

Small Business Solutions 2018

Small Business & Technology

ALSO INSIDE

- * Cybersecurity
- * Innovative small businesses
- * High-Tech Opportunities
- * Funding for high-tech programs
- * Understanding the High-Tech Ecosystem
- * Future of Technology in Maryland



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This publication is prepared in collaboration with the Maryland Small Business Development Center by the staff of



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FROM THE CEO

Greetings:

For over 25 years, the Maryland Small Business Development Center (SBDC) has enjoyed a mutually rewarding relationship with small businesses throughout the state. We've helped home-based businesses become multimillion dollar companies, and self-employed individuals build viable small businesses that created jobs for others. As the state's premier provider of assistance to Maryland's small businesses, the SBDC has helped tens of thousands of entrepreneurs turn their dreams into reality, thereby contributing to economic growth throughout the state.

Our services are made possible through support from federal, state and local resource partners. We receive funding from the US Small Business Administration, the State of Maryland and the University of Maryland. Our five regional offices are sponsored by local colleges and universities, and receive support from local government and private sector organizations. The SBDC gratefully acknowledges the continued support of our many resource partners.

As we move forward, the SBDC will continue to make small business success its primary goal. As the new CEO, my top priorities will be to:

- Expand the pool of external stakeholders who care passionately about our success;
- Strengthen our links to job training initiatives to help increase the number of qualified small business workers;
- Proactively nurture new industries throughout and market one or more new initiatives to benefit small businesses.

We sincerely appreciate The Daily Record for providing a platform to highlight our services and deliver relevant content to support small business growth. We are also pleased to highlight the accomplishments of a few of our many clients.

Sincerely,

Paul Bardack

Paul Bardack,
CEO, Maryland Small Business
Development Center



About the Maryland SBDC

By Glenna Cush
Director of Marketing, MDSBDC

According to the Association of Small Business Development Centers (ASBDC), there are currently more than 22 million small businesses in America and that number is growing rapidly. Small business accounts for 99 percent of all U.S. businesses, employs more than 53 percent of the private workforce and contributes more than half of the nation's private gross domestic product.

Each year, the Maryland Small Business Development Center Network (SBDC) assists more than 10,000 small businesses with comprehensive services that include training, resource development and individualized consulting. The network, a partnership between the U.S. Small Business Administration, the state of Maryland and the University of Maryland, College Park, links private enterprise, government, higher education and local economic development organizations to provide management, training and technical assistance to Maryland's small businesses.

The SBDC was established in 1988 to provide statewide coverage delivered through five regional offices and more than 19 locations where clients are serviced. Confidential business services help refine business plans, identify sources of capital and develop strategies to support growth and profitability. Service is provided by counselors who have owned or managed successful businesses, have advanced degrees and worked for Fortune 500 companies before bringing their expertise to the SBDC. Professional development opportunities help counselors stay abreast of economic trends, industry and market conditions and financial

resources.

The recent climate has resulted in additional challenges for Maryland businesses. Retail manager, Garrett Glover and network consultants have lent assistance to communities such as Ellicott City that have faced natural and economic disasters in recent years.

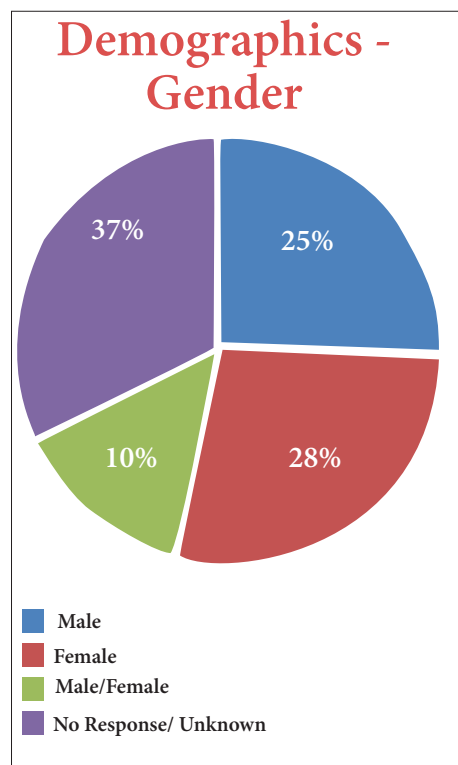
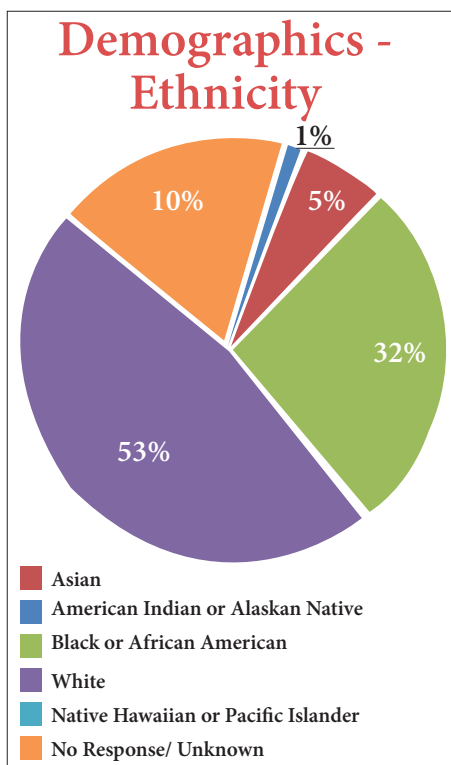
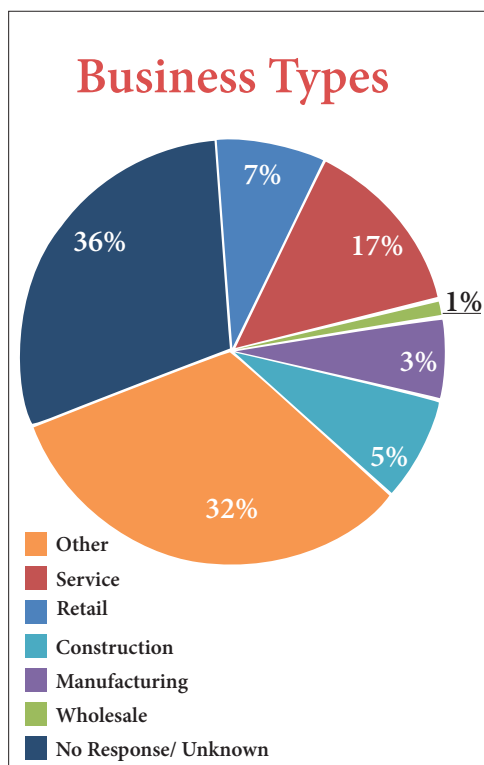
"I wouldn't have survived without the SBDC," says Jason Barnes, owner of All Time Toys. "They helped breathe new life into my business."

