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2017

PHILADELPHIA VENTURE REPORT



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Release Date: 11/2/2017

Data as of: 9/30/2017

Note: This report covers the Philadelphia-Camden-Wilmington Metropolitan Statistical Area (Philadelphia), which includes parts of Pennsylvania, New Jersey, Delaware and Maryland. All data and charts cited throughout the report are based on companies and/or investors headquartered in this region.

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The PitchBook Platform

The data in this report comes from the PitchBook Platform—our data software for VC, PE and M&A. Contact sales@pitchbook.com to request a free trial.

INTRODUCTION

Philadelphia is thriving in many ways—from our millennial population growth to our increased college graduate retention rates, the future is bright as the next generation increasingly calls Philadelphia home and looks to build an inclusive, innovation-focused community of thinkers, designers and builders. Investment capital will be critical, and on that front Philadelphia has seen a positive trajectory over the past ten years. While 2017 data shows a decrease in activity, the fall-off has been consistent across the nation. We remain full of hope in a continued path toward growth in Philadelphia, including more capital at all stages investing in an increasingly diverse entrepreneurial base. Please join me in thanking our sponsors of this report. PACT looks forward to working with them and all of you to elevate Philadelphia!

Dean Miller, President & CEO 

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Recent growth hits setback in 2017

Overview of VC activity in Philadelphia MSA

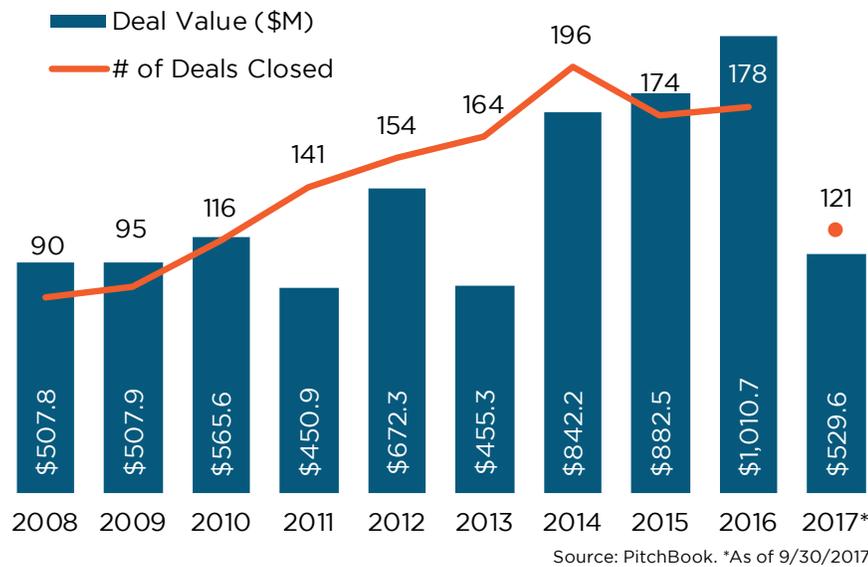
Historically, the economic background of the Philadelphia metropolitan statistical area (MSA) is rooted in industries that until recently hadn't been traditional venture capital targets. Manufacturing and traditional healthcare have long been major parts of the area—roughly 500 medical institutions are located throughout

greater Philadelphia. The growth of tech within the region—which the Chamber of Commerce of Greater Philadelphia estimates at 4.4% annually since the turn of the century—as well as their increasing focus on innovation into tech-enabled arenas, has provided investors with a diverse market of opportunities.

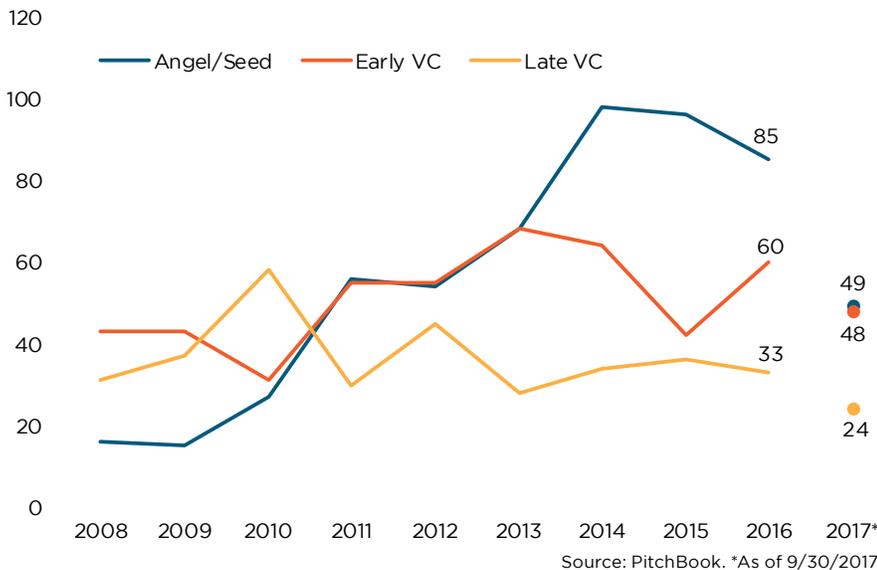
VC activity in the Philadelphia region has grown rapidly over the past decade, cementing itself as a top-20 market in the US in terms of both the overall volume and value. Last year more than \$1 billion was invested throughout the MSA—ranking the region just outside the top 10 in dollars invested—representing the highest figure the MSA has achieved over the past decade. While it was bolstered by several outsized deals, those late-stage fundings are predicated on the overall growth and maturation of the domestic VC ecosystem, from the earliest stages on. The industrial makeup of the economy also presents an opportunity for the VC ecosystem to continue its growth moving forward, especially as manufacturing moves toward automation and the region's healthcare sector continues to develop into one of the more innovative markets in the US.

