesses across the state that would not otherwise have access to, or be able to afford such services. SMS will work in cooperation with existing economic development organizations and business service providers (i.e., Regional Business Centers, John Pappajohn Entrepreneurial Centers, community economic development organizations, chambers of commerce, etc.) to identify businesses that would benefit greatly from this assistance. SMS will use GIVF funds to pay down half the cost of these services for small, under-financed businesses

with the client paying the remaining half. A maximum of five businesses/individuals will be eligible for this funding.

**Area 4: Market research consultations, plans, and assessments**

SMS will consult with Iowa businesses, entrepreneurs, statewide associations and local governments to assess their market research needs. Where appropriate, market research plans will be developed. In some cases, the client may wish to undertake some or all of the research activities on their own, utilizing the market research plan as a guide.

**Area 5: Assistance to UNI's technology transfer program**

The UNI Research Foundation (UNIRF) will support 50% of Phase One research and GIVF will support 50%. Phase One research provides initial market screening and identifies potential competitors.

**Area 6: Marketing and education**

Many Iowa businesses, city governments and organizations are not familiar with market research, i.e., what it is, the potential benefits, and how it can be effectively used to grow their business. As a result, this valuable tool is underutilized and businesses fail to grow to their full potential. A small portion of GIVF dollars will be used to develop and implement an education / marketing and public relations effort in order to help fill the knowledge gaps that exist concerning market research. These efforts will include articles distributed to statewide media, case studies of market research projects, newsletter contributions to Iowa businesses and statewide associations, and a postcard mailing campaign.

**Budget & Metrics**

***Areas 1 & 2*                      *\$60,000***

**Metrics:** SMS will complete 6-10 market research projects as described in Areas 1 & 3. The maximum allowed for any one project is limited to \$10,000. Some projects will not meet this maximum and dollars will be allocated on a first-come, first-served basis until expended. Measurements of success will be based on new/increased sales, new sales leads, new product introductions, product modifications, customer satisfaction measurements, new jobs created, workforce development, physical plant expansions, new market penetration, market expansion, job retention, and focused marketing/operations initiatives.

***Areas 3, 4 & 5*                      *\$25,000***

**Metrics:** 25 consultations, assessments, and market research plans, economic gardening projects or secondary research projects will be conducted.

***Area 6*                                      *\$5,000***

**Metrics:** Development and implementation of a public relations/marketing campaign. Participate in at least eight public relations/marketing activities across the state to include a direct mail campaign of postcards and promotional letters.

## **Project 4: Regional Development ♦ \$117,000**

With the shared purpose of expanding and stimulating economic growth across the state of Iowa, the Institute for Decision Making (IDM) continues to implement regional development assistance programs that build capacity both regionally and locally to sustain Iowa's regional economies over the long term.

Specific priorities for FY 2010:

### **Area 1: Sustainability of Regional Work and Strengthening the Collaborating Member Groups:**

During the maturing process of collaborative regional efforts, many of Iowa's organized economic regional groups continue to benefit from technical and other assistance in sustaining themselves as active regions. Toward this shared sustaining goal, IDM staff will continue to act as a quasi-staff member to one region (Off-Shore Iowa), and to continue assisting other regions by providing technical assistance to strengthen their members. IDM will assist new regions based upon demand.

### **Area 2: Regional metrics pilot project:**

In FY 2009 IDM outlined metrics for regions. These metrics are available for pilot testing and for use in assisting IDM's Regional Partners as needed. In FY 2010, IDM plans to work with the Iowa Department of Economic Development to train regions how to effectively collect data and assess regional outcomes or progress.

### **Area 3: Social Media as Potential Marketing Tools:**

IDM will work to assist regional marketing groups in integrating the use of social media into their marketing strategy. These tools can be used to build awareness of the regional group, attract potential members of the workforce and by driving users to local and regional websites. IDM will provide assistance to regions wishing to employ social media technology by helping to develop a sound plan for this type of marketing as well as educating regional members on how and why these technologies are utilized.

### **Area 4: Economic Adjustments and Shifts to Economic Base:**

During FY 2009 IDM has made significant progress researching and documenting practical community workforce processes that assist regions (and their individual communities) in averting or proactively responding when a layoff or closing occurs. For FY 2010 IDM will continue the research and documentation leading to the content of a useful on-line tool and corresponding print manual. IDM will formalize training delivery partnerships with Iowa Workforce Development (IWD) for workshops with local developers and anticipates assisting IWD with pilot testing (applying and adapting) the workforce aversion/response processes. Further, IDM expects to develop a matching on-line tool that will aid in marketing the region and targeting based on the laid-off and existing workforce. IDM expects to assist regions in using this resource based on need and opportunity.

