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The IEDC
Economic Development Journal

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Diversifying Downtown from the Ground Up
Setting and Managing the Stage for Downtown Revival

Innovation in Economic Development
Transforming Philadelphia's Economy

Manufacturing the Future
Greater Philadelphia in the 21st Century

The Art of Tourism
How Arts & Culture Fuels the Tourism Economy

When Partnerships Work in Marketing a Region
Success at a Local Level Means the Entire Region Succeeds

A River Runs Through Them
The Story of Philadelphia and Camden's Downtown Waterfront Revivals

Supporting the Southeastern Pennsylvania Life Sciences Industry
The First 30 Years of Innovation & Growth

The World Trade Center of Greater Philadelphia
Driving Regional Economic Growth and Jobs Through Exports

Recession and Recovery
Economic Performance in the Third Federal Reserve District

Transit-Oriented Development in the Greater Philadelphia Region
Progress, Challenges, and Opportunities

INTERNATIONAL
ECONOMIC DEVELOPMENT
COUNCIL

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INTERNATIONAL ECONOMIC DEVELOPMENT COUNCIL

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The International Economic Development Council (IEDC) is the premier international association dedicated to leadership and excellence in economic development. IEDC can equip you with the tools and resources that are helping to shape economic development throughout the country and around the world. Our services include:

- *ED Now*, a twice-monthly newsletter
- *Economic Development Journal*, a quarterly publication
- Improved access to resources and information
- Enhanced educational choices
- Stronger advocacy and access at the Federal level
- Expanded networks and alliances
- Industry-leader publications
- Expanded research and technical assistance
- An international presence

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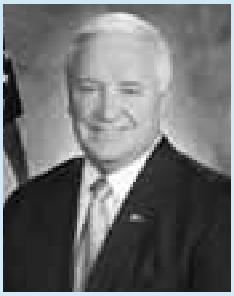

Tom Corbett
Governor of Pennsylvania

LETTER FROM THE GOVERNOR

welcome to pennsylvania

Dear IEDC Members:

On behalf of the Commonwealth of Pennsylvania, I invite you to attend the 2013 International Economic Development Council's Annual Conference in Philadelphia, Pennsylvania on October 6-9, 2013. I look forward to welcoming you and other economic development professionals from all over the world to Pennsylvania so that you can see for yourself all the development opportunities that exist in our beautiful state.

I have made it a top priority to create an environment in which companies can grow by enacting historic business tax and regulatory reforms. A business-friendly environment along with Pennsylvania's world-class higher education institutions, skilled workforce, low-cost energy, and proximity to 40 percent of our nation's population make the possibilities for success limitless. Pennsylvania's keystone location provides companies one-day trucking access to all major markets on the eastern seaboard. Our three major ports provide shipping access to the Atlantic Ocean, Great Lakes, and the Gulf of Mexico.

Pennsylvania is a leader in cross-border projects with the largest network of overseas offices of any U.S. state, and we are committed to breaking down barriers for businesses looking to expand. We stand ready to help you become the next Pennsylvania success.

Many of our partners in the Philadelphia region and throughout the state have been preparing for your arrival for quite some time. Philadelphia is an economic success story that spotlights revitalization and accentuates the theme of the conference: *Transformation, Innovation, Reinvention: Creating Tomorrow's Economy Today*. Philadelphia, the City of Brotherly Love, is packed with diverse industries and is home to Fortune 500 companies as well as international companies with home offices in Asia, Europe and South America.

Philadelphia is also a remarkable city with many historic destinations. Be sure to make time to experience our nation's history with a visit to the National Constitution Center or spend some time at the Liberty Bell and Independence Hall.

I hope to see you in Philadelphia where you can hear more about why we are so proud to live and do business in the Keystone State.

Sincerely,

Tom Corbett

Tom Corbett
Governor of Pennsylvania

Michael A. Nutter
Mayor of Philadelphia

welcome to philadelphia

Greetings!

It is a great pleasure for me to welcome you to the International Economic Development Council's (IEDC) 2013 Annual Conference. Through a program of top speakers, cutting-edge topics, and educational tours, conference attendees will not only see the region's innovative energy, but leave with fresh strategies and tools to take their organizations to the next level.

IEDC is a non-profit membership organization dedicated to helping economic developers do their job more effectively and raising the profile of the profession. When the organization succeeds, their members create more high-quality jobs, develop more vibrant communities, and generally improve the quality of life in their regions.

Philadelphia is proud to have been chosen as the host city for this conference that will address obstacles facing economic developers, as well as existing trends in our dynamic economy. With the right tools, economic developers everywhere can create a vision for the future, stimulate consensus, and prepare their communities for 21st century success.

On behalf of the City of Philadelphia I extend best wishes for a productive and successful conference. May you return home with fond memories of the City of Philadelphia and its citizens.

Sincerely,

Michael A. Nutter
Mayor of Philadelphia

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INTERNATIONAL
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diversifying downtown
FROM THE GROUND UP

By Paul Levy

A TALE OF TWO RECESSIONS

Act 1. *Time:* 1990. *Setting:* The real estate boom of the last five years has transformed Center City's skyline. State-of-the-art office towers have broken an informal, decades-old rule that skyscrapers should be no taller than 548 feet, the height of the peak of the hat on Alexander Milne Calder's 27-ton cast-iron statue of William Penn atop City Hall. But at street level, there are windstorms of litter; graffiti is lathered on buildings; retailers roll down security gates by 6 pm; the commercial district is empty and avoided after dark.

A decade of federal disengagement has compounded the impact of four decades of suburbanization, leaving declining resources for cities. Philadelphia's municipal budget is severely stressed, verging on bankruptcy. To cope, local government has been raising the real estate tax from 4.475 percent in 1970 to 8.264 percent; a real estate transfer tax has gone from 1 percent to 4.07 percent; a resident wage tax, first levied in 1937 in the midst of the Depression has climbed from 1 percent to 4.96 percent; a perversely named *business privilege tax* takes 3.25 percent of gross revenues and 6.5 percent of net revenue from every business. As a result, businesses are decamping for the suburbs. By the time this recession is over, downtown real estate will have lost 26 percent of its assessed value.

Act 2. *Time:* The present. *Setting:* The 58-story, Comcast Center, at 974 feet, is the tallest building in Philadelphia looming over lesser giants from the late 1980s. But unlike those towers, each with several hundred parking spaces below ground, the LEED certified Comcast Center has only an 87-space parking garage underground. It features instead, a 500-seat concourse level dining court and direct connections to the regional train lines. On a landscaped, surface plaza, adorned with a café, generous landscaping and playful fountain, parking was provided for 100 bicycles. Between 200 and 300 are parked there each day in a downtown where 74 percent of residents get to work without a car.

The Comcast Center, at 974 feet, is the tallest building in the Philadelphia skyline.

Paul Levy is president and CEO of the Center City District/Central Philadelphia Development Corporation. (plevy@centercityphila.org)

The surrounding environment has been transformed: 419 non-profit arts and cultural institutions provided 26,000 performances, classes and exhibitions in 2011 and the ten major performing arts organizations attracted more than 2.6 attendees, filling sidewalks with patrons every evening. Public investments in a convention center and tourism promotion prompted a 95 percent increase in downtown hotel rooms; nearly all of the 38 hotels are in repurposed or historic buildings. Visitors, workers, and residents can choose from 713 restaurants and 273 outdoor cafes. The number of options has steadily increased even through the recession.

SETTING AND MANAGING THE STAGE FOR DOWNTOWN REVIVAL

Since 1990, Center City Philadelphia has been transformed from a littered, 9-to-5 office district where merchants rolled down gates after dark, to a thriving 24-hour, live-work environment, enlivened by new housing, theaters, sidewalk cafes, hotels, new skyscrapers, and impressive population growth. This reincarnation is the result of private and public initiatives, including the creation of the Center City District. The CCD started with the aim of making downtown clean, safe, and attractive, but is now also lighting sidewalks and building facades, redeveloping and managing parks, and promoting public schools to ensure that Philadelphia is a leader in the renaissance of America's great cities.

In 1990, there was just one major residential condominium in the commercial core. Now, there are 49 condominium buildings with 3,871 units and another 165 apartment buildings with 15,630 units in what had been purely a commercial district. But downtown's residential boundaries have also dramatically expanded, as the population has increased by 16.3 percent in the last decade.

With almost 14,000 new housing units completed in the last 15 years, there are 181,000 residents now living in the eight zip codes between Girard Avenue and Tasker Street. Sixty-six percent of them have at least a college degree; 39 percent have advanced degrees; 22,000 children have been born to Center City parents in the last decade. Strollers are everywhere. Philadelphia now has the third largest downtown population among American cities, behind only New York and Chicago.

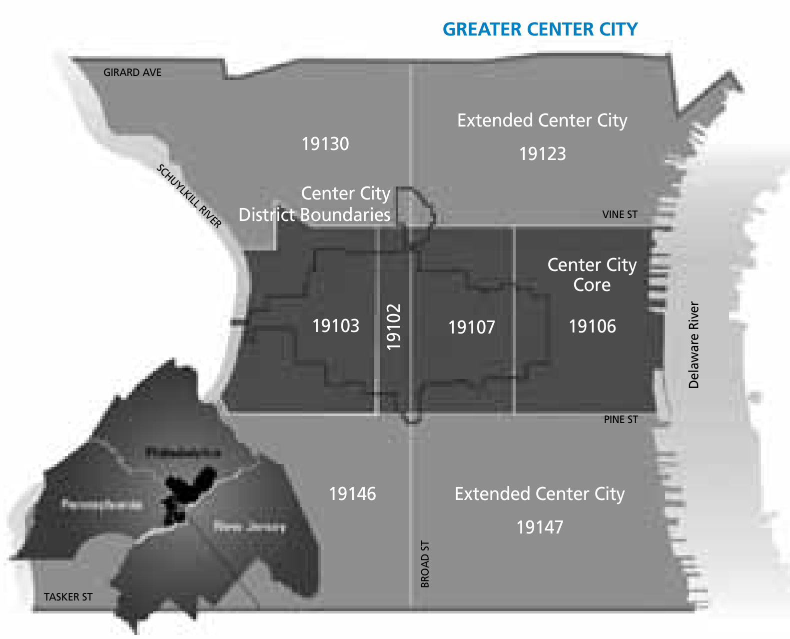
Diversification pays dividends. In every year of the worst recession since the Great Depression, the aggregate value of Center City real estate has *increased*; office occupancy is five points higher than surrounding suburbs; apartment and townhouse construction continues, along with major developments driven by educational, health care, and research institutions.

