



**innovation  
park**  
at PENN STATE

# JOURNEYS

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## THE INGENUOUS POWER OF PARTNERSHIP

### CARBON SCIENCE CENTRE OPENS AT PENN STATE



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# CUTTING-EDGE CARBON SCIENCE CENTRE

## OPENS AT INNOVATION PARK

Even Centre County's first major snowstorm of the season could not dampen the celebratory atmosphere of the 100-plus university officials, business leaders, government representatives and community members who gathered at Penn State's Innovation Park on November 15 to mark the grand opening of Morgan Advanced Materials' new multi-million dollar Carbon Science Centre of Excellence at Penn State's Innovation Park. The new Centre of Excellence will pioneer research into carbon materials and technologies, drawing on the resources of Penn State and its faculty in a truly collaborative partnership that is the latest success in the University's Invent Penn State initiative.

### Connections Through Entrepreneurship And Innovation

Launched in 2015 by Penn State president Eric Barron, Invent Penn State is a \$30 million dollar initiative "redefining the University's land grant mission to include entrepreneurship and innovation programs, tools and resources that accelerate the movement of great ideas to the marketplace and make a substantial economic development in Pennsylvania and beyond."

President Barron sums up the initiative's mission, "Invent Penn State is aiming to drive job creation, economic development and student career success by connecting researchers with the people who help bring their discoveries to the marketplace."

Through its Office of Industrial Partnerships, the University has sought to make these collaborations a solid reality by attracting research and development centres to Innovation Park. These partnerships give industry access to Penn State resources and faculty; and the presence of these centres helps keep Penn State on the cutting edge of innovation and development. The mutually beneficial dynamic of these partnerships are of particular benefit to companies like Morgan Advanced Materials, their chief technical officer, Mike Murray says, noting, "Penn State has an



*Vern Squier, president and CEO of the Chamber of Business & Industry of Centre County; Andrew Goshe, global technical director at Morgan Advanced Materials; Neil Sharkey, Penn State vice president for research; Pete Raby, CEO at Morgan Advanced Materials; Phil Armstrong, CoE lead at Morgan Advanced Materials; and Nick Jones, Penn State executive vice president and provost, celebrate the opening of the Carbon Science Research Centre for Excellence with a ribbon-cutting ceremony. Image: Invent Penn State*

unrivaled reputation for innovation in this field, which we believe will add real value for our customers."



*Phil Armstrong and Andy Goshe talk about Morgan Advanced Materials' new multi-million-dollar Carbon Science Centre of Excellence at Innovation Park.*

### Leaders In The Field

Morgan Advanced Materials was founded in 1856 by the Morgan brothers in London. The company's initial success came from their use of graphite in a clay mix to produce a crucible that melted metal faster and lasted longer than any other product available at the time. Over the years, Morgan Advanced Materials has continued to grow, change and adapt. However, its focus remains where the same: engineering high-performance materials and specialized products that offer reliable solutions to technical challenges and help customers achieve more with less.

**"These partnerships give industry access to Penn State resources and faculty; and the presence of these centres helps keep Penn State on the cutting edge of innovation and development."**

Morgan's CEO, Pete Raby, noted that an important component of Morgan's business strategy for the 21<sup>st</sup> century was increased investment in research and development. To achieve this, Morgan began establishing

[innovationpark.psu.edu](http://innovationpark.psu.edu)



*Pete Raby from Morgan Advanced Materials speaks at the opening of the Carbon Science Research Centre for Excellence. Image: Invent Penn State*

research centres to refine current materials and develop new ones. These centres of excellence are dedicated to collaboration with academic institutions to develop advanced materials that are technically superior, cost-effective and environmentally sound. The first centres were established in England in 2008 and 2015, and are focused on Morgan's ceramic products. As Raby observed, the next logical step was to establish a centre for its carbon-based materials. Through its Office of Industrial Partnerships and the Invent Penn State Initiative, as well as contacts with faculty involved in the study of carbon-based materials, Penn State was well positioned to offer Morgan the facilities and support necessary for success, and Morgan was impressed with the quality and range of Penn State's research into carbon-based materials. As Andy Goshe, Morgan's global technical director, noted, Morgan's needs were a "good match with Penn State research."

## Built On Collaboration

As Jeff Fortin of PSU's Office of Industrial Partnerships observed, "Relationships power these collaborations," and the partnership between Morgan and Penn State was augmented by assistance from local government, and the Pennsylvania Governor's Action Team, all of which worked together to advance the Carbon Science Centre of Excellence from a concept to a reality.

The reality came to fruition with the construction of 310 Innovation Boulevard. The 7.3 million dollar, 29,700 square foot building was designed and built by GLP Development Group, which is developing a number of sites in Innovation Park. GLP's Robert Barron noted the single story, high bay building was designed to allow maximum flexibility for its occupants in configuring their space. Morgan is the first occupant of the building. They estimate the centre will create 25-30 high-tech positions once it's fully operational.

## "Relationships power these collaborations."

It was at this cutting edge facility that representatives of Morgan Advanced Materials, Penn State officials, local government researchers and business leaders gathered to mark the grand opening of the Carbon Science Centre of Excellence on November 15. The ceremony began with remarks from Morgan CEO Peter Raby.

Raby noted that establishment of the centre was the next logical step in Morgan's investment in research and development, and that the Penn State partnership was crucial, not only in terms of location, but in the wealth of resources available, emphasizing that it was "a centre of collaboration." He stated that the creation of the centre was not only an example of the benefits of such

creative partnerships, but "for me, the opening of this centre is significant step for our company in the development of carbon-based materials."

Raby's presentation was followed by remarks from Nick Jones, Penn State executive vice-president and provost. Provost Jones echoed Raby's observations about the benefits of collaboration between industry and academia. Reaffirming Penn State's commitment to such creative partnerships, he observed such "partnerships are meaningful in advancing innovation and development." Provost Jones' remarks were followed up by Neil Sharkey, Penn State's vice-president for research, who praised the "ingenious power of partnership" in advancing technological and industrial development. He noted such collaborative business partnerships thrived best in a "fertile intellectual environment."

## "For me, the opening of this centre is significant step for our company in the development of carbon-based materials."

Dr. Sharkey was followed by remarks from Morgan's global technical director, Andy Goshe. Goshe emphasized that Morgan's development of new materials had a positive impact on the world economy and environment. He noted that several of the products developed by Morgan have been used to provide potable drinking water in under-developed areas in the world and reduce the carbon imprint on the environment. He observed that Penn State's research into carbon-based materials would be invaluable to their efforts and that Morgan was excited at the prospect of "filling this fantastic space with brilliant young minds."

Closing remarks were given by Vern Squier, CEO and president of the Chamber of Business and Industry of Centre County. Squier reviewed the invaluable assistance provided by local business and the Governor's Action Team in facilitating the partnership which resulted in the centre. He noted that bringing Morgan to Penn State not only benefited the partners involved, but the larger business community as well. He emphasized that business in the Centre Region was committed to assisting in the creation of these partnerships which have a "positive impact on our area, our businesses and our people."