"The SBDC is crucial for maintaining Maryland's economic vitality," says Paul Bardack, SBDC state director. "Being in touch with the challenges confronting smaller companies allows us to tailor programs that meet the specific needs of our clients."

The SBDC also manages the Procurement Technical Assistance Program (PTAP) which provides assistance to entrepreneurs seeking to do business with the federal and state government. Assistance includes individualized government marketing strategies, access to experienced government contracting and procurement specialists, automated bid matching and training. Profiles of success. Each year, the SBDC contributes to the success of many businesses throughout the state and is proud of a portfolio of clients that have been nationally recognized. "Each business is special because it represents someone's dream," says Bardack. "As we look forward to a brighter future, we do so with the knowledge that the Maryland SBDC will continue to play an important role in helping entrepreneurial dreams become realities."

To find out more about the SBDC, or to find the nearest location, visit the network Web site at www.mdsbdc.umd.edu.

A look at who the SBDC has helped



SBDC Assistance to Small Businesses in Maryland

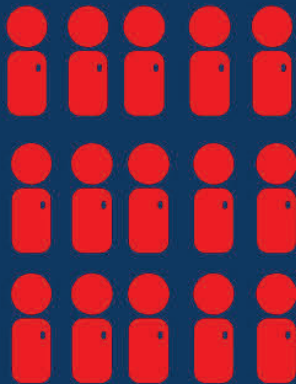


Accredited to provide technology commercialization assistance.



\$49,638,382

Dollar amount of small business loans obtained by Maryland Small businesses with SBDC assistance



1251

Number of Jobs created with SBDC assistance



208

Number of new businesses started



54:1

ROI State Tax Revenue to SBDC Cash



7965

Number of individuals receiving SBDC assistance

SMALL BUSINESS CYBERSECURITY

SMALL BUSINESSES TAKE A RISK IF THEY FORGET ABOUT CYBERSECURITY

By Pete Pichaske
Special to The Daily Record

Cybersecurity experts and businesses have some advice for small business executives who think they're too busy, too poor or too small to worry about protecting their company from hackers: Do it now. It might be cheaper than you think and it could help you avoid huge trouble later. That challenge can be particularly daunting for small, minority- and women- owned businesses trying to compete.

"Cybersecurity is most certainly overlooked by a lot of small businesses," said Candace Pruett, business consultant, Maryland Small Business Development Center at the Anne Arundel Economic Development Corporation.

"A lot of businesses think that a cyber plan is expensive or just think it's not for them, that they're too small," she said. "So many are just putting their head in the sand – they don't believe they'll be the next target. ...But they need to understand what's at risk."

What's at risk is plenty, according to recent statistics. While data breaches of big companies like Equifax and big cities like Atlanta make headlines, a 2018 report from Verizon Data found that 58 percent

of the victims of data breaches are small businesses.

According to UPS Capital, a financial services company that is part of UPS, cyber attacks typically cost small businesses between \$84,000 and \$148,000 and six of 10 small businesses shut down within six months of an attack. And yet, the company reported, 90 percent of small businesses don't use data protection at all.

In Maryland, small business owners looking to boost their cybersecurity can start with the SBDC. The organization's

experts, Pruett said, can explain what specific risks the company might want to protect and refer





“A lot of businesses think that a cyber plan is expensive or just think it's not for them, that they're too small.”

— Candace Pruett, business consultant, Maryland Small Business Development Center

cybersecurity.

Penacity owner Timothy Schilbach said many managed service providers, while typically more than competent with IT, typically don't have the experience to prevent their clients from hackers, which is Penacity's specialty.

“We understand the bad guys, we understand where the bad guys hide,” he said.

Schilbach said small businesses have three options for boosting their cybersecurity. The first option is to pay a monthly fee for insurance.

The second is to hire a company with expertise in the field to do the job.

The third option, he said, is to “totally ignore the problem and face the wrath of the problem later on.

“If you have no cybersecurity at all or are just buying

off-the-shelf products, at some point you're going to have a breach in your company,” Schilbach added. “Small businesses get hacked every day.”

The CEO of Annapolis-based Netrias, a data science solutions company, agrees that business owners in the United States, one of the most wired countries in the world, should assume they will be attacked by hackers someday.

“If they make that assumption, they're going to behave in the right way and make employees behave in the right way,” CEO Matt Puglisi said. “If they don't, they can experience a catastrophic attack that could put them out of business.”

companies to businesses that can provide the needed safeguards.

One such business is Anne Arundel County-based Penacity, which provides consulting technology and security services to companies in Maryland and Virginia and to the managed

service providers that many of those small companies use for

Netrias follows “three pillars” of security, which Puglisi said should be followed by any business, large or small.

The first is to have an ironclad, clear and serious security policy for all employees. At his company, for example, the policy includes requiring all employees cell phones to be encrypted and password protected, and one of Netrias' few firing offenses is violating that policy.

