

PENNOVATION WORKS

Where Ideas Go To Work

YEAR IN REVIEW 2016-2017

PENNOVATION BY THE NUMBERS*

151,000+	# of square feet leased, Works and Center, total
25,000+	# of available square feet for lease, Works and Center, total
64	# of companies in the Works and the Center, total
266	# of people working at the Works and in the Center, total
4,840	# of additional usable square feet added to Pennovation Center in recent build-out, due to popular demand
6,500+	# of attendees at events held at the Pennovation Center in its first year of operation

*as of October 2017

The University of Pennsylvania's community of innovators is bound together by a common goal: serving society through the advancement of knowledge. [Pennovation Works](#) is the place where researchers and students, entrepreneurs, and the private sector thrive together with the benefit of diverse, flexible, and affordable spaces. This creates a dynamic environment where ideas go to work. One year out from the grand opening celebration, marking the official launch of the new [Pennovation Center](#) and completion of the first phase of the 23-acre Pennovation Works site improvements, we take a look back at the advancements made [in the ecosystem this year](#) and a look ahead at what's in the works.

WHAT'S GOING ON AT PENNOVATION?

...ON TOUR

Everyone wants to see what 'Pennovation' is all about: Government leaders, regional urban developers, University departments, and international businesses have requested tours of the Works and the Center.

- March 29, 2017 — [Pennsylvania Governor Tom Wolf](#) hosted a discussion on budget initiatives aimed at job creation, University partnerships, and workforce training.
- May 4, 2017 — Representatives of the [PECO Exelon Group](#) considered launching their own innovation initiative.
- July 17, 2017 – 160 high school seniors participating in the [Leadership in the Business World](#) program used their visit as inspiration for developing their own business ventures.
- September 18, 2017 — [Congressman Charlie Dent](#) (R-PA-15) wanted to learn more about what the state could do to support biotech start-ups.
- September 29, 2017 – Penn students in the [Joseph Wharton Scholars](#) program visited Pennovation to explore the office space, the company mission, opportunities that students may pursue for internships, and recommendations for how students can engage in the startup scene themselves.
- October 6, 2017 — Yusuf Bashir (CEO of KAD ICT Hub) and leaders from [Universities in Nigeria](#) hoped to learn more about the synergy between universities and innovation hubs.

...ON THE WAY UP

Pennovation Works is home to a diverse collection of inventors, researchers, entrepreneurs, and innovators. Ideally, start-ups will grow from a coworking desk, to an Inventor Garage, to a planned lab or office space in the larger Pennovation Works site. Custom environments have been constructed to study biopharmaceutical delivery systems, or test the skills of search-and-rescue dogs.

- Pennovation Center
 - The [Penn Engineering Research & Collaboration Hub](#) (PERCH) occupies the third floor of the Pennovation Center and serves as a testbed for the school's newest robots. Using an indoor flying space with infrared motion capture system, as well as a netted outdoor arena, PERCH faculty and students study and design new ways of getting machines to cooperate. In the last year, PERCH researchers, led by Nemirovsky Family Dean Vijay Kumar, were awarded a \$27M grant from the Army Research Laboratory to develop faster, smarter and more resilient teams of robots.
 - Bio Bots joined the Pennovation Center community in February 2017. The company, founded by two Penn graduates, makes 3D bioprinters that create

human tissue and bone. The desktop-sized, reasonably priced device makes 3D bioprinting accessible to just about any lab. The company has recently expanded its business model and is now known as [Allevi](#).

- In June 2017, [IQinetics](#) took office space in the Center. IQinetics develops advanced motion control systems that allow electric motors to achieve increased power and efficiency, as well as superior position and velocity control. Their success has earned them a place in the HAX Accelerator in China.
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- Pennovation Works
 - Among the first to set up at Pennovation Works, the staff of the [Penn Vet Working Dog Center](#) has used its space to evaluate, train, and care for a growing population of dogs training for careers in law enforcement, search and rescue, medical assistance and research such as cancer detection. On September 11, 2017, the Penn Vet WDC celebrated its [five year anniversary](#).
 - [Qualcomm Research Philadelphia](#) opened at Pennovation Works in summer 2017, with a 10,000 SF facility comprised of high bay ceilings for indoor aerial robotics, robotic engineering labs, and office space. This [new location](#) for Qualcomm rounds out an engagement started in 2015 with the company's acquisition of KMeI, an experimental robotics firm founded by Penn alumni.