## "Partnerships are meaningful in advancing innovation and development."

Following the formal remarks, a light-hearted moment occurred when those on the speakers' platform gathered for the ceremonial ribbon-cutting. Morgan CEO Raby was presented with a large pair of ceremonial scissors with which to cut the broad ribbon. When the scissors failed to slice the ribbon on the first try, Raby quipped that the scissors "obviously weren't made by Morgan." Following the ribbon-cutting, participants were served a light luncheon, followed by tours of the new centre. Those present were fascinated by the new facilities and the research that will be conducted. Despite the cold, inclement weather, the prospects for the future of the centre are bright and sunny, and the partnership that created it is a shining example of the positive global impact of such creative collaborations. As CEO Raby noted, the opening of the Carbon Science Centre of Excellence allows its collaborators to "seize the opportunity to advance the study of carbon-based materials to better our world." ■



# BEN FRANKLIN TECHNOLOGY HELPS STARTUPS CHANGE THE WORLD

Every year for the past 30 years, Ben Franklin Technology Partners has teamed up with the minds behind some of Pennsylvania's biggest ideas, fueling their projects with the funding they need to take the next big step. The money—up to four yearly infusions of cash totaling \$500,000—is used for things like software development, prototype development, beta testing and payroll. In the most practical terms, the funding is buying time, expertise and the ability to focus on the project.

This year, six projects were approved to receive both funding and Ben Franklin's signature support services with expertise in areas like marketing, human resources, accounting and advertising.

Spread over the state, these new ideas in tech range from a comprehensive college and career resource for the state's high school students to a patented LED light that helps people see the entire color spectrum at low light levels. While these projects were all different from each other, they share a common thread—an unmistakable, contagious passion for innovation. Ben Franklin would be proud.

## Croptix Helps Citrus Farmers Tackle Disease

Croptix, based in State College, is tackling the \$220 billion global losses in crops due to disease with a machine learning and internet of things (IoT)-enabled disease screening platform for farmers. The platform provides farmers with the ability to screen for disease and detect it early using data collected from Croptix's patented optical sensor technology. Croptix has recently launched with citrus growers in California, who are dealing with the devastating HuangLongBing (HLB) disease, often referred to as citrus greening disease.

HLB has decimated the U.S. citrus industry in Florida, reducing production to 40 percent of the 2005 level. Currently, the only effective intervention is timely

detection of disease and removal of infected trees. The Croptix service is the first to market to California growers and provides a practical, high-throughput early warning screening system to mitigate the damage of HLB to their groves.

"Croptix uses a combination of patented optical technology licensed from Penn State and developed in house to look inside a crop's leaves and detect small structural changes that are associated with the progression of crop disease. These small changes often happen before your eye can see it, therefore allowing our technology to act as an early identification and warning system for the farmer," CEO and co-founder Perry Edwards says.



*Croptix is helping citrus farmers tackle disease*

Ben Franklin previously invested in Croptix and became even more motivated to invest again based on the progress the company made in obtaining its first group of customers. This investment helped them establish a stronger presence in their initial target market with California growers and further support their customer development. Croptix also recently received a National Science Foundation Phase II SBIR Award, which is supporting the final stages of research and development on their product.

**“Ben Franklin has been with us from the beginning and has truly helped position our company for success.”**

Croptix will now look to tackle challenging problems in other crops experiencing nutrient deficiencies, water stress or disease. Once they have proven their platform in citrus, they will be able to rapidly diversify the product offering to other crops like grapes, olives, cocoa and cassava.

Thanks to Ben Franklin Technology Partners' investment, Croptix can build their team and improve the experience and efficiency of providing results to their customers. “Ben Franklin has been with us from the beginning and has truly helped position our company for success,” Edwards says.

## Noodigs Innovates The Home Buying Experience

Hailing from Lancaster, the Noodigs platform connects home buyers and sellers directly and allows them to work through every step of the home sale process without the involvement of a residential real estate agent and their high fees.

“The home sale industry is antiquated in so many ways. With technology touching every part of peoples' lives, why hasn't it had a bigger impact on the way we buy and sell homes?” founder Ryan Harris asks. “In part, the answer to that is the legal protections that the establishment has baked into the industry. In order to touch any part of the [real estate] sale transaction, you have to be a licensed brokerage, which really stifles innovation. There's simply no motivation to innovate. We've looked at the entire transaction and said, ‘But why?’”

Buying or selling a home is a checklist; in the traditional model it's just



*Noodigs founder Ryan Harris*



a really well-protected checklist. Noodigs has built a tool that removes that veil of mystery, giving their customers insight into the when, why and how of each step in the transaction.

**“Ben Franklin is so much more than just money. They're access to tools and resources, and the startup expertise that so many of us are lacking in these early stages.”**

They are shaking up the status quo, but the upsides make it worth it. It's aimed at a generation who is tech-savvy, independent and looking for ways to save money. “In some cases, we're saving \$15,000 in just the house buying transaction. That's a down payment on a house or the start of a 529 plan for your kids. It's significant,” Harris says.

Thanks to Ben Franklin Technology Partners' investment, Noodigs can attract beta testers and early adopters to more finely tune our product to appeal to the masses. “Ben Franklin is so much more than just money,” Ryan says. “They're access to tools and resources, and the startup expertise that so many of us are lacking in these early stages. They are unique in the sense that you can be certain that your goals align with theirs.”



*RokkBoxx is working with restaurants and bars to increase customer's dwell time*

## Rokkboxx Revolutionizes Bars and Restaurants

Erie-based RokkBoxx says the key to increasing restaurant and bar sales is increasing customer's dwell time. And what keeps customers around, in their seats and making subsequent purchases? Keep them entertained.

**“It's so hard to quantify the impact of Ben Franklin on our company. But the partnership allows us to bring in resources that we normally wouldn't be able to have access to. In a small company, you can only bring in the talent that you can pay for, and the biggest expense is almost always payroll. Ben Franklin allows us to take the next step in our growth.”**

“Back when I was a kid, MTV was on all day long,” says CEO and co-founder William M. Grant. “I mean, all day. Today, the highest-watched videos on YouTube are all music videos. It's something we all watch. When you ask someone if they've heard a new release, the first thing they'll do is go to their phone and watch the video while they listen to it.”

He and co-founder Shawn McCullough, CTO, developed RokkBoxx, a video music management and delivery service built with a unique advertising engine that allows bars and restaurants to leverage existing TVs and infrastructure to promote local and in-house specials and events.

When someone's favorite music videos are playing, they will stay at a bar or restaurant longer and they'll end up buying more. With the addition of a scrolling bar at the bottom of the screen, the RokkBoxx system can also deliver the venue's own info to the customer at the same time. It is next level, customized entertainment and advertising.

This is RokkBoxx's second round of funding through Ben Franklin Technology Partners. They gravitated toward this universal idea of entertaining with a layer of AI to make the user interface simple. “Technology is embedded with the name Ben Franklin,” Grant says, “and they are looking for this type of innovation to partner with and promote.”

After mastering the bar and restaurant market, they aim to roll out to vertical markets like bowling alleys and have their sights on eventually releasing the system to individual households.

Thanks to Ben Franklin Technology Partners' investment, RokkBoxx can grow effectively and efficiently. “It's so hard to quantify the impact of Ben Franklin on our company,” Grant says, “But the partnership allows us to bring in resources that we normally wouldn't be able to have access to. In a small company, you can only bring in the talent that you can pay for, and the biggest expense is almost always payroll. Ben Franklin allows us to take the next step in our growth.”

## Lyr lux Brings the Full Color Spectrum to Low Light Conditions

Lyr lux in State College wants to change the way the world sees, one LED at a time. As light levels decrease, the human visual system becomes less sensitive to color. Yet, there are many applications where low light levels are common and the quality of color rendering is important—something not addressed with current lighting solutions. Lyr lux's patent-pending technology, called Dim to Vivid™, features an LED lighting technology that reveals the full color spectrum no matter the light level. The technology is based on a highly-engineered variable spectrum that works by differentially adjusting an array of LEDs that emit different colors of light.

The concept has applications in places like museums and galleries, but the company's co-founder, Penn State professor of architectural engineering Kevin Houser says the impact of their Dim to Vivid technology could eventually be felt everywhere. “Lyr lux's vision is to improve people's lives through light. In addition to being the stimulus for vision, light also influences circadian rhythms, alertness throughout the day and sleep quality at night. While our first market is low-light applications, our product development roadmap includes adaptations of our underlying technology for many other contexts.”

