

10 YEARS IMPACTS



Innovation Works

“Entrepreneurs are still the primary engine of job creation in the U.S.

In the last 30 years, all net new jobs have come from firms less than five years old. Every minute, another entrepreneur takes a risk to start a company. That number is constant, even during a recession.”

Carl Schramm, President & CEO, Kauffman Foundation during his 2010 State of Entrepreneurship address at the National Press Club, Washington, D.C.

At its 10-year mark, Innovation Works is taking a look back, and to the future. In this year’s Community Report, we present the far-reaching impact of the entrepreneurs we are privileged to support. Their stories illustrate the true value of investing seed capital and providing business assistance to our most promising opportunities. Listed here are 10 categories of impact, each critical to the Southwestern PA region’s past and future.

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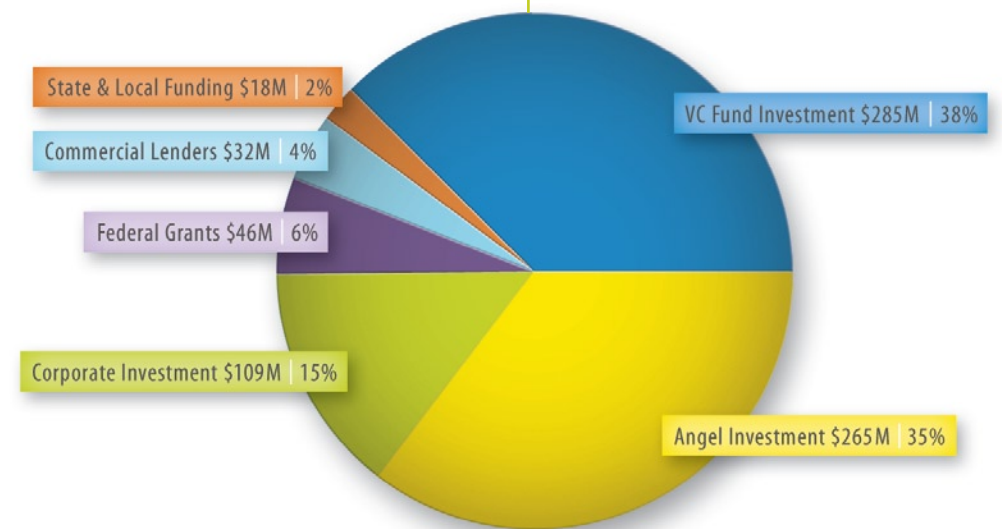
Over the past 10 years, the IW Seed Fund alone has invested \$43 million in regional startups which has helped to attract more than \$750 million in additional capital—a ratio of more than \$17 for every \$1 of State funding invested.

ATTRACTING INVESTMENT TO THE REGION

As one of the most active seed-stage investors in the U.S., IW is a nexus of opportunities for institutional investors. In the last 10 years, IW has helped its portfolio companies attract more than \$750 million in follow-on funding. In fact, 72% of all venture deals in Southwestern PA over the past three years were with companies that had received seed funding from IW. Two-thirds of that capital came from outside the SW PA region.

“When VCs hear success stories about Pittsburgh and want to learn more, IW is their first stop,” said Michael Stubler, Managing Director at Draper Triangle Ventures. “They know they’ll get the best view of quality dealflow in the early-stage economy from IW.”

By investing in early-stage companies and networking with investors across the U.S., IW has helped to catalyze over \$750 million in investment from venture capital firms, angels and other sources of capital. The image below shows the breakdown of follow-on funding obtained by IW’s portfolio companies subsequent to receiving an investment from the IW Seed Fund.



CATALYZING COMPANY CREATION

In the last 10 years, IW has helped to launch hundreds of startups, providing funding and assistance to enable them to grow from promising ideas into thriving companies, primed to attract customers, talent and capital. At the point of IW's first investment, these young companies are at the prototype stage of product development, have on average fewer than four employees, and are about two years away from their first venture capital investment. Yet, these portfolio companies have gone on to employ several thousand highly skilled workers, secure over \$750 million in additional capital, spawn other entrepreneurs and startups, and attract customers and partners.

