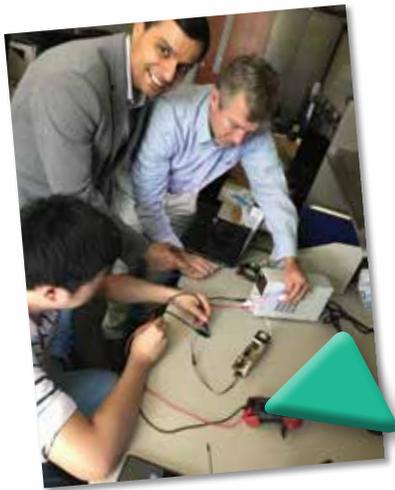




# WHITEBOARD 2 BOARDROOM

BRINGING TECHNOLOGY TO MARKET



## WE CREA+E INNOVATIONS

2018 ANNUAL REPORT

*“Whiteboard2Boardroom works for my company at the confluence of research and commercialization. It is the critical link connecting university and hospital research to area entrepreneurs and businesses.”*

—BOB ETZEL, CEO  
Nascent Stage Development, LLC

# INNOVATIONS GROW **HERE**

**It's been a busy year for Whiteboard2Boardroom (W2B). This past year, W2B has worked with more than 300 entrepreneurs and companies, managed 72 innovative projects in our pipeline and launched new initiatives to help introduce the region's budding and cutting-edge technologies to those who can advance them toward commercialization.**



James G. Baxendale, Director  
Whiteboard2Boardroom

And that's been our mission for the past five years. A program of the UMKC Innovation Center, W2B curates innovations from 21 research institutions, hospitals and corporations across Kansas and Missouri, helping move technology out of research labs and into the marketplace.

We do that by helping make **the right introductions to the right partners at the right time.**

This past year, W2B introduced a new crop of talented entrepreneurs and business executives to our portfolio of licensable technologies. To that end, we made connections with the alumni programs at the University of Missouri–Kansas City and Rockhurst University. Additionally, we created partnerships with the Growth Mentoring Service program at the Enterprise Center in Johnson County and the Growth Mentoring Service in St. Louis, Missouri, both of which are modeled after the established and highly recognized MIT mentoring program.

The members of these mentoring programs can serve as CEOs, mentors, advisors or board members for young startup

companies that are formed by W2B or who are seeking other forms of assistance from W2B.

Identifying talented individuals and companies seeking innovations is part of the recipe. We then strive to put CEO-ready technologies and just-in-time opportunities in front of those same people who can then take them to market.

We hosted 11 webinars this year, giving our institutional partners the chance to present their licensable technologies to invited entrepreneurs and business executives. This past year's webinars have resulted in one new startup and three additional licenses. We also created a portal on the W2B website to post our partner institutions' young startups that are seeking CEO talent, mentors, advisors and strategic partners.

Over the past year, W2B participated in several events dedicated to **expanding innovations** in the Midwest and **introducing next-generation entrepreneurs** to our region's homegrown innovations.

Networks and talent—these are the early connections W2B provides to advance technologies to market, because we know these primary drivers move ideas through the “valley of death” and from whiteboard to boardroom.

# PIPELINE of INNOVATIONS

At any given time, W2B is working with a number of innovations in the region to help advance them to the marketplace. Looking at the network described below, you can see the significant pipeline of technologies from various technical fields available for licensing.

## NETWORK

academic and research organizations, corporations and hospitals, ready to accelerate regional innovation

21

**regional partners** that include corporations, hospitals, academia and research organizations

1,038

**entrepreneurs and companies** engaged

500+

**new innovations** available for licensing each year

## MATCH

The W2B Project pipeline below involves innovations in need of mentors, CEOs, prototyping resources, capital, strategic partners, business assistance, etc.



