OHIO UNIVERSITY IS LEADING APPALACHIA OUT OF THE ECONOMIC WOODS
The Appalachian New Economy Partnership Flourishes in Ohio’s Southeast Region

INSIDE:
Sinclair CC becoming a national unmanned aerial systems leader
Miami’s student-run credit union - why it works
OSU student entrepreneurs compete against each other
MCCTC partnering with business and industry in manufacturing
This is a quarterly e-newsletter designed to connect Ohio higher education to the business community. In this publication, you will learn about the efforts of the Ohio Board of Regents to move students from the classroom to the workforce; and about research and idea development happening within the University System of Ohio that is benefiting Ohio businesses.
With a new school year under way, I’m pleased to share with you this second issue of ConnectED, our newsletter that focuses on the ties between higher education and the business community. As we work to prepare more of our students for the workforce, strong relationships between our University System of Ohio partners and Ohio businesses are more vital than ever.

In this issue, we’ll see how Ohio University is working to strengthen the economy of Ohio’s Appalachian region, and how Sinclair Community College has become a national leader in unmanned aerial systems. We’ll also visit a unique student-led venture at Miami University and learn what it takes to make the perfect pitch to business investors.

The biennial budget signed by Governor Kasich in June illustrates a commitment to higher education in Ohio at a time when most states are cutting their higher ed budgets. That commitment will contribute to our goal to have 60 percent of Ohioans with a post-secondary degree or certificate by 2020, and ensure that they’re ready to fill Ohio’s high-demand jobs. A skilled workforce and a strong economy – two great reasons to stay ConnectED.

John Carey
Chancellor, Ohio Board of Regents
Ohio University is Leading Appalachia Out of the Economic Woods

If you were an entrepreneur living in southeastern Ohio 15 or 20 years ago, your first order of business might have been to relocate to Columbus, Cincinnati or Pittsburgh.

Not anymore. Over the past decade, an elaborate ecosystem of entrepreneurial services and activities has blossomed around Ohio University, aided in part by a strategic, modest investment of state money called the Appalachian New Economy Partnership (ANEP).

THE APPALACHIAN NEW ECONOMY PARTNERSHIP BLOOMS
The ANEP first appeared during Governor Bob Taft’s administration as a single line-item in the state budget with the stated purpose to “link Appalachia to the new economy.” It was a relatively low-stakes approach to economic development in the region that the state hadn’t really tried before. In the ensuing years, that line item has gradually shrunk from its original $1.5 million to its current $747,366, but it’s managed to survive both a major recession and three different gubernatorial administrations.

There’s a reason it continues to be funded. Ohio University and its various business partners have expertly turned ANEP funding into a network of programs and services that continue to expand and provide an undeniably positive impact to the regional and state economy.

“The ANEP has been instrumental in building a couple of things,” said Dr. Mark Weinberg, director of Ohio University’s Voinovich School of Leadership and Public Affairs. “The most important thing has been building an entrepreneurial, venture capital, innovation platform for developing
technology and companies in a region that just didn’t exist before.”

THE RISE OF TECHGROWTH OHIO
By leveraging ANEP dollars with funds from the Third Frontier program and other private/federal sources, Ohio University has been able to parlay the humble line item into higher-profile initiatives and programs such as TechGROWTH Ohio (TGO), which connects local technology entrepreneurs to funding and services that help grow their businesses. Programs such as TGO serve on the front lines of business development – holding the hands of entrepreneurs as they navigate the critical early stages of a new or expanding business.

Since it started five years ago, TGO has helped southeastern Ohio businesses generate more than $11 in economic returns for every $1 of state money invested. By its own count, TGO has worked with more than 500 businesses and created or retained nearly 200 jobs in the region. Its role varies depending on the needs of the individual business – for one, it might help find low-cost manufacturing or office space, for another it might facilitate access to angel investment groups or find venture capital to keep a fledgling company up and running while coaching it through a business plan. It was through the development of TGO that the region’s first organized angel investment fund was started. The East Central Ohio Tech Angel Fund (ECOTAF) has become one of the largest rural angel networks in the U.S.