Companies launched with IW assistance over the past 10 years have an impressive success rate. More than 75% of them are still in business today when on average, roughly a third of all U.S. startups close by year two.

Prime-8 and Penbo, from Bossa Nova Concepts, LLC, are not ordinary toys. They're the leading edge of personal entertainment robotics that wow children by mimicking their personalities with endless energy. Over a three-year period, Bossa Nova used IW funding for product development and business planning, successfully launching its first toys commercially in 2009.



“I wouldn't have started my company without the help of IW.

It's not just the funding, it's the expertise and the access they provide to legal and financial advisors, experienced entrepreneurs and venture capital. They opened up a whole entrepreneurial community for my company.”

Don Charlton, Founder, The Resumator, a 2009 IW AlphaLab company

The Resumator is an online recruiting platform that helps companies manage the resume review and hiring process. Since the company formed, it has launched its first product and secured customers among the Inc. 500.

DELIVERING ECONOMIC RETURN ON INVESTMENT

“IW helped us identify health care as a major market for our technology. That was critical to our success.”

Aldo Zini, President and CEO of Aethon

Aethon's Tug® robot transports medicine, charts, meals, linens and other supplies in hospitals, freeing skilled staff for clinical work. IW was the first investor in Aethon which now employs 72 engineers, skilled technicians, software developers and others in operations support.

IW analyzes where gaps and opportunities exist in the early-stage technology economy and applies the right mix of funding and other resources where they will have the greatest impact to help companies thrive.

As IW portfolio companies continue to grow, their impact ripples through the regional economy. The results are high paying jobs, wealth creation for investors and employees, venture capital attracted to the region, increased business for local suppliers of goods and services, and the development of new entrepreneurs that spin out companies and mentor other nascent businesses.

According to research from the PA Economy League, the companies assisted by Innovation Works and the network of Ben Franklin Technology Partners (of which IW is the SW PA center) contribute more to the region's and state's economy than the state puts into the program. Pennsylvania receives \$3.50 in additional state tax revenue for every dollar it spends on the IW/Ben Franklin program.

The IW program more than pays for itself in the form of significant tax revenue returned to the state by the companies IW assists. The graphic below illustrates some of the ways in which IW has delivered economic value over the past 10 years.



PROVIDING VITAL RESOURCES TO ENTREPRENEURS

ShowClix is a fast-growing mobile ticketing and promotion service for live events around the world.

After an IW seed investment, ShowClix raised additional funding through Pittsburgh Equity Partners, a venture fund initiated by IW to catalyze new investment capital in the region.

IW led the formation of Pittsburgh Equity Partners, a professionally managed fund designed to fill the gap between seed-stage funding and larger rounds of institutional investment. "This is typically the most difficult period for a startup to raise money—there are not enough angel funds to fill demand, and it's usually too early for money from a traditional VC fund," said Ed Engler, who, along with Steve Robinson, is Co-Managing Director of PEP. "There is probably room for four or five more funds like PEP here, largely because IW and others are doing such a great job graduating quality startups."

At the earliest stages, the needs of startups are varied, cutting across many disciplines. IW's veteran team helps entrepreneurs navigate these challenging times by providing expertise in areas such as product development, market entry, fundraising, hiring, marketing, communications and sales.

