



15 Years of Life Sciences
Collaboration and Results in Indiana



We Connect

We Educate

We Invest

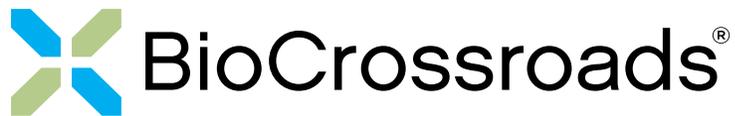
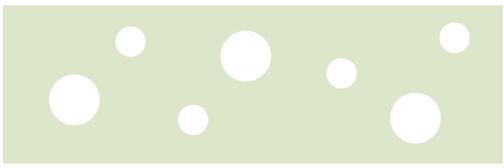


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1,687 companies

working in the areas of drugs and pharmaceuticals, medical devices and equipment, agricultural chemicals and feedstock, medical, research and testing laboratories and biologistics



56,198
people employed

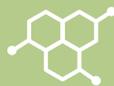


\$98,934 wages

per person in life sciences;
\$44,121 per person
in private sector



\$5.6B total wages



Collaboration

As it was at two years old, collaboration remains BioCrossroads' special sauce. The difference now is the definition of the processes for collaboration. The difference is the breadth and depth of the collaborations fostered across the state's life sciences sector. The difference is at 15 years old, BioCrossroads has hit its stride.

Seven distinct programs developed over the years exist thanks to BioCrossroads' collaborative work:

-  Indiana Seed Funds, I and II, which remain under BioCrossroads management, the \$14 million raised from institutional investors has been pumped into 22 companies and likely will lead to a third seed fund.
-  Indiana Health Information Exchange, a fee-for-service collaboration among healthcare providers who wanted to share patient data more efficiently. Today, IHIE leverages the cooperation of nearly 90 healthcare providers all across Indiana and a massive database and its management system first established by the Regenstrief Institute and is recognized as a national leader.
-  IndyHub, which connects the city's newer and younger residents with its cultural assets, the effort was organized before such place-making initiatives became popular.
-  The Datalys Center, a collaboration of athletic trainers, universities and sports governing bodies using big data to better understand injuries and how to treat them more effectively.
-  OrthoWorx was organized to create a forum for Kosciusko County's highly concentrated orthopedic manufacturing industry to collaborate on important issues like talent attraction and retention, education and economic development.
-  AgriNovus Indiana, which is similar to OrthoWorx in purpose but applied to the large biosciences sector within the state's agriculture industry.
-  Indiana Biosciences Research Institute, the newest of the initiatives and a peek into the future as BioCrossroads matures. The IBRI is a center for applied scientific research that is independent of the state's many biosciences companies, but provides them the opportunity to collaborate on projects and sponsor research.

“These collaborations look like inventions of things that are brand new, but they’re not,” Johnson said. “It’s simply saying, ‘We have a problem. We can quantify it. We ought to be able to solve it, because we’ve got the assets and the leadership here to do it. Let’s do it.’”

That explanation leaves out the meticulous process BioCrossroads employs before ever considering a new initiative. It’s a data-driven process honed over time that follows a straight-forward path.

It begins with identifying an issue facing the life sciences in Indiana or an opportunity to build on it. It can originate anywhere, from BioCrossroads’ staff members or board or from the industry itself.

Then BioCrossroads will study the problem. It’s often relied on prominent contract providers to do the work, but just as often will identify a local person with the right expertise and qualifications to hire for the project.

If that report shows promise, the next step is to gauge interest. Meetings are convened with stakeholders and potential financial backers to test the premise and, if the response is promising, then BioCrossroads will incubate the initiative—likely tapping the initial investigator to run it.

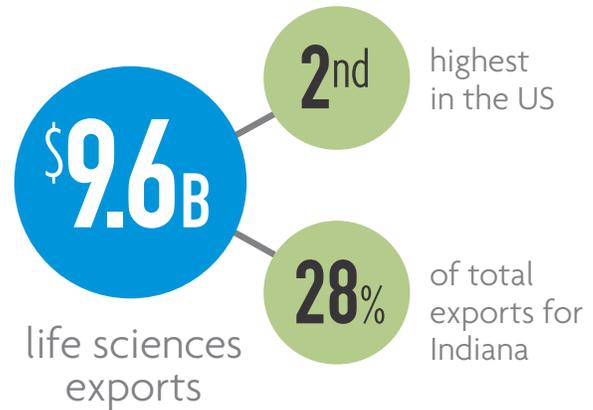
It’s the same method the Central Indiana Corporate Partnership used to establish BioCrossroads itself.

“That’s a good example of what the methodology was in the beginning and remains today,” Johnson said. “Analyze what your gaps are, and do everything you can to quantify those gaps and what is needed to fill them. That includes going directly to the top levels of the corporate stakeholders involved, and really understanding their business, how their stuff works. Then, you can create something that itself will work, is truly responsive and, therefore, is something they will actually invest in to leverage activity on the landscape here.”

Build it because it’s needed, not because it’s cool.

The development of AgriNovus Indiana is instructive. Understanding Indiana’s agriculture business was among the first studies BioCrossroads commissioned. The initial report was the blueprint used by former Gov. Mitch Daniels to establish the state’s first Department of Agriculture in 2006.

Six years later a former chief executive of Dow AgroSciences suggested Indiana was failing to leverage the bioscience



companies participating in the state’s agriculture industry. That prompted BioCrossroads to engage Beth Bechdol, the ag department’s first deputy director, to take a deeper look at the industry.

Bechdol dusted off her master’s degree in ag economics from Purdue University and discovered that Indiana does have a wealth of bioscience assets in agriculture. Before long she was talking with stakeholders and within two years AgriNovus was launched.

BioCrossroads has put itself in the space between sometimes competing interests and then found ways for them to work together. Sometimes the purpose is to foster growth, sometimes it’s to inform the public and sometimes it’s just to do new and interesting research. But it’s always meant to boost the life sciences sector and benefit the state’s economy.

“BioCrossroads has catalyzed all of that and given us a little more fertile ground to plant these seeds in,” said Derek Small, the co-founder, president and CEO of Assembly BioSciences, a recipient of an Indiana Seed Fund II investment, and now a publicly-traded company based in Carmel.

Before long BioCrossroads will convene a session among its employees and others to cast an eye to the future, Johnson said. They’ll think about what comes next and how BioCrossroads can help make whatever it is happen.

Flash forward another 15 years: start-up companies that the Indiana Seed Fund invested in will have products on the market; the IBRI will have dozens of scientific collaborations and results; and BioCrossroads will continue to uncover untapped opportunities for Indiana’s life sciences. ●

BioCrossroads funds seed companies, local life sciences industry

Indiana Seed Funds I and II

BioCrossroads had \$6 million it wanted to invest as seed money in upstart life sciences companies, so chief executive, David Johnson, went looking for a firm to handle the job.

"I spent the first nine months here trying to find somebody to hire on the outside to come on board to be a third-party manager for the fund," Johnson said. "Nobody wanted it."

With a three percent commission at best, there just wasn't enough money in the kitty for an outside firm to take on the fund. Johnson convened staffers Brian Stemme and Nora Doherty and told them, "either it's us, or it isn't going to happen."

The staffers spent a few weeks working out the kinks, but before long BioCrossroads Indiana Seed Fund I was taking shape. Doherty took the lead and Johnson realized his good fortune. "What I didn't know at the time was her background," he said. "She knew an enormous amount about venture funding and that quickly became evident. I thought, 'This is actually going to work.'"

Before BioCrossroads, Doherty's experience was in electronics, especially as a co-founder of Carmel-based Escient, a management company made up of five operating companies. Legal affairs, administration and human resources were her charge, and she spent a lot of time with dealmakers. "I was involved with every financing and acquisition," Doherty said. "I did a lot of due diligence, both sides of it."

When Escient was buying small companies, she'd be involved from term sheet to the final agreement. But it was her experience with investors like Lazard Freres and, especially, Sequoia Capital that most informed the philosophy she's developed with the BioCrossroads seed funds.

