

# ED Now Feature: How Michigan Harnesses University Brainpower to Boost Startups

**tags:** [startups](#), [technology commercialization](#), [universities](#), [innovation & technology](#)

Eli Dile on Monday, February 19, 2018 at 9:05:00 am

*By Paula Sorrell, director, Economic Growth Institute*

The first thing people think of when you mention “Detroit” or “Michigan” is the auto industry. What typically isn’t top of mind are growing tech companies – more than 3,000 of them, focused on everything from fuel cells to sensors and software to medical devices.

These fledgling technology startups have a friend in the Economic Growth Institute (EGI), an academic-economic development partnership operating out of the University of Michigan. Established six years ago with funding from the Michigan Economic Development Corporation, EGI’s Innovation Services identifies budding tech companies across the state and offers them a range of growth-enabling services.

Though access to finance is a commonly cited need, a company has to show two things before funding discussions can begin: that 1) the product works, and 2) the customer will pay for it. Failure to meet these conditions has meant the downfall of many promising enterprises.

That’s where Innovation Services comes in. Here’s how.

## Getting the product to work

Often when a brilliant scientist or engineer develops a new product, he or she does not have all of the technical skills necessary to take that product from vision to reality. For example, a flexible-printed electronic antenna, initially for use in the automotive industry, required further mechanical and materials-engineering work to finish the product. The expert and the lab were found a couple of hours away at Western Michigan University in Kalamazoo.



*Photo: Mac Arthur Corporation*

“The program enabled Mac Arthur to explore technical and manufacturing feasibility of two customer-driven market opportunities,” explained Mac Arthur Corporation CEO Christie Wong Barrett. “Feasibility studies were presented to a major tier-one customer in order to shape a business case for potential investment in this area. EGI enabled new capabilities for our R&D project scoping, management, and execution.”

To finish the “last mile” of technical work on a product before it’s taken to market, the Economic Growth Institute works with 15 public universities to do the following:

1. define the technical work that needs completion,
2. identify the expert and lab that can deliver,
3. negotiate a reasonable rate for project work,

4. combine state-supported funds and matching money from the company to cover lab fees and other expenses, and
5. see the project through to completion.

## Getting the customer to buy

Technology companies are founded by technical people, meaning business experience – especially marketing and sales skills – is typically lacking. Even for those startups with business development experience, it can be exceedingly difficult for a scrappy little nobody to get the attention of a large potential customer. Sometimes, the biggest challenge is just getting a prospect to answer a phone call or email.

Experience shows the most common needs for tech startups are:

- market research that indicates where sales opportunities exist,
- a structured customer-discovery process,
- marketing collateral that presents a professional appearance, no matter how small the company,
- assistance vetting marketing-service providers,
- sales coaching, and
- introduction to potential customers.

For example, Akervall Technologies developed the SISU mouthguard for use by surgery patients during intubation. It occurred to the company that a new but similar product might work well as protection for people who grind their teeth at night.

“We used our kids’ field hockey team as a test market,” said CEO Sassa Ackervall. “Before meeting with the Economic Growth Institute, the SOVA [non-surgical] mouthguard constituted less than 10 percent of total sales. Through the program, we realized there is a bigger market for the mouthguard and gained confidence to invest more in this product.”

The Economic Growth Institute’s Innovation Services team collected market intelligence to narrow in on a customer profile and supported website development that targeted the company’s ideal customer base. The company subsequently experienced a 30 percent increase in revenue and has since gone on to release more products and build partnerships with large sporting equipment companies.



*Photo: The SOVA night guard, Ackervall Technologies*

## Behind the scenes, partnerships enable success

It's our high-performing network of universities and other stakeholders that enables us to have such a strong impact. Although the Innovation Services suite of programs is run out of the University of Michigan in Ann Arbor, many projects are referred to other universities and labs around the state with specialized expertise.

# "Technology companies are founded by technical people, meaning business experience – especially marketing and sales skills – is typically lacking."

Local economic development organizations are excellent feeder groups for our network and are among our 30-plus ecosystem partners we actively engage with. To keep this network humming, we hold regular meetings with EDOs, incubators, Small Business Development Centers, and universities. We meet quarterly to provide updates on upcoming rounds of funding, any eligibility changes, and to work through issues that come up. After seven years of collaboration, this ecosystem runs like a machine.

Success begets success, but there is also a need to educate the next generation of entrepreneurs. Every project involves students in order to increase their exposure to the many ingredients that enable a company to launch and grow.

Of course, there is a screening process, out of which about 40 percent of companies and projects make the cut. As Michigan's tech economy continues to grow, demand for Innovation Services has increased three-fold since its inception in 2012. In that time, more than 200 new products were launched by small and medium-sized companies, and the program has helped create 4,535 tech jobs and \$223.8 million in tax revenue for the state. The original program investment was \$5.6 million – a 40.3 return on the state's investment.

Still, the value of these investments is not always understood. Decision-makers will often back away from tech because they don't understand it. This puts even the most successful technology-support programs at risk of budget cuts.

It's important for everyone to understand these are not line-item expenses in a budget, but rather a source of revenue. Even when funding seems secure, it's essential to communicate successes to overcome short-term thinking. Where support is consistent and understood is where you see the most success, but that takes a champion, or champions, to win and sustain support.

*The Michigan Economic Growth Institute Innovation Services received a Silver Award from IEDC's 2017 Excellence in Economic Development Awards in the Entrepreneurship category.*



*The Innovation Services staff and students display their 2017 IEDC Excellence in Economic Development Award.*