A snapshot of Pittsburgh's technology investment landscape

Trends and highlights, 2012–16
Ernst & Young LLP and Innovation Works, Inc. are pleased to present our fifth annual review of investment trends and highlights for the Pittsburgh region's technology sector. This report reviews the investment activity in our region from 2012 to 2016, analyzes the companies attracting capital and tracks the funding sources that support their growth — including venture capital firms (VCs), angel investors (angels), corporate/strategic investors, seed funds, accelerators, public offerings, and other sources.

2016 was a strong year for Pittsburgh in every investment category. Despite a retraction in venture capital nationally, the Pittsburgh region posted its second best year for investment since 2008. Nationally, venture investment dollars declined by 32.2% and deals declined by 12.4%, while Pittsburgh saw an 8.1% increase in dollars and a 11.4% increase in deals. Additionally, angel investment in the Pittsburgh region increased by 105.3% and corporate investment increased by 183.7%. Total overall investment dollars across all segments (VC, angel, corporate, etc.) was up by 34.6%, from $280 million in 2015 to $376 million in 2016.

There are both positive trends and challenges shaping Pittsburgh's technology investment landscape. Our advantages as a region are helping Pittsburgh pull ahead of similarly sized markets. However, some national trends exacerbate the gulf between a handful of regions and the rest of the country as venture continues to consolidate geographically and move disproportionately toward later-stage, larger deals. We’ve observed several factors impacting local investment levels:

- Pittsburgh is increasingly attracting offices and research centers of major technology firms like Google, Uber, Facebook, Amazon, and others that are strengthening our region’s technology ecosystem.
- Our world-class universities continue to differentiate Pittsburgh with cutting-edge research, talent and a growing focus on commercializing campus innovation.
- The Pittsburgh region demonstrates deep sector diversity with software, robotics, medical devices, biotechnology, health care IT, and energy leading the way. As these sectors continue to attract attention, Pittsburgh is in a good position to capitalize on investment trends.
- Because a majority of the nation’s venture investment is concentrated in a few markets (California, Massachusetts and New York attract more than 70% of the nation’s venture capital investment), regions like Pittsburgh must strive to garner national attention to avoid seeing a smaller share of investment, deals and resident venture capital.
- Our region has seen growth in venture investment and exits, but Pittsburgh needs more companies to achieve significant commercial traction catalyzing larger growth investments and exits/IPOs that stimulate accelerated regional growth.

Both EY and Innovation Works are committed to supporting entrepreneurial growth in the region. Tracking investment activity helps us begin conversations with new investors interested in regional deals, informs local investors about our status versus other communities, and chronicles what’s working and where we need to focus efforts. We hope this report provides you with useful insights into the state of the local technology community and venture capital ecosystem and inspires new ways to move it forward.

Lynette Horrell
Pittsburgh Office Managing Partner, Ernst & Young LLP

Rich Lunak
CEO, Innovation Works, Inc.
Venture capital financing decreased 32.2% nationally, from $77.3 billion invested in 2015 to $52.3 billion in 2016. The number of investment rounds decreased 12.4% from 4,244 in 2015 to 3,718 in 2016. The decrease was driven largely by substantial reduction in later-stage “unicorn” financings amidst a cooling IPO market and negative press surrounding several high-profile late-stage companies.

Pittsburgh area deals attracted $235.1 million in funding from venture capital firms in 2016, bucking the national trend with an 8.1% increase over the $217.4 million invested in 2015. The number of deals led by VCs increased 11.4% from 35 to 39. 2016 also saw an increase in the number of large investment rounds, with seven companies raising at least $15 million compared to only two in 2015.
The $376.2 million of funding raised by Pittsburgh companies in 2016 is a 34.6% increase from the $279.6 million reported in 2015. Investments from venture capital firms saw a slight increase, while the amount of investment from both angels and corporate investors more than doubled from 2015 to 2016. Investment from seed funds and accelerators was also up slightly.