The second pillar is to “decrease the attack space,” which means limiting the chance of hackers succeeding by, for example, not using Wi-Fi in public places, such as Starbucks, where all traffic can be monitored by hackers.

The third pillar, Puglisi said, is to use a professional password manager for all electronic devices, to ensure strong passwords that are almost impossible to steal.

While some might view his company's vigilance as excessive, Puglisi acknowledged, he recommended it for all businesses. It is not necessarily that expensive, he said, and help is available at most Maryland universities or through the Anne Arundel County EDC.

Advocates of better cybersecurity for small businesses in Maryland also are hoping that a bill passed this year by the General Assembly will help their cause.

The Cybersecurity Incentive Tax Credits Bill, the first of its kind in the country, offers businesses with fewer than 50 employees a tax credit for 50 percent of the cost of cybersecurity products or services purchased from a licensed cybersecurity Maryland company, up to a maximum of \$50,000 per year.

“This new bill provides a financial incentive for more small businesses to get the cybersecurity products and services they need, thus helping to ensure a more cyber secure Maryland,” said Stacey Smith, executive director of the Cybersecurity Association of Maryland, Inc., in an email response to questions.

“Many small businesses have not taken steps to be cyber secure because they don't think they are a target for cyber attacks or don't think they can afford it,” she added. “The question is, can they afford not to be cyber secure? The operational, financial and reputational damages from a cyber attack can be substantial and devastating.”



“A This new bill provides a financial incentive for more small businesses to get the cybersecurity products and services they need, thus helping to ensure a more cyber secure Maryland.”

— Stacey Smith, executive director, Cybersecurity Association of Maryland



“If they don't, they can experience a catastrophic attack that could put them out of business.”

— Matt Puglisi, CEO, Netrias

SMALL BUSINESSES ARE THE TRUE INNOVATORS



Innovation

By Christine Hansen
Special to The Daily Record

Electric light bulb inventor Thomas Edison once said, “There’s a way to do it better – find it.” That’s exactly what Mike Steele, inventor of a wind-powered automatic chain oiler, and Brian Jordan, inventor of a prosthetic finger, did.

Steele, CEO of Motobriiz, is an avid motorcyclist but loathed having to clean and lubricate the chain oil. It’s recommended that the chain oiler be cleaned every 300 to 500 miles – no small feat – and to Steele, a total nuisance. He knew there had to be a better way.

“It kept eating at me. I was tinkering around with chain oilers that work automatic, so I thought maybe wind could do this,” he says.

After a little research to determine the right amount of pressure, Steele made a prototype with a water bottle and tubing, and attached the device to his motorcycle to see if his idea would work. It was a complete success.

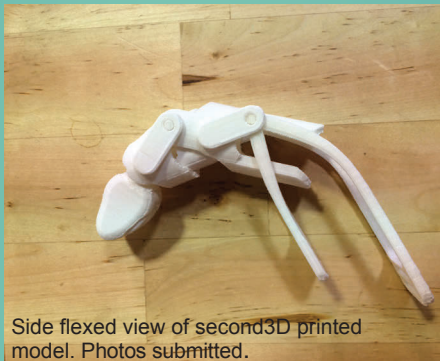
The tube pointed into the wind, and as he rode, the air pushed into the tubing, which then created pressure into a small chamber that makes the oil move. The oil then gets transferred directly into the bike chain and the flow naturally changes with the speed of the motorcycle.

“The neat thing about it is that it is completely automatic. The only moving part is your motorcycle,” Steele says.

Steele’s product motto: “If there’s wind in your face, there’s oil on your chain.” Motobriiz™ was born.

That was the summer of 2012. By December of that same year, he filed for a U.S. patent, and sold his first product in June 2013. Since its creation, Motobriiz™ has been sold in 41 countries. Today, Steele has patents in Australia, Canada, and another pending in Europe. He’s also developed two other products for the market – the Air Zapper™ and the Filt8™ vacuum pump – and hopes to leave his job to focus on his new innovations full time.

Brian Jordan is also looking to leave his full-time job to focus all his energy on his innovation.



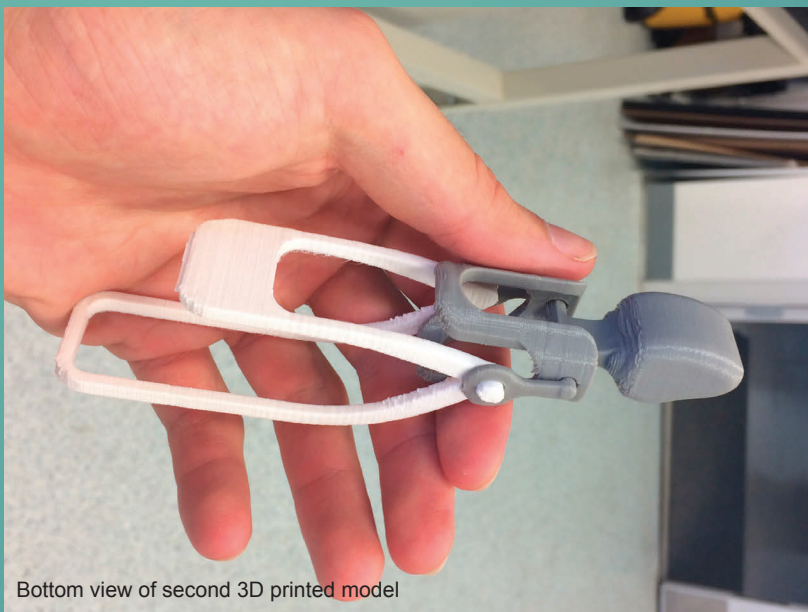
Side flexed view of second 3D printed model. Photos submitted.



Consumer packaging.



Small oil reservoir stores oil.