Two severe recessions; the same city; two very different outcomes.

What did it take to transform littered, fear-filled streets and vacant buildings into a thriving 24 hour downtown?

MAKING TRANSFORMATIONAL CHANGE INCREMENTALLY

It took private developers; public inducements; strong, local, charitable foundations; entrepreneurs; adventurous new residents; and new marketing campaigns. Demographic trends and rising energy prices surely contributed. But it began with *clean* and *safe*.



The CCD maintains its commitment to keeping the downtown clean and safe.

In the depths of the real estate recession in 1990, major property owners, business and civic leaders, convened by developer Ronald Rubin, took advantage of a state law that enabled property owners to assess themselves with a real estate surcharge collected through the mandatory mechanism of a business improvement district (BID). Securing the approval of a skeptical City Council, a term-limited mayor, and more than 2,100 downtown owners, many initially averse to paying more in a high-tax city, the Center City District (CCD) was launched on the first day of sping 1991 with a budget of $6.5 million and a narrow focus on *clean* and *safe*. Key to the initial launch was the credibility of an all private-sector board that defined the services, programs, and charges and a professional staff, imbued with a culture of customer service, with the authority to bill and collect directly from property owners.

Deploying 50 uniformed sidewalk cleaners and 42 safety ambassadors, called Community Service Representatives (CSRs) who are co-located with a contingent of Philadelphia police, the CCD is a textbook case of how to nudge a place over the *tipping point*. Focusing first on the basics, quality of life issues that shape perceptions, the CCD sought initially just to remove the negatives – *dirty* and *dangerous*. Over two decades, as population, vistors, and density have increased, serious crimes have been cut in half and quality of life crimes reduced by 75 percent. Through the evolution and expansion of its services, the CCD reclaimed the public domain. Ultimately, by investing more than $118 million in public area and park improvements, it has helped restore investor confidence in the entire downtown.

ANIMATING A WALKABLE DOWNTOWN

From William Penn's 1682 plan, Center City inherits a compact, walkable street grid. Because so much of the past has been preserved, buildings are at an intimate scale and provide the rhythm that Jane Jacobs saw as essential for thriving streets: frequent doors, numerous windows, and short blocks. It's a place where

38 percent of downtown residents walk to work and where convention attendees don't need buses to get to their hotels.

The story of the last 22 years is a tale of how incremental, but sustained investments in this historic grid transformed a declining, single-purpose American CBD into a vibrant and diverse, European-style city center.

A pro-development, promotional Mayor Edward Rendell took office a year after the CCD commenced operations, focusing on fiscal recovery and a revival driven by arts, entertainment, and hospitality investments. Beginning in 1992 on the Avenue of the Arts, with the guidance of the city's lead economic development agency, the Philadelphia Industrial Development Corporation, historic theaters were renovated and new theaters built. Office buildings that had been in their prime in the 1920s were converted to hotels, apartments, condominiums, and art student housing.

The Pennsylvania Convention Center, in the works since the 1980s, opened in 1993, marrying a restored 19th century train shed to a new state-of-the-art 440,000-square-foot facility right in the middle of downtown. Hotel rooms followed, most created in restored, underutilized office buildings like the former PSFS bank building, the Girard Trust bank building, and Reading Railroad's former corporate headquarters. A new 1,200-room Marriott gave Philadelphia its prime convention hotel with direct pedestrian links into the Reading train shed. In March 2011, the Convention Center completed a major expansion, doubling to offer almost a million square feet of exhibition and meeting space.

Community Service Representatives serve as ambassadors to the public and create a welcoming presence.

New visitor attractions around Independence Mall filled in gaps created by the overly-aggressive bulldozers of urban renewal. A new visitor's center, a new constitution center, a new home for the Liberty Bell, the National Museum for American Jewish History, and the President's House now draw more than 3 million visitors a year to the historic district. Today, more than 10,000 hotel rooms are within a 15-minute walk of the Convention Center and the new attractions around Independence Hall. Another major hotel opened in October 2012 in a rehabilitated historic building on Independence Mall, while a newly constructed suites hotel opened this year, immediately across from the Convention Center.

Funding for convention and tourism promotion is provided by a surcharge on hotel rooms with a division of labor that has the Philadelphia Convention and Visitors Bureau marketing to convention and trade meeting planners and those who handle group travel. Greater Philadelphia Tourism Marketing Corporation focuses on leisure travelers. Together, these two organizations have given the city and region a national profile it lacked two decades ago. On the business side, they are complemented by Select Greater Philadelphia, a regional marketing effort supported by the Greater Philadelphia Chamber of Commerce.

INVESTING IN THE PUBLIC ENVIRONMENT

Downtown has a strong employment base of professional and business services, educational and medical institutions with 221,000 private sector jobs providing more than $13.2 billion annually in salaries and compensation to regional residents. Reinforcing this base and capitalizing on a long tradition of downtown living, the diversification of the downtown brought new customers, new restaurants, and evening animation. To this, the CCD added $118 million in streetscape and public area enhancements funded by its own bond issues and by the leveraging of city, state, federal, and foundation funds.

Each year, for the last 15 years the CCD has made improvements that steadily add up: 1,000 street trees, 2,200 pedestrian-scale, light fixtures, 683 maps and directional signs for pedestrians and 233 for motorists; there are also maps and historic information on transit shelters and graphics and illuminated signs for 100 entrances to underground transit. Along the Benjamin Franklin Parkway, CCD placed a comprehensive interpretative sign system and illuminated public sculpture and building facades. On the Avenue of the Arts, there are synchronized color-changing LED lights on the facades of eight different buildings. All are visible signs of transformation, giving confidence to investors, developers, businesses, and residents.

The story of the last 22 years is a tale of how incremental, but sustained investments in this historic grid transformed a declining, single-purpose American CBD into a vibrant and diverse, European-style city center.

TURNING ON THE LIGHTS UPSTAIRS

In 1997, a citywide, ten-year tax abatement, granted for converting vacant buildings to residential use, altered the dismal economics for 4.5 million square feet of obsolete class B and C office space and former industrial buildings. Expanded in 2000 to cover all new construction citywide, the abatement prompted in Center City alone the conversion of 171 buildings to residential use and the addition of 14,000 new housing units, resulting in a 26 percent increase in population in the core of the downtown over the last two decades.

Initially, new residents were predominantly the young professionals and empty-nesters who are flocking to most U.S. downtowns. But the 2010 census demonstrated the broad appeal of Center City living: 28 percent of downtown residents were ages 25-34 (twice the national average), 24 percent were ages 35-54, and 22 percent were 55 or older. Twenty-two percent of households with adults ages 35-54 reported school age children at home, while day-care centers, pre-school programs, and elementary schools are surging in enrollment as more families with children remain in the city. The markers of downtown residential revival are clear: dogs and dog parks come first; then come the strollers, daycare centers, and the search for quality schools.

A MULTI-PURPOSE ORGANIZATION FOR A MULTI-USE DOWNTOWN

Today, the CCD has diversified into a $20 million operating **entity**, focused still on clean and safe, but now also managing a broad range of services: convening public and private security through a 200-person downtown Crime Prevention Council; installing and routinely changing more than 3,500 banners on downtown streets for 70 different cultural and civic groups; promoting restaurants, retail and cultural amenities through print, electronic, and social media; and managing highly-visible special events like the twice-annual *Restaurant Week* promotion.

Most recently, the CCD has taken on more complex projects like park renovation and management: adding two new cafes along the Benjamin Franklin Parkway, creating a children's park from derelict space at Logan Square, and restoring a small pocket park at 1707 Chestnut Street, renaming it after landscape architect John Collins, who originally designed the park, along with the landscaped greenways in Society Hill and created the first drawings for the now thriving Schuylkill River Park.

In 1995, there were no outdoor cafes in Center City. Today there are 273.

Along the way, the CCD began providing extensive, contractual cleaning services to adjacent communities, simultaneously offering employment opportunities for formerly homeless individuals and those making the transition from welfare-to-work. In 2007, the CCD assumed maintenance responsibility for the 3.5 mile underground subway concourse and two regional rail stations, deploying another 50 cleaners to enhance the transit connectivity of a downtown where 310,000 take public transit into Center City each day.

Today, the Center City District is leading the $50 million renovation of Dilworth Plaza on the west side of City Hall, creating a new gateway to public transit, much-needed green space for Philadelphia's primary office district, a new fountain with a kinetic piece of public art, fashioning a civic centerpiece to link together all the city's major cultural, tourist, and business corridors. The project will be complete in the spring of 2014.

Through its partner organization, Central Philadelphia Development Corporation, there has been a major focus on enhancements to the Benjamin Franklin Parkway, where the Barnes Foundation recently relocated, bringing a unique collection of Impressionist and Post-Impressionist art. There have been sustained efforts to retain families with children in the city through a website www.KidsInCenterCity.com and a partnership with parents' organizations and the School District of Philadelphia. Through an alliance with major developers, building owners, and city wide organizations, efforts are underway to complete the unfinished work of the Rendell Administration in the 1990s, helping Philadelphia fashion a pro-growth, post-industrial tax policy.

Initially, new residents were predominantly the young professionals and empty-nesters who are flocking to most U.S. downtowns. But the 2010 census demonstrated the broad appeal of Center City living: 28 percent of downtown residents were ages 25-34 (twice the national average), 24 percent were ages 35-54, and 22 percent were 55 or older.

A 21ST CENTURY DOWNTOWN

It is one of the defining paradoxes of the post-industrial economy: as digital technology enables work to occur virtually any place, the qualities of a particular place become paramount. Lively parks; attractive plazas; clean, safe, walkable, landscaped and well-lit streetscapes; outdoor cafes; and accessible and customer-friendly transit – all the spaces between buildings – become essential to a competitive, downtown experience. Business improvement districts (BIDs) have thus become the stage setters and managers for many 21st century cities whose local governments find resources severely constrained.

