



**innovation
park**
at PENN STATE

Volume 10, April 2018

JOURNEYS

You pick the path, we support your journey

- SPECIAL EDITION -

**invent
PENN STATE**

the ingenious power of partnership

Venture & IP Conference
April 19 & 20, 2018



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STAY HERE**
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**THE COMPREHENSIVE
RESOURCE GUIDE FOR
STARTUPS**



**EXPANSION OPPORTUNITIES
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**STARTUP SPOTLIGHT:
PHOSPHOLUTIONS**
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Venture & IP Conference

April 19 & 20, 2018 | The Penn Stater Conference Center Hotel

Thursday, April 19th

8:00 am – 7:30 pm
General Registration

8:30 – 11:00 am
Millennium Science Complex
and LaunchBox Tours

11:00 am
Exhibits Open

11:00 – 12:30 pm
Luncheon
Keynote: Dr. Eric J. Barron,
President of Penn State
Inc.U Student Startup Pitch

12:45 – 3:00 pm
Venture Connection for
pre-selected entrepreneurs
& investors

12:45 – 1:45 pm
Session #1 - America's Seed
Fund - Growing your Startup
with SBIR/STTR

2:00 – 2:45 pm
Session #2 - Getting AI and
Technology Right in Education
Ventures

3:00 – 5:30 pm
Penn State Tech Tournament

5:30 – 7:30 pm
Cocktail Reception

7:00 – 11:00 pm
Courtesy Shuttles to and from
The Penn Stater to Downtown
State College

AN INSIDE LOOK

FOLLOWING AN IMPRESSIVE DEBUT IN 2016, THE INVENT PENN STATE VENTURE AND IP CONFERENCE RETURNS

Following an impressive debut in 2016, the Invent Penn State Venture and IP Conference returns.

The inaugural event showcased over 90 startup ventures, many of which were from the Penn State community. These 90 ventures represented emerging markets including IT, energy, biotechnology and healthcare among others. The 2018 conference is expected to draw an even wider array of markets and innovations.

Venture Connection

The Venture Connection event is divided into two sessions. The first will be held on Thursday, April 19, from 12:45 p.m. to 3:00 p.m., and the second, Friday, April 20, from 9:00 to 11:00 a.m. at the Penn Stater Conference Center Hotel.

Venture Connection is the central event of the Penn State VIP.

During the speed-dating-styled event, investors host tables where they meet with entrepreneurs who have been matched with investors based on key criteria, including capital needs and industry. Each Venture Connection session is broken into 20-minute segments giving each investor the chance to meet with up to 36 capital-seeking, well-screened entrepreneurs.

Venture Connection helps build relationships between innovative entrepreneurs and investors. Entrepreneurs are provided with the opportunity to give an elevator pitch to their potential investors, and investors share details about what they look for in prospects and discuss funding

and strategies. If a connection is made, further one-on-one meetings can be scheduled.

Entrepreneurs participating in Venture Connection must apply to participate in the event. Applications are reviewed by a selection committee to ensure that Venture Connection is an exemplary showcase introducing bright and promising technology ventures.

tech | TOURNAMENT

Tech Tournament

The tournament will be held from 3:00 to 5:30 p.m. Thursday, April 19, at the Penn Stater Conference Center and Hotel. Prizes are \$75,000, \$50,000, \$25,000 and \$10,000.

The Penn State Tech Tournament is a fast-paced competition in the style of the hit TV series Shark Tank. The Tech Tournament gives Penn State research-based startups a chance to present their technology to a large audience of investors. Entrepreneurs have only a few minutes on stage with which to impress a panel of judges to earn one of three cash prizes for first, second and third place. But it isn't just the judges and investors they should aim to impress. The winner of the fourth award, the People's Choice Award, will be chosen by the audience via a text message vote.



Venture & IP Conference

April 19 & 20, 2018 | The Penn Stater Conference Center Hotel

Friday, April 20th

7:00 am – 2:45 pm

Registration & Exhibits Open

7:30 – 9:00 am

Breakfast & Keynote: Fireside Chat with James Franklin, Penn State Football Coach & Wayne Kimmel, Managing Partner, SeventySix Capital

9:00 – 11:00 am

Venture Connection for pre-selected entrepreneurs & investors

9:00 – 9:45 am

Session #3 - 8 Questions Every Entrepreneur Needs to Know the Answers to with Brian Slawin of Ben Franklin Technology Partners

10:00 – 10:45 am

Session #4 - Growing PA's Capacity for Life Sciences Startups

11:15 am - 12:15 pm

The Corporate Venture Panel

11:00 – 11:45 am

Session #5 - The Secrets of Fundraising for Your Company

11:45 am – 12:30 pm

Session #6 - How I Did It - Stories from Experienced Entrepreneurs

12:30 – 2:30 pm

Lunch, Awards Ceremony & Keynote: Nir Eyal, Investor, Entrepreneur and Author

Last Year's Tech Tournament Standouts: Where are They Now?

AdvanceRib

First place winner AdvanceRib earned a cash prize of \$75,000. The AdvanceRib system is an FDA-approved device used to improve the outcomes of rib surgery. It was invented by a team at Hershey Medical Center, by Barry Fell, a biomedical engineer whose company, TPC Design, specializes in orthopedic devices such as artificial hips and knees.

Fell partnered with Dr. Peter Dillion, chief of surgery at Penn State Health Milton S. Hershey Medical Center, Dr. Don Mackay, a surgeon at Penn State Hershey Plastic Surgery, and Dr. Randy Haluck, chief of minimally invasive surgery at the Penn State Health Milton S. Hershey Medical Center, to file the 2013 patent applications for their new minimally invasive system for stabilizing broken ribs in a manner less traumatic for patients.

After an unsure beginning due to licensing transfers, Fell started a business called SIG Medical to produce and sell the system in conjunction with the Hershey Medical Center. Although ethics rules prevent the surgeons from having a management or director's role in the business, they are investors in it, as is Ben Franklin Technology Partners, among others.

AvoColor

Second place and a prize of \$50,000 was awarded to AvoColor, a natural food colorant developed by Penn State food researcher Greg Ziegler. AvoColor has been commercialized by Ziegler's start-up, Persea Naturals LLC, which operates in the Tehcnology Center Incubator at Innovation Park.

Persea Naturals created AvoColor as a natural yellow-red color additive made from the very heart of the simple avocado — the seed. AvoColor remains stable over a wide range of pH levels, water activities and temperatures as well to light and oxygen exposure. It also has no impact on the taste or smell of a product.