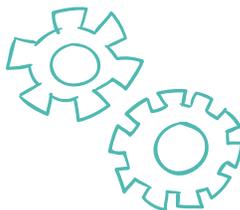
30

SOFTWARE



20

MEDICAL DEVICE



11

ENGINEERING



6

DRUG DEVELOPMENT



4

AGRICULTURE



1

ANIMAL HEALTH

## ADVANCE

projects toward commercialization

37

**new startups** facilitated

144

**new jobs**

\$30.9 million

in **follow-on funding**

Whiteboard2Boardroom program results measured from 2012 through June 20, 2018.

# MAKING CONNECTIONS TO ADVANCE INNOVATIONS

*“Whiteboard2Boardroom helped our startup connect to the municipality and potential clients in another Missouri city, an opportunity we wouldn’t have come across if it wasn’t for them.”*

—SALEEM AHMAD, CEO of Jrop, Ameren Accelerator startup

## ENERGIZED CONNECTIONS FOR ENERGY STARTUPS

For the second year in a row, W2B supported energy startup companies accepted into the Ameren Accelerator in St. Louis and made significant connections for two of them in the Kansas City community, which included grant opportunities, pilot programs and new product applications.

**JROP, INC.** engages in designing infrastructure for mass adoption of ride-sharing and autonomous vehicles. The company was founded in 2018 and is based in Toronto, Canada. W2B made introductions to KC Digital Drive and a local transportation organization, which will be exploring ways in which Jrop could be integrated into their current initiatives.

**APPLIED PARTICLE TECHNOLOGY, INC.** has designed a wearable technology to monitor real-time exposure to biohazardous materials. W2B made connections to the industrial hygiene department of a major engineering firm, a company specializing in government contracting and an environmental consulting agency.

## STARTUPS + EXECUTIVE TALENT = SUCCESS

Spinning a company out of a regional university or hospital is just the start. Those fledgling companies need lots of help, and Whiteboard2Boardroom helps fill the gaps. Startup companies like these need advisors, board members and other business assistance: W2B has created an online portal to connect young startups to the executive talent they need.

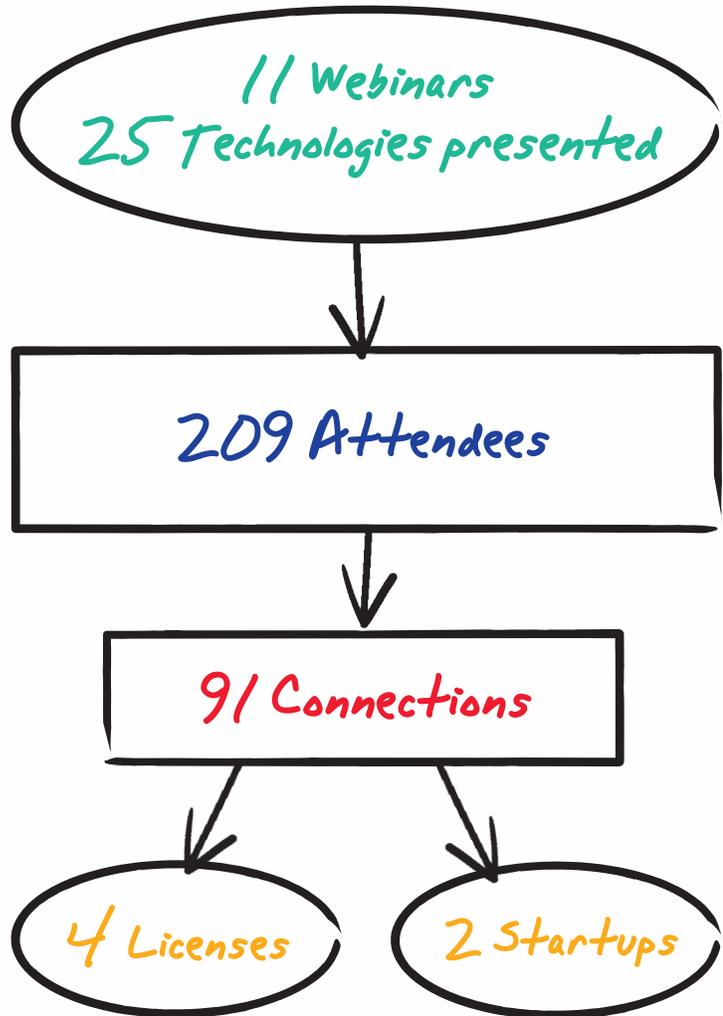
The portal asks interested companies to create their Startup Company Profile by describing the purpose of the company and its current team members, the intellectual property position of its technology, the status of the company as a corporate entity and the resources needed going forward to be successful. Needs can take the form of mentors, advisors, board members, strategic partners, management, business assistance and capital. W2B works to develop and maintain a strong network of management, talent and business resources that startups can tap to fill these needs.

