

The University of Akron (UA) Biomimicry Research and Innovation Center (BRIC)

Vision - Innovation inspired by nature incubates / catalyzes regional growth, engagement, relevance

The unparalleled diversity of processes, materials, and resources, in the natural, world offer design solutions for societal challenges ranging from medicine to traffic to economy to sustainable urban growth. But successful translation of designs from nature requires a new way of thinking about the relationship between university research, education and community partners such as government and industry. We plan to leverage university expertise in biomimetic research to collaborate with regional partners who have developed a business model using Biomimicry as the foundation for the Great Lakes region to become the world's leader in sustainable innovation, both economically and educationally, powered by technologies inspired from the natural world around us.

Goal - Create an internationally recognized center for biomimicry research, design, teaching and training that is first to market, innovative and without peer in scope and capacity

Objectives

- Enhance / expand capacity for biomimicry research and teaching
- Strengthen regional partnerships through collaboration in research, education and business
- Create a K-PhD biomimicry education and research 'ecosystem'
- Use the Biomimicry Center to extend the "Akron Model"



Executive Summary

UA, with the collaboration of members of the Innovation Alliance and other Northeast Ohio (NEO) and international and entrepreneurial organizations, is well positioned to create a globally recognized center for innovation, based on the emerging paradigm and discipline of biomimicry. We describe how we will **organize, fill gaps, and extend** existing **biomimetic research capacity**, harness the power of **collaboration with NEO business** visionaries, who recognize the potential of biomimicry, and use the unique platform of the **Integrated Bioscience** program to bring together scientists, engineers, business and art and design in the creation of a first of its kind center for biomimicry research and education. The center captures these resources and is shaped by, and operates according to, fundamental principles of Vision2020: **Inclusive student access and success, UA serves as catalyst and driver of regional economic development, programs are place-based and globally relevant,**

mission and activities foster entrepreneurial spirit and collaborative interactions. Our proposal focuses on strategic investments over a three-year time period. However we will articulate that this three-year period relates directly to Vision 2020. Over the first two years, a firm foundation for the center will be established, followed immediately by launch and formal engagement of the center with NEO regional economic development efforts in years three – five. The three-year plan will culminate with a mature biomimicry research and education center forming the core of a biomimicry innovation and economic development ecosystem of global significance within 10 years.