Houser and Lyr lux partnered with Ben Franklin's TechCelerator in 2018 and were accepted into the spring cohort. Houser said the help was invaluable when it came to human resources, hiring, accounting and information on Pennsylvania labor laws. “It's been a natural fit for me, and I am glad Ben Franklin thought so too,” he says. “I attained deeper knowledge and received structured coaching. They helped guide ideas developed in my lab toward commercialization.”

At the end of the spring 2018 TechCelerator cohort, entrepreneurs pitched their ideas to a panel of judges for a chance to win \$10,000 in prizes. The judges were so impressed with Lyr lux's concept that

*Continued on next page*



they awarded them the entire prize. Lyr Lux was also selected as a finalist to pitch at the Tech Tournament at the Invent Penn State Venture and IP Conference in April 2018.

Even though Lyr Lux has been selected as a recipient of Ben Franklin's funding this year, they have chosen to decline the cash at this time as they decide next steps in their development, relying instead on Ben Franklin's other contributions to their venture. "This is such an amazingly supportive group of people in growth of small businesses in Pennsylvania," Houser says.

Thanks to Ben Franklin Technology Partners' involvement, Lyr Lux can continue to turn their lab-based discoveries into a commercially-viable venture that will change the way the world sees light and color.



Lyr Lux co-founder Kevin Houser

## Dashboard OSM Simplifies E-Commerce

FullStac LLC in Harrisburg saw a need for e-commerce management solutions for small and mid-sized companies. "Online sales total more than \$1.7 billion this year, and there are only six management solutions for all the demand, with no good solutions for small to mid-sized companies," EVP Mike Kulczycky says. "Either solutions are too cheap and don't give the support companies need, or they are built for massive companies and too expensive for everyone else."

They've developed Dashboard OSM, a cloud-based online sales dashboard that manages multiple online accounts in a variety of marketplace platforms from one application. Features include listing to multiple marketplaces, automatic order entry, QuickBooks integration, label creation, inventory control and point of sale. The company's product automates daily tasks, consolidates data and reduces the likelihood of error.

"If you are a reseller, you are selling online, period," Kulczycky says. "And Dashboard OSM has all the features you need to manage those online sales, whether you are selling on your own site, on Amazon or sites like EBay. We've created this for businesses who need a powerful solution but are too small to have an IT department create something from scratch."

Thanks to Ben Franklin Technology Partners' investment, DashboardOSM can grow. "Any tech



FullStac LLC EVP  
Mike Kulczycky

**"Our partnership with Ben Franklin is a match made in heaven."**

or software business is extremely expensive. Software takes a lot of research and development... a lot of time," Kulczycky says. "Our largest cost is payroll, and now we can bring on more employees and grow organically rather than spending valuable time looking for investors. Our partnership with Ben Franklin is a match made in heaven."

## Counselors Advantage Program For Success Modernizes College And Career Prep

When assistant principal Cass Wright saw his job eliminated in a budget cut, he didn't get mad, he got busy. He took an idea of how to better support our state's high schoolers, coupled with his own story of how guidance and education can rescue at-risk students, and turned it into a solution.

After five years of research and development, his team has rolled out Counselors Advantage Program for Success, a comprehensive internet-based College and Career Readiness platform



Cass Wright of Counselors Advantage Program for Success

for the K-12 market, replacing the paper/excel spreadsheet process currently used by many guidance counselors. The company's product includes the required curriculum, syllabus and guidance tools in support of all students as they proceed toward post-secondary goals. Their courses include new teacher induction, preK-5th grade parent programming, 6-12th grade parent and students programming and readiness for college, military, employment and entrepreneurship.

In just about one hour per week, students work through short videos, interactive checklists and worksheets that keep them on track for future success. It's a blended model. CAPS team members go into schools to help with instruction and teachers, counselors and parents work together to mentor students toward success.

The state of Pennsylvania requires college and career readiness to be taught at the high school level, but some budget-strapped districts struggle to offer more than the bare minimum. Add to that to the sheer number of students per guidance counselors within the school and it becomes harder and harder to adequately mentor and guide students through college readiness, especially at-risk students and those whose parents never attended secondary education.

CAPS soars past the state requirements for college and career readiness, easily nesting into a school's existing setup to aid teachers and parents where they need help the most. CAPS-involved schools typically graduate students with a total of \$3 million in student aids. In beta testing, they followed 820 students through high school from a wide spectrum of racial, financial and societal backgrounds, including children from families who had never attended secondary education. Of the 820, there were 932 offers of college admission and a staggering \$27 million offered in financial aid.

**"Thanks to Ben Franklin Technology Partners' investment, CAPS can continue to work toward making college and career readiness available to every student in Pennsylvania."**

Whether students aim for a four-year school, the military, trade school or entrepreneurship, CAPS walks them through every step needed for success. And, reflecting back on Cass Wright's own experience with cash-strapped school districts, soon it will free. His team is working with local and nationwide corporate sponsors to fund individual school districts, enabling them to offer mentorship and guidance to the state's most vulnerable youth when they need it the most.

Thanks to Ben Franklin Technology Partners' investment, CAPS can continue to work toward making college and career readiness available to every student in Pennsylvania. "We can reach these kids before they get farther behind or want to drop out," Wright says. "I was one of those kids and I want to help this generation have what they need to succeed." ■



# IMPULSE TECHNOLOGY'S INNOVATION WINS 2018 TECHCONNECT DEFENSE AWARD

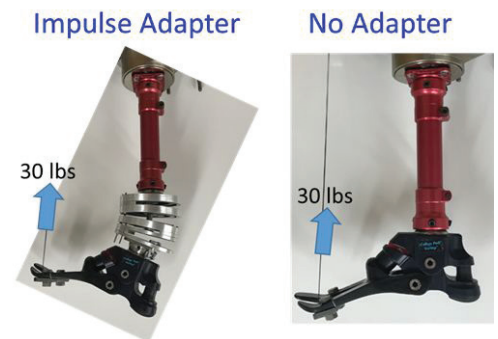
For six consecutive years, TechConnect has served as a bridge between the Department of Defense (DoD) and the latest technological innovations. Start-ups, agencies and investors are able to connect in order to find solutions to the biggest problems plaguing military personnel. Each year at the annual Defense TechConnect Summit, hundreds of innovators have the opportunity to submit their technologies not only for recognition, but for the advancement of national security. The summit is a unique event that provides technological innovators with exposure that would be hard to get elsewhere. The various innovation challenges that participants aim to meet include categories such as digital transformation, critical infrastructure, autonomous systems, smart operations and warfighter focused technologies. Though many of the pitches submitted to the selection committee are considered to be some of the best

technologies in the world, only the top 15 percent of innovations receive a TechConnect Defense Innovation Award. This year, nanoscale research and development startup Impulse Technology LLC was one of the select awardees.

Impulse Technology, located in Innovation Park and one of the members of the Tech Center Incubator Program at Innovation Park, was recognized for their self-aligning prosthetic adapter. According to the tech firm, each year there are over 180,000 hospital discharges related to amputation with over 50 percent of those



affected experiencing long-term associative problems. Their research also noted the hefty price tag that can come along with high-quality prosthetics, making them inaccessible to many veteran amputees. The reality is that these products can lead to tendonitis, pain in other areas of the body or even amputation of an individual's second leg.



## Bringing New Technology to their Field

The self-aligning prosthetic adapter by Impulse Technology is easy to tune and is manufactured with 3D printing technology, making it cheaper and more comfortable than traditional options for lower limb loss. Their below-knee prosthetic has also been found to reduce adaptation time and reduce the negative impacts of misalignment. Their new technology works to mimic natural leg function more successfully than options that are currently on the market.