Sequoia invested in one of Escient's companies and Doherty saw first-hand how the venerable firm approached the process. It made an impression.

"If Sequoia Capital can say the important part is to execute on your company's plan and not to make the financing complicated,

to simplify financing and make sure everyone's interests are harmonized, then that's the way to do it," Doherty said.

Relying on a pool of experts to help with evaluating the opportunities, Doherty and Stemme put in place their version of the Sequoia investing processes and launched the first seed fund in 2005. BioCrossroads invested in a dozen companies and while it hasn't realized a return, it paved the way for a second seed fund that has.

BioCrossroads started raising money for the second fund in 2010 and closed it two years later at a little more than \$8 million. The money's invested in 10 companies and three of the investments have realized returns to the institutional investors in Indiana Seed Fund II.

"Financing is a tool, but it has to be enabling," Doherty said. "It has to be done in such a way as to not complicate any future financing."

If BioCrossroads could stimulate both the company and the market, then it was doing well. "Our job also is to make sure that we are connecting companies with other sources of capital, expertise and any other information we can," she said.

Along the way, BioCrossroads has learned a lot about being adaptable. "The assumptions that we had for Seed Fund I about building a company and how much capital it took and where venture capital came into the market are completely wrong today," Johnson said. "And we know it. We designed Seed Fund II, and it was designed in 2010 to be responsive to the circumstances as they were at that time. In doing Seed Fund III, it will be different again."

Being close to the companies and the industry is the critical factor, and the experience BioCrossroads has gained makes them better investors—whether it's money or time and expertise.

"We've gotten a lot of companies up on their feet," said Darren Carroll, senior vice president of corporate business development for Eli Lilly and Co. "You have to be prepared to take a long view. The second seed fund is starting to show some real liquidity events and that's what other investors need to see."

Investments to date:
Indiana Seed Fund I - 12 companies
Indiana Seed Fund II - 10 companies



BioCrossroads brings more than just money to the table, though. SonarMed Vice President Laura Lyons said Doherty's presence as a board member is a benefit. "The measured attention that it gave us, the consistency in it ... was a very unbiased, helpful business approach," Lyons said. "No drama, just great support."

Even companies that don't get BioCrossroads' money can get help. Nine of 10 companies that interact with BioCrossroads are not candidates for seed funding, but almost all of them will leave with connections and advice.

"We do what we can, we try to be helpful," Doherty said. "We want to help the industry as much as make a return, but we're not doing anyone any favors by investing in things that other people don't find attractive."

There are a lot of reasons why BioCrossroads might not make an investment, but still provide other types of support like the time they worked with Marcadia, a company started by serial entrepreneur, Richard DiMarchi that returned a huge premium to investors when it sold.

"Our chairman at the time, the late Dr. Gus Watanabe, was involved with the company. Their funding round came together very quickly, but we did not look to participate so as to avoid any appearance of conflict," she said. "We were able to provide a meeting space for a short while and were thrilled at their ultimate success. It was an important early indicator that therapeutic companies could be built here—we had the science, the talent, and the access to capital."

Coincidentally, Marcadia's successor is one of the three payouts for the second seed fund. BioCrossroads did not have a conflict and was able to invest in Calibrum, another company based on science from DiMarchi's lab. It's a good thing, too, because Calibrum sold to Novo Nordisk within two years.

BioCrossroads remains one of the few seed funds available to provide early stage money to life sciences companies with Indiana connections. BioCrossroads hopes for more players because it will help the market. They are heartened by the growth of more organized angel investor networks in the state.

"We need to have a robust angel network out there, but a healthy early stage fundraising capacity has got to have multiple groups that are looking at things differently," Doherty said. "No one's infallible. I may pass on something that's fantastic and they need to be able to go somewhere else and find that funding and vice versa. But if we're the only game in town, that's not a healthy marketplace."

The market here is healthier because of BioCrossroads' participation, according to Michael Arpey, the Washington D.C.-based managing director and head of investor relations for The Carlyle Group. He's worked with life sciences investing in Indiana as an advisor and manager of BioCrossroads investment fund of funds.

Arpey called BioCrossroads' work "crucial."

"It acts as a repository, a clearinghouse for opportunities, he said. "A lot of times you have people coming out of larger places or educational contexts or other situations, so this is the first time to the rodeo. BioCrossroads can provide them with an infrastructure that allows the germ of an idea to take hold and really be fostered. Absent that, I think the amount of inertia that might exist wanting to make that leap of faith would be overwhelming."

Matching money with ideas to stimulate the market is a mix of science and art. It seems BioCrossroads has found the right ratio to be effective.

"I would say that we are at the end of our investment period with our existing fund," Doherty said, "and we've learned that having an active seed fund is important part for BioCrossroads to fulfill its mission." ●

A true pioneer in healthcare information exchanges



John Kansky has to pause before he uses a technical phrase to describe the Indiana Health Information Exchange (IHIE).

"It is the nation's largest inter-organizational clinical data repository," the IHIE president and chief executive officer said.

Kansky said a mouthful, so here's a translation. Inter-organizational means hospitals, doctors, insurance companies and the government. Clinical data is medical information about people in the system. Repository, of course, is the place that information is stored, but more importantly it's kept in a way that has leading-edge security, but also can be easily shared.

IHIE is leading the nation in its cutting-edge medical information exchange systems. It's no simple task to collect, organize and deliver patient records electronically between doctors, hospitals and patients, and IHIE is doing it well.

There are a lot of reasons for that, but Kansky wants to dismiss the boast, first. "We used to call ourselves the nation's largest health information exchange and we were," Kansky said. "We may still be, but I don't worry about it anymore."

The reason is this: there are other ways to organize the flow of electronic records competing for primacy, so it's in the best

"It is the nation's largest inter-organizational clinical data repository."

John Kansky
President and Chief Executive Officer
Indiana Health Information Exchange

interest of IHIE and other exchanges to develop and innovate faster and better than the others.

"Every time we see a headline that exchanges are going to merge and create the nation's largest health information exchange, I think, 'good, let's all be the largest,'" Kansky said.

"What we need to do to solve this problem of the interstate exchange is make a quilt out of high-quality health information exchanges."

Sew together the exchanges in a way that information can flow seamlessly among them, and they become the way medical data is shared, nationwide.