*“The introductions from W2B have had a large impact by allowing us to engage with important stakeholders for feedback to improve our technology toward product market fit.”*

—JIAXI FANG, founder of Applied Particle Technology, Ameren Accelerator startup

Whiteboard2Boardroom webinars have proved to be a key conduit for sharing innovative technologies with the broader community. About once a month, researchers and/or tech transfer professionals from one or two W2B partner organizations present cutting-edge innovations.

Following the sessions, the presentation materials are shared along with a brief marketing write-up. This makes it easy for those listening in on the webinar to review the technologies at their convenience and share the content with others in their networks.



W2B webinar data from March 2017-October 2018.

## PARTNER LIST

W2B works because of a strong relationship with research institutions, corporations, CEO-level talent and business development resources. Today, W2B has 21 institutional partners across the region, including:

**Blue Valley High School Center for Advanced Professional Studies** Overland Park, Kan.

**Children's Mercy Hospital** Kansas City, Mo.

**Honeywell FM & T** Kansas City, Mo.

**Innovation Stockyard** St. Joseph, Mo.

**Jordan Valley Innovation Center** Springfield, Mo.

**Kansas City University of Medicine and Biosciences** Kansas City, Mo.

**Kansas State University** Manhattan, Kan.

**Missouri University of Science & Technology** Rolla, Mo.

**MRIGlobal** Kansas City, Mo.

**Pittsburg State University** Pittsburg, Kan.

**Rockhurst University** Kansas City, Mo.

**Saint Louis University** St. Louis, Mo.

**Saint Luke's Mid America Heart Institute** Kansas City, Mo.

**University of Kansas** Lawrence, Kan.

**University of Kansas Institute for Advancing Medical Innovation** Kansas City, Kan.

**University of Kansas Medical Center** Kansas City, Kan.

**University of Missouri-Columbia** Columbia, Mo.

**University of Missouri-Kansas City** Kansas City, Mo.

**University of Missouri-St. Louis** St. Louis, Mo.

**Wichita State University** Wichita, Kan.

**William Jewell College** Liberty, Mo.

# PROJECTS IN THE INNOVATION PIPELINE



Dr. Kim Smolderen  
Dynamo Health, LLC

## RESEARCHER SHARPENS HER BUSINESS EXPERTISE

Dr. Kim Smolderen is a researcher at her core. With the help of W2B, she's developing her business acumen to support her other key role: cofounder of Dynamo Health, LLC.

According to Dr. Smolderen, Dynamo Health is working on "a telemedicine solution to help patients with PAD (peripheral artery disease) manage their disease, which in turn may prevent them from needing costly procedures." This solution delivers healthcare services in patients' homes.

While earning an entrepreneurship certificate in biomedical technology offered by Saint Luke's Mid America Heart Institute, Dr. Smolderen met Jim Baxendale, director of Whiteboard2Boardroom, a mentor for the program. For Dr. Smolderen, Baxendale was the stimulating force in realizing her team's telemedicine solution.