Since 2008, both yearly deal counts and values have grown in almost lock step. Each figure had nearly doubled through 2016, even when considering that deal count in 2016 was lower than 2014's total. Similar to what we have seen across the US VC market, a high proportion of the growth in volume can be traced to an increasing number of angel and seed rounds. The proximity of Philadelphia to several universities also leads to an influx of talent entering the entrepreneurial ecosystem that can manifest in a greater population of fledgling startups. The University of Pennsylvania, for example, has ranked near the top of universities producing startup founders over the past decade, graduating almost 800 founders since 2006—Drexel University, Temple University and Villanova University have together graduated an additional 225 founders. Though many of those companies are launched outside of Philadelphia, the MSA as a whole certainly benefits from the high density of colleges and universities.

VC activity in Philadelphia MSA



VC activity in Philadelphia MSA (#) by stage

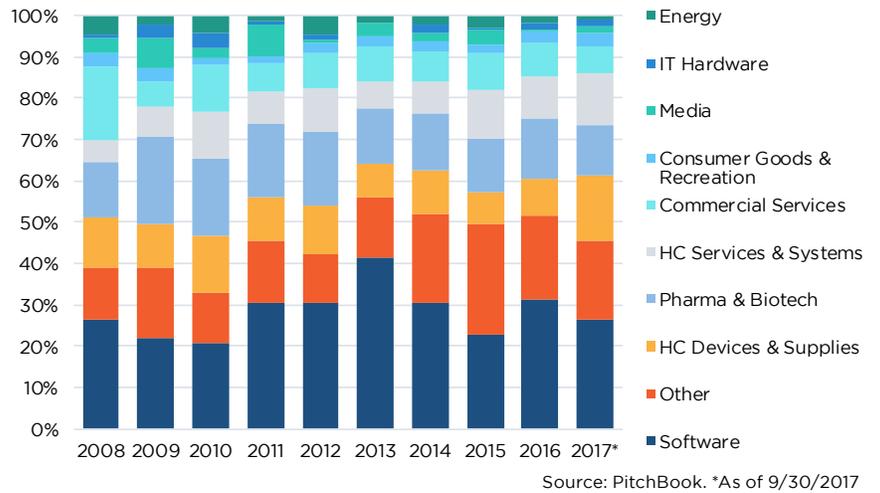


The largest area of VC investment overall is the robust healthcare industry throughout the Philadelphia metro, which is comprised of research universities, hospitals and major pharmaceutical corporations. More than 40% of completed VC rounds this year have been made into healthcare. The capital-intensive nature of many healthcare investments has also funneled nearly 80% of all 2017 deal value for Philadelphia into the sector. Pharma and biotech alone has registered 43% of all capital invested into the MSA this year. Five companies have raised at least \$25 million this year, and, in fact, the five largest financings completed in Philadelphia this year have been by healthcare firms.

