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Creating an Entrepreneurial Ecosystem

The world's largest maker space in a small town, where people can do things they never thought possible!

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www.fablabicc.org

What a maker space can



by Jim Correll Director, Fab Lab ICC

For the past 30 years, Jim has enjoyed a highly diverse career working in small business, manufacturing, entrepreneurial ventures and post-secondary education. Since 2006, he has been employed at Independence Community College, where his roles have included business coach, entrepreneur mentor and the director of Fab Lab ICC and the Successful Entrepreneur Program. Jim teaches aspiring entrepreneurs to challenge the traditional models of business thinking and education and explore new paths for solving the world's problems through innovation, creativity, trial and error.

Jim regularly shares his insights through multiple channels, including regional and national public speaking engagements, Southeast Kansas media - print columns and radio features - classes at the community college, an entrepreneur-centric podcast and one-on-one consultation. Jim has served on boards and committees for several local and state economic development and business organizations and has garnered multiple accolades. In May 2017, he was named among the "50 Kansans You Should Know" by Ingram's magazine.

Jim has announced his upcoming retirement from ICC, effective September 1, but plans to offer business consulting services on a part-time basis in the future.

The launch of Fab Lab ICC on the campus of Independence Community College in October 2014 has had an impact on Independence and the surrounding communities in Southeast Kansas. Many aspects of this impact are surprising. The impact on the community was not planned. We had no master plan. We were just trying to create a place with digital equipment where people could imagine, design and create things using tools they probably didn't have at home. Now, we would say our mission is to increase the self-efficacy (a special kind of self-confidence that leads people to make better decisions in their personal, academic and professional lives) of people of all ages and from all walks of life as they learn to do things they never thought possible. We are a community membership organization, and any individual in our region can become a member and learn to use any of our equipment.

The Fab Lab in our name stands for Fabrication Laboratory and ICC stands for Independence Community College. Fab labs are a subset of a larger, generic group called "maker spaces,"



"The value of maker spaces like the Fab Lab in a rural area is priceless. They bridge the gap for communities that don't have access to emerging technologies, while opening the minds of the youth to new possibilities. I was one of those youths, and I can't say I would have started my drone company without the maker space in Independence."

**- Wesley Collins,
CEO of AVA Energy Expeditions**

a broad term for any kind of community space where people can make things. We belong to the International Fab Lab Network (IFLN), an organization with roots back to the Massachusetts Institute of Technology (MIT) and Neil Gershenfeld director of MIT's Center for Bits and Atoms. Sometime around the year 2001, Gershenfeld grew tired of seeing college freshmen in his classes who could not apply their knowledge to real world problems. These were the smartest students from around the

country and they didn't know how to work with their hands. Gershenfeld created a fabrication lab with the high-tech equipment of the day so these smart students could couple their brain power with an ability to understand how things work and, indeed, the ability to actually make things. The model of the MIT Fab Lab began to spread, first to a community space in South Boston, then to Ghana, then to Barcelona, Spain. Other places around the globe began to open fab labs with similar philosophies and capabilities. That way, designs and creations could be shared around the world with the other labs being able to replicate.

At the time we applied to become part of the network in July 2014, there were only 200 fab labs in the international network. We used the suggested equipment list of IFLN. Our tag on the related web site, www.fablabs.io, does a good job of summarizing our philosophy: "Situated on the campus of Independence Community College, Fab Lab ICC seeks to provide its users with access to cutting edge tools for design, experimentation, problem solving and making custom artwork. The industrial layout of the space has an open, spacious feel and is intended to encourage a focused, collaborative experience. Our focus is on building self-efficacy, creative confidence and an entrepreneurial mindset. These three ideas will make people better at whatever they choose to do."

Fab Lab ICC is located in the Center for Innovation and Entrepreneurship, formerly known as the Cessna Learning Center, a training facility of 8,000 square feet built in 1996 for employees working in the new



"Having a maker space in a rural community like Independence has been a blessing for this non-profit organization. As a member of Fab Lab ICC, we share access to tools and technologies such as 3D printers, laser cutters, printers, CNC router and much more. Our budget and small downtown space would not allow for such equipment."

Fab Lab ICC is a place we can encourage small businesses, entrepreneurs and community members to come meet and develop relationships with future potential business partners and gather to create, invent and learn."