188 funding rounds were reported in 2016, a slight uptick over the 179 rounds reported in 2015. In 2016, 152 unique companies received funding compared to 146 in 2015. For the first time in six years, angel investors accounted for the majority of funding rounds, a position typically occupied by seed funds and accelerators.
Companies representing a broad assortment of technology sectors are thriving in Pittsburgh. From 2012 to 2016, 318 unique companies attracted funding totaling roughly $1.7 billion. Software companies (consumer and enterprise) represented 40.3% of the companies, life science companies (biotech, medical device, health care IT and health care services) represented 23.0% and hardware (robotics and electronics) represented 14.8%.

Source: Dow Jones VentureSource, Innovation Works, Pitchbook, and Thomson Reuters Thomson OneDatabase
The local supply of venture capital funding still growing

The chart below estimates the annual supply of uncommitted funds at venture capital firms in the Pittsburgh region. This analysis considers the timing of new fund closings and assumes that a firm will commit 25% of a new fund’s capital during each of the first four years post-closing. If a fund is managed by partners who are located outside of the Pittsburgh region, the amount of the fund’s capital that is “located” in Pittsburgh is determined by multiplying by the percentage of the fund’s partners who are located in the region.

The estimated supply of local venture capital funds increased for a fifth straight year, reaching a **14-year high of $140.8 million**. Several mainstays of the Pittsburgh VC community closed on additional funding in 2016 along with first closings on inaugural funds from The Robotics Hub, Ridgetop Health and Velocity Fund.

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimate of uncommitted capital at Pittsburgh-based VC firms ($ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>$120.5</td>
</tr>
<tr>
<td>2008</td>
<td>$81.1</td>
</tr>
<tr>
<td>2009</td>
<td>$48.3</td>
</tr>
<tr>
<td>2010</td>
<td>$18.0</td>
</tr>
<tr>
<td>2011</td>
<td>$7.1</td>
</tr>
<tr>
<td>2012</td>
<td>$29.3</td>
</tr>
<tr>
<td>2013</td>
<td>$65.9</td>
</tr>
<tr>
<td>2014</td>
<td>$88.2</td>
</tr>
<tr>
<td>2015</td>
<td>$126.6</td>
</tr>
<tr>
<td>2016</td>
<td>$140.8</td>
</tr>
</tbody>
</table>

Source: Innovation Works and Pittsburgh VCs
Proceeds from US venture capital-backed M&A deal values totaled $82.4 billion in 2016, a 41.8% increase over the $58.1 billion reported in 2015.

51 Pittsburgh companies exited in the past five years with total proceeds of over $7.4 billion. 54.9% of the companies were software companies and yielded 67.7% of the disclosed proceeds. 25.5% of the companies were life science companies – including health care IT – and accounted for 24.6% of the proceeds. The remainder were hardware, robotics and other technology sectors.

Ten Pittsburgh companies were acquired in 2016 with total disclosed values exceeding $275 million. Several of the reported deals have potential to generate significant additional proceeds based on achieving certain milestones. The companies acquired represented an assortment of technology sectors including B2B software, medical devices, industrial IoT and drug development.

### Period 2012-2016:

**51 companies**

$7.4 billion

Total value (disclosed and undisclosed)

### Representative deals

<table>
<thead>
<tr>
<th>The ExOne Company</th>
<th>Millennium Pharmacy Systems</th>
<th>iGate acquired by Capgemini</th>
<th>GiftCards.com acquired by Blackhawk Network</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tr>
</tbody>
</table>

March 2017
Firms making recent investments in Pittsburgh companies (2012-2016)

**Pittsburgh region**
- Adams Capital Management
- AGSM
- Birchmere Ventures
- Blue Tree Allied Angels
- BlueTree Venture Fund
- Bradford Capital Partners
- Draper Triangle Ventures
- Eagle Ventures
- Idea Foundry
- iNetworks
- Innovation Works, Inc.
- Meakem Becker Venture Capital
- Newlin Investment Company
- Pittsburgh Equity Partners
- Pittsburgh Life Sciences Greenhouse
- PLSG Accelerator Fund
- Riverfront Ventures
- Smithfield Trust
- Startbot
- The Robotics Hub