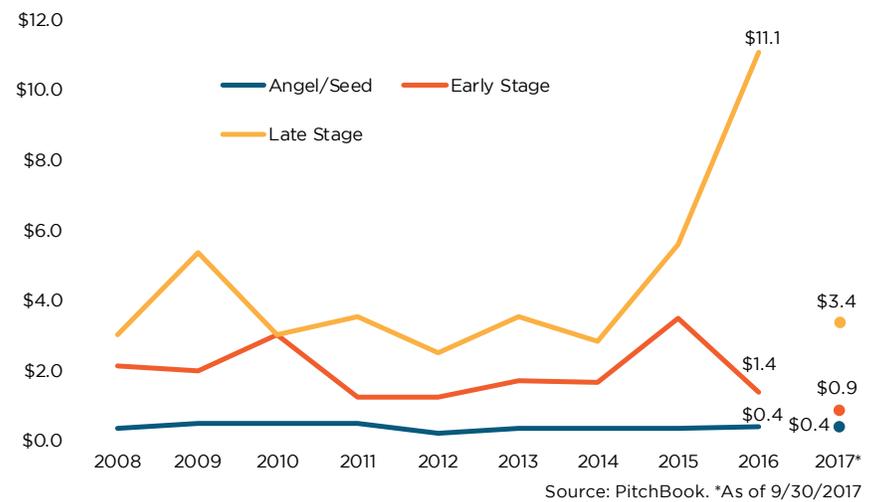
Particularly given these larger deals, the relative shortage of dry powder held by investors headquartered in the MSA can make it more challenging for companies to raise investment. The proximity of the MSA to other major hubs can, however, enable outside investor participation, filling late-stage voids. In Complexa's \$62 million Series C in July, the largest VC deal of the year, not one of the investors was headquartered in the MSA. New Enterprise Associates and Pfizer Venture Investments co-led the round, with three firms headquartered outside the US filling out the deal.

The VC ecosystem in Philadelphia has developed the ability to attract outside investment, but the reliance on that capital will play a part in its ability to keep talented entrepreneurs and startups. Of the 136 unique investors that have completed at least one deal in Philadelphia this year, 110 are headquartered outside the metro area. While the proximity of New York allows Philadelphia startups to leverage New York investors, its proximity likely also lures entrepreneurs and their startups away altogether. This highlights the need for Philadelphia to better market its own billing as a flourishing ecosystem to its entrepreneurs.

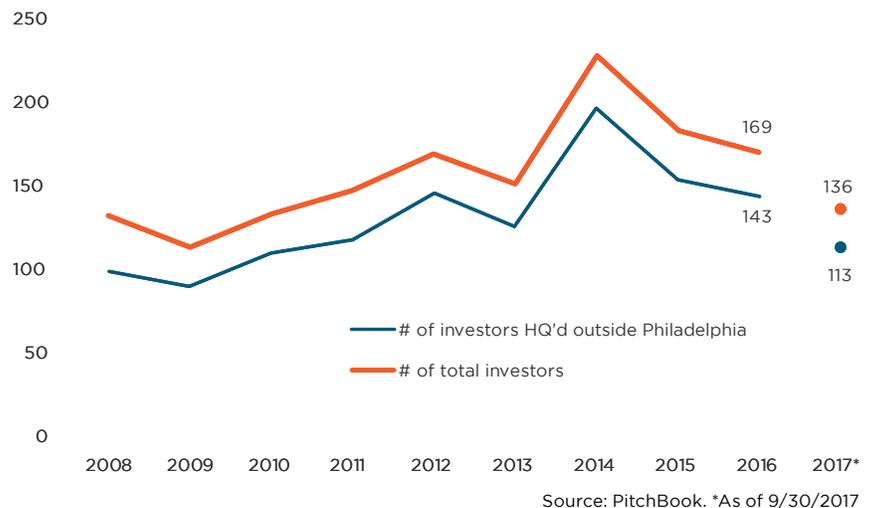
VC activity in Philadelphia MSA (#) by sector



Median round size (\$M) by stage in Philadelphia MSA



Unique investors (#) in Philadelphia MSA VC deals



Activity slows as sizes grow larger

Angel & seed activity in Philadelphia MSA

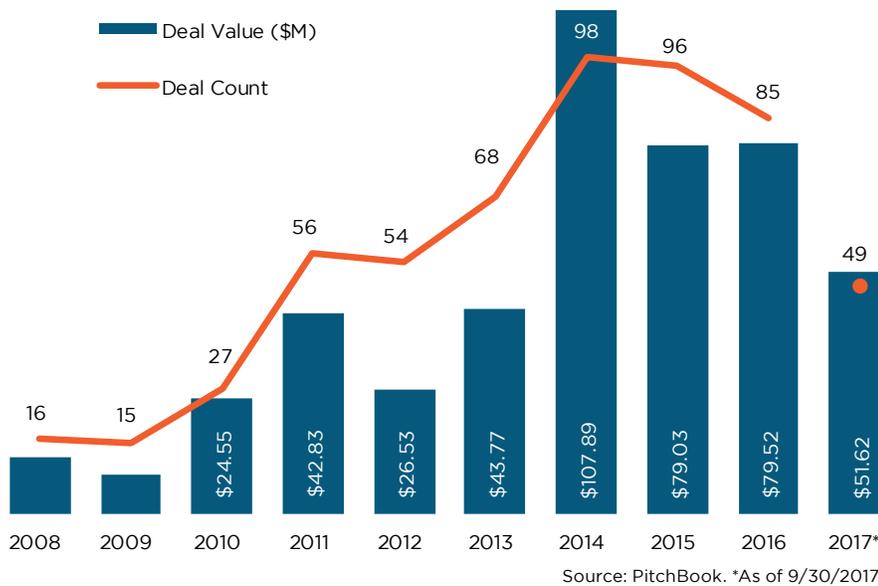
Philadelphia owes much of the recent rise in activity to its angel and seed community. Unsurprisingly, the financial crisis took its toll on such early-stage and wealthy individual-linked investing. But over the past

three years, the region averaged 93 angel and seed deals each period, an almost 6x growth over the 16 completed transactions in 2009. The launch of initiatives such as Startup PHL in 2012, in tandem with other