**- Tabatha Snodgrass
Executive Director, Independence Main Street**

...n mean to a small community



Cessna manufacturing plant. When the building was no longer needed by Cessna (about nine years ago), building ownership passed to ICC. The 1,800-square-foot shop area of the building was well-suited for Fab Lab ICC with heavy duty electrical wiring and plumbing for compressed air already in place.

Since I had been hired by ICC in 2006 to launch an entrepreneurship program, I've always thought about the ways Fab Lab ICC could be of value to entrepreneurs and small business owners. An important early step in this mission was the 2012 formation of the Innovative Business Resource Center (IBRC), comprised of a group of local leaders engaged with the NetWork Kansas organization to function as an "E-Community" (Entrepreneurial Community). The role of an E-Community is to offer small businesses training programs and gap financing through a revolving loan pool. ▶



"Having a maker space in our rural area allows people to create and sustain a small business that they otherwise would be hindered financially and creatively to do so. Having access to the various equipment and technology gives them an ability to develop their products and creativity. It is an economic engine for small business growth in our community. Without our maker space, our community wouldn't be able to provide the technology small businesses can't provide themselves financially, yet they need, to grow and develop in this advancing tech-driven day and age. People now can turn their hobbies into a profitable business without dumping thousands of dollars into expensive tech."

- Miranda Bruening, owner
Echelon Arch + Design
Founders Place - Indy



"The Fab Lab is empowering for entrepreneurs. We can do projects on our own, in our own time, that would have required the help of professionals in the past. That saves us large amounts of money and allows us much more control of the project from start to finish. Additionally, the Fab Lab is a place for entrepreneurs to be. The people coming and going always bring a unique energy that seems to foster creativity. That environment doesn't exist anywhere else that I know of."

- Brian Hight, Co-Owner
Magnolia Scents by Design

When the Fab Lab ICC maker space came to fruition two years later, we were obsessed with combining "entrepreneurial" mindset with "maker" mindset and becoming a national leader in combining the two to offer a comprehensive support system for those we serve.

WHAT'S PACKED INTO THE FACILITY

While we initially followed the recommended equipment guidelines set forth by the International Fab Lab Network to outfit our facility, most of the suggested equipment on the list was primarily for fabrication and prototyping. We have since expanded our equipment inventory specifically for the benefit of entrepreneurs and small business owners to help them not only prototype new products, but also promote their businesses. For example, we have high-quality laser and wide-media (banner) printers available as well as video and podcast studios.

We've also grown our footprint to meet the need of our members, opening a 7,600-square-foot building addition in 2018, with the help of funding from private donors and the U.S. Economic Development Administration. The addition offers space for business incubation, a digital studio (3D printing and wide-media printing), welding, plasma metal

cutting and a paint booth. The space has also become home to our Guitar Fabrication classes, in which participants create high-quality electric and acoustic guitars from kits. In 2019, we relocated our Adult Basic Education program into the space so students working on their GED (Kansas State High School Diploma) could mix project-based learning with their subject learning.