**“Their new technology works to mimic natural leg function more successfully than options that are currently on the market.”**

Dr. Kamrun Nahar, CEO and co-founder of Impulse Technology, played a monumental role in the design, research and development of the prosthetic technology. The main goal of her team is to improve the overall quality of life for amputees by helping to restore their mobility. The TechConnect Defense Innovation Award will help them to further that goal, as this award will raise awareness of the company among both potential users and potential investors. In an interview, Dr. Nahar expressed just how valuable the honor has been to her team.

“This award actually acknowledges the work that we have done. So, though it does not have monetary value, it gave us recognition at the conference as well as an opportunity to pitch to a panel of investors and defense program managers,” stated Dr. Nahar. “We were also able to show our award at our booth, so anybody visiting knew that this was a technology that was recognized.”

This year, the DTC Summit showcased more than 200 booths and connected small businesses with potential investors in both private and federal sectors. As an award recipient, Dr. Nahar's team was able to participate in an innovation showcase where they were invited to give a ten-minute pitch to various panelists, officials and third-party investors. Networking plays a crucial role in taking ground-breaking ideas from research to reality.

“There are many United States Department of Defense sponsor stations and program managers, and they have their information sessions to make connections with the industry, startups, companies, innovations and so on,” said Dr. Nahar.

“We were given an opportunity to be in a booth and present our prototype, or innovation, so that people can come see firsthand what we

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are doing,” she continued, “We made some good connections there by explaining our project. It was pretty good exposure too.”

## Opportunity to Expand

Funding is a crucial component throughout every stage of developing a product, and DTC facilitates an environment for startups like Impulse Technology to forge relationships with investors. Since its initial launch, Defense TechConnect has tallied more than \$25 billion in sourced government funds and \$2.5 billion in Small Business Innovation Research—a federal government program that works alongside the Small Business Administration—funding for technology solution providers.

“SBIR is a federal government program that sponsors grants and contracts to small businesses. So at the conference there were many information sessions to meet those program officials,” explained Dr. Nahar. “Small business people were able to get connected and get information on how to submit their proposals for funding the projects they are working on—along with research and development.”

**“Networking plays a crucial role in taking ground-breaking ideas from research to reality.”**

With the Defense TechConnect Conference serving as an instrumental springboard, it's natural to think that Impulse Technology would use the opportunity to begin additional projects. And while they take advantage of their momentum to develop multiple technologies like an energy harvester and human-generated energy project, their primary focus continues to be their

		Co-Located with 
<b>TECHNOLOGY:</b> A self-aligning prosthetic adapter using compliant mechanism for both static and dynamic aligning. <sup>TM</sup>		
<b>AFFILIATION:</b> Impulse Technology LLC, State College, Pennsylvania, United States		
<b>TECHNOLOGY SUMMARY</b>		<b>FIGURES OF MERIT</b>
<b>Track:</b> Medical/Health <b>Area:</b> Medical, Health & Biotech <b>Tech Maturity:</b> TRL 4	<b>Value Proposition:</b> Our self-aligning prosthetic adapter will enhance comfort and mobility for military and civilian personnel suffering from lower limb loss due to injuries and diabetes. Roughly, 185,000 amputation-related hospital discharges occur in the United States each year, with approximate hospital cost of \$8.7 billion. While more than 51% of the amputees experience pain while walking, longer term problems range from tendonitis and lower back pain to amputation of the second leg or higher mortality rate in the case of diabetes. The current market, including that for veteran amputees, suffers from the high price of prosthetics, leading to a trend towards low price and low quality products, which negatively affects consumer dynamics. Our goal is to deliver a self-aligning adapter that is passive in nature, easy to tune and straightforward to manufacture using 3D printing, all contributing to comfort and biomechanics similar to upper end values, reduced amputee-prosthetist time, and low cost.	
<b>SHOWCASE SUMMARY</b>		
<b>Orig Type:</b> Early-stage Startup (Seed) <b>Website:</b> <a href="http://www.impulse-technology.com">http://www.impulse-technology.com</a> <b>Booth Number:</b> 525T		



most recent technological innovations in prosthetics.

Impulse Technology continues to work on their

self-aligning prosthetic adapter that is projected to provide immense value to veterans, DoD offices and industry leaders. Assisting those that have lost their limbs in the war zone or in active duty is what helped to inspire Dr. Nahar and the rest of her team, and their ultimate goal is to make their exciting technology accessible to those who need it.

**“Assisting those that have lost their limbs in the war zone or in active duty is what helped to inspire Dr. Nahar and the rest of her team, and their ultimate goal is to make their exciting technology accessible to those who need it.”**

Dr. Nahar is sure that the exposure, networking and connections facilitated by TechConnect will prove to be invaluable in meeting that goal. If their award is any indication of what to expect in the future, Impulse Technology will continue to be a home of ground-breaking innovation that makes a difference. ■



# LOCALLY GROWN: SUPPORT FROM ECOSYSTEM HELPING XACT METAL REVOLUTIONIZE 3D PRINTING

If it takes a village to raise a child, it takes an ecosystem to grow a startup. Xact Metal is proof. The company is basking in the excitement of two recent milestones: shipping its first batch of products and welcoming a global distributor network, eager to sell even more.

## Collaborating and Connecting

Since taking space over two years ago in the Technology Center Incubator at Innovation Park, Xact Metal has more than quadrupled its office and maker space, and taken its products from prototype to reality under the leadership of Co-founders Matt Woods and Juan Mario Gomez. But don't expect them to take all the credit.

"We've had help from so many people and organizations in this local ecosystem," Gomez says, pointing to a wall of photos featuring some of those helpers. "Tim Simpson and CIMP-3D, Innovation Park, Ben Franklin Technology Partners, Penn State, CBICC, PennTAP, College Township, CREN, New Leaf, Launchbox and many, many more. In fact, we need to update this wall with more photos."

Support from this ecosystem has arrived in many forms, from critical funding to additional space to casual introductions that have turned into paying customers and new suppliers. All of this assistance has contributed to fulfilling the Xact Metal mission to bring accessible, high-performing 3D metal printing to an array of global markets that are more than ready for it, like higher education, automotive, healthcare, aerospace, engineering and defense.

## Delivering on the Mission

The company's flagship product, the XM200C, was made specifically to fill a gaping need in 3D metal printing: affordability and usability that don't sacrifice performance. The machine costs



*Xact Metal co-founder Matt Woods' innovations are changing the game in every industry that can take advantage of 3D metal printing, fellow co-founder Juan Mario Gomez says.*

less than half of other available machines and is half the size, with the ability to print larger parts, making it ideal for customers who need 3D metal printing for prototyping, tooling and education. The product line also includes the XM200S, which delivers higher speed printing, and the XM300C, which offers an expanded print area for larger industrial printing needs.

In January, Woods and Gomez, along with staff and a few of those ecosystem helpers celebrated the first shipment of XM200C units. Five machines left Innovation Park for delivery to customers across North America. More orders are being filled now, including machines for international shipments to Mexico, Canada and Saudi Arabia.

## Growing Local

It's not just the company itself that's grown out of local investment and resources. Xact Metal's product line is also locally and regionally made. Several parts are made in Pennsylvania, as nearby as Centre County, York and Ephrata, and final assembly takes place in its incubator space in Innovation Park.

"Even the design layout and workflow of the touchscreen on our machines was developed with help of a local marketing firm, Rowland Creative," Gomez says. "Anytime we can use a local resource, we do it, for design speed and lower cost, and to have an impact on the economy."