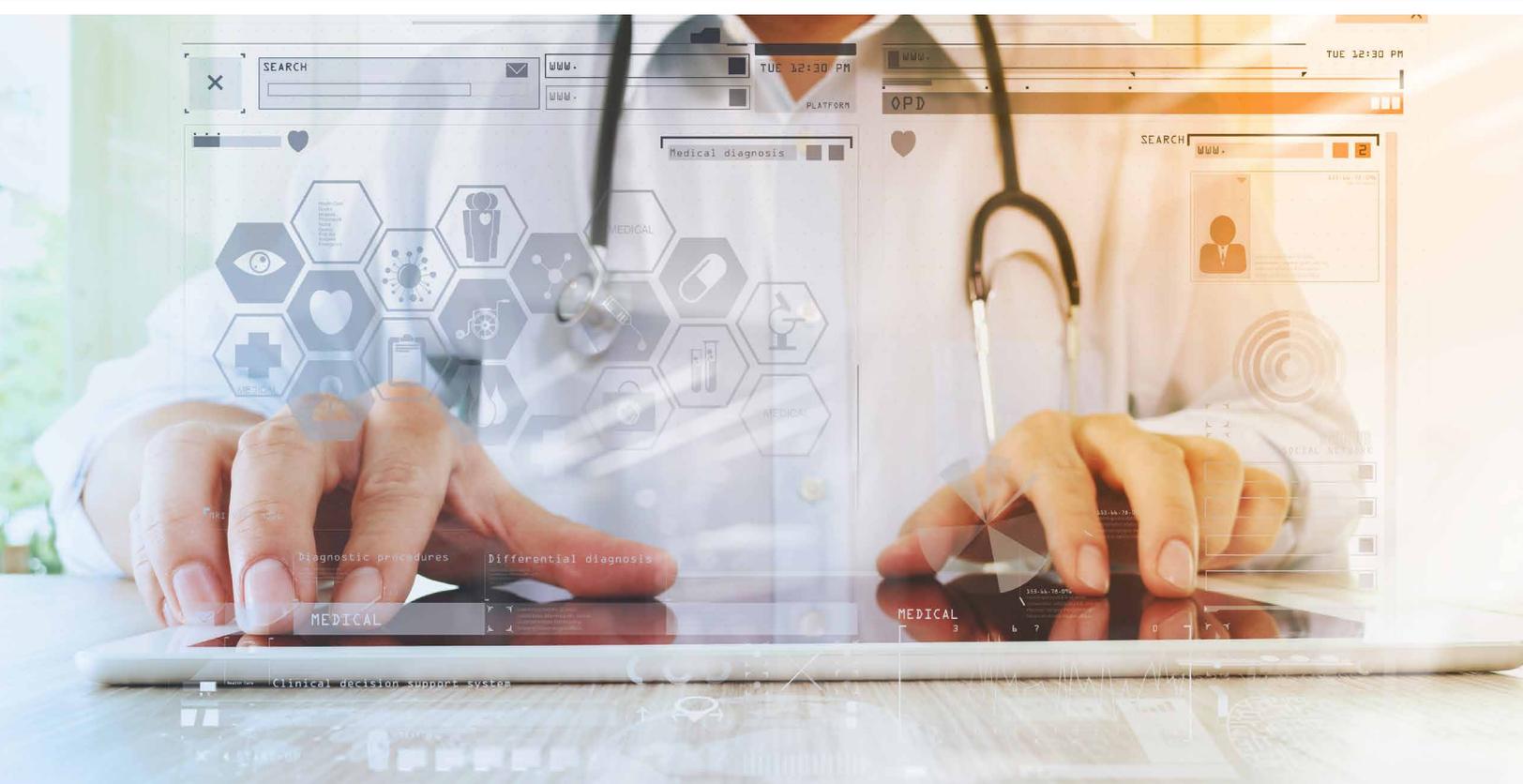
Another metaphor, this one centered on telephone calls, shows how difficult it currently is to be interoperable and connect across HIEs' geographic boundaries. While we take seamless calls across the globe for granted now, it used to be an operator had to physically complete a circuit to make it happen.

"That's where we are with health information," Kansky said. "If you can get healthcare data from another HIE, it's because somebody is doing something a little unnatural in this day and age. We have to evolve the process to that of a long-distance call. You know how to do it and you don't have to think about it. It just works. We're not there yet."

IHIE, however, is as close to this ideal as anyone and it's definitely blazing the path forward in terms of organization and technology. There are three reasons for its leadership.

First, about 30 years ago the Regenstrief Institute and the predecessor to Eskenazi Health got together to collect and store patient records for research. Regenstrief, founded in 1969 to study inefficiencies in the healthcare system, teamed with the county's general hospital on the project and together they created a prototype health information exchange.

"Regenstrief really is the pioneer in this space," Kansky said. "They were doing health information exchange before they even had a word for it. They created things for the purposes of proving they were possible and doing research. There's a perishable time in innovations like when you can figure out how to scale it and sustain it, and there was some forward thinking."



The forward thinking to use that perishable research occurred about 15 years ago. As BioCrossroads was getting started, a study identified clinical data for pharmaceutical research as a potential platform on which to build a business. “It turns out that it is also a pretty impressive healthcare platform,” said David Johnson, president and CEO of BioCrossroads and its parent, the Central Indiana Corporate Partnership. “Nobody had ever thought to make that connection before, but it seemed like a good thing to do.”

So BioCrossroads expanded the regional healthcare universe to include all five of the Indianapolis hospital systems and worked with Regenstrief to design what eventually became IHIE. The seeds for the nation’s largest inter-organizational clinical data repository were sown.

The new not-for-profit had to get competing hospital systems to cooperate and then deliver on its initial product: electronic delivery of lab and radiological results. Now it’s hard to remember when it took days to get results and they arrived via mail or on long sheets of thermal paper spit out of fax machines.

A core staff at IHIE spent several years developing the system to effectively deliver lab and radiology results electronically, along the way learning to leverage the Regenstrief database.

By 2010, IHIE had spread across most of the state and built the scale necessary to sustain additional innovation. There were two hurdles, Kansky said.

The first was transitioning from start-up philanthropy to a fee-based system for services. “If we had not been able to convince the hospitals and the other participants of the economic value of IHIE’s services to their operations, I don’t know what would have happened,” Kansky said.

The second was reaching an agreement in 2013 with Regenstrief to license the software underlying IHIE’s operations. “We control the code – that’s very unusual for a health information exchange,” Kansky said.

It means if a hospital wants a new process, IHIE can send over a product manager and business analyst, scope the project and get it done. A health information exchange that contracts for its software development has far less control over the process.

Controlling the process is another reason IHIE is leading the industry and it’s also the reason for its growth in recent years. Sixty-five people work at IHIE, including about 20 on the software development team.

The big, open floor in IHIE's space on the third floor of the old Barbasol Shaving Cream plant on Senate Avenue hums with huddles of people drawing white-board diagrams. The regular "stand-ups" are part of the Agile Scrum process Kansky said developers use to build, test, and implement changes to the system.

Instead of designing the system up front and then building it all before going live, IHIE's developers implement changes during the entire process, meaning the system's always evolving.

This is one ingredient in IHIE's secret sauce. The other is the cooperation among the hospital systems and others that occurred 15 years ago. It's a crucial component to expansion of the entire system.

"There are places in this country that want to start health information exchanges or advance the feeble health information exchanges that they have, and our first piece of advice is to get their healthcare leadership around the same table," Kansky related. "Often their response is, 'That's not going to happen.'"

But despite these challenges, cooperation is on the rise among HIEs nationally. "Competition is crumbling among the existing

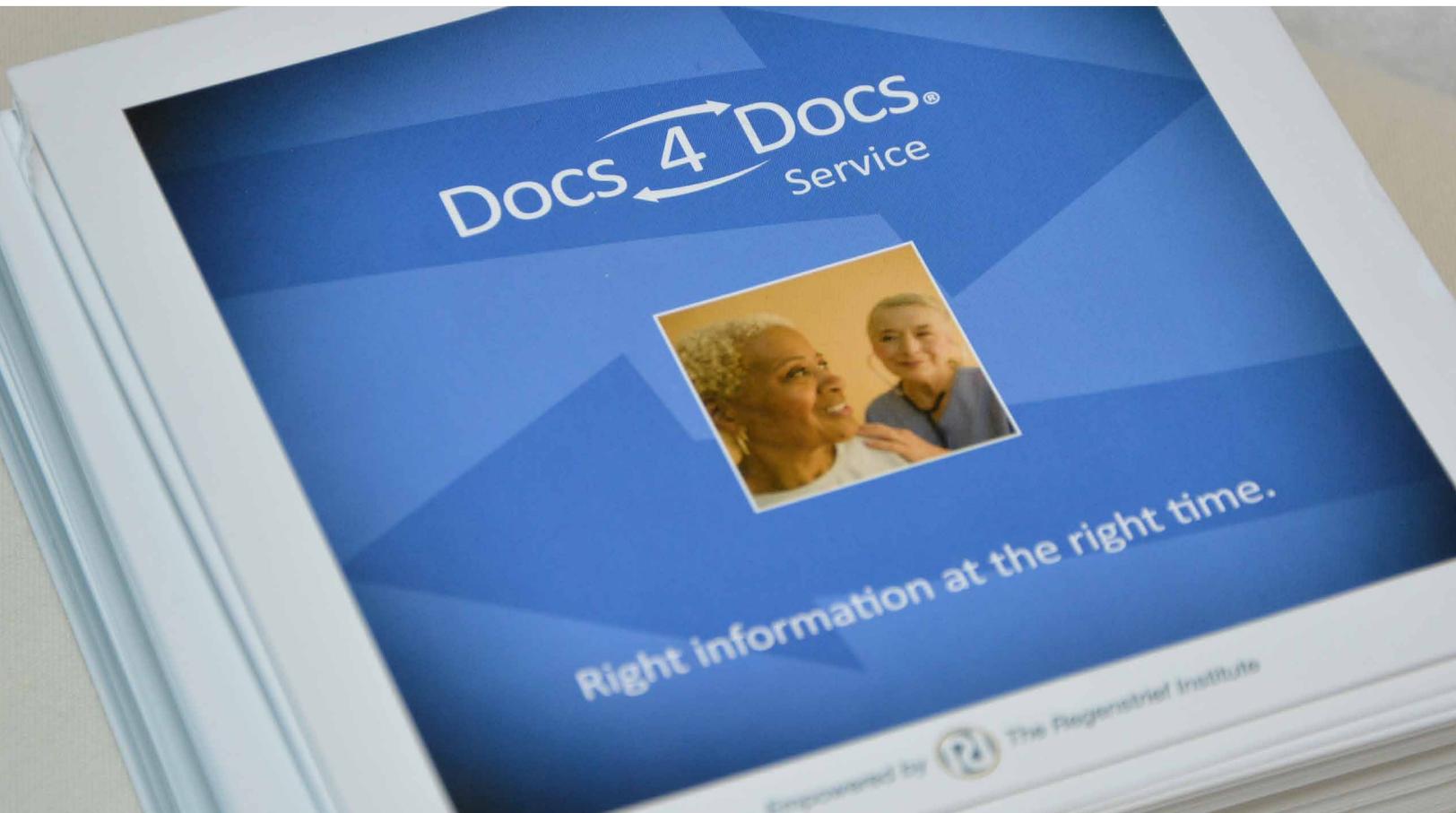
health information exchanges," Kansky said. It's a notion Kansky promotes and he's finding more willing participants as health information exchange executives recognize that cooperation makes success more likely for the whole system.

