Information Technology report: building on our strengths

Greater Philadelphia Region
Trends and highlights, January 2010 to June 2015
Building on our strengths

In 1946, the seeds of the global information technology (IT) revolution were planted in Philadelphia, with the demonstration of the University of Pennsylvania's Electronic Numerical Integrator and Computer (ENIAC), the world's first general purpose electronic computer. Nearly 70 years later, a vibrant IT ecosystem thrives in the Greater Philadelphia region, deep with strong companies, a skilled workforce, and steady creation and expansion of IT ventures. Since 2010, its growth has surged, placing the concentration of IT and telecommunications establishments, employment and wages in the Philadelphia metro area above the national average, and priming it for a new era of success.

This report details investments in information technology companies from 2010 through the first half of 2015, and discusses how the payoffs from those investments have been woven into the economic fabric of the Greater Philadelphia region. It speaks to how the growing importance of IT in the region is producing a broad range of sustainable employment opportunities and the increasing importance of this sector to our export profile.

The goal of report is to provide information on what is already here and information that can help identify actions that can be undertaken by business, government, and non-profit organizations to propel this forward momentum!
Advancing IT

The IT sector in the Greater Philadelphia region includes a diverse array of companies and subsectors. Over the past five and a half years, the Greater Philadelphia region has experienced a surge in technology innovation. The technology sector’s growth has both contributed to and benefited from the region’s strengths, with more than 6,000 IT companies calling the Greater Philadelphia region home. Added to this are the region’s venture capital community, pre-seed and seed stage public/private investment resources such as Ben Franklin Technology Partners, StartUp PHL and VC4BC; private angel investor funds, vibrant networking opportunities such as those sponsored by Philly Startup Leaders and PACT, coworking spaces, including Benjamin’s Desk; varied accelerator models: Project Liberty, Dreamit, EDSi and the civic-focused FASTFWDTM university challenges, including the University of Pennsylvania’s AppitUP; efforts like TechGirlz, designed to attract and train new talent; and more complex partnerships that engage established institutions such as the CEO Council for Growth’s Health Care Innovation Collaborative. No better example of the organic growth of new, innovative business can be made than the now famous section of Philadelphia known as N3rd Street – the stretch of the city that extends along 3rd Street from Market Street to Northern Liberties – home to a collegial community of collaborative IT working spaces in an artistic and innovative community. Coverage of the IT sector has also grown, with publications like Technical.ly and mainstream publications dedicating reporters to cover this sector.

Clearly, the ecosystem is here and growing!

In this report, we quantify and characterize the region’s growing IT sector. Philadelphia is home to a large community of innovative, diverse and growing IT companies. We have tracked over 1,000 investment rounds in IT companies that have generated investments and exits totaling more than $11.3 billion since 2010. The breadth of the region’s IT companies encompasses technology start-ups to long-established corporations reinventing themselves. Monetate, a start-up founded in 2008, now employs 189 people and is a global leader in cloud-based testing, email optimization and in-the-moment personalization software that empowers marketers to create, deliver and measure personalized marketing campaigns across all touch points. Comcast Corporation brings together the best in media and technology with two primary businesses, Comcast Cable and NBCUniversal. Comcast is currently underway with the development of the Comcast Innovation and Technology Center in Philadelphia to house its growing workforce of engineers, technologists and software architects. The building will extend Comcast’s vertical campus and complement its global headquarters, the Comcast Center.

Given the constant pace of improvement in IT and the ongoing evolution of the web-based and phone and tablet software, tools and services, information technology will undoubtedly continue to represent a growth area for companies in the Greater Philadelphia region. On behalf of Ben Franklin Technology Partners of Southeastern PA, CEO Council for Growth, Comcast, EY, Fairmount Partners, PACT and Select Greater Philadelphia, we look forward to supporting our region’s innovators as they leverage our regional strengths and capture the opportunities ahead.