Unlike office campuses, theme parks, and shopping centers, absent a BID, downtown management would be fragmented among thousands of individual property owners and scores of public agencies. BIDs are the common area maintenance corporations for urban districts. But they can also be, as one writer suggests, the horizontal developers who make vertical development possible.

Diversification of Center City real estate has spurred a self-reinforcing, virtuous cycle. Hotels, theaters, and restaurants create an environment that appeals to business and residents. The hospitality industry creates work for accounting, architecture, and law firms. Office tenants attract both corporate meetings and business travelers who fill hotel rooms. Fifty-five percent of the business at the Pennsylvania Convention Center is driven by the health-care, education, and pharmaceutical industries.

Sister Cities Park, opened in 2012 on the Benjamin Franklin Parkway, is family-friendly and accessible to the office district, residential neighborhoods, and tourist attractions.

Young, in-movers support new uses in old buildings: cafes, home furnishing stores, bowling alleys, gyms, and spas. In one of the most startling signs of change, an "adult entertainment" venue was recently converted to play space for infants and children. New theaters beget new restaurants that attract patrons to outdoor cafes. An active street-scene draws customers who come simply to savor the downtown experience. People enjoy watching people. Empty-nesters, tired of commuting and cutting lawns, downsize to live in the center of it all (though the latest generation of condos priced in the $3 to $7 million range should hardly be termed *downsizing*).

As housing prices have risen dramatically in the center, new households seeking more affordable options push out the perimeter of the revitalizing downtown. Citywide, 20 percent of the residents of every neighborhood commute to work in Center City. But the definition of the expanding downtown is based not only on new households and rising prices, but the widening zone in which more than 40 percent of the residents work downtown; another 12 percent commute to adjacent University City. This is the live-work environment of successful 21st century cities. Residents beyond the immediate walkable range of the business district are relying more on public transit and bicycles and are shopping and eating at places that advertise locally-sourced product – all hallmarks of a sustainable lifestyle.

Even as the inventory of unsold condos left from the 2008-2009 housing crisis drops below 10 percent, developers have shifted almost entirely to building new rental product in the downtown, while new townhouses in the extended neighborhoods of Center City are still being brought to market, but at a very modest pace. Overall, population densities in the expanded downtown are at 41 persons per acre, 20 times the densities in surrounding suburbs. Around Rittenhouse Square, densities rise to 95 persons per acre, creating the strongest market for retail in the city.

Looking ahead, East Market and East Chestnut Streets, slow to participate in revival, will steadily improve as major sites like the Gallery at Market East and Girard Square are redeveloped and as rising rents on the west side push more tenants east. At least one major commercial office building could break ground in the coming year and more would follow if local government gets its tax policies right.

AN AGENDA FOR COMPETITIVENESS AND GROWTH

Amenities matter, making cities more attractive to businesses, residents, and tourists. But Philadelphia's growth is still constrained by a tax structure inherited from the manufacturing age, when large factories with fixed assets depended on rivers and railroads. Even after Rendell-led reductions, continued by Mayor John

Street, brought the resident wage tax down a full point to 3.928 percent, municipal government still generates 66 percent of local tax revenue by taxing highly mobile wages and profits. It only secures 17 percent from taxes on land and real estate improvements.

But nearly all professional, business, and financial services firms, as well as start-ups and entrepreneurs, are highly mobile tenants, linked to the global economy through laptops and hand-held devices. These firms can be anywhere and, while quality of life issues matter, they are highly sensitive to the differential burden of local taxes.

Philadelphia thus stands at a crossroads. For more than a half-century the city shed old-economy jobs, leaving diminished opportunities in working class communities. Now economic and demographic trends, lifestyle choices, and energy-costs are all tilting in Philadelphia's favor.

The 2010 census raised the curtain on a new era. With downtown's expansion and new Latino and Asian immigration in neighborhoods east of Broad Street, the city's population increased for the first time in 60 years. With a strong regional transit system, good highway access, world-class educational institutions, and a downtown that concentrates 129 jobs per acre in a compact, mixed-use and walkable place, Philadelphia is poised to capture a much greater share of regional growth, creating opportunities for residents at all educational and skill levels.

Dilworth Plaza is expected to open in mid-2014.

innovation in economic development

By John Grady

Philadelphia's economic strength lies in the diversity and innovation of its people, its institutions, and its business community. That's why the Philadelphia Industrial Development Corporation (PIDC) works with businesses, non-profits, and developers in all sectors and neighborhoods to provide financing and real estate resources resulting in job creation and economic growth. PIDC's unique position at the intersection of the public and private sectors has enabled it to compete for new resources and develop innovative new products to keep up with the needs of the marketplace.

PIDC has been the City's economic development corporation since 1958. As a non-profit, public-private joint venture founded by the City of Philadelphia and the Greater Philadelphia Chamber of Commerce, PIDC plans and implements financing and real estate transactions throughout all neighborhoods that attract investment and jobs to Philadelphia. PIDC's investments serve to diversify the City's economic base and improve the quality of life for businesses and residents alike. Over the past 54 years, PIDC has settled over 6,000 transactions – including $10.5 billion of financing and 3,000 acres of land sales – which have leveraged over $20 billion in total investment and assisted in retaining and creating hundreds of thousands of jobs in Philadelphia.

Local economic development officials are asked to promote market growth against the backdrop of a challenged national and international economy while also addressing varied public policy concerns such as small business formation, job creation for low-income residents, sustainable development, leading edge development in under-performing or blighted markets, and brownfield site reclamation. With limited public resources and many challenges, PIDC's innovation strategy focuses on attracting capital to address current and anticipated market needs and repositioning land for future development.

Credit: Philadelphia Convention & Visitors Bureau

Philadelphia's skyline as seen from the Philadelphia Museum of Art.

John Grady is president of the Philadelphia Industrial Development Corporation. (jgrady@pidc-pa.org)

ATTRACTING CAPITAL TO ADDRESS MARKET NEEDS

Like many economic development organizations, the Philadelphia Industrial Development Corporation (PIDC) has traditionally drawn on an array of economic development programs funded at the federal, state, and local levels that are available at low or no cost. PIDC, in turn, has structured these varied sources into a spectrum of subordinated and below-market financial offerings that are designed to fund gaps in the private markets and to meet the City's policy goals. As governmental resources shrink, we are turning more and more to internal and private sector resources to supplement

TRANSFORMING PHILADELPHIA'S ECONOMY

The Philadelphia Industrial Development Corporation (PIDC) is at the forefront of the nation's leading public-private partnerships. Working collaboratively with the City of Philadelphia and the Greater Philadelphia Chamber of Commerce, PIDC has been able to attract and retain businesses through innovative financing and real estate solutions. Understanding the needs in the marketplace and developing new resources and programs to meet those needs has been a key to PIDC's success. Whether promoting entrepreneurship and small business growth, or helping large corporations with business location or expansion, PIDC's financing and real estate solutions work well in both a struggling and bustling economy.

public funds and address additional needs of Philadelphia's business sector.

Flexible Capital for Small and Emerging Businesses

Since the start of the 2008 recession, PIDC has found increasing demand from emerging businesses, including small, minority, woman and disabled-owned businesses, for working capital. Since such uses of funds are typically discouraged by public sources of funds, PIDC has looked to its own balance sheet and bank partnerships to develop pilot programs to meet this important market need.

PIDC has used internal funds to create the Emerging Business Loan program, offering working capital secured by specific contract receivables. For example, PIDC was able to provide a loan under this program to Bittenbender Construction, a woman-owned construction firm that was suffering from a slow-paying construction contract and had otherwise tapped out its bank lines of credit. PIDC has administered 67 Emerging Business Loans over the last five years.

To create the Emerging Business Guarantee program, PIDC partnered with three local community banks – United Bank, Valley Green Bank, and East River Bank – to provide loan guarantees for small business loans that fall just short of the banks' credit criteria. With a guarantee from PIDC, Valley Green Bank provided financing to a growing bakery, Philly Cupcake, which allowed the company to expand into a third retail location in a formerly vacant storefront on an important commercial corridor. In 2012, PIDC guaranteed seven loans totaling nearly $1 million. In 2013, PIDC will introduce a third product, the Emerging Business Bonding program, which will enable small contractors to access surety bonding and thereby bolster their ability to bid on construction projects.

Photo Credit: Michael Spain-Smith

Philly Cupcake owners Johnny Columbo and Michael Lewis, participants in PIDC's Emerging Business Guarantee Program.

Based on our positive track record with small and emerging business lending, PIDC is now turning to the community development finance world to complement and extend our existing resources for the benefit of Philadelphia's small business community. PIDC obtained its Community Development Finance Institution (CDFI) certification in 2012 and has commenced a strategic effort to attract private bank and foundation capital to the small business community which is otherwise not being served by the private sector.

In an important first step, PIDC has joined forces with Goldman Sachs and their *10,000 Small Businesses* initiative to make $10 million in lending capital available via PIDC to small businesses throughout Philadelphia. The Goldman Sachs 10,000 Small Businesses initiative is designed to help create jobs and economic growth by providing small businesses with practical business education, business support services, and access to capital. Community College of Philadelphia will deliver the business education portion of the program in Philadelphia. This partnership draws on the best of both worlds – Goldman Sachs' access to private capital blended with PIDC's on-the-ground experience with the local small business market.

Investing in Sustainability

Increasing awareness of the negative impact of inefficient buildings and storm water management practices to our environment and business' bottom line is driving a rising call for financing of environmentally sustainable practices. PIDC partnered with the City and The Reinvestment Fund (TRF), a prominent local CDFI, to successfully compete for and structure federal Department of Energy dollars along with other public and private funds to create the EnergyWorks Loan Fund. EnergyWorks provides low-interest loans to building owners who are looking to improve their overall energy usage by at least 25 percent by improving the building envelope and/or basic building systems. To date, PIDC has administered six EnergyWorks Loans to projects meeting the goals of the loan fund.

In addition, PIDC has joined forces with the Philadelphia Water Department to implement the Stormwater Management Improvement Program (SMIP). This innovative program offers grants and loans to business property owners that want to manage stormwater onsite through proven technologies such as green roofs or porous pavement.