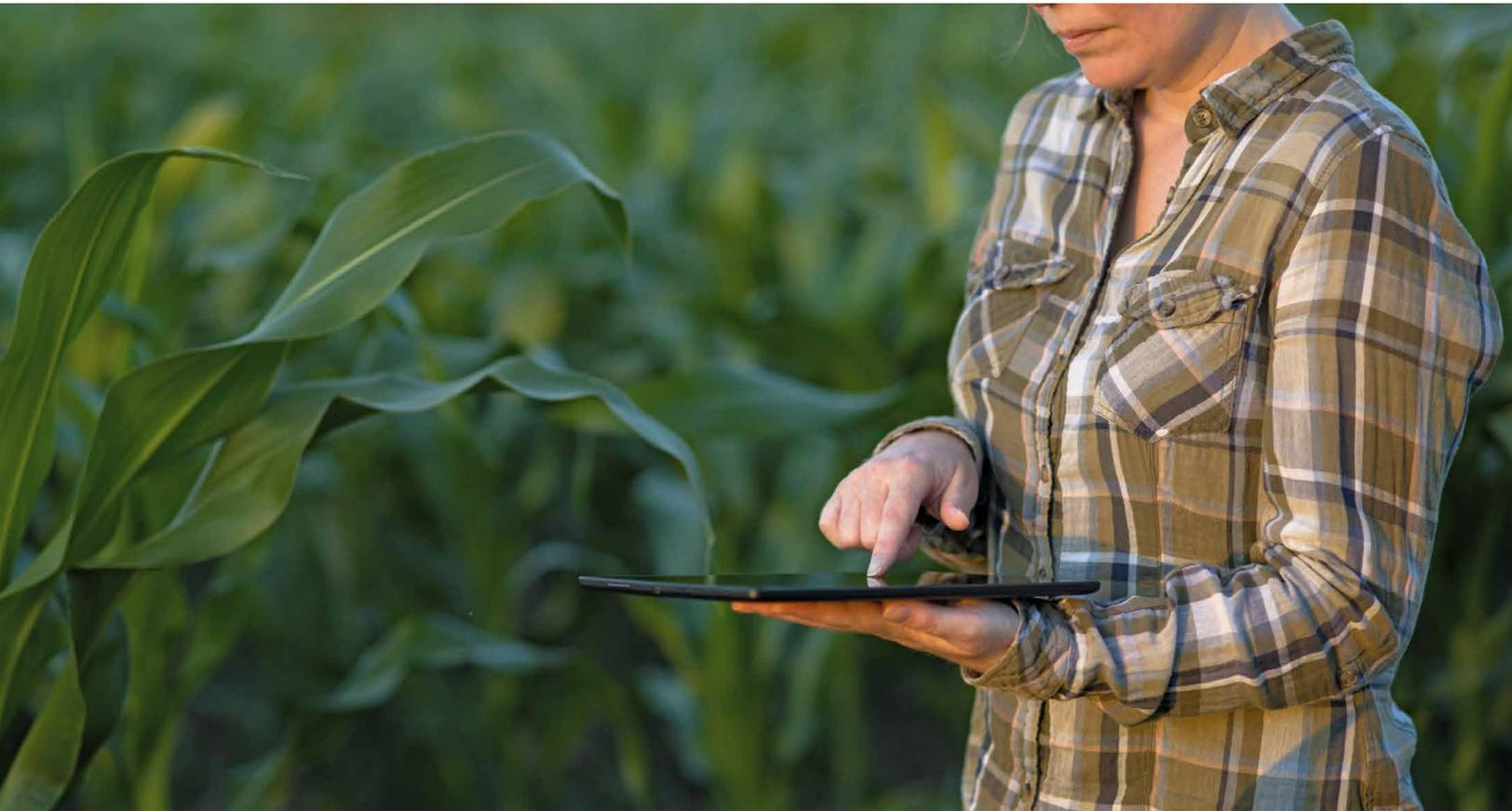
Kansky likens it to a situation the major U.S. automakers encountered a generation ago when they faced increased foreign competition. "Despite intense competition in the marketplace, the auto companies created a common exchange for their supplier relationships," Kansky said. "It was in everyone's best interest to drive costs down."

"Does that sound familiar?" he asked. "It's what healthcare is going to drive itself to do, but the unnatural incentives of third-party reimbursement and other factors are making this progress at a rate slower than it could or should."

Meantime, IHIE sets the standard and Kansky practices saying "the nation's largest inter-organizational clinical data repository."

"I believe in what the company is doing," he said. "There are plenty of 'next' challenges and I'm never bored. No year ends exactly like it starts. That's kind of a cool thing." ●





AgriNovus redefines ag and discovers its future in Indiana



AgriNovus
INDIANA

Hoosiers tend not to think very deeply about agriculture.

It's just a given, all those acres of corn and soybeans, the big tractors and the bigger barns. Farmers who check the weather and the commodity prices before heading off to the county commissioners meeting to gripe about poor roads.

Beth Bechdol, the head of AgriNovus Indiana, knows better and she's on a mission to change the perception to better reflect reality. But the daughter of grain farmers who still lives on the family's acreage outside Auburn knows how hard it is to get beneath the surface.

"We weren't telling our own story very well," Bechdol said. "We'd rationalize our ag leadership by simply citing farm numbers, crop acreage, livestock inventories and national rankings in every commodity from corn, soybeans and pigs to popcorn, tomatoes and ducks. I've given that talk myself countless times over to Rotary Clubs, Chambers of Commerce and other community groups."

A study done at the formation of BioCrossroads, which fostered the development of AgriNovus, laid the groundwork for a deeper look that Bechdol started in 2011, but it was a nudge from former Dow AgroSciences executive Antonio Galindez that really prompted the deeper look.

BioCrossroads approached Bechdol who was fresh off her stint as deputy director of Indiana's first Department of Agriculture. Bechdol, with a bachelor's from Georgetown University and a master's from Purdue, had returned from Washington D.C. where she'd worked at the U.S. Department of Agriculture and former Sen. Richard Lugar's staff specializing in ag.



"It had been a while since I'd had to use those graduate school research and analytical lessons, but I thought I was up to the challenge," Bechdol said.

So she looked for innovation in the space between bioscience and agriculture and sought out the companies working there to see if anything here compared with noted ag-biosciences centers like Research Triangle in North Carolina or Kansas City, Mo.