**California and Western region**
- Accel Partners
- A-Grade Investments
- ARCH Venture Partners
- Breakout Labs
- Bright Capital
- Camp One Ventures
- Correlation Ventures
- CrunchFund
- CureDuchenne Ventures
- ePlanet Capital
- Floodgate
- Foundation Capital
- Gentry Venture Partners
- Google Capital
- Harrison Metal Capital
- Health Evolution Partners
- Horizon Technology Finance
- InCube Ventures
- Indie.VC
- Kern Whelan Capital
- Kleiner Perkins Caufield & Byers
- Lightspeed Venture Partners
- Menlo Ventures
- Montage Ventures
- Norwest Venture Partners
- Pacific Venture Group
- Partech Ventures
- Prescient Capital
- Qualcomm Ventures
- Rincon Venture Partners
- Riverwood Capital Group
- Sand Hill Angels Inc.
- Silverton Partners
- SJF Ventures
- Space Angels Network
- Tech Coast Angels
- Tenaya Capital Inc.
- Trident Capital
- Western Digital Capital
- Y Combinator
New England region
- Advanced Technology Ventures
- Bain Capital Ventures
- Castanea Partners
- Four Winds Capital Management
- GE Ventures
- Harborlight Capital
- L Catterton
- LearnLaunch Accelerator
- Nexus Medical Partners
- Saturn Partners
- Volition Capital

New York region
- Blue Cloud Ventures
- CIT Group
- Eastern Advisors Capital Group
- Enhanced Capital Partners
- ff Venture Capital
- Golden Seeds
- Great Oaks Venture Capital
- Insight Venture Partners
- KKR
- Level Equity
- New York Angels
- Prospect Capital Corporation
- Radius Ventures
- Red Swan Ventures
- Scout Ventures
- TechStars
- Two Sigma Ventures
- Union Square Ventures

Philadelphia region
- Comcast Ventures
- Commerce Health Ventures
- Dreamit Health
- First Round Capital
- Novitas Capital
- Originate Ventures
- Osage Partners

Baltimore/Washington, DC region
- ABS Capital
- Constellation Technology Ventures
- New Atlantic Ventures
- New Enterprise Associates
- Oxford Finance Corporation
- Revolution Ventures
- Updata Partners
- Vital Venture Capital

Firms making recent investments in Pittsburgh companies (2012–2016)
In a comparison of venture investments in the 40 largest Metropolitan Statistical Areas in the United States in 2016, Pittsburgh, which ranked 26th in population, ranked 17th in venture capital investment dollars per capita and 5th in deals per million residents, behind only Silicon Valley (San Jose and San Francisco), Austin and Boston.

