OHIO UNIVERSITY

FOSTERING AN INNOVATION ECOSYSTEM

Ohio University has a strong commitment to the economic development of the state of Ohio and to helping the public benefit from new knowledge and innovations emerging from its campuses. Over the last several decades, the University has built a program of applied research, technology commercialization, small business incubation, and entrepreneurship that has become a powerful force for stimulating the economy in southeastern Ohio. Ohio University regularly receives awards and recognition from state, national, and international organizations for its innovative strategy of partnering with other public and private entities to spur the growth of new jobs, technologies, and businesses in its home region. And while the University has made great strides in fostering economic development, it also continues to create new ways to expand the reach of the innovation ecosystem.
For all entrepreneurs in southeastern Ohio—whether emerging from the Ohio University campus or the community—the innovation ecosystem offers many opportunities for support. Any entrepreneur working with one of these entities can easily access the services of the other programs as needed.
HOW WE SUPPORT OHIO UNIVERSITY INVENTORS AND STUDENTS

For faculty, staff, and students, the Technology Transfer Office is the key partner in identifying innovations that should be patented and licensed to established and startup companies.

- **FAST FACTS:** OHIO is in the top tier of universities nationally for research return on investment. It received more than $90 million in royalty income from research licenses between FY 04 and FY 17, primarily from a license to the Pfizer corporation for a growth hormone antagonist. The technology became the basis for a pharmaceutical treatment for individuals with acromegaly, a form of gigantism. OHIO has a portfolio of more than 250 active issued U.S. and foreign patents as of February 2018. Ohio University is one of 11 higher education institutions that developed the new Midwest Executives-on-Roster (XOR) platform, an online portal that matches entrepreneurs with university technologies and startup companies.

The Industry Partnerships Office fosters and strengthens connections to the private sector in the areas of research, industry analysis, fundraising, and student opportunities.

- **FAST FACTS:** The Industry Partnerships Office identified a funding opportunity through the Advanced Manufacturing Program at the Ohio Development Support Agency that resulted in a collaborative research funding award of more than $600,000 and a new partnership between the Russ College of Engineering and Technology and four companies. In addition, the office found a new client for MTL, a biotechnology startup company at the Innovation Center, that resulted in substantial revenue growth and the creation of four new full-time research jobs; three of the four hires were Ohio University graduates. The client relationship with MTL is expected to last multiple years.
The Edison Biotechnology Institute pursues basic and applied research on health and medical disorders, with a focus on developing innovations that can benefit society through the creation of technologies and companies. A principal investigator with 25 years of pharmaceutical industrial experience also provides business coaching for pharmaceutical and medical device startups.

- **FAST FACTS:** The institute has launched a natural products research and commercialization initiative focused on studying the effectiveness and safety of alternative therapies to conventional medical approaches for a wide variety of diseases.

Ohio University is one of six founding higher education institutions of the state of Ohio's I-Corps@Ohio program, which is designed to help faculty and graduate students develop their technologies for the marketplace and launch startup businesses.

- **FAST FACTS:** Seven Ohio University teams have been chosen to participate in the program and have developed innovations in medical devices, drug discovery, and heat exchangers for electronic and mechanical systems.

Ohio is one of four major Ohio universities that led the design and development of the Ohio Innovation Exchange (OIEx), a new research expertise portal created to bolster collaborations between universities and industry and further assist technology commercialization across the state of Ohio. This innovative knowledge management framework provides a single point of search for online users looking for faculty experts, research technologies, and shareable equipment across multiple universities. Sponsored by the Ohio Department of Higher Education, OIEx will help businesses gain access to high-end equipment, allow industry to tap into the next generation of employees, forge new R&D partnerships, strengthen industry-sector supply chains, and ultimately stimulate job opportunities across Ohio.

- **FAST FACTS:** The site went live in 2018 with more than 8,250 faculty profiles and 900 university resources.

The Center for Entrepreneurship, a joint program of the College of Business and the Voinovich School of Leadership and Public Affairs, is a University-wide resource that supports student and faculty entrepreneurs and innovators in all academic colleges. The center offers a curriculum of entrepreneurship and experiential courses, workshops, mentoring, clubs, guest speakers, and special events designed to highlight career and entrepreneurial opportunities in a wide array of industries—all to encourage and guide student entrepreneurs.

As of April 2018, the center has approximately **110 majors and 68 students** pursuing the certificate program. In addition, **more than 400 students** are enrolled in entrepreneurship classes. During the 2017-2018 school year, the center hosted six events that attracted almost **1,400 attendees** representing most of the University’s academic colleges.