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Select Greater Philadelphia
Greater Philadelphia IT

- 466 funded IT companies since 2010
- Over 660 deals valued at over $11.3 billion dollars
  - Over 250 M&A deals valued at $10.2 billion
  - Over 400 funded deals valued at over $1.1 billion
IT Investment in the Greater Philadelphia region

From 2010 through the first half of 2015, 466 IT companies in the Greater Philadelphia region received $11.3 billion in funding through 666 deals with venture capital firms, angel investors, strategic investors, accelerators, seed funds and other sources. Mergers and Acquisitions (M&A) activities accounted for 90% of these transactions and generated $10.2 billion of value. New venture (non-M&A) funding exceeded $1.1 billion over the five-and-a-half-year period.

Source: S&P Capital IQ, Fairmount Partners Databases
Why Greater Philadelphia region? - The economic case

The IT industry in Greater Philadelphia is diverse and has made an increasing contribution to the regional economy from both domestic and global sales. IT industries in the Greater Philadelphia region encompass traditional equipment and software products and services, digital media services, commercial and health care apps, robotics and royalty-generating intellectual capital. Currently, there are over 6,000 IT industry establishments in the Greater Philadelphia region, employing almost 90,000 people, and generating annual total sales revenue of $34.828 billion, or about 8.3% of the region’s gross domestic product (GDP). The IT industry in the region provides a very tight ecosystem that encompasses large and small established enterprises, new ventures and universities.

From 2001 through 2014, the industry has grown from $21.436 billion in sales to $35.828 billion. Industry growth surged from 2006 and was little affected by the distressed economic conditions of the last recession, exceeding the growth in the overall regional economy.

![Graph showing contribution of IT to the Greater Philadelphia region](Source: US Bureau of Economic Analysis, IHS)

Annual trend growth for the industry is estimated to be 4.4%, which exceeds the estimated annual growth in regional GDP by 1.0 percentage point.

The IT industry’s robust growth is reflected in its growing share of both the Greater Philadelphia economy and its export share. IT’s share of regional GDP grew from a 7.4% share in 2004 to as much as 9.1% in 2011, receding only slightly by year-end 2014.
The IT industry - international exports

The IT industry in Greater Philadelphia also has a global reach. According to recent estimates from the Brookings Institution, the Greater Philadelphia region is the 10th largest export economy in the US, ranking 15th among the 25 biggest metros in international exports as a share of GDP. Not only have exports grown in absolute terms but they have become more important to the regional economy. Total exports from Greater Philadelphia in 2014 were $31.7 billion, or 9.1% of the region’s GDP, and the share of exports has grown by two percentage points over the past decade.

But just as international exports have become more important to the region’s economy so also have IT exports. IT exports of goods and services, especially royalties, have become an important source of growth to the region’s export economy. Total international IT exports grew from $4.8 billion in 2007 to $5.8 billion at the end of 2014, and currently represent a 17% share of total regional exports. Computer and electronic equipment exports are a significant part of this activity, but most of the value and growth of IT exports derive from computer and information services, mainly royalties derived from IT, digital media, and scientific and technical services. These export streams are directly connected to the nurture and development of new IT start-ups and expanding IT companies.
Overview of companies

Location of IT companies receiving investments
Greater Philadelphia Region 2010-2015 first half

Locations of existing IT companies
Greater Philadelphia Region

Source: S&P Capital IQ, Fairmount Partners Databases

Source: Hoover’s Business Intelligence
Companies

Among the many successful IT companies in the Greater Philadelphia region, the following five IT companies help show the range of innovative young companies that are not only bringing creative solutions to market but are also securing investments and growing jobs in the region.

**ColdLight**, a PTC business, offers big data machine learning and predictive analytics. The ColdLight automated predictive analytics platform will enrich PTC’s technology portfolio and extend PTC’s position as a leader in the Internet of Things (IoT) market. PTC is a global provider of technology platforms and enterprise solutions to create, operate, and service smart and connected products.

**CloudMine** is an enterprise mobility company that provides a Health Insurance Portability and Accountability Act-compliant managed mobility solution to accelerate development, eliminate maintenance and standardize cross-organizational mobile IT. By securely blending public cloud with private data, CloudMine enables the next generation of enterprise mobility by allowing enterprise development teams to quickly mobile-enable their legacy applications while keeping them secured behind the enterprise firewall. CloudMine’s Managed Mobility suite is being used by world-class enterprises, including Mylan Specialty, Endo Pharmaceuticals, Barnes & Noble College and Digitas Health to drive mobile-first solutions.