"What I realized as I worked through this is we have tremendous innovation and technology assets in our food and agriculture sector. We had been missing opportunities though as a state to really tout and promote the forward-looking, visionary future-driven opportunities that we had and continue to have in food and agricultural innovation," Bechdol said.

Timing is everything, though, and Indiana wasn't ready to consider the future as Bechdol perceived it until just a few years before she started looking for it. David Johnson, president and chief executive of BioCrossroads, remembers assigning a study of the state's ag sector to a loaned executive to BioCrossroads. This was in 2002 and the executive quickly learned Indiana didn't keep even the most basic data about its agriculture sector; BioCrossroads would have to compile the data before it could study it.

Former Gov. Mitch Daniels used that first study to rationalize establishing a department of agriculture in the state.

"People weren't thinking that if you were going to be involved in agriculture you were going to have to have (science, technology, engineering or math) credentials," Johnson said. "That wasn't happening even a decade ago. It is now. Because we live in a time when a John Deere tractor is collecting as much data as a biomarker instrument does."

That's essentially what Bechdol found in her first report. "What we recognized is that one, we have a lot of innovation here," Bechdol said. "And, two, we realized when we looked at some of these other regions, we had some of the same underlying competitive assets and conditions that were making them regional hubs of development and innovation in ag."

There was political support for ag, a raft of companies doing bioscience research and development, and university research to help push innovation. Even with the development of a state ag department, Bechdol realized there was a missing piece. "The champion of the effort," she said. "The convener, the facilitator, the one that everybody looked to as the guide to where we all need to go."

Bechdol's initial research led to another assignment: to see if the state's ag players were ready to commit thought leadership and cash to an effort that would fulfill the functions her report described. She met with dozens of industry leaders, state government officials and those in academia and asked whether they agreed with the conclusions of her report and, if so, what an entity to lead the effort should look like.

"It brought everyone along before we came in and said, would you be willing to put dollars on the table to help us?" Bechdol said. "We got everybody to come naturally to the same conclusion that this has merit, and they saw a place for them to participate and for them to realize a benefit."

AgriNovus launched in November 2014. While it's telling the story of Indiana's innovative agbioscience sector, it's still looking for ways to measure it. Beneath the obvious ag assets is a burgeoning biosciences industry that stretches from plant sciences to animal health and nutrition to human food and nutrition. More than 85 companies are in the sector, employing nearly 75,000 people and generating immense intellectual capital, including more than 700 patents.

It's time for Hoosiers to reconsider the ag sector's scope and importance to the state's economy. Tim Hassinger, who is president and CEO of Dow AgroSciences, lives the redefinition of Indiana agriculture. About 1,500 people work at the company's sprawling northwest-side operations where research dominates and the world congregates.

People from 40 countries work at Dow AgroSciences, he told the audience as December's AgriNovus summit. They speak 20

different languages. And they're young. More than half of the workforce has been with the company for less than five years.

"We have an employee group that is younger and more diverse than we've ever had in the history of our company," Hassinger said. "We need to be able to provide an environment that they are attracted to and can thrive in for us to be able to compete in the global market."

This is the AgriNovus imperative, a key part of the mission going forward. "I would ask that we put a real emphasis on how do we get minority students more attracted to agriculture," Hassinger said. "I need this help in order for us to have the workforce that I want to have in order to compete in a global marketplace."

"This is the year, based on a study conducted last year, that AgriNovus begins to address those concerns," Bechdol said. "It's a phased-in plan to engage people in ag from the age of six through 60," she said, "the talent lifecycle. Expose more school-aged kids to the opportunities in ag, especially biosciences. Build a culture among younger workers, those entering their first jobs as Dow AgroSciences, Fair Oaks Farm, or Mead Johnson Nutrition, so they can be connected through the ag industry. And find ways to "recycle" older ag hands for the new opportunities."

"This is not about replacing the remarkable farming story that's here in Indiana and changing about how we talk about who we are in Indiana agriculture," Bechdol said. "This is about adding some more pieces to the puzzle and then sharing our entire story." ●

Indiana's agbiosciences sector stats

	Plant Science	Animal Health and Nutrition	High-Tech Agriculture	Human Health and Nutrition
Innovation companies	19	9	30	27
Employees	3,116	1,159	13,671	1,404
Patents	668	11	35	25
Publications	804	662	396	100

Source: AgriNovus Indiana

IndyHub's connectivity makes city practical, cool



Molly Chavers knows a lot of the work she does has an intangible quality, but she approaches it in a most matter-of-fact way.

The executive director of IndyHub since its founding a dozen years ago, Chavers' job is to link people and place to make the city attractive to its next-generation citizens. It's become all the rage in economic development, to tap the huge Millennial Generation and its footloose economic power to make a place seem hip.

"Talent attraction and retention is now the No. 1 factor determining cities' economic growth or decline," noted Michael Huber, president and chief executive officer of the IndyChamber. "IndyHub's work to connect and attract talented professionals has never been more important."

IndyHub was among the first initiatives undertaken by BioCrossroads and its formation followed a now familiar pattern: observe a need, analyze it and then figure out how to address it.

"What was happening in other cities was the chambers of commerce were taking on this role of talent recruitment," Chavers said. "We thought, 'What if we had a private organization, one without any biases that could be fully focused on recruiting and keeping talent here?'"

In 2005 the notion of recruiting talent to a city as an economic strategy, rather than focusing solely on companies, was just gaining traction. Chavers and the other key organizers, Anne Shane, Troy Hege and Trevor Belden, knew there were many things to do in Indianapolis, but connecting them with people was a challenge.

The question, Chavers said, was how to create a platform that will provide multiple points of access for new arrivals. "We were adamant that we never wanted IndyHub to be a membership organization," Chavers said.

It's tempting to create that buy-in and revenue stream to provide financial sustenance, she said, but "we also wanted to inspire people to use whatever extra money they had to join a membership organization that already existed, or to buy tickets to the symphony" or other arts groups.

Whether it was the Friday Lunch Club, Indianapolis Ambassadors, FORTE or 78 other membership groups, there were plenty of things for people to do. So the next step was to raise seed money to create the first web-based clearinghouse to match people with places to make plans.

The initial funding came from BioCrossroads and the City of Indianapolis. Soon after, Dow AgroSciences and Eli Lilly & Co., invested in the effort. These two large international corporations knew recruiting talent was more than offering someone a job. Two other funders, IUPUI and the Indianapolis Power & Light Co. were attracted by the prospect of what a new talent pool would mean for their operations.

"Working with the second (Mayor Bart) Peterson administration, the goal was to enable Indianapolis to be a vibrant and talented place for young professionals and to help them easily become part of our community," Chavers said.

So far, so good. "More than any other organization, they build cross-sector collaborations that bring together professionals from tech, life sciences, arts, and grass-roots community organizations," Huber said, "all of which helps raise Indy's profile as a top-tier region for talent."

An early program known as the Passport for the Arts put the mission into play by creating a comprehensive and low-stress way for people interested in the local arts community to connect with it. Do this for many years and throw in hundreds of annual events and constant contact with people and you have IndyHub at the center of activity between the city and its young professional population.

The connectedness is based on a lot more than everyone knowing everyone else. It's based on odd-year surveys that are meant to tap into what the community wants and how it can be met. The effort began in earnest in 2013 with support from Walker Information and the Indianapolis Foundation.



This research drives IndyHub's regular programming in major ways. From public education to expansion of transit and support for a diverse community, capturing the pulse of the 20- and 30-something community on a regular basis allows IndyHub to step forward and support major initiatives and efforts that are in line with the community's growth.

"We are quick and nimble," she added. "We are responsive to the community."

IndyHub's 2013 survey supported then-Mayor Greg Ballard's strategic plans. "They used it to get involved in the transit question and it helped form the response to the religious freedom restoration act among other things."

That IndyHub has been integral in the plans for a Democratic administration and a Republican one cements its status as a credible pathway for linking younger people and the larger community.

Chavers' recalls her own experience as IndyHub was forming and how it's been writ large since. "I think about all the phone calls I made when we started IndyHub and all the people who took them," she said. "They made the connections for me, and that's what we're doing through IndyHub. We make magic happen by connecting people."