### Dollars invested per capita - 2016 ($millions)

<table>
<thead>
<tr>
<th>City</th>
<th>Dollars Invested Per Capita (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Francisco-Oakland-Hayward, CA</td>
<td>$3,980.0</td>
</tr>
<tr>
<td>San Jose-Sunnyvale-Santa Clara, CA</td>
<td>$1,913.0</td>
</tr>
<tr>
<td>Boston-Cambridge-Newton, MA-NH</td>
<td>$1,160.8</td>
</tr>
<tr>
<td>San Diego-Carlsbad, CA</td>
<td>$339.4</td>
</tr>
<tr>
<td>Austin-Round Rock, TX</td>
<td>$315.3</td>
</tr>
<tr>
<td>New York-Newark-Jersey City, NY-NJ-PA</td>
<td>$311.3</td>
</tr>
<tr>
<td>Los Angeles-Long Beach-Anaheim, CA</td>
<td>$302.0</td>
</tr>
<tr>
<td>Seattle-Tacoma-Bellevue, WA</td>
<td>$252.1</td>
</tr>
<tr>
<td>Washington-Arlington-Alexandria, DC-VA-MD-WV</td>
<td>$204.4</td>
</tr>
<tr>
<td>Miami-Fort Lauderdale-West Palm Beach, FL</td>
<td>$165.5</td>
</tr>
<tr>
<td>Houston-The Woodlands-Sugar Land, TX</td>
<td>$120.7</td>
</tr>
<tr>
<td>Portland-Vancouver-Hillsboro, OR-WA</td>
<td>$107.6</td>
</tr>
<tr>
<td>Denver-Aurora-Lakewood, CO</td>
<td>$107.1</td>
</tr>
<tr>
<td>Philadelphia-Camden-Wilmington, PA-NJ-DE-MD</td>
<td>$102.5</td>
</tr>
<tr>
<td>Minneapolis-St. Paul-Bloomington, MN-WI</td>
<td>$100.1</td>
</tr>
<tr>
<td>Chicago-Naperville-Elgin, IL-IN-WI</td>
<td>$91.7</td>
</tr>
<tr>
<td>Nashville-Davidson-Murfreesboro-Franklin, TN</td>
<td>$83.3</td>
</tr>
<tr>
<td>Cincinnati, OH-KY-IN</td>
<td>$73.2</td>
</tr>
<tr>
<td>St. Louis, MO-IL</td>
<td>$63.2</td>
</tr>
<tr>
<td>Cleveland-Elyria, OH</td>
<td>$61.9</td>
</tr>
<tr>
<td>Atlanta-Sandy Springs-Roswell, GA</td>
<td>$59.9</td>
</tr>
<tr>
<td>Baltimore-Columbia-Towson, MD</td>
<td>$54.9</td>
</tr>
<tr>
<td>Milwaukee-Waukesha-West Allis, WI</td>
<td>$45.3</td>
</tr>
<tr>
<td>Columbus, OH</td>
<td>$35.0</td>
</tr>
<tr>
<td>Indianapolis-Carmel-Anderson, IN</td>
<td>$34.2</td>
</tr>
<tr>
<td>Phoenix-Mesa-Scottsdale, AZ</td>
<td>$30.8</td>
</tr>
<tr>
<td>Dallas-Fort Worth-Arlington, TX</td>
<td>$29.5</td>
</tr>
<tr>
<td>Tampa-St. Petersburg-Clearwater, FL</td>
<td>$26.2</td>
</tr>
<tr>
<td>Charlotte-Concord-Gastonia, NC-SC</td>
<td>$24.8</td>
</tr>
<tr>
<td>Detroit-Warren-Dearborn, MI</td>
<td>$24.5</td>
</tr>
<tr>
<td>Kansas City, MO-KS</td>
<td>$23.8</td>
</tr>
<tr>
<td>Sacramento--Roseville--Arden-Arcade, CA</td>
<td>$22.5</td>
</tr>
<tr>
<td>San Antonio-New Braunfels, TX</td>
<td>$19.6</td>
</tr>
<tr>
<td>Orlando-Kissimmee-Sanford, FL</td>
<td>$17.6</td>
</tr>
<tr>
<td>Providence-Warwick, RI-MA</td>
<td>$12.7</td>
</tr>
<tr>
<td>Jacksonville, FL</td>
<td>$10.1</td>
</tr>
<tr>
<td>Las Vegas-Henderson-Paradise, NV</td>
<td>$2.9</td>
</tr>
<tr>
<td>Virginia Beach-Norfolk-Newport News, VA-NC</td>
<td>$0.0</td>
</tr>
<tr>
<td>Riverside-San Bernardino-Ontario, CA</td>
<td>$0.0</td>
</tr>
</tbody>
</table>

Source: Thomson Reuters ThomsonOne Database and US Census
Number of venture rounds per million residents - 2016

San Francisco-Oakland-Hayward, CA  197.8
San Jose-Sunnyvale-Santa Clara, CA  178.1
Boston-Cambridge-Newton, MA-NH  89.4
Austin-Round Rock, TX  59.0
Pittsburgh, PA  40.8
San Diego-Carlsbad, CA  34.2
Seattle-Tacoma-Bellevue, WA  27.3
New York-Newark-Jersey City, NY-NJ-PA  24.5
Los Angeles-Long Beach-Anaheim, CA  23.3
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD  22.9
Washington-Arlington-Alexandria, DC-VA-MD-WV  21.0
Denver-Aurora-Lakewood, CO  20.6
Portland-Vancouver-Hillsboro, OR-WA  20.5
Cincinnati, OH-KY-IN  17.6
Columbus, OH  16.8
St. Louis, MO-IL  16.4
Baltimore-Columbia-Towson, MD  15.7
Nashville-Davidson--Murfreesboro--Franklin, TN  15.3
Cleveland-Elyria, OH  13.1
Indianapolis-Carmel-Anderson, IN  12.1
Minneapolis-St. Paul-Bloomington, MN-WI  11.3
Atlanta-Sandy Springs-Roswell, GA  11.2
Chicago-Naperville-Elgin, IL-IN-WI  10.7
Providence-Warwick, RI-MA  10.5
Charlotte-Concord-Gastonia, NC-SC  7.4
Phoenix-Mesa-Scottsdale, AZ  7.2
Orlando-Kissimmee-Sanford, FL  6.7
Miami-Fort Lauderdale-West Palm Beach, FL  6.5
Dallas-Fort Worth-Arlington, TX  6.3
Kansas City, MO-KS  6.2
Houston-The Woodlands-Sugar Land, TX  5.3
Sacramento--Roseville--Arden-Arcade, CA  4.0
Milwaukee-Waukesha-West Allis, WI  3.8
Tampa-St. Petersburg-Clearwater, FL  3.7
Detroit-Warren-Dearborn, MI  3.5
Jacksonville, FL  3.4
Las Vegas-Henderson-Paradise, NV  3.3
San Antonio-New Braunfels, TX  2.5
Virginia Beach-Norfolk-Newport News, VA-NC  0.6
Riverside-San Bernardino-Ontario, CA  0.0

