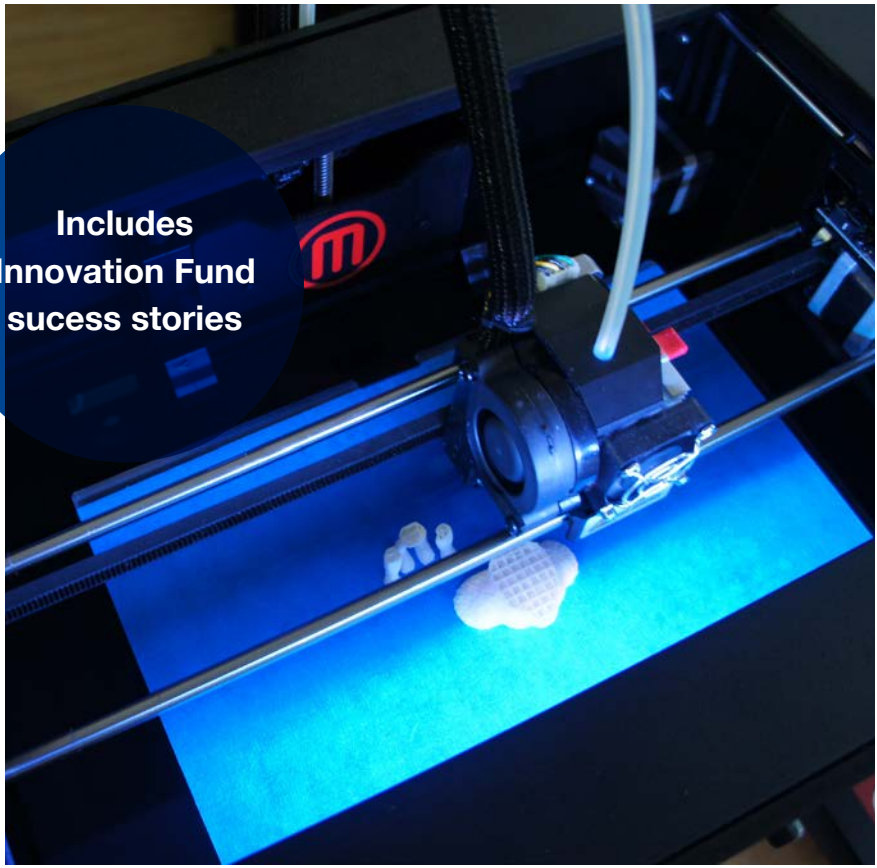
THE
INNOVATION ENTERPRISE
REPORT 2014



Includes Innovation Fund sucess stories

ON THE COVER

3D printing is leading 21st innovation, and Louisiana Tech is at the forefront.

Letter from the CINO:

Dear Friends,

In the Spring of 2009 with support from key community leaders and philanthropic partners, Louisiana Tech established the Innovation Enterprise Fund through the University Foundation to provide small grants to early stage companies connected to our Innovation Enterprise. The following report highlights some of the key elements of our Innovation Enterprise, including companies and technologies that have received grants from the Innovation Enterprise Fund. The grants are designed to accelerate the movement of innovation from the research lab to the marketplace and generate new economic activity and investment opportunities in our region. Engagement of the business and investor community in this Innovation Enterprise is increasing the likelihood of new venture success and maximizing the local economic impact of new technology development. The Fund is already beginning to increase the amount and quality of deal flow available to regional investors and set north Louisiana apart from other communities in our level of local commitment to the Innovation Enterprise. We have held three rounds of grant competitions and will hold the fourth round in the winter of 2014. All fund members are welcome to participate in the process and to vote on grant award decisions. Our goal is to grow this into a $1 million fund and dramatically accelerate the growth of high-tech companies and quality job opportunities in our community. We hope to increase the engagement of existing members and significantly grow membership in the fund over the coming months. I want to extend our sincerest appreciation to all who have contributed so far. Your contribution is already working to benefit our community. Feel free to contact me directly with any inquiries, suggestions, or to discuss your interest in becoming a member of the fund.