Startup PHL: New Funding for Entrepreneurs

PIDC has witnessed tremendous recent growth in Philadelphia's start-up and early-stage community. With little or no revenue and no collateral, these high-potential start-ups are not able to access PIDC's traditional debt financing, but are nonetheless crucial to the city's economic vitality. To support this burgeoning sector, PIDC joined forces with the City of Philadelphia to announce a series of initiatives under the StartUp PHL brand.

In October 2012, the City launched the StartUp PHL website (http://www.startupphl.com) and a "Call for Ideas" that will provide small grants to individuals or organizations that support the entrepreneurial community. In conjunction with the City's announcement, PIDC launched a request for proposals to create the StartUp PHL Seed Fund. PIDC is offering $3 million from its revolving loan fund resources as a lead investment in a new, privately managed SEED Fund for Philadelphia start-ups to be matched and managed by

PIDC's half century of experience has also led it to develop innovative ways to reposition land so that it can support newer forms of development.

a professional seed-stage investment firm to fill the gap between initial "family and friends" funding available to start-up companies, and the increasingly conservative financing from the formal venture and angel capital communities.

Whether it is a hard-working small business, energy-efficient building retrofit, or start-up tech company, PIDC and economic development organizations like it are continually called upon to fill the gaps left by today's private debt and equity markets. This requires innovative uses of traditional public economic development resources coupled with private resources so that Philadelphia continues to grow as an attractive place for business investment and job creation.

REPOSITIONING LAND FOR FUTURE DEVELOPMENT

PIDC's half century of experience has also led it to develop innovative ways to reposition land so that it can support newer forms of development. With a long track record including more than 500 successful real estate transactions totaling more than 3,000 acres of land completed since its founding, PIDC is an experienced participant in Philadelphia's real estate marketplace. From the development of some of the earliest urban industrial parks in the U.S. to helping create new zoning classifications that reflect the evolution of modern industrial activity to crafting master plans for future industrial districts, PIDC has played an important role in the development of Philadelphia.

Industrial Land & Market Strategy

In 2010, PIDC, working along with the City Planning Commission and the Philadelphia Commerce Department, released the *Industrial Land & Market Strategy for the City of Philadelphia (Strategy)*, a comprehensive analysis of industrial activity in Philadelphia. Based on a detailed parcel-by-parcel survey of nearly 25 square miles of industrially-zoned land, the *Strategy* provides a data-driven foundation for city policies affecting the industrial sector. While the character of industrial firms in Philadelphia has changed remarkably since the city was known as the "Workshop of the World," with names like Baldwin Locomotive, Disston Saws, and Stetson Hats giving way to Augusta Aviation, Lannett Pharmaceuticals, and Microcision, industry remains an important component of the city's economy.

Today, industrial firms are the source of more than 100,000 jobs with a combined annual payroll of $5 billion. In recognition of the importance of industrial activity to Philadelphia, the *Strategy* has led PIDC to focus on several new ways to nurture and support industry. The *Strategy* documented the characteristics modern industrial users need to thrive – industrially-zoned land with adequate infrastructure, modern facilities, workforce access, and separation from incompatible uses.

Since the *Strategy's* release, PIDC has coordinated an inter-agency review of proposed zoning changes and variances on industrial land in Philadelphia. Annually, this review team evaluates approximately 300 zoning requests to determine what impacts proposed non-industrial uses will have on the integrity and function of industrial districts. The City Planning Commission made use of the research in the *Strategy* during its development of *Philadelphia2035*, the city's comprehensive plan which identified industrial legacy areas that require protection and support, and the 2011 overhaul of the Philadelphia Zoning Code which included the simplification and modernization of the city's 50-year-old code and two new industrial classifications designed to reflect new forms of industry.

Lower Schuylkill Master Plan

The *Strategy* also included a comprehensive survey of Philadelphia's industrial districts. This survey identified a 3,700-acre section of the district along the Schuylkill River containing nearly 70 percent of the city's vacant or under-utilized industrial land as a prime candidate for redevelopment. While large, under-utilized industrial zones are unfortunately all too common in older cities, the Lower Schuylkill does have features which make it suitable for redevelopment into a 21st century industrial district.

A future aerial view of the 3,700-acre Lower Schuylkill River district to include three campuses; Innovation District, Logistics Hub and Energy Corridor.

The Lower Schuylkill is located adjacent to areas which drive Philadelphia's economy, notably University City – home to several world-class universities and research centers; Philadelphia International Airport; and the PIDC-managed Navy Yard – an emerging industrial, commercial, and energy campus. The area is industrially-zoned and has parcels with the scale required by modern industry. The Lower Schuylkill has access to two interstates and is served by both passenger and freight rail. Finally, the district straddles a riverfront that is increasingly being rediscovered as a recreational amenity by Philadelphians thanks to the extension of the Schuylkill River Trail that will provide connections to both residents and employees to important park space along the river.

In recognition of these strengths, in 2011, the City of Philadelphia and PIDC embarked on a planning process to develop a Master Plan for the Lower Schuylkill River. Funded collaboratively by the City of Philadelphia and the William Penn Foundation, this effort identified the benefits of its redevelopment, constraints preventing it, and established a strategy, schedule, and cost for public investments required to overcome impediments to the attraction and deployment of private capital in this area. Recently completed, the *Lower Schuylkill Master Plan* now serves as a guide for a series of public interventions intended to leverage private investment, development, and employment to re-establish this district as a vibrant part of Philadelphia's economy.

Planning and Funding Waterfront Infrastructure

Like many cities, Philadelphia has struggled to successfully redevelop its waterfront. Recent waterfront planning initiatives, led by the Delaware River Waterfront Corporation (DRWC) and Penn Praxis, a University of Pennsylvania planning initiative, have sparked new excitement, particularly along a six-mile stretch of the Delaware River dubbed the "Central Delaware."

In 2010, DRWC developed *A Plan for the Central Delaware*, a detailed blueprint for transforming 1,100 acres of Delaware River waterfront into a vibrant destination for recreational, cultural, commercial, and residential activities. DRWC completed several early action projects, including artistic and well-lit connector streets, the widely-acclaimed Race Street Pier, an ecological park, and a waterfront trail. New restaurants and entertainment venues have followed. With this new momentum, a number of large-scale, privately-led projects are beginning to emerge.

To support this new development, particularly the residential and retail development envisioned by the *Plan*, new financing resources are required to address cost premiums and market risk associated with waterfront redevelopment. In late 2012, PIDC teamed up with the City, Delaware River Waterfront Corporation (DRWC), the William Penn Foundation, and Forsyth Street Advisors to evaluate the viability of a public-private investment fund capable of providing long-term, patient capital to facilitate this new development. Currently under development, this fund will serve as a new mechanism for public-private collaboration to fund and implement transformative development in Philadelphia.

THE NAVY YARD: INNOVATION IN ACTION

Traditionally, economic development has centered on two fundamental drivers – financing and real estate – to catalyze the private marketplace. Today, innovation in attracting and developing new financial tools and real estate assets is critical to the continued transformation of Philadelphia's economy for the future. There is no better example than the ongoing successful redevelopment of The Navy Yard in South Philadelphia.

Photo Credit: Michael Spain-Smith

The Navy Yard at full build-out, expected to support up to 13.5 million square feet of facilities, attract $3 billion in private investment, and employ more than 30,000 people.

The Navy Yard is a 1,200-acre former military base that was closed in 1995 as part of the U.S. Department of Defense Base Realignment and Closure (BRAC) process. In 2000, the federal government conveyed the property to the City of Philadelphia with PIDC serving as master developer and manager for all aspects of the property's management and development, including master planning, leasing, property management, infrastructure development, utility operation, and structuring leasing and development transactions.

Upon transfer of the property, PIDC's 1994 plan focused initially on stabilizing and revitalizing the property's industrial assets and securing employment opportunities for its workforce. Once the industrial sector was stabilized, PIDC focused on attracting new office, research, and industrial investment selecting Liberty Property Trust and Synterra Partners as a commercial and industrial development partner.

Together with Liberty/Synterra and the City, PIDC undertook a new master planning process for a mixed-use campus in addition to the property's industrial assets. Since the release of that plan in 2004, there has been more than $700 million in private investment and in excess of $130 million in public infrastructure investment. The 2004 plan has the development of The Navy Yard as a highly sustainable place that includes environmentally friendly workplaces, significant architecture, industrial development, great public spaces, waterfront amenities, improved mass transit, and the potential for residential development.

In 2006, The Navy Yard Smart Energy Campus was created as a collaboration of businesses, universities, and government, focused on establishing The Navy Yard as a national center for energy research, education, and commercialization. By actively engaging all of The Navy Yard's assets – its people, infrastructure, and buildings – the Smart Energy Campus is developing and deploying the next generation solutions in energy efficiency, smart grids, and related engineering and IT fields.

In 2011, The Navy Yard was chosen by the U.S. Department of Energy (DOE) as the national headquarters for the Energy Efficient Buildings Hub (EEB Hub). The EEB Hub is led by the Pennsylvania State University, funded by a $129 million renewable federal grant from DOE, and supported by three other federal agencies and the Commonwealth of Pennsylvania. The EEB Hub is a 27-member consortium focused on solving energy efficiency challenges by designing and deploying proven, economically viable technologies that significantly reduce energy consumption in the nation's commercial buildings, while also promoting economic growth and job creation. With the creation of the EEB Hub, more and more energy-efficiency related companies have begun locating to The Navy Yard.

Today, The Navy Yard is a dynamic, urban waterfront campus that is home to more than 130 companies and 10,000 employees in the office, industrial/manufacturing, and research and development sectors, occupying 6.5 million square feet of real estate in a mix of historic buildings and new LEED® certified construction. PIDC recently released an update to the Master Plan in combination with an Energy Master Plan calling for The Navy Yard and the community to continue demonstrating these innovations around energy and collaboration. At full build-out, The Navy Yard will support up to 13.5 million square feet of facilities, attract $3 billion of private investment, and employ more than 30,000 people.

Every day brings something new to PIDC. Making investments and building relationships with institutions and for-profit and non-profit businesses that are diverse, dynamic, and fun to work with never gets old. By attracting capital to address market needs, repositioning land for future development, and putting it all together at The Navy Yard, Philadelphia and PIDC stand as leaders in innovation and economic development.