**ColdLight**

*President & General Manager: Ryan Caplan*

*Investors: Ben Franklin Technology Partners of Southeastern PA, Kayne Anderson Capital Advisors, L.P.*

**CloudMine**

*Founder & CEO: Brendan McCorkle*

*Investors: Ben Franklin Technology Partners of Southeastern PA*
Monetate powers multichannel testing and personalization for brands worldwide. Built for speed, the Monetate platform's easy-to-use interface allows marketers to create, test and deploy an unlimited number of personalized digital experiences with limited need for IT or consulting resources. Monetate is used by the world's leading retail brands to grow revenue faster by being faster. Founded in 2008, Monetate influences billions of dollars in revenue every year for world-class companies like Macy's, QVC, Patagonia, Sur la Table, The North Face and hundreds of other market leaders.

RJMetrics is on a mission to inspire and empower data-driven people. Modern businesses are drowning in new, rich sources of data that inhabit various systems, files and tools across the cloud. RJMetrics software combines data from these disparate sources, optimizes it for analysis and provides business users with an intuitive interface for answering questions and collaborating around the results. Since moving to Philadelphia in 2011 as a four-person start-up, RJMetrics has raised over $20 Million from top-tier venture capital firms, acquired hundreds of customers and grown to over 100 team members. The company’s full team is based in the Widener Building in Center City Philadelphia.

Zonoff empowers the world’s leading brands to deliver smart, seamless living to the consumer mass market through its Internet of Things software and services platform. Zonoff is committed to helping its partners leverage the market potential of the Internet of Things by building superior core technology that fills a real need. Our world-class consumer IoT platform was purposefully built to be protocol agnostic, enable interoperability, and be responsive and reliable.
IT investment in the Greater Philadelphia region

Total IT investment from 2010 through the first half of 2015 has been $564 million, about 30% of all investment in the region, and has grown from $60 million in 2010 to $112 million in 2014. As of the end of the first half of 2015, total investment was $52.0 million with just over half as many deals as in 2014, indicating that the average investment per deal is running slightly higher this year than any other year since 2010.

Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report, Data: Thomson Reuters

Investment by industry sector - 2010-2015 | Greater Philadelphia Region

- Life Sciences
- Information Technology
- Industrial and Other
- Commercial Services

$ Millions

Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report, Data: Thomson Reuters

Investment by industry subsector

- Entertainment and leisure IT services
- IT Programming and computer services
- Telecommunications
- Neworking, hardware, semiconductors
- Other software applications
- Educational and home software
- Commercial software
- Financial software
- Medical, healthcare
- Internet content, services, and e-commerce

Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report, Data: Thomson Reuters
IT investment by industry in Greater Philadelphia

The IT industry includes networking and computer equipment, IT services, software, digital media and communications. During the five and one-half years starting in 2010, industry investment has been concentrated in software, receiving $431 million or a 76% share of total IT investment, and in IT Services, receiving $65 million or 11% of total IT investment.

Growth in software investment has been robust. Investment in 2010 of $25 million grew to $88 million by the end of 2014 yielding a 28.5% compound annual growth rate. Over the entire period from 2010 through the first half of 2015, the main applications receiving IT investment have been in financial services software ($75 million), in business applications ($69 million), in home use applications ($40 million) and in medical/health care software ($40 million).

Aggregating individual and enterprise software applications into target market groups points to a concentration into two broad areas: medical and health care software and internet-related subsectors. Investment in medical/health care software together with integrated systems health care software has doubled since 2010, receiving over $90 million. Internet services, along with internet content development, internet marketing services and e-commerce enabling services have accounted for over $96 million of IT investment. Taken together, these two major industry groups have attracted more than $186 million, or over one-third of all IT investment.