Sincerely,

Dave N. Norris, Jr.
Chief Innovation Officer
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Geopolymer Concrete Technology Wins Awards and Targets World Markets

ABOVE: Testing formulas for geopolymer concrete blocks at the TTC lab

Alchemy Geopolymer Systems was recently formed, through an Innovation Enterprise Fund grant, to commercialize a specialized geopolymer concrete technology developed by researchers at the Trenchless Technology Center at Louisiana Tech University over the past eight years. The base technology received the Louisiana Technology of the Year award in 2012. The company also recently won the 2014 Louisiana Startup Prize competition in Shreveport.

The technology directly targets a number of challenges in the construction industry, including laying concrete on sloped or vertical surfaces, in areas with a wide range of harsh temperatures, and in extreme acidic environments. These developments allow the company to deliver construction repair services to fix structural deficiencies found within major factories and buildings. Alchemy Geopolymer Systems is also experimenting with various techniques for curing concrete. One method has succeeded in creating a hard surface that people can walk on less than 30 minutes after the concrete is laid. The research team—led by Chief Scientist, Dr. Erez Allouche—just completed two field tests, resulting in new constructions at a power generation station in Ohio and a major industrial facility in southern Mississippi. These tests were the final step in a successful three year proof-of-concept effort. Alchemy Geopolymer Systems is currently engaged in developing a market for its unique concrete products. The company says that its technology is attracting commercial business partners not only in the United States, but additionally in Europe, Canada, China, and Mexico.

Student Startup Selling First Product On Amazon

ConnectOne is an electronics sales and development company. Founded in 2012 by Evan Puckett, a Junior Entrepreneurship major at Louisiana Tech, the company specializes in selling quality electronics to customers.

Realizing success through Louisiana Tech's 2012 TOP Dawg New Venture Championships, Puckett was able to start ConnectOne after winning a $2,000 grant from Baton Rouge based law firm Jones/Walker Attorneys. ConnectOne currently sells products on Amazon.com and through the company website. Currently, the main product is the ConnectOne Auxiliary Cable. Besides being high-quality, the cable's main benefit is that it provides simplified use for iPhone and iPad users with custom phone cases.

BELOW: The cable that connects to Apple devices with a 'Lifeproof™' case.

The company is working on several new ideas that they hope will hit the market quickly. Among these ideas are the ConnectOne Charging Station and the ConnectOne Car Charger. Development of these products is reliant on additional funding and investment coming into the business. Also expanding to a broader sector than just electronic sales, Puckett says that ConnectOne soon "plans to move into app development in markets that are untapped."

New Digital Marketing Company Begins Operation at Tech Pointe

BlueArx is a strategy management and consulting company based in Shreveport, LA, and specializing in solving real world problems through technology and software engineering. The company's members have Fortune 500 experience as well as small business insights. Through a recent collaboration with Louisiana Tech, BlueArx is providing students with the opportunity to work (for pay) with industry leading firms both regionally and nationally. Students assist in the development of a brand's digital presence by creating engaging online content. Through BlueArx's satellite office on the Tech campus, students can gain valuable job experience and create relationships with potential employers prior to graduation.

When students at Tech work with BlueArx, they are divided into teams that manage four different clients. Each team consists of a blogger, technical writer, videographer, graphic designer, content distributor, and project manager. In one week, teams work on the monthly web content for a client. This allows each team to collaborate on topics and allows plenty of time for client feedback before content is deployed to the web.

BlueArx CEO Ryan Wooley describes this work environment as "highly energetic, fast-paced, and efficient." Students gain experience working with deadlines and creating content suitable to management's needs. BlueArx also believes that this work teaches students about "industry best practices for online marketing and provides an in-depth understanding of how to execute an online marketing campaign."