Bottom view of second 3D printed model

Creator of the DigiTouch Prosthetic Finger, a biomechanical prosthetic finger that mimics the action of a real finger, Jordan wants to use his creation to help others.

The DigiTouch prosthetic finger was developed by Jordan as the result of an unfortunate accident involving a saw in his machine shop. The saw severed the tips of his thumb, middle and index fingers. Doctors were able to repair his middle finger, but the tips of his thumb and index finger were not salvageable. During his recovery in occupational therapy, he inquired about a functional prosthetic for fingers and was told there was no such thing.

“As an inventor, this was not good enough for me. So I set out to create my own artificial working digit and now I want to share it with the world,” Jordan says.

As a trained aviator and engineer for the U.S. Navy, Jordan put his skills to work. Working first with metal, and then moving on to plastic resin, the prototypes – or beta versions as Jordan refers to them – are almost ready for the masses.

“We strive for perfection. Our fingers are functional, but we want them to be better,” he says.

Perfection and customization is central to the success of each prosthetic. To streamline the production process, Jordan partnered with the University of Maryland’s MakerBot Innovation Center and will begin working with St. Mary’s College this summer to create 3D printed models.

He and his wife who run his company, Jordan Research and Development, also started a nonprofit to help more people. The nonprofit status, he says, allows them to get prosthetics to people who may not be able to afford them. Jordan is hoping to get his product registered with the Food and Drug Administration to get it covered for health insurance claims. He’s also working with occupational therapists to generate interest.

Once he’s perfected the DigiTouch prosthetic, Jordan doesn’t plan to stop there.

“We want to go the entire gamut – arms, exoskeleton – to help change the lives of people with limited movement,” he says.



HIGH-TECH OPPORTUNITIES IN MARYLAND FOR SMALL BUSINESSES

By Stephen Berberich
Special to The Daily Record

For those looking to start a high-tech venture in Maryland there are plenty of resources and opportunity to help them succeed.

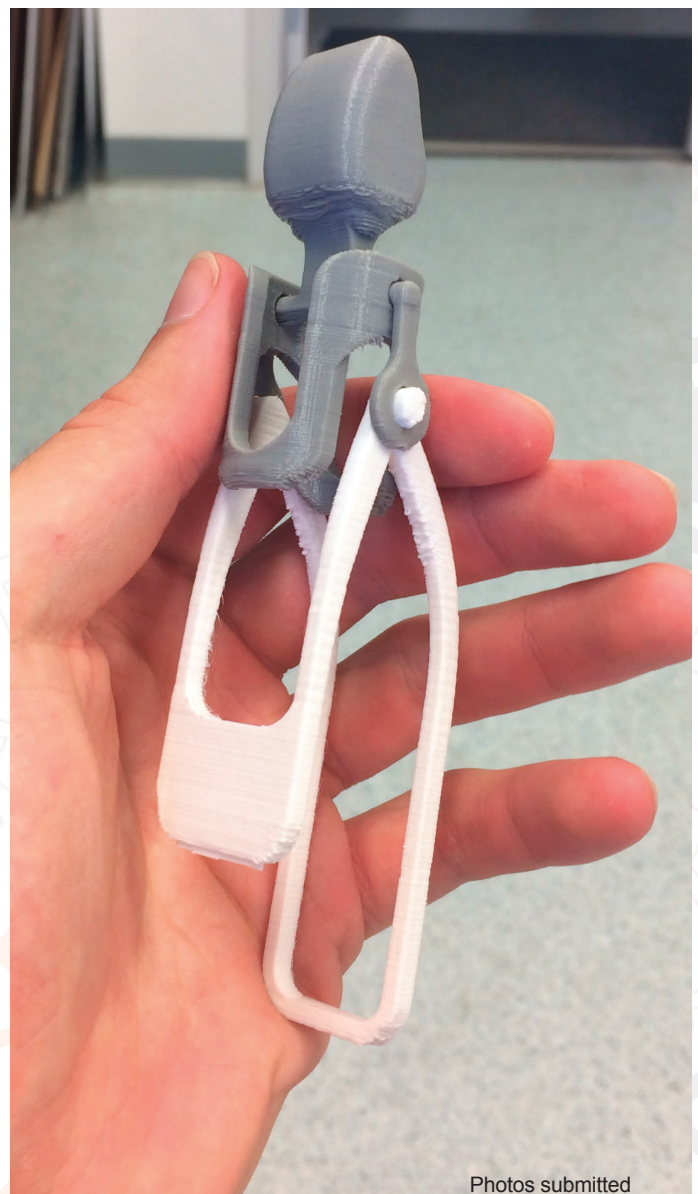
“We have great public and private universities and federal agencies full of technology for licensing,” Jim Hughes, co-director of UM Ventures, said. “The state of Maryland (government) is very aggressive in supporting startup companies. And, the Biotech Investment Tax Credit is I think the best in the country, giving investors a 50 percent tax credit of the amount of their investment, making it much easier for biotech companies to attract funding.”

Hughes is also the vice president and chief enterprise and economic development officer at the University of Maryland, Baltimore.

Under Hughes and co-director Julie Lenzer, UM Ventures is one of several academic commercializing routes for inventors or investors to start or join a small technology business. Entrepreneurs may also choose to launch a company through the nurturing advice and training at the state’s Small Business Development Center, part of a national SBDC network. Still others may emerge from one of a growing number of state and county business accelerator or incubator programs with a startup business.

The scale of ambition or target markets doesn’t matter. Consultants are readily available at low cost in all corners of Maryland as long as you can sell your technology invention or idea for a company.

Systems engineer Christopher Mennan at the University of Maryland School of Medicine felt the full potential of UM Ventures. About eight years ago, he and his team of four computer geeks were working in a large attic room in a small brick building two blocks from the university’s hospital in downtown Baltimore. He told Phillip



Photos submitted



First concept
prosthetic on
Jordan's hand.