IT investment by stage of investment - 2010-2015 first half
Greater Philadelphia Region

Early stage: 31%
Expansion: 34%
Later stage: 34%
Startup/Seed: 1%
IT investment by stage of investment

IT investment varies by stage of investment but virtually all IT investment has been devoted to early stage, expansions, and late-stage companies. Total early stage IT investment was $190 million, expansion investment was $178 million, later-stage IT investment was $192 million, and the remainder of just over $4 million was devoted to start-up/seed investment, suggesting that seed stage entrepreneurs are successfully bootstrapping their businesses to early stage funding. From early stage through later-stage, between 75% and 80% of all IT investment has been directed to software development, followed by IT services and internet-related services.

Of the $190 million of early stage investment, over $141 million was devoted to software applications. In 2014, investment in software doubled to over 2013, growing to $47 million. IT services and internet-related e-commerce and content services attracted over $40 million of early stage investment.

Software received the highest levels of expansion funding ($133 million) and late-stage investment ($155 million). Estimates of first-half 2005 late-stage investment indicate that software investment of $33.8 million has already exceeded the 2014 level of investment by over $10 million.

Most of the IT investment in start-ups or in seed funding was devoted to telecommunications services, including internet communications, multimedia services, e-commerce services and wireless communications services.

The takeaways

The IT industry in Greater Philadelphia is clearly home to a very large and diverse software development industry, one that supports many applications, including business and financial services, health care, and a host of internet content and marketing services. IT investment is substantial and widespread and it is focused on the industries that give Greater Philadelphia a competitive edge in creating value in the IT industry domestically and in export markets.
Incubator/coworking/shared work space

Overview

There are over 50 incubators, accelerators, and coworking spaces engaged in fostering the growth of companies in the Greater Philadelphia region. These incubators, accelerators and coworking spaces span over dozens of focus areas, including the arts, digital media technology, biotechnology, energy, green technology, education, fashion, food, gaming, civic, social impact and military-government. Fourteen have a focus specifically on IT and applications of technology. Many of the other facilities include start-up companies working in various areas of IT.

Locations of incubators, accelerators and coworking spaces | Greater Philadelphia Region
Workforce

Overview

IT occupations typically include activities such as computer hardware and software development, web and digital media design, network design, operations, management, and a host of scientific and analytical professional services.

Most IT jobs tend to be in the information services sector, which includes telecommunications, video distribution and internet services. These occupations are also in great demand across the region's industries, including within professional and scientific industries, such as consulting and software development services, financial services, construction and government.

IT Occupations share of industry employment, 2014 | Greater Philadelphia Region

Sources: JobsEQ™ and U.S. Bureau of Labor Statistics
IT occupations - earnings and growth prospects

IT occupations are among the highest paid occupations in the Greater Philadelphia region. Average annual salaries for these jobs range from $54,000 for support and digital design specialists to $110,000 for network architecture, quantitative applications and data scientists, and computer and information research. On average, IT occupations pay a 60% premium over the average annual salary earned in the region.

<table>
<thead>
<tr>
<th>IT occupations average annual salary, 2014</th>
<th>Greater Philadelphia Region</th>
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<tr>
<td>Mathematicians</td>
<td>$100,000</td>
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<tr>
<td>Computer Network Architects</td>
<td>$90,000</td>
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<td>Electronics Engineers, Except Computer</td>
<td>$80,000</td>
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<td>Computer and Information Research Scientists</td>
<td>$80,000</td>
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<td>Software Developers, Systems Software</td>
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<td>Information Security Analysts</td>
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<td>Software Developers, Applications</td>
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<td>Computer Hardware Engineers</td>
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<td>Computer Systems Analysts</td>
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<td>Statisticians</td>
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<td>Operations Research Analysts</td>
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<td>Computer Programmers</td>
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<td>Database Administrators</td>
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<td>Network and Computer Systems Administrators</td>
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<tr>
<td>Computer Occupations, All Other</td>
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<tr>
<td>Media and Communication Equipment Workers, All Other</td>
<td>$80,000</td>
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<tr>
<td>Mathematical Science Occupations, All Other</td>
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<tr>
<td>Computer Network Support Specialists</td>
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<td>Web Developers</td>
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Sources: JobsEQ™ and U.S. Bureau of Labor Statistics

