SCHOLAR Magazine











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Foreword

Every day, MSU researchers work to promote prosperity for the people of Michigan—making a positive impact on the state's economy, education, health, environment, and arts. They work side by side with small businesses, corporations, hospitals, schools, and communities in every part of the state to make life better.

Now more than ever, these scholars are thinking about innovative ways to apply their discoveries to real-life problems. In partnership with communities, they are using their creativity to make connections between "pure" research and practical uses for it.

Behind the scenes at MSU is a powerful infrastructure to support this work. Strategies that the University has employed to coordinate and strengthen the efforts of individual faculty around regional economic development include:

- Incubating new businesses and assisting established ones
- Transferring technologies and inventions to the marketplace
- **Building inter-university collaborations**
- Strengthening leadership for sustainable economies

Another primary strategy has been to focus on what's working and more fully utilize existing assets in sectors that are already strong building blocks for a new economy in Michigan:

- Agriculture and agribusiness ("Michigan's first green industry")
- Arts and cultural entrepreneurship
- Bioeconomy/energy alternatives
- Community-based health care, medical education, and research
- Community economic development
- Knowledge economy

We know that evidence-based practice works, as many case studies have shown.

By working in a regional context, engaging local leadership, building on existing assets, paying attention to inclusiveness and sustainability, basing plans on solid research, and approaching change with an entrepreneurial spirit, communities across America and around the world have successfully addressed their economic challenges.

This issue of *The Engaged Scholar Magazine* is a special edition focusing on economic development, drawing together a variety of stories from across the university about the ways in which MSU is working to improve the economic well-being of the state and its citizens.

Linda Chapel Jackson Editor

SOURCES: Anderson, L., Clogston, F., Erekat, D., Garmise, S., Girdwood, C., Mulcaire, C., & Thorstensen, L. (2010, March). Creating quality jobs: Transforming the economic development landscape. Washington, DC: International Economic Development Council. Retrieved from http://www.iedconline.org/downloads/

> National Association of Realtors. (2005, February). Economic development case studies. Chicago, IL: Author. Retrieved from http://www.envirotools.msu.edu/redevelopment/NARcasestudies.pdf

Swinburn, G., & Murphy, F. (2005). Local economic development strategic planning and practice casebook. Washington, DC: The World Bank. Retrieved from http://www.worldbank.org/reference/ (search Documents & Reports for title)

A Commitment to Partnerships for a Stronger Michigan



Equipping citizens to achieve prosperity has been part of Michigan State University's portfolio since our establishment in 1855... Today, Michigan State is on the ground in every county in the state, making us uniquely

equipped to partner in the community development and regional economic development initiatives that will be so vital to our future...

We are hard at work applying our vast capabilities to attack the toughest problems in partnership with communities across Michigan...With our University Research Corridor partners, the University of Michigan and Wayne State University, we constitute a formidable innovation cluster positioning Michigan and its citizens to compete successfully in the global knowledge economy.

- Lou Anna K. Simon

SOURCE: Simon, L.A.K. (2011, January 20). A commitment to partnership for a stronger Michigan. From the President's desk. East Lansing: Michigan State University. Retrieved from http:// president.msu.edu/from-the-presidentsdesk/2011/commitment-partnershipstronger-michigan.html

MSU INFRASTRUCTURE TO SUPPORT ECONOMIC DEVELOPME

Innovating and Incubating: MSU Business-CONNECT

SU Business-CONNECT, located in East Lansing, Michigan, was established to assist businesses by directing and linking them to the right MSU resources. Charles A. Hasemann, executive director of MSU Business-CONNECT, leads a team of professionals ready to provide corporations with knowledge, assistance, and resources tailored to their needs. The team: facilitates connections with MSU's research, equipment and facilities, and international resources; supports entrepreneurs; facilitates contractual and other business agreements between MSU and partner organizations; and supports regional economic development efforts. For example:

- Companies' research and development teams can work with MSU faculty researchers to develop new ideas or to refine or test innovations.
- MSU faculty experts can offer business-specialized help including: business strategy, leadership, and change management; marketing and new product development; financial management and control; supply chain management; business tools and techniques; labor and industrial relations; industrial and organizational psychology; and information technology management.
- MSU experts can analyze and help shape economic development strategies and provide assistance to government/business-related agencies and initiatives (e.g., Michigan Economic Development Corporation [MEDC]).
- MSU faculty and staff can provide business-related articles, available from the Business-CONNECT website.
- MSU Libraries and its business librarians can provide resources such as the Entrepreneurship & Small Business Resources Guide: http://libguides.lib.msu.edu/entrepreneur.



MSU Business-CONNECT staff

As Hasemann noted in 2010, "Our landgrant heritage means that we constantly ask how we can translate our discoveries into tangible outcomes for our region and the world...MSU Business-CONNECT is a front door for entrepreneurs and business leaders. We can put them in touch with university experts, scientific equipment and facilities, draw upon international connections, and navigate the vast knowledge base that extends across our faculty and staff, to our libraries, collections, and source materials. MSU is a big place, but we can make it a very personal experience for those working with us."

Business-CONNECT is now handling all of MSU's corporate-sponsored research contracts, which average more than \$10 million annually. Clients include General Electric, Neogen, INgage, and Ford. In addition, many new potential projects are underway with West Michigan's economic development organization, The Right Place, Inc., a nonprofit economic development organization created in 1985 to advance the West Michigan economy.

Bill Foley leads advanced production initiatives for The Right Place and coordinates the collaboration between MSU Business-CONNECT and the West Michigan Manufacturers' Council. "Our participants operate small to mid-sized manufacturing companies that are dedicated to keeping the region vibrant, competitive, and forward-moving," said

Foley. "We performed a needs analysis that documented what manufacturers needed and turned that over to Dr. Hasemann. He pulled together a mixture of MSU resources, including faculty, students, tech transfer, and intellectual property information. There are some interesting technologies with market potential."

Foley added, "Working with Dr. Hasemann means we have confidence that we can talk to the right people, and receive quicker feedback about opportunities or challenges for collaborations with MSU. Time is valuable, and our manufacturing decision makers want dynamic, forward-moving relationships, because their economic survival depends on it."

For more information on Business-CONNECT and on how it can assist Michigan corporations, visit http://www.businessconnect.msu.edu/or contact bconnect@msu.edu.

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SOURCES: Hills, C. (2010, February). MSU Business-CONNECT has the "university door open" for entrepreneurs, research partnerships, and economic development. The Engaged Scholar E-newsletter, 2(3). Retrieved from http://engagedscholar.msu.edu/enewsletter/volume2/issue3/businessconnect.aspx

MSU Business-CONNECT website: http://www.businessconnect.msu.edu/

Entrepreneurship Grant Funds Noninvasive Baby Reflux Monitor

A cid reflux is a painful nuisance for most who suffer symptoms such as heartburn, but it can also lead to pneumonia and worse for infants. Just detecting it—often by inserting a tube through the nose into the esophagus—can be traumatic.

But Ira Gewolb, chief of the Division of Neonatology in the MSU College of Human Medicine, is testing a far less invasive diagnostic method he developed for babies, supported by a university technology commercialization partnership.

Preemies and their parents are accustomed to invasive procedures, Gewolb said, "but if you try to put a tube down a one-and-a-half-year-old's nose for 24 hours, it's not a pretty picture." X-rays often are used instead, he added, but aren't always reliable.

Gewolb and laboratory associate Frank Vice are refining a prototype for a neonatal gastroesophageal reflux monitor based on a common engineering instrument, the accelerometer. Taped to an infant's chest, it picks up low-frequency sound as reflux backs up from the stomach into the esophagus.

"Federal funding of research enables the development of basic science concepts, but there is often a gap in funding as the science becomes more applied or product oriented."

- Charles A. Hasemann

More than half of newborns suffer from acid reflux, ranging in severity "from the happy spitters to the scrawny screamers" who resist feeding, Gewolb said, but the vast majority outgrow it after they start to sit up. Ex-preemies are especially susceptible, however, and often go home with medications that themselves have side effects. He hopes the monitor, which is currently being tested at Sparrow Hospital's neonatology unit, ultimately can be approved

for use in preemies as well as older infants and even certain adults.

Gewolb is one of seven MSU faculty inventors who won technology transfer grants this year from the Michigan Initiative for Innovation & Entrepreneurship (MIIE) and a predecessor program.

The grants are meant to help bridge the difficult financial chasm separating campus lab developments from their commercialization. MIIE includes Michigan's 15 state universities with funding from the C.S. Mott Foundation, the New Economy Initiative for Southeast Michigan, and the Dow Foundation.

"Federal funding of research enables the development of basic science concepts, but there is often a gap in funding as the science becomes more applied or product oriented," said Charles A. Hasemann, executive director of MSU Business-CONNECT and interim technology transfer office chief. "These grant programs fill that gap and help move the technology from the nascent stage to proof of concept and on to prototype. The grants are invaluable in helping to move MSU's technologies toward commercialization."

Grantees work with the university's technology transfer office, MSU Technologies, to patent and then license their innovations to companies or investors that can bring them to market. The reflux monitor has been under development for about a decade, Gewolb said, resulting from his work applying accelerometers to infant feeding and swallowing problems. ❖



Dr. Ira Gewolb has used an MIIE grant to develop a less invasive method of detecting reflux in babies.

CONTACT: Ira Gewolb

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SOURCE: Noninvasive baby reflux monitor among funded MSU innovations. (2011, May 19). East Lansing: MSU University Relations. Retrieved from http://news.msu.edu/story/9395/

Transferring Technologies and Inventions to the Marketplace: MSU Technologies

ou might think of an intellectual property office as an unlikely candidate for stardom.

Think again.

Shortly after MSU's intellectual property office moved into new East Lansing SmartZone quarters and renamed itself MSU Technologies (MSUT), the magazine Entrepreneur published an article, "The Union of Town and Gown: Best College Towns to Start a Business." Noting that "more universities and cities are linking up in creative entrepreneurial initiatives," Jason Daley wrote:

In economically hard-hit Michigan, there's at least one thing going right: Michigan State University is pulling no punches in an effort to create and incubate new local business ventures...The Lansing Area Economic Partnership is working with MSUbred startups to find resources to keep them in the community. The Prima Civitas Foundation, partly funded by MSU, is working to bring biotech and alternative energy projects to central Michigan. MSU Technologies is a tech transfer office on steroids andalong with MSU Business Connect, which links businesses with local resources—is the anchor tenant in East Lansing's new Technology Innovation Center...This is a community doing everything possible to jumpstart a new entrepreneurial vision for itself, and the university is its key power source.

MSUT's move into East Lansing resulted from a partnership with the City of East Lansing and the East Lansing Downtown Development Authority. The new location was intended to improve service to faculty, encourage closer interaction with companies and investors, and accommodate future growth of the office. MSU's priorities dovetailed nicely with those of East Lansing by promoting a diversified and growing tax base and development of the knowledge-based regional economy.



Evangelyn Alocilja (on right) with students in the Biosystems Engineering program

Under the leadership of interim executive director Charles A. Hasemann, the MSUT office:

- Manages the university's extensive intellectual property portfolio
- Evaluates the commercial potential of each invention
- Works with MSU researchers on the invention disclosure and technology transfer process
- Protects inventions by filing patent applications
- Markets and licenses commercially viable technologies to large corporations and small-tomid-sized businesses
- Assists with launching start-up companies based around MSU technologies
- Facilitates confidential disclosure and material transfer agreements

In addition to the tailored services provided by MSUT's professional staff, the office maintains a wealth of information about copyrights, patents, licensing, and the commercialization/ tech transfer process for authors, researchers, and industry partners: http://www.technologies.msu.edu. There is also a database of technologies available for licensing.

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SOURCES: Daley, J. (2009, October). The union of town and gown: Best college towns to start a business. Entrepreneur. Retrieved from entrepreneur.com/magazine/ entrepreneur/2009/october/203418.html

> MSU Technologies website: http://www.technologies.msu.edu/

"MSU Technologies is a tech transfer office on steroids."

- Jason Daley, Entrepreneur

New Position Aims to Commercialize FRIB, Other MSU Technologies

ay DeVito, who earned a doctorate in experimental nuclear physics from Michigan State University, has returned to his alma mater as a technology manager for MSU Technologies. DeVito will pursue commercial opportunities for the discoveries that emerge from the soon-to-be-built Facility for Rare Isotope Beams (FRIB), as well as other MSU facilities.



While DeVito will work with a number of MSU units, including the National Superconducting Cyclotron

Laboratory (NSCL) and the colleges of Engineering and Natural Resources, he will devote the majority of his time to FRIB.

"FRIB is taking everything to a new level," DeVito said. "Even though a lot of the technology already exists, we're putting it into a higher level of performance. We're only just starting to scratch the surface."

"The FRIB is one of the top economic development priorities for the Greater Lansing region," said Tim Daman, president and CEO of the Lansing Regional Chamber of Commerce. "We look forward to working with Ray and Michigan State University in the commercialization and development of FRIB technologies."