Robilotto, assistant vice president of technology transfer at the university, they had invented innovative information technology “tools to provide a more global view,” which will connect all hospital systems and thus “surely help take better care of patients.”

On November 24, 2017, Amsterdam-based Royal Phillips, a leading health technology company, purchased Mennan’s start-up firm he co-founded, Analytical Informatics.

UM Ventures had helped Mennan secure the license agreements that made AI’s launch possible. The team quickly drove the company from concept to commercialization, acquiring funding and customers along the way.

Consultants with the state’s Small Business Development Center are available in every county and three in Baltimore City. Like UM Venture’s licensing agents, SBDC

consultants get inventors and entrepreneurs in touch with all training and commercializing resources for each step in forming and growing a small technology company.

SBDC consultants were there for inventor, innovator and self-described day-dreamer Brian Jordan of Jordan Research and Development, LLC of Hollywood, Md., in regard to a home accident when he lost some fingers.

Jordan invented the DigiTouch Prosthetic Finger to gain use of his lost fingers with the help of the SBDC, and then established a nonprofit organization, Robiotech Corp. to raise awareness and working solutions for digital amputees.

“Having an innovation-based business, the SBDC is a key asset when it comes to helping streamline product development,” says Jordan. “Even though we are a small company, it is like having a large executive board to help get your products to the next level.”

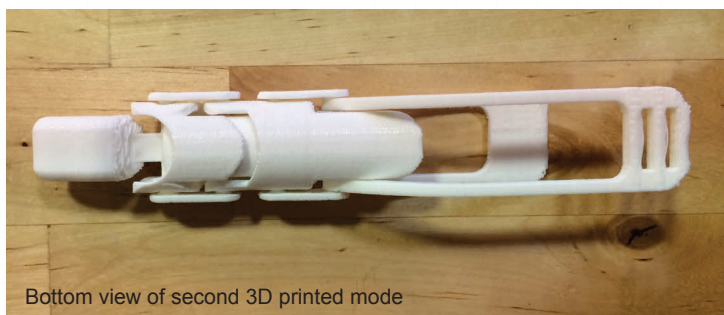
As with Mennan’s IT tools, Jordan’s invention of a DigiTouch Prosthetic Finger has gained much wider applications. SBDC consultant Linda Craven helped establish a business plan, marketing research, and more. She connected him with Ralph Blakeney, Technology manager for the Small Business Development Center to discuss the invention. Blakeney connected Jordan with the University of Maryland Makerbot Laboratory in College Park.

“They helped us create a rendering of our finger which was ultimately 3D printed. This helped us reach the next stage of prototype development,” said Jordan. “And, while we were working on this we discovered there are millions of people worldwide who are missing fingers.”

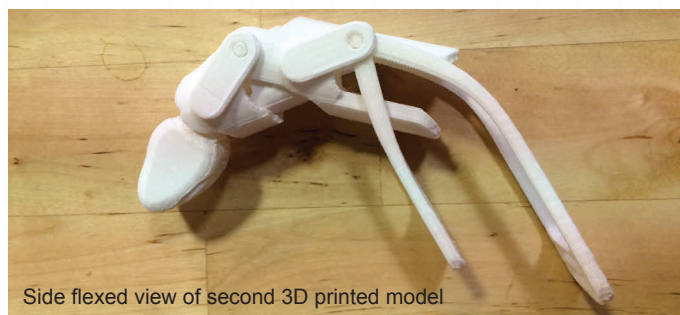
UM Ventures offices license innovations developed by faculty, students and staff to industry partners from early stage start-ups to industry giants. Services include evaluating, patenting and licensing intellectual property.

UM Ventures reviews invention disclosure forms from faculty, staff, students or joint appointee of the University of Maryland, plus direct from anyone not affiliated with the University System of Maryland to an appropriate state office to get help.

All available technologies are listed online at www.umventures.org/search/site under categories from the university’s labs in Baltimore and College Park. In 2012, UM Ventures was closing three or four start-up companies per year from available technologies from UM research. Now it is closing eight to 10 per year.



Bottom view of second 3D printed mode



Side flexed view of second 3D printed model

VARIOUS FUNDING PROGRAMS AVAILABLE FOR SMALL BUSINESSES

By Pete Pichaske
Special to The Daily Record

Native Marylander Ted Cooney, whose business ventures have ranged from commercial fishing and boat-building to health-care financial services and an oyster farm, knows the value of seeking financial help wherever you can find it.

These days, the founder of Madhouse Oysters, a six-year-old oyster farm on Hooper's Island, does much of his looking among the various state agencies set up to help small businesses.

"We're kind of the poster child for accessing some of this stuff," said Cooney, who has worked to fund his ventures through such programs as the Maryland Industrial Partnerships (MIPS) and the Columbia-based Technology Development Corporation (TEDCO). "There's a ton of money out there for innovative ideas."