Fenway Xperience Continues to Grow and Attract New Clients

The Fenway Group is a national consulting firm with several Fortune 100 clients. The group has partnered with Louisiana Tech through the Fenway Xperience program and has offices at Tech Pointe in the Enterprise Campus. Martin Santora, CEO of the Fenway Group and creator of the Xperience Program, says that the purpose of the Xperience program is to provide students and recent graduates with real world consulting experience in the form of paid, on-campus employment opportunities integrated with their educational experience.

Primarily, the Xperience program looks to develop and make connections with Tech's IT and Computer Science students. The program works by pairing students with executive coaches and mentors in a team that completes work for the Fenway Group's professional business clients. The daily structured mentorship students receive accelerates their individual skill sets rapidly. This benefits the Fenway Group by allowing for experienced students to be hired into the group with an assurance of compatibility.

So the Xperience programs is a major benefit to Fenway's clients as they have the opportunity to work with potential new employees while they are still students, screen them and help them build their skill sets. The Xperience program helps the Fenway Group to bridge the hiring gap as more and more senior programmers are retiring from the labor market and find strong and diverse talent from Louisiana Tech.

Fenway Group
Faster digital innovation

Art, Education, and Science Combine to Catalyze New Faculty Startup

ABOVE: A few examples of LMNObeast 3D printed and designed by Todd Maggio.

LMNOBeasts is a mobile app and workbook package for young children developed by Todd Maggio, professor of Communication Design at Louisiana Tech University. The package uses entertaining "beasts" made from letters and numbers by the children using the program in order to to improve children's reading and cognitive skills and serve as a therapeutic learning aid for students with autism, Asperger's, and other communicative disorders.

The inspiration to create LMNOBeasts came from a project Professor Maggio assigned to his students to teach basic anatomy using typeface of letters and numbers. With the idea in mind, he collaborated with Tech's speech pathology faculty to begin testing and developing LMNOBeasts. The group used the idea to write a paper detailing the potential of the venture. After the success of the paper was realized at the International Toy Research Association's 2014 World Conference, an initial product launch was planned for March of 2015.

Maggio plans to expand the brand quickly after launch. He said that he "sees a high potential for schools, especially Montessori ones, to adopt this technology soon. A partnership with schools will establish the workbook and mobile app package as a serious educational tool through association with a premium brand." Maggio claims his end goal is to use an entertaining learning process to make children smarter, happier, and healthier.

Nanogaia Takes Personalized Medicine Into 3D

Nanogaia is a company founded in 2010 that focuses on growing cells in a three-dimensional format, as opposed to a two-dimensional one such as a petri dish. The team is led by Dr. Mark Decoster, a professor of biomedical engineering at Louisiana Tech.

Nanogaia's new technology allows researchers the ability to grow normal and cancerous cells, both animal and human, all in a 3D structure. The company is moving quickly, having already secured multiple grants and awards, including a Louisiana Board of Regents award and a La-i6 award from Louisiana Tech's Proof of Concept Center. A partnership has been formed with the LSU Health Science Center in Shreveport medical campus for screening potential anti-cancer drugs.

Recently, Nanogaia launched its first commercially available starter kit, which allows scientists to begin growing cells in this style. Many competitors in the 3D cell growing market use much more complicated methods than Nanogaia's straightforward approach, allowing Nanogaia to have the potential to succeed. The simplicity of the design even allows for 3D printed materials to be integrated into the process. Since both cancer cells and normal cells are used, it is expected that the work could be commercially important for not only cancer research, but also tissue engineering markets. The company says that a current goal is to "get initial kits into the hands of researchers and collaborators and spread the word for market entry."

Customized Medical Implants Being Developed by New Bio Venture

In 2011, Dr. David K. Mills, Professor of Biological Sciences and Faculty Associate at the Center for Biomedical Engineering and Rehabilitation Science at Louisiana Tech University, founded organicNANO. The company's mission is to commercialize discoveries and inventions produced by the BioMorph Lab at Louisiana Tech.