Konrad Gelbke, director of the NSCL, said "history has shown that bold investments into science and technology have enriched our lives and paid handsome economic dividends in the long term.

MSU Technologies can play an important role in building bridges between the scientists and engineers who carry out innovative fundamental research and the entrepreneurs who will take some of these results and develop new products that are beneficial to society."

Gelbke added that "FRIB's potential for creating jobs via spinoffs will likely exceed the economic impact that can be predicted from its fairly well-defined funding and staffing needs."

FRIB is a more than \$600 million project funded by the Department of Energy and is expected to pump nearly \$1 billion in economic development into the region. The facility will produce beams of rare isotopes that will help scientists better understand the origin of the elements and the evolution of the cosmos.

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SOURCE: New position aims to commercialize FRIB, other MSU technologies. (2011, August 29). East Lansing: MSU University Relations. Retrieved from http://news.msu.edu/story/9718



Konrad Gelbke at the National Superconducting Cyclotron Laboratory

"MSU Technologies can play an important role in building bridges between the scientists and engineers who carry out innovative fundamental research and the entrepreneurs who will take some of these results and develop new products that are beneficial to society."

- Konrad Gelbke

Building Inter-University Collaborations: The University Research Corridor



Former WSU President Jay Noren, U-M President Mary Sue Coleman, and MSU President Lou Anna K. Simon share an informal conversation with the media at the URC headquarters in Lansing.

ichigan's University Research Corridor (URC), an alliance of Michigan State University, the University of Michigan, and Wayne State University, has a vision to help transform Michigan's economy. The three universities taken together represent an intellectual and economic engine for the state, generating a net economic impact greater than \$14.8 billion.

The URC is among the top R&D clusters in the nation (compared with regions such as Route 128 in Boston, Research Triangle in North Carolina, and Silicon Valley in Northern California) for producing patents, new business, and graduates with the high-tech degrees needed in growing new fields. In addition, the three universities serve as a magnet in helping to attract and retain businesses in Michigan.

A series of URC benchmarking reports, based on studies by the Anderson Economic Group, show that the URC partners have improved in several key measures since the first study in 2007.

For example, the latest study shows that the URC's net economic impact on the state has grown from \$12.9 billion to \$14.8 billion since 2006. "Even as state support has dropped, Michigan's research universities remain the number one cluster in the U.S. in terms of enrollment, and number three in terms of high-tech degrees. These universities provide a net benefit to the state that is 16 times the cost to taxpayers. This gives Michigan the talented workforce we need for the jobs of tomorrow," said Patrick Anderson, founder and principal of Anderson Economic Group.

The fourth annual Empowering Michigan report also demonstrates the URC's growth in areas such as research expenditures and technology transfer. It compares the universities' collective assets with other "knowledge regions" featuring research universities in close proximity.

The URC is among the top R&D clusters in the nation for producing patents, new business, and graduates with the high-tech degrees needed in growing new fields.

URC Support for IT Sector in Michigan

Of nearly 150 start-ups the URC partners have helped create since 2001, about 40 percent have had an information and/or communication technology component. IT employs about 3.5 percent of the state's workforce, about 136,000 workers, and these employees earn about \$20,000 per year more than other workers in the private sector.

SOURCE: URC report: Information technology sector shows potential for Michigan. (2011, June 2). Lansing, MI: University Research Corridor. Retrieved from http://urcmich.org/news/110602it.html

"The URC has been a bright spot in the state's economic picture, even in the teeth of the recession. Michigan has the second fastest research and development growth rate among competitive innovation clusters," said URC executive director Jeff Mason. "Just as importantly, we're getting stronger relative to the competition, which puts us in a good position to help propel the state's economic growth in the future."

The report has tracked a significant increase in patents, licenses, and start-up companies over the past four years, evidence of new initiatives the URC universities have undertaken to better support business growth. For more information visit http://urcmich.org/.

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SOURCE: University Research Corridor. (2010). Annual Report 2010: Empowering Michigan. Lansing, MI: Author. Retrieved from http://urcmich.org/commentary/2011annualreport.pdf

MSU Chemists Research, Develop, and Deploy Green Technology

ohn and Karen Frost wear many hats. They are chemists as well as entrepreneurs, employers, and innovative leaders in a field that has captured the mood of investors in the United States, and perhaps the world, who are looking for alternatives to petroleum-based products.

In 2005 the Frosts founded the Draths Corporation, a company that combines chemistry, biology, and genetic engineering to develop chemical manufacturing processes that utilize renewable resources as feedstocks in place of petroleum-derived feedstocks. John Frost is a University Distinguished Professor in the MSU Department of Chemistry. Karen Frost left her assistant professor

Draths Corporation built a new \$20 million pilot manufacturing plant in mid-Michigan... and estimates the expansion will create 200 new direct jobs and an additional 442 indirectly.

position in the department to focus her efforts full time at Draths. MSU Technologies licensed the technologies developed at MSU by the Frosts to Draths Corporation.

The Frosts' current work with "green technology" involves preparing identical starter chemicals from sugar instead of petroleum. According to Karen Frost, "Other renewable companies have

sought to use sugar to make new chemicals but many of those have less desirable physical properties." One Draths target is a starter chemical for nylon manufacture, which would supply consumer goods makers with cost-effective processes that create compounds without petroleum.

"Our challenge is to produce a high enough yield that can be useful to larger corporations for product development. After several discussions, it was clear that we needed to expand our business model and take the next steps to scale up the chemical intermediaries for commercial technology use," said John Frost. "We conduct research, development, and deployment."

In August 2009, the Draths Corporation received a state tax credit through the Michigan Economic Growth Authority (MEGA) to help the company expand by building a new \$20 million pilot manufacturing plant in mid-Michigan, rather than at a competing site in Minnesota. The tax credit was valued at \$5.2 million over 10 years, and it was estimated that the expansion would create 200 new jobs directly, with an additional 442 indirectly.



MSU chemist and entrepreneur John Frost in his lab at Draths Corp. in Okemos



Draths Corporation develops chemical manufacturing processes that utilize renewable resources as feedstocks.

CONTACT: John W. Frost

University Distinguished Professor, Chemistry College of Natural Science (517) 355-9715/x115 frostj@msu.edu

SOURCE: Hills, C. (2009, October), MSU chemists create renewable resources technology. The Engaged Scholar E-Newsletter, 2(1). Retrieved from http:// engagedscholar.msu.edu/enewsletter/volume2/ issue1/frost.aspx

Transforming Transportation Research Corridor Consortium

ichigan State University has a lead role in providing research-based insights and innovative solutions for an industry that is both significant in Michigan's history and vital to its future.

The University Research Corridor's partner institutions—MSU, the University of Michigan, and Wayne State University—established the Transforming Transportation Research Corridor Consortium in 2010 to accelerate the implementation of innovative transportation systems at the intersection of technology, livability, labor and supply chain, economic and environmental sustainability, social equity, and public policy.

"The Consortium has emerged to fill a major gap in systematic research on transforming the future of transportation," said Hiram E. Fitzgerald, MSU associate provost for university outreach and engagement. "We are a catalyst for collaborative partnerships, anchored in scholarship, that include researchers, industry practitioners, and policymakers."

Leadership is provided by Fitzgerald, along with Susan Zielinski, managing director of Sustainable Mobility and Accessibility Research and Transformation (SMART) at the University of Michigan's Transportation Research Institute, and Allen Batteau, associate professor of anthropology at Wayne State University. MSU College of Social Science dean Marietta Baba has also been closely involved.

Transportation industries have supported generations of workers and characterized the core identity of many communities and regions, particularly in Michigan. As these industries, technologies, and cultures change, leaders from all sectors are searching for insights and strategies to address the profound contemporary changes experienced in Michigan, and their impacts on Michigan's future.



Poster display at Transforming Transportation conference, April 2011 in Detroit

"Michigan should have a pivotal role in that transformation," said Zielinski. "There is new opportunity on the horizon to grow an industry and an economy that will supply the next generation of connected and sustainable transportation systems for an urbanizing and increasingly complex world."

In April 2011 the Consortium held an inaugural summit

meeting, "Transforming Transportation: Economies and Communities," in Detroit. More than 200 attendees from seven countries, including business and labor leaders, policymakers, entrepreneurs, and research scholars, gathered during plenary and working sessions to understand and advance transportation in Michigan, the surrounding region, and across the globe.

"As residents and workers in the city of Detroit, our faculty and students are on the front lines of the contemporary issues facing the transportation industry and facing our communities, and we have a shared interest in working together," said Batteau.



Tim Potter of MSU Bikes and Gus Gosselin of the physical plant with award designating MSU as a "bicycle friendly university" in 2011



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SOURCE: Hills, C. (2011,

April). Transforming Transportation Research Corridor Consortium. The Engaged Scholar E-Newsletter, 3(4). Retrieved from http:// engagedscholar.msu.edu/ enewsletter/volume3/ issue4/ttrcc.aspx

"There is new opportunity... to grow an industry and an economy that will supply the next generation of connected, sustainable transportation."

– Susan Zielinski

Strengthening Leadership for Sustainable Economies: The Center for Community and Economic Development

hrough its applied research and outreach activities, MSU's Center for Community and Economic Development (CCED) has been mobilizing the university's resources and expertise to strengthen Michigan communities for 40 years. Through responsive engagement, strategic partnerships, and collaborative learning, CCED is dedicated to empowering communities to create sustainable prosperity and an equitable global knowledge economy.

CCED's director, Rex LaMore, said the work of the Center "takes place at the engagement interfacethe messy, unpredictable place where theory and practice meet in real-time about real-life problems. Its capacity to collaborate with communities in addressing their issues—by co-discovering new ways of addressing persistent problems, engaging in informed experiments, and assessing impactscreates a unique role for higher education to be fully engaged as a contributing partner in the creation of the 21st century Michigan."

LaMore believes "more and more that community and economic development work is striving to become a sustainable community and economic development paradigm. Nowhere is achieving some form of sustainability more challenging than in the context of the economic decline that we are experiencing in Michigan. Ironically, at the same time there is no greater opportunity to create a socially just and economically sustainable society than in Michigan, where a fundamental transformation is widely accepted as needed."

Michigan State University's Center for Community and Economic Development, through a rigorous scholarship of engagement, is fully committed to advancing new concepts, building the competence, and facilitating the connections that will lead to a more just and sustainable Michigan. For more information visit http://www.ced.msu.edu/.

CONTACT: Rex LaMore

Director MSU Center for Community and Economic Development (517) 353-9555 ced@msu.edu

SOURCE: LaMore, R. (2010, Fall). View from the edge: University/ community partnerships. Community News & Views, 20(1). Retrieved from http://www.ced.msu.edu/cnv/Fall 2010 Newsletter.pdf

CCED-Led Project Aims to Develop Export Trade for Michigan Companies

Economic development experts from MSU's Center for Community and Economic Development (CCED) will lead a federally funded effort to help businesses increase exports in two of Michigan's most chronically depressed regions.

The CCED and regional partners will help small and mid-sized companies in the eastern Upper Peninsula and Saginaw regions to find new markets for their products and services. The initiative is funded by a \$179,654 grant from the U.S. Economic Development Administration.

"Exporting strategies are a critical component of knowledgebased regional economic development," said CCED director Rex LaMore. "This project builds on our previous work to develop regional innovative development strategies."

MSU will collaborate with two regional partners—the East Michigan Council of Governments, which covers the Saginaw region, and the Eastern Upper Peninsula Regional Planning and Development Commission—to identify and implement opportunities to increase exporting and importing opportunities between Michigan and neighboring Ontario and other Canadian provinces.

"To be successful in the global economy, small and medium companies must take advantage of lucrative export markets," said J. D. Snyder, project director for the CCED. "In working with our regional partners, we will help companies in their regions to start or expand their exporting."

Project investigators will survey companies in the two regions to identify those interested in entry



CCED's J. D. Snyder leads a project that is developing export trade capabilities in Michigan's most chronically depressed regions.

or expansion into the export market and their knowledge of potential exporting opportunities. The project team will then conduct five workshops during the next 18 months to help Michigan companies enter or expand exporting markets.

The project is designed to support the National Export Initiative (NEI) goal to double U.S. exports by the end of 2014 in support of several million jobs. The NEI enhances the government's trade promotion efforts, increases credit to businesses looking to export, and continues to improve efforts to remove trade barriers to U.S. companies competing in foreign markets.

CONTACT: J. D. Snyder

Project Director MSU Center for Community and Economic Development (517) 353-9555 snyderj6@msu.edu

SOURCE: MSU-led project aims to expand trade for Michigan companies. (2011, July 13). East Lansing: MSU University Relations. Retrieved from http://news.msu.edu/story/9566/

MSU Product Center Assists Michigan's Agriculture and Food Industries





MSU Researcher Dale Mutch

he MSU Product Center is improving economic opportunities in Michigan's agriculture and food industries by helping clients develop and commercialize high value, consumerresponsive products and businesses. The Product Center employs a multi-phase process that utilizes the following resources at various stages of a company's growth.