The organization's next turn occurred with an extension of its organizational structure with the IndyHub Foundation, established in 2013. As a supporting organization for the Arts Council of Indianapolis, Central Indiana Corporation Partnership, City of Indianapolis, Indy Chamber, and Visit Indy, IndyHub Foundation provides support to these critical missions through their programs and promotion.

"These critically important Indy promoting partners are critical to IndyHub's success," Chavers said. "We are proud to have the opportunity to support them through our work."

The No Mean City effort is an example of this type of partnership. The Ballard administration tapped IndyHub as the point organization for developing the initiative focused on recruiting and retaining residents to Marion County.

No Mean City, which takes its name from an inscription on the cornerstone of the old City Hall, is an ongoing series of stories of the people, places and history of Indianapolis. They're told online and in print, but the effort is purposefully understated. "We want people to get a feel for what it's like to live in our city by way of these authentic and compelling stories. The site and our tools are relatable. The effort is intentionally discoverable," Chavers said.

The name is part of a biblical quote, "I am, myself, a citizen of no mean city," that former President Benjamin Harrison used to describe Indianapolis as a place of aspiration. At the 1909 ceremony to lay the cornerstone for the City Hall at Alabama and Ohio streets, Mayor Charles Bookwalter used the quote too.

Part of the larger effort is to get our city's leaders and everyday citizens to believe a bit more in their city and promote it for what it is – a bold and progressive place. Chavers knows it's hard to explain or pin down, but she's seen the early transformation and believes an even greater one is coming.

"Nobody talks about their product by telling people what it doesn't have, so why would we?" Chavers said. "We need to start celebrating the amazing place we live and work in, to talk about how great a city Indianapolis is,"

And that's a fact. ●

Datalys crunches big data to help reduce sports injuries



Sports fans like a good debate and when the National Collegiate Athletic Administration decided in 2012 to change its rules regarding kickoffs in football, the debate was deafening.

Reasoning the high-speed collisions that occur during the kickoffs produced an unusually high number of severe injuries, the NCAA decided to move up the spot where kickers placed the ball and added five yards to the initial spot after touchbacks. The howl on sports talk radio was the usual uninformed hot take that passes for debate. Fortunately the NCAA was able to base its decision on cold, hard data.

The Datalys Center for Sports Injury Research and Prevention in Indianapolis manages the NCAA's Injury Surveillance Program, a massive database of injuries at all levels of collegiate sports. Since 2009, Datalys has been able to answer the questions about injuries posed by the governing body, trainers, coaches or athletes based on the data.

"We can look at historical trends. If a policy change or a rule change is implemented we can look at the before and after effect of that change," said Thomas Dompier, president of the Datalys Center.

Kickoff returns declined sharply after the rule changes, Dompier said, reducing the number of injuries. Over time, though, the data showed the number of returns started to increase as coaches and players adapted, again changing the injury profile. "That makes it challenging from an analytical standpoint," Dompier said. "How do you account for those adjustments in the analysis?"

It's a familiar question for those who launched the Datalys Center in 2006. Through a comprehensive planning, organizational and fundraising effort led by BioCrossroads' project director Troy Hege, BioCrossroads saw a chance to collaborate with the NCAA and several other sports governing bodies based in Indianapolis. Hege believed there was an

opportunity to bridge the interests of several sport governing and sports medicine organizations that capitalized on Indiana's reputation as the amateur sports capital of the world. Bridging these interests enabled a unique capability to be developed in a sustainable platform that has provided real value to organizations looking to improve the safety of sports across a spectrum of ages from peewee to Division I college athletics.

"Good injury data is not only critical to sound policy management, sound and safe sport, but it's really essential to the quality care of athletes," said John Parsons, director of the NCAA's Sports Science Institute. "Participating in the system, and allowing the production of the kind of data the system gives us, stands to benefit (athletes and trainers) in the long run based on good, solid empirical data."

The Datalys Center's programs track and analyze injuries to athletes in high school through college from schools across the country. While the breadth and depth of the data is unmatched, what the Center's researchers do with it provides real value. There are seven full-time employees, including an injury epidemiologist, a statistician, an information technology director and three research associates in addition to Dompier.

"The reason why we have the relationship to the Datalys Center that we do is because, number one, that expertise is hard to come by," Parsons said. "There is a valuable objectivity that comes from having an independent organization like Datalys oversee such a system."

The Center is organized as a not-for-profit and its attitude about sharing its research reflects that structure. Dompier, who came to the Datalys Center in 2011 from the faculty at the University of South Carolina, seeks to publish the results of research. "I see it as serving the public in that our mission is to disseminate the information we collect to policy makers, to parents, to coaches, to administrators and others who can affect policy or rule changes that make sports safer," he said. As of 2017, the Datalys Center has published or provided data to other researchers who have published over 41 peer-reviewed articles. "The data that are generated are peer-reviewed and have been determined to be publishable," Parsons said, "which is essentially a community of experts evaluating that data and saying that they are sound, that they are accurate and that they are meaningful."

The sometimes volatile grant-research market is important to the Center's efforts. Some years grants make up half the Center's funding and some years it's just a quarter. "The grant game is a challenge, it's very fluid," Dompier said. "Our success rate is good, about 10 percent, so we're about in the middle of the typical range (8 percent to 15 percent)." This volatility makes it hard for academic researchers to establish and maintain injury surveillance programs. The value of a good surveillance program is the ability to follow trends over time. The NCAA's engagement provides a level of base funding that allows Datalys to maintain core programs even in down grant cycles.

Being able to maintain data collection efforts over time has, in turn, positioned Datalys to be a valuable collaborator with academia as well. These collaborations tend to work well as they allow the academics to focus on analysis, impact and intervention without having to source funding to support all of the overhead costs involved with sports injury data collection.

Sports injury research has gotten more attention as the effects of concussions have become more understood, especially among football players. Datalys' research helps that process using the data to determine who is most at risk, what types of plays tend to produce concussions and even when during a game they're most likely to occur. "This type of injury question is where the data is most powerful," Dompier said, describing the three types of analysis that form a cycle of prevention—incidence data, risk factors and intervention, such as a rule change. "It's a piece of the prevention puzzle, a key piece because if you don't understand who is getting hurt and why they are getting hurt, then you can't put in effective interventions."

In training rooms, data is becoming as useful as tape and ice baths. "This data is not only valuable for the organization, but also for everyone in the training community," said Joseph Murphy, athletic trainer and education program director, Lebanon Valley College in Annville, Penn. "What do your outcomes look like? In the new healthcare world, outcomes are king so we've got to make sure we're collecting it and using that outcome data effectively."

Like all BioCrossroads initiatives, the Datalys Center exists to address a marketplace need. In doing so, its work also fosters collaboration among researchers, universities and those that organize athletic events. "Academia can sometimes be very siloed because tenure and promotion is based on research," said Dompier, who worked on contract with the Datalys Center while he was with the University of South Carolina. "One of the things I've learned from BioCrossroads is that you're much more effective collaborating with people than competing with them."

Datalys has a nine-member review committee that includes experts from seven universities and two from the national Centers for Disease Control. It also maintains research relationships with more than 50 other institutions across the country.

Crunching data to help reduce injuries may seem unlikely, but the evidence suggests that's the case, and Dompier's glad to be part of the effort. "It's a great time to be in this area of work," he said. "It's a great time to effect change and make sports safer." Sports fans aren't likely to argue about that. ●



OrthoWorx at center of state's impressive orthopedics industry



One of Indiana's best economic stories resides in Warsaw, which otherwise is a typical county-seat town in northeast Indiana, and every day it is the job of OrthoWorx to assure that Warsaw maintains its atypical status.

When it comes to orthopedic implants in Americans—knees, hips and the like—the chances are a little better than 50-50 that the device was made in Warsaw. A third of those implanted around the world originated in the Kosciusko County seat.

Thousands of Hoosiers owe their livelihood to what was until recently three major Warsaw-based orthopedic operations (two of the largest companies, Zimmer and Biomet, merged in 2015). In addition, there is a deep supply chain that has grown up around the industry over more than a century. The economic impact is immense for the county, region and state, yet until OrthoWorx was organized less than a decade ago little was done to engage with the industry, much less promote it.