Growth prospects for IT jobs in Greater Philadelphia are excellent and in many cases projected to exceed the growth of IT employment in the US as a whole. The high demand for IT professionals makes the Greater Philadelphia region a magnet for those in the IT field while encouraging both college degree and non-degree training programs in local colleges and universities and community colleges. One of the great assets of the region is its array of community colleges that provide a gateway for non-degree individuals into IT occupations through a complete menu of training and certification programs. These programs are essential in retraining skilled workers and in bringing new job seekers into well-paying and essential IT jobs.
IT occupations 10-years projection, 2014–2024 - average annual growth
Greater Philadelphia Region

Sources: JobsEQ™ and U.S. Bureau of Labor Statistics
A recent study by Philadelphia Works Inc. shows that IT occupations that are most in demand in the region will be those engaged in custom computer design and programming services in corporate environments and across universities. The report also suggests that IT jobs will be distributed across the region with Philadelphia, Montgomery and Chester counties in Pennsylvania, and New Castle County in Delaware being the most likely to see the greatest growth in IT occupations.

While the Greater Philadelphia region enjoys a greater proportion of IT jobs to total employment than the national average, forecasts of industry demand for these occupations exceed current projections of the IT workforce over time, suggesting that either skilled talent must be recruited from outside the region or that training and education must be expanded from within the region.

Source: Ben Franklin Technology Partners

Photo © 2015 Jason Heritage
IT occupations - earnings and growth prospects

*Our colleges and universities are meeting this challenge!*

The Greater Philadelphia region is home to over 100 colleges, universities and training centers. During the 2012-2013 academic year over 95,000 certificates, bachelor’s degrees and postgraduate degrees were awarded. Nearly half of these were in science, technology, engineering, arts or mathematical (STEAM) programs of study. All industries in the region benefit directly from graduates in these areas. Graduates, who are both local to the area as well as from outside the region, have a propensity to stay in the Philadelphia area. Campus Philly reports that “64 percent of college students educated in Greater Philadelphia colleges and universities stay in the region after graduation, significantly more than other cities that measure this trend, including Boston (about 50 percent of college graduates stay) and Baltimore (37 percent of college graduates are likely to stay).” This trend bodes well for the local economy and the industries that comprise the economic base, including health sciences, educational services, technology and IT services, as well as the arts and digital media industries. Over 150,000 workers are employed in science and technology in the region.

The region’s IT workforce is drawn mainly from local colleges, universities, and training centers that confer IT degrees and also certification programs that provide more specific areas of skill development. The fields with the most degrees range from artificial intelligence, computer systems and networking, and network administration to more specific areas such as bioinformatics, data modeling, and digital/multimedia and information. In the 2013-2014 academic-year, colleges and universities in the Greater Philadelphia region awarded over 14,000 certificates, two-year degrees, four-year degrees and postgraduate degrees in areas specific to IT occupations.

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*Sources: JobsEQ and National Center for Education Statistics (IPEDS) - Academic Year 2013-2014*

Degree requirements needed for jobs differ by occupation. For some occupations such as network user support, entry level does not typically require a bachelor’s degree, while for more advanced occupations such as those engaged in artificial intelligence and simulation, a minimum of a bachelor’s degree is typically required and in those occupations advanced degrees are in the highest proportion.
Greater Philadelphia's developing workforce

Greater Philadelphia is meeting this workforce challenge through several initiatives. Prominent among them is Philly Tech Hire, a collaborative formed in partnership by Philadelphia Works, PNC Financial Services Group, Inc.; Comcast, Randstad Technologies; EventUpon; Technical.ly; PACT; Seed Philly and the City of Philadelphia. Philly Tech Hire has created an exchange for the technology community designed to build talent pipelines between companies and workers. It offers programs for entry-level and IT professionals ranging from bootcamp training and internships to networking opportunities and seeks to engage IT employers to participate in the network to enable faster matching of skilled new hires.

In addition to Philly Tech Hire, Opportunities Industrialization Center has adopted a new strategy that focuses on IT raining across industry sectors. Several other regional initiatives are underway to develop IT talent from non-traditional and disadvantaged communities also. Included among them are StartUp PHL, First Hand, Coded by Kids and TechGirlz. These partnerships direct their efforts to build interest and skills among youth groups not typically attracted to STEAM disciplines. StartUp PHL, the partnership between the City of Philadelphia and the Philadelphia Industrial Development Corporation designed to stimulate the city’s innovation economy, has funded tech talent initiatives. Young students at First Hand become linked to the IT world through connections with the University City Science Center. Coded by Kids engages very young students through hands-on web development and programming curricula. TechGirlz attracts middle-school girls to build a growing pool of tech-skilled young women to eventually reduce the gender gap in technology occupations.