A statewide network of innovation counselors is available to guide entrepreneurs from the idea phase to start-up and beyond. These professionals are trained to help assess new products and businesses, provide guidance in the developmental phase, identify markets, and otherwise help entrepreneurs make informed decisions.

The Product Center's coordinating Venture Development unit pinpoints the most effective resources available to entrepreneurs at MSU or through state and federal agencies and private companies to help move existing projects forward.

Product Center analysts publish a variety of fact sheets and market reports to provide insights into where potentially successful product development ideas are found in today's marketplace. They are especially useful to entrepreneurs seeking high-value, differentiated, or niche products.

The Michigan branch of MarketMaker, a multi-state, interactive, online mapping system, is maintained by the Product

Center. It can be used to bring together agricultural product businesses and markets across Michigan, providing an important link between producers and consumers. Visit http://mimarketmaker. msu.edu for information on local agribusinesses and food products.

Recently added to the Product Center portfolio is the High Impact Venture Action Team (HI-VAT). HI-VAT is a partnership of the MSU Product Center in cooperation with MSU Extension, the Michigan Department of Agriculture and Rural Development, the Michigan Economic Development Corporation, and the Michigan office of USDA Rural Development. Its purpose is to quickly respond to challenges faced by agribusiness firms in Michigan as they prepare to expand their job opportunities and economic impact. These challenges might include regulatory compliance, marketing, business planning, or financing.

Team members assist in projects that will provide at least \$1 million in new investments, \$2 million in additional sales, or 30 or more new or retained jobs. According to Tom Kalchik, associate director of the Product Center, the Team has already assisted one company with a project that meets these criteria and is currently working on three other projects.



On October 19, 2011, the Center will present its annual Making it in Michigan **Conference and Marketplace Trade** Show. This event offers practical, handson educational classes on launching or expanding a business and showcases over 130 vendors. For more information visit http://makingitinmichigan.msu.edu/.

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SOURCE: MSU Product Center website: http://www.aec.msu.edu/product/

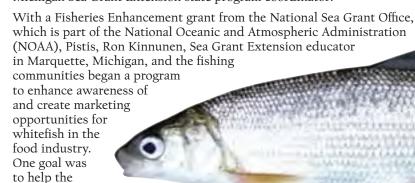
> Team members assist in projects that will provide at least \$1 million in new investments, \$2 million in additional sales, or 30 or more new or retained jobs.

Marketing Effort Helps Great Lakes Whitefish Make a Comeback

ishing for Great Lakes whitefish was one of the earliest business enterprises in Michigan. But despite tasting good and being nutritious, Great Lakes whitefish began showing up less often on restaurant menus and in shoppers' grocery carts. As a result, communities with fishing and fish processing industries—especially tribal communities and others in Michigan's Upper Peninsula—were seeing profits decline.

Michigan Sea Grant, which has long-standing contacts in coastal communities around the state, learned about the problem and launched a marketing program in collaboration with state and tribal commercial fisheries to help solve it. "We didn't want to lose this component of state culture and its economic and tourism potential," said Chuck Pistis, Michigan Sea Grant Extension state program coordinator.

"We didn't want to lose this component of state culture and its economic and tourism potential..."



fishing businesses establish stringent guidelines for the industry to assure a high-quality product and a speedy trip from lakes to market.

An early step linked the tribal and other fishing industry leaders with the MSU Product Center, where supply chain specialist Matt Birbeck helped them form a marketing cooperative called Legends of the Lakes. Working with a market research firm, the cooperative analyzed their industry and its potential market. "They capitalized on the local angle," Pistis recalled. Processing the fish close to home—where it's caught and where it's processed is noted on the package—helps assure freshness.

In addition, Pistis and Kinnunen worked with MSU food scientist Janice Harte to coordinate taste tests comparing fresh and quick-frozen Great Lakes whitefish to whitefish from inland Canadian lakes. "The Great Lakes fish came out ahead in all those sensory analyses, whether they were fresh or frozen," Pistis said.

"We talked to chefs and asked them for their favorite lake whitefish recipes," said Carol Swinehart, Sea Grant communications specialist. In addition to being featured in restaurants, including the Grand Hotel on Mackinac Island, the recipes appear on a Great Lakes Whitefish website. Swinehart also interviewed local fishing families and included their profiles on the website. The one-pound packages of Legends of the Lake whitefish sold in local grocery stores also feature a recipe from the fishing family who caught it. "That personal touch along with a recipe on a mealsize package made the product very appealing to consumers," she said.

Now the culinary arts program at Northern Michigan University is incorporating whitefish preparation into its curriculum, and restaurants throughout the Midwest are using Great Lakes whitefish for everything from fish fries to high-end cuisine.

CONTACT: Chuck Pistis

Coordinator, Michigan Sea Grant Extension State Program pistis@msu.edu

SOURCE: Michigan Sea Grant helps Great Lakes whitefish make a comeback. (2010, May 7). East Lansing: MSU Vice President for Research and Graduate Studies. Retrieved from http://research.msu.edu/ stories/michigan-sea-grant-helps-great-lakeswhitefish-make-comeback

Light of Day Organics Grows Business with Help from MSU Product Center

ngela Macke, of Light of Day Organics in Traverse City, Michigan, grows 240 different products on her farm that are used in blends for tea and tisanes, which are "teas" made from roots, bark, berries, dried fruits, herbs, flowers, and other sources.

Light of Day Organics also markets black, green, white, oolong, and chakra teas. All of these are imported except a portion of the white tea. "All our imported ingredients are Fair Trade certified," said Macke. "Since I use only 100% organic Fair Trade certified teas and ingredients in our recipes, I have a limited selection of leaf style offerings but the quality and taste is quite exceptional."

Macke utilizes her professional training in nursing, biology, health studies, and horticulture to teach others about the health and well-being that can be achieved through holistic health management, which includes incorporating the teas and products she grows and markets. Her farm products are both organic certified and biodynamic certified.

Macke started Light of Day Organics in 2004 with a three-and-a-half-acre patch of sun on her farm and 12 different tea blends. She now produces over 90 different teas on 25 acres. Her products are available online (http://lightofdayorganics.com/) as well as through 40 specialty food distributors nationwide.

Although Macke wishes she had found the Product Center earlier in her business development, she said that Matt Birbeck had provided general business counseling and help with her target demographics, and she also had done some work with Janice Harte (in the Department of Food Science and Human Nutrition) on nutritional labeling. "The Product Center is just a great resource for the people of Michigan," she said. "I plan to use its resources on new products and packaging."

Light of Day Organics was named the Michigan Small Business of the Year for 2008-2009 by the State of Michigan and Angela Macke was named Environmentalist of the Year for Business in 2007 by the Northern Michigan Environmental Action Council.



Angela Macke of Light of Day Organics



The MSU Product Center assisted with general business counseling, target demographics, and finding a connection in the Department of Food Science and Human Nutrition for nutrition labeling.



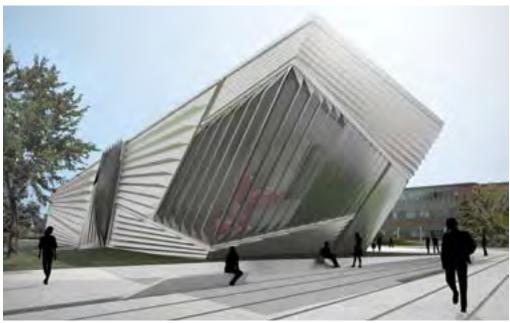
CONTACT: Tom Kalchik

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SOURCES: Kalchk, T. (2010, October). Another Product Center success story: Light of Day Organics, Angela Macke. Product Central: News and Advice from the MSU Product Center, pp. 8-9. Retrieved from http://productcenter.msu.edu/October%20 2010%20Product%20Center%20Newsletter.pdf

> Light of Day Organics website: http://lightofdayorganics.com

The Eli and Edythe Broad Art Museum at Michigan State University



When the Eli and Edythe Broad Art Museum is completed, it will feature more than 70 percent gallery space and room for large art works to be displayed. The primary focus of the museum will be contemporary art.

Karin A. Wurst, Dean of MSU's College of Arts and Letters, cites the critical thinking and analytical skills fostered by the arts. "The arts help prepare students to thrive in an economy that is increasingly based on the generation of creative content and the visually compelling presentation of that content," she said. "The particular strength of a university art museum is the firm foundation of research and scholarship on which it is built. The most exciting scholarship goes beyond enhancing our knowledge of objects and collections to foster visitors' ability to make connections

Michael Rush, who was named the museum's founding director in December 2010, is preparing for the spring 2012 opening by hiring staff, conceptualizing programs, and generating support for the museum, both locally and nationally. Rush comes to MSU from Brandeis, located near Boston, where he oversaw a significant collection of modern and contemporary art.

between the familiar and the unfamiliar."

The museum is located on Grand River Avenue near the Collingwood entrance to campus. The building will feature permanent collections, special exhibitions, modern and contemporary new media, photography, works on paper, and an education wing.

More information is available at http://broadmuseum.msu.edu. ❖





Breaking ground for the Eli and Edythe Broad Art Museum, March 16, 2010.



The more than 18,000 square feet of gallery space will include areas for special exhibitions, modern and contemporary art, new media, photography and works on paper.

CONTACT: Michael Rush

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SOURCES: Michigan State hires director of Eli and Edythe Broad Art Museum. (2010, December 10). East Lansing: MSU University Relations. Retrieved from http://news.msu.edu/story/8683/

MSU's Friends of Kresge "Make it a Million." (2009, September 22). East Lansing: MSU University Relations. Retrieved from http://news.msu.edu/story/6864/

Wurst, K. A. (n.d.) The special place of university art museums [open letter published on Broad Museum website]. Retrieved from http://broadmuseum.msu.edu/msu/artmuseums.pdf

J. Bandes. "The support from our donors shows that they understand the importance of enhancing mid-Michigan's cultural profile. Signature buildings like the Broad Museum can contribute significantly to economic and cultural tourism."

donations are evidence of the community's

he iconic Eli and Edythe Broad

Art Museum now taking shape

on the MSU campus is destined

to be a catalyst for cultural economic

development in our region. Designed by

world-renowned architect Zaha Hadid,

the transformative facility is anticipated

In 2007, when Eli and Edythe Broad

history, Mr. Broad talked about the

donated the largest cash gift in MSU's

significance of arts and culture in his life.

"A great university needs a great museum, since the arts stimulate learning and

creativity throughout the entire campus.

Speaking from personal experience, the

arts have played a transformative role in

my life, even though they were not the

center of my studies at MSU," he said.

embrace of the museum," said former

Kresge Art Museum director Susan

Numerous other donors have also

contributed to the project. "These

to bring international attention to the art

museum, MSU, and the State of Michigan.

MSU Cultural Engagement Council Represents Best of Campus Cultural Resources

he MSU Cultural Engagement Council brings together more than 20 units on campus and the Arts Council of Greater Lansing to showcase arts and culture at Michigan State University and to collaborate with researchers and partners on community initiatives. The Council works to increase the visibility of campus cultural resources and facilitate expanded cultural engagement across Michigan, nationally, and internationally.

Every year, MSU offers a wide array of informative and entertaining cultural events, including performances, exhibitions, lectures, programs, and conferences, which are available not only to students and local residents but also to TV and Internet viewers all over the world. Other resources include MSU's public gardens, museums and libraries, musical and theatrical venues, public art, public broadcasting, and historical sites.

In recent years, policy makers and economic developers have recognized that cultural development is an essential component in creating vibrant communities. A study conducted by researchers at MSU's Center for Community and Economic Development found that the funding of arts and crafts provides critical support to Michigan's economic transformation. The study found that artistic activities

"If Michigan is going to reinvent itself out of this economic crisis, we must attend to the role of arts and crafts as generators of innovation."

— Rex LaMore

are closely related to success of the scientists, engineers, and other innovators who create new companies and inventions that stimulate the economy.

In 2007-2008, MSU sponsored The Year of Arts and Culture, comprising activities that involved multiple disciplines, aligning with local economic development efforts, enriching student experiences, and engaging community residents. More recent collaborations between MSU, the Arts Council of Greater Lansing, the Greater Lansing Convention and Visitors

Bureau, and the Lansing State Journal have explored how arts and culture can be applied as a strategy for regional economic development.

As President Lou Anna K. Simon has said, "Michigan State University is at the center of energizing cultural entrepreneurship and development in Michigan's Capital Region and beyond." Learn more at artsandculture.msu.edu.

