Building an Ecosystem of Innovation in Ohio and Beyond
April 5-6, 2023, Coral Gables, Florida

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http://OhioInnovationExchange.org
Imagine if the research and innovation resources of Ohio’s Universities were leveraged to enhance business and industry collaboration?

What would that look like?
Timeline

• 2015, Governor’s request
• Live in 2018
• 2023, ten institutions and growing
Research Informs Our Partnership Strategy
OIEx Viability Study

• Conducted by Iryna V. Lendel
  • Then - Research Associate Professor, Director Center for Economic Development, Maxine Goodman Levin College of Urban Affairs, Cleveland State University, Cleveland, OH
  • Now – Senior Director of Regional and Economic and Community Development, Kalamazoo, MI

• Understand “Best Practices of Creating Innovation Exchange Web Portal Across the States”
Key Discoveries

- Web portal as a public good to enhance innovation exchange among universities, companies, government, and scientists
- Collaboration between universities and industries to catalyze economic development
  - Employment growth
  - Expanding research dollars
  - Enhancing economic output
- Marketing respective regions for research, business, and living
Where OIEx is Different?

• Diverse feedback
  • Industry
  • Academics
  • Government Agencies and NGOs
  • Economic Development Offices
  • Trade Associations

• Goal is to push Ohio’s innovation and commercialization forward

• Dedicated resources for adaptability

• Endless possibilities; talent and workforce development, matchmaking services, entrepreneurs to established start-ups, etc.
Partnerships Builds Our Ecosystem
National Science Foundation (NSF)

• Directorate for Technology, Innovation and Partnerships (TIP) established in March of 2022

• Focus on use-inspired and translational research, fostering innovation and technology ecosystems throughout the nation, with the explicit goal of creating opportunities for everyone everywhere, e.g., Regional Innovation Engines

• The U.S. Congress passes the "CHIPS and Science Act," authorizing the establishment of the TIP directorate and charging it with the critical mission of advancing key technologies and address pressing societal and economic challenges
NSF announces nearly $50 million partnership with Ericsson, IBM, Intel, and Samsung to support the future of semiconductor design and manufacturing

January 26, 2023
- Leading-edge semiconductor site
- Will span more than 1,000 acres in New Albany (Licking County)
- Initial investment of $20B+ for 2 new fab modules
- Potential to grow to up to 8 fabs
- The biggest private investment in state history
- More than 3,000 Intel jobs
Intel Invests $100 Million in Ohio and National Semiconductor Education and Research

- $50 Million in Ohio
- $50 Million + $50 Million Match in the U.S. (NSF)
Partnerships with JobsOhio

• Series of virtual events featuring Ohio’s partnership with Intel’s Semiconductor Research and Education Program, https://highered.ohio.gov/initiatives/workforce-development/oiex

• Features awarded/funded researchers and their university partners

• Showcase each region of the state including the innovation ecosystem
Intel® Semiconductor Education and Research Program for Ohio

Phase one of Intel’s $50 million investment in Ohio higher education institutions:

- **$17.7M** in funding
- **8** projects by leading Ohio institutions
- **2,300+** scholarships provided
- **9,000** students educated
- **80+** collaborating higher education institutions
JobsOhio was built to help reverse those job losses in Ohio.
JobsOhio represents the state of Ohio to the world of investors with industry-specific expertise, including the following sectors:

- Advanced Manufacturing
- Additive Manufacturing
- Aerospace & Aviation
- Automotive
- Advanced Mobility
- Energy & Chemicals
- Financial Services
- Insurtech
- Food & Agribusiness
- Healthcare
- Gene Therapy
- Logistics & Distribution
Three Innovation Districts focus on healthcare, life sciences, and technology.

Combined $3 Billion Investment

Creates sustainable ecosystems of ideas, infrastructure, and talent.

Innovation Helps Fuel Ohio’s Economy
From inspiring new STEM graduates to creating new jobs, investment in Innovation Districts is making a significant economic impact.

- $300M Invested by JobsOhio
- 60K Estimated new jobs created
- $9B Estimated annual economic impact to the state
Cincinnati Innovation District

Institutional Partners:

- University of Cincinnati
- Cincinnati Children’s Hospital

Combined $450M in Research
Columbus Innovation District

Institutional Partners:

The Ohio State University

Nationwide Children’s Hospital
Innovation News in Cleveland

Case Western Reserve University launches Illinis

$100B+
biotech industry

Cleveland Innovation District

Institutional Partners:

Cleveland Clinic

Cleveland State University

Case Western Reserve University

MetroHealth

University Hospital
Partnerships within Higher Education
Partner Universities

1. Case Western Reserve University
2. The Ohio State University
3. University of Cincinnati
4. Ohio University
5. University of Akron
6. Cleveland State University
7. University of Dayton
8. Northeast Ohio Medical University
9. Ohio Supercomputer Center
10. Kent State University (Summer 2023)
Use Cases: University Offices & Programs

- Technology Licensing Office
- Corporate Partnerships
- Corporate Relations
- Research News & Communications
- Research Development | Proposal Teams
- New Research Initiatives
- Grand Challenges/Discovery Themes
- Institute and Center Support
- STEMM Disciplines | Department and Faculty Websites
- Reporting
Top Profiles Campaign – Influence is a Strategy!