Universities

Universities – Research in IT

Research universities play a critical role in the Greater Philadelphia region’s innovation network, nurturing new commercial IT ventures through university-sponsored innovation hubs and research centers. These institutions are developing cutting-edge technologies through research funded by the National Science Foundation (NSF); the Department of Defense (DoD); private foundations; other federal, state, and city governments; private sector corporations and through cross-university partnerships. The region’s universities annually receive funding in excess of $1 billion from NSF, about $50 million of which is directed toward computer science and mathematics for basic and applied research. University research in computer science and IT span a wide range of fields including cybersecurity, informatics, visualization and data science, robotics, computer vision, computer graphics and animation, and natural language processing among many more.
The region is dense with research centers in IT and computing sciences. The Penn Institute for Computational Science is a cross-disciplinary institute focused on computing science while also developing applications that impact other areas of science and engineering. The Warren Center for Network and Data Sciences is an incubator directed toward research in cross-disciplinary applications of network science. Penn Research in Embedded Computing is engaged in developing middleware, protocols and interfaces for the Internet of Things. Computer systems research at Temple University’s Center for Networked Computing has been awarded rich grants from NSF and DoD, among others for research in cloud computing, wireless networks and cyber-physical systems. Temple cyber-scientists Eduard Dragut and Yuhong Guo were recently awarded an $800,000 NSF grant to develop algorithms for extracting information from real-time big data flows. Drexel University’s College of Computing and Informatics is part of a network of research centers and institutes that host several of the university’s research initiatives, including the Center for Spatial Analytics and Geocomputation, the Center for Visual and Decision Informatics, the Drexel University Cybersecurity Institute and the Metadata Research Center. Drexel researchers received over 90 awards spanning areas in science and technology during the second quarter of 2015. Awards for computer science included research and development for routing techniques for IP video, sponsored by Comcast, and for machine learning and big data analytics. IT research at the University of Delaware is fostered through extensive, world-class facilities and resources. NSF awards have supported the development of several high performance computer clusters, including a supercomputer and an advanced Graphics Processor Unit that expands research capabilities in computer graphics and vision and supports several research applications in chemical science. The Electrical & Computer Engineering and Department of Computer and Informational Sciences Joint Laboratory supports cooperative applied research in artificial intelligence, computer networks, and software engineering.

IT research in the region’s universities is also being applied to address real issues in the community. Seeded with a combined grant of $800,000 from NASA, the NAVY, and the National Science Foundation, Rowan University acquired the Cave Automated Virtual Environment that creates virtual reality environments to test and solve complex problems. It has been used to address mechanical engineering and physical distribution systems. With additional funding it is currently being used to redesign community water and sewage systems to alleviate flooding. Associate Professor Justin Shi and four students from Temple University’s Computer and Information Sciences launched the Urban Maps and Apps Studio. The studio aims to develop web-based programs, such as GrowShare to revitalize urban neighborhoods by turning vacant lots into urban farms. Spurred by a grant from The Knight Foundation, the Studio has developed summer programs to promote digital arts and sciences among young adults in Philadelphia’s underserved communities. One recent summer Fellow, Nicodemus Madehdou, was honored at the White House for his work in developing socially oriented game projects.

Equally important to the role that universities play in developing new IT applications is the training and education of the next generation of IT researchers and faculty. Colleges and universities throughout the region enrich the research institutions with new students and postgraduate researchers and at the same time inject new graduates into the region’s IT workforce.

**The IT ecosystem in Greater Philadelphia**

Greater Philadelphia enjoys the presence and partnership of:

- established IT companies, large and small;
- a large pool of community colleges, small colleges and major world-class universities, which produce important research product and develop new professionals for the IT workforce;
- a supportive public sector;
- a network of incubators, investors and innovation hubs.