**"[We valued] having that encouragement to turn gaps that we identified through our research observations into solutions that feed into a business idea," Dr. Smolderen said. "As researchers, we are not really encouraged to think that way—that we can also contribute in an entrepreneurial way. It was a completely different way of thinking."**

Whiteboard2Boardroom also connected Dynamo Health to Engage Mobile Solutions, a business solutions firm in Kansas City, Missouri, specializing in software development.

"[Engage Mobile Solutions] helped us think through our idea, not only from the IT development side but from a user perspective," Dr. Smolderen said.

The two companies continue to collaborate on Dynamo Health's telemedicine solutions, working to support patients who want to manage their disease with noninvasive treatment methods.

What's next? Dr. Smolderen will use both her research and business skills as she and her team pursue a STTR grant application to build on their existing research and take their solution to the next level.

## A BRIDGE BETWEEN RESEARCH AND REAL-WORLD MARKET APPLICATION

With almost 40 years as a physics professor and 25 patents under his belt, Dr. Henry White knows what it takes for university innovations to be successful in the marketplace.

W2B creates a fertile ground for innovation discovery and strategic partnership development. W2B uses a number of strategies—technology webinars, in-person meetings, mentor participation with startup programs and the website—to highlight partner institutions' newest and most promising innovations.

Dr. White, chair of the physics and astronomy department at the University of Missouri-Columbia (MU), is also a key member of a team developing a carp de-boning device at MU, along with MU professors Dr. Mark Morgan in the School of Natural Resources and Dr. Yuyi Lin in mechanical engineering.

The device was featured on the Whiteboard2Boardroom website last fall. One of the interested inquiries came from Andre Raghu with Moon River Foods, a company working to commercially harvest an invasive species of Asian carp from the Mississippi River and its tributaries — a perfect match for the MU team.

"Andre provided me with a sharp focus on how we might best proceed," Dr. White said. "I just can't emphasize how important the connection with Andre was," Dr. White said, giving credit to the Whiteboard2Boardroom team for providing the bridge from a university innovation to a marketplace application.



Dr. Henry White (center) and his MU team,  
Dr. Yuyi Lin (left) and Dr. Mark Morgan (right)

## ALSO IN THE PIPELINE

Here are technologies developed with the help and connections of Whiteboard2Boardroom:

**17°73° INNOVATION COMPANY** develops solar solutions to facilitate the expansion of electronic device usage in support of economic development and communication.

**AWARE VEHICLES** has multiple applications focused on autonomous, unmanned vehicles.

**CARDIOPTIMUS** is a safety device for use in transcatheter aortic valve replacement.

**KC AIR** is a vehicle sensor network that auto-collects road data for better pattern recognition and resource allocation.

**LARIAT GENOMICS** designs drug compounds for treating HIV.

**LAZSER DOWN** offers digitally displayed real-time down and distance feedback on the football field.

**MOBILITY+DESIGNED** crafts innovative mobility devices for disabled users.

**NASCENT TECHNOLOGY DEVELOPMENT** helps children with autism develop better social skills.

**NVISION AG** uses remote sensing to diagnose nitrogen deficiency in crops and determine appropriate levels of fertilization.