Through years of working with hundreds of startups,

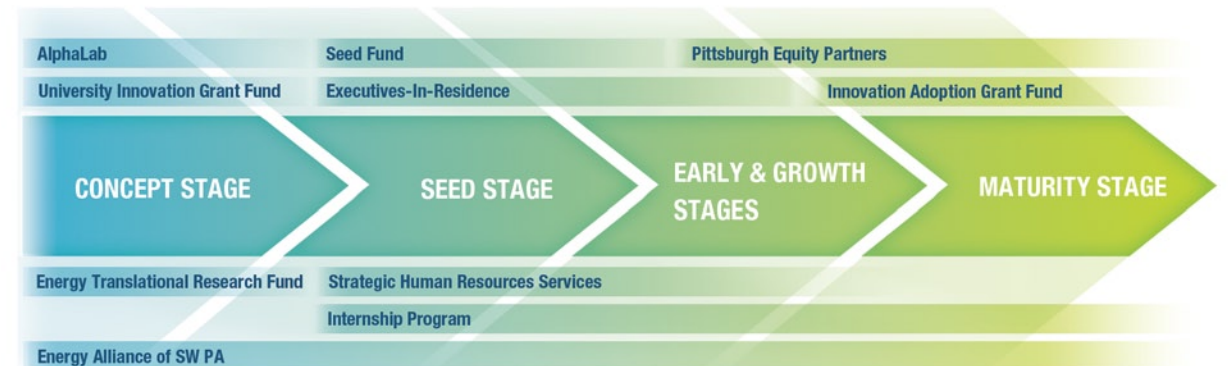


AlphaLab, a rapid product development accelerator for creating innovative web-based and mobile software companies.

In its first two years, AlphaLab has received over 350 applications from 35 states across the U.S. and seven countries, and has resulted in the launching of 23 new companies in the SW PA region.

IW's programs and funding are strategically designed to capitalize on market opportunities and help entrepreneurs and companies at each stage of growth—from a promising technology in a lab, to a startup commercializing a product, to a small manufacturer trying to remain competitive in global markets.

PROVIDING CRITICAL RESOURCES FOR EACH STAGE OF COMPANY GROWTH





Cognition Therapeutics is developing small-molecule therapeutics aimed at slowing or stopping Alzheimer's and other neurodegenerative diseases

Plextronics develops printed electronics for alternative energy products such as the world's most efficient organic solar cells



RedZone uses robotic inspection technologies and data analysis software to help municipalities repair and manage North America's aging wastewater infrastructure

Epiphany Solar Water Systems concentrate solar energy to create low-cost water purification systems



ALung is commercializing artificial lung devices that can replace ventilators in patients with acute respiratory failure

ADDRESSING SOCIETY'S GREATEST CHALLENGES

IW's portfolio companies are engaged in solving some of the world's most challenging problems affecting human health, environmental issues, security and quality of life. In fast-growing sectors such as alternative energy, personalized medicine, cybersecurity, clean technology and robotics, these companies are technology leaders and market innovators.

"The companies IW invests in are not just solving complex problems and capitalizing on market opportunities, they are improving people's lives, sustaining the environment and having a positive impact on society," notes Rich Lunak, CEO, Innovation Works.

Knopp Neurosciences CEO Michael Bozik, M.D. says the company hopes to prevent fatal neurological diseases such as ALS (Lou Gehrig's Disease). Knopp received early investment from IW. The company received Fast Track designation from the U.S. Food and Drug Administration and is in Phase 2 studies.





ATTRACTING AND RETAINING TALENT

Innovation Works initiatives are helping early-stage companies and the region attract and retain top talent.

IW's Strategic Human Resources initiative helps companies prepare for explosive growth by attracting and retaining not just the top talent, but the right talent for the position and the company at each stage of growth.

Nearly a third of IW's talent placements in the past three years were women and minorities and almost one fifth of them were 'boomerangs,' highly skilled individuals attracted back to the region with the right opportunity.

IW's AlphaLab, an immersive environment which helps entrepreneurs rapidly develop technologies and companies, is also attracting the interest of bright minds in software, web, mobile and entertainment technologies from around the world.

"We've been blown away by what AlphaLab has had to offer—surrounding us with in-house experts, other entrepreneurs, and access to potential investors," said Jordan Messina, co-founder of 25eight Inc. Messina was on his way to Pittsburgh after accepting a leadership-track position with a bank when a podcast about entrepreneurship in Pittsburgh caught his ear. Two months later, he opted out of the corporate track and co-founded AlphaLab company 25eight with fellow New York native John Ganotis.

Henry Thorne is an ultimate frisbee player but he just may be the ultimate serial entrepreneur. After completing graduate work in robotics at Carnegie Mellon in 1984, Thorne has started three companies, two of them with Innovation Works seed funding, including Aethon, maker of the TUG® robot for hospitals, and his newest venture, Thorley Industries, creator of the wildly successful 4Moms brand which infuses robotics technology into toys and baby products.