**Area 5: Regional Workforce Assessments - Skillsheds:**

IDM proposes to determine the implementation follow-through rate for regions after initial RIG (Rural Innovation Grant) money expires. One key area with potential for economic development is skillsheds. A skillshed is designed to provide economic developers, educators, and policy-makers with a thorough understanding of the labor skills and knowledge clusters within their region’s laborshed and the steps necessary to adapt these labor clusters for occupations within knowledge-based industries. Iowa Workforce Development (IWD) and IDM have been piloting a skillshed analysis during the current fiscal year. This skillshed analysis evolved from previous research on laborshed analysis and workforce needs analysis completed by IDM and IWD. The pilot skillshed analysis utilizes data from a region’s laborshed survey and workforce needs survey to identify labor skill gaps within a region in order to meet employer needs. IDM will continue to assist IWD in evaluating this initial pilot skillshed analysis and revise the skillshed methodology for future studies of other regions in Iowa.

**Matching Funds:** Program income, workforce development grants and Heartland EDC.

**Results/Metrics:** IDM will solicit and report testimonials, and track progress recorded through regional metrics, increase in marketing leads and delivery of training related to layoff aversions and economic adjustments, based upon reports from local developers. IDM will document progress in Areas 1 – 5 in this proposal.

**Project 5: National Ag-Based Lubricants (NABL) Center - \$180,000**

The University of Northern Iowa’s National Ag-Based Lubricants (NABL) Center is a well-established and nationally-recognized research facility. NABL’s 20,000 square foot facility houses one of the most comprehensive biolubricant testing labs in the United States, offering over 100 specific product testing methodologies per ASTM, AOCS, or other credible specifications, to clients and research partners. In addition, NABL offers biodiesel testing, sample composition analysis, and a full spectrum of custom research and development capabilities. As one of the best-equipped biolubricant facilities in the US, the NABL Center has brought over \$5M in federally-funded equipment to UNI.

In FY2010, the NABL Center will continue existing efforts in support of the State’s growing biobased products industries, while also expanding on successful initiatives through new research activities and product development work targeting some of the most difficult applications known for vegetable oils. The expected outcome of new research is to find technologically-feasible methods of improving vegetable oil performance so that it can be utilized in applications that are currently restricted to petroleum or synthetic oils.

**Area 1: Support Iowa’s Biobased Products Industry:**

NABL will continue to participate in round-robins, ASTM Laboratory Crosschecks, and other proficiency testing programs as needed to ascertain the laboratory’s accuracy, and contribute to improved test standardization for biobased products. Involvement and participation in industry organizations such as ASTM (American Society for Testing and

Materials), STLE (Society of Tribologists and Lubrication Engineers), NLGI (National Lubricating Greases Institute), SAE (Society of Automotive Engineers), and AOCS (American Oil Chemists Society) is on-going and will continue to ensure that biobased products are tested and evaluated based on standards that are compatible with vegetable oils. This will help to insure that Iowa's biobased products meet necessary performance certifications before being released into the marketplace. NABL will also create new growth opportunities for Iowa's biolubricant industry. NABL scientists have partnered with reputable research centers in Canada and other countries for innovative crop oil-based lubricant development to expand the international market for biobased lubricants.

**Area 2: Fundamental Research of Vegetable Oil Based Products:**

This research activity targets new methods of improving the inherent characteristics and fundamental properties of vegetable oils. With 15 years of biobased lubricants research, NABL has dealt extensively with polymerization of soybean oil and common oil additives. NABL's efforts will be focused on properties that can cause serious problems for this expanding market, including lack of oxidation stability and poor cold temperature flowability. The Center's experience in overcoming these issues in soy-based lubricants provides the foundation for NABL investigation of these issues with other crop oil-based lubricants, and non-lubricant products.

**Area 3: Investigate the Stability and Cold Temperature Properties of Vegetable-Based Fuel Additives:**

This research area aims to improve the oxidative stability and cold temperature properties of vegetable oils for future use in replacing petroleum fuel lubricity additives with vegetable-based fuel additives. NABL will investigate the oxidation stability, shelf-life and storage stability, improvements in cold temperature properties of these vegetable oils and derivatives, as well as the addition of small quantities of vegetable oils and derivatives to engine crankcase oil as an environmentally preferable, renewable lubricity agent.

**Area 4: Research the Potential Use of Vegetable Oils as Engine Oil Additives:**

This research activity targets new techniques using vegetable oils and vegetable oil derivatives as engine lubricants and lubricity additives. NABL's efforts focus on properties that can cause serious problems for this expanding market, including lack of oxidation stability and poor cold temperature flowability. NABL's experience in overcoming these same issues in soy-lubricants provides the foundation for NABL investigation of these issues with crop oil-based fuel additives.

**Matching Funds:** Federal funding from US Department of Energy, and fees from testing.

**Results/Metrics:** NABL will provide fee-based testing services to at least 15 biofuels and/or biolubricant industry clients during FY09-10. NABL will complete at least three ASTM Crosscheck programs. NABL will participate in at least two scientific or industry organization events during 2009-10. NABL will formulate at least 2 different engine oils, using biobased base oils. NABL laboratories will complete at least 100 hours of diesel engine testing, operating a diesel engine lubricated by biobased crankcase lubricants.