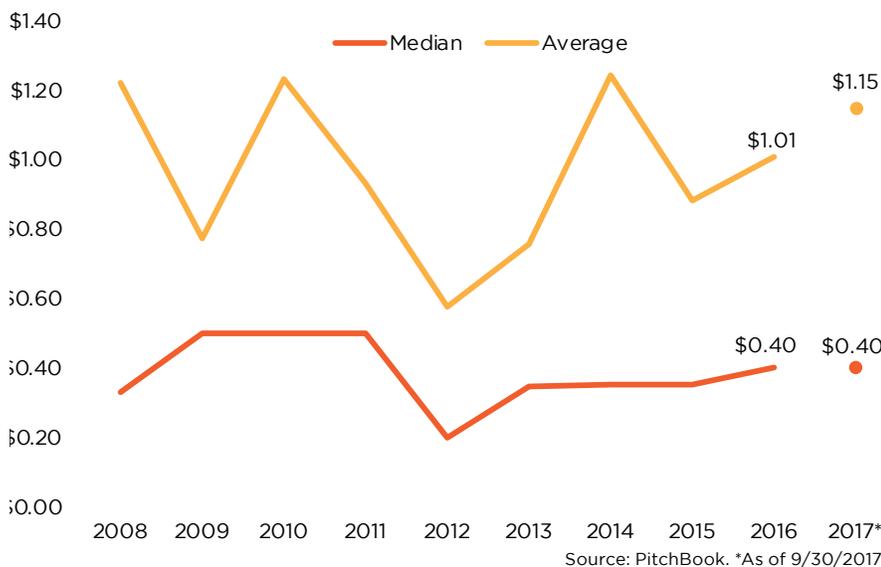
seed and angel programs already in existence, certainly foster domestic entrepreneurship, as well as attract those who had resided elsewhere. Looking back at the companies founded by University of Pennsylvania graduates, just 10 companies received an angel or seed financing deal in Philadelphia from 2006 through 2011. Since the beginning of 2012 nearly 30 have received an angel or seed round. While those top-line numbers may not jump off the page, it signals both a growth in the number of angels as well as the MSA's growing ability to retain homegrown entrepreneurs, a necessary component of a healthy ecosystem.

Though angel and seed investment has slowed considerably in 2017, the pattern follows nationwide trends. The median and average sizes of these deals have pushed higher over recent years. While these figures have traditionally been larger than normal in Philadelphia because of the relatively higher number of sizable healthcare financings, the age at which these companies are raising has increased as well. Across the US, startups are raising angel and seed rounds at a median age of 2.4 years, nearly a full year later than just a decade ago. Philadelphia startups marked a median age of 2.3 years when raising angel and seed rounds in 2017, a slight drop from 2.7 in 2016, but well above the decade low of one year from 2009. Essentially, currently fundraising companies are looking for larger sums of capital, whether that is due to general pricing levels or shifts in common business runways. As this trend has played out, investors have also emphasized further traction and more robust metrics. Such higher benchmarks naturally lead to larger round sizes, as well as lower volume.

Philadelphia MSA angel & seed activity



Median and average angel & seed round size (\$M)



Corporate VC on pace for record

Corporate VC activity in Philadelphia MSA

Corporate VC (CVC) activity in Philadelphia has continued its recent growth throughout this year. After nine months, 2017 has almost matched the decade high for number of deals with CVC participation (16), and is pacing to also surpass the high-water mark for accompanying deal value. The area is home to 15 Fortune 500 companies, including one of the most active corporations in terms of CVC investments (Comcast). That said, much of CVC participation is due to corporations headquartered outside the Philadelphia region—eight of the top 10 CVC investors are headquartered outside the MSA.