Dr. Greg Ziegler: Research Lead of Persea Naturals, producer of AvoColor. Photo courtesy of Phoebe Sheehan/Centre Daily Times

In 2018, Persea Naturals announced its membership in the International Association of Color Manufacturers and welcomed Dr. Tanedjeu Kemgang, whose experience lies in Immunology, Biochemistry, Microbiology, Bioinformatics and Food Science and nutrition. Kemgang will be responsible for leading Persea Naturals from lab-scale to industrial-scale production, as well as developing and commercializing new products.



Project TEAM

Third place went to Project TEAM, along with a cash prize of \$25,000. Project Team is a K-12 anti-bullying curriculum developed by a team of Penn State Education Faculty members led by Linsey Covert. It is currently selling to educators across Pennsylvania; reaching 14,137 students and 1,241 educators.

Since its development, Project TEAM reports a positive impact in schools across many areas of need, including: increasing positive student support conditions and school connectedness; improving positive school climates; decreasing bullying and other anti-social behaviors; increasing student knowledge and use of concepts taught through the program; helping teachers in the classroom; and preparing students for the future.



L4IS

Lasers for Innovative Solutions, LLC, won the People's Choice award and a \$10,000 prize. L4IS is a laser-imaging system developed by Ben Hall, a Penn State grad student, which provides highly detailed images of samples produced when the laser slices the sample into fine layers. L4IS is also a tenant in the Innovation Park incubator. **Learn about more Penn State technologies and startups at invent.psu.edu.**

Keynote Speakers

Dr. Eric J. Barron

Dr. Eric J. Barron, the president of Penn State University and former dean of the College of Earth Mineral Sciences at Penn State and former president of Florida State University. He has been a dedicated champion of growing the university's role in commercializing research and helping drive entrepreneurship.

Coach James Franklin

Coach James Franklin is Head Coach of the Penn State Football program. Franklin has 22 combined years of coaching experience at the collegiate and NFL levels, and is one of 12 current Football Bowl Sub-division coaches to lead his teams to a bowl game in each of his first six seasons as a head coach. He has also secured Top 25 recruiting classes each of his last five seasons, including back-to-back Top 20 classes at Penn State. Of course, Penn State football fans know him best as the coach who led the Nittany Lions to win the 2016 Big Ten Championship against Wisconsin after Penn State's legendary upset against Ohio State to secure the Big Ten East title, then led them to win the Fiesta Bowl against Washington in 2017.

Wayne Kimmel

Wayne Kimmel is managing partner at SeventySix Capital, but he wasn't always a venture capitalist investing in game-changing companies. He started out as a 29-year-old law school graduate with no connections who networked obsessively to work his way to success. Kimmel is an

Moving Innovative Ideas to Market

The anticipated return of the VIP Conference is just weeks away. Join us.

- Explore 80+ Investment, Licensing & Partnership Opportunities from Across the Country
- Hear Prominent Speakers & Panelists
- Meet 50+ Venture Capitalists & Leading Investors
- Experience Competitions & Awards
- Tour the Technology & Downtown Incubation Centers
- Attend Receptions & Other Networking Functions

Special guest speakers:



James Franklin
Head Football Coach,
Penn State University



Wayne Kimmel
Sports Tech Venture
Capitalist & Entrepreneur



Nir Eyal
Wall Street Journal
Bestselling Author of
"Hooked: How to Build
Habit-Forming Products,"
Public Speaker and
Consultant

entrepreneur, venture capitalist, philanthropist, keynote speaker and author of the book "Six Degrees of Wayne Kimmel." Kimmel has invested in over 50 technology and healthcare startups, including SeamlessWeb — now publically traded as GrubHub — take Care Health Systems and Nutrisystem.

"Our aim is to accelerate the transfer of new ideas into useful products and processes that encompass a broad range... We plan to create flexible and vibrant physical spaces in key locations across the Commonwealth to host entrepreneurial boot camps that will allow individuals and groups to incubate their ideas and develop viable business ideas."

- Penn State President Dr. Eric J. Barron

Brian Slawin

Brian Slawin is the regional director and portfolio manager at Ben Franklin Technology Partners Central and Northern PA. He is an accomplished operations executive with a comprehensive technology, marketing and sales background. He has experience partnering with senior leaders to capitalize on opportunities and manage product development. He is currently based in Erie Pennsylvania after leaving Saint Louis, Missouri, and his own startup in 2015.

Nir Eyal

Nir Eyal is the bestselling author of "Hooked: How to Build Habit-forming Products," a public speaker and a consultant. Eyal had founded two tech companies since 2003, and has taught at the Stanford Graduate School of Business and Hasso Plattner Institute of Design at Stanford. He is a contributing writer for TechCrunch, Inc. and Psychology Today as well as a blogger at NirAndFar.com. He also invests actively in habit-forming technologies, including Evenbrite, Product hunt, Pantry, Kahoot, Refresh.io, Happy Bits, Presence Learning, 7 Cups of Tea, Pana and Symphony Commerce.

Also: Don't Miss

- Tours of the Millennium Science Complex, located on the University Park Campus, and a tour of the LaunchBox, located on Allen Street in downtown State College.
- Exhibits and expert-led panels both Thursday and Friday, as well as a cocktail reception 5:30 to 7:30 p.m. on Thursday, April 19. Courtesy shuttle will be available to take guests between the Conference Center and downtown State College.



PennState

LIVE, LAUNCH, LOVE HAPPY VALLEY



Love HAPPY VALLEY

PRAISE FOR STATE COLLEGE AND HAPPY VALLEY

- ★ Best Town in Pennsylvania, *Niche*, 2018
- ★ Top 15 Best U.S. Cities for Entrepreneurs to Live and Launch, *Entrepreneur Magazine*, 2016
- ★ #7, The Best Places for Business and Careers, *Forbes*, 2018



PRAISE FOR PENN STATE

- ★ #1 for Recruiting, *Wall Street Journal*, 2010
- ★ Ranked by National Science Foundation in Top 10 of 15 STEM fields. No university has more top 10 rankings.
- ★ Top 50 Best National Universities, *U.S. News & World Report*



LIVE HAPPY VALLEY

A SPORTS FAN'S PARADISE

With 31 NCAA Division I teams, plus club sports and a minor league baseball team, Happy Valley has the best in collegiate athletics and a whole lot more:

NITTANY LION FOOTBALL

Saturdays in the fall are all about football. Well, tailgating and football. Nittany Lion fans love to win, but at the heart of Happy Valley's football culture is fun. Enjoy some tailgate treats and beverages under the sun (or in the snow, it is central PA after all) then head into Beaver Stadium in 109,000 of your closest friends. Go State!