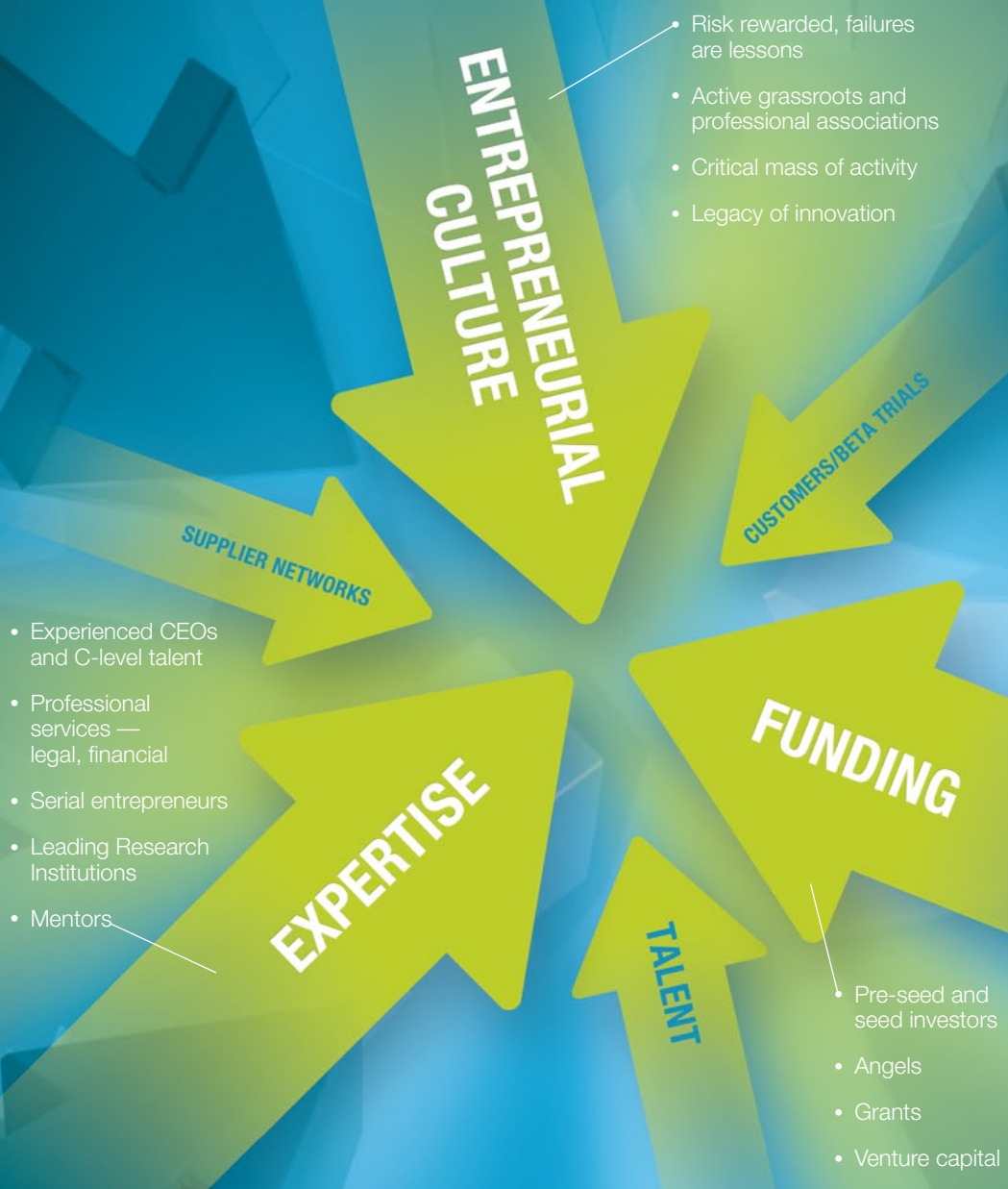
Whether founded by a graduate student or serial entrepreneur, early-stage companies here are attracting star talent in science, engineering, marketing and management from around the globe.