MSU Cultural Engagement Council Participating Units

- MSU Alumni Association
- University Archives & Historical Collections
- Department of Art, Art History, and Design
- College of Arts & Letters
- Breslin Student Events Center
- College of Music
- College of Communication Arts and Sciences
- International Studies and Programs
- Kresge Art Museum at MSU
- MSU Libraries
- MSU Museum
- MSU Press
- Residential College in Arts and Humanities
- Department of Theatre
- Wharton Center for Performing Arts
- WKAR-Public Broadcasting Services

In partnership with:

- Office for Inclusion and Intercultural Initiatives
- Office of the Provost
- University Outreach and Engagement
- Division of Student Affairs & Services
- Division of University Relations

Arts Council of Greater Lansing









CONTACT: C. Kurt Dewhurst

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MSU Cultural Engagement Council
Director, Arts and Cultural Initiatives,
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Curator of Folklife and Cultural Heritage,
Michigan State University Museum
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College of Arts and Letters
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dewhurs1@msu.edu

SOURCES: MSU Cultural Economy Research Team.
(2011, March 29). ArtSmarts among innovators in science, technology, engineering, and mathematics (STEM). East Lansing: MSU, Center for Community and Economic Development. Retrieved from http://www.ced.msu.edu/reports/ARTSMART%20Report-FINAL.pdf

Simon, L.A.K. (2007, September 10). MSU's Year of Arts and Culture. *From the President's Desk.* East Lansing: Michigan State University.

MSU Arts and Culture website: http://artsandculture.msu.edu/

ARTS AND CULTURAL ASSETS ARTS AND CULTURAL A





Great Lakes Folk Festival

The Great Lakes Folk Festival (GLFF) is a statewide multicultural education event that serves as a major economic development asset for the City of East Lansing and the mid-Michigan region. Celebrating and educating the people of Michigan, the event produces the state's largest living museum exhibit each August. Annual attendance is estimated at about 90,000 visitors, with a highly diverse multi-generational audience; more than 45 percent of the attendees are from beyond the mid-Michigan area.

The GLFF showcases the traditional cultural treasures of the nation's Upper Midwest. It is a unique fusion of arts fair, music festival, county fair, multi-ethnic festival, hands-on activity workshop, and celebration of cultural heritage. Cross-cultural understanding of our diverse society is encouraged through presentations by musicians, dancers, cooks, storytellers, and craftspeople whose traditions are rooted in their communities. The artists come from across America and around the world. August 2011 marked the 10th annual event in East Lansing.

Under the direction of the MSU Museum's Michigan Traditional Arts Program, a statewide partnership program with the Michigan Council for Arts and Cultural Affairs, the festival represents partnerships

of civic, business, education, and arts agencies. Collaborators include: the City of East Lansing; WKAR/Radio; MATRIX-The Center for Humane Arts, Letters and Social Sciences Online; the Ten Pound Fiddle; the Smithsonian Institution's Center for Folklife and Cultural Heritage; the Michigan Humanities Council; the Center for Great Lakes Culture at Michigan State University; and provincial and state folk arts programs of the Great Lakes Region.

Primary financial support for the festival comes from the City of East Lansing, Michigan State University's Office of the Provost and University Outreach and Engagement, and the National Endowment for the Arts. In addition, nearly 100 corporations, foundations, and organizations support the festival annually, as well as "Great Friends" individual donors.

In 2004 the GLFF was selected by the Michigan Humanities Council as one of its 30 most outstanding projects over its 30-year history (1974-2004), and also received the Imagining Michigan Award for outstanding university-community partnership programming. It is now considered a cornerstone event for the university and community each year that has significant economic and educational impact for the university and the region.

For more information visit http://greatlakesfolkfest.net/ Information/AbouttheFestival/.



CONTACT: Marsha MacDowell

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SOURCES: Michigan Humanities Council honors MSU Museum, Kresge Art Museum projects. (2004, October 5). East Lansing: MSU University Relations. Retrieved from http://news.msu.edu/story/602/

> GLFF brochure and website: http://greatlakesfolkfest.net

Switchgrass May Replace Non-Renewable Fossil Fuels

ould switchgrass (Panicum virgatum L.), a perennial warmseason grass that is native to North America and is also a renewable biofuel, be used to help power steam plants? And replace non-renewable fossil fuels such as petroleum and coal in the process? That's what Doo-Hong Min, an extension specialist in forages/bioenergy crops with MSU AgBioResearch, has been helping his research partners try to find out.

Based in the Upper Peninsula (UP) Research Center in Chatham, Min has been collaborating since 2007 with Cliffs Natural Resources, an international mining and resources company, and one of its subsidiaries, Renewafuel, LLC, which provides renewable biomass energy solutions for industries, institutions, and utilities. The companies have been testing "cubes" made from plant biomass such as switchgrass, along with other products such as wood, and corn stover (i.e., post-harvest leaves, stalks and cobs) as possible sources of fuel.

Min, whose research focuses on switchgrass and forages (i.e., plants grown for animal grazing or harvesting) has tested nine varieties of switchgrass in the UP Research Center and Renewafuel also has a test site in the area. Min has been working with the companies' scientists to help them identify which varieties of switchgrass are best to grow in the UP and how best to grow them.

Michelle Jarvie, an environmental engineer with Cliffs who has been working on the test plot, said that "Dr. Min's research and advice have been invaluable to us," and "his expertise has made it easier for us to start working with this new crop."

Min's research also benefits local farmers. Switchgrass can, once planted, last 15-20 years as it has a massive root system with rhizomes (underground stems). It is very low maintenance and can be planted in fallow fields, thereby adding value to them. As well as serving as a bioenergy source, switchgrass can be used as livestock feed for many types of animals during the summer slump of cool-season grasses.



Crop and soil scientist Doo-Hong Min

Renewafuel is currently working to modify its woodchip cubing machine to blend woodchips with switchgrass and other feedstock. Once these modifications are complete, the company plans to buy switchgrass from growers near its recently opened biomass fuel production plant in the Telkite Technology Park. The plant is located on the site of the former K. I. Sawyer Air Force base in Gwinn, Marquette County, which closed in 1995, resulting in the loss of more than 4,500 jobs. Min has been working with growers to increase the amount of switchgrass by testing different varieties in nearby Dickinson County.

It is estimated that Renewafuel's \$19-million plant will produce 150,000 tons of biomass cube fuel "pellets" annually when it is at full production. The company's research and development facility in Battle Creek, Michigan, is expected to be able to produce another 60,000 tons per year. Initially 25 employees (many from local areas) have been employed at the new plant, and additional "spinoff" jobs could be created to help the local and regional economy.



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Extension Forage Specialist Upper Peninsula Research Center MSU AgBioResearch (906) 439-5118 mind@msu.edu

SOURCES: DePolo, J. (2010, Winter/Spring). The business of biofuel. *Futures*, 27(4)/28(1), pp. 25-28. Retrieved from http:// agbioresearch.msu.edu/publications/ futures/winspr2010/winspr2010.pdf

> Gordon, L. (2010, September 20). Renewafuel set to start output of biofuel. Metal Bulletin Daily Alerts.

Michigan Holds Strong Potential to Lead the Bioeconomy

ichigan's strong research institutes, diverse agriculture and plentiful forests position it to become a bioeconomy leader given the political will, according to MSU researchers.

Another plus is that Michigan didn't over-invest in corn-based ethanol and biodiesel plants, said Chris Peterson, director of the MSU Product Center.

"Michigan has geographic advantages over other states in terms of diverse feedstocks, underutilized forestry resources and vast water resources," said Peterson, who is also an MSU AgBioResearch scientist. "A thriving bioeconomy is not a certainty, but Michigan has the ability to shape its own future and has significant opportunities to expand its bioeconomy and advance its position on the global bioeconomy market."

An inventory of alternative-fuel enterprises developed with Ann Arbor-based Shepherd Advisors reveals that Michigan has more than 100 biofuel, bioenergy and biomaterial operations. A public-private partnership in Flint, for example, is developing a biogas plant to generate heat for buildings and methane to fuel buses.

Michigan's corporate assets include Dow Chemical Co., Ford Motor Co. and KTM industries Inc., which are growing their biomaterials and biochemical businesses.

Michigan ranks in the top third of states in commercial ethanol and biodiesel crops and now hosts five ethanol plants. Its first commercial-scale cellulosic ethanol plant, one of only seven in the country, is under construction. A number of smaller-scale anaerobic digester facilities, turning animal and other waste into methane, also are in use while MSU researchers work to make the technology more broadly accessible.

The state currently ranks in the top fifth in ethanol consumption and electricity production from biomass. Michigan grows more than 19 million acres of forest, a 6 percent increase since 1980. More than 1.7 million megawatt hours of electricity are produced from burning woody biomass at 10 plants, Peterson said.

"Honestly, there are other states that are more competitive with respect to corn biomass, but Michigan's diverse crop mix and strong timberland resources puts the state in an excellent position if cellulosic ethanol becomes commercially viable," he said.

Cost-effectively processing cellulosic biomass such as corn stalks and wood into fuel poses steep challenges. MSU researcher Bruce Dale is a leader in that technology, working with universityaffiliated bio-based technology development organization MBI to scale-up his laboratory process.

Corn is the nation's prime source of ethanol today, but using commercial crops for biofuel raises a host of foodversus-fuel issues—an area of intense scrutiny by MSU researchers. Row crops require intense petrochemical and water inputs and expanding their cultivated acreage for biofuel uses brings up a number of environmental issues. Among those are the impact on beneficial insects and wildlife, versus cellulosic fuel feedstock alternatives such as native prairie grasses.

Many such factors will ultimately decide Michigan's bioeconomy position, said Doug Gage, director of MSU's Bioeconomy Network.

"Technological innovations from our research labs are necessary, but we also will need to demonstrate their commercial viability, attract investment and promote acceptance by potential producers and end users," he said.

The Bioeconomy Network supports studies like these because they provide a much-needed, practical framework to guide Michigan's efforts, Gage added.

"This is such a new economic sector that there is no roadmap to follow," he said. "Identifying the state's assets and developing plausible scenarios can only help enhance the state's bioeconomy position."



MSU biofuels expert Bruce Dale tanks up.

CONTACT: Chris Peterson

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SOURCE: Michigan holds strong potential to lead the bioeconomy. (2011, January 19). East Lansing: MSU University Relations. Retrieved from http://news.msu.edu/story/8789/

Innovative Research Network Helps Fuel Michigan's Bioeconomy

SU BioEconomy Network (MBEN) is an umbrella organization for researchers from more than 20 MSU units. Its mission is to foster connections between MSU researchers and resources and external partners and to coordinate the university's efforts in the bioeconomy.

MBEN works in concert with MSU Technologies, MSU Business-CONNECT, and related units such as MBI International and the MSU Bioeconomy Institute in Holland. It also acts as the MSU contact point for the DOE Great Lakes Bioenergy Research Center (an MSU-University of Wisconsin partnership to develop next generation biofuels).



Douglas Gage, director of MBEN, sees his organization's main role as one of integration. He acknowledges that while MSU's traditional academic structure and land-grant tradition have served the university well in the past, MSU has to find new ways to link people and knowledge together. "We also have to be more nimble

in our interactions with the private sector," Gage said. "Universities are not in the business of being in business... but we have much to offer as partners with Michigan firms of all sizes—that see opportunity in the new bioeconomy."

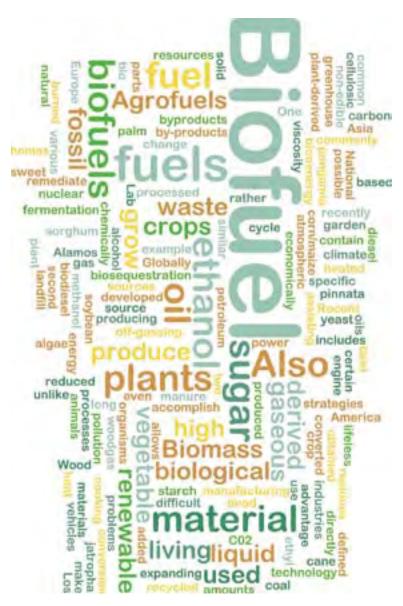
The terms "bioeconomy" and "biobased economy" refer to a society relying more on renewable resources to meet its need for energy, chemicals, and raw materials than on nonrenewable, petroleum-based materials. For example, plant material and municipal and livestock waste-biomasscan be converted into electricity, fuels, plastics, and basic components of chemical processes.

The bioeconomy is particularly important to Michigan and its economic future. High energy prices and concerns about U.S. dependency on foreign oil, and the need for renewable resources, together with Michigan's need to diversify its industries and its abundance of raw materials such as wood and crops, make Michigan particularly well situated to develop a thriving bioeconomy. In addition, biomass products can be used in existing industries, such as automotive and furniture manufacturing, as well as in new ones.

Michigan's skilled workforce, together with MSU's expertise in the areas of plant sciences, engineering, chemistry, and economics, and MSU's land-grant tradition of creating partnerships with community stakeholders and utilizing applied research to help solve problems, provide just the right formula to help expand Michigan's bioeconomy. MBEN is there to act as a catalyst to help make all this happen.

In the next 20 years or so, Gage envisions a world of both very large and small biorefineries, with biomass raw materials being turned into biofuel, and more efficient use of energy and raw materials.