Photo Credit: Michael Spain-Smith

Photo Credit: Michael Spain-Smith

Welcome to The Navy Yard, a 1,200-acre former military base; now a dynamic, urban business campus that is home to over 10,000 employees and 130 businesses occupying 6.5 million square feet of space.

The Corporate Center, developed by Liberty Property Trust/ Synterra Partners, a vibrant district of The Navy Yard that offers collaborative, progressive, and environmentally friendly workplaces.

manufacturing the future

By Joseph J. Houldin

Just as the 19th and 20th century companies and industries grew to be national in scope and stood on the shoulders of a diverse base of existing companies that were seeded in the 18th century, Greater Philadelphia's 21st century manufacturing sector will grow, once again, from the existing large and diverse base of manufacturers on the ground today. The future belongs to the entrepreneurs from every size company with an overall environment that enables them to do what they do – make things.

Joseph J. Houldin is CEO of the Delaware Valley Industrial Resource Center. (jhouldin@dvirc.org)

There is an increasing reference in the general public and business media to a macro trend in our early 21st century national manufacturing economy. It is described as entering the Second Industrial Revolution. With terms like re-shoring, on-shoring, and back-shoring, it suggests that a major reinvention of how and where what is made – what is manufactured – is well underway.

Manufacturing activity continues to be viewed by economically emerging countries as the doorway to broad-based national prosperity. As such it is cultivated in many different ways by government policy in countries throughout the world. Of course the world stage in 2013 is very different from the one in 1850 but is still very important to understand where and how developed countries and regions will continue to play. The foundational threshold for a seat at this new larger table is and will continue to be some mix of price, quality, and service advantage where the plusses of one help offset the minuses of another. Also, we have come to understand or remember that innovation, or an increase in the rate of positive change from the norm, is the secret sauce that produces sustainable competitive advantage.

Hit hard by the most recent recession, the nation's manufacturing base has been weathering ongoing global shifts in manufacturing production, intense international price competition, major demographic shifts, and frenetic world markets. Greater Philadelphia's manufacturing sector, once heralded as the "Workshop of the World," has also weathered these elements and has done so (in large part because of its diversity) better than many other regions. With a manufacturing renaissance of sorts underway, Greater Philadelphia is poised yet again to become a premier region in the business of making things. The Delaware Valley Industrial Resource Center (DVIRC) has witnessed these changes over the past 25 years and will continue to provide high value-added services focused on helping companies with profitable growth. In addition to helping companies with operational efficiencies, we now offer a robust suite of services for strategy and new market development focused on growing business value.

What follows makes the case briefly for why the Philadelphia region will once again be one of the global players in this "second" industrial revolution.

THE WORKSHOP OF THE WORLD

From the Greater Philadelphia area perspective, what is happening can just as easily be described as its *Third* Industrial Revolution. The Philadelphia area was the center of manufacturing for the 13 original colonies and at the center of the "first" industrial revolution. It was in the forefront of the period when things were made in a low volume, highly customized, craft-based production model; it was in the forefront of the shift to a more mechanized, high volume and low customization model; and it is now at the forefront of the current revolution to a high value-added mass customization model.

Just as the 19th and 20th century companies and industries grew to be national in scope and stood on the shoulders of a diverse base of existing companies that were seeded in the 18th century, Greater Philadelphia's

GREATER PHILADELPHIA IN THE 21ST CENTURY

From its craft beginnings in colonial times, through its ascent as a major steel producer and maker of ships and planes and locomotives and just about everything else at the turn of the 20th century, to its unparalleled production at the Philadelphia Naval Shipyard during World War II and post-war rise as a center of chemical and pharmaceutical research and production – Greater Philadelphia's manufacturing history is long and storied. Today, through innovation and partnerships, the region's manufacturing sector has not only survived but is poised to thrive, and emerge as a premier region "in the business of making things."

While some of the large manufacturers in our region are re-shoring – K'NEX toys for example – a vast majority of the 6,000 manufacturers in Greater Philadelphia are thriving because they have perfected their craft, adopted lean manufacturing practices, and identified targeted niche markets worldwide.

21st century manufacturing sector will grow, once again, from the existing large and diverse base of manufacturers on the ground today. The future belongs to the entrepreneurs from every size company with an overall environment that enables them to do what they do – make things.

The Philadelphia region has that environment and those entrepreneurs. Three such examples follow.

K'NEX. While some of the large manufacturers in our region are re-shoring – K'NEX toys for example – a vast majority of the 6,000 manufacturers in Greater Philadelphia are thriving because they have perfected their craft, adopted lean manufacturing practices, and identified targeted niche markets worldwide.

K'NEX is a third generation, family owned toy maker from suburban Philadelphia that moved part of its manufacturing process overseas in the 1990s. Over the past four years, the company has grown by about 40 percent. Thanks in part to license agreements with Nintendo, Sesame Street, NASCAR, and others, its toys are now distributed in 40 countries, up from just 12 three years ago. Its management recently began re-shoring, hiring workers and spending millions on equipment locally. The decision to do so came at a time when American parents were concerned about toys being manufactured in China. Quality matters. K'NEX is now exporting toys to China where the "Made in America" brand is desirable because it is synonymous with good quality.

Customized silicone sponge gaskets die cut at Stockwell Elastomerics.

Stockwell Elastomerics, a 4th generation and 93-year-old company, has made the shift from higher volume, commodity and price sensitive type production to lower volume, specialized production based on their ability to solve customer problems (engineering) and provide unmatched service through the fast-turn delivery of custom gaskets, seals and cushioning components for the high-tech electronics and specialty electronics markets.

If one had walked through the Stockwell Rubber plant 10 to 15 years ago, one would have seen rows of large presses die-cutting rubber parts, with significant floor space devoted to work-in-process and finished goods inventory. Today, most of the big presses are gone, replaced by four smaller, programmable water jet cutters. Much of the floor space is now dedicated to small batch size adhesive lamination and custom fabrication to support the fast-turn production needs of Stockwell's customers in the Technology Sector.

With DVIRC as a partner, the company implemented Lean Business Principles in 2007 – with the main goal of responding faster to the design needs of customers in the Technology Sector – where the sealing gasket is one of the last components specified. Despite having one engineering and production location in Philadelphia, the company's reach is global, exporting product to generate approximately 25 percent of its revenue from customers with facilities in Asia and Mexico. The business has increased in revenue by 50 percent since 2009, surpassing its pre-recession peak and gaining additional share in its strategic markets.

Dean Swisher (left) and Mike Sisco (right) apply custom adhesives in Stockwell's lamination department.

Ehmke Manufacturing Company, Inc. is an 83-year-old Philadelphia textile end-product manufacturer selling products and services primarily to the Department of Defense (DoD) and the Defense marketplace. In its early years, Ehmke produced commercial commodity textiles such as school tote bags, workers aprons, and residential awnings. Today, the company has transformed into a premier domestic military contractor supplying technical fabric products such as aviation thermal/acoustical blankets, medical first aid kits, nylon military tactical gear, and custom military aircraft VIP interiors. Ehmke's specialization in engineered, customized product solutions has resulted in substantial growth since the current ownership took control of the business in 2001.

Over the last five years, Ehmke CEO Bob Rosania and COO Cliff Stokes have successfully elevated the company up the value/margin supply chain within its market segments. Ehmke recently made a significant investment in research & development resulting in a robust New Product Development (NPD) process that has enabled the company to bring over 50 new tactical gear products to the market under the brand name, *High Ground Gear*. *High Ground Gear* is integrated nylon sewn products that are specifically designed to meet the unique mission requirements of Special Forces operators and military personnel. Ehmke's investment in R&D and its business model to offer high value-added products to its customer base have provided a pathway forward for continued growth.

GREATER PHILADELPHIA REGION – Manufacturing Establishments 2012

NAICS	NAICS Description	No. Firms	Pct. of Total
311	Food Manufacturing	529	8.9%
312	Beverage and Tobacco Product Manufacturing	61	1.03%
313	Textile Mills	64	1.08%
314	Textile Product Mills	123	2.08%
315	Apparel Manufacturing	139	2.35%
316	Leather and Allied Product Manufacturing	25	0.42%
321	Wood Product Manufacturing	147	2.48%
322	Paper Manufacturing	117	1.98%
323	Printing and Related Support Activities	635	10.73%
324	Petroleum and Coal Products Manufacturing	58	0.98%
325	Chemical Manufacturing	359	6.07%
326	Plastics and Rubber Products Manufacturing	246	4.16%
327	Nonmetallic Mineral Product Manufacturing	226	3.82%
331	Primary Metal Manufacturing	97	1.64%
332	Fabricated Metal Product Manufacturing	1,038	17.54%
333	Machinery Manufacturing	508	8.58%
334	Computer and Electronic Product Manufacturing	362	6.12%
335	Electrical Equipment, Appliance, and Component Manufacturing	151	2.55%
336	Transportation Equipment Manufacturing	139	2.35%
337	Furniture and Related Product Manufacturing	272	4.60%
339	Miscellaneous Manufacturing	622	10.51%
	Total	**5,918**	**100.00%**

Source: IHS Global Insights 2012

Bob Rosania, president of Ehmke Manufacturing Company

Through a robust Lean Manufacturing initiative implemented with the help of the DVIRC starting in 2008, Ehmke has drastically improved its productivity and eliminated wastes in its production processes. Since 2008, Ehmke has doubled in size and has surpassed its highest revenue year in 2012. As a U.S. textile manufacturer, Ehmke has not only survived, but thrived in an industry decimated by foreign competition during a tumultuous economic environment. The foundation of that success can be found in its innovative approach to NPD and its commitment to Lean Manufacturing.

These are but three examples that illustrate some of the types of changes that are going on in firms throughout the region. Housed within the manufacturing base of some 5,000 firms lies a wealth of business, engineering, marketing, sales, and production expertise that is second to none. The number of 5,000 firms is about the same as the number in 1970. Of course there are fewer large firms or branch plants and lower total employment, and most of those firms are not where they once were – in the city; they are now in the Greater Philadelphia suburbs. That said, the evidence is that the region's manufacturers as well as the region as a whole maintain a globally competitive position.