Sheryl Conley grew up in Warsaw and spent about 25 years as an executive in the orthopedics business, but she'll admit it started by accident. After earning a bachelor's degree in chemistry and biology at Ball State University, she returned to her hometown just as a recession that hammered the state's manufacturing sector was winding down.

"By chance I heard about a job at Zimmer and started in clinical research," said Conley. That was in 1983. "I'd never thought about a job in the orthopedics industry."

When she left Zimmer in 2008 Conley was president of its Global Products Group, which had nearly \$4 billion in revenue and resources around the world. "I never thought I would stay here in Warsaw or have a long, incredibly vibrant and interesting career," she said.

Now it's her job as president and chief executive officer of OrthoWorx to ensure Indiana and the industry not only know each other well, but do what they can to maintain this economic powerhouse.

The biggest challenge is talent—developing it in the state and attracting it from other places. The third major emphasis for OrthoWorx is fostering innovation. "We're the ones that really keep the tension on the line to make sure we capitalize on the opportunities that exist," Conley said.

Since its founding in 2009, OrthoWorx has been the forum for cooperation among the competitive players in the orthopedics business and the conduit between the industry and the community, educators and government.

"We thought that was a gap we could play a role in closing if we could get all the parties to better know each other and engage to address common needs and opportunities," said Brad Bishop, OrthoWorx executive director and its first employee. "Until then we all thought talent just developed because orthopedics was such a vibrant cluster."

That was true over time. DePuy, founded in 1895, begat Zimmer, which in turn begat Biomet—all in Warsaw. Another local company, Warsaw Orthopedics, became Medtronic's spine business through a series of mergers. The world leader in that category, Medtronic's principal spinal manufacturing facility is in Warsaw. The close proximity of these companies fostered growth in the region, but it also created fierce competitors intent on taking care of their own business. As they grew into the global marketplace these major players became citizens of the world—either as publicly-traded companies or divisions of international businesses.

Enter BioCrossroads, the Indianapolis-based not-for-profit formed to understand Indiana's life sciences industry and foster its growth in the state. With a grant from Lilly Endowment Inc., BioCrossroads commissioned a study of Warsaw's orthopedics industry by Battelle's Technology Partnership Practice augmented by the findings of dozens of community meetings facilitated by Mary Walshok, a sociology professor at the University of California at San Diego who has become an expert on community and economic growth.

The comprehensive, year-long study described Warsaw's place in the orthopedics industry, the challenges faced by the sector's global nature and, importantly, how OrthoWorx could help ensure the future. "The industry has been good for Warsaw

and Indiana for 100 years," Bishop said, "but is the environment right for the companies to want to stay here?"

That's a daunting question, especially in such a competitive and increasingly mobile industry. "It was not a well-recognized economic driver in our state," Conley said. "Because of the competitive nature, the companies didn't work together on things that might benefit the whole region."

The orthopedics industry's insular nature didn't impede growth, but it did make Warsaw vulnerable to global economic forces. What if the industry consolidated? How would the community react if thousands of well-paying skilled manufacturing jobs moved overseas?

Armed with the study's information and direction, OrthoWorx set about working to ensure the economic future of Warsaw and the benefit it provides the region and the state.

"OrthoWorx is a critical component in the orthopedic industry with a large-scale economic impact," said David Hoffert, superintendent of Warsaw Community Schools. "OrthoWorx's continued promotion and advancements create a forward-thinking and visionary community around the vibrant orthopedic industry."

Early on OrthoWorx set about telling the industry's story to Warsaw and the world while providing a framework for company executives to cooperate so the industry could continue to thrive in the region. While the story's still being

told, the industry forum has matured and so has OrthoWorx. "We're heavily weighted into talent development, attraction and innovation," Conley said.

Education is key to all three of those thrusts but in different ways.

The industry's insularity meant there had been little interaction with the state's universities, something OrthoWorx set about changing. It convened the University-Industry Advisory Board (UIAB) intent on building links between the two. Those links are expressed in classes to reflect the industry's needs, cooperative research to support the industry and internships that give would-be employees the experience to contribute immediately. According to UIAB academic chair, Bob Bernhard, the vice president of research at the University of Notre Dame, attempts by universities to engage with the industry had been hit or miss in the past. "There have been a few projects and collaborations, but they've been sporadic, so we haven't built the type of partnerships where we experience the mutual benefit that results from committed relationships," said Bernhard. "OrthoWorx has brought staff resources, processes and opportunities for identifying areas of mutual interest and has done the hard work of building the operating level partnerships that are required. We have terrific opportunities for productive collaborations. We have made a very important first step."

The high-level board has opened channels that didn't exist before, Conley and Bishop said, which deepens the industry's roots in the region.





Education also plays a critical role in attracting talent. “What are people looking at when they look at Warsaw for a job,” Conley asked. “The first thing they look at is the school system, not necessarily the job. Our school system had some real challenges.”

OrthoWorx funded a study of the school system and then worked with the administration to implement the key findings. It led to changes in the curriculum and establishing an academy for science, technology, engineering and math.

“The school system went from average grades to straight A’s in the state ratings by 2013,” Conley said. “Now it’s to a point that we don’t have to do as much because there is incredible momentum.”

The collaboration with OrthoWorx on project-based learning programs and STEM led to national recognition as a Top 100 Future-Ready School corporation, Hoffert said. “OrthoWorx has been an integral part of the forward acceleration in the Warsaw Community,” he said. “These critical thinking and analytical skills are preparing our students for the local and global industry needs.”

Together these efforts build the foundation for the third prong: innovation. Even as a center for manufacturing, Kosciusko County’s rate of patent applications was five times greater than the state and 15 times greater than the United States, according to the BioCrossroads report. Tying together Warsaw’s schools and the state’s universities strengthens the research and development efforts, again deepening the industry’s roots here.

OrthoWorx is looking to the future as well. It has developed the concept for and helped launch AcceLINX, a multi-stage, musculoskeletal health business accelerator that will provide industry-specific support to select inventors and entrepreneurs looking to enhance their prospects of business success. AcceLINX will operate separately from OrthoWorx, but will also leverage the unprecedented concentration of medical device industry resources in northern Indiana.

Warsaw’s economic story is getting out, thanks to OrthoWorx, but the increasingly global nature of the orthopedics industry means the challenges remain. Consolidation has meant the three largest independent companies based there are now two.

“The challenges we’re facing now are almost as difficult as they were when we started,” Conley said. “But now we have an environment in which they can all come together around key agenda items and we’ve put full-time energy into pushing those agenda items forward.” ●

Advancing Indiana biopharmaceutical development and manufacturing

BioCrossroads® LINX

Who helps Indiana's pharmaceutical companies and others around the world get their drugs to market? Contract drug development service providers work on everything from toxicology studies and pre-clinical services to formulation and manufacturing. And Indiana has a concentration of nearly 50 of these companies and more than 8,000 skilled workers help companies and universities to advance discovery and develop drugs around the world.

In 2007, BioCrossroads performed an analysis of this sector and published a report "Biopharma Discovery and Development Contract Services – Indiana Market Opportunities and Funding Options."

As a result of the breadth and number of these contract pharmaceutical development and manufacturing companies, BioCrossroads formed BioCrossroadsLINX in late 2007 to work with its public and private stakeholders to define, organize and advance Indiana's signature strengths in biopharmaceutical development and manufacturing. It also built regional collaborations and developed educational programs, connecting discovery and development.

"Trends in the pharmaceutical and biotech industries, such as the need for increased productivity and lower cost, led to a disaggregation of the pharmaceutical industry, with companies continuing to outsource tasks that are not core to their operations," said Brian Stemme, project director for the BioCrossroadsLINX initiative. "We formed LINX to capitalize on our assets, to make connections and to promote the great development work that we're doing in Indiana."

Because of the number of biotech companies in San Diego, Stemme partnered with several organizations in that region to promote Indiana's strengths in contract development work, and linked the two together.