Source: Thomson Reuters ThomsonOne Database and US Census

March 2017
The number of new patents issued is at the highest level in at least 10 years. The number of licenses, options and other agreements also reached an eight-year high while the number of new spinout companies compared favorably to prior years.

The universities continue to provide valuable resources to students and other local entrepreneurs and attract research dollars to the region. Carnegie Mellon recently announced the receipt of a $250 million award to build an Advanced Robotics Manufacturing Institute, and UPMC, the University of Pittsburgh and Carnegie Mellon University announced a major collaboration in the Pittsburgh Health Data Alliance.

Pittsburgh’s major research universities, including Carnegie Mellon University, the University of Pittsburgh and Duquesne University, are major catalysts for innovation. The University of Pittsburgh consistently ranks among the top universities for National Institutes of Health funding and Carnegie Mellon University ranked as the top computer science graduate school in the latest U.S. News and World Report rankings.
Growth in Pittsburgh’s technology economy took many forms in 2016: direct investment, company acquisitions, expansion of operations from some of the world’s biggest names in tech, and new campus initiatives to further increase commercialization and entrepreneurship. In quotes, press releases and news articles, here’s a snapshot of the region’s progress from some of the people making deals happen or reporting on them.

“We’re very excited that over the last decade Pittsburgh’s tech scene has gotten stronger and stronger and has attracted a broader variety of companies of all sizes. Having a strong tech ecosystem here in Pittsburgh is excellent for the city and it’s great for Google.”

Kamal Nigam
Engineering Director, Google Pittsburgh

Vibrant tech scene vital for Google in Pittsburgh | Alex Nixon | Tribune Review Monday | June 13, 2016

“I think what’s great about Pittsburgh frankly is that talent base, ranking it among four or five best cities in the world with the capabilities in robotics and artificial intelligence.”

David Richter
VP, Strategic Initiatives, Uber

Uber expects to see more growth in Pittsburgh | Tim Schooley | Pittsburgh Business Times | January 31, 2017

Pittsburgh has always been an epicenter for innovation, with an incredible workforce possessing the talent, grit and determination to take an idea and turn it into reality.

Bryan Salesky
CEO, Argo AI

Argo AI blog post | February 23, 2017

“Amazon was drawn to Pittsburgh because (of) the remarkable technical talent and the strong community ... We love being here and are excited to continue to grow in the city.”

Bill Kaper
General Manager - Translation Services Platform, Amazon

Amazon opens Pittsburgh office to tap local talent | Tim Schooley | Pittsburgh Business Times | January 17, 2017
“It’s easy to see why Pittsburgh ranks as one of Forbes’ smartest cities in the country. The city has consistently proven to be a great partner for Bosch, Bosch is investing here because we see Pittsburgh as having a bright future.”

Mike Mansuetti
President, Robert Bosch LLC

Bosch Hosts Opening Ceremony for Technical Center in Pittsburgh | Press release | Bosch | June 13, 2016

“We think Pittsburgh has the chance to be one of the four or five destinations for advanced manufacturing.”