And, Gage noted, "I see MSU continuing to provide the research and education to keep these refineries profitable, efficient, and environmentally sound."



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SOURCE: MSU BioEconomy Network website:

http://www.bioeconomv.msu.edu/

New Directions for MSU's Business School: Engaged, Global, Sustainable, Entrepreneurial

Stefanie Lenway, the new Eli and Edythe L. Broad College of Business dean, brings new vision for building a global mindset.



Stefanie Lenway Dean Eli and Edythe L. Broad College of Business

Our students need to...
be creative and
innovative with
the ability to apply
multifunctional and
multidisciplinary
perspectives to illdefined problems.

What is your current vision for the college?

There are three main things I'd like to focus on, all of which will help the Broad School focus on the reimagination of Michigan's economy and how local companies can leverage global networks to become the new multinational corporations.

I'd like for us to work at partnering more with the Michigan business community, which will help engage students in contributing to economic development through consulting projects, new product development, and new venture creation. I'm looking forward to engaging Michigan businesses very soon. For instance, we can put students to work writing business plans based on faculty inventions, which could get funded by local venture capitalists.

I'd like to continue the work that's been done to partner with business schools in key international markets to deliver new degree and non-degree programs through global strategic alliances. There is tremendous potential for building global programs to support research on the global dimensions of business by leveraging the college's Center for International Business Education and Research, as well as the university's global networks.

I'd also like to create even more partnerships with other colleges at MSU and use the work that's been done already to build a multidisciplinary sustainability curriculum.

Where do you see the future of business education going?

A few years ago there was a study done about this at Harvard Business School that has challenged the leadership of business schools around the world to think creatively about the future. Concerning the MBA degree, I think a lot of schools are looking at the relevancy of the two-year degree, the sufficiency of the classroom experience, and the increasing importance of entrepreneurship in the curriculum as the number of entry level positions in typical MBA jobs, such as consulting and investment banking, continue to decline.

In general, I think we need to be giving students a more global perspective so they can build sensitivity to cultural differences and have a "global mindset." They need to understand the limits of markets and models and the importance of judgment, risk management, and the imperfections and incompleteness of mathematical models. And they need to be creative and innovative with the ability to apply multifunctional and multidisciplinary perspectives to ill-defined problems.

They also need to be able to apply classroom models to real world problems, see organizations as political entities, have the ability to work in teams, and master oral and written communications.

Values, attitudes, and beliefs are also important, because they form managers' world views and professional identities. Our students need to understand their personal strengths, weaknesses, and values, as well as the social consequences of business decisions. We need to give them frameworks to deal with ethical dilemmas.

The full interview is available online at http://broad.msu.edu/information/news/item?oid=1839. ❖



Eli Broad College of Business

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SOURCE: Hill, H. (2010, July 29). Getting to know Broad's new dean: Stefanie Lenway. East Lansing: Michigan State University, Broad College of Business. Retrieved from http://broad.msu.edu/information/news/item?oid=1839

Advancing High-Tech and Biotech Entrepreneurship, **Venture Capital, and Private Equity Investments in Michigan**



suzsanna Fluck, associate professor of finance and director of the Broad College's Center for Venture Capital, Private Equity & Entrepreneurial Finance (CVCPEEF), has been awarded \$30,000 by the Michigan Initiative for Innovation and Entrepreneurship (MIIE)

for a research project with Lisa D. Cook, assistant professor of economics and international relations, Department of Economics, and James Madison College. The two co-investigators will undertake a study on "Disruptive Technologies, Company Partnerships, Financing Strategies and Venture Capital: Advancing Entrepreneurship and Innovation in Michigan." The MIIE leverages Michigan universities' economic

The MIIE leverages Michigan universities' economic knowledge by helping with the commercialization of this knowledge and encouraging entrepreneurial risk-taking.

knowledge by helping with the commercialization of this knowledge and encouraging entrepreneurial risk-taking.

The funding for Fluck and Cook's project will support student teams working with entrepreneurial biotechnology companies at the

Michigan Molecular Institute (MMI). The MMI, located in Midland, Michigan, is an independent, nonprofit research and educational organization that conducts basic and applied research in polymer science and technology. The project will be completed between September 2011 and August 2012.

The CVCPEEF advances and promotes research on entrepreneurship, venture capital, and private equity investments by MSU faculty and students, disseminates this research, and forms and maintains mutually beneficial relationships with MSU alumni entrepreneurs, venture capital and private equity professionals and companies, Michiganbased entrepreneurs, the Michigan Venture

Capital Association, and the Michigan Economic Development Corporation. It also partners with similar peer institution centers within the U.S. and globally on research, teaching, and outreach activities. In addition, the CVCPEEF arranges for non-classroom learning opportunities and student internships for Broad College students, and advises them on entrepreneurship projects.

In 2010, Dr. Fluck, together with Jim Plonka, CEO of MMI and an advisory board member of the CVCPEEF, led a team of Broad College MBA students who provided entrepreneurial, high-tech and biotech firms in Midland with professional advice and market and financial analysis on their business and financial plans. As a result of the students' assistance, the companies were able to expand in the directions recommended, raise financing, and provide more local employment opportunities. These outreach

These outreach projects enhanced the educational experiences of the students by incorporating hands-on, hightech and biotech entrepreneurship and venture capital projects into their curriculum.

projects also enhanced the educational experiences of the students by incorporating hands-on, high-tech and biotech entrepreneurship and venture capital projects into their curriculum.

Fluck is also a member of the leadership team of the MSU Institute for Entrepreneurship.

CONTACT: Zsuzsanna Fluck

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SOURCE: Center for Venture Capital, Private Equity & Entrepreneurial Finance receives MIIE grant. (2011, April 27). East Lansing: MSU, Eli Broad College of Business. Retrieved from http://broad.msu.edu/information/news/ item?oid=1983

Transforming Companies to Meet the Challenge of Change: **The Executive Summit**

ur nation's businesses are facing major challenges, and not just as a result of the current economic crisis. In order to compete effectively in a global context—in fact in order to survive businesses need to be flexible and innovative. Executives and managerial professionals need to know how to change, and change quickly.

Ram Narasimhan, University Distinguished Professor in MSU's Department of Supply Chain Management, is bringing together the best minds in academe and industry to develop creative business strategies for these challenging times with the Executive Summit, an annual signature event hosted by the Department at MSU's Henry Center.

According to Narasimhan and co-director Joseph Sandor (Hoagland-Metzler Endowed Professor of Practice), the Executive Summit, now in the planning stages for its fourth event, is inspiring "transformational leadership, strategic change, and competitive excellence" on a national level. Business executives representing many major U.S. companies come to the Executive Summit, both to learn about cutting edge research from leading researchers and to share their own insights, gained from years of collective experience. This exchange of knowledge is fostering new perspectives on how businesses can implement the changes necessary to survive and compete effectively. Attendance is by invitation only.



Executive Business Summit Session

Lisa Michalek, vice president of packaging procurement for Sara Lee Corporation, has attended previous events. "The Executive Summit provides a unique forum that combines thought leadership from both the academic and corporate perspective around the challenging and evolving area of supply management," she said. "As a very proud MSU alumna in this field, I welcome and encourage the innovation around this topic that Professor Narasimhan and the Broad College of Business provide."

Executive Summit IV, scheduled for October 2011, will be specifically for supply chain management executives. For more information about the Summit and a list of participating organizations, visit http://broad.msu.edu/supplychain/ executivebriefing/executivesummit; for this year's program visit http://broad. msu.edu/edp/open/program?236.

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SOURCE: Byle, A. (2009, February). Transforming companies to meet the challenge of change. The Engaged Scholar E-Newsletter, 1(3). Retrieved from http://engagedscholar. msu.edu/enewsletter/volume1/issue3/ Narasimhan.aspx

"The Executive Summit provides a unique forum that combines thought leadership from both the academic and corporate perspective around the challenging and evolving area of supply management."

- Lisa Michalek

Ready for College, Ready for Work, Ready for Life: The Capital Area Birth to Work Framework

hriving children, a skilled workforce, and a healthy regional economy go hand in hand. Successful transitions from early to middle childhood and adolescence lay the foundation for success in adulthood.

Operating from this premise, the Capital Area Birth to Work Framework combines the resources of the Capital Area community represented by the Power of We Consortium (PWC) and Michigan State University—to promote positive transitions for all children through three critical periods of development: early childhood, middle childhood/ early adolescence, and late adolescence/early adulthood.

Because success in each of these critical transitions requires that children have access to multiple supports and opportunities, the Framework's ultimate goal is to effect change at all levels of the community systems that support young people's development—that is, families, neighborhoods, organizations, and communities. The emphasis is on integrating and improving existing systems for each transition stage, rather than superimposing new ones, to form a seamless web of supports at key points in development.





The Birth to **Work Framework** goal: By 2020 all children, youth, and young adults in the Capital Area will grow up with the skills and abilities to actively participate in the global knowledge economy.

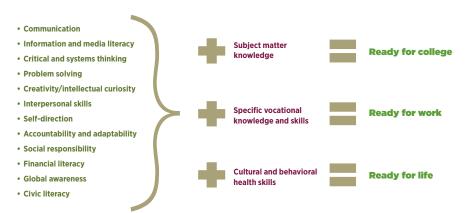
The Birth to Work Framework focuses on systems that support all vulnerable children, with a special emphasis on those living in areas of concentrated poverty. Partners utilizing the Framework believe that given appropriate supports and opportunities, all children can successfully meet the inevitable challenges to development and thrive. However, those who face extreme adversity related to poverty and/or racial discrimination are exposed to multiple risk factors and often lack access to supports and opportunities in their neighborhoods that would enable them to reach their full potential.

According to John Melcher, associate director of MSU's Center for Community and Economic Development, the partners have already taken steps to improve support systems by building an infrastructure and data tracking system, as well as engaging the community in needs assessment and planning.

Informed by the Birth to Work Framework, a coalition of local funders invested \$700,000 over three years to implement the Great Start Strategic Plan. The coalition is engaging directly with neighborhood residents to ensure that change is community driven and to give historically underserved groups a voice in delivery systems reform. Community groups involved with each transition period, such as the Great Start Parent Coalition for early childhood and neighborhood youth councils for adolescents, facilitate local participation. Feedback from communitylevel outcome data and the experiences of families will be used to improve efforts.

PWC's partners include Ingham County/ City of Lansing Community Coalition for Youth (CCY); Ingham Great Start Collaborative (GSC), Birth to Five; Lansing Economic Area Partnership (Leap, Inc.); Capital Region Community Foundation; MSU Extension; and MSU University Outreach and Engagement.

Ready for 21: What's needed?



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SOURCES: Melcher, J. (2010, Fall). New systems framework for BTW. Community News & Views, 20(1), p. 6. Retrieved from http://www.ced.msu.edu/cnv/ Fall 2010 Newsletter.pdf

> Websites: http://capitalarea.ucp.msu.edu/ http://powerofwe.org

I Know MI Numbers

ichigan residents and communities are facing critical problems that affect their quality of life, challenge government and household budgets, and put Michigan's recovery at risk. The fiscal soundness of local governments; the quality of our water; rising levels of obesity, especially among children; low achievement in science literacy; and low levels of child readiness for entering school are just a few of the issues that threaten Michigan's efforts to move forward. All of these concerns have been identified as critical issues on Governor Rick Snyder's "dashboard" to measure how Michigan is faring (see "Measuring Michigan's Performance" at michigan.gov/midashboard for details).

To help overcome these challenges, MSU Extension (MSUE) has launched the "I Know MI Numbers" initiative, a set of targeted programs that are encouraging all Michigan residents to understand how their personal actions can translate into the "numbers" that reflect healthier living, a cleaner environment, and educational achievement for their families, their communities, and the state.

"The key to making dramatic changes in critical issues such as balancing production with environmental protection, obesity, municipal management, and literacy is understanding how to measure success," said Thomas Coon, director of MSU Extension. "We're encouraging people to learn where they stand and how to move forward."

Helping our Cities and Towns Succeed

Local governments and school districts in Michigan make up a \$50 billion enterprise that provides basic public services such as police patrols, ambulance service, clean water, parks, and education. In Michigan this enterprise is increasingly under financial stress. Lower tax revenues, less state revenue sharing, and a sluggish economy have put many local Michigan governments in financial stress that is severe enough to threaten basic public services.

Extension educators, working with partners from the legal and financial sectors, are offering workshops for newly elected and appointed local officials about new civic management tools that the governor and Legislature have provided to address this crisis. Workshop topics include the new emergency financial manager law, legal contracts, health care management, turnaround plans, local finance, local government cooperation and consolidation, school law and finance, and municipal bankruptcy.