CREATING A VIBRANT ENTREPRENEURIAL COMMUNITY

The Pittsburgh region's legacy of entrepreneurship and innovation runs deep, marked by renowned names such as Andrew Carnegie and George Westinghouse. Today, that spirit continues to drive the economy as technology-based entrepreneurship has become a key engine of growth. IW has played a leading role in driving this technology economy by providing funding and expertise to hundreds of startups, and connecting vital organizations and experts with each other and the region's most promising early-stage opportunities.

"All around the world, I have seen the significant role that services and capital support offered through programs like Innovation Works play in creating a vibrant and diverse ecosystem of support for entrepreneurs."
 Chris Shipley, Co-founder of DEMO and Guidewire Group



Innovation Works serves as a focal point for forming critical connections between entrepreneurs and the region's broader business community, helping to create a more efficient innovation ecosystem in Southwestern PA.





PLEXTRONICS
Light. Power. Circuitry.™

“IW’s early funding was critical in enabling us to develop and scale our technology.

The business expertise their team provided helped us move from the lab to commercialization.”

Andy Hannah (right), Co-founder and CEO, Plextronics, pictured here with Dr. Rick McCullough, Co-founder and Chief Scientist

Plextronics is recognized worldwide for its conductive ink technology for low-cost organic solar cells and high-efficiency lighting. IW was Plextronics’ first institutional investor when it spun out of Carnegie Mellon in 2002 after years of research. The company now employs 70.

Innovation Works

IMPACT8

LEVERAGING RESEARCH STRENGTHS

The Pittsburgh region has a concentration of innovation assets that is unmatched: Nearly \$1 billion in cutting-edge research conducted at regional universities, and another \$1.6 billion in energy-related research and commercial opportunities at the National Energy Technology Laboratory and area companies. IW is tapping into this base with programs to further spinouts from the universities and by taking a lead role in aggregating clean and alternative energy research and development to accelerate the commercial opportunities for regional companies.

IW developed its University Innovation Grant program to help move high-potential research and ideas from labs to commercialization. By providing resources to researchers for technology validation, market research, prototype development, business planning and commercialization, IW has helped accelerate the spinout of companies with promising market opportunity.

“IW is a vital link in the entrepreneurial community here. They play a key role in helping researchers to determine whether their innovation warrants moving forward as a startup company. IW’s vetting process creates a stamp of approval for future investors.”

Marc Malandro, PhD., Associate Vice Chancellor for Technology Management and Commercialization, and Director of the University of Pittsburgh’s Office of Technology Management.

ENHANCING THE REGION'S PROFILE

Along with a host of organizations, IW has raised the profile of the Southwestern PA region among national and international media, investors, business and government leaders, entrepreneurs and technologists. Pittsburgh's ranking continues to climb in areas such as venture capital investment, livability and a climate supportive of technology-based entrepreneurship. Companies in the IW portfolio have distinguished themselves by capturing national awards, furthering scientific discovery and attracting a global customer base. This creates a halo effect on other companies and the region as investors, media and policymakers look to Pittsburgh for leadership in innovation.

They're among the 'coolest young entrepreneurs' in the U.S., according to Inc. magazine. ModCloth co-founders Eric Koger and Susan Gregg Koger started their online vintage clothing store in a college dorm room. They received expertise and funding from IW beginning in 2007. "IW funds helped us scale the team, build up inventory and fund our proprietary e-commerce platform. But the value went way beyond the dollars. They opened a lot of doors for us, helped hone our pitch for angel investors and gave us invaluable credibility," says Eric Koger. Today the company has more than 100 employees.



“Pittsburgh stands as a bold example of how to create new jobs and industries while transitioning to a 21st century economy.”