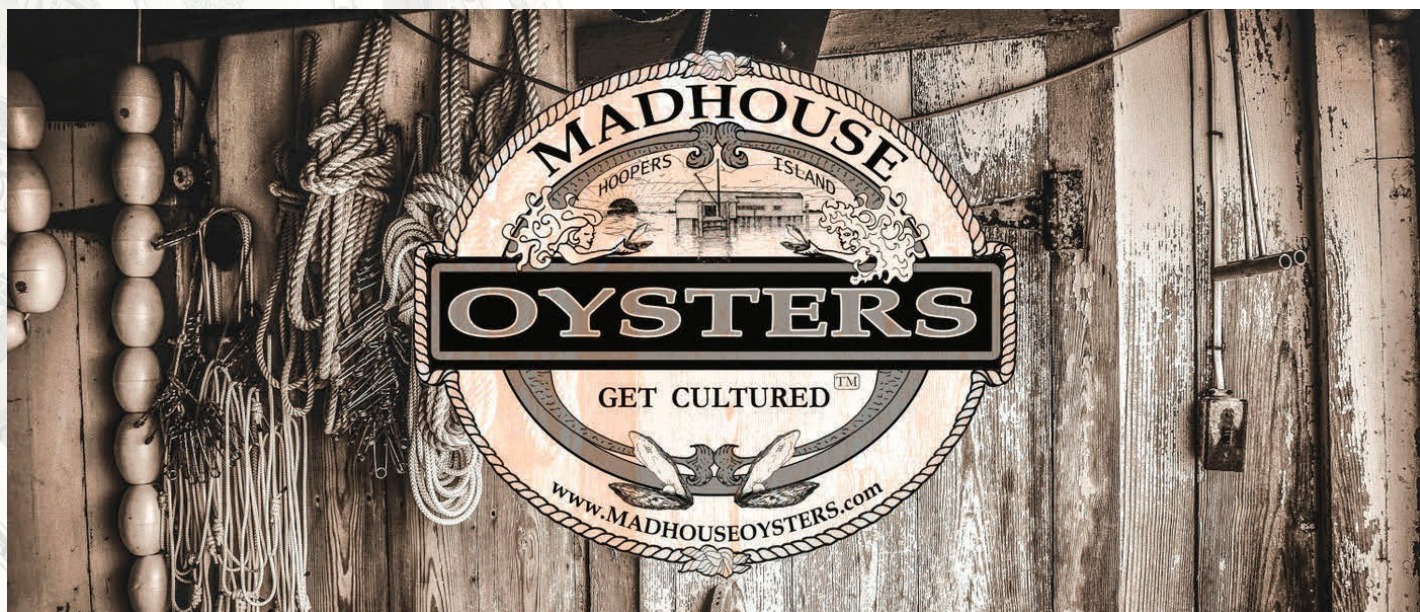
Indeed, Maryland's business landscape is littered with organizations set up largely to provide assistance to entrepreneurs who want to launch or grow their small businesses with grants, low-interest loans, mentoring or other guidance.

"There are a lot more opportunities than businesses are aware of," said Candace Pruett, business consultant for the Maryland Small Business Development Center, a resource for small businesses based at the University of Maryland in College Park.

Those opportunities, she said, range from grants and loans to convertible notes and equity stakes.

"The challenging part for entrepreneurs is understanding which funds they are eligible for and which may be the most meaningful for the businesses at their development stage," Pruett said.

Scott Robinson Sr. brings his boat in after a morning of winter harvest.
Photos submitted.



AVAILABLE FUNDING PROGRAMS INCLUDE THE FOLLOWING:

- MIPS, started in 1987, offers Maryland companies access not only to funding but to creative talents and research help in fields that include engineering and computer science from any of the state's 13 universities.

MIPS offers grants of up to \$100,000 per year for existing companies and \$90,000 a year for start-ups. Companies must match the funding with cash and in-kind contributions, but the cash contribution can be as low as 20 percent depending on the size of the company – and 10 percent for start-ups.

- TEDCO was created by the state 20 years ago to mentor, fund and otherwise assist tech-related businesses and start-ups. An independent organization, TEDCO is based in Columbia, but funds entrepreneurs throughout the state.

- The Next Stage Fund, operated by the Anne Arundel County Economic Development Corporation, provides interest-free loans up to \$250,000 for high-tech cybersecurity and national defense companies in Anne Arundel County.

The loans are meant to provide small companies the capital they need to grow, according to corporation CEO Julie Mussog. “These are businesses that have a viable product or service, have contracts, but need to be able to spend money on hiring people, say, or leasing office space,” she said.

The program, started just last year, has approved seven loans totaling some \$700,000 so far and has about 10 more applicants in the pipeline, she said.

- AAEDC also is one of eight contract lenders for the state's Video Lottery Terminal Fund, which uses a portion of the proceeds from Maryland's casinos to support small, minority and women-owned businesses. From the fund's inception seven years ago through June 2017, \$43.7 million in loans and capital had been handed out, according to the fund's most recent annual report.

- The Small Business Innovation Research program (SBIR) is a federally funded program that financially supports small technology businesses to get through their start-up and development stages and to commercialize their product.

SBIR awards are as generous as \$1 million over two years, depending on the business's track record and commercial potential.

John Davis, who heads the area's SBIR Resource Center, in Severna Park, said the program was set up in the early 1980s to help states and local communities develop a tech-based culture. While not pushed heavily in Maryland, he said, competition for SBIR support nationally is fierce.

Cooney is not the only Maryland entrepreneur to rave about the array of acronym-themed agencies available to help small businesses. Leaders of two Anne Arundel high-tech companies say the help they've gotten from one of the organizations has been invaluable.

Matt Puglisi, CEO of Netrias, a data science solution company in Annapolis, said he regularly uses the counseling provided to small businesses by the Anne Arundel County Economic Development Corporation.

“I meet with an advisor every six weeks or so – she's like a coach,” he said. “When I'm looking to hire, she gives me a list” of potential hires.

Recently, Netrias also snared \$150,000 in Next Stage Funding from the county EDC, which Puglisi said will be

used to boost his staff from four employees to six by the end of the year. The growth, he said, “will allow us to build our technology to make us more competitive. ... It's accelerating our growth, no doubt.”

Similarly, Pasadena-based Penacity, a cybersecurity company that specializes in social engineering, threat analysis and penetration testing, got \$50,000 from the Anne Arundel County EDC late last year.

“It gave us the ability to really grow without having to slice too deep into the bank account or worry about checks making it in time for payroll, said owner Timothy Schilbach. “It helped us grow quite a bit. ... We might even use it again, for our next set of contracts.”