Most of the projects that organicNANO is working on involve using nanotechnology to repair and regenerate body tissues. One product being developed by the company uses a 3D printing process to create custom medical implants that are intended for anti-infection and chemotherapy purposes. "One of the greatest benefits of this technology is that it can be done using any consumer 3D printer and can be used anywhere in the world," said Jeffery Weisman, a doctoral student in Louisiana Tech's biomedical engineering program. OrganicNANO has received initial funding to get started on prototypes and testing for several of these projects, including the ones mentioned. The company is working with product components that have all received FDA approval, so they are confident of eventual approval for their new product applications.

Moving forward, organicNANO hopes to maintain and develop a strong marketing presence along the I-20 corridor in Louisiana. The company says that its processes are compatible with "either small scale or industrial scale manufacturing," so organicNANO is optimistic about the potential for future growth.

After Competition Accolades, New Diagnostic Tool Seeks Commercialization Partners

PathoRADAR is a new startup company that is developing a diagnostic tool that can detect contamination in samples taken from food, water, and the environment. The company was started by Varun Kopparthy, a Louisiana Tech Ph.D. candidate in Biomedical Engineering and research assistant at the Tech Biomedical Microfluidics laboratory.

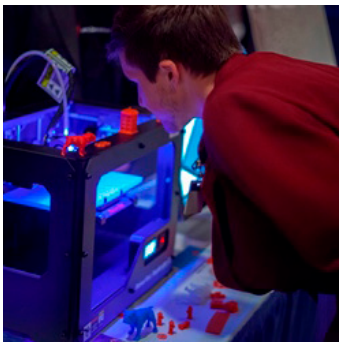
Kopparthy says this technology is needed because "current methods to identify contamination from food are time consuming, expensive, and complex to handle." PathoRADAR has the capability to detect multiple pathogens in a single test run. The new diagnostic tool would also help to reduce inventory costs at food manufacturing companies.

Kopparthy has successfully used PathoRADAR to compete at entrepreneurship competitions at Tech placing in the top 10 at the Top DAWG IDEA Pitch competition in Fall of 2013 and placing first in the Top DAWG New Venture Championship in Spring of 2014. The startup also made it to the Final Five in the LA Startup Prize competition in 2014.

BELOW: Vanrun Kopparthy founder of PathoRADAR and his partners.

PathoRADAR is actively seeking business partnerships to develop prototypes and a fulfill their commercialization plan. Several investors in the community have already shown interest, and Kopparthy is optimistic about the future outlook for the company to grow in north Louisiana.

The Thingery: A Catalyst for Product Innovation in North Louisiana



ABOVE: Student experimenting with 3D printing in The Thingery lab.

The Thingery at Louisiana Tech is a multidisciplinary design and fabrication lab developed as a community resource and exists to give innovators access to the technical and intellectual resources needed to fully explore their ideas. This exploration may include design work, prototyping, packaging, manufacturing, and distribution for their new concepts. The Thingery has the equipment necessary to accomplish these tasks and the knowledge to train people to bring their ideas to reality.

The space, located in University Hall on the Tech campus, contains 3D printers, laser cutters, metal and soft material milling stations, computers with graphic design and technical software, and a wide variety of circuitry equipment (soldering, testing voltage, repairing equipment, etc.). According to Dr. Dave Norris, Chief Innovation Officer at Louisiana Tech, “Students are learning the fundamental skills required to use the creative technical resources of the space in ways not yet imagined. And these resources are now being made available to the community so that entrepreneurs and innovators from across north Louisiana can learn and use these tools to create new economic opportunity for themselves and for our region.”

The goal is to enable innovators who are makers and entrepreneurs to imagine and create new products and new business ventures in the region.

INNOVATION FUND REPORT

DECEMBER 2014

Gifts Received:
$297,906

Grant Funds Awarded:
$172,906

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