This gives the region a competitive advantage in IT markets here and abroad and fuels the engines of expanded IT growth and economic growth. The attractiveness of Greater Philadelphia as a center for innovation in IT and all technologies is reflected in the legions of young people - university graduates, new professionals and entrepreneurs - who have made this area their home and place to build a career. The IT industry is a magnet for these new settlers. The continued growth of IT investment will add to this burgeoning ecosystem and provide the opportunity of well-paying job opportunities in Greater Philadelphia.
About partners

**Ben Franklin Technology Partners of Southeastern PA**

Ben Franklin is the most active early stage capital provider for the region’s technology sectors. Through university, industry and regional partnerships that accelerate technology commercialization and entrepreneurship, Ben Franklin combines the leading practices of venture capital with a public spirited purpose to lead the region's technology community to new heights, creating jobs and changing lives for the better.

Ben Franklin is an initiative of the Pennsylvania Department of Community and Economic Development and is funded by the Ben Franklin Technology Development Authority.

For more information, please visit: [www.sep.benfranklin.org](http://www.sep.benfranklin.org)

**CEO Council for Growth**

The CEO Council for Growth (CEO Council) is a devoted group of more than 55 business, higher education and civic leaders who commit their time and efforts to enhancing economic growth and prosperity in the 11-county region across northern Delaware, southern New Jersey and southeastern Pennsylvania. The CEO Council is an initiative of the Greater Philadelphia Chamber of Commerce influencing regional and national policy through advocacy.

For more information, please visit: [www.ceocouncilforgrowth.com](http://www.ceocouncilforgrowth.com)

**Comcast Corporation**

Comcast Corporation (Nasdaq: CMCSA, CMCSK) is a global media and technology company with two primary businesses, Comcast Cable and NBCUniversal. Comcast Cable is one of the nation’s largest video, high-speed internet and phone providers to residential customers under the XFINITY brand and also provides these services to businesses. NBCUniversal operates news, entertainment and sports cable networks, the NBC and Telemundo broadcast networks, television production operations, television station groups, Universal Pictures and Universal Parks and Resorts.

For more information visit: [www.comcastcorporation.com](http://www.comcastcorporation.com)

**EY**

EY is a global leader in assurance, tax, transaction and advisory services. Worldwide, its 190,000 people are united by its shared values and an unwavering commitment to quality. EY makes a difference by helping its people, its clients and its wider communities achieve their potential.

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Fairmount Partners

Fairmount Partners is an investment banking firm focused on serving the needs of middle market and emerging growth companies. It offers mergers and acquisition, capital-raising and strategic-advisory services to help maximize the value of technology and health care-oriented businesses. Fairmount Partners measures itself by its dedication and loyalty to its clients and the exceptional results it creates. In its first 11 years, it has completed more than 160 transactions, spanning 19 countries and involving some of the most notable businesses in its area.

For more information, please visit: www.fairmountpartners.com

PACT

PACT’s vision is to be a premier resource for emerging growth companies in the technology and health care industries. It connects emerging growth companies, investors, professional advisors, universities and technology-focused corporations to network, develop relationships, pursue business opportunities, and market and promote their businesses to foster growth and innovation.

For more information, please visit: www.philadelphiapact.com

Select Greater Philadelphia

Select Greater Philadelphia (Select) is a business attraction marketing organization dedicated to promoting the Greater Philadelphia region nationally and globally in order to establish Greater Philadelphia as a top-tier place to do business. Select assists companies interested in the region by providing detailed information about the 11-county area and gateway services that connect companies with the legal, political and financial assistance they may need in relocating or expanding in the Greater Philadelphia region.

For more information, please visit: www.selectgreaterphiladelphia.com

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The data and information in this report came from a variety of sources, including Ben Franklin Technology Partners of Southeastern PA; Brookings Institution; Campus Philly; CEO Council for Growth; Economy League of Greater Philadelphia; EY; Fairmount Partners; Hoover’s Business Intelligence; His; Jones Lang LaSalle; NVCA; Philadelphia Works Inc.; PWC; Select Greater Philadelphia; S&P Capital IQ and U.S. Bureau of Economic Analysis.

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