Jeff Immelt
Chief Executive Officer, GE

Pittsburgh: GE Celebrates Grand Opening of $40 Million Center for Additive Technology Advancement | Bridget Butler Millsaps | 3DPrint.com | April 7, 2016

Facebook is about to open a facility dedicated to Oculus virtual reality research in Pittsburgh ... Why Steeltown, you might ask? Facebook, which purchased Oculus in 2014, is attracted by the large pool of research talent coming out of Carnegie Mellon University and other local schools.

Facebook is opening an Oculus research office in Pittsburgh | Steve Dent | Engadget | January 20, 2016

Today other Rust Belt cities like Detroit, Buffalo and Cleveland have attempted to replicate Pittsburgh’s success in transforming their struggling 20th-century economies into 21st-century successes. But none so far appear to have been as successful.

Uber got this right — Pittsburgh is America’s city of the future. The Steel City is more than the country’s next great innovation hub – it’s a model for the Rust Belt’s revival | Angelo Young | Salon | August 19, 2016

“Pittsburgh is an emerging market for life sciences. We have the expertise here.”

Alethea Wieland
President and CEO of Scope International USA Inc.
The following were among the Pittsburgh companies completing significant funding rounds in 2016:

360fly Inc.
360fly designs and creates 360° cameras and technology that inspire people to capture, share and experience their lives in immersive, interactive 360° video. Their passion and unrelenting pursuit of innovation have led the team to redefine what is possible in video, virtual reality and visual storytelling.
www.360fly.com
CEO: Ed Kremer
Investors: Hydra Ventures, L Catterton, MAG Ventures, Qualcomm Ventures, VOXX International

4moms
4moms is dedicated to making dramatically better baby products that make life easier for parents.
www.4moms.com
CEO: Rob Daley
Investors: Bain Capital Ventures, BlueTree Allied Angels, Castanea Partners, Innovation Works, Mousse Partners, Private Investors

Acrobatiq Inc.
Acrobatiq harnesses learning and data science in a cloud-hosted platform to enable postsecondary institutions to create highly personalized learning experiences that improve student course completion rates and keep them on track to graduation.
www.acrobatiq.com
CEO: Eric Frank
Investors: Bill & Melinda Gates Foundation, Carnegie Innovations, Draper Triangle Ventures, Hearst Ventures

ALung Technologies, Inc.
ALung Technologies is a leading developer of advanced medical devices for treating respiratory failure.
www.alung.com
CEO: Pete DeComo
Investors: Allos Ventures, Audrey's Kitchen, Birchmere Ventures, BlueTree Allied Angels, BlueTree Venture Fund, Fifth Third Bank, Innovation Works, Pittsburgh Life Sciences Greenhouse, PLSG Accelerator Fund, Riverfront Ventures, West Capital Advisors

Aquion Energy Inc.
Aquion is changing the energy storage paradigm by manufacturing high-performance batteries that are clean, safe and sustainable.
www.aquion-energy.com
CEO: Scott Pearson

Astrobotic Technologies
Astrobotic Technologies is pioneering affordable planetary access that promises to spark a new era of exploration, science, tourism, resource utilization, and mining.
www.astrobotic.com
CEO: John Thornton
Investors: Carnegie Mellon University, Innovation Works, Space Angels Network

Bossa Nova Concepts
Bossa Nova develops autonomous robots that re-invent retail operations by capturing store data that helps store staff work smarter.
www.bnrobotics.com
CEO: Martin Hitch
Investors: Walden International, WRV Capital, Private Investors

Cereve Inc.
Cereve developed a clinically-proven medical device that is FDA-cleared for the treatment of insomnia and is safe and effective for use every night – without the side effects of sleeping pills.
www.cerevesleep.com
CEO: Craig Reynolds
Investors: Arboratum Ventures, KKR, Partner Ventures, Versant Ventures

Cognition Therapeutics
Cognition Therapeutics is a clinical stage drug discovery company developing new therapeutics to treat patients suffering from Alzheimer’s disease and other neurodegenerative disorders.
www.cogrx.com
CEO: Kenneth I. Moch

2016 Pittsburgh investment highlights

March 2017
2016 Pittsburgh investment highlights

Complexa
Complexa is a biopharmaceutical company that develops therapies for the treatment of inflammatory and fibrosis-related orphan diseases.