UNDERSTANDING THE HIGH-TECH ECOSYSTEM

By Stephen Berberich
Special to The Daily Record

Understanding the far- and wide-ranging Maryland technology ‘household’ or ecosystem is essential to success, according to Glenna E. Cush, director of marketing with the state’s Small Business Development Center.

“The ecosystem refers businesses to how different components of technology support systems fit together,” she says, “Those components are organizations that provide expertise, technical assistance to different types of companies.”

But experts say novices should beware of swimming alone through an alphabet soup of acronyms for business development in Maryland, such as TEDCO, MIPS, SBIR, BWTech, SMIT, MDMEP, MTech, AIE and more. Learn them as you go.

Instead, a consensus of business experts says the place to start understanding the high-tech ecosystem for small businesses is at the SBDC. Its consultants in the statewide network in all 23 counties and Baltimore are dedicated to helping inventors start and grow a business. SBDC provides training, confidential consulting and market research to help aspiring and existing small businesses make sound decisions for successful operations. The consultants have owned or managed successful businesses.

In LaPlata, SBDC was instrumental in helping mechanical engineer Michael Steele launch Motobriiz LLC, a manufacturer of wind-powered automatic chain oilers for motorcycles.

“I had this idea in my garage and then I kind of went underground because I was afraid someone would steal it until I submitted a patent,” Steele said. “Once I emerged, I was amazed how much help is out there; many people in Maryland really want businesses to succeed.”

Steele was soon convinced that SBDC was a good place to



Matt Furstenburg, Chief Executive Officer of Grip Boost, helps test a new formula for a clean tacky football gel in the lab. Photos submitted.

start to build a company.

“I found in the entrepreneur ecosystem that if you go to the wrong place first, they will tell you to go somewhere else, you are not quite ready for us. Come back when ready,” Steele said. “You may not be ready if you try to go to an incubator, for example. They might send you back to the SBDC to get you on track again.”

Steele has sold his Motobriiz oilers to customers in 41

different countries so far. He is now marketing other products. Using the wind was a natural choice for powering the oiler because it is ever present when you ride, he said on his website.

Former professional football player Matt Furstenburg and Chana Arya also got a grip on the high-tech ecosystem. Furstenburg is now the CEO of GripBoost, a Linthicum company that sells a polymer to extend usefulness of sports gloves and Arya is the chief operating officer.

Arya explains, “The grip was wearing down on Matt’s football gloves and I’m a chemical engineer. We teamed up to find a solution.”

Furstenburg, who comes from a family of entrepreneurs, said his gloves, which cost \$40 to \$60 a pair, wore out too quickly. He sought help through advisors at the college. “We worked through TEDCO to develop a product that can restore old football gloves to ‘like-new’ tack without leaving residue on the ball.”

GripBoost is doing well four years later, sustaining 300 percent growth per year. Arya’s expertise is in biomaterials and surface functionalization chemistry. The two met through Harry Geller, a serial entrepreneur, whose career has spanned a broad range of successful startup companies.

Ralph Blakeney, technology manager for the Maryland Small Business Development Center and Julie Lenzer, co-director of UM Ventures in College Park, helped them get started, says Arya.

“And then, we got a lot of help from all over Maryland, from Baltimore, D.C., College Park for the past six years,” Arya said.

“We got past the post-funding stage and are completely reliant on our revenues to pay back our loans and keep on growing. Now we are rolling, we know who we are.

“We are not going to be like a Facebook or Google, but will be a small exit, hopefully when one does come. We have to make ourselves acquirable, maybe in the next four or five years I think. If it will be a \$5 million to \$10 million exit then I’m happy.”

Blakeney says a fundamental understanding of how to actually start a business is what is often lacking at first, and researchers or college professors often have the acumen to help newcomers manage a business.

Lenzer says, “Small businesses are the number one job creators, responsible for 68 percent of the net new jobs created nationally. Looking at the fabric of our community, main street

especially, it is the small businesses that help define it.”

According to Phil Robilotto, assistant vice president, Office of Technology Transfer at the University of Maryland, Baltimore, “The high-tech ecosystem for us, and we are focused on the life sciences, is composed of the research coming out of the universities in Maryland and federal labs such as the NIH, plus all the opportunities for funding which are available through the state for business infrastructure advice. There is also a burgeoning support for the state and its universities to provide incubator space for startups, such as the UMBioPark. These spaces bring new companies at a similar stage together to use and share equipment, utilities, mentorship and help available at the sites.”



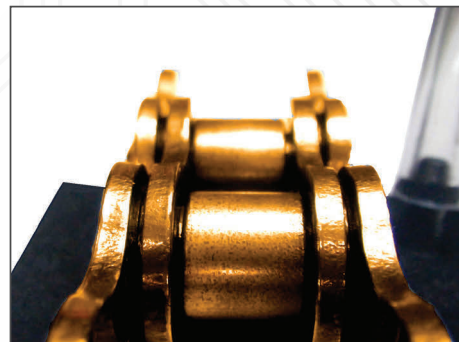
Wind Pressure moves oil from small reservoir to chain.



Small tube mounted at front of bike collects wind pressure.



Matt Furstenburg, Chief Executive Officer of Grip Boost, helps test a new formula for our clean tacky football gel in the lab.



Oil applied to chain by felt applicator.

AUTONOMOUS COMPUTING AND AR/VR POSSIBLE AREAS OF GROWTH IN MARYLAND

By Patrick Brannan
The Daily Record

As smaller, quicker and easier technology drives more connectivity for devices and systems, executives say smart companies large and small can leverage those advancements to create opportunities for growth.

“There are opportunities to use that information,” said Harry Holt, executive vice president of operations at Bith Energy Group. “You can improve the products for your customers.”

As technology continues to evolve, Holt says it is imperative for companies to stay on the cutting edge for their businesses. An early warning of impending system failure could spell the difference between business as usual or a company-wide catastrophe.