## Scaling Up

Next up for Xact Metal is a push to scale and produce hundreds of machines per year. This stage in its development will prove critical to fulfilling a growing pipeline of orders from distributors across North America, Europe and Asia and beyond. A recent sale training session in State College drew more than two dozen key distributors who are partnering with Xact Metal to bring metal 3D metal printing to more and more people.

"Matt's innovations are changing the game in every industry that can take advantage of 3D metal printing. It's an exciting time," Gomez says, introducing newest member Mike, a 25-year expert in global supply chain, lean manufacturing and material management. "We have a great team and we're ready for it." ■



*In January, Xact Metal celebrated the first shipment of XM200C machines to customers across North America. Future orders are destined for international shipment to Mexico and Saudi Arabia.*



# STARTUP THAT SIMULATES SURGERY FOR DOCTORS

## RECOGNIZED BY BEN FRANKLIN TECHNOLOGY PARTNERS

From changing a tire to removing a gallbladder, there's no substitute for learning by doing. Most of us learn more effectively when we get hands-on experience, and medical simulators are bringing entirely new experiential learning opportunities to medical students around the world. The potential value of using medical simulation technology in medical schools is unquantifiable, so it's no surprise that investors are flocking to startups offering applications for this advanced educational technology.

### Startup Makes a Difference for Medical Students

At Innovation Park on Dec. 6, seven technology startups presented their business ideas before a panel of judges and their peers. They competed with the hopes of winning up to \$10,000 in prizes from Ben Franklin Technology Partners. While each pitch offered a unique value proposition, the judges awarded the top prize to Medulate, an up-and-coming startup offering medical

simulation products designed to provide medical students with the best possible medical training.

Medulate uses advanced software, robotics, and human tissue modeling applications to develop realistic medical simulations that students can use to practice their skills. In addition to offering a realistic simulation of human medical care, Medulate's systems are designed to provide individualized feedback to students training on their devices – something that a cadaver could never do. Once all the startups presented, the judges awarded Medulate the top prize and \$10,000 for developing a suite of medical simulators geared at increasing the efficiency and effectiveness of medical education.

**“We're thrilled we were able to convince others to believe in our company as much as we do. This money means a lot as we build our business and improve the educational experience for medical students. If you told us three months ago that we would be in this position, we wouldn't have believed you. Thank you to Ben Franklin and Invent Penn State for this incredible opportunity.”**

“We're thrilled we were able to convince others to believe in our company as much as we do. This money means a lot as we build our business and improve the educational experience for medical students. If you told us three months ago that we would be in this position, we wouldn't have believed you. Thank you to Ben Franklin and Invent Penn State for this incredible opportunity,” said Scarlett Miller, co-founder of Medulate.

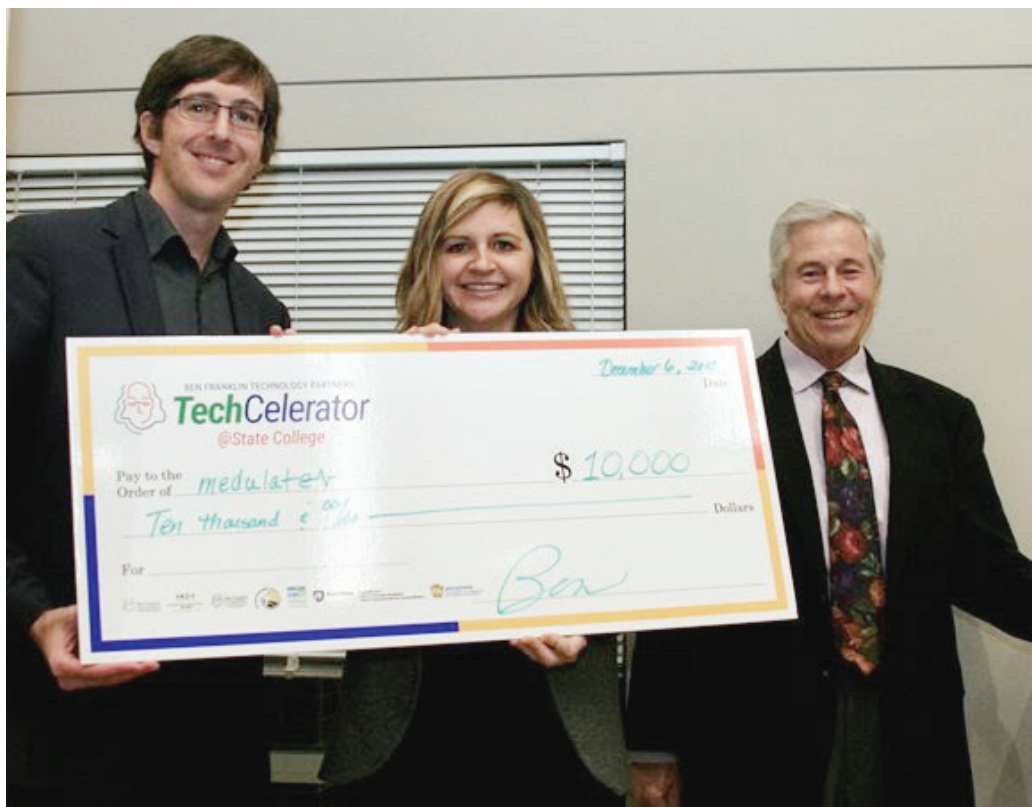
The startups are graduates of Ben Franklin's TechCelerator@StateCollege program, a pre-business accelerator held twice a year in State College and once in Altoona, Johnstown and Somerset, with more to be held in the future.

### TechCelerator Grads Make a Splash

“The TechCelerator this semester has an exceptional group of ‘townies,’ undergrads, grad students, and professors. Having a front row seat to see these new startups launch is really thrilling. On top of that, I get to work with some of the most inspiring economic development people I have ever met, including our leader, Steve Brawley. Invent Penn State is a world-class organization and I feel very lucky to be part of it,” said Bob Dornich, director of the TechCelerator.

Six other startups joined Medulate this fall in the competition for top prize:

- **Actinic**, a company that developed a technology that decreases the curing time for silicones and other thermoset polymers so they can be used in 3D printing processes.
- **Propter Hoc Imaging**, which developed a high-powered yet low-cost microscope that can be used with educational applications.



Scarlett Miller and Jason Moore from Medulate receive \$10,000 prize from Bob Dornich at TechCelerator.



- **GreenBriq**, a company that creates alternative, sustainable fuel sources from invasive plant species in locations of the world where charcoal is scarce and expensive.
- **Go2Gro**, who developed a delivery system platform that gets orders picked up and delivered to a home or business within two hours or less.
- **Kijenzi**, a startup that developed 3D printing capabilities to allow manufacturers within sub-Saharan Africa to make replacement parts for medical equipment.
- **Power Ink**, which has developed a method to harvest collagen (BIO-ink) that can be 3D printed and someday used in surgical procedures.



*Scarlett Miller, co-founder of the startup Medulate, demonstrates how the mock ultrasound, septic robot and retractable needle work with a computer program to train surgeons.*

Ben Franklin deploys a team of at least six experts along with colleagues from the Small Business Development Center in order to mentor and guide students through the steps to starting a company. And with the State College area slowly transforming into Central Pennsylvania's next tech hub, there's plenty of promising new enterprises that the experts at Ben Franklin can help. From startups to established companies, businesses are heading towards Centre County because it's affordable, offers a strong potential customer base and is home to a skilled group of dedicated and well-rounded workers.

Medulate is only one example of the types of new enterprises that investors are funding in the State College area, but Innovation Park is full of forward-thinking entrepreneurs and bold small businesses looking to make their mark in the growing tech space. There's no telling what's coming next, but one thing is for sure – investments in next-generation tech startups are helping communities across Pennsylvania build stronger local economies.