President Barack Obama following the G-20 Summit

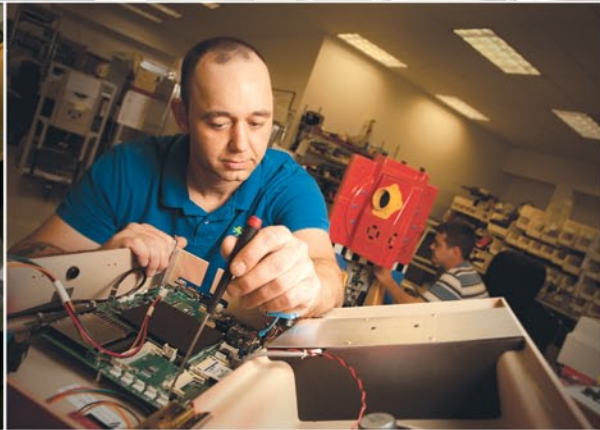
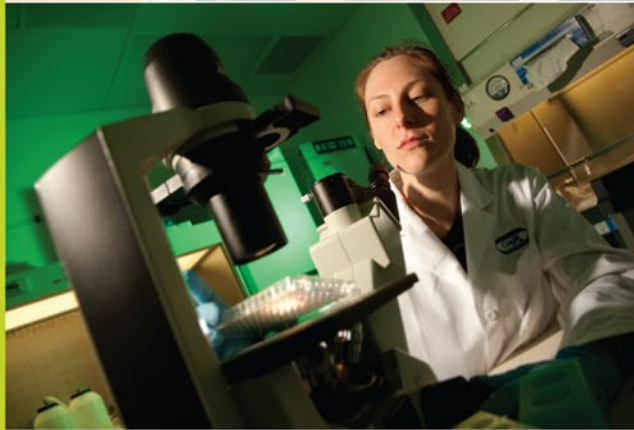
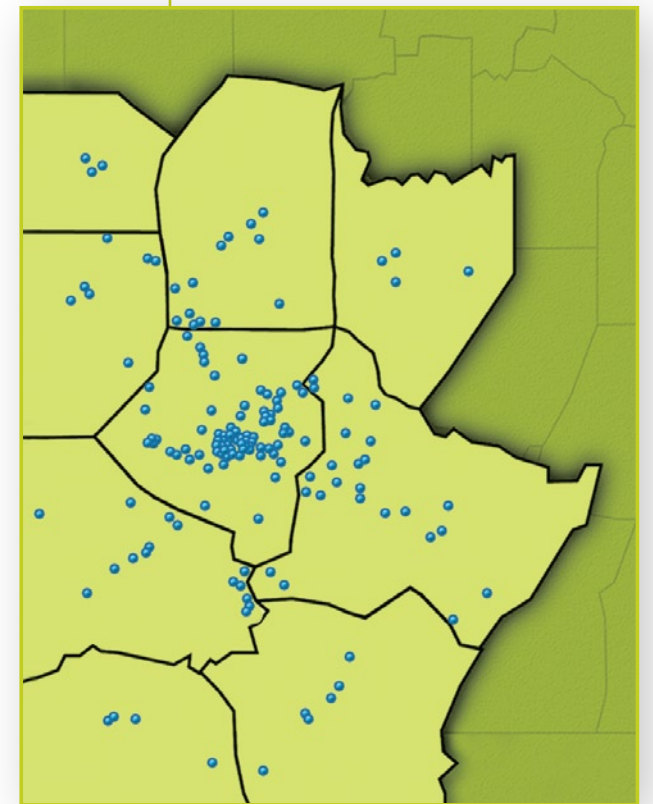
DIVERSIFYING OUR ECONOMY THROUGH INNOVATION

Innovation Works plays a key role in helping startups and innovative manufacturers grow in an economy that is increasingly technology-based and globally competitive. Our philosophy of investing in the best opportunities across all sectors has served the region well in fueling growth across a diverse spectrum while complementing other regional efforts focused on specific industries.