It's not the setting for a fairytale, but Happy Valley is producing beautiful beginnings and happily-ever-afters. Young professionals, entrepreneurs, growing companies and more are finding central Pennsylvania is the ideal place for growing their careers, innovations and businesses.

When the Happy Valley area started appearing in national rankings, praise revolved mostly around lifestyle. The area was named "Least Stressful Town in the U.S." by *Psychology Today* in 1988. Soon after it made lists for safety, health, walkability and recreation—traits it shares with many college towns. and adventure culture.

Fast-forward to today and Happy Valley is gaining recognition that reflects how Penn State has fused education, research and business to create an environment that's conducive for starting and growing businesses.

Livability.com named it one of the best cities for entrepreneurs, with statistics on venture capital deals, how much funding business owners received from SBA and 7(a) loans and how much money residents spent within their community. Personal finance company ValuePenguin named State College as a top city for new students to launch. Best College Reviews calls it "one of the smartest towns in America."

Overlay these new accolades on a region that's just 3-4 hours from New York, Philly, and Baltimore/DC, and earns high marks for quality of life, and you have one happy valley.



HOCKEY VALLEY

The 6,014-seat Pegula Ice Arena, opened for business in October 2013, replacing the 1,350-seat Penn State Ice Pavilion as the home of Nittany Lion men's and women's ice hockey (the former club teams became NCAA Division I in the 2012-13 season). Since then, hockey is the hottest ticket in the valley, and for good reason. The teams are competitive, the space is gorgeous, and the concessions are delish—hello Penn State Creamery.



STATE COLLEGE SPIKES

Summer is for baseball and Happy Valley has a hometown team. The State College Spikes, a class A short season affiliate of the St. Louis Cardinals, play in the New York-Penn League. Medlar Field at Lubrano Park, also home to Penn State Baseball, has all the amenities of a major league ballpark, including comfortable suites, microbrews on tap, fireworks galore, and a gorgeous view of a local landmark—in this case, Mount Nittany.

ARTS & ENTERTAINMENT BIG TIME

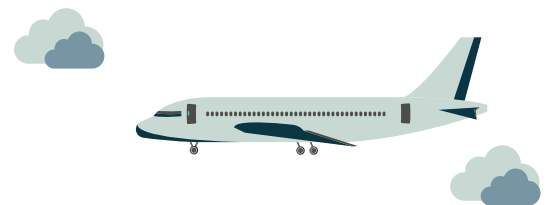
When you think of the best in visual arts, performing arts, music and cinema, central Pennsylvania may not top your list. But it should. Penn State's Palmer Museum of Art hosts a permanent collection of more than 8,000 works, and adds nine rotating exhibits a year. The Bellefonte Art Museum for Centre County showcases local artists and offers free art shows,

classes and cultural exhibits, including a permanent exhibit that remembers the role of our region in the operations of the Underground Railroad.

No need to drive to the closest major city for concerts or shows. Big name music acts, including Elton John, Bruce Springsteen, and Luke Bryan, regularly stop at the Bryce Jordan Center; and The Center for the Performing Arts' annual line-up includes top touring musicals, plays, dance troupes, symphonies and musical groups from around the world. Indie fans shouldn't worry; The State Theatre in downtown State College brings music and film to town. Deer Tick plays April 30 and the BANFF Mountain Film Festival, which stops annually, is here this Spring.

GET OUTSIDE

Centre county and surrounding counties are home to state parks and state forests that offer hiking, mountain biking, camping and boating for all levels of outdoor lovers. Just four miles from Beaver Stadium you can bike, walk and birdwatch in Millbrook Marsh Nature Center, a 62-acre nature preserve with protected wetlands and boardwalks for hiking and wildlife viewing. Centre county's pristine limestone streams, including Spring Creek, Penn's Creek and Elk Creek, offer world-renowned trout fishing. And just over 40 minutes away you can spend the weekend on a houseboat or a day on the water or on the trails surrounding 8,300 acre Raystown Lake.



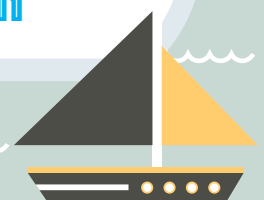
FUN FOR FAMILY AND FRIENDS

Kids and families love Happy Valley. Popular spots around campus include the Penn State Berkey Creamery and the Arboretum, which includes botanical garden's and a children's garden featuring a limestone cave and stone amphitheater. In the summer, it's a short drive to nearby Del Grosso Amusement Park for water slides, rides, games and their famous Italian concessions.

Happy Valley was an early-adopter of the locavore movement and has an abundance of options for farm-to-table dining and market shopping. The Central PA Tasting Trail features a growing selection of craft breweries, distilleries, wineries and cideries. In total, there are 12 unique destinations to visit for handcrafted local beverages.