In addition to the essential ongoing company investment in innovation, the region has recently received a public investment intended to further spur investments at the company level. DVIRC and its partner organizations – PIDC, Penn State University, and Philadelphia University among them – received grants from five different public agencies (the U.S. Departments of Commerce, Energy, and Labor, and the Small Business and Economic Development Administrations) to develop an *Advanced Manufacturing Technology and Jobs Accelerator.* This project brings together economic development organizations, universities, and area companies with expertise in product design, prototyping, and manufacturing simulations capabilities to augment an already dynamic innovation process. Located at the Philadelphia Navy Yard, it will be a magnet for manufacturers to more efficiently and effectively spur innovation.

The Accelerator will be a place where the partners' services are delivered to companies committed to more aggressive growth, and it will be a hot house of innovation for the area's manufacturing community. The project was funded in part by a group of federal investors who saw opportunity for economic growth within the Philadelphia region's manufacturing sector.

MORE THAN A HELPING HAND

DVIRC and others in the region are helping to usher in the impact and benefits of this next revolution for the Philadelphia region. As a regional economic development organization, DVIRC's place among the business development and attraction-oriented service providers is defined as a convener and as an educational and technical assistance provider focused solely on the manufacturing sector. DVIRC functions as a consultant, trainer, facilitator and yes, as an instigator of continuous improvement within a company, and we offer more than a helping hand. We won't fish for you, or just teach you how to fish. We want to be your fishing buddies.

Since 1988, DVIRC has served as an economic development organization that supports its work through multi-year and performance-based contracts from the state and federal governments along with fee-for-service income. Public support enables DVIRC to pay particular attention to smaller companies that typically require a longer sales cycle and that undertake smaller projects in dollar amount and time. Public support also allows DVIRC to be more patient than most private consultants can generally afford to be – an essential characteristic that enables us to pursue our mission with passion.

Historically, for the first half of our organizational existence we focused our services on the production and operations levels in a company, helping hundreds of area firms learn about and apply the principles of Lean Manufacturing to improve quality, on-time delivery, and overall productivity. Over 2,000 individuals have been through our Lean Manufacturing programs, creating a knowledgeable army of continuous improvement soldiers. Helping companies adopt lean techniques and innovative growth strategies is at the heart of what we do, through our own internal expertise and by bringing additional service providers to the table to help our clients grow their business value – the most significant measure of business competitiveness.

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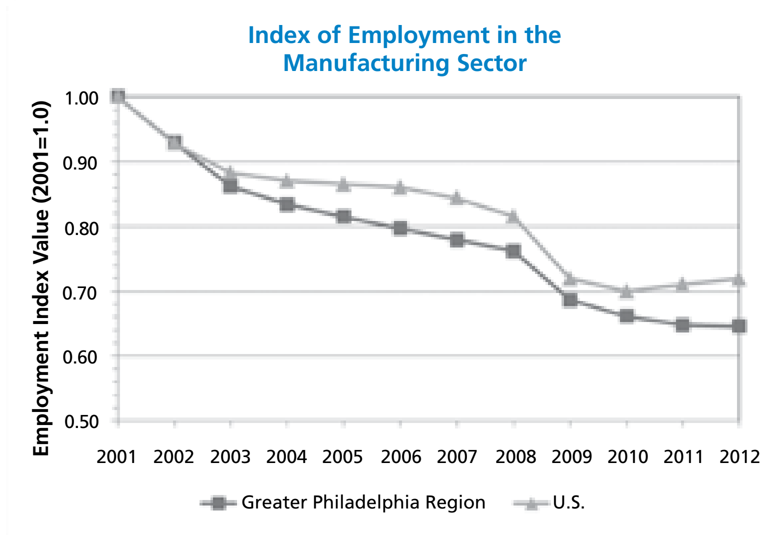
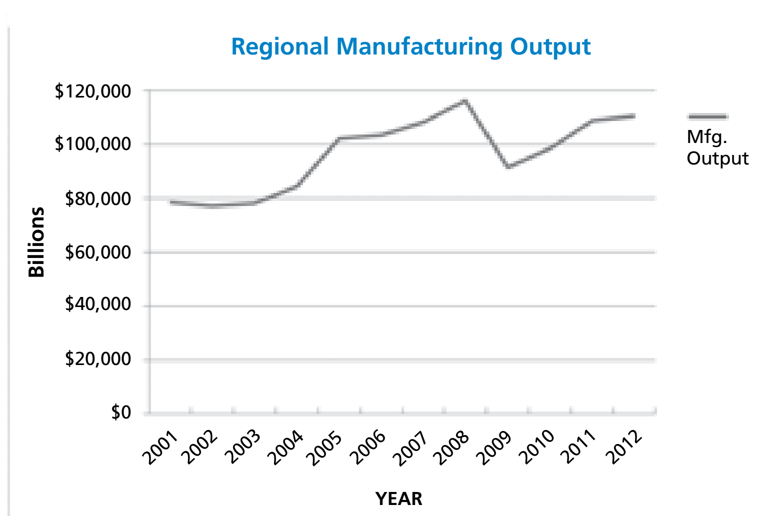


Source: IHS Global Insights 2012



Source: IHS Global Insights 2012

The key to the region's manufacturing future is directly tied to our region's ability to provide companies with the overall business environment needed to succeed. A significant business environment component is providing the talent – business, engineering, technical, financial – businesses need to grow their companies. Now and over the next decade, as older workers retire, there are and will be plentiful opportunities for individuals to forge a career in manufacturing. Engineers, machinists, mechanics, technicians, skilled production specialists – these are positions that represent opportunities to engage in the making of things that will support the high quality of life and standard of living we want for our region.

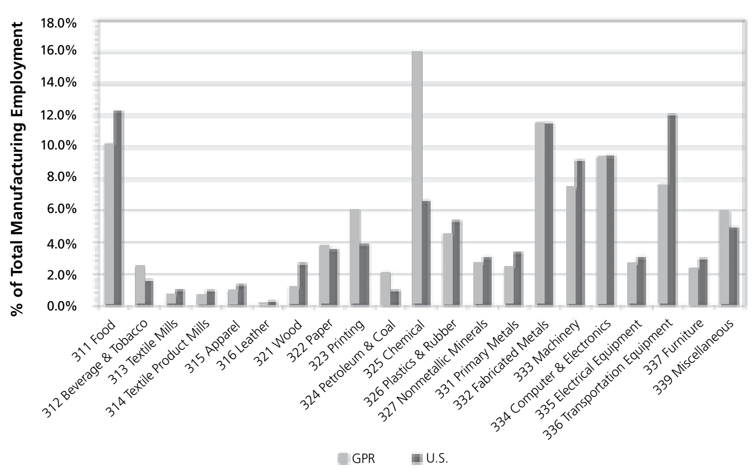
Now that our national and regional economies are inching out of the recession, we expect to see even more job opportunities in the manufacturing sector, with companies throughout the region vying for manufacturing talent as they continue to grow.

MANUFACTURING ESTABLISHMENTS BY EMPLOYMENT SIZE 2010

Employment Size	Establishments	Pct of Total
1-9	2,982	54.3%
10-19	892	16.2%
20-49	915	16.7%
50-99	353	6.4%
100-249	266	4.8%
250-499	40	0.7%
500-999	35	0.6%
1000+	11	0.2%
Total	**5,494**	**100.0%**

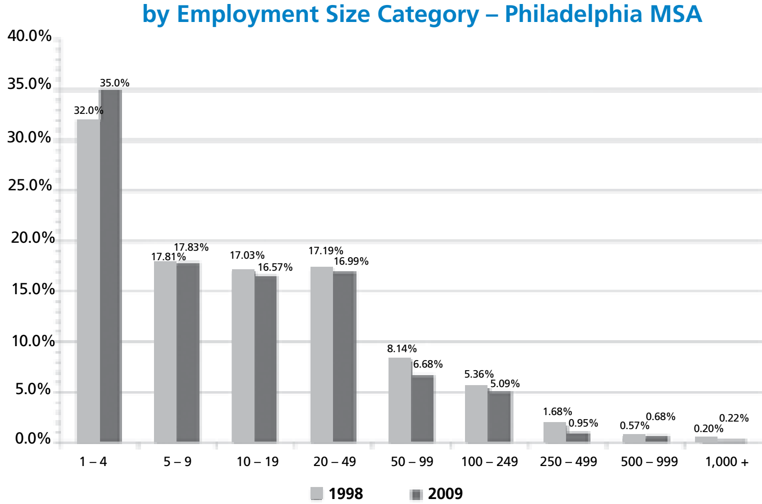
Source: Bureau of the Census, 2012. 2010 County Business Patterns

Distribution of Manufacturing Sector Employment in 2012



Source: IHS Global Insights 2012

Distribution of Manufacturing Sector Establishments by Employment Size Category – Philadelphia MSA



Source: Bureau of the Census, 2012

Following are a few of the demographics for the regional manufacturing community.

- Mfg. bottomed out at 3.28 percent of the number of firms in all sectors in 2011 and has risen over the past two years.
- Employment: Loss of an average of about 3.8 percent per year over the 12-year period (2002-2012).
- Increase in Gross Output of approximately 3.15 percent per year from 2001 to 2012, currently totaling about $110.6 billion.
- Output per worker from 2001 to 2012 had an annual growth rate of 7.3 percent per year, compared to 3.9 percent for all sectors.
- 54 percent of establishments have less than 10 employees and about 93.5 percent have less than 100 employees.

Though Greater Philadelphia manufacturing, like the rest of the nation, has suffered through decades of geographic shifts in production – first to the South, then to Mexico, and then to Asia, it has continued to increase both productivity and gross regional output. Fortunately, the region's manufacturing base is diverse and not tied to any large OEM or specific sector.

Barring a dip at the beginning of the recession in 2009, output continued to rise even as employment decreased. And while the diversity of manufacturing establishments is well spread, the region's employment in the chemicals more than doubles the national average due to the region's overall strength in pharmaceuticals.

Our region, like the nation, is a region of small firms, with over 90 percent having fewer than 100 employees and just over 86 percent having less than 50.