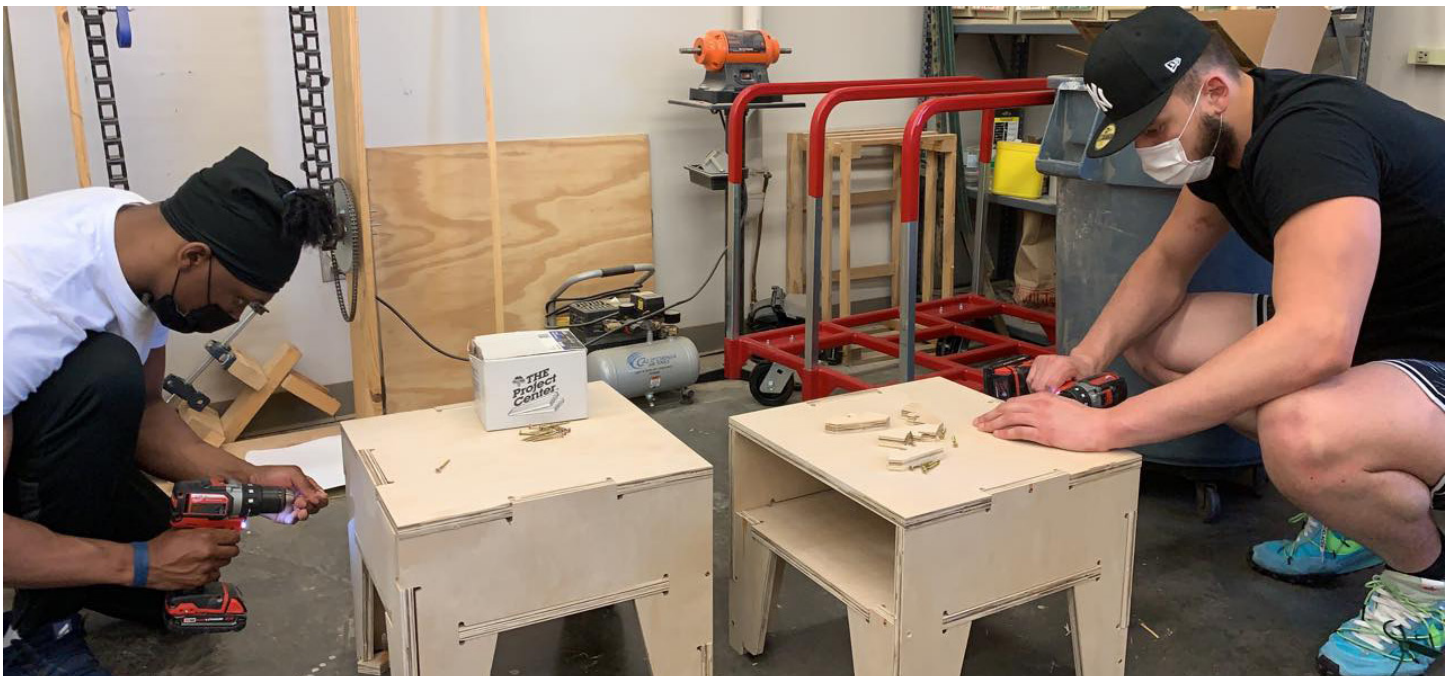
"The Fab Lab is one of those things that is just perfect for our area. I hear many comments about it on a weekly basis from customers, fellow business owners, etc. Shame on those of us who haven't taken advantage of the full benefits of this. There are just so many things we could be making in there for our business. The Fab Lab, in my opinion, has created an atmosphere that while extremely hard to measure has certainly had a positive impact on our economy and quality of life...I am confident that all that happens there is for the good of our community and especially nice for our small businesses in Independence."

- Terry Trout, owner
Ane Mae's Coffee and Sandwich House

"I think having a maker space 'evens the playing ground' for rural communities. Not just the kids...and we really do focus on our youth ... and exposing them to making as a way to be more self-reliant and become better problem solvers...but for our small businesses as well. With access to the maker space, even one as small as ours, our businesses can afford to create and distribute first-class marketing materials they may not have had access to before. The same can be said for other entities, such as Economic Development, Tourism and 4-H! I know that it would've taken MANY more years for my community to have a maker space if I had not attended the Indy Fab Lab Maker Space Bootcamp! Seeing what they have and thinking about how I could replicate it on a smaller scale ... was key. It's hard to 'be it' if you never 'see it,' and the bootcamp opened my eyes to what was possible."



- Lea Ann Seiler
Jetmore, Kansas



Here are some of the ways we believe Fab Lab ICC has impacted the local and area economy. *We believe similar impact can be felt by a fab lab or maker space in any community.*



TOP 9 WAYS OUR MAKER SPACE IMPACTS THE AREA ECONOMY

1. JOBS We work toward a continuous flow of new business start-ups, while existing entrepreneurs and small business owners learn they can use the lab to develop new products and services. This adds jobs as some grow to need help. Every entrepreneur who evolves a start-up business is either a part-time or full-time job created.

2. EDUCATION We inspire an Entrepreneurial Mindset through everything we do, including the Entrepreneurial Mindset class conducted for community members twice each year.

3. RESOURCES We connect our Fab Lab ICC members with agencies to provide business development assistance. Examples are the Innovative Business Resource Center, Montgomery County E-Community, Montgomery County Action Council, NetWork Kansas and Kansas Small Business Development Center. (Just the E-Community and other NetWork Kansas gap financing loans have amounted to \$1.3M in Montgomery County since 2013.)

4. QUALITY OF LIFE We can help challenged individuals improve their quality of life. We discovered this by



"Having a facility such as the maker space in such a small community is truly remarkable. It gives me the opportunity to cut costs in several areas of my business ranging from being able to create my own marketing materials to having access to woodworking machinery.

We have used the woodworking, laser etching and 3D printing to produce our draft board, marketing materials and even a few prototypes of our tap handles. This is all in addition to the social networking and advice that is absolutely invaluable in our small community."