## ENTREPRENEUR SHARES FIRSTHAND EXPERIENCE: CRAIG S. MARKOVITZ ON HIS JOURNEY

Entrepreneur Craig S. Markovitz recently visited Innovation Park to share his journey from founding and growing technology companies to sharing his expertise at Carnegie Mellon University. As part of the ongoing Rainmaker Series, Markovitz presented a talk entitled "From License to Exit," which focused on the strategies and skills that helped him become successful as an entrepreneur.

Markovitz is an Entrepreneur-in-Residence in the Swartz Center for Entrepreneurship and an Assistant Teaching Professor of Entrepreneurship in the Tepper School of Business at Carnegie Mellon University (CMU). He is co-founder of several companies, including Blue Belt Technologies, Inc and Spotlight Medical, Inc. Spotlight was a spinoff company based on technology developed jointly by Carnegie Mellon University and The University of Pittsburgh.

Markovitz was also the recipient of the 2016 Carnegie Science Center Entrepreneur and the 2016 Pittsburgh Venture Capital Association Outstanding Entrepreneur Awards.

After managing the sale of the businesses he helped to found, Markovitz decided to take his career in a new direction.

"When Blue Belt [was acquired by] Smith and Nephew, that was the end of my journey with the company," Markovitz started. "I was deciding what to do next and all of a sudden, the idea of working in academia with young entrepreneurs really appealed to me."

Markovitz's company had been a CMU spinoff and so the ability to join the faculty was the first option on the table.

"I spent time teaching entrepreneurship to graduates and undergraduates; I spent time

volunteering and telling my story," he said, smiling. "It was such a nice career transition. I've spent 30 years working hard and now I want to give back to the community."

Markovitz has two roles at CMU: assistant teaching professor (teaching classes) and entrepreneurship-in-residence (mentoring, advising and assisting in networking to aspiring entrepreneurs).

In this way, the entrepreneur found himself no longer finding and reinventing companies, but finding and reinventing his career path.

**"Markovitz has now talked to hundreds of students and helped them sell companies, raise money and build strategies— everything he had once done himself."**

The knocks on his door were different.

They were coming from students.

"I have spent my professional career building businesses and now to go into teaching, I get the unique opportunity to take all the mistakes I have made, the people I've met—what I learned—and use it as a way to help new entrepreneurs be successful."

Markovitz has now talked to hundreds of students and helped them build strategies, raise money and sell companies—everything he had once done himself.

During the presentation, Markovitz shared one of the most profound lessons he learned as an entrepreneur: "It is never about you. It's always about the people you work with, the companies you serve and the sooner you see that, the better an entrepreneur you will be," he said. "A sign of a true entrepreneur is his/her ability to work with others and give them the tools to be successful. Their success then becomes your success."



# SBDC HOSTS ENTREPRENEURSHIP PANEL ON WEAVING ART AND BUSINESS

“Art and business may be strange bedfellows, but an artist must make room for both.”

For the budding artistic entrepreneur, the road ahead may seem formidable, but there is help readily available for the artist looking to launch their business.

The Small Business Development Center (SBDC) has had a rich history of working with artistic start-ups, from writers to glass blowers. As one successful participant noted, “As a self-employed person, I am out there on my own, and knowing that I have people to call on for advice and assistance provides me security.”



Brittany Lentz

The concerns of the artistic entrepreneur also were a key component of PSU’s Global Entrepreneurship Week. The SBDC partnered with GEW to present a panel discussion on November 12 entitled, “Heading to Hollywood and Making It in the Entertainment Industry!”

## Real World Insights

For those contemplating success in the entertainment capital, the panel offered real insight by industry insiders – Praveen Pandian, a television agent with Creative Artists Agency; Brittany Lentz, an account director with IMRE, a marketing communications agency with expertise in social, digital, creative, public relations and paid media; and Austin Sepulveda, the founder of Watchmakers Entertainment. A good-sized crowd gathered to hear the insights of the panelists on the expectations and the reality of launching a career in the entertainment industry.

**“Anyone with their own business finds out that it's a 24 hour, 7 days a week, 365 days a year job. But if you love it, you can't imagine yourself doing anything else.”**

As Praveen Pandian noted, there are different levels of success. “A lot of people come to Hollywood convinced that they are going to be the next movie star, music sensation or supermodel.” Talent and perseverance can take you far, he observed, but an individual needs to be realistic about what they can achieve, especially when starting an independent endeavor. Tens of thousands of people work in film and music industry in Hollywood, and have successful, rewarding careers “without becoming a superstar.” One of the most important factors is to have a clear idea of what your goals are and what you can realistically hope to accomplish. Especially when starting an independent business or service, it is fundamental to have a clear view of what resources are needed and to make use of assistance and guidance. “Events like this are important for giving anyone interested in the entertainment industry a straight-forward idea of what is required for success.”

Picking up on this thread, Ms. Lentz highlighted the importance of networking and

contacts in the industry. “There are many people with a lot of talent and good ideas, but if they don’t know how to put those ideas and talent forward, they are never going to get anywhere.”

**“Events like this are important for giving anyone interested in the entertainment industry a straight-forward idea of what is required for success.”**

She noted that the rise of social media has made it much easier for budding entrepreneurs to reach out into the marketplace, but unless they have the expertise and guidance to effectively target and reach their audience, whether it be a large group or one individual, their efforts will be unsuccessful. “This is a business of people and relationships. It is also an open business. So the person with a good idea can get ahead if they know how to move forward.” She noted that ideas sell in Hollywood and the artistic entrepreneur must be willing to sell themselves, rather than waiting to be discovered.

Austin Sepulveda, the founder of his own company, Watchmakers Entertainment, emphasized that the drive and commitment necessary for any successful entrepreneurial endeavor is more intense in the entertainment industry. “Anyone trying to start up a new business

of any kind in entertainment or the arts has to be present to that business all the time.

It’s all or nothing.”

Because

“big breaks” in show business are so rare, the entertainment entrepreneur must create their own opportunities. He noted that actors and directors will write their own scripts to create projects for themselves and that creating opportunities “is as important, or more important” than finding them. “Anyone with their own business finds out that it’s a 24 hour, 7 days a week, 365 days a year job. But if you love it, you can’t imagine yourself doing anything else.”

## Participants Benefit

The interaction between the panel and the audience was lively and enlightening. Many asked detailed and specific questions about aspects of succeeding in the entertainment industry, as well as broader questions about the skills and mindset necessary to pursue success. The exchanges were candid and revealing, and the audience came away with a sense of encouragement and purpose. As one put it, “I have a much more realistic view now of what it takes. That doesn’t make me less hopeful, just more determined.”



**Small Business Development Center  
Penn State**



# A GLOBAL CELEBRATION OF DREAMERS

## GLOBAL ENTREPRENEURSHIP WEEK AT PENN STATE

The American dream of starting your own, successful business is alive and well at Penn State with the tenth anniversary of Global Entrepreneurship Week. The annual event, which expanded this year from a week to ten days to mark the anniversary, connects student innovators and community entrepreneurs with collaborators, mentors and investors to create a fertile environment for the development of new and innovative businesses.

The Global Entrepreneurship Week is one of the major initiatives of the Global Entrepreneurship Network, an international movement that was created by the Kauffman Foundation in 2007 “to inspire people everywhere to unleash their ideas and take the next step in their entrepreneurial journey.” A truly global event, the GEW began with 37 countries and, over the past decade, has expanded to include 170 countries with over 15,000 partners. This is a celebration of the innovators and job creators who launch startups, bring ideas to life, drive economic growth, expand human welfare and engage millions across the globe. More than just an awareness campaign, the GEW is a platform for connection and collaboration between budding entrepreneurs and seasoned business leaders, introducing them to new possibilities and exciting opportunities.