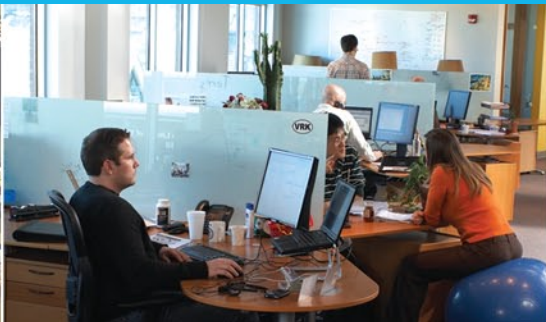
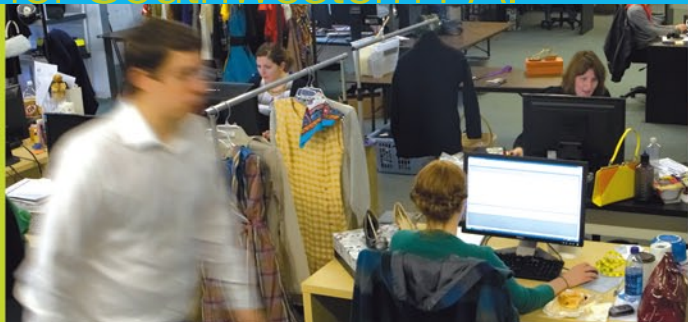
Over the past 10 years, IW funding and support has been deployed throughout the nine-county SW PA region to support hundreds of companies in a diverse array of sectors ranging from software and IT, to biotechnology, advanced materials, robotics and advanced manufacturing. IW's Innovation Adoption Grants specifically help small manufacturers work with centers of excellence to find technology solutions for new products and markets.

"The region is better diversified now so the volatility during booms and busts has been reduced," said Stuart Hoffman, Chief Economist, The PNC Financial Services Group. "Part of that diversification comes from the growing base of small firms where the region was once defined by a larger manufacturing base. But well established small companies create more jobs than large companies."

IW plays a vital role in SW PA's technology economy, investing capital, business expertise and other resources in high-potential companies with the greatest likelihood for regional economic impact. These companies range from technology-based startups to small innovative manufacturers.



A balance of technology-based startups and innovative manufacturers provides a diverse economy and steady momentum for Southwestern PA.



GROWING COMPANIES, GROWING IMPACT

It's been 10 years since Southwestern PA's Ben Franklin Technology Partnership became Innovation Works. That gives us an opportunity to reflect, not just on the cumulative stats, but on the progress we've made as a region, and the achievements of the early-stage companies that are fueling our growth. Their stories are remarkable and their importance to our region is significant. At right, you'll see that these companies are making scientific breakthroughs, attracting venture capital, and garnering industry awards and international recognition. Our companies are creating wealth and jobs and fueling what has become a diversified, technology-based economy, relatively resilient to sharp economic cycles such as the two downturns we've weathered in the past decade.

Our role as a regional investor has given us the opportunity to work with hundreds of these young startups and progressive manufacturers, helping them grow and take on global challenges using advanced technologies. In so doing, we are strategic in evaluating where the greatest opportunities are and how we can best fill critical gaps.

Initiatives such as AlphaLab, Pittsburgh Equity Partners and the Energy Alliance are the most recent examples of this strategic approach.

We will continue to look for opportunities to strengthen our region's entrepreneurial environment by recognizing market needs and then mobilizing regional resources to capitalize on them.

The SW PA region has an abundance of innovation assets here with world-class universities and federal labs conducting research, and a good balance of established global companies and young startups that position us for continued growth. That innovation edge is what will propel us. In addition, our entrepreneurial culture is thriving, with a growing network of business advisors, investors and risk-takers who are fostering the next generation of companies and giving us all reason for optimism. This emerging community as a whole is incubating more of our young companies and will sustain our economy.

It has been a decade of challenge, opportunity and breakthrough, one that is setting the stage for even more promise and potential.



Rich Lunak
President & CEO



Ron Bianchini
Chairman



Innovation Works COMPANY HIGHLIGHTS

Aethon – formed a strategic partnership with Bosch Group, a global leader in industrial technology, and was featured by Forbes.com as one of “Seven Technologies That Could Change Health Care.”

ATRP Solutions – Technical co-founder Krzysztof Matyjaszewski received the 2009 Presidential Green Chemistry Challenge Award from the Environmental Protection Agency.

