

# THE (NOT SO) SECRET WORD: INNOVATION

## USI Delivers Commercialization Potential

Companies in southern Indiana and students at the University of Southern Indiana (USI) are mutually benefitting from the university's Technology Commercialization Academy (TCA), a 12-week opportunity for students to help bring new technology to the market.

Sixteen students each year are selected to participate in the program, which gives them experiential learning opportunities and a chance to network with local companies. Businesses can utilize the TCA resources to work out new technologies or innovative ideas.

The program – which initially partnered with Naval Surface Warfare Center Crane in 2012 and grew out of the university's co-op initiative – is part of the USI I-69 Innovation Corridor. Five years in, the TCA is continuing to adapt new methodologies and reach out to regional companies, while focusing on student learning opportunities.



Students participating in the Technology Commercialization Academy at the University of Southern Indiana work with local companies to develop and market ideas and technologies.

“Tech transfer is a challenging endeavor in the best of circumstances and we are experimenting on ways to facilitate it,” offers Dr. Jason Salstrom, technology commercialization manager. “The mission was on experiential learning opportunities for students and the ambitious goal of facilitating students launching new start-ups on Crane technology.”

Today, the partnerships have expanded past just Crane and into the community and other businesses. The focus has “pivoted” to helping existing companies, Salstrom explains.

“In surveying the region, there are a number of companies that have ideas, but they're not sure how to move them forward, or they don't have necessarily the bandwidth or market research. So, we've pivoted toward helping these types of companies launch new ventures themselves, which has more potential for impact than the high risk of launching student start-ups,” he advises.

Salstrom acknowledges that the USI program is unique, due to the university's smaller size.

“Normally at a school, the job would be to transfer university research into commercial opportunities. We're not a big research university; we're not developing much for commercial potential. My job is a little turned inside out. I look outside into the region for technology that I can use for students to have opportunities to work on real-world technologies,” he explains.

TCA graduates are finding jobs and, importantly, staying in the region after graduation.

As a new offering of the TCA, Salstrom is retaining four of the “best and brightest” TCA graduates to continue to work for him and with clients on a year-round basis. And the 2017 TCA will once again partner with Crane, as well as the Battery Innovation Center, to “discover commercial potential for Crane technology in the energy sector,” Salstrom adds.

**RESOURCE:** Dr. Jason Salstrom, University of Southern Indiana Technology Commercialization Academy, at [www.usi.edu/tca](http://www.usi.edu/tca)

## Alumni Inventions on Display at Trine

The Molitor golf ball, a ground fault circuit interrupter and an in-dash car radio.

These dissimilar inventions have one thing in common: All are patents held by graduates of Trine University in Angola.

Plaques displaying the work of patent holders – more than 200 alumni, representing over 1,000 patents – are now prominently on display at the new Hall of Innovation at Trine.

Jason Blume is executive director of Innovation One, the university's incubator for business, innovation and design. The Hall of Innovation, unveiled in October 2016, is another vehicle to show potential students and others just how relevant innovation and invention are in daily life, he says.

“We show it to area high schools, middle school students. It's really understanding, ‘I'm going to be an engineer ... I can relate to that golf ball. I listened to a car radio on the way here,’ ” Blume explains. “They can relate to what the engineering really is. It's bridging the academic to reality.”

Many of the patent holders are graduates of the school's engineering department, but others come from business and accounting backgrounds. Most of the inventions were patented through the course of the alumni's careers and not while they were in school, Blume notes.

There are about 30 new patent holders that have been included since the Hall of Innovation was established, and the Innovation One team is actively seeking more patent holders to come forward. Each patent holder's background is thoroughly researched to ensure accuracy before being added to the wall.

Additionally, the Innovation One team



Over 1,000 patents for inventions – such as the ground fault circuit interrupter, technology for cruise control and a number of orthopedic devices – are on display in the Hall of Innovation at Trine University.

creates the plaques in-house, with a laser engraver on acrylic.

The in-dash car radio, patented by Ray Ellis from the class of 1921 (and when Trine was called Tri-State University), was recently submitted and is now the oldest patent on display. The newest submission comes from Bryan Bowman of the class of 2011, who patented an orthopedic knee device. The class of 1966 leads the way with more than 20 patent holders.

“This gives them that tangible connection to the university as an alum. We don’t ask for a hard donation to get them on the wall. This is how they’ve impacted the world,” Blume offers.

“Outside of that, it’s the ability for people to understand and see what an engineer can do. They walk into this hall and they really see, ‘Wow, this is what people are doing.’ It’s amazing to show potential students, industry leaders, the pipe of product that is here.”

**RESOURCE:** Jason Blume, Innovation One, at [www.trine.edu/innovation-one](http://www.trine.edu/innovation-one)

## I-Light Upgrades Speeds to Increase Connections

Uploading data to its intended destination via the internet should be faster than driving the data on a disk for several hours or to another state.