WORKSHOP REDUX – A MANUFACTURING REGION

Our region is again becoming a premier manufacturing region because we and the firms we work with are cultivating the characteristics that support growth and an increase in individual business value. Profitable growth, innovation in every aspect of the business, greater international market shares, increased productivity, a commitment to lifelong learning, and steady job growth – these are the features of the firms that are making Greater Philadelphia a premier manufacturing region.

After nearly four decades of unprecedented challenges, manufacturers in the region are poised for growth, reinventing themselves to compete in markets at home and around the world. New products, new processes, new technologies, new markets, and new business models – all are ways in which our clients are competing to sound the message that our manufacturing base is alive and well and formidable.

If you don't think Greater Philadelphia is a manufacturing region, take another look. What you'll see are companies representing the best American manufacturing has to offer – strong leaders in innovative enterprises with design genius and engineering know-how. Business men and women who want to define the next generation of advanced manufacturing, and who are ready to put Greater Philadelphia on the world map as a premier region in the business of making things. These are our clients: innovative companies selling all over the world, combining world class front-end engineering, design, and production with back-end installation and customer service. They are innovative leaders that are unleashing the creativity and imagination of the people they employ. They make things. And they make things happen.

After nearly four decades of unprecedented challenges, manufacturers in the region are poised for growth, reinventing themselves to compete in markets at home and around the world. New products, new processes, new technologies, new markets, and new business models – all are ways in which our clients are competing to sound the message that our manufacturing base is alive and well and formidable.

If you don't think Greater Philadelphia is a manufacturing region, take another look: there are thousands of companies with lasers, robots, materials breakthroughs, additive manufacturing prowess, nanotechnology, computer-controlled production systems, and engineering wizardry – perpetual innovation.

Whether it is precision parts, complicated assemblies and sub-assemblies, or customized design-build challenges – our companies can make and address them, and they can make them of the finest quality, delivered and serviced on time.

We have great respect for the men and women running and working in these companies – their future and the future of their companies are tied to those of the citizens of our region. Greater Philadelphia is emerging once again as a premier manufacturing region – as one of the great workshops of the world.

Our mission remains the same: to grow the business value of companies through consulting services, talent development efforts, and comprehensive resources. More than ever, we know that growing individual business value improves the standard of living and quality of life for those who live and work in this great manufacturing region.

the art of tourism

By Alan Greenberger and Meryl Levitz

Photo by B. Krist for GPTMC

The tree-lined path along the Benjamin Franklin Parkway stretches past the thoroughfare's newest neighbor, the Barnes Foundation, which opened in 2012. Blending art, nature, education and aesthetics, the 4.5-acre Barnes campus is a fitting addition to the culturally rich Parkway

Alan Greenberger is deputy mayor for economic development, Philadelphia Department of Commerce. (alan.greenberger@phila.gov)

Meryl Levitz is president & CEO of the Greater Philadelphia Tourism Marketing Corporation. (meryl@gptmc.com)

Few American cities boast an arts and culture scene that compares to Philadelphia's vast and vibrant offerings. In 2012, the Barnes Foundation's Philadelphia campus – home to one of the world's greatest collections of Impressionist, Post-Impressionist, and early Modern paintings – debuted on the culturally rich Benjamin Franklin Parkway, and with it came a bundle of accolades from major national publications. *Travel + Leisure* called the Barnes' arrival "a moment of splendid cultural renaissance" for the city and remarked that "the Barnes … is helping visitors see Philly's impressive art scene in a new light." The Travel Channel's *Traveling Type* blog named Philadelphia the "Next Great Art Destination," while *Lonely Planet* ranked the city fourth on its list of "Top 10 U.S. Destinations for 2013" based on the strong arts scene here.

With all of these rave reviews, along with consistent image building over the past two decades, come visitors – about 38 million per year – many of whom are here to explore the cultural assets that give Philadelphia a competitive advantage over many others. While visitors are busy perusing the Barnes Foundation, attending a Philadelphia Orchestra performance or exploring art galleries during one of the city's monthly "First Friday" exhibit opening night events, they're also generating revenue for our businesses ($26 million per day in 2011), creating jobs for our residents (86,000 in 2011), and reducing budget deficits ($600 million in state and municipal tax revenue in 2011).

Culture is a key tourism draw for Philadelphia and a major driver of tourism revenue. According to industry research experts Longwoods International, overnight visitors to Philadelphia who participate in arts and culture events during their stay spend an average of $624 – 54 percent more than the average visitor. They also stay longer (three nights on average compared to 2.5) and are more likely to stay in a hotel (61 percent compared to 52 percent overall) than those who do not participate in an arts and culture event. So what has Philadelphia done to attract these visitors?

LAYING THE FOUNDATION FOR TOURISM TO THRIVE

In the 1980s and early 90s, potential travelers thought of Philadelphia – if they thought of it at all – as a day-trip destination. Once they crossed the Liberty Bell, the Rocky steps, and a cheesesteak off their lists, they crossed off Philadelphia too, embracing a been-there-done-that mentality.

HOW ARTS & CULTURE FUELS THE TOURISM ECONOMY

Philadelphia has established strategic partnerships and made investments in the past two decades that have substantially increased tourism to the city and augmented its cultural amenities. These include multi-million dollar projects that created and expanded its downtown Convention Center, investments along cultural corridors, hotels, and in marketing the region. These investments have proven to be worthwhile as cultural sector jobs have increased in the region despite the national recession. Arts and Culture has demonstrated its importance within Philadelphia's economy as it supports one in 15 jobs, supports local businesses, catalyzes neighborhood revitalization, and supplements the city's revenue stream. Through these investments, Philadelphia has become a top national and international visitor destination.

Photo by PHL CVB

Pennsylvania Convention Center and Philadelphia City Hall.

To become a destination that travelers would move to the top of their must-visit and must-revisit lists, Philadelphia needed more than history. It needed buzzed-about museums, performing arts aplenty, revitalized restaurants, noteworthy nightlife, national brand stores, and independent boutiques. It needed big-name hotels for visitors to stay in and meeting space to accommodate large groups. And it needed a new commitment to marketing the city and all its great assets.

A Downtown Convention Center

The growth of the city's tourism industry into the lively and robust one that it is today began in 1993 with the opening of the 624,000-square-foot Pennsylvania Convention Center, adjacent to the historic Reading Terminal Market, a bustling and expansive public market in the former Reading Railroad headhouse. Previously, Philadelphia's largest meeting space had been the Civic Center, a classic building from 1931 located west of the downtown. The new facility immediately integrated the group travel market into the heart of Philadelphia's tourism and business districts. And its size allowed Philadelphia to compete for business on a national scale, drawing big-ticket conventions and events.

In 1993, downtown Philadelphia featured just 5,600 hotel rooms – only 65 percent of which were occupied that year. A confluence of events led to rapid construction in the hotel market – the opening of the Convention Center, the increased appeal of Philadelphia as a leisure destination and the Republican National Convention, which the city hosted in 2000. Major chains such as Marriott, Hilton, and Starwood planted several flags in the Philadelphia market, and by the end of 2011, those brands accounted for 31 hotels, representing 57 percent of the city's room supply. In recent years, boutique brands such as Kimpton have joined them, opening hotels in historic downtown buildings and a uniquely Philadelphia feel.

By the end of 2012, there were more than 11,000 hotel rooms available in the downtown area and occupancy had grown to 74 percent. This means more than twice as many hotel guests stay downtown each night compared to two decades ago, helping to drive revenue for retailers, restaurants, attractions and, of course, arts and cultural institutions.

In 2011, the Convention Center took another bold step forward, expanding to nearly twice its original size, and in 2012, the Philadelphia Convention & Visitors Bureau (PHLCVB) booked 225 meetings and conventions in the space, securing more than 565,000 total hotel room nights and an estimated economic impact of more than $813 million. Not only do these visitors pump dollars into the city and state economy, but we have anecdotal proof that these same visitors fall in love with Philadelphia and return with family or friends to see and do more.

ARTS & CULTURE ENHANCEMENTS

Over the past two decades, significant investments have also been made to enhance key cultural corridors in Philadelphia, and neighborhood redevelopment has helped spawn creative hubs throughout the city. As Philadelphia continues to move away from a manufacturing-based economy, hospitality and creative sectors jobs have proven to be key drivers of growth.

The Avenue of the Arts Arrives

One of the first upgrades to the city's downtown came in 1993 with the creation of the Avenue of the Arts, Inc. to promote South Broad Street as the city's performing arts hub for theater, music, dance, and higher arts education. Over the years, the organization has welcomed new and renewed venues along the mile-long section of South Broad Street that runs between City Hall and Washington Avenue: the Clef Club of the Performing Arts (1995), The Wilma Theater (1996), Arts Bank (1996), Prince Music Theater (1999), Kimmel Center for the Performing Arts (2001), and the Suzanne Roberts Theatre (2007). A host of restaurants, bars, and hotels also fill the Avenue of the Arts and its environs. And in recent years, the activity along the Avenue has filtered onto North Broad Street, primed to be one of the city's next must-visit neighborhoods.

Photo by G. Widman for GPTMC

Modeled after Milan's La Scala opera house, Philadelphia's 1865 Academy of Music is a performing and architectural landmark on the Avenue of the Arts (Broad Street) and is home to the Opera Company of Philadelphia and Pennsylvania Ballet.

An Historic Transformation

Philadelphia's Independence Mall has long been the center of the city's prized historic attractions, and this area began its modern transformation in 2001, when the Independence Visitor Center opened at 6th and Market Streets, locating the city's visitor services for the first time in the heart of its Independence National Historical Park. The opening of the Visitor Center served as the starting point for major enhancements throughout the neighborhood that took place over more than a decade. The $400-million-plus transformation project saw the monumental move of the Liberty Bell in 2003 to a brand new interpretive center next door, along with several new major attractions and programs on Independence Mall: the National Constitution Center (2003), Once Upon A Nation's interpretive programming (2005), Franklin Square (2006), the National Museum of American Jewish History (2010), The President's House: Freedom and Slavery in the Making of a New Nation (2010), the Philadelphia History Museum at the Atwater Kent (2012), and Benjamin Franklin Life and Legacy Museum (2013).