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Happy Valley

“One of the Top 10 Places to Live and Launch a Business.”*

- entrepreneur.com

Downtown State College and Penn State Campus

Startup Resource Providers

Provider	Description	Primary User				Resources										
		Community Entrepreneurs	PSU Faculty & Postdocs	PSU Graduate Students	PSU Undergraduate Students	Classes & Workshops	Accelerator Program	Mentors & Advisors	Funding	Pitch Competition	Community Building	Subsidized Leasable Space	Co-Living Space	Co-Working Space	Cost	
1855 Capital 1855capital.com	Early-stage venture fund with focus on Penn State affiliated startups	●	●	●	●			●	●							Equity
Ag Springboard Competition agsci.psu.edu/entrepreneur/competitions/springboard	An annual business pitch competition open to all students at Penn State—\$7,500 grand prize		●	●	●			●		●	●					Free
AI Challenge edtechnetwork.psu.edu/challenge	Compete for \$100,000 by utilizing AI to improve the student experience at Penn State						●	●		●						Free
Ben Franklin Technology Partners cnp.benfranklin.org	Direct funding, business assistance and networking for early-stage and established technology companies	●	●			●		●	●							Loans
Big Idea Contest cnp.benfranklin.org/2017-big-ideacontest	Pitch to win up to \$25,000	●	●	●	●					●	●					Free
Centre Region Entrepreneur Network (CREN) Facebook.com/CRENetwork	CEO networking group	●	●								●					Free
Chamber of Business & Industry Centre County cbicc.org	Networking opportunities for local businesses	●	●		●							●				Annual Fee
ENGINEERING for Innovation & Entrepreneurship (ENGINE) Grants	Grant program to advance promising technologies in the Penn State College of Engineering		●	●				●	●							Free
Fund for Innovation fundforinnovation.psu.edu	Provides awards of \$25,000-75,000 to de-risk and develop Penn State technology with commercial promise through a matching program with academic colleges		●					●	●							Free
Garber Venture Fund smeal.psu.edu/garber	Student-run investment fund with an emphasis on Penn State affiliated startups	●	●		●				●							Equity
Global Entrepreneurship Week gew.psu.edu	The largest GEW event in the US. Provides entrepreneurial workshops, networking events, student pitch competitions and talks from successful startup founders including many Penn State alumni	●	●	●	●	●				●	●					Free
Happy Valley LaunchBox powered by PNC Bank launchbox.psu.edu	Hot desk space and walk-in legal and business advice M-F, plus accelerators offering teams 24-hour co-working space and free Wi-Fi	●	●		●	●	●	●	●	●				●		Free
Idea Maker Challenge ideamakers.ist.psu.edu	Build a team. Pitch an idea. Win a trip to an incubator or innovation center			●				●		●						Free

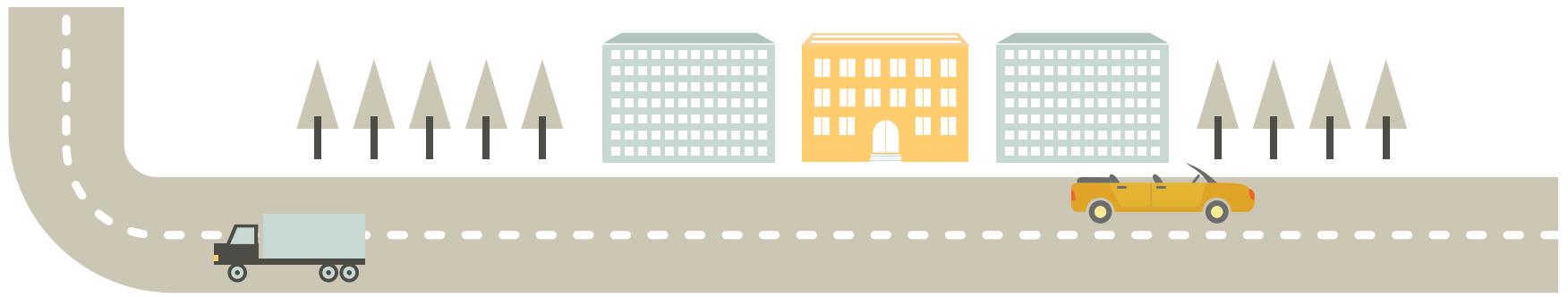
Startup Resource Providers

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Inc. U penntap.psu.edu/innovation/incu	A competition for undergraduate student start-ups from any Penn State campus to earn a spot to compete on "The Investment" TV show and win money			●				●		●						Free
Innoblue innoblue.org	Where Penn State students go to connect, brainstorm projects and build businesses			●		●			●		●					Free
Invent Penn State invent.psu.edu	Where Penn State students go to connect, brainstorm projects and build businesses	●	●	●	●	●	●	●	●	●	●	●		●		Free
Invent Penn State Venture & IP Conference invent.psu.edu	Brings startups together with venture capitalists and industry for pitches and a showcase of Penn State Technologies	●	●	●	●	●			●	●	●					Fee
Lab Bench to Commercialization	Grant program to advance promising technologies in the Penn State Eberly College of Sciences		●	●				●	●							Free
Lion LaunchPad lionlaunchpad.psu.edu	Like-minded student entrepreneurs share living space and tailored programs			●		●					●		●			Fee
mHealth Challenge	Brings nursing students together with students from other disciplines to solve complex health challenges through technology			●						●	●					Free
New Leaf Initiative newleafinitiative.com	Low-cost hot desk and co-working space with programs, events and workshops	●		●		●					●			●		Fee
NSF I-Corps Site invent.psu.edu/program/nsf-i-corps-site	Provides microgrants and accelerator program for up to 30 faculty affiliated startups each year	●	●	●	●		●	●	●					●		Free
Office of Entrepreneurship and Commercialization invent.psu.edu	Programs and services for Penn State startups through Invent Penn State		●			●	●	●	●	●	●	●		●		Free
Office of Industrial Partnerships researchpartnerships.psu.edu	Matches Penn State researchers with industry challenges to create sponsored research opportunities		●						●							Free
Office of Technology Management research.psu.edu/otm	Manages intellectual property derived from Penn State research and assists faculty with the patenting and commercialization process and paying up-front patenting expenses		●					●	●							Free
Patent and Trademark Resource Center guides.libraries.psu.edu	Helps locate patent and trademark information and filings with the USPTO	●	●	●	●	●		●								Free
Penn State Incubator: Innovation Park & Zetachron innovationpark.psu.edu	Low-cost wet lab and light manufacturing space, co-located with 30+ tech startups, business advisors and resources in Innovation Park and Science Park	●	●			●		●			●	●				Low-Cost Lease
Penn State Law Entrepreneur Assistance Clinic & IP Clinic pennstatelaw.psu.edu/practice-skills/clinics/entrepreneur-assistance-clinic	Provides legal advice to startups on entity formation and equity agreements. Provides intellectual property advice	●	●	●	●			●								Free
Penn State Startup Week startupweek.psu.edu	Entrepreneurial workshops, networking events, student pitch competitions and talks from successful startup founders, including many Penn State alumni			●	●	●				●	●					Free
Penn State University Libraries libraries.psu.edu	Support for entrepreneurship curricular-driven projects, assignments and research		●	●	●	●		●								Free
PennTAP penntap.psu.edu	A statewide technical assistance organization supporting businesses with advanced IT solutions, energy and environment services and innovation services	●		●				●	●	●						Free