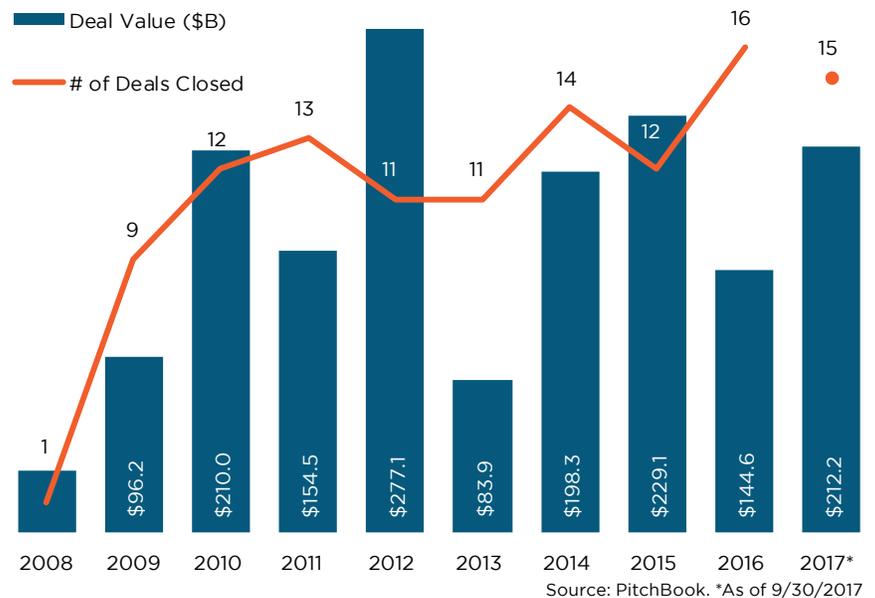
CVC has become a popular form of research and development for large corporations, especially for healthcare companies. Novo, Pfizer and Novartis each lay claim to a spot in the top six most active CVC investors in Philadelphia startups since 2010. During that time healthcare has accounted for roughly 52% of all CVC deals in the MSA. CVC offers relatively cheap exposure to newer technologies for corporations with an eye toward acquisition in the future. As the average cost of developing a new drug reaches \$1 billion—though that figure is claimed to be higher or lower depending on different sides of the argument, the range is high regardless—potential savings via funding outside R&D in an emerging company are enormous, especially considering many drugs will never make it to market.

The recent upsurge in US CVC has been bolstered by the entrance of new corporations. Many would also not be generally thought to engage venture, but, faced with disruption, are being forced to find new methods of innovation. Philadelphia MSA-based Campbell Soup Company launched its

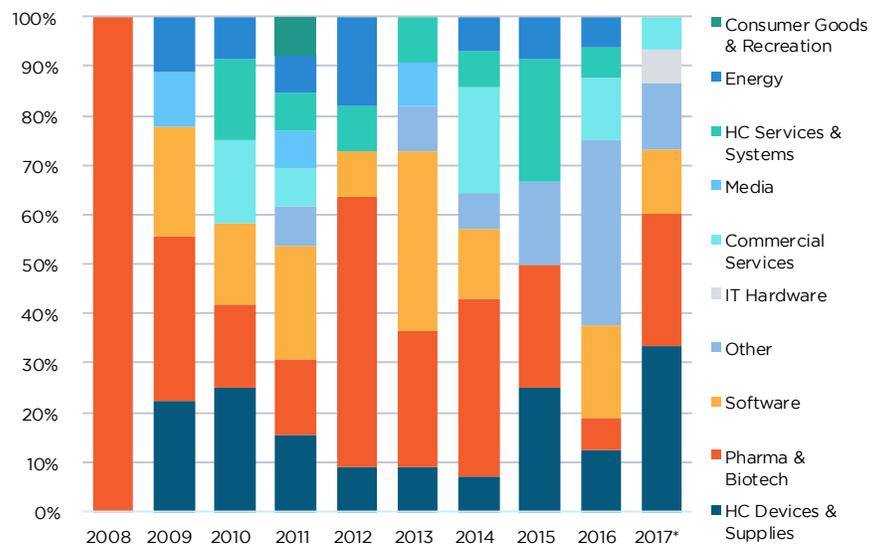
Acre Venture Fund last year to invest in food startups and trends. The vehicle is managed by outside management and has completed nine investments, including in a food management platform, organic food providers and a

cold press juice machine. Though none were within the Philadelphia ecosystem, Campbell Soup epitomizes this need for corporations to innovate, having fallen 40 spots on the Fortune 500 since 2010.