Developing the Workforce of Tomorrow

Increasing early childhood literacy. More than a third of children enter kindergarten without the pre-reading skills needed to benefit from the instruction they receive. MSUE is partnering with the Molina Foundation, based in Torrance, California, to distribute 50,000 books across the state to help improve early childhood literacy. The books will be bundled with other learning resources that will give parents and caregivers the tools they need to better prepare Michigan's youngest learners for a lifetime of greater literacy and greater success.



Kids learn about scientific measurement at "4-H Science Blast," a recent I Know MI Numbers event.

Improving science literacy. MSUE has a long history of providing science education in a non-formal setting that uses an experiential, learn-by-doing method. Science literacy for school-aged youth in Michigan is below the national average. MSUE aims to impact this rating by supporting teachers across Michigan with resources, experiments, and lesson plans on three science focus areas: biology (animal and veterinary sciences), plant sciences, and environmental sciences (including bioenergy). MSUE will provide resource packets, aligned with Michigan Science Education Standards by grade, to teachers along with training in how to incorporate the resources into their classroom lessons. After-school and community-based programs such as 4-H Science Blast and National 4-H Youth Science Day events will be held across the state in the coming months. Combined, these efforts are designed to help improve student science scores in schools and connect classroom learning with real world experiences.

Other areas of the I Know MI Numbers program include:

- Educating farmers about agricultural practices that will protect and enhance our state's natural resources
- Working through faith-based organizations, worksites, and existing programming to lead nutrition education classes with an emphasis on reducing obesity

I Know MI Numbers programs began in communities in April 2011. Initial results should be reported by the end of the year. ❖



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SOURCE:

I know MI numbers. (2011, June 6). East Lansing: MSU Extension. Retrieved from http://msue.anr. msu.edu/msue/i_know_mi_numbers

Greater Lansing Next Initiative Galvanizes Regional Development Efforts





Old Town photos courtesy of UOE

In November 2009 the Lansing Economic Area Partnership (Leap, Inc.) rolled out a new economic development plan for Michigan's Tri-County Region (Ingham, Clinton and Eaton counties) before an audience of 270 business and community leaders at the MSU Wharton Center in East Lansing. *Greater Lansing Next:* A Plan for Regional Prosperity was unveiled with a tremendous amount of media enthusiasm and the hope that it could galvanize a coordinated effort by business, government, and nonprofit organizations to guide the region to greater prosperity.

At the time of the rollout, Denyse Ferguson, then Leap, Inc. CEO and president, said, "The Greater Lansing Region now has a consensus strategy around which to work cooperatively. We have already begun receiving commitments from regional partners including businesses, NGOs and local governments to take the lead in implementing the seven strategies in the plan."

The Greater Lansing Next plan was based on 10 months of intensive study of regional assets and opportunities by MSU's Land Policy Institute (LPI). The process was based on a strategic growth paradigm, developed by former director

Soji Adelaja and others at LPI, which accentuates regional place-based strategies for sustainable economic development. LPI's Mark Wyckoff prepared the plan in partnership with the Leap, Inc. staff and Board of Directors. Leap, Inc. is playing a lead role in promoting Greater Lansing Next, building support and helping to ensure that everyone who wants to help implement the plan has a meaningful role.

The research that went into creating the plan is embodied in four reports. The first report documented regional assets, comparing the Lansing region to 55 similarly-sized regions around the nation. The second report examined technical information on 10 clusters of business activity in the region. Four of those clusters emerged as growth industries of consequence: finance and insurance, healthcare, life sciences, and information technology. The third report identified key problems, opportunities, gaps, and strategies that could be pursued to improve job and talent creation and retention in the region. The fourth and final report synthesized and categorized the highest priority strategies.

The Leap plan led to LPI providing assistance to all 14 state-designated regional planning commissions in

2010 to develop draft regional strategic growth plans patterned after the lessons learned in preparing the Leap plan. This phase of the project was part of the Michigan Prosperity Initiative, a joint project between MSU and Michigan state government (see http://www.landpolicy.msu.edu/MPI for more information about MPI).

Leap, Inc. has followed up on the energy generated by the publication of the Greater Lansing Next plan with the creation of an online community (at http://greaterlansingnext.com/) for sharing news, thoughts, and project updates. Recent activities include a call to "regional experts" to define quantitative benchmarks for tracking progress along with a request to the community at large for data related to the seven key strategies of the plan. •

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SOURCE:

Wyckoff, M. (2009, November 25). LPI research foundation for Greater Lansing Next plan. East Lansing: MSU Land Policy Institute. Retrieved from http://www.landpolicy.msu.edu/modules.php?name=News&op=viewlive&sp_id=103







MSU's Land Policy Institute Develops Strategies for Regional Growth



Scott G. Witter

he MSU Land Policy Institute (LPI) is devoted to basic and applied research, as well as community engagement, in the critical areas of land use, land policy, and strategic regional planning. As a basic resource of society, land—and its management have become key in shaping the future of communities, states, and the nation.

LPI is currently undergoing a transition of leadership and focus. In April of 2011, Soji Adelaja, the John A. Hannah Distinguished Professor in Land Policy and director of the Institute since its inception almost five years ago, accepted a request from MSU to bring his expertise and leadership in land use policy to

the university's global initiatives. Scott G. Witter, director of the School of Planning, Design, and Construction, stepped up to fill in as interim director.

Witter said that "as LPI refocuses its efforts, there will be opportunities to engage a larger number of faculty in the work of the Institute and to enhance LPI's value proposition." Current work at LPI builds on five years of research and outreach programs and projects, focused on the New Economy, place and place-making, energy, regional planning, sustainable development, and relevant policy alternatives. Visit http://www.landpolicy. msu.edu for more information.

"As LPI refocuses its efforts, there will be opportunities to engage a larger number of faculty in the work of the Institute and to enhance LPI's value proposition."

- Scott G. Witter

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SOURCE: Witter, S. G. (n.d.). Interim director's message. East Lansing: MSU Land Policy Institute. Retrieved from http://www.landpolicy. msu.edu/ (Click "About Us," then "Interim Director's Message.")

MSU Extension Programs Cultivate Future Leaders

or more than 100 years MSU Extension (MSUE) has extended the university's knowledge to address real-world issues and opportunities facing Michigan residents. It continues in that vein today, with a new structure that is mobilized under four programming themes: supporting agriculture and agribusiness (Michigan's second-largest industry); "greening" Michigan toward a more sustainable future; health and nutrition programs that give Michigan residents the tools they need to embrace healthy living; and programs for children and youth that lay the foundation for tomorrow's leaders, entrepreneurs, educators, and skilled employees.

Careers

Extension's 4-H youth resources include career exploration tools, activities and programs; information about post-high school education and training opportunities; financial aid assistance; and job search pointers.

• WOW! Wild Over Work

WOW! is designed to help teen and adult volunteers and teachers introduce children aged 5 to 12 to skills and behaviors they'll need in the workforce of the future. The curriculum consists of hands-on, experiential activities in career exploration and skill development. It is organized around four themes: Work Around Me, Work in My Community, Work Around the World, and Work in My Future. The idea behind WOW! is to expose children to a variety of options and help them gather information and think about the future.

Entrepreneurship

A wealth of information, contacts, and coaching is available for young entrepreneurs. A few of these resources include:

• Be the "E" Entrepreneurship National 4-H Curriculum

Be the "E" is an exciting way for young people in grades 7 to 12 to learn if they have what it takes to be a successful entrepreneur. The curriculum includes three levels of activities: Level 1 introduces young people to the world of entrepreneurship; Level 2 is a series of planning experiences that helps participants identify and develop the skills they need to function successfully as entrepreneurs; and Level 3 takes them through the process of researching and creating a business plan.

• Going Solo Curriculum

Going Solo is a complete package for guiding aspiring entrepreneurs into the world of business ownership. The materials are adaptable and can be customized for virtually any setting. The program targets high school youth and is very handson, including a computer game to provide a realistic experience.

Money Management

Educational resources and opportunities include teaching children about money, allowances and alternatives, and family financial literacy.

Visit http://4h.msue.msu.edu/4h/careers and http://4h.msue.msu. edu/4h/entrepreneurship for more information.



WOW! is designed to help teen and adult volunteers and teachers introduce children aged 5 to 12 to skills and behaviors they'll need in the workforce of the future.

CONTACT: Tom Coon

Director, MSU Extension (517) 355-2308 coontg@msu.edu

SOURCE: Michigan 4-H youth development. East Lansing: MSU Extension. Retrieved from http://4h.msue. msu.edu/

MSU Salutes Capital Area Community Builders

Working Together to Advance Mid-Michigan...

MSU and Lansing Economic Area Partnership (LEAP, Inc.), the tri-county region's economic development organization, worked with Prima Civitas Foundation to establish the Capital Area Community Builders recognition program for local companies and organizations that are building our community through their collaborations with MSU. Their combined contributions to local arts, education, technology, and business play a pivotal role in making our region a great place to live, work, and invest. MSU gratefully acknowledges these entities for their commitment to progress in our community.

Accident Fund Insurance Company of America

AKT Peerless Environmental Services

Allen Neighborhood Center Andrews Hooper & Pavlik PLC Arts Council of Greater Lansing

Auto-Owners Insurance

Big Brothers/Big Sisters Michigan Capital Region

Black Child and Family Institute

C2AE

Capital Area Michigan Works!

Capital Area Transportation Authority

Capital Area United Way

Capital Region Airport Authority

Capital Region Community Foundation

Capitol Bancorp Limited

Christman Company

Clark Construction Company Clinton County Economic Alliance Clinton Task Force on Employment

Comprehensive Emergency Management Associates

Consumers Energy

Cristo Rey Community Center Dart Container Corporation

Dart Foundation
Dean Transportation
Demmer Corporation

Dewpoint Inc.

Dykema Gossett, PLLC East Lansing Public Schools

Elderly Instruments

Emergent Biosolutions Inc.

Eyde Company

FinCor Holdings, Inc.
General Motors Corporation

Granger Construction Company

Greater Lansing Business Monthly

Greater Lansing Business Monthly

Greater Lansing Convention and Visitors' Bureau

Hasselbring-Clark

HSS Material Management Solutions

IDV Solutions

Impression 5 Science Center

Ingham County Health Department
Ingham Regional Medical Center

Jackson National Life Insurance Company

John Henry Company

Joseph D. & Jerry L. Reid Foundation Lansing Board of Water & Light

Lansing Community College

Lansing Lugnuts

Lansing Regional Chamber of Commerce

Lansing School District
Lansing State Journal
Lansing Symphony Orchestra

Loomis, Ewert, Parsley, Davis & Gotting PC

Marriott East Lansing at University Place

Message Makers

Michigan Farm Bureau Family of Companies Michigan Millers Mutual Insurance Company Michigan Small Business Development Corp. Michigan State University Federal Credit Union

Mid-Michigan Physicians
National City Corporation
Neogen Corporation
Power of We Consortium
Red Cedar Technology

Rehmann Group

SME Soil & Materials Engineers, Inc.

Sparrow Health System

Spartan Internet Consulting Corporation

Spartan Motors, Inc.
Symbiosis International
TechSmith Corporation
Thomas M. Cooloy Law Sc

Thomas M. Cooley Law School

Tri-County Regional Planning Commission

UAW Local 652

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OURCE: Community Builders website:

http://msucommunitybuilders.com/

MSU's Medical Colleges Leverage Local Capacity to Meet Statewide Needs

ccording to a 2011 report from the Michigan Health and Hospital Association, the health care industry is Michigan's largest private-sector employer. The industry directly employs more than half a million Michigan residents—who earn more than \$30 billion in wages, salaries, and benefits, and pay. \$6.6 billion in federal, state and local taxes—and supports countless local suppliers and other businesses as well. And MSU's medical colleges are expanding their local capacities to meet growing statewide needs.







Secchia Center — MSU College of Human Medicine in Grand Rapids

College of Human Medicine

MSU's College of Human Medicine has a significant impact on Michigan's population, with physicians and medical students positioned in seven communities throughout the state and reaching some of Michigan's most underserved and vulnerable residents.

With the September 2010 opening of the Secchia Center, the \$90 million headquarters for the college in Grand Rapids, MSU began a new era of medical education, "The impact of this unique collaboration-from health care delivery to new research endeavors to economic stimulus—will be felt both in Grand Rapids and across the state," said MSU President Lou Anna K. Simon. "MSU and the College of Human Medicine believe in the value of teaching medicine where it is needed and practiced—in the community." The new building was financed entirely without public funding.

The Secchia Center is only part of the College of Human Medicine's growing footprint in communities across the state. New regional campuses have been opened in Traverse City and Midland, administrators are working in Flint to develop a research and education model built specifically around that region's needs, and early admission programs have been signed with several colleges and universities across the state. In addition to its partners in Grand Rapids— Spectrum Health, Van Andel Institute, Saint Mary's Health Care, Grand Valley State University, Grand Action, and The Right Place—the college also has hospital partners in Kalamazoo, Lansing, Midland, Traverse City, and the Upper Peninsula.

The College of Human Medicine attracted more than \$31 million in external research funds during 2010, and employs more than 300 full-time faculty members and many support staff.