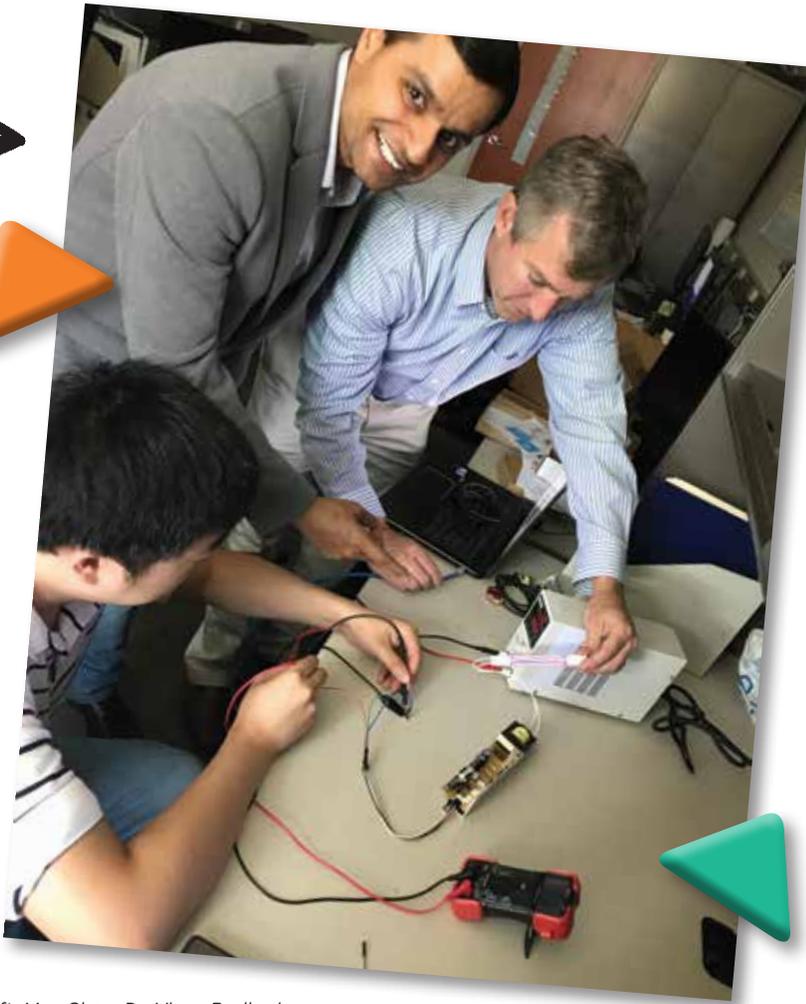
**SEEKEDGAR** uses cloud technology to search companies' filings to regulatory agencies.

**SENSORY A.I.** is a fully developed, automated road inspection service.

**U2D** is a portable neutron-radiation detection system.

**ZOLOZ** (formerly EyeVerify) developed Eyeprint ID, a highly accurate biometric technology for smart devices that delivers a password-free mobile experience with convenient, secure, private authentication.

**ZORILLA** predicts problematic interactions of a drug in the early stages of its development.



From left, Max Chen, Dr. Vinay Budhraj and PJ Piper

### DRIVING INNOVATIONS ACROSS THE VALLEY OF DEATH

PJ Piper is the perfect partner for Whiteboard2Boardroom, not just because of his experience founding companies and taking them to successful exits, but also because he's learned how to navigate the challenges innovators and early-stage companies face when trying to take technologies across the "valley of death"—that precarious transition between laboratory success and clinical trials.

Most recently, W2B helped Piper identify and connect with new pathogen detection research out of W2B partner MRI Global. This research paired well with his company, Far UV Technologies, the first UV disinfection system that is safe for humans and animals. Far UV Technologies recently added MRIGlobal as a subcontractor under its NASA contract to prevent foodborne illness in space applications.

**"Without W2B, [it] would've been a much more difficult task for us to find and potentially add this important detection capability to our whole product solution," Piper said.**

His first W2B commercialization project resulted in Aware Vehicles, in collaboration with University of Missouri-Kansas City professor Dr. ZhiQiang Chen, and has since obtained funding from the National Science Foundation to provide autonomous drone technologies for precision agriculture and the Department of Transportation for advanced imaging and autonomous infrastructure inspection.

"Having come to Kansas City only six years ago to scale another venture, I didn't have the expansive network with all the local research institutions that W2B has," Piper said. "Once we connect with the right innovators and their inventions, we can use our platform and resources to create a company and de-risk the opportunity."

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**Honeywell**

**KANSAS STATE  
UNIVERSITY**



University of Missouri



**wsu** | VENTURES



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