...ON THE GROUND

The Pennovation Center is the hub of activity on the 23-acre Pennovation Works site. A master plan envisions a phased approach to development of the site, with initial activity focused on site improvements and renovating existing buildings. Work over the past year results in potential:

- An additional 4,840 sq.ft. inside the Pennovation Center. This "Phase 2" area is comprised of two additional labs and a series of flexible offices. (Open January 2018.)
- Approximately 24,000 sq. ft. in the renovated [Office Building](#). Office and dry lab space here is attracting tenants such as [COSY](#), the artificial intelligence company that has moved up from its original space in a Pennovation Center Inventor Garage.
- Potentially 69,000 sq. ft. in the [Lab Building](#), according to a recently completed feasibility study. A renovation of this building would transform the space in modern wet lab facilities.
- Development Parcels are available for build to suit, with a site Master Plan Total build-out capacity = 1.5M sq.ft.

...ON CENTER STAGE

In the first year of operation, more than 50 programs at the Pennovation Center have attracted 6,500+ attendees. Drawn to Pennovation events have been venture capitalists, women in tech,

and local kids interested in science. Many more have come out for gatherings at Pennovation Works and visited Pennovation representatives at tradeshow.

- January 19, 2017 – The **PACT MedTech** series featured a keynote and panel discussion with Penn scientific and commercialization leaders and the medicine pilot projects initiated by faculty inventors and startups.
- February 16, 2017 – “When Innovation Meets Capital,” a discussion of strategic partnerships with headliners from **Safeguard Scientific, Osage Venture Partners, and COSY**.
- February 25, 2017 – A beginner-friendly collegiate hackathon, **FemmeHacks**, encouraged women in the Philly tech community to build apps and network with companies like Google, Facebook, and Jane Street Capital.
- March 12-15, 2017 – A delegation from Penn and PCI showcased new technology, start-ups, and resources for innovation and entrepreneurship at **SXSW 2017 Interactive Tradeshow** in Austin, TX.
- April 23, 2017 – “Be a Scientist for a Day,” a **Philadelphia Science Festival** program for adults and children with demonstrations, innovation talks, and hands-on activities.
- May 1, 2017 – “Building a Venture-Backed Business,” a fireside chat featuring Josh Kopelman, Partner at **First Round Capital** (presented by **PACT** and the Penn Center for Innovation).
- May 5, 2017 – The Pennovation Center was introduced to Philly’s tech community at large as the site for the **Philly Tech Week #PTW17** Signature event, the social highlight of a week celebrating the Philadelphia tech scene.
- September 8, 2017 – **Pennovation Works 1st Annual Community Concert** welcomed neighbors of all ages to enjoy Zydeco music, New Orleans-style cuisine, and to connect with community resources.
- October 10, 2017 – Eleven of the city’s brightest entrepreneurs pitched to a panel of judges at the 1776 Challenge Cup Philadelphia geared towards disruption in health technology, education technology, artificial intelligence, and robotics.

...ON THE BANDWAGON

Corporate sponsorship at the Pennovation Center allows companies to form relationships with start-ups and innovators in the life sciences, robotics, and emerging technologies. To date, sponsorships have taken the form of direct faculty and student engagement via programs, sponsored research, internships and other direct collaborations as well as donations of lab equipment such as that generously provided by Merck.

- Announced in May 2016, The Hershey Company, a founding corporate sponsor, opened the Digital Innovation Lab at the Center in October 2016. In the subsequent 18 months Hershey’s Digital Innovation Lab has hosted multiple brainstorming sessions with faculty from across the University, sponsored research projects with faculty & students, hosted several Hershey leadership offsite workshops, partnered with the Mack Institute to sponsor courses and research with Wharton & the School of

Engineering students, and hired several summer interns from schools across the University.