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Dean, College of Human Medicine (616) 233-1678 rappley@msu.edu

"The impact of this unique collaboration—from health care delivery to new research endeavors to economic stimuluswill be felt both in Grand Rapids and across the state."

- Lou Anna K. Simon

LTH CARE, MEDICAL EDUCATION, AND RESEARCH 📄 HEALTH CA

College of Osteopathic Medicine

In partnership with Macomb University Center and the Detroit Medical Center, MSU's College of Osteopathic Medicine (COM) recently expanded its local capacity for community-based health care, medical education, and research to these two Southeast Michigan sites. Overall, COM has students in more than 40 community hospitals across the state.

COM is also partnering with Detroit Public Schools to open a new high school, based at the Medical Center, which will focus on a college-prep science and medical curriculum. The Benjamin Carson School of Science and Medicine will open to incoming freshmen in fall 2011.

More than two-thirds of MSU-COM's 3,933 living alumni practice in Michigan, and 48 percent of those practitioners are in Wayne, Oakland, and Macomb counties.

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Opening of MSU College of Osteopathic Medicine/Macomb University Center

College of Nursing

MSU's College of Nursing is one of 26 schools nationwide to receive federal funds to expand its primary care nurse practitioner program.

The five-year, \$1.42 million grant from the Department of Health and Human Services' Health Resources and Services Administration, announced in October 2010, is a part of the Advanced Nursing Education Expansion program. That program aims to increase the number of nurses with advanced degrees who provide health care services similar to those of a physician.

Student recipients are awarded a \$22,000 annual stipend for up to two years to help reduce their financial burden so they can enroll in the program full time. In turn, graduation is accelerated, increasing the number of nurse practitioners in the Michigan work force. The first cohort of five recipients, all members of the class of 2012, was announced in February 2011.

Clinical placement of MSU nurse practitioner students takes place in more than 300 urban and rural settings throughout Michigan. The College of Nursing retains a majority of nurse practitioner graduates in Michigan, including underserved areas of the state.



Dean Carpenter, College of Nursing alumnus, is a nurse practitioner at the Tumaini Center homeless shelter in Detroit.

CONTACT: Mary H. Mundt

Dean, College of Nursing (517) 355-6527 mundtm@msu.edu SOURCES: \$1.4 million federal grant expands nurse practitioner program. (2010, October 1). East Lansing: MSU University Relations. Retrieved from http://news.msu.edu/story/8378

> College of Human Medicine transforms medical education with new Secchia Center. (2010, September 10). East Lansing: MSU University Relations. Retrieved from http:// news.msu.edu/story/8262

College of Osteopathic Medicine teams with new Detroit high school. (2011, June 1). East Lansing: MSU University Relations. Retrieved from http://news.msu.edu/story/9444/

Headapohl, J. (2011, February 28). Health care industry is Michigan's biggest employer. Retrieved from: http://www.mlive.com/jobs/index.ssf/2011/02/health_care_industry_is_michigans_bigges.html

Michigan Health and Hospital Association. (2011, February). Michigan hospitals: The heart of our communities, the key to our recovery. Lansing, MI: Author. Retrieved from http://www.mha.org/mha_app/mission_critical/docs/final_missioncritical.pdf

College websites:

http://humanmedicine.msu.edu http://nursing.msu.edu/ http://www.com.msu.edu/

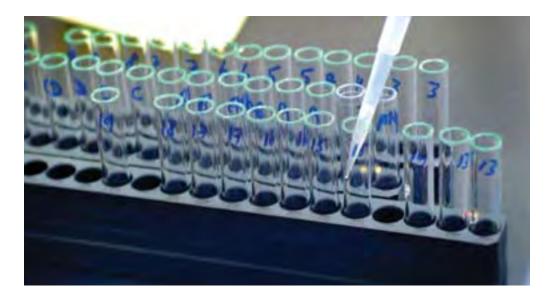
In Vivo Facility Links MSU to Industry

SU's In Vivo Facility is a matchmaker. The service facility contracts with both industry and academics in need of in vivo pharmacology capabilities (i.e., within-organism research on drug properties) to conduct research and enlists MSU faculty to participate in the projects. "It's a win for everyone," said facility director Marc Bailie. "Our industry contacts get the knowledge and expertise they need, and the MSU collaborators develop relationships with the private sector and generate funding for their own research."

"These projects provide a good way for MSU researchers to develop relationships with industry scientists and to contribute directly to the translation of important scientific and medical research," added associate director Teresa Krieger-Burke, assistant professor of pharmacology and toxicology. These interactions provide university personnel with insight into the more directed and circumscribed types of applied research and testing often needed by the private sector.

J.R. Haywood, chair of the Department of Pharmacology and Toxicology and assistant vice president for regulatory affairs, recruited Bailie, Krieger-Burke, and Sarah Marsh, a licensed veterinary technician and specialist in the Department of Pharmacology and Toxicology, to establish the facility. "When the Pfizer Research and Development site in Ann Arbor closed, we were fortunate to be able to bring these talented employees from the Pfizer drug safety group to MSU to develop this service facility," he said. It was a homecoming of sorts for all three. They had all earned degrees at MSU, and Marsh worked at the MSU Veterinary Teaching Hospital before joining Pfizer.

"From the beginning we determined that the facility would offer timely, flexible services at competitive prices," Bailie said. "That makes it very valuable to our industry and faculty customers." The group also provides services at cost for academic researchers who are



funding projects from government grants. So far about 90 percent of their work has come from industry. "We would really like to grow the fraction of work we do with MSU faculty, helping them translate their in vitro studies of novel therapeutics into validated toxicology and pharmacology studies," he said. "This is an important step in the translation of lab science to human clinical research."

Through the facility, the team applies their expertise in drug development and enlists other MSU experts to help researchers begin to translate a molecule or chemical that shows therapeutic promise into a potential new drug. They develop custom models that meet researchers' needs for specific kinds of testing to support research on a variety of diseases. They gather and interpret data and provide reports to their clients. The projects range in scope from simple pharmacokinetic evaluations and GI motility studies to complex assessments of compound effects in sophisticated models of cardiac disease.

Projects also involve MSU students, who benefit from the opportunity to interact and develop connections with industry researchers, Marsh said. Industry and academic researchers approach projects differently. Industry researchers typically have specific goals and deliverables with clearly defined endpoints and timelines, while academic researchers tend to work on open-ended projects where ideas that develop during their explorations may lead them in new directions. "Experiencing and understanding those differences can be a useful addition to a student's education." Bailie said.

A core group of MSU scientists is available to work on research projects through the facility, "but we would be happy to know about others who might be interested in working on these projects," Bailie said. The group is also available to help faculty develop proposals that include their services.

"The In Vivo Facility gives us a new way to support research at MSU and advance our research reputation," Haywood said. "It's helping us develop important connections with industry colleagues across the nation."

CONTACT: Marc Bailie

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SOURCE: In Vivo Pharmacology Facility links MSU to industry. (2010, Spring). Research News. East Lansing: MSU Vice President for Research and Graduate Studies, Retrieved from http://www. vprgs.msu.edu/node/1390

\$12 Million Statewide Project Increases Broadband Services, **Access, and Education**



urt DeMaagd is in the midst of a three-year project to assist Michigan's preparedness in the new information economy by increasing the availability of public computer centers, expanding broadband access in the centers, and providing technology education for Michigan citizens.

DeMaagd and his partners received three federal grants totaling more than \$12 million, awarded by the National Telecommunications

and Information Administration, via the American Recovery and Reinvestment Act of 2009. DeMaagd works with officials in the Broadband Technology Opportunities Program (BTOP), documenting information and progress.

The work being done addresses both financial and educational challenges in the knowledge economy, according to DeMaagd. "People need access to the technology, and then they need education and training so they can become familiar with tools and skills that make them marketable." Also, "increasing the population's confidence in technology will contribute to a more skilled workforce that is better equipped to meet the current entrepreneurial demands," said DeMaagd.

The first grant provides funding for installation of computers in 88 existing public library computer centers, and establishment of new centers providing broadband access in 15 underserved Michigan counties in primarily rural areas. Michigan libraries play a key role in providing computer access to their patrons, including the unemployed.

The second grant increases broadband coverage by working with an additional 207 community partners to create or expand public computer centers statewide. It also involves working with the Michigan e-Library to provide online job search and retraining resources.

The third grant provides tools and training for broadband use for residents in distressed urban areas included in the State of Michigan's Cities of Promise Initiative: Detroit, Flint, Highland Park, Pontiac, Saginaw, Benton Harbor, Hamtramck, and Muskegon Heights, as well as Lansing, Jackson, and Muskegon.

DeMaagd has a long list of collaborators, including: the Library of Michigan, housed in the Michigan Department of Education; the adult education unit at the Department of Energy, Labor and Economic Growth; Michigan Department of Technology, Management and Budget; Michigan Small Business and Technology Development Center; Lansing Community College; Jackson Community College; Lansing's Information Technology Empowerment Center; Detroit Digital Justice Coalition; YMCA of Marquette; and 274 libraries and centers.

The entire project involves 300 partners and covers 76 out of 83 Michigan counties. 👁

"Increasing the population's confidence in technology will contribute to a more skilled workforce that is better equipped to meet the current entrepreneurial demands."

Kurt DeMaagd



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SOURCE: Hills, C. J. (2011, March). MSU leads \$12 million statewide project to expand broadband services, access and education. *The Engaged Scholar* E-Newsletter, 3(3). Retrieved from http:// engagedscholar.msu.edu/enewsletter/volume3/ issue3/demaagd.aspx

Capital Area IT Council Develops Skills for Local IT Professionals

he Capital Area IT Council is a regional Michigan Skills Alliance that was formed to address the specific workforce development challenges facing the local information technology industry.

Employer led and directed, the Capital Area IT Council is a coalition of industry, education, economic development, and government partners committed to identifying, developing, and implementing real solutions for improving the quantity and quality of IT professionals in this region.

MSU holds an institutional membership with the Capital Area IT Council, which provides all MSU staff members with the opportunity to attend sponsored training and information sessions on various IT topics.

In 2009, MSU partnered with the Capital Area IT Council, Capital Area Michigan Works!, and Prima Civitas Foundation on a \$15 million Workforce Innovation in Regional Economic Development (WIRED) grant from the U.S. Department of Labor. The project focused on talent development and increasing educational opportunities for workers in the IT sector.

The Capital Area IT Council has developed successful outreach programs designed to engage students, job seekers, and businesses with the local IT industry. A partnership with the Lansing Economic Development Corporation and MSU Career Services Network led to "Tech Tours," a unique experience promoting mid-Michigan career and community offerings to the next generation of IT professionals.

For more information visit http:// capitalareaitcouncil.org/.





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SOURCE: MSU leads regional effort to retrain workers for new IT jobs. (2009, November 18). East Lansing: MSU University Relations. Retrieved from http:// news.msu.edu/story/7124/

ENGAGED SCHOLARSHIP

Each issue of *The Engaged Scholar Magazine* features a brief "think piece" about the theory and practice of engaged scholarship. For this issue Ed Morrison, economic policy advisor at the Purdue Center for Regional Development, Purdue University, discusses a conceptual shift from "strategic planning" to "strategic doing."

Strategic Doing

The Great Lakes economy is transforming and, with it, our universities. The changes are profound. Outside, in cities stretching from Youngstown to Duluth, we see what happens with an industrial economy compressed under the massive weight of globalization. Leaders in these shrinking cities confront the cold realities of a crumbling civic infrastructure.

Yet, in the middle of each one of these cities sits a university campus. Around each of these campuses we see the sprouts of a new Great Lakes economy: the Hatch in East Lansing; the fresh water technology cluster anchored by the University of Wisconsin – Milwaukee; Discovery Park in West Lafayette; the biomaterials cluster emerging around the University of Akron; and the list goes on.

We are moving into an era in which open networks generate wealth. Companies are learning that they must collaborate to compete. Many of the entrepreneurs guiding these young, more dynamic companies recognize that universities can be their most reliable, valuable collaborator.

Leaders in local and state government, as well as the nonprofit sector, are learning the same lesson: In the midst of dwindling budgets and a growing demand for services, collaboration provides the only reliable path forward. Our traditional approach to organization and programs is too stiff, too inflexible, and too costly. We need new approaches to providing education and social services that are more responsive, productive, and adaptive. We need more innovation.

It sounds simple enough. To leverage the vast resources of our universities in service to our regional economies, we should expand our collaborations. But the task is not so easy.

Each of these collaborations involves a new venture, a startup with a new team of people who have never worked together. We are moving across organizational and political boundaries, and, as we do, we can easily ignite fear of the consequences. We are undertaking complex initiatives, and both power and authority are split across these boundaries; no one can tell anyone else what to do. We are undertaking these collaborations in an era of shrinking budgets, all in the hope that we can find new ways to become more productive: to do more with less.