www.complexarx.com
CEO: Josh Tarnoff
Investors: BlueTree Allied Angels, Innovation Works, JAFCO, Mid-Atlantic Angel Group, Pittsburgh Life Sciences Greenhouse, Riverfront Ventures, Scientific Health Development, Upstart, Private Investors

ContainerShip
ContainerShip is a container hosting platform that provides software companies and developers with simple end-to-end automation of application deployments and scalability in any cloud provider or data center.

www.containership.io
CEO: Phil Dougherty
Investors: Birchmere Ventures, Draper Triangle Ventures, Innovation Works, Riverfront Ventures

Encentiv Energy
Encentiv Energy provides an industry leading sales enablement platform that seamlessly integrates thousands of rebate and financing options into the workflow of energy efficiency providers - helping them close more deals and maximize energy savings.

www.encentivenergy.com
CEO: Steve Moritz
Investors: Birchmere Ventures, Innovation Works, Pittsburgh Equity Partners

Guilty Soles
GuiltySoles is a factory-direct, fashion shoe e-tailer in an age run by and for millennials. The relationship they have with their factory enables them to be in control - giving them the leading edge on up-and-coming trends, faster production time, and higher quality at lower prices. Most importantly, they're social first. They connect with their customers directly and authentically so they can get the customer the shoes they want faster than anyone else.

www.guiltysoles.com
CEO: Tommy Wang
Investors: Private Investors

HEBI Robotics
HEBI Robotics creates Lego-like robotic building blocks that can be used to quickly build and deploy custom collaborative robots.

www.hebirobotics.com
CEO: Howie Choset
Investors: Private Investors

Innovu
Innovu is a data analytics company that empowers clients to use total rewards and risk data differently to manage and mitigate business and employee population risk. Innovu’s solution is to integrate all data sources into a single, secure, cloud-based, 360-degree view of each client’s employee population, providing in-depth actionable insights.

www.innovu.com
CEO: Patrick Stewart
Investors: Joel Adams, Jim O’Neill, Pat Stewart, Private Investors

Knopp Biosciences
Knopp Biosciences is a privately held drug discovery and development company focused on delivering breakthrough treatments for inflammatory and neurological diseases of high unmet need in clearly defined patient populations.

www.knoppbio.com
CEO: Michael Bozik
Investors: Innovation Works, Kramer Capital, LaunchCyte, Saturn Management

kWantera
kWantera’s AI-powered intelligence platform helps their customers make smarter decisions with their electricity usage, consumption, and generation.

www.kwantera.com
CEO: Kyle O’Connor
Investors: AGSM, GE Ventures, Innovation Works, TEDCO, Private Investors

LegalSifter Inc.
Dedicated to making legal support affordable by empowering the world with artificial intelligence, LegalSifter makes simple products that help people negotiate and manage contracts faster.

www.legalsifter.com
CEO: Kevin Miller
Investors: Birchmere Ventures, Carnegie Mellon University, Private Investors

ContainerShip

www.containership.io

CEO: Phil Dougherty

Investors: Birchmere Ventures, Draper Triangle Ventures, Innovation Works, Riverfront Ventures

Encentiv Energy

www.encentivenergy.com

CEO: Steve Moritz

Investors: Birchmere Ventures, Innovation Works, Pittsburgh Equity Partners

Guilty Soles

www.guiltysoles.com

CEO: Tommy Wang

Investors: Private Investors

HEBI Robotics

www.hebirobotics.com

CEO: Howie Choset

Investors: Private Investors

Innovu

www.innovu.com

CEO: Patrick Stewart

Investors: Joel Adams, Jim O’Neill, Pat Stewart, Private Investors

Knopp Biosciences

www.knoppbio.com

CEO: Michael Bozik

Investors: Innovation Works, Kramer Capital, LaunchCyte, Saturn Management

kWantera

www.kwantera.com

CEO: Kyle O’Connor

Investors: AGSM, GE Ventures, Innovation Works, TEDCO, Private Investors

LegalSifter Inc.

www.legalsifter.com

CEO: Kevin Miller

Investors: Birchmere Ventures, Carnegie Mellon University, Private Investors
**Liquid X Printed Metals Inc.**

Liquid X Printed Metals is an advanced material manufacturer of functional metallic inks that takes an application from prototype to production.