Startup Resource Providers

Provider	Description	Primary User				Resources									
		Community Entrepreneurs	PSU Faculty & Postdocs	PSU Graduate Students	PSU Undergraduate Students	Classes & Workshops	Accelerator Program	Mentors & Advisors	Funding	Pitch Competition	Community Building	Subsidized Leaseable Space	Co-Living Space	Co-Working Space	Cost
PSU Corporate Innovation & Entrepreneurship (CIENT) Major undergrad.smeal.psu.edu/ majors/corporate-innovation-and-entrepreneurship	Corporate Innovation and Entrepreneurship major for Penn State student entrepreneurs			●	●										Tuition
PSU Entrepreneurship & Innovation (ENTI) Minor enti.psu.edu	Minor in Entrepreneurship at Penn State available to all students regardless of major			●	●										Tuition
RAIN Grant Program agsci.psu.edu/research/resources/ funding/rain-grants-program	Grant program to advance promising technologies in the College of Agricultural Studies		●	●				●	●						Free
SCORE centralpa.score.org	Service corps of retired executives now providing professional resources to entrepreneurs	●	●	●	●			●							Free/Low-Cost
Small Business Development Center (SBDC) sbd.c.psu.edu	No-cost, confidential consulting services and low-cost seminars for small businesses and individuals considering starting a business	●	●	●	●			●							Free/Low-Cost
Smeal Commercialization of Research (SCOR) Grant Program	Provides student teams training and \$10,000 each to work on their startup, social good or non-profit idea for the summer		●	●				●	●						Free
Summer Founders Program invent.psu.edu/program/ summer-founders	Provides student teams training and \$10,000 each to work on their startup, social good or non-profit idea for the summer			●	●		●	●	●		●				Free
TechCelerator @ State College techceleratorstatecollege.org	10-wk accelerator held 2x per year with mentorship and opportunities for Ben Franklin Technology funding	●	●	●			●	●		●					Free
The Co.Space thecospace.com	Co-housing and year-long programming support for up to 20 change makers	●		●	●					●		●			Lease





Launch HAPPY VALLEY



HIGHEREDJOBS CO-FOUNDER ERIC BLESSNER: “While we work with colleges and universities across the United States and abroad, we have stayed committed to our values by growing our business in smaller communities like State College, so while we have spent the last 20 years supporting and serving the academic community, we have also worked hard to build a company that supports our local community.”

XACT METAL CEO JUAN MARIO GOMEZ: “We have access to the university, students, faculty and outstanding resources — we have a world-class 3-D printer right at our doorstep. It would be difficult to have this same level of success if we were not as close to Penn State. There is a huge amount of talented, hard-working people who are committed to making our company succeed. I don’t know if it would have been as easy to start up in a larger city and attract the same amount of talent.”

support and environment were critical to get my company off the ground.”

OGOVO CO-FOUNDER PRESIDENT MICHAEL M. MCCARTHY: “There is so much support for entrepreneurs to get started and get growing. We have a strong loyalty to the Centre region. Luckily for me, and so many others, Penn State and State College is one of the most innovative and supportive town and gowns in America — and at the top of the list in the entrepreneurship conversation.”

ACTUATED MEDICAL CEO, CO-FOUNDER AND OWNER MAUREEN L. MULVIHILL:

“The people in central Pennsylvania are hard working individuals; they love coming to work and they love where they live. When you’re happy at home and you’re happy at work, life is good.”

L4IS FOUNDER BENJAMIN HALL: “The school is a tremendous resource for expertise in a wide breadth of fields, and has a population of bright-eyed and motivated students. The business incubator, in conjunction with Ben Franklin Technology Partners, allowed us to develop a basic skill set and understanding of this new startup world, and provided opportunities for getting initial funding to launch.”

“I can’t imagine a scenario where [launching L4IS] could have been possible without these key resources in place; the

MORGAN CHIEF TECHNICAL OFFICER MIKE MURRAY: “For us, the decision to work with Penn State was a natural one. As a world leader in carbon-related research, Penn State has an unrivaled reputation for innovation in this field, which we believe will add real value for our customers. We hope the partnership will help accelerate our development of new products and capabilities, enabling us to continue to meet the future needs of our customers more quickly, efficiently and comprehensively.”



KCF TECHNOLOGIES CEO JEREMY FRANK: “Just a few hours from 20 percent of the country’s manufacturing and industrial infrastructure, a few blocks from campus, and a bike ride away from home, there’s no place else KCF Technologies would rather be.”

KCF TECHNOLOGIES VP OF SALES AND MARKETING BEN LAWRENCE: “The schools are good, the area is beautiful, and you get to enjoy small-town living with the perks of a university town.”

EXPANSION AND OPPORTUNITY AT INNOVATION PARK AT PENN STATE

HOW BUSINESS, EDUCATION AND RESEARCH COMBINE TO GROW LOCAL BUSINESSES

Innovation Park at Penn State is where happy collisions happen. On a typical day it's difficult not to encounter someone or something that can improve your business, your employees or your resume. The park is home to early-stage entrepreneurs and established businesses alike, and makes an impact with on-site resources, a network of mentors and programs and events designed to connect people and businesses both professionally and personally.



Rendering of 310 Innovation Boulevard.

The newest buildings, at 310 and 331 Innovation Boulevard, were recently added and are still leasing space.

- 310 Innovation Boulevard, a brand new flex-building that will be used for research, development, light manufacturing and office space, is the future home of the Carbon Science Center of Excellence and Morgan Advanced Materials. The corporation is a UK-based global leader in engineered carbon and ceramic materials; but there is still room available.
- 331 Innovation Boulevard has limited availability for Class A office and research space, and boasts a gorgeous view of Beaver Stadium on one side and green rolling hills on the other.

The atmosphere in the park promotes idea-sharing, according to tenants.

“The greatest benefit of our location in Innovation Park,” one tenant said, “is the cross-pollination that goes on. We can inspire and help each other, and we do. We get together for lunches and offer one another advice.”

Another component of the park's popularity are perks and benefits that tenants can offer employees.

- Daybridge Child Development Center, one of the top rated childcare facilities in the area, is located in the park—a huge plus for working parents. It is a convenient option for all daycare needs, and caters to children from six-weeks to 12-years old, both full-time and part-time.
- Walking paths circle the park and connect it to campus downtown, offering runners and bikers an opportunity for lunch-hour fitness, or make it a great spot for commuters. CATA bus service also runs every 15 minutes.
- Food trucks make regular stops at Innovation Park, offering unique lunches made from local ingredients.