Corporate VC activity in Philadelphia MSA



Corporate VC activity (#) by sector



VC making an impact

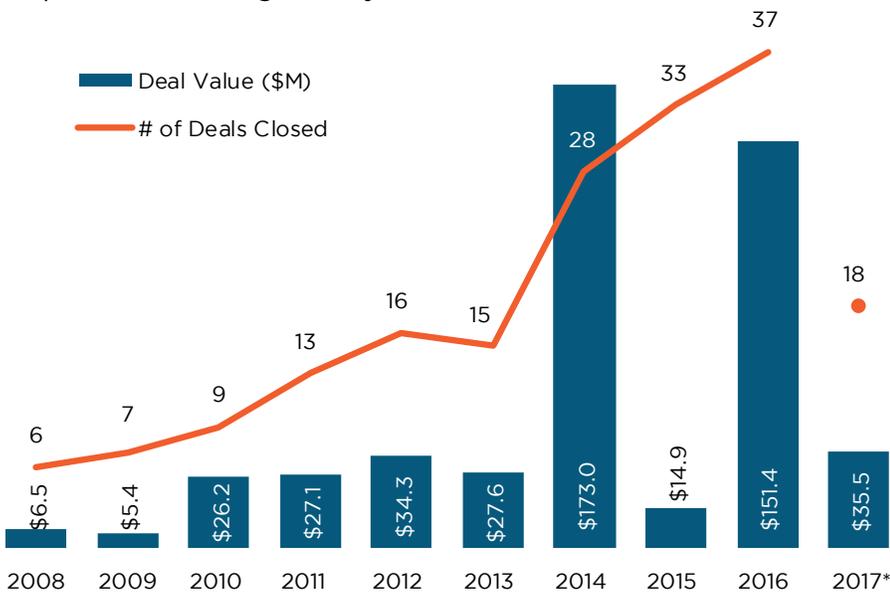
Impact investment activity in Philadelphia MSA

While its exact parameters are difficult to pin down, impact investing has become a growing point of focus for the venture industry over recent years. Especially in the wake of recent scandals and continued criticism that too much money is flowing into products catered to high-end

user markets, there has been more emphasis on backing enterprises that focus on enabling positive social changes in addition to returns. In the end, whether a company matches the common concept of impact investing or not matters less than if it can prove it provides a net benefit; producing

change for the better. Philadelphia has been a frontrunner in encouraging the development of a social impact investment community. Programs in Philadelphia such as ImpactPHL and Benjamin's Desk (recently merged with 1776 of Washington DC) are highly relevant examples.

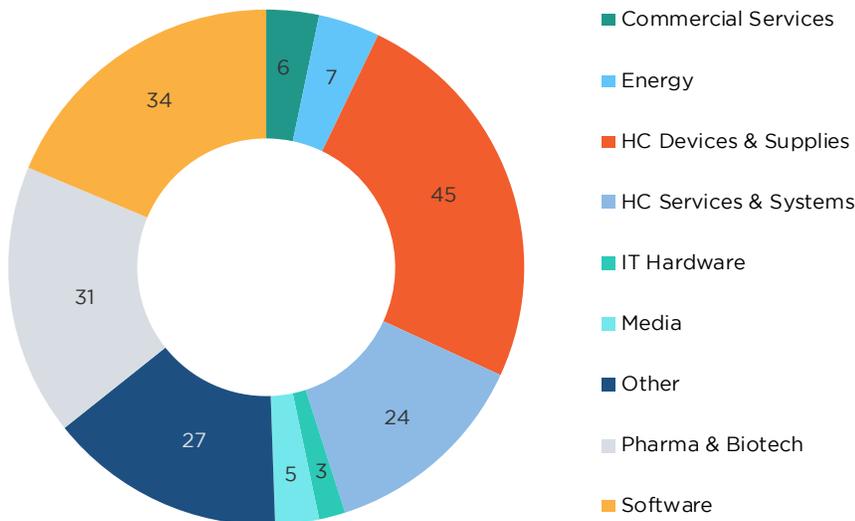
Impact VC investing activity



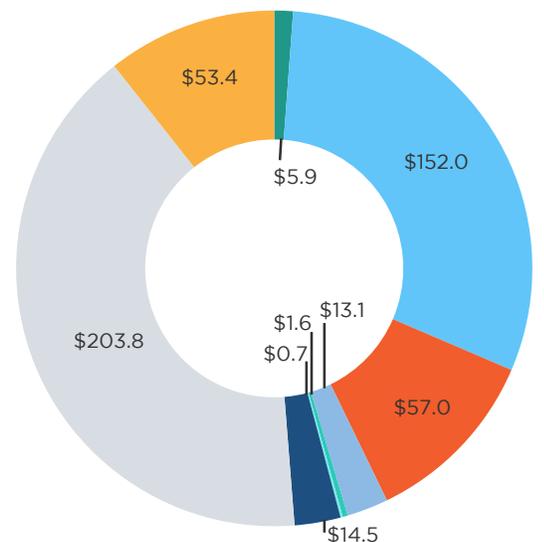
Source: PitchBook. *As of 9/30/2017

Analyzing associated venture financing activity, impact investment in Philadelphia has grown by more than 6x since 2008. 37 investments were completed in 2016 for total investment of more than \$150 million. The aggregate value of impact investments is generally much smaller than for other VC deal types, with the median round size yet to cross \$1 million within the MSA for any year in the past decade—though the 2017 median currently stands at \$980,000. Energy, usually lower on many VCs' list, has received 30% of the impact capital invested in the region, and edtech companies make up a sizable portion of the software investments. While impact investment may not tip the scales for Philadelphia VC as a whole, the commitment the region has made to realizing a social impact is noticeable.