In addition, BioCrossroadsLinx.com was developed as a "go-to" portal and hub for information about Indiana's contract research and development organizations, listing the companies and specifics on the types of work that they do. ●

With 16 reports, 50 events and dozens of podcasts on life sciences topics, BioCrossroads generates market data and original educational content. And each year, BioCrossroads publishes statistics that quantify the depth and breadth of Indiana's life sciences industry such as the industry's \$63 billion economic impact, and its prowess as the second highest exporter of life sciences goods in the United States. BioIntellex.com was the brainchild of BioCrossroads vice president of communications, Lori LeRoy, developed first in 2010 and continuously improved ever since as a one-stop-shop for the organization's substantial educational offerings, including life sciences information and intelligence for Indiana, reports and studies, educational sessions, conferences and podcasts.

"You can download a report, register for one of our events or listen to a podcast from BioIntellex.com," said Lori LeRoy, vice president of communications for BioCrossroads. "We developed the platform as a way to harness all of our educational content into a central hub."

With topics ranging from healthcare delivery, talent and workforce development, cancer research, university start-ups, innovation districts, microbiomes and more, BioCrossroads convenes intellectual discussions and analyzes market data to unearth innovation and opportunities. ●



Indiana Biosciences Research Institute seeks to harness existing talent for discovery with purpose

INDIANA BIOSCIENCES RESEARCH INSTITUTE

Within the Indianapolis metropolitan area, there are companies among the world's leaders in pharmaceuticals, medical diagnostic devices and agricultural biosciences. The areas also home to the nation's largest medical school.

Nearby, there are companies that are among the leaders in animal health, medical and orthopedic devices, and nutrition.

It's an incredible concentration of companies. The agglomeration of bioscience-related entities generates high level management and research jobs, well-paying manufacturing careers, and an enviable economic impact – over \$63 billion, placing Indiana #2 in life sciences exports in the United States.

These complementary companies co-exist well, but five years ago BioCrossroads wondered whether there was a way to better harness their potential. After a year of study and development of possible platforms by the BioCrossroads team, John Lechleiter issued a call to action at a BioCrossroads' Indiana Life Sciences Summit—and it resulted in the formation of the Indiana Biosciences Research Institute.

"In the last decade, Indiana has come of age as a recognized leader in the life sciences, with demonstrated capabilities in biopharmaceuticals, medical devices, and diagnostics, as well as in the areas of animal health and crop sciences," the former Eli Lilly and Company CEO said as his company pledged an initial \$7.5 million to the effort.

"The research institute will fuel Indiana's economy and will underscore the state's position as a life sciences leader," he added. "The bio-landscape of Indiana is fertile ground for the Institute."

The BioCrossroads study mapped all these assets and determined that an independent applied science research institute focused on key overlapping interests for collaboration—starting with nutrition and cardiometabolic diseases like diabetes and obesity—would be the best way to capitalize on the talent and capabilities within these companies going forward. When fully functioning, the IBRI expects to

have up to 200 innovative researchers working in a dozen teams headed by research fellows on projects that will lead to breakthroughs that can be commercialized.

"What the executives of our life sciences companies realized was the strength in the diversity of our life sciences industry," said David Broecker, the IBRI's president and chief executive. "What makes Indiana unique is we have one of everything."

The IBRI is intended to be "the place in the middle of a diverse life sciences ecosystem that is motivated by the same things in terms of translation and collaboration with others," Broecker said. The folks around the IBRI are calling it "discovery with purpose."

In the first year the IBRI raised \$50 million, half from the state, \$15 million from corporations and \$10 million from Lilly Endowment, Inc., which last year joined Lilly to raise its ante by nearly \$100 million. The IBRI so far is well funded.

It's starting to use the labs and offices at its headquarters just north of the planned 16 Tech Innovation District, too. In the last 18 months a half-dozen scientists have joined the IBRI, including Teresa Mastracci, an Institute Scientist who won a \$750,000 career development grant from JDRF last September and was recognized as one of IBJ's Forty Under 40 in 2017.

Michael Pugia is among the fellows recruited into the IBRI last year. Pugia worked on in-vitro biomedical devices for 30 years with both Bayer and Siemens. The IBRI's director of the Single Cell Bioanalytics Center holds 367 patents, with another 72 pending.

And in October the IBRI nabbed international attention with its announcement that it had lured Professor Rainer Fischer from his post as senior executive director of the Institute for Molecular Biology and Applied Ecology at the Fraunhofer in Germany. Fischer had been with the Fraunhofer nearly 20 years, much of the time as leading officer of its Molecular Biology and Applied Ecology (IME).

The Fraunhofer was established shortly after World War II as part of the effort to rebuild Germany. It is Europe's largest applied science research center and has 67 separate institutes. The IME has about 480 people working in six German locations. There also are satellite operations in Wilmington, Del. and Santiago, Chile, which Fischer established.



Fischer led the Fraunhofer through incredible growth, increasing its employee base by a factor of 10 and attracting more than 1 billion Euro in extramural research funding. But he's also worked with more than 600 life sciences companies, including projects with Indianapolis-based Dow AgroSciences.

Between raising money for and managing the Fraunhofer and all his time traveling, Fischer was spread thin. Since the IBRI's model is similar to the Fraunhofer's, Broecker sensed an opportunity. He showed him the IBRI's collaborative model, its support from industry and the state, and introduced him to the high-level Science Advisory Board.

"He said, 'I can get this thing started and I don't have to spend 300 days on the road? Count me in,'" Broecker said. "It took a little cajoling and then everything clicked."

Fischer will be chief scientific and innovation officer for the IBRI and will start April 1.

"It's like building an NFL franchise," Broecker said, "and you've got the No. 1 pick." Fischer's the IBRI's Peyton Manning. His presence also suggests the IBRI aspires to participate in the global marketplace.

"We can't get out ahead of our skis, but if people think this is just going to stay in Indiana and only work with local companies, they're going to be quite surprised when we're working with institutions and companies in other parts of the world," Broecker said. "We have to get established in Indiana and prove ourselves, but this truly could move beyond the borders of Indiana over time."

There are 20 people working at the IBRI now and Broecker expects that to reach 30 or 35 by year's end. At that point they'll be pushing the limits of their current space, so plans to build a new office/lab elsewhere in the 16 Tech Innovation community should be well under way by then.

In the meantime, Broecker will continue to make the connections, to catalyze cooperation and raise the money necessary to create what many believe will be an important center of applied research, a place where ideas become patents and patents become companies.

Along the way he's sure he'll meet a lot more people like the young scientist he met during the Christmas holiday. She's a Hoosier with an undergrad degree from IUPUI, a doctorate from Harvard, and she's doing her post-doctoral work at MIT. She and her husband are thinking about returning to Indiana, but she worries her career will stall.

Broecker said she's torn between the research she loves to do and possibly joining a startup company for the experience. "I asked her, why don't you come to the IBRI," Broecker said. "You don't have to make those kinds of career decisions from the standpoint that you can do all that here. Recruiting talent back is as important as bringing new talent to Indiana."

The IBRI's ideal researcher will spend a third of their time doing novel research with others under a traditional grant. Another third of their time will be spent working on corporate-sponsored research. "Then the other third of the time they're working late at night on a completely new thing they hope will become a company or a new invention," Broecker said.

Though its evolution hasn't exactly followed the plan Lechleiter set forth in 2012, the IBRI is doing exactly what the organizers hoped it would do. "This institute will help Indiana attract additional global talent and will nurture partnerships across the state and across the country—keeping more research dollars in Indiana and attracting more federal research funds to our state," Lechleiter noted. "By pulling together the best minds for collaborative thinking and research, the new institute will help move us closer to solving some of the world's most difficult challenges in health and nutrition." ●

About the author

John Ketzenberger is a recovering journalist and president of the Indiana Fiscal Policy Institute, a non-partisan not-for-profit with a mission to examine the state's tax policies and budget practices. He worked at several newspapers after graduating from Ball State University in 1986, including two stints at IBJ. A veteran Statehouse reporter, he manned bureaus for the Fort Wayne Journal Gazette and Gannett News Service through the 1990s. Ketzenberger has called Indianapolis home for more than 25 years.



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