A highlight for businesses and employees alike is the coolBLUE community, a park-led initiative that plans and manages employee-engagement activities such as book clubs, walking and running groups, unique museum and PSU facilities tours, outdoor picnics and more, all in an effort to create a positive work environment and facilitate connections among park residents. The program is often cited as a top employee retention tool when businesses renew their space in the park.

Businesses love that Innovation Park is home to the Penn State Conference Center Hotel, making it ideal for companies welcoming guests and business travelers, hosting events and conferences, and seeking nearby dining options for meetings and networking.

“Innovation Park has everything we need to continue to grow our business,” according to a long-time tenant. “Our sales team loves that it's near the airport and just off I-99 for easy travel, and our team enjoys taking part in coolBlue activities. It's like working in a neighborhood, not a research park. And I love that I have easy access to resources like Penn State Research and Ben Franklin Technology Partners.”

For more information on leasing space in the park, contact Tom MacDonald at 412-434-1082 or at tmacdonald@ngkf.com.



310 Innovation Boulevard featured an innovative build process called tilt-up construction that allowed for faster completion of the project.

TEACHING TOMORROW'S INNOVATORS

NOW OFFERED TO ALL PENN STATE STUDENTS

The entrepreneurial spirit can strike early, and Penn State is answering the call for programs and resources to support young people with big ideas.

Teaching entrepreneurship in the classroom isn't exactly a new concept at Penn State. In 2002, the university established its Engineering Entrepreneurship minor. Since its inception, the program has graduated more than 500 students from engineering, business, IST and communications disciplines.

In 2013, the ENTI minor was created to expand the entrepreneurship program to all students and incorporate more areas of interest. Offered through the Digital Learning Cooperative, the ENTI minor teaches the foundational skills necessary to start your journey as an entrepreneur, such as innovative thinking, leadership skills and management and planning. Skills mastered through this program benefit not only aspiring entrepreneurs, but students of nearly every area of study.

The program requires three central core courses and three courses specific to a student's area of concentration, which is referred to as a cluster. "Clusters are designed to provide you with the skills to achieve your career goals — whether you aspire to take the technology world by storm, revolutionize information delivery or contribute to improving society one good idea at a time," according to program materials.

Currently, nine clusters are offered: arts, digital entrepreneurship and innovation, entrepreneurship as advocacy, food and bio-innovation, hospitality management, new media, new ventures, social entrepreneurship and technology based entrepreneurship.



Lee Erickson, Chief Amplifier of Happy Valley LaunchBox.

Students enrolled in the ENTI minor also receive benefits beyond the classroom experience. The Happy Valley LaunchBox powered by PNC Bank is collaborating with the ENTI faculty to ensure students are armed with not just the information, but also the practical skills necessary to follow their entrepreneurial pursuits.

“ENTI students are doing more than talking about entrepreneurship: they are practicing the skills that are critical to success”

“One of the things that faculty focus on in the ENTI program is getting students out of the classroom to practice the skills they are learning,” says LaunchBox Chief Amplifier Lee Erickson.

“As such, our collaboration with the ENTI faculty has resulted in the creation of a number of hands-on, interactive activities that require students to jump out of their comfort zone and apply what they are learning ... ENTI students are doing more than talking about entrepreneurship: they are practicing the skills that are critical to success,” she says.

Penn State class of 2016 graduate Dylan Weisman is one of the program's success stories, and he credits his achievements to the ENTI minor. He and four of his peers were accepted into the inaugural program at Penn State Abington during his sophomore year.

“Every moment spent in that program was something that helped me better myself, whether tangibly or intangibly,” he says. “Penn State did the best job of developing my entrepreneurial thinking and advancement by putting me through exercises of real application.”

The availability of local resources like the LaunchBox and the Penn State Small Business Development Center is also driving students to embrace entrepreneurship. According to Erickson, by collaborating with the ENTI faculty, the LaunchBox has been able to increase the number of students taking advantage of its services and programs.

“As a result,” Erickson says, “these students will be better prepared to start their own businesses, or help corporations to identify and enter new markets.”

For more information about the Entrepreneurship and Innovation minor offered at The Penn State University, check out their website at http://enti.psu.edu/arts_entrepreneurship.html

Specific information about each cluster and minor requirements can also be found at <http://bulletins.psu.edu/undergrad/programs/minors/E/ENTIMIN>

For more information about the Happy Valley LaunchBox powered by PNC Bank, visit their website at launchbox.psu.edu.



STARTUP SPOTLIGHT

FLOURISHING WITH AID OF LOCAL STARTUP RESOURCES

Hunter Swisher does not come across as a “plant geek.” Rather, the 23-year old CEO of Phospholutions comes across as poised, engaging and wise beyond his years. His passion for his field, however, shines through immediately.

Hunter founded Phospholutions before he completed his undergraduate studies at Penn State, but his preoccupation with plants stretches back to his high school days. The company’s initial

offering, RhizoSorb™, has already made a splash in the lucrative Ornamental Plants — everything from greenhouses to cannabis production — and Turf Grass — golf courses and athletic fields — spaces. RhizoSorb™ works by soaking up and controlling the release of key plant nutrients over time, allowing roots to stretch deeper into the soil. This offers a cost effective, long-lasting impact on root growth, which in turn results in better quality plants that require fewer chemical applications.

Hunter came across the technology that would become RhizoSorb™ while he was a sophomore in college. He couldn’t understand why the technology, which was developed by one of his professors, had yet to be commercialized given its potential as a powerful, green alternative to standard fertilizers and chemicals. In his “spare” time outside of his 18-credit course load and research, he managed to make a key development in the manufacturing process that allowed him to change the business model and price point on the product. With science and passion behind him, Hunter stood poised to make an impact, but had no idea where to start.

Taking Advantage of Every Resource

Hunter reached out to his advisor about what he should do next and was referred to Harbaugh Entrepreneurship Scholar and Entrepreneurship Coordinator for the College of Agricultural Sciences at Penn State Mark Gagnon. By working with Mark, Hunter came up with a basic business plan, and prepared for the Ag Springboard Competition, a \$7,500 pitch competition in the College of Agriculture at Penn State. Although he didn’t win, it brought him into direct





competition with his current partner—who did win for another idea—Benjamin Nason.

Ag Springboard offered Hunter his first real opportunity to refine and share his idea, and provided him the basis to apply for the Summer Founder's Program at Happy Valley LaunchBox. Participants receive \$10,000 in funding, mentorship, a place to work and networking opportunities. The sole requirement is to stay in State College, Pennsylvania, and focus on their project for the summer. Hunter views being accepted into the program as, "the biggest game changer of [his] life, to this day," as it provided him validation that his idea had the potential to become a viable business.