• Identify profiles in the top 1% of pages views
• Engage with faculty to discover why, e.g., notable publication, new grants, events, graduate student postdoc recruitment, industry, licensable IP, industry contracts, etc.
• Build awareness of the OIEx, increase advocacy for OIEx, and demonstrate impact to research and academic leaders
Partner Universities – Influence is a Strategy!

Ohio Innovation Exchange

1K followers

The Ohio Innovation Exchange celebrates the accomplishments of these six professors, as they have recently been named 2022 AAAS Fellows. Thank you AAAS!

Ohio Innovation Exchange

1.166 followers

This weekend, the CBS News program 60 Minutes is scheduled to feature groundbreaking work led by Case Western Reserve University researchers Dustin Tyler and A. Bolu Ajiboye—biomedical engineering pioneers who are bringing...
Build Ecosystem with Strategic Partnerships

Ohio Trade Associations
State Agencies
Non-Governmental Organizations
Professional Associations
Ohio Trade Associations Partnerships with Emerging Businesses/Industries

- OhioX – connects, promotes, and advocates for the technology community.
- Ohio Life Sciences - driving innovation and economic growth in biotech
- Ohio Manufacturing Association – protect and grow manufacturing
- Ohio Association of Career and Technical Education – vocational and career tech centers, 90+ career centers in Ohio
State of Ohio Agencies & Programs

- Ohio Department of Higher Education
- Ohio Department of Development
  - Ohio Manufacturing Orgs
  - Small Business Development
- Ohio Department of Commerce
  - International Trade Association
- Governor’s Office
  - Workforce Transformation
  - Innovate Ohio
  - Ohio IP Promise
Non-Government Organizations

• JobsOhio – focused on 10 key industry sectors to grow economy
• Parallax – research institute addressing global challenges with government, academic institutions, and industry clients
• Ohio Aerospace Institute - accelerate Ohio’s aerospace workforce development
• The Ohio Hemp Company – bioscience research station, connecting farmers to plant sciences, e.g., applications in carbon sequestration, concrete, batteries/EVs, nutraceuticals, etc.
Professional Associations

- National Organization of Research Development Professionals (NORDP)
- University Industry Demonstration Partnership (UIDP)
- University Industry Innovation Network (UIIN)
- AUTM - educate, promote and inspire professionals to support the development of academic research that changes the world and drives innovation forward
Partnerships with Emerging State Initiatives
Advanced Air Mobility (Aviation and Aerospace Sectors)

- 5th largest veteran population in the U.S.
- Fly Ohio Initiative (Ohio Federal Research Network, JobsOhio, Ohio Department of Transportation, Dayton Development Coalition, City of Springfield, etc.)
- Commercial, Voyager NanoRocks Project, located at Ohio State, is a space laboratory in collaboration with Cleveland’s NASA Glenn Research Center and The Ohio State University
Advanced Air Mobility

- $13B – Projected Ohio economic impact by 2045
- 15,000 – New Ohio Jobs
- $6M grant – National Advanced Air Mobility Center, Department of Defense; leverages proximity to Wright Patterson Airforce Base
- Healthcare Partnerships – patients, materials, and organs and tissue distribution, etc.
AIRBUS JOINS STARLAB – GEORGE WASHINGTON CARVER SCIENCE PARK

TERRESTRIAL ANALOG FACILITY
Starlab - George Washington Carver Science Park – Terrestrial Analog Facility
INTRODUCING STARLAB

Nanoracks spent the last decade mastering the commercial operation of space stations, meeting customer demand, charting market growth, and self-investing in private hardware on the International Space Station.

Based on this experience, and to assure there is no Space Station gap, Nanoracks proudly introduces Starlab, a continuously crewed commercial station dedicated to conducting advanced research, fostering commercial industrial activity, and ensuring continued U.S. presence and leadership in low-Earth Orbit.

INFLATABLE HABITAT

Human Rated
Initial capacity for up to six astronauts or continuously hosting 4

Customer Composition
NASA, other countries space agencies, tourists, researchers, students, and commercial companies will use Starlab.

George Washington Carver Science Park
Democratizing access to space and facilitating microgravity research

Size
350 cubic meters of volume in one launch. Half the size of a 747 fuselage
George Washington Carver Science Park

### Founding Partners

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<th>Partner</th>
<th>Role</th>
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<tr>
<td>ZIN Technologies</td>
<td>Component Developer</td>
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<tr>
<td>Universities Space Research Association</td>
<td>Director, GWC Park</td>
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<tr>
<td>Ohio State University</td>
<td>Director, University Consortium &amp; Terrestrial Analog</td>
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<td>International Association of Science Parks</td>
<td>Global Engagement</td>
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<td>DreamUp</td>
<td>STEM Education Advisor</td>
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<td>StarLab Oasis</td>
<td>AgTech Advisor</td>
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The Ohio Innovation Exchange Facilitates Impactful Partnerships

- Career Fairs, Internships & Co-ops
- Industry Liaisons Facilitate Research
- Access to Shared Equipment, Resources, Centers & Services
- Licensable IP, Commercialization & Partnerships
- Strategic University & Industry Partnerships