- Robert Box
Owner, Indy Brew Works

"Having access to a maker space in a rural community creates exponential opportunities for anyone interested in becoming a small business owner or entrepreneur. The resources and technology available offer endless avenues to explore ventures and develop skills. Through a combination of programming and equipment, a maker space reduces significant barriers to entry and fosters positivity and growth for its members."



- Brittney Holum
Arrow Advisors

accident. Some will become entrepreneurs, experiencing for the first time in their lives the joy of providing a product or service in exchange for money. We saw one young man diagnosed with autism on his way to opening a computer repair and networking business. Government and foundation agencies around the U.S. are looking for quality of life solutions for these populations. We are working with two local agencies to develop solutions through the fab lab experience.

5. WORK FORCE TRAINING We're creating the work force training (we've named it "Fab Force") that is required to thrive in the coming age of customized manufacturing made possible by automation, robotics and advanced electronics. We believe the training for the employees and contractors of the future should consist of an approach where participants receive an introduction to a variety of disciplines rather than the singular disciplinary approaches of the past.

6. EXPERIMENTATION We strive to function as a type of advance manufacturing lab where existing businesses can learn about new techniques in customization and automation.

7. COLLEGE ASSET Fab Lab ICC makes a contribution in making Independence Community College strong. A strong community college helps build a strong community.

8. ATTRACTING YOUTH The fab lab culture has a positive effect on attracting youth to the area. That kind of entrepreneurial-fab lab culture based on technology and innovation never gets old or goes out of style. Young people like that kind of environment and will be attracted to return to the area as the quality of "city life" continues to deteriorate.

9. VISITOR DESTINATION The fab lab and related culture become destinations that out-of-town visitors and guests want to come see. We'll continue to make headlines, host events and offer our assistance around the country to communities who are building their fab labs.

We believe that every community should have a fab lab or maker space and that by combining the "maker" environment with "entrepreneurial mindset" an ecosystem will evolve in which "entrepreneurial" means an environment of effective problem solving in both private and public entities. ►

THE SATISFYING RESULTS

We're seeing the development and growth of an entrepreneurial ecosystem in our area. This is an ecosystem of entrepreneurs independently working with each other in a complex interconnected network. The ecosystem builds on itself. Other than a supportive environment, the ecosystem needs less and less help from outside forces. We do what we can to help entrepreneurs and others enter the ecosystem. Once in, they start to grow. They consult with each other and start doing business with each other. We try to be there to continue to help by seeing that they get what they need. On several occasions, we've worked with them daily as they've used our equipment to develop their products and promotional materials. At a certain point, their business grows enough they buy their own equipment. Some stay in touch. Some disappear from our radar screens and grow on their own.

All in all, that's the way an ecosystem should be, requiring limited help and attention. There's nothing more fulfilling than seeing these independent and self-confident people

"What is the definition of 'Entrepreneurial Ecosystem?'"

To me, it's a bunch of independent and disparate resource partners and organizations more closely aligning and working together in ways that create a stronger, more clearly defined and more inclusive environment and process to enable entrepreneurs to receive the assistance (expertise, education and capital) they need when they need it."



- Erik Pedersen,
President and Chief Operating Officer
NetWorkKansas

thrive in the ecosystem while providing for the needs of the marketplace.

It is that fostering of the entrepreneurial ecosystem that we believe has the greatest impact, providing the greatest benefit, to the Southeast Kansas area. A strong entrepreneurial ecosystem is the best medicine for all small, rural communities working to survive and thrive in today's crazy market dynamics. ❖





Fab Lab ICC is a membership organization open to the general public. In addition to students, entrepreneurs and small business owners, the lab serves hobbyists, crafters, retirees, teachers, designers, artists, trades people, non-profit organizations - anyone interested in the making experience.

Equipment, technology and services available include:

- Laser engraving
- Plasma cutting
- Banner printing
- Vinyl cutting
- 3D printing
- T-shirt press
- Sewing, quilting & embroidery
- Laser printing, copying and book binding
- Wood working
- Welding
- Painting
- Entrepreneur education / business coaching

Tours are readily available and equipment / technology orientation is provided.

Public Hours:

Mon, Tues, Thurs, Fri: 1 p.m.-5 p.m.

Wed: 1 p.m.-7:30 p.m.

Sat: 9 a.m.-1 p.m.

620-332-5499

www.fablabicc.org





IDEAS



IMPACT



INNOVATION