### Nurturing the Entrepreneurial Spirit

The driving force in bringing the GEW to Pennsylvania has been the Penn State Small Business Development Center. The SBDC provides free, confidential business consulting and low-cost seminars to pre-venture, start-up and existing small businesses located in central Pennsylvania. In 2008, Linda Feltman of the SBDC was assigned to bring the GEW to Penn State. That year, GEW featured two events. From its modest beginnings that year, the GEW at Penn State has expanded to include over 100 events, engaging over 5,000 students at 18 commonwealth campuses. As Feltman notes, “It is gratifying to see the growth, not only with the students and the faculty, but an expanding engagement with the community that will continue to nurture the entrepreneurial spirit into the future.”

The events that comprise the GEW are designed to have broad appeal to the individual entrepreneur and the ever-evolving business landscape. Diversity is a key component in many of the events, not only in the business environment, but with the individual entrepreneur as well. “Empowering Women in Technology,” “AARP’s Work for Yourself at 50+” and “Veteran Entrepreneurship” are just a few of the programs that address not only the technical aspects and problems of creating a new business, but the challenges facing the individual entrepreneur. As SBDC Director Kimberlee MacMullan notes, “Anyone starting their own business can find not

only valuable information that applies to all start-ups, but events and individuals which speak directly to their life experience.”

### Drawing Inspiration From What Frightens Us

This concept of providing practical information combined with powerful individual experience was beautifully encapsulated in the presentation of keynote speaker Tanya Wright, which kicked-off the GEW on November 8 in the Ruth Pike Auditorium at Penn State. Wright, a young African-American actress best known for her roles in *Orange is the New Black* and *True Blood*, is also the founder of HAIRiette, a hair care line for people of all ethnicities. Wright, who in addition to her acting career is the author of two books—*Butterfly Rising* and *I Found God in My Hair*—is also a sought-after speaker at universities and corporations, where she shares insights on her artistic and creative entrepreneurship. Despite the many demands of her multi-faceted career, Wright regards her public speaking as an integral part of her development as an artist and an entrepreneur, noting “I want to use my voice to inspire others.”

**“This is a celebration of the innovators and job creators who launch startups, bring ideas to life, drive economic growth, expand human welfare and engage millions across the globe.”**

Wright explained that it took her some time to find the confidence to use her own voice. “I was a pretty shy girl growing up, but I’ve always been strangely drawn to those things that frighten me the most. There were times when I did not raise my hand in class and other folks either said what I wanted to or worse yet, never did.” As her confidence in her own voice grew, she was able to step into the career that she created for herself. “I learned what I had to say was important, despite the fact that I was terrified to say it.” Wright said that finding her voice as a writer helped her in her acting career. “I have a treasure trove of scripts I have written through the years, very quietly. I have always been prolific, bopping from acting to writing. I don’t think I would be happy to do one or the other; my writing helps my acting and my acting helps my writing.”

Despite her burgeoning career as an author and actress, there is another animating passion in Wright’s life—a desire to be part of the beauty industry. “My naturally curly hair was a struggle for most of my life and I literally got the name ‘HAIRiette’ while outside walking my black lab, Macarena.” Wright explained that her hair care line was inspired by Ayurveda, an Indian system of healing using fruits, herbs and oils. “I worked in the office of an Ayurvedic doctor and learned about kokum butter, which is great for skin, allergies and even heart ailments—but it’s pretty phenomenal for your hair.”

Like many budding entrepreneurs, Wright had a great idea but needed guidance in getting it off the ground. “Many people assume since they see me on TV shows that I have this huge engine behind my hair care line, but it’s mostly just me.” Fortunately, Wright had ties to eastern Pennsylvania and was connected with staff at Penn State Lehigh Valley’s LaunchBox, a center devoted to identifying and assisting

*Continued on next page*





Tanya Wright

potential entrepreneurs. “The staff at Lehigh Valley LaunchBox has been a huge help to me on my entrepreneurial journey. I also received a micro-grant to help with funding.” The invaluable assistance she received from the Lehigh Valley LaunchBox enabled Wright to identify and implement a mission and operating model for her business. “The mission of HAIRiette is to help make the world a better place,” Wright explained, “we do that via our high-quality products and media, including the book *I Found God in My Hair* and the HAIRiette series about gratitude on YouTube.”

Wright’s message resonated deeply with her audience, the question and answer session moderated by WPSU’s community engagement manager, Carolyn Donaldson, was lively and insightful. Students not only asked practical questions, but were also interested in the mindset and drive necessary to launch a successful new business. Wright succinctly summarized her own message to her audience, “I hope people can walk away from this event inspired to be persistent and take definitive action in creating the lives they want, personally and professionally.”

## A Wealth Of Diversity In Entrepreneurship

A wealth of events both in the Centre region and at 17 other commonwealth campuses followed Wright’s inspiring keynote. The events in Happy Valley, which explored the many aspects of the start-up and small business experience, took place at different locales along what has been dubbed the “Avenue of Entrepreneurship.” GEW co-coordinator Linda Feltman said that the Avenue was created in 2016 as an initiative to increase community involvement in the GEW. The Avenue extends from Pattee Library to the Happy Valley LaunchBox on South Allen Street, and events for the week take place both on campus and at various locations downtown. Feltman noted that the creation of the Avenue and other outreach initiatives have greatly increased the participation of the community and individual businesses in the GEW and complement the involvement of Penn State faculty and students.

Seminars throughout the ten days covered a wealth of topics and approaches. One such seminar, “The First Step to Small Business Success” hosted by John Peterson of SBDC was one of several events devoted to the initial stages of starting a business. Engaging sessions such as “Save the World, Start a Business — all in 90 Minutes” hosted by John Gershenson and a panel discussion, “Entrepreneurial Intention, Culture and New Venture Development,” further explored the mindset, resources and guidance needed at the very beginning of the business development process. Participants benefited from keen insights into the preliminary steps necessary to move their ideas into reality.

Other events focused on specific opportunities available to budding entrepreneurs. Noemi Mendez presented a talk on “Using Census Business Data to Start or Grow Your Business.” Margaret King hosted “Culture’s Impact on our Behavior Patterns and Buying Decisions” and Frank Koe spoke on “Entrepreneurship Essentials: Lessons worth Remembering.” There were seminars covering the music and entertainment industry, the hospitality industry and presentations by the U.S. Patent and Trademark Office. Marketing, design thinking, entrepreneurial creativity and legal issues were other topics explored by local businesspersons and Penn State faculty, giving the participants a well-rounded overview of the challenges and rewards of individual entrepreneurship.

Michael DelGrosso of DelGrosso Foods and DelGrosso Amusement Park is one of the best examples of a local businessman who presented his experience and insight. DelGrosso shared his experience of running a family business and building a brand during his presentation, “Reinventing the Family Business.” He reviewed the start of his family business as a pasta sauce maker, their acquisition of a local amusement park and the struggles to keep it afloat during its early years. By the early 1980s, with business stagnating, the company had reached what DelGrosso described as the “tipping point,” where the company had to invest to expand beyond its regional reach or stop growing. One of the markets that opened up was the expansion of private brands, store chains that buy products and put their own labels on them. DelGrosso highlighted the company’s expansion into this market as an illustration of the importance of responding to trends in the marketplace.

**“Like many budding entrepreneurs, Wright had a great idea but needed guidance in getting it off the ground.”**

DelGrosso noted that, while there were many lean years, a good product, hard work and willingness to adapt can produce success. He said the key ingredient to becoming an entrepreneur is simply getting started. “Too many people wait for the perfect moment, and that usually never comes. Start small, learn, fail and then grow. Your idea or business may shift from your initial concept as you see how the market reacts to your offerings,” he advises.