Earlier in the decade, ANEP funding helped house and grow a Small Business Development Center (SBDC) and Procurement Technical Assistance Center (PTAC) at the university. Lynn Gellermann, TGO’s executive director, said, “When you look at all of the service offerings we have, there’s a good chance we can provide some service at some level for most business owners who approach us.” More often than not, TGO and the other entities are able to facilitate funding for local businesses from Ohio-based sources, which in turn helps keep young companies in the state and provides a direct benefit to the region’s economy. Gellermann added, “Local businesses now get a level of assistance similar to what they could get in a big metropolitan area.”

HERE’S THE PITCH
Ohio University also hosts the Innovation Center, a technology business incubator that provides entrepreneurs with everything from free consulting services for businesses in the early stages to low-cost training for business-related skills and networking events. One of its more popular events is the annual Innovation Engine Accelerator, a 12-week summer program that provides up to $20,000 to six digital media startups and allows them to refine their business models and products, receive expert coaching and advice, and pitch their startups to investors at the end of the summer.

Ohio University’s Center for Entrepreneurship, a
partnership between the College of Business and Voinovich School, provides a program curriculum based on the “lean startup” philosophy, popularized by Silicon Valley entrepreneurs Eric Ries and Steve Blank, which aims to shorten the development cycles of new companies and minimize the amount of funding needed to initially get a product up and running.

It’s not uncommon for students to migrate through other university events before landing at the Accelerator. Several student teams also participate in Hatchery Ideation events, Venture Café gatherings, Idea Pitch Competitions, Guest Lecture Series speakers and StartUp Weekends.

Not all of the startups that go through the program see the light of day, Gellermann said, but each student “has an experience that will affect their career and their life, the way they think and innovate – whether they wind up starting their own company or working for one.”

REACHING FOR THE SKY
A number of successful young companies with ties to Ohio University have emerged in recent years.

Affine Technologies, a 3D data visualization and computer graphics company specializing in aviation and avionic software, was founded by OU graduate students Chad Mourning and Scott Nykl after placing in two Idea Pitch Competitions and participating in the Innovation Engine Accelerator. The company, aTechGROWTH client, went on to win a finalist award in the prestigious 2012 Collegiate Inventors Competition.

Another student startup company that benefitted from an early relationship with TechGROWTH Ohio is Flare Code, a web development tool used especially by non-profit companies to quickly and inexpensively build mobile websites. The company was founded by Niklos Salontay and Ian Bowman-Henderson, two OU graduates whose idea started as a research paper in 2010, won the inaugural Idea Pitch Competition at Ohio University and then was selected to participate in the 10X Accelerator program in Columbus.

According to Bowman-Henderson, OU and TGO were essential to the development of Flare Code. “In terms of being able to take a risk on a student-run company, they are the only people with an incentive to do that.”

But their interest goes beyond simply making money. “For TechGROWTH, there’s an interest in promoting young entrepreneurs,” said Bowman-Henderson. “They’re looking to promote entrepreneurship as an ideal, as an industry, rather than simply making their money back.”

E3 Clean Technologies boasts a proprietary electrochemical technology platform that removes pollutants from automotive and power plant exhaust, and also removes ammonia from waste water to generate hydrogen fuel. It was founded by Ohio University engineering professor, Dr. Geraldine Botte. After receiving investment from TGO and support from the university’s Technology Transfer Office, the company won the “Most Likely to Succeed” award in the clean technology category at this summer’s Launch: Silicon Valley 2013 event.

Global Cooling manufactures a range of ultra-low temperature freezers that use a unique, highly energy-efficient Stirling engine. Initially backed by TechGROWTH, ECOTAF and international angel investors, the company has raised two rounds of investment funding, successfully taken three new products to market, dramatically increased sales and recently won 2013 Outstanding New Product of the Year award from the International Society for Biological and Environmental Repositories (ISBER) at the group’s annual meeting in Sydney, Australia. In addition to TechGROWTH, Global Cooling has received support over the years from Ohio University’s Voinovich School, College of Business, Innovation Center and Office of Research and Creative Activity.

“Together with TechGROWTH, these groups are creating a healthy and vibrant startup and entrepreneurial community here in Athens. I see real, meaningful progress in this endeavor
and we are proud to be a part of it,” offers said Neill Lane, the president and CEO of the company.

ANEPr also fueled the creation of Ohio University’s Center for Energy, Environment and Economics (CE3), which conducts policy studies, educational outreach and data aggregation in those areas. Recently, the CE3 compiled a supply chain database of Ohio companies that support, or could support, shale development activities in eastern Ohio and provide guidance on the balance of environmental and economic impacts related to shale development.

THE NEXT BIG IDEA IS ALREADY ON CAMPUS

Weinberg and Gellermann both believe that the role Ohio University will play in the future development of southeast Ohio goes well beyond building the local economy. By tying the lessons and philosophies of OU’s economic development work back to the university’s educational mission, Weinberg and Gellermann agree that OU can foster a culture of innovation that cuts across disciplines. As Gellermann states, “We want to educate the next generation of innovation leaders, who will end up leading startups, governments, and not-for-profits.”

This goal is embodied in two OU centers whose missions are increasingly intertwined – the Center for Entrepreneurship (a partnership between the College of Business and the Voinovich School of Leadership and Public Affairs) and the Center for Public and Social Innovation.

As Weinberg sees it, the skills of entrepreneurship, particularly “lean startup” principles, can be applied to solve bigger social problems, well beyond the problem of turning a profit. “We need to create a social capital market similar to a business venture market,” he said, “and establish OU as a center for public and social innovation.” Dean Hugh Sherman of the College of Business, a founding member of the ANEP strategy, adds, “OU is instilling a culture of innovation and entrepreneurship in the region and educationally through its colleges such as the Russ College of Engineering and Technology, Arts and Science, the Scripps College of Communication and others.” OU is also working to partner with the JobsOhio regional office, the Appalachian Partnership for Economic Growth to continue building out the continuum of services and funding available in Southeast Ohio.

IT ALL STARTED WITH ANEP

Much of the current economic growth of southeast Ohio, as well as the future plans for OU’s two centers, can be directly or indirectly attributed to that initial small investment by the state. “ANEPr has fueled capacity development here,” Weinberg said. “It’s helped us attract both financial and human capital.”

Gellermann said he can already see the difference all around him. “When I go to meetings, the level of talent I see in my colleagues, in our clients, has improved so vastly over the years. Attracting and developing talent – none of this works unless you can do those two things.”

“We want to educate the next generation of innovation leaders, who will end up leading startups, governments, and not-for-profits.”

-Lynn Gellermann
Executive Director,
TechGrowth Ohio
Sinclair Leading the Way in UAS Training and Education

Community colleges play a vital role in training workers and in linking businesses to the human talent they need to grow and excel. Sinclair Community College has become a nationally recognized leader in Unmanned Aerial Systems (UAS) by collaborating with the Dayton Development Coalition (DDC) to establish the UAS Training and Certification Center and meet the future demands of this growing industry. Sinclair’s Board of Trustees recently committed an additional $1.4 million to UAS to ensure that the college has the resources it needs to move forward with its phased and deliberate plan to emerge as a national UAS leader.

A study presented at the annual Association of Unmanned Vehicle Systems International (AUVSI) 2013 Conference in August has forecast an increase in spending that will double annually to more than $90 billion over the next 10 years. With a robust history in aviation technology and development, and the proximity to Wright-Patterson Air Force Base, the Dayton region is primed to become a destination of choice for UAS research, training and manufacturing.

Understanding that a well-trained workforce is vital to attracting businesses and driving economic development, Sinclair has been working with key industry and government organizations to develop a UAS program that meets the demands of this evolving field. Sinclair’s focus is on commercial applications of UAS, from precision agriculture and geographic information systems to disaster response and search-and-rescue operations.
This summer, the college took another major step in developing the program by securing additional Certificates of Authorization (COA) from the Federal Aviation Administration (FAA). These certificates are necessary for public operation of a specific unmanned aircraft activity and a vital part of the UAS industry.

Sinclair now has COAs at the Springfield-Beckley Municipal Airport and the Wilmington Air Park, making it the first community college in Ohio to secure airspace through this process. Each UAS platform needs its own unique COA, and Sinclair currently owns multiple platforms, including two fixed-wing Vireo and two fixed-wing SPEAR vehicles, and leases one additional vehicle.

In developing the curriculum for Sinclair’s UAS program, the college sought to focus on practical real-world applications of current and emerging non-military UAS vehicle and sensor technologies, using classroom instruction, leading-edge simulation and hands-on vehicle operations. Courses currently being offered by the college include reviews of laws and regulations regarding UAS operation and the role that UAS will play in precision agriculture in the coming years.

Sinclair is also offering the first UAS Short-Term Technical Certificate in the state, a two-semester program designed for entry-level technical positions in the emerging UAS industry. The non-credit offerings will also be made available through the college’s Workforce Development Learning Management System, powered by Desire2Learn, the first implementation of this new resource. These course offerings will be available in online synchronous and asynchronous formats in addition to current traditional classroom settings, making Sinclair’s unique UAS curriculum easily accessible to markets outside the region.

With a strong foundation in place, Sinclair is now in a position to begin working with businesses from around the country to test new vehicles, sensors and equipment, in conjunction with the college’s COAs. Sinclair is in the process of pursuing additional COAs as the college continues to develop and adapt its curriculum and expertise in the UAS field to meet the needs of students and industry leaders.

“"It is truly exciting for Sinclair to be a part of this rapidly evolving industry, and we are committed to our region’s and state’s success as key players in UAS”"

-Deb Norris
Workforce Development Vice President, Sinclair Community College
The college recently hosted an aerospace company from Minnesota that needed to test out new sensors and was unable to obtain the authorization necessary to perform the flights in its home state. By working with Sinclair and utilizing the college’s COA at the Springfield airport, the company was able to conduct flights and test out sensors that are designed to provide farmers with information on crop health, irrigation needs and fertilizer application.

Sinclair is continuing to build on the success of launching the UAS program by implementing additional curriculum development, introducing a competency-based content model, and driving accreditation standards and national certifications in partnership with the FAA over the next three years. Businesses and students seeking a career in an emerging market with a bright future are beginning to see the benefits of the hard work that’s been done to get the program up and running.

“It is truly exciting for Sinclair to be a part of this rapidly evolving industry, and we are committed to our region’s and state’s success as key players in UAS,” said Sinclair Workforce Development Vice President Deb Norris. “As the industry moves forward and UAS functions and jobs continue to be defined, we look to capitalize on that research and turn it into state-of-the-art training that will yield highly skilled workers.”

OhioMeansInternships.com helps students find internships and experiential learning opportunities. The website brings together the existing online career and educational assets of Ohio and augments them with Monster career services, especially as it ties in with OhioMeansJobs.com.
Some of today’s most successful companies started out in the dorm room of a young entrepreneur. There are many factors that contribute to whether or not a business will be successful. Among the obstacles that can be most difficult for young entrepreneurs to overcome are properly pitching their ideas to investors and gaining knowledge from those who have experience in business development.

The Ohio State University’s Technology Commercialization and Knowledge Transfer Office (TCO) offers many services to student entrepreneurs by turning their inventions, ideas, technologies, and research into business opportunities and products that make an impact in the local and global marketplace.

One of the programs that really targets the pitching phase of the business development process is BOSS, a six-week pitch competition where teams pitch repeatedly to a panel of judges, receive assignments and tweaks to make on their ideas, and return to pitch again.

Pitching is about understanding what investors and future customers are most interested in, and developing a dialogue that enables young entrepreneurs to better connect with them. The panel of judges helps the young entrepreneurs craft their messages by offering helpful insight and constructive criticism.
The panel of judges, composed of industry leaders, ultimately decides which new student startup companies are the winners. It is a great opportunity for students to learn the importance of communicating their ideas to potential investors.

Lucas Williamson, co-founder of NMC Athletics Ltd., won last year’s BOSS competition and described the program as a critical part of becoming a successful entrepreneur.

“The BOSS program and the team at TCO have played a crucial role in our start-up’s development and progress over this past year,” he said. “The website they helped us design and build has drastically increased business and given our brand a credible online platform to grow from. The New Venture team has nurtured, inspired and pushed me to become a successful entrepreneur. It has been an experience I will never forget.”

The 2013 Fall BOSS Program competition is currently under way. Throughout the course of the semester, these pitch sessions take place bi-weekly, leading to a high-profile final pitch event in front of the TCO team, faculty, and the community. The field of 30 student startups will be narrowed to two winners that will begin working with committed TCO staff to accelerate and launch their startup.

For more information about the BOSS Program and The Ohio State University’s Technology Commercialization and Knowledge Transfer Office (TCO), visit http://tco.osu.edu/revolution/.
The Adult Career Center of Mahoning County Career and Technical Center continues to provide customized training for business and industry. This year, MCCTC had the opportunity to be part of the pre-hire training with Exterran, an industry leader in natural gas compression products and services, along with the Trumbull and Columbiana Adult Career Centers. The Exterran training included training sessions for human resources, shop math, blueprint reading, a basic overview of welding for non-welder positions, and training for welding certifications. The Workforce Development and Training Coordinator played a crucial role in the development of the curriculum to customize the needs of Exterran and to assist in evaluating criteria necessary for pre-employment qualifications. Instructors observed and monitored the progress of welders to determine good welds chosen to send on for certification. The Adult Career Center of MCCTC was also honored to be present at the opening ceremony and to recognize the opportunity to have Exterran in our community.

In addition, the Adult Career Center partnered with Work Advance, a workforce development model designed to help unemployed and low-wage working adults increase their employment and earnings by finding quality jobs in targeted sectors that have room for advancement within established career pathways. The training involved shop math, blueprint reading, MIG and Stick welding modules.

Training was also provided for the Boardman Township Road Department. The training encompassed pipe welding (6G) for employees to become certified. At the completion of the training, all employees did obtain certification.

Due to the demand in the machining and welding industry, the Adult Career Center at MCCTC added additional training programs for the Adult Career Certification programs for welding and machining to meet the needs of those employees that have lost their jobs and need retraining and education. Along with the advancements of employment in the manufacturing industry, the Adult Career Center has been partnering with the OH-PENN Manufacturing Career Pathways initiative. A collaborative effort has been made to inform business and industry of the effectiveness of utilizing the Act WorkKeys National Career Readiness Credential as a strategic tool for measuring necessary skills for employment, and as part of a screening process for a productive workforce.

Making connections with business and industry is a priority and a commitment for Mahoning County Career and Technical Center. The Adult Career Center connects with business and industry as a dynamic resource that creates and inspires necessary curriculum and training for students and industry needs, leading to a productive workforce and employment.
First Miami Preparing Students for Careers and Financial Responsibility

Student-led credit union offers experience and life skills

Recognizing that the financial and career choices made—and habits developed—during college have an outsized impact after graduation, parents and students are increasingly focused on financial responsibility and skills development as critical parts of higher education.

Miami University’s First Miami Student Credit Union, however, has been focused on these important issues for 25 years and from a unique perspective. First Miami is not just another financial institution serving a university community. It is not just a place where students can sign up for accounts, manage their money, and maybe get an internship or part-time job.

At First Miami, one of only three completely student-run credit unions in the country, the students are the institution. First Miami is an entirely volunteer, student-run financial institution, from the chief executive officer to the daily tellers.

Since its founding in 1988 by students and members of the Associated Student Government (ASG), Fist Miami has grown into a thriving institution that not only provides needed products and
services to the university community, but also focuses on educating its members on financial literacy and responsibility.

Students for Good Credit (SFGC), for example, provides financial education seminars to various organizations, focusing on understanding, building, and maintaining strong credit and the basics of everyday financial matters. These seminars are presented by students, for students, with the goal of guiding students into financial independence.

Nicholette Cameron, a senior majoring in business economics who serves as vice president of external relations, said First Miami is filling an important need by focusing on financial literacy and responsibility.

“We have found that many seniors graduate and land great jobs but still struggle to get apartments or buy cars because they didn’t manage their finances or build good credit,” Cameron said. “There was a gap on campus that wasn’t being filled. A personal-finance oriented class was not available, even for business majors.”

Beyond financial education, First Miami’s unique structure and perspective offer great on-the-job learning opportunities. Students can gain hands-on business experience while working in an enterprise that manages more than $1 million in assets.

Quincy Walker, a junior from Hamilton majoring in computer science, said working at the credit union has changed his perspective on business. Walker, who serves as vice president of technology, had assumed he would take his high-tech computer skills to work in the public sector, but his work at First Miami changed that.

“Seeing the credit union’s operations first hand opened my eyes to the opportunities business affords. Now, I could really see myself working as VP of technology in the private sector,” Walker said.

First Miami offered Walker an opportunity that no other job or internship could: immediate high-level experience. In his role as vice president of technology, Walker was tasked with projects from web development to database administration and online security.

“Working at another company I would have to start at the bottom and work my way up over the course of years. At First Miami I was able to jump in immediately and work to build a team while creating policies and procedures that will continue long after I am gone,” said Walker. “It was an amazing opportunity for a freshman just out of high school.”

Working as part of a team that is actually running a business is very different from classroom knowledge. “It is one thing to learn something in class,” said
Cameron. “It is very different to do that work as part of a real business; it changes the way you understand your responsibilities and the very real impact of not doing the necessary work.”

This type of unmatched experience has resulted in a 100% job placement rate for graduating interns, many of whom now work for Fortune 500 companies.

For its customers, First Miami is also an ideal choice. It is conveniently located in the center of campus, one of only two financial institutions on the Oxford campus, and since it is student-run it is easy to find staff members with the experience and knowledge students are seeking.

Dan Krancevic, chief operating officer and a senior business economics major, said he believes First Miami’s unique structure makes a difference.

“The fact that we are students and our market is students gives us an advantage,” he said. “Our customers are our peers; we see them in class and around campus so they are comfortable interacting with us. And in providing services, and especially in our marketing, we are able to tap into what students really want and need.”

Krancevic also emphasized the combination of real-world experience and skills development that is so critical for success.

“Having leadership experience at the credit union stands out on my resume; it grabs the attention of recruiters. But developing critical thinking and problem solving skills in the course of helping operate an actual business is what stands out the most,” he said.

First Miami Student Credit Union offers a unique educational opportunity even as it provides a valuable service to the community. In doing so it offers students the type of skills and experience our economy requires while preparing them for life after college.”
A special thank you to all of those who contributed to this issue:

(Mahoning County Career and Technical Center) Mary Mihalopoulos (The Ohio State University) Melanie Baker and staff, Lucas Williamson (Ohio University) Dr. Mark Weinberg, Lynn Gellermann, Ian Bowman-Henderson (Sinclair Community College) Ryan Honeyman, Adam Murka (Miami University) Randi Thomas, Nicholette Cameron, Quincy Walker, Dan Krancevic

Thank you for reading ConnectED. We would appreciate any suggestions or ideas to improve this newsletter.

We welcome story ideas, links to articles of interest and news releases.

Please send story ideas to Jeff Robinson at jrobinson@regents.state.oh.us