“Ask for help. My strategy has always been to present your idea to the people around you. Present your idea to that first person and refine it. Present it to the next person and refine it. And then continue to go through that group until all of the sudden, you have a completely different idea that has pivoted quite a bit. And I still go back to the first person and say, ‘well, does this sound better.’”

In addition to participating in the Summer Founders Program, Phospholutions was part of the second cohort of LaunchBox's FastTrack Accelerator. In the Accelerator, Hunter learned everything from business models to running a lean startup, and he fine-tuned his pitch and presented it repeatedly to a wide variety of audiences. He credits the experience with helping him move out of the "technical bubble" so he could refine his value proposition and make key decisions about the business model. For example, instead of manufacturing the product, as he'd initially believed he'd be doing, his experience with LaunchBox helped him alter his approach. Now, rather than managing the manufacturing process, Hunter and Ben instead focus on marketing and education around the company's mission of reducing the environmental impact of fertilizer, as well as developing new technologies, such as a fertilizer generated as a byproduct of pulling nutrients out of polluted waste streams that can be applied in a form that will never re-enter waterways.

After completing the programs offered by LaunchBox, Hunter decided to drop his other pursuits to focus fully on Phospholutions. The next opportunity came from the TechCelerator hosted by Ben Franklin Technology Partners of Central and Northern PA, which Hunter describes as moving from LaunchBox's model of, "you have an idea, let's create a product," to "you have the product, now let's figure out how you're going to commercialize it." Through TechCelerator's 10-week boot camp, he learned about pro formas, fundraising and other advanced business tools and strategies.

Fully embracing every advantage available to him in Central Pennsylvania, Hunter shares that he has utilized resources including the Penn State Small Business Development Center in Innovation Park, PennTAP, which hosted Inc.U pitch competitions that Phospholutions won, and WPSU's "The Investment."

Hunter graduated from both college and the TechCelerator in the fall of 2016. Leveraging these robust regional resources, along with the Penn State network, he proceeded to license his patents in May of 2017, and Phospholutions made its first big sale to Penn State one month later in June 2017.

Less than a year later, Phospholutions has continued to leverage their network and lessons learned at LaunchBox and TechCelerator to achieve \$50,000 in pitch competition winnings, \$100,000 in sales and make a formal partnership with global chemical manufacturer BASF Corporation for manufacturing, order fulfillment, research, co-promotion and support to target the agriculture space with new products and technologies. Phospholutions has also benefited from continued investment and support from Ben Franklin, including HR support, accounting, business consulting and other free business resources, and LaunchBox, which provides space to work, support from the Intellectual Property Clinic out of the Penn State Law School and the Entrepreneurial Law Clinic.

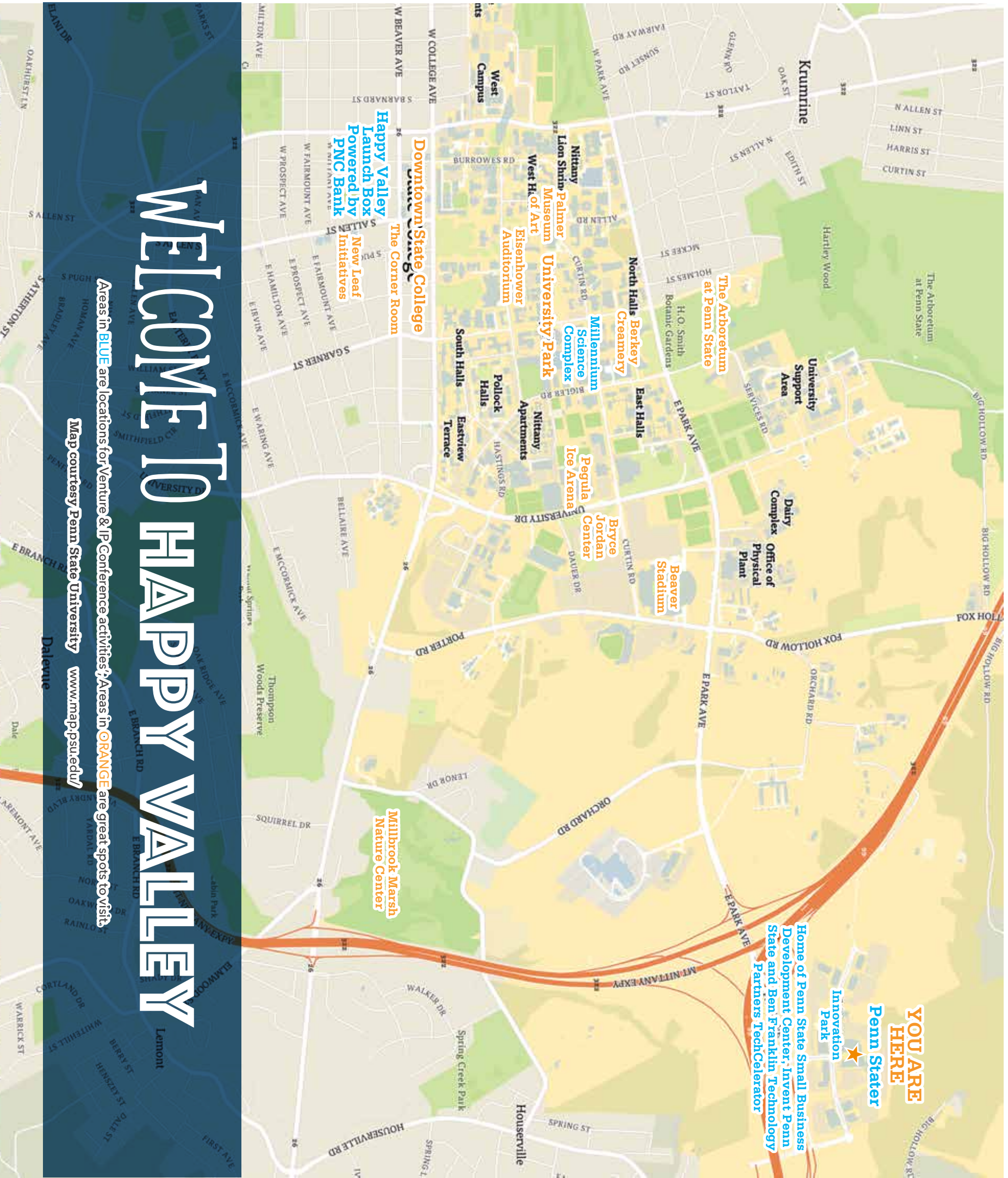
Advice from the Trenches

With an ambitious—and on track—goal of \$1 million in sales for 2018, Phospholutions is poised for success. In spite of these initial achievements, Hunter stays grounded and displays an understanding of lessons that can take many years to learn. He describes the process of adapting his business model as involving many "pivots."