After a decade of transformation, the area and its first-rate facilities are better prepared to welcome and orient visitors. The new offerings also tell a much broader story of our nation's history, better incorporating different cultures and the evolving American story through time. And visitors have taken note: Independence National Historical Park now welcomes nearly four million visitors a year, an increase of one million from a decade ago.

The Parkway Gets Primed for Success

The city's latest tourism success story focuses on the Benjamin Franklin Parkway, a mile-long stretch running from City Hall to the Philadelphia Museum of Art that's long been the nexus of the city's acclaimed art offerings. A major public investment when it opened in 1929, the Parkway still serves as a central public space and a home to key tourist attractions such as the Philadelphia Museum of Art, the Rodin Museum (renovated in 2012), The Franklin Institute, the Academy of Natural Sciences at Drexel University, Swann Memorial Fountain, Cathedral Basilica of Saints Peter and Paul, and various works of public art. In recent years, the Parkway has welcomed the Ruth and Raymond G. Perelman Building (2007), housing the Art Museum's costume and textile collections; Sister Cities Park (2012), complete with a children's garden, boat pond, fountain, and café; and most notably, the Barnes Foundation (2012), site of Albert Barnes' renowned art collection.

PHILADELPHIA'S CULTURAL VITALITY

Throughout Philadelphia, arts and culture continues to grow as a source of jobs, tax revenue, and economic activity. Arts and culture institutions are part of a larger creative economy ecosystem that also includes community arts organizations; for-profit creative businesses such as commercial art galleries, architecture, music clubs; and individual artists. These businesses often share both a workforce and a customer base with nonprofit art organizations, and it would be challenging for one to thrive without the other.

According to a study commissioned by Philadelphia's Office of Arts, Culture and the Creative Economy and conducted by Econsult, the creative sector is a significant growth industry for the city and employs about 50,000 people, making it the fourth-largest industry sector employer in the city, behind only education, healthcare and retail. That means one in every 15 workers is employed in the creative sector, and that translates into $5 billion in direct output by creative businesses and $2.7 billion in employee earnings. According to the Cultural Vitality Index, another study commissioned by the Office of Arts, Culture and the Creative Economy developed by the Western States Art Federation, when comparing Philadelphia to national benchmarks, the city's creative economy was 54 percent stronger than the nation as a whole in 2010.

Photo by A. Sinagoga for GPTMC

Located at 6th and Market Streets, the Independence Visitor Center is the gateway to Historic Philadelphia, the city and the region. Visitors can find attraction information, purchase tickets and take a snack break here. The Visitor Center is also the only place to pick up free, timed tickets for Independence Hall.

Philadelphia is also a hub for secondary education in creative fields, so the next generation of creative workers are learning and living right here. The region's higher education institutions granted 7,088 degrees in creative subject areas in 2010, a huge potential workforce for the creative sector that is increasingly being retained.

Arts and culture also has a powerful impact in fostering vibrancy and stability in Philadelphia's neighborhoods. The Social Impact of the Arts Project (SIAP) at the University of Pennsylvania has been a national leader in studying what they term "naturally occurring cultural districts" and the impact of arts and culture at the neighborhood level. Their research over the past 20 years has found that cultural activity draws new residents into communities, reducing poverty and increasing population. Philadelphia is partnering with SIAP and The Reinvestment Fund to create a free cultural mapping tool that will allow further analysis and research into the relationship between the culture and economic development. The tool, "CultureBlocks," will help with decision making and drive policy and investment decisions, furthering the role of the culture and creativity in neighborhood development and urban recovery.

Organizations like the Philadelphia Museum of Art, the Kimmel Center for the Performing Arts, FringeArts, and more than 400 smaller cultural organizations help improve the quality of life for residents and visitors, as well as contribute to the estimated $580 million in revenue that the MSA's cultural organizations generated in 2010.

Philadelphia's cultural growth comes in spite of national trends in the other direction. According to the Greater Philadelphia Cultural Alliance, total attendance (paid and unpaid) increased at arts and cultural organizations by 5 percent from 2007 to 2009. Both the National Arts Index and the National Endowment for the Arts show a decline in national attendance over the same period.

Photo by R. Kennedy for GPTMC

Opened in 2012 after relocating from suburban Philadelphia, the Barnes Foundation on the Benjamin Franklin Parkway maintains the distinct display style of Dr. Albert Barnes. However, sophisticated filtering of natural light throughout the building and galleries gives the artworks a stunning, almost new look, while also reducing the building's electrical usage.

IF YOU MARKET IT, THEY WILL COME

Philadelphia's investments and increasing cultural vitality has brought the city a long way as a tourism destination over the past two decades. But in the tourism business, it's not enough to build it and hope people come. It's necessary to spread the word too.

Marketing Mission

In the 1990s, city, regional, and state leaders worked on a dedicated tourism strategy for Philadelphia. One of the results was the creation of the Greater Philadelphia Tourism Marketing Corporation (GPTMC), a non-profit organization charged with building the city's image and increasing overnight visitation by marketing directly to the leisure traveler. Since 1996, it has been GPTMC's mission to make people want to visit and revisit the city over and over again. That means running advertising; working with local and national media to feature Philadelphia on their programs, in their publications, and on their websites and blogs; developing hotel packages to help visitors stay longer and do more; and maintaining a strong and strategic presence on the web and in social media.

Visitphilly.com, GPTMC's primary visitor website, features rich content and links to all that visitors can see and do in the region. And in 2007, the City of Philadelphia funded uwishunu.com, a 'what's-happening-now' blog that brought Philadelphians closer to an array of diverse amenities by highlighting real-time experiences in the culture, culinary, and lifestyle markets. Executing all of these tactics successfully means a commitment to content that shows and tells the many new Philadelphia stories.

Philadelphia's tourism efforts have generated a clear return for the city. A recent report by the U.S. Travel Association shows that overnight visitation to Greater Philadelphia has grown six times faster than the national average since 1997 and that every $1 invested in tourism marketing generates $100 in revenue for local businesses and $5 in tax revenue for the city. Today, Greater Philadelphia welcomes 11 million more visitors a year than it did in 1997, when GPTMC began advertising. That momentum continues with new additions – museums, attractions, parks, and restaurants – to the city's tourism product every year. These additions are essential to tourism's growth and require the city to plan strategically and engage the collective will of both the public and private sectors to give storytellers even more to talk about.

Arts & Culture Marketing

In the recent past, individual cultural organizations have worked with GPTMC and the PHLCVB to create buzz, drive attendance, and increase overnight visitation around special exhibitions such as *Salvador Dalí* at the Philadelphia Museum of Art, *Tutankhamun and the Golden Age of the Pharaohs* at The Franklin Institute, and the *Philadelphia International Festival of the Arts* at the Kimmel Center for the Performing Arts. And that's exactly what these partnerships have done. The *King Tut* exhibition, for example, drew more than 1.3 million visitors from all across the U.S. and at least 13 foreign countries, resulting in nearly 100,000 room nights and $127 million in economic impact.

These small-but-significant collaborations proved to be extraordinarily worthwhile, leading the city's art leaders to believe that a major team effort centered around the opening of the Barnes Foundation would help generate sustained attention on the city's wide-ranging arts and culture scene and cement its reputation as one of the world's great art capitals.

With Art Philadelphia™

And so was born With Art Philadelphia™, a two-year, $4 million marketing campaign supporting the area's varied visual arts scene and the many art makers and keepers who contribute to its vibrancy. That includes everything from museum stalwarts to independent collectives to plentiful public art to popular annual events. And it includes everyone from classically trained art teachers to gallery owners to muralists to on-the-rise student artists.

The initial group – made up of leaders from the city of Philadelphia – including the mayor, the Office of Arts, Culture and Creative Economy and the City Representative's Office, the Barnes Foundation, the Philadelphia Museum of Art, Pennsylvania Academy of the Fine Arts, and GPTMC – recognized early on that they could do a much better job of getting the message out about Philadelphia as an arts powerhouse if they collaborated with a broad base of stakeholders to shine a significant spotlight on the region's exciting art offerings. That would mean pooling the talents and financial resources of some of the city's major institutions. Now in year two, the founding partners continue to work with a mega team of public and private partners to bring Philadelphia's visual arts scene into sharp focus for potential international, national, and regional travelers searching for their next inspired big-city experience.

Are the results paying off? In year one alone, the *With Art* collaborative generated 500 stories about the campaign and Philadelphia's art scene, and touted the message in advertising, on a newly launched website, through social media, and in a first-ever Philadelphia culture insert in *US Airways* magazine.

Another key indicator of the campaign's success is attraction visitation. The Barnes Foundation drew more than 200,000 visitors to the new facility in its first seven months on the Parkway, more than tripling a full year of operation in its previous home in Merion, Pennsylvania. Plus, in its first three months, the Barnes counted 25,000 members, ranking it among the top institutions of its kind in the country and representing an increase of 159 percent over the previous year's count of 9,434 households. Visitation figures at other Parkway attractions show that the Barnes isn't the only museum benefitting from increased attention. From June to August 2012, immediately following the launch of the campaign, attendance at The Franklin Institute, the Philadelphia Museum of Art, and the Academy of Natural Sciences at Drexel University was up 15 percent from the previous year.

ARTS & YOUR INSPIRATION

Cities seeking to link arts and culture to real economic growth should glean this message from Philadelphia: potential takes time, cooperation, and sustained commitment to turn into reality. We have worked thoughtfully and methodically over the past two decades to fully capitalize on this sector of our economy, and we're not done yet. But key to what's been accomplished so far is a vision for how to build on our assets; committed leadership in the public, private, foundation, and nonprofit sectors; and a marketing infrastructure empowered to tell Philadelphia's story for generations to come.

when partnerships work

IN MARKETING A REGION

By Thomas G. Morr

Thomas G. Morr is president and CEO of Select Greater Philadelphia. (tmorr@select greaterphila.com)

"The secret is to gang up on the problem, rather than each other." - Thomas Stallkamp

THINKING REGIONALLY INSTEAD OF LOCALLY

When Tokyo Chemical Industry recently decided to set up a distribution center in Montgomery County, Pennsylvania, it was a clear win for our entire region. Not one just for Montgomery County. Not one just for Pennsylvania. It