Impact investing since 2006 (#) by sector



Impact investing since 2006 (\$M) by sector



Source: PitchBook. *As of 9/30/2017

The final piece of the ecosystem

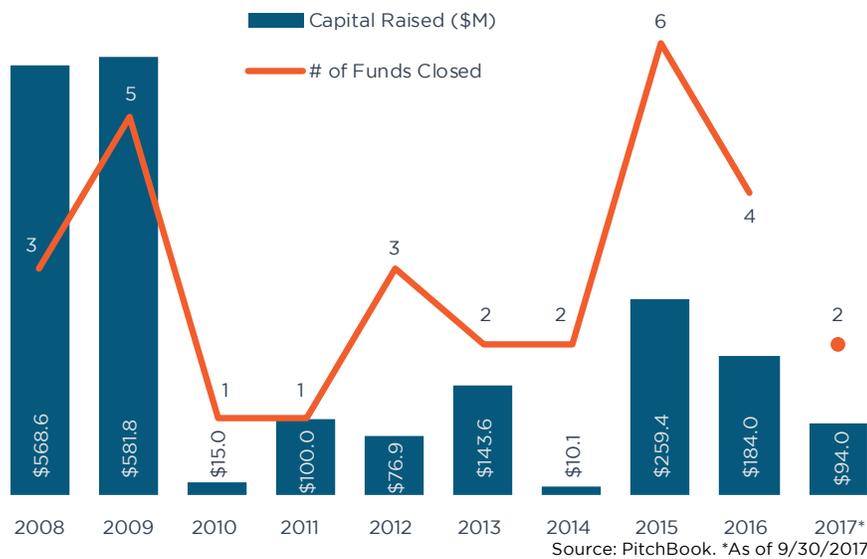
Fundraising and exit activity in Philadelphia MSA

If there is one thing that may be holding back the Philadelphia ecosystem, it would be fundraising. There has been \$534 million in commitments made to 12 VC funds since the beginning of 2015, a small number relative to larger VC hubs.

More than the amount raised, the low number of funds makes it difficult for startups to raise local cash at certain developmental points. This can cause promising startups to look elsewhere for capital. Proximity to New York, DC and Boston allows young companies

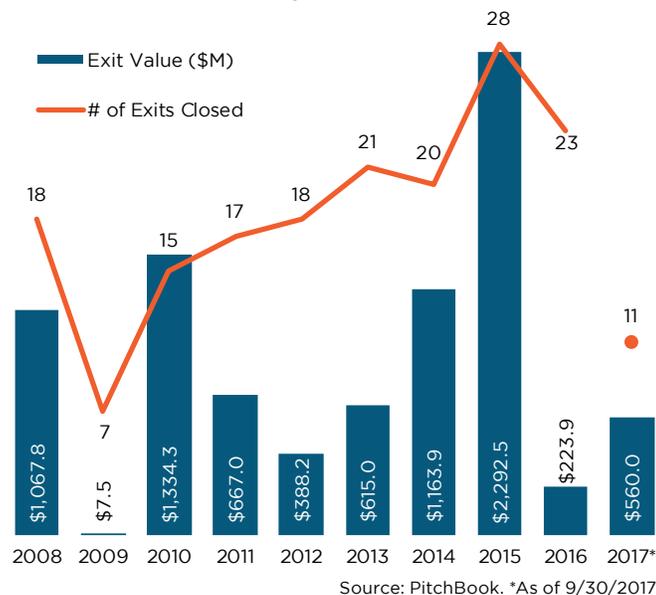
and entrepreneurs to raise money outside the Philadelphia region, but it can also drive some to relocate. While there is plenty of capital available for younger startups, there is a need for more large, late-stage vehicles to enable domestic development along the full capital stack so that companies are able to continue growth through to an exit and recycle more capital and talent.