But that was the reality for at least one of Indiana’s higher education institutions until recently, when upgrades to the I-Light bandwidth system began to enable faster connections. The greater speeds – now up to 100 Gigabits per second – allows increased capability for the network of Indiana’s universities and colleges (both public and private) that are connected to I-Light.

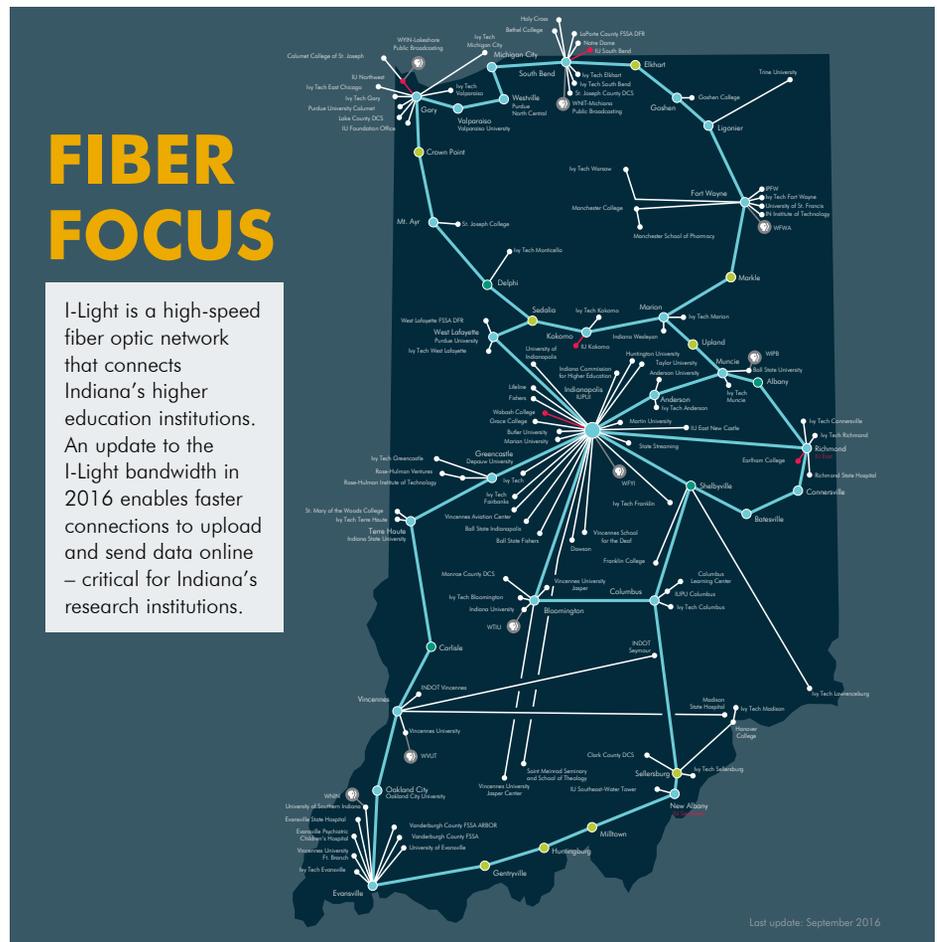
I-Light is a high-speed fiber optic network that is managed by the Indiana University Global Research Network Operations Center (management of the network is under both Indiana University and Purdue University). The public-private partnership is limited to serving only Indiana’s higher education institutions.

“What we provide to the schools is essentially transport; they get connectivity from us and we connect them all back to Indianapolis, and to the Indiana GigaPOP and commercial internet providers,” explains Marianne Chitwood, I-Light director.

The member institutions pay a fee to the fiber optic backbone and can subscribe to connections between 1 Gigabit per second and up to 100 Gigabits per second, according to Chitwood.

The benefits are obvious for Indiana’s larger research institutions – Indiana University, Purdue University and the University of Notre Dame. I-Light also assists its smaller member institutions through applying for grants to increase fiber infrastructure or connectivity. Wabash College (the institution that needed to physically drive its data) wrote a proposal for and received \$350,000 from the National Science Foundation to improve its infrastructure and connection.

“That’s a big deal. These schools – the smaller, private colleges – typically have a very small IT budget,” Chitwood notes.



I-Light connects most Ivy Tech Community College campuses as well. That has bolstered opportunities in many of the rural areas of the state.

“We believe I-Light certainly is a positive business development opportunity for communities where universities sit. ... We contract with the telecommunications providers to that (fiber) and they benefit. They build fiber to wherever (the need is),” Chitwood adds.

The potential for continued bandwidth growth is also available.

“We’ll be able to continue to grow this as our needs dictate and it’s just a very simple matter of changing out electronics to go from 100 gig to 200 gig or more. ... The intent for the platform is to sustain us for at least 10 years. We can turn up an additional 100 gigs where we require it,” she concludes.

**RESOURCE:** Marianne Chitwood, I-Light, at [www.ilight.net](http://www.ilight.net)