“It’s critical to stay current with the changes in technology,” Holt said, especially if a company hopes to survive. “The systems can create an efficiency.”

From educational institutions to government agencies, Maryland small businesses have plenty of resources to take advantage of growing and ever-changing technology systems.



Some Mindgrub employees test a VR headset in the Mindgrub VR room. (Maximilian Franz/The Daily Record File photo)

Julie Lenzer, Associate Vice President of Innovation and Economic Development and Co-Director of UM Ventures, sees several areas of growth in technology in the region. Lenzer points to quantum computing, autonomous computing – especially with drones -- and augmented and virtual reality as areas of potential growth to compliment the state's strong base in cybersecurity and life sciences.

She added the lower cost of entry for drones and AR/VR give small businesses and startups an entry point into advanced technology.

The popularity of games such as “Pokemon Go” show how augmented and virtual reality can grow and invite investment. Brendan Irbie, co-founder and CEO of Oculus donated \$31 million to the University of Maryland, College Park.

Holt also championed VR as a tool in training situations. For example, utility workers would be able to train on an electrical substation virtually or train for a gas leak in a safe environment.

Executives say one of the most important things businesses owners can do to stay ahead of the technology curve is to have an “adapt or die” mentality, having employees embrace a flexible frame of mind toward technology and be open to change and evolution.

Holt pointed out one of the critical areas for companies to evolve in their use of technology is by connecting with younger people. Not only those in college, but high school and even middle-school students, who have been exposed to and adopted newer technology such as augmented and virtual reality through the playing of video games and game-like experiences. To do this, Holt said companies still need older, more seasoned workers who can show younger employees how to translate that technology into a language its customers will understand and embrace.

Flexibility in attracting its workforce is imperative for a company to prosper. With the rise in telecommuting or remote working, businesses will have to be open to alternative work environments if they expect to attract and keep talented employees.

Montgomery County making the final cut in Amazon's location search for a new second headquarters, dubbed “HQ2,” speaks to the region's technology level and growth potential. The region also benefits from strong educational institutions able to produce a tech-savvy workforce and diverse transportation outlets all play a part in the attractiveness of the region.

Bith Energy Group founder Robert Wallace believes small businesses are what fuels Maryland's economy and it is paramount for them to help improve the state's economy. Small businesses should foster a growth plan that involves its diverse population so it can gain an economic advantage.



Harry Holt

“It's critical to stay current with the changes in technology, especially if a company hopes to survive. The systems can create an efficiency.”

— Harry Holt, executive vice president of operations at Bith Energy Group

What to do if a hacker steals your company's data

By James Farwell
And Geoff Elkins
BridgeTower Media

When Sony Pictures and Equifax got hacked, it cost them tens of millions. Sadly, studies indicate over half of companies can expect to be hacked. There is no fool-proof way to stop an incident breach. So what should you do if your company is attacked? You need to be ready on the front end, so that you can respond when the attack occurs.

Here are eight broad action steps:

1 Consult your information security plan.
Companies should have in place an information security plan to identify, prevent, detect, respond and recover from hacking attacks. This plan should outline your company's defenses against hackers and provide a blueprint for what to do when you are hacked.



2 Implement incident response procedures per your information security plan.

You need to assemble an incident breach response team before a breach occurs. The team should include key management; your chief security information officer (CISO); IT department heads; physical security department head; public relations experts; and both in-house and outside counsel. Often outside counsel lead the effort in dealing with incident breaches to ensure compliance with governing law and to establish attorney client privilege for the company's response efforts. The faster you act, the better your chances of limiting loss, damage, and legal exposure.



3 Consult with legal counsel to cover all obligations.

Identify your legal and contractual obligations. Depending on what industry you are in, these vary. Regulators often require that you notify them and affected customers on a particular timeline. You face severe penalties for failure to comply.



4 Determine insurance coverage and contract providers.

Meet with your insurance broker and both in-house and outside legal counsel to determine what coverage you have in place and who you have to notify about what. Cyber insurance policies can vary considerably. You need to understand your rights and obligations, including what time limits for discovering an incident apply and how they are triggered. Policies may limit your freedom to select your own attorney, your public relations team, and what insurance will pay for in notifying affected customers and taking remedial steps.

5 Engage professional forensic investigators to work closely with your IT team.



This will enable you to help determine the scope of the breach, the lines of attack and what data was affected. Your

IT experts need to move fast when an incident occurs. The ability to figure out how a breach occurred lessens by the minute. You must isolate, preserve and document compromised computer systems and networks to contain the damage.

6 Notify affected individuals as required by law.

Notification can get complicated because you need to have your counsel check the law of each state in which an affected customer resides. Each state has its own law you must comply with and states are not consistent, so be careful. There is a key exception that can be found in some laws: You may not need to notify if, after a reasonable investigation, you determine there is not a reasonable likelihood of harm to a customer. If you do have to notify, the law prescribes various methods of notification. You must notify in the most expedient time possible and without unreasonable delay.

7 Engage communications and public relations personnel.

They can craft communications and public messaging, and counsel needs to review the messaging and press releases to ensure that these comply with each state law. Federal laws that govern the health care, financial services and other industries may have their own requirements, including notification to regulators. You need to coordinate closely with counsel in addressing these challenges.

8 Review the information security plan and identify lessons from the breach.

The information security plan should always be reviewed after the company has been hacked. You need to make certain that your plan enables you to act quickly, limit damage and provide lessons learned from the attack that will produce a stronger security plan in the future. Make certain – especially where ransomware is involved – that you have a plan for resiliency so that an attacker does not shut you down.



One of the best ways to thwart somebody who holds you ransom is to store a duplicate set of data in a separate, secure location so that you can shut down the system that is being held for ransom and keep operations going by using back up duplicate data. The threat of cyberattack cannot be eliminated. Being ready for when one does occur can save you a great deal of money.



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