"I call them pivots. You run into a wall, and say, 'Oh, yup, that is definitely not going to work. Well, now what?' So it's going back and figuring out what is going to work. Go back to the drawing board. My first business model was, 'we're going to make the product.' I quickly realized I wasn't equipped to do that. So then I realized, 'I can go buy it from someone who makes it.' Then it was, 'I'm going to sell it myself.' But then I realized there's only one me, and a mature market with relationship-based sales. So, now I sell through established distributors, but why aren't they buying product faster? And we realized we needed to educate those buyers so they want to buy the product. We've continually taken on a problem as it occurs, and we find a solution to it to move forward."

He also advocates for his fellow entrepreneurs to be unafraid of asking questions, unabashedly admitting that he, "doesn't know it all."

"Ask for help," he advises. "It's probably the most useful thing you can do, and you don't really know until you ask. I will ask, and if you want to tell me no, then it's fine. I'll sometimes ask for outrageous things, because I could be shut down, or all of a sudden I could have it happen."



**YOU ARE
HERE**
★
Penn Stater

Home of Penn State Small Business
Development Center, Invent Penn
State and Ben Franklin Technology
Partners TechCelerator

Innovation
Park

The Arboretum
at Penn State

North Hall Berkeley
Creamery

Millennium
Science
Complex

University Park

Eisenhower
Auditorium

Downtown State College
The Corner Room

Happy Valley
Launch Box
Powered by
PNC Bank
New Leaf
Initiatives

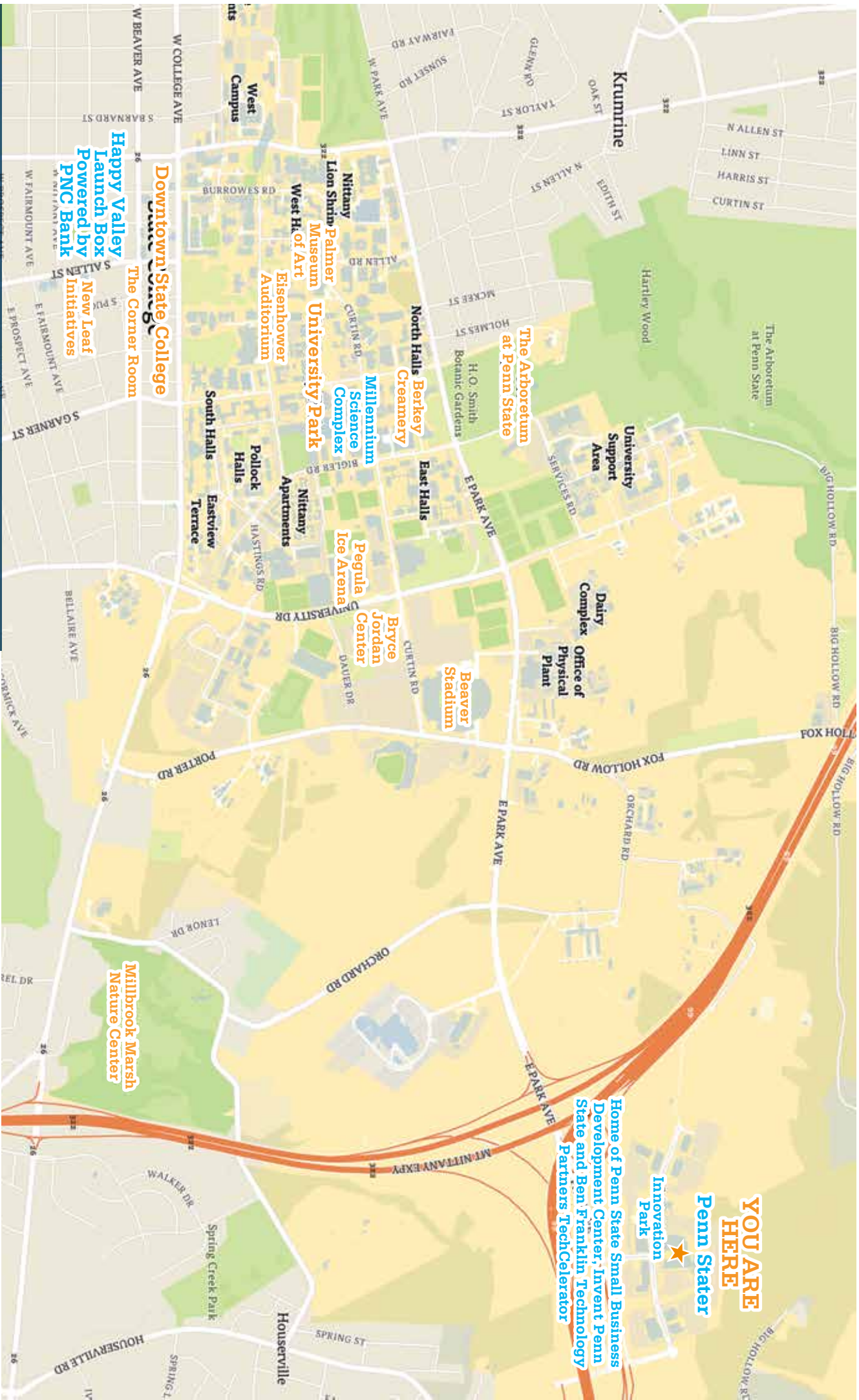
Millbrook Marsh
Nature Center

WELCOME TO HAPPY VALLEY

Areas in **BLUE** are locations for Venture & IP Conference activities; Areas in **ORANGE** are great spots to visit.

Map courtesy Penn State University www.map.psu.edu/

Daleque



**YOU ARE
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Penn Stater



Home of Penn State Small Business
Development Center, Invent Penn
State and Ben Franklin Technology
Partners TechCelerator

WELCOME TO HAPPY VALLEY

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