What's worse, our traditional approach to strategic thinking—the disciplines of strategic planning—are not well-suited to the complex, ambiguous world in which we must build these collaborations. Strategic planning disciplines are simply too costly, too inflexible and too slow to meet our needs.

At the Purdue Center for Regional Development we have spent a number of years grappling with this problem: How do we form sophisticated strategic collaborations quickly that are capable of meeting the complex challenges of rebuilding a regional economy? In the new discipline of **strategic doing**, we believe we have found an answer.



By drawing on the lessons of complex adaptive systems, open source software development, social network analysis, appreciative inquiry, and asset-based community development, we have distilled a new discipline for thinking and acting strategically in open, loosely joined networks. We have deployed strategic doing in a variety of different settings. The results are so encouraging that we are launching a new certification in the strategic doing discipline to share what we have learned.

Strategic doing leads to sophisticated innovations that link and leverage our university resources. The key: Develop a strategy with simple rules.

We look at our collaboration with Michigan State University as the anchor partnership in an emerging university network. We are committed to designing new approaches to university engagement by expanding the discipline of strategic doing. Working together, we are developing leaders with a new set of skills to guide sophisticated civic collaborations that achieve measurable results. We are also accelerating the transformation of the Great Lakes economy.



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Zambia Epilepsy Care Team Receives MSU OSCP and Regional Outreach Awards

retchen L. Birbeck is director of MSU's International Neurologic and Psychiatric Epidemiology Program and a faculty member in the College of Osteopathic Medicine. Chieftainess Mwenda of the Basanje Royal Establishment, Zambia, is a registered nurse and a member of Birbeck's Chikankata Epilepsy Care Team in Mazabuka, Zambia.

For more than 15 years, these two partners have worked together to improve the lives of people with epilepsy in rural Zambia. The scholarly contributions from their work are regularly utilized by the World Health Organization in the development of more optimal programs of epilepsy care and care delivery in Africa. Birbeck and Mwenda have served as expert advisors on community-based epilepsy care for the Zambian Ministry of Health, the World Bank, and the U.S. Institute of Medicine. They have identified global problems in drug access for people with epilepsy in low income countries, famine-related drug toxicity, and the lack of appropriate treatment for co-morbid HIV and epilepsy in most of Africa. They have also worked tirelessly to bring their findings to the attention of key stakeholders and policy makers.

In 2011, the Chikankata team received two major honors. In February, Birbeck and Mwenda were recognized with MSU's annual Outreach Scholarship Community Partnership (OSCP) Award, which is conferred at the all-university Awards Convocation in February. The OSCP award gives University-wide recognition to highly engaged research collaborations that positively impact both communities and scholarship. The award goes to both the researcher and the community partner.

In May, Birbeck was notified that the Chikankata collaboration had received the prestigious regional Outreach Scholarship/W.K. Kellogg Foundation Engagement Award from the Association of Public and Land-grant Universities (APLU). This award will be honored at the 12th Annual National Outreach Scholarship Conference, which is being hosted by MSU in October.

Winning the regional Kellogg award also qualifies recipients to compete for the APLU's national C. Peter Magrath University Community Engagement Award, which will be conferred in November at the APLU's annual meeting in San Francisco. Established in 2006, the Kellogg Outreach Scholarship and Magrath University Community Engagement awards both recognize four-year public universities that have redesigned their learning, discovery, and engagement functions to become more closely and productively involved with their communities.

Learn more about the OSCP Award at http://outreach.msu. edu/awards/oscpa/. 👁



Chieftainess Mwenda and Gretchen Birbeck

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SOURCES: Association of Public and Land-grant Universities (2011, May 12). Michigan State, Montana State, Penn State, and University of Tennessee win regional community engagement awards. Washington, DC: Author. Retrieved from http://outreach. msu.edu/documents/NewsRelease/MagrathRegionalAwards2011.pdf

> Hills, C. (2011, February 8). Zambia epilepsy care team awarded Outreach Scholarship Community Partnership Award. East Lansing: MSU University Outreach and Engagement. Retrieved from http://outreach.msu.edu/ documents/newsrelease/News_Release,_Outreach_Award_2011,_Epilepsy_ Care_Team,_2.08.11.pdf

Hills, C. (2011, May 12). MSU's Birbeck wins outreach award for work on epilepsy in Zambia. East Lansing: MSU University Relations. Retrieved from http://news. msu.edu/story/9366/

"When I arrived in Zambia in 1994 I had no idea the burden of epilepsy I would find there, but I quickly realized that to combat this terrible disease I would have to leave the hospital and go out and engage the community."

- Gretchen Birbeck

October 2010

MSU's **Center for Community and Economic Development** (CCED) was selected as an Awards of Excellence Finalist by the University Economic Development Association for efforts that address regional economic planning in the 21st century. Recognition in this national competition comes as a result of a two-year partnership between CCED and three regional planning agencies—the Eastern Upper Peninsula Regional Planning and Development Commission, the Northeast Michigan Council of Governments, and the Northwest Michigan Council of Governments—which together represent 21 of Michigan's 83 counties. The MSU team collaborated with community members to identify or develop 32 knowledge-economy indicators in seven categories. The project was funded by the U.S. Economic Development Administration and MSU. Additional information is available at http://knowledgeplanning.org/.

This is the second time in three years the CCED has been named an Awards of Excellence Finalist.



January 2011

C. Kurt Dewhurst, MSU Museum curator of folk life and cultural heritage, was awarded a prestigious Fulbright Specialist grant this year. Dewhurst was in residence February through March at the Anthropology Department at the University of Witwatersrand in Johannesburg, South Africa, where he researched the artifact and documentary collections of the Museum of Ethnology and the university's larger archival collections to help construct a museum redevelopment plan.



Diane Doberneck, research specialist with the National Collaborative for the Study of University Engagement, received the H. Paul Roberts Award for Distinguished Service in Study Abroad Programs from MSU's College of Agriculture and Natural Resources.



February 2011

Rex L. LaMore has been involved in community and economic development at MSU for almost 35 years. In consideration of LaMore's many years of service in applying the World Grant ideal to the community, with a particular focus on the needs of the economically disadvantaged, persons of color, and other minority groups, MSU honored him with its Distinguished Academic Specialist Award.



March 2011

Anna Orsini, a junior in MSU's Residential College in the Arts and Humanities, is one of six college students in Michigan to receive Michigan Campus Compact's Outstanding Community Impact Award. The award recognizes students who have made an effort to strengthen the partnership between campuses and communities. During Orsini's sophomore year she started "Leaders of the Pack," a lunchtime club that taught leadership skills, for sixth graders at Whitehills Elementary

School. From that experience she developed an afterschool leadership program at MacDonald Middle School, where the students worked on a service project for Haven House, a homeless shelter in East Lansing.

April 2011

MSU's **Community Evaluation and Research Collaborative** (CERC) received the 2011 John A. Seeley Friend of Evaluation Award from the Michigan Association for Evaluation.



August 2011

Laurie Van Egeren of MSU's Community Evaluation and Research Collaborative, along with co-investigators Christina Schwarz, Norman Lownds, Holly Brophy-Herb, Steven Pierce, Hope Gerde (all MSU) and Bradley Morris (Grand Valley State University), received a five-year, \$2.5 million grant from the National Science Foundation to evaluate whether an early childhood science education program, Head Start on

Science, produces measurable impacts for children, teachers, and parents in low-income preschool settings. Eight Head Start programs in Michigan, serving a diverse group of African American, Latino, American Indian, and White children in 72 classrooms, will participate in the study.

OEMI results for 2010 include the following:

\$15,918,497

Value of salary investment by MSU faculty and academic staff in addressing issues of public concern (data from those reporting outreach activities on the OEMI)

95.1%

Respondents whose outreach contributed to achieving Boldness by Design (BBD) imperatives:

73.8% Enhanced the student experience

75.7% Enriched community, economic, and family life

47.0% Expanded international reach

66.0% Increased research opportunities

56.9% Strengthened stewardship

650

Number of specific projects/activities reported

Of the respondents who described specific projects/activities:

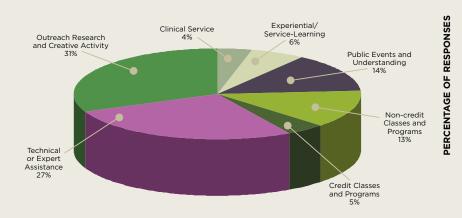
82.7% Reported working with external partners

88.8% Reported having created intellectual property and scholarly outcomes

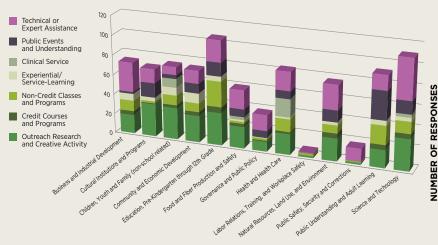
84.6% Reported that their outreach work impacted their scholarly or teaching practices

NATIONAL COLLABORATIVE FOR THE STUDY OF UNIVERSITY ENGAGEMENT

Forms of Engagement Reported by MSU Faculty and Academic Staff in 2010

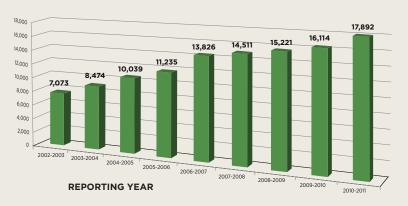


Forms of Outreach Cross-Tabulated with Societal Concerns for 2010



The number of "responses" is greater than the number of "respondents." Respondents were given the opportunity to describe their engagement activities for up to two areas of social concern; each description was counted as a separate response.

Number of Student Registrations for Service-Learning Received and Accommodated (2002-2011)





About University Outreach and Engagement

University Outreach and Engagement (UOE) connects university knowledge with community knowledge in mutually beneficial ways. UOE assists academic departments, centers, institutes, and MSU Extension on priority issues of concern to society by encouraging, supporting, and collaborating with MSU faculty and academic staff to generate, apply, transmit, and preserve knowledge.

Hiram E. Fitzgerald Associate Provost

Michigan State University Kellogg Center Garden Level East Lansing, MI 48824

Phone: (517) 353-8977 Fax: (517) 432-9541 Web: outreach.msu.edu E-mail: outreach@msu.edu

The UOE Associate Provost is supported by the advice of two important councils:

Outreach and Engagement Campus Senior Fellows,

a group of faculty who have distinguished themselves through careers as engaged scholars

Outreach and Engagement Community Senior

Fellows, comprising leaders from government, business, foundations, and nonprofit organizations

For lists of these individuals, see outreach.msu.edu/people.

Contact University Outreach and Engagement to learn how you can become more active in the MSU engagement enterprise.

outreach.msu.edu

University-Community Partnerships

Patricia A. Farrell, Assistant Provost for University-Community Partnerships UCP facilitates research collaborations between MSU faculty and community-based partners to address a wide variety of societal issues.

Center for Community and Economic Development

Rex LaMore, Director

Located in central Lansing, CCED works to improve the quality of life for people in distressed Michigan communities through responsive engagement, strategic partnerships, and collaborative learning.

Community Evaluation and Research Collaborative

Laurie Van Egeren, Director

CERC provides a hub for university-based evaluators and conducts participatory program evaluation in the areas of education, youth development, early childhood, health, and community development.

Center for Service-Learning and Civic Engagement

Karen McKnight Casey, Director

CSLCE provides curricular and co-curricular service-learning and engagement opportunities for MSU students and helps faculty integrate service-learning into their courses.

Communication and Information Technology

Burton A. Bargerstock, Director

CIT provides public access to information about university-wide outreach initiatives through the Internet, as well as consulting and product development services for websites, databases, publications, graphic design, and event management.

Usability/Accessibility Research and Consulting

Sarah J. Swierenga, Director

UARC conducts research and evaluates new interface technologies to ensure that they are useful, usable, accessible, and appealing to a broad audience.

Wharton Center for Performing Arts

Michael J. Brand, Executive Director

Wharton Center educational programs connect students to the performing arts by offering a wide range of programs suited to a variety of learner needs.

Michigan State University Museum

Gary Morgan, Director

The MSU Museum reaches a broad public audience through collections, field- and collections-based research, public service and education programs, traveling exhibits, and innovative partnerships.

Arts and Cultural Initiatives

C. Kurt Dewhurst, Director

UOE Arts and Cultural Initiatives facilitates research collaborations between MSU faculty and community-based partners using arts and culture to foster effective inclusive communities and cultural economic development.

Estate and Wealth Strategies Institute

Robert A. Esperti and Renno L. Peterson, Co-Directors
EWSI is a nonprofit organization dedicated to developing strategies
for wealth, estate, business, and charitable planning.

National Collaborative for the Study of University Engagement

Burton A. Bargerstock and Laurie Van Egeren, Co-Directors

NCSUE is a national innovator, conducting studies about faculty roles
and rewards as well as facilitating conversations on benchmarking,
engaged scholarship, and the scholarship of engagement.

University Outreach and Engagement

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Outreach and Engagement