www.liquid-x.com

CEO: Greg Babe

Investors: Innovation Works, Matthews International, Newlin Investment Company

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**NoWait**

NoWait is the first mobile network for casual-dining restaurants.

www.nowait.com

CEO: Ware Sykes

Investors: AlphaLab, Birchmere Ventures, Drive Capital, Innovation Works, Riverfront Ventures, Yelp

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**Panopto Inc.**

Panopto is the video platform for businesses and universities. Panopto is the easiest way to manage, live stream, record and share videos across your organization.

www.panopto.com

CEO: Eric Burns

Investors: Mountain Group Partners, Saturn Partners, Sterling Partners

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**PennAlt Organics, Inc.**

PennAlt Organics is focused in the area of providing extracted naturally occurring plant molecules for the treatment of complex medical disorders.

CEO: Ron Zorn

Investors: The iNetworks Opportunity Fund

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**Rinovum Women’s Health**

Rinovum Women’s Health, LLC is dedicated to bringing products into the market that will enhance women’s lives and empower them to take charge of their health. The company is the market leader in OTC Assisted Reproduction Technology, and expanding into other Women’s Health Solutions.

www.rinovum.com

CEO: Steve Bollinger

Investors: BlueTree Allied Angels, Innovation Works, Pittsburgh Life Sciences Greenhouse, PLSG Accelerator Fund, Thirteen Ventures, Private Investors

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**Seegrid**

Seegrid, the pioneer and leader in autonomous vision navigation, provides vision-guided vehicles for materials handling.

www.seegrid.com

CEO: Jim Rock

Investors: Giant Eagle Corporation, Innovation Works, Private Investors

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**Thar Pharmaceuticals**

Thar Pharmaceuticals, Inc. is a clinical-stage, specialty pharmaceutical company with its lead product, T121, initiating Phase 3 clinical trials in complex regional pain syndrome, an orphan disease with no approved drug therapies. Thar was acquired by Grunenthal GmbH in October 2016.

www.tharpharma.com

CEO: Raymond K. Houck

Investors: Innovation Works, Private Investors
Methodology

The data in this report comes from a combination of the Dow Jones VentureSource, Pitchbook and ThomsonOne databases; private company data collected by Innovation Works, Inc.; and information reported by Carnegie Mellon University, Duquesne University and the University of Pittsburgh. The investment rounds tracked in these datasets were completed by companies in the Pittsburgh region from January 1, 2012 to December 31, 2016. Note that changes may occur in this report from year-to-year due to updates in third-party databases and adjustments made to best reflect the timing of investment for rounds that have “rolling closes.” For the purpose of this report, both equity investments and convertible note investments were counted as “venture” investments. The geographic boundary of the Pittsburgh region used in this report corresponds to the Pittsburgh Metropolitan Statistical Area, as utilized by the U.S. Census Bureau. Throughout this report, the terms “deal” and “round” are used interchangeably, and refer to a single reported round of funding. Companies may complete more than one fundraising round in a single year, in which case each round is counted as a separate “deal.”

About EY

EY is a leader in helping to take companies public worldwide. With decades of experience, our global network is dedicated to serving market leaders and helping businesses evaluate the pros and cons of an IPO. We demystify the process by offering IPO readiness assessments, IPO preparation, project management and execution services, all of which help prepare you for life in the public spotlight. Our Global IPO Center of Excellence is a virtual hub which provides access to our IPO knowledge, tools, thought leadership and contacts from around the world in one easy-to-use source.

www.ey.com/ipocenter

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www.ey.com/sgm

About Innovation Works

Innovation Works, Inc. (IW) invests capital, business expertise and other resources into high-potential companies with the greatest likelihood for economic impact in the Pittsburgh region. IW is the single largest investor in seed-stage companies in this region and is one of the most active seed-stage investors in the United States. In addition to the seed fund, Innovation Works, Inc. has two nationally ranked accelerators: Alphalab and Alphalab Gear. IW also manages Riverfront Ventures, LLC, an early-stage venture capital fund. Innovation Works, Inc. is an initiative of the PA Department of Community and Economic Development and is partially funded by the Ben Franklin Technology Development Authority.

For more information, please visit

www.innovationworks.org
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