VC fundraising activity in Philadelphia

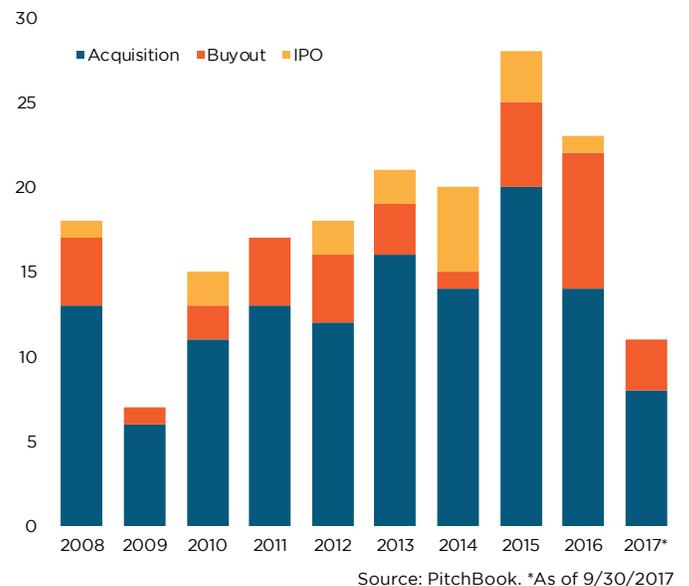


Hampering fundraising, few exits have been achieved in the MSA. 151 companies have completed an exit since 2010, an average of about 20 each year during that time. While more than \$7 billion in exit value has been realized, almost 30% of that is represented by just three exits. A high percentage of the top exits have also happened in the healthcare sector, which sees less serial entrepreneurship than tech because of lengthened development timelines and initial costs. Altogether \$783 million in exit value has been created since the beginning of 2016, including \$430 million in 3Q of this year.

VC-backed exit activity



VC-backed exit activity (#) by type



Capital, coaching & customers



Dean Miller
President & CEO



CAPITAL is the fuel for emerging technology companies. This report highlights how the growth in entrepreneurial activity in our region correlates with increased fundraising by entrepreneurs over the past decade, both in terms of the number of deals closed and the size of the investment rounds. In addition, the report reveals a consistent and significant number of investors from outside of the Greater Philadelphia region. Is this a problem? Not inherently, as money is portable and will go wherever there are the best opportunities for returns. However, seed and early stage capital is *less* portable and an increasing local supply of these dollars is critical to the growth and health of a venture ecosystem.

“Seed and early stage capital is *less* portable and an increasing local supply of these dollars is critical to the growth and health of a venture ecosystem.”

From a peak in 2014, the region has witnessed a decrease in the number of seed stage deals completed.

At PACT, we watch the data closely and align our resources and energy to increase the flow of capital, particularly at the seed and early stages. PACT, in partnership with Ben Franklin Technology Partners of SE PA, led the creation of Innovate in PA, a \$100 million bipartisan insurance premium tax credit bill. Since 2015, funds from the sale of these tax credits have been directed through Pennsylvania’s four Ben Franklin Technology Partners, three Life Sciences Greenhouses, and the BFTDA’s Venture Investment Program into seed and early-stage companies in Pennsylvania, as well as funds focused on the investment sector. Despite the macro level data, these entities have deployed increasing amounts of capital to seed and early-stage companies in the past three years. Is this enough? Definitely not.

A healthy and growing base of individual angel investors and angel groups is another critical success factor for a growing entrepreneurial ecosystem. In this regard, Philadelphia is witnessing an increased, palpable energy among a growing and more visible group of angels and angel groups. The creation of Broad Street Angels in 2017 is just one example of an effort to organize the desires of a growing number of individual investors to fund seed and early stage technology companies. At PACT, we launched the PACT/TiE Pitch Series in collaboration with the newly established Philadelphia Chapter of

“In the first two editions of the Lion’s Den, 4 of 6 companies have collectively raised over \$1 million.”

TiE to provide entrepreneurs more opportunity to connect with, pitch to, and raise capital from qualified angel investors. We also introduced the Lion’s Den, an annual event within our Capital Conference where the top three featured companies pitch to five angel investors and compete live for on-the-spot commitments of capital. In the first two editions of the Lion’s Den, 4 of 6 companies have collectively raised over \$1 million.

With all of this activity, why are the numbers for seed and early-stage investments down over the past three years? Unfortunately, since 2010 there has been a significant decrease in the number of new institutional venture funds raised as well as the dollars raised by those closing new funds. And, of those that closed new funds,

“While capital is critical, experienced management and early customers will help to attract more capital and ultimately grow the base of local capital.”

the majority are directing capital away from seed and early-stage investments. We can certainly do more as a community to reverse this trend. What will it take? It is not just about capital availability. Remember that capital *will find* good opportunities. We at PACT, along with others in the region, recognize that while capital is critical, coaching can help make a promising entrepreneur great, and early customers can take a good idea and make it a great investment.

PACT has invested heavily in two new programs, MentorConnect and CustomerConnect, to grow and strengthen our region’s entrepreneurial leaders and companies to increase the number of attractive investment opportunities. We launched MentorConnect in partnership with

Ben Franklin Technology Partners of Southeastern Pennsylvania in June 2016 to provide teams of experienced entrepreneurs to emerging CEOs. CustomerConnect was launched the same year to provide more opportunities for young companies to pitch to and navigate enterprise customers. Both of these programs recognize that while capital is critical, experienced management and early customers will help to attract more capital and ultimately grow the base of local capital.

Interested in getting connected to or helping us with any of these programs? Visit www.philadelphiafact.com and send us an email.

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