BPL Global – formed a partnership with global energy leader Siemens to integrate and resell BPL Global's energy resource management solutions. BPLG is also partnering in 19 federal Smart Grid Investment Grants totalling more than \$800 million.

ClearCount – received FDA clearance for two products. Their SmartSponge System was named one of the Top 100 technological innovations in the “Best of What's New” Awards by *Popular Science*, the world's largest science and technology publication.

ModCloth – Founders Susan and Eric Koger were named to Inc. magazine's prestigious 30 Under 30 top entrepreneurs. In two years, ModCloth grew from 3 to 105 employees with more than 10 million visitors to their online store.

Plextronics – set a world record for solar cell efficiency and was featured on the CBS Evening News segment “The Future of Jobs in America.” Plextronics recently achieved ISO 9001 certification.

RedZone Robotics – RedZone's autonomous wastewater inspection device, SOLO, was named by *Popular Science* as one of 25 new technologies that will help transform the crumbling US infrastructure. The company acquired Icomm, Inc., a software company serving the wastewater industry.

SEEGRID – consolidated and expanded all of its manufacturing operations in a new 30,000 sq. ft. facility near Pittsburgh International Airport. The company expects to bring on as many as 100 new employees following the opening of the new facility.

Sim Ops Studios – CEO Shanna Tellerman was named to *Business Week's* Best Young Tech Entrepreneurs 2009.

Thorley Industries – won multiple Juvenile Products Marketing Association Innovation Awards for their products and received a strategic investment from Newell Rubbermaid Group, the owner of Graco.

Vivísimo – has been named one of KMWorld's “100 Companies that Matter in Knowledge Management.” Vivísimo has earned a spot on this prestigious list for eight consecutive years.

CARRYING OUR MOMENTUM FORWARD

The region's future holds much promise with a vibrant entrepreneurial community that is stronger than ever.

What factors will shape our technology-based economy and sustain it in years to come?

- A growing base of first-time and serial entrepreneurs.
- An expanding base of local investors.
- Increased attention from investors outside SW PA.
- An increasing appreciation of the value of risk and the important lessons of failure.
- A steady base of manufacturers who continue to innovate.
- Continued strength in research and education.

SW PA is already outperforming our benchmark regions around the country in several categories, such as attracting outside investment, but we must aspire to do more to become a global leader in tomorrow's most promising fields. We have a strong base to build upon, including a combination of unique assets: our world-class research institutions, and the mix of early-stage and mature companies that are breaking new ground on challenges of global importance. One of the best examples of this is the recent aggregation of our energy resources into the Energy Alliance of Southwestern Pennsylvania which will position SW PA as a global leader in energy innovation, production and related manufacturing.

There's more to come and IW looks forward to helping it take shape.

“The world is getting better. Improvements have been matched, and in some cases triggered, by advances in science, technology, and medicine. They have brought us to a high point in human welfare.

We are at the start of a technology-driven revolution in what people will be able to do for one another. In the coming decades, we will have astonishing new abilities to diagnose illness, heal disease, educate the world's children, create opportunities for the poor, and harness the world's brightest minds to solve our most difficult problems.”

Bill Gates, Chairman, Microsoft Corporation
remarks at World Economic Forum 2008



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Innovation Works is the Southwestern Pennsylvania Ben Franklin Technology Partner, an initiative of the PA Department of Community and Economic Development and is overseen by the Ben Franklin Technology Development Authority. We thank the Commonwealth for its ongoing financial support. We also appreciate a decade of support from the Pittsburgh region's foundation community: the Claude Worthington Benedum Foundation, the Heinz Endowments, Hillman Foundation, R. K. Mellon Foundation, and Tippins Foundation. We thank the numerous federal agencies that have provided programmatic funding: US Departments of Commerce, Defense, Energy and Labor plus the Small Business Administration. The success of Innovation Works and our companies also relies on the contribution of many individuals and organizations who invest their time, expertise and capital in the region's startup technology companies.

The figures used throughout this community report are based on company responses to IW's annual impact survey.