## Connections that Matter

For Linda Feltman, who spearheaded Penn State’s sponsorship of the GEW ten years ago and is still its co-coordinator, the interaction between Wright, DelGrosso and the other attendees is exactly what the GEW is all about. Feltman noted that the decision in 2014 to expand the program to the commonwealth campuses dramatically spurred its growth and reach.

From its humble beginnings in 2008, the GEW at Penn State has expanded to become a statewide program that reaches thousands of entrepreneurs and small business owners throughout the commonwealth. While the GEW is over for this year, the work it celebrates continues throughout the year through its sponsor. The SBDC not only continues to sponsor events to educate and promote small businesses, it provides the practical, hands-on counseling and referrals essential to helping entrepreneurs succeed. As Kimberlee MacMullan, the SBDC’s director and GEW’s co-coordinator, commented, “We want to inspire and motivate entrepreneurs to make their dreams happen. We want to help them materialize their vision.” ■



# BUSINESS RESOURCES & EVENTS

## Pre-Business Planning Workshops in the Southern Alleghenies

Learn basic information needed to start a business such as business and marketing plans, financing, types of organizations, and rules and regulations at various locations throughout the Southern Alleghenies region. Pre-registration is required at least two business days in advance.

The normal \$15.00 fee is being waived by the SBDC due to donations from AmeriServ Financial. **To register, please contact the Saint Francis University SBDC at (814) 472-3200 sbdc@francis.edu.**

### February 7 | 9 a.m. – 11 a.m.

ABCD Corporation  
Devorris Center for Business Development,  
3900 Industrial Park Drive, Altoona, PA

CAMBRIA COUNTY (2 Locations)

### February 27 | 5 p.m. – 7 p.m.

### March 27 | 5 p.m. – 7 p.m.

### April 24 | 5 p.m. – 7 p.m.

Saint Francis University SBDC  
117 Evergreen Drive, Loretto, PA

### April 9 | 9 a.m. – 11 a.m.

JARI Center for Business Development  
160 JARI Drive, Johnstown, PA

BEDFORD COUNTY

### March 7 | 9 a.m. – 11 a.m.

Bedford County Chamber of Commerce  
203 S. Juliana St., Bedford, PA

SOMERSET COUNTY

### May 15 | 9 a.m. – 11 a.m.

Somerset Trust Historic Conference Room  
131 N. Center Avenue, Somerset, PA

## The First Step to Small Business Success

### February 12, 1:00 - 4:00 p.m. and March 12, 9:00 a.m. - 12:00 p.m.

Location: 475 Rolling Ridge Drive, State College, PA, 16801

Have you always had the dream to start your own business but didn't know where to begin? This free workshop will help aspiring entrepreneurs begin the process of owning a successful business, including evaluating business ideas, developing a business plan, and exploring financing options.

To find out more, go to [sbdc.psu.edu/events](http://sbdc.psu.edu/events)

## CBICC CONNECT: GrowPro – making sense of cents

### Tuesday, March 26, 5:15 - 6:30 p.m.

Location: CBICC

For more information, go to [Web.CBICC.org/events](http://Web.CBICC.org/events)

## Doing Business with Penn State

### Thursday, March 28, 10:00 a.m. - 12:00 p.m.

Location: 253 Transfer Road, Bellefonte, PA, 16823

Find out more about how Penn State purchases products and services, how to find business opportunities with Penn State, how to find construction opportunities with Penn State and more. For more information, see [sbdc.psu.edu/events](http://sbdc.psu.edu/events)

## CBICC CONNECT: GrowPro- Time choices for busy professionals

### Wednesday, April 03, 5:15 - 6:30 p.m.

Location: CBICC

For more information, go to [Web.CBICC.org/events](http://Web.CBICC.org/events)

## Empowering women in leadership

### Tuesday, April 09, 8:30 a.m. -

### Wednesday, April 10, 4:30 p.m.

Location: The Penn Stater Conference Center

Empowering Women in Leadership celebrates the relevance and advancement of current and aspiring women in leadership, with a focus on intersectionality. Join for an opportunity to share knowledge, enhance leadership skills, and create long-lasting relationships with like-minded women

## Social Media for Small Businesses

### April 25, 2019, 1:00 - 3:00 p.m.

Location: 200 Innovation Blvd, Suite 243, State College, PA, 16803

Learn how getting to know your audience can help you with your organic reach, along with basics for creating a social media strategy, learning more about your audience with analytics and creating your online persona. Cost is free.

## Watch PennTap Recorded Webinars Anytime

To help local businesses grow, PennTap actively promotes training and education opportunities. PennTap provides online training through webinars hosted by technical advisors, in addition to hosting in-person learning events and conferences throughout the year. Visit <https://penntap.psu.edu/> to watch webinars.

### 2019 webinars

#### Energy Efficiency for Agriculture-Related Businesses

### Feb 28, 2019, 12:00 – 1:00 p.m.

Optimize efficiency with sustainable energy savings and explore new opportunities to save money and grow your business.

#### Getting Students to Engage with Your Facility

### Mar 21, 2019, 12:00 – 1:00 p.m.

An overview of programs that can bring Penn State students to your facility to engage in real-world problem-solving.

#### Step-by-Step Guide to DOE 50001 Ready

### Apr 18, 2019, 12:00 – 1:00 p.m.

Helping you understand the structure, goals, and many benefits of an EnMS.

#### Basics of Building Re-Tuning (BRT)

### May 16, 2019, 12:00 – 1:00 p.m.

Helping those involved with building operations learn how to operate buildings more efficiently, reduce operating costs, and provide energy savings.

#### Funding and Incentives to Implement Energy Efficiency Projects

### Jul 18, 2019, 12:00 – 1:00 p.m.

Discussing funding opportunities for small to mid-sized companies throughout Pennsylvania.

#### Building Re-Tuning for Downtown Buildings

### Aug 15, 2019, 12:00 – 1:00 p.m.

Showing you how to operate buildings more efficiently, reduce operating costs, and provide energy savings.



# INNOVATION PARK

## SPACE FOR LEASE

<http://www.innovationpark.psu.edu/>

18,900 SF ~~29,700 SF~~ Available



**310 INNOVATION BOULEVARD** NEW HIGH-BAY OFFICE & RESEARCH BUILDING



**331 INNOVATION BOULEVARD**

**3<sup>rd</sup> Floor**

**ONLY 7,025 SF LEFT!**

- ◆ High quality master planned Class A professional office and research park
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- ◆ Abundant free parking
- ◆ High-grade construction materials, efficient design and immaculately landscaped
- ◆ Penn Stater Hotel
- ◆ Daybridge daycare services located within Innovation Park
- ◆ Free CATA public bus transportation service every 20 minutes to/from University Park and surrounding community



 **Newmark Grubb  
Knight Frank**

FOR MORE INFORMATION CONTACT:

TOM MacDONALD, SIOR | 412.434.1028 | [tmacdonald@ngkf.com](mailto:tmacdonald@ngkf.com)

210 Sixth Avenue, Suite 600, Pittsburgh PA 15222 T 412.281.0100 [www.ngkf.com](http://www.ngkf.com)



# INNOVATION PARK

## SPACE FOR LEASE

<http://www.innovationpark.psu.edu/>



18,900 SF ~~29,700 SF~~ Available

**310 INNOVATION BOULEVARD** NEW HIGH-BAY OFFICE & RESEARCH BUILDING



**331 INNOVATION BOULEVARD** 3RD FLOOR ONLY 7,025 SF LEFT!

- ◆ High quality master planned Class A professional office and research park
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**Newmark Grubb  
Knight Frank**

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