- Announced in October 2016, a sponsorship by [Comcast](#) promised to foster entrepreneurial education. In July 2017, the Comcast-Pennovation Challenge provided the opportunity for faculty and student teams to develop new IoT (Internet of Things) solutions for machineQ™, Comcast's enterprise IoT network service and platform focused on making cities smarter. The winner was Viewpoint, a multidisciplinary team of Penn students from the Master of Integrated Product Design program and the School of Design's Historic Preservation department.

...ON THE AGENDA

A bustling neighborhood since the mid-1800s, Grays Ferry is experiencing an upturn in population and business interest as is seen currently in much of Philadelphia. There is support underway for increased or improved housing and transportation in the area.

- The University and the PIDC, Philadelphia's public-private economic development corporation, have partnered with the U.S. Economic Development Administration to provide an EDA Grant to the intersection of 34th and Grays Ferry in an effort to increase productivity, spur innovation, and promote entrepreneurship to help increase long-term regional competitiveness.
- Penn worked closely with the state Department of Environmental Protection (PADEP) to prep the Pennovation Works site for its new use. As part of this effort, PIDC and the EPA jointly invested in the site improvements and enabled the Pennovation Center project to move forward.
- MVM Associates, Inc., of Fort Washington, PA, presented to Pennovation tenants on the topic of securing and managing a variety of grants and tax credits, particularly, Keystone Innovation Zone (KIZ) tax credits.
- The [Office of Penn Home Ownership Services](#) has expanded the boundary of areas of the city of Philadelphia in which Penn Employees might apply for closing cost assistance and funds toward home improvement to include part of the Grays Ferry neighborhood adjacent to the Pennovation Works.
- PennDot and City of Philadelphia Streets Department have installed Pedestrian and Bicycle safety improvements near the I-76 University Avenue exit ramp.
- The University has reached out to SEPTA for discussion on expanded bus service through the neighborhood; anticipated Fall 2018.

...ON THE FRONT PAGE

An abundance of news stories have interpreted the design of the Pennovation Center, studied the site's master plan, interviewed tenants, filmed their inventions, and featured their creative

personalities. Local and national publications, journals on construction and architecture, and film crews interested in both the site and the science have produced pieces on Pennovation.

Oct 6, 2016

Philadelphia Inquirer, Inga Saffron

[Changing Skyline: At Pennovation, UPenn creates a lab for the social media age](#)

December 14, 2016

Fast Company Design

[Office Design Grows Up](#)

December 13, 2016 and December 5, 2017

WCAU NBC10

[Growing Greater Philadelphia](#)

January 23, 2017

Philadelphia Business Journal

[Transformations 2017: Here's what to watch for in Greater Philadelphia](#)

April 25, 2017

Philadelphia Magazine, Fabiola Cineas

[Penn Is the Nation's Sixth Best School for Tech Transfer, Report Finds](#)

May 2017

Breakthrough — National Geographic Channel

["That's One Smart Drone"](#)

October 16, 2017

PIDC Philadelphia video (GreenTreks Network) via Vimeo

[Transforming the Lower Schuylkill: Vision and Investment lay the foundation for business, sustainability, community growth.](#)

October 2017

Reuters.com

[Reuters Top 10: The World's Most Innovative Universities - 2017](#)

...IN A FEW WORDS

The Pennovation Works ecosystem exists to facilitate productivity—translating exciting discoveries into products, ventures, and services for real world application to improve how we live. An investment by Penn aimed at supporting a more dynamic culture of innovation, the future of Pennovation Works is looking better than ever.

For even more about “What’s in the Works,” visit our Pennovation [website](#) to learn about additional educational programs, networking events, industry recognition and news.

Follow *@Pennovation* on Twitter and *@pennovationworks* on Facebook and Linked In.

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