Undergraduate students spearheaded the development of CoLab, a campus-wide initiative to provide a central space and programming for student entrepreneurs and innovators. The University has committed **$1 million** towards the renovation of a space in Alden Library for the project, slated to open during the 2018-19 school year.

The new Bobcat Seed Fund helps students pay for certain goods and services associated with starting a new business—such as legal and accounting services, software development, and prototype creation—and also supports a mentor and partner network for student and local entrepreneurs. In addition, the center works with faculty members from colleges across campus to create a network of "entrepreneurial champions" who incorporate entrepreneurship and innovation into existing or new courses.

- **FAST FACTS:** The center earned the **2017 Deshpande Symposium Award for Excellence in Student Engagement in Entrepreneurship.** Professor and entrepreneurial leader Luke Pittaway was named the **2018 Entrepreneurship Educator of the Year** by the United States Association for Small Business and Entrepreneurship, a lifetime achievement award. **More than 700 individuals attended the Business of Games Summit,** hosted by the Center for Entrepreneurship and Immersive Media Initiative in September 2017. The event highlighted the growing digital gaming industry in Ohio.
HOW WE SUPPORT REGIONAL AND UNIVERSITY ENTREPRENEURS

TechGROWTH Ohio, an Ohio Third Frontier Entrepreneurial Services Provider program of the Voinovich School of Leadership and Public Affairs, helps technology companies take their ideas to market, by enabling access to experts for every stage of business development and aligning resources to accelerate commercialization.

• FAST FACTS: Since its launch in 2007, TechGROWTH Ohio has served 2,069 startup entities, which have generated more than $462 million in economic activity in the form of new sales, external capital raised, and federal research grants awarded. TechGROWTH Ohio also has made nearly $5 million of GROWTH Funding awards to 92 companies and invested nearly $7 million of seed-stage capital in 15 companies. Nearly 700 jobs have been created or retained with an average annual salary approaching $57,000, compared to Ohio’s average per capita income of nearly $28,000. TechGROWTH Ohio is now a $52 million public private partnership with Ohio Third Frontier, Ohio University, and private investors. Every $1 invested now generates $21 in return.

The Innovation Center, Ohio University’s small business incubator, provides business coaching, education, and leased and shared spaces to its clients. Additional services and resources include prototype development, biotechnology expertise, and equipment.

• FAST FACTS: The Innovation Center supported 269 jobs that generated an estimated $9.9 million in employee compensation in Athens County in 2017. The figures represent the number of jobs created directly, indirectly, or induced by the Innovation Center businesses, which also generated an estimated $1.5 million in state and local tax revenues in 2017. In 2018, the Innovation Center also acquired dozens of pieces of biotechnology laboratory equipment donated from Quidel Corporation and an ultra-low temperature (ULT) freezer manufactured locally by Stirling Ultracold, a Division of Global Cooling, Inc. The equipment has been used by incubator startups in the areas of diagnostics, drug development, and medical devices.

The Innovation Center hosts events such as Startup Weekend Athens for regional and university entrepreneurs.
HOW WE SUPPORT REGIONAL AND UNIVERSITY ENTREPRENEURS

The Ohio University Small Business Development Center, a program of the Voinovich School of Leadership and Public Affairs, offers business assistance in all areas of start-up and operations, including building businesses, improving competitiveness, increasing revenues, solving problems, or managing the next stage of growth.

• FAST FACTS: The center, which serves nearly 400 clients in a 12-county region of southeastern and eastern Ohio, was named the Small Business Development Center of the Year in Region V by the U.S. Small Business Administration.

The Ohio University Procurement Technical Assistance Center, a program of the Voinovich School of Leadership and Public Affairs, assists Ohio businesses seeking to sell goods and services to local, state, and federal government.

• FAST FACTS: The center helped 709 businesses in 55 Ohio counties win 7,807 government contracts worth more than $500 million, which contributed to 11,847 jobs being created or retained in FY 2017.

The LIGHTS Regional Innovation Network provides expertise, training, and resources, to the workforce, entrepreneurs, companies, and local communities in a 28-country region of Ohio, West Virginia, and Kentucky.

• FAST FACTS: LIGHTS and its regional partners have assisted 90 startups and small business clients. Those businesses employ 122 people with total annualized wages of $2.83 million. The businesses also have achieved $50.9 million in revenue and have attracted $22.9 million in private investment. LIGHTS hosted 298 entrepreneurship and making events with 4,094 participants. In May 2018 LIGHTS and the Innovation Center acquired new design and product development equipment—3D printers, a mill and vacuum former—for the incubator’s Additive Manufacturing Lab.

The Social Enterprise Ecosystem (SEE Appalachia), a program of the Voinovich School of Leadership and Public Affairs, supports social enterprises in a 10-county region in Ohio and West Virginia. Social enterprises combine the social mission of a nonprofit with the market-driven approach of a business, with the goal of achieving financial and operational sustainability throughout the enterprise’s life cycle.

• FAST FACTS: SEE Appalachia was founded in fall 2017 with support from a $300,000 grant from the Appalachian Regional Commission. In partnership with the Foundation for Appalachian Ohio and the Parkersburg Area Community Foundation, SEE Appalachia already has worked with more than 50 clients, creating more than 20 jobs and leveraging more than $3.8 million in private investments.

The Ohio Innovation Fund (OIF), is a venture capital firm that provides capital and expertise to early-stage Ohio companies. Ohio University is one of the founding investors in the fund, along with Ohio State University and Kent State University, as part of its commitment to innovation in the state. OIF fosters innovative companies that emerge out of research conducted at Ohio University, and serves on the Ohio University Selection Committee for TVSF Phase 1B funding. In addition, its portfolio companies provide internship and career opportunities in the high-growth industries of the future for Ohio University’s students and alumni, with over 100 positions open in early 2018. Universities including Harvard, Caltech, UCSF, Case Western, Rochester, Duke, MIT, Emory, and Northwestern are customers of OIF’s portfolio companies.

• FAST FACTS: As of mid-2018, the OIF has invested in 12 businesses throughout the state, including two Athens-based companies now approaching 100 employees each. OIF’s companies doubled combined revenues from 2016 to 2017, and are growing at a similar pace in 2018. They have gained national attention and awards from the Wall Street Journal, CNN, Gartner, and Forbes, among others, and a majority of the Fortune 500 are their customers. Their strategic and medical trial partners include Facebook, Microsoft, SAP, and Mayo. More than $150 million has been co-invested into its 12 companies, with approximately 80 percent coming from out-of-state sources. A majority of OIF’s portfolio companies are rated as one of 2018’s Top 50 Start-Ups.
ENTREPRENEUR SUCCESS EXAMPLES

Three Firefighters: Based in Zanesville, Ohio, the company developed a product called "DoorBoss" to help firefighters safely manage air flow in a burning building. TechGROWTH Ohio helped the startup company develop and test the product prototype, create a business plan, and network with partners, in addition to providing funding. The company also is working with the LIGHTS program and the Spark 560 business growth and development center in Zanesville on the official 2018 product launch.

Burley Clay: The company, which makes clay products such as garden pots and birdbaths in Roseville, Ohio, worked with the LIGHTS program and the IDEA Lab at Zane State College to incorporate 3D printing techniques in their product design process. Using the new technology has helped the company save money, expand production capabilities, and reach new markets.

RXQ Compounding: This FDA approved 503B compounding outsourcing facility was founded at the Innovation Center and supported by TechGROWTH Ohio. The company, which compounds drugs for the medical and veterinary fields, announced $7 million in Series A funding, led by the Ohio Innovation Fund, in July 2018. RXQ Compounding plans to move into a 35,000-square-foot-facility in Albany, Ohio, upon graduation from the business incubator, employing hundreds of people.

Global Cooling: This company, based in Athens, Ohio, develops ultra-cold freezers for the science and medical industry. It has been supported by TechGROWTH Ohio and the Ohio Innovation Fund. In July 2017, the company announced a new partnership with the U.S. Environmental Protection Agency’s ENERGY STAR® program. It was also named “2017 Equipment, Instruments and Chromatography Supplier of the Year” by VWR, a leading laboratory product provider.

Diagnostic Hybrids: A spinoff of Ohio University biotechnology research, this company was an Innovation Center client that established headquarters in Athens, Ohio. By 2010, it employed more than 200 staff members and was a market leader in the development and distribution of rapid diagnostic kits for a broad range of medical issues. When the Quidel Corporation purchased the company that year, the Ohio University Foundation, a major stakeholder, received $35 million.

The Women’s Recovery House: Five women with backgrounds in health sector employment, all affected by addiction personally or in the family, sought the Social Enterprise Ecosystem (SEE) team to help realize their vision for a local women’s recovery residence. The Recovery House team welcomed SEE’s basic social enterprise start-up services toolkit, including identification of Recovery House’s problem/solution statement, value proposition, target beneficiaries, and proposed activities and strategic partners; identification of costs, revenue, and comprehensive financial modeling; and a fundraising efficacy modeling and tools. As a direct result of SEE assistance, the Women’s Recovery House received more than $265,000 in donations and State of Ohio grant assistance, with additional resource acquisition underway.
Ohio University students developed a new student innovation hub called CoLab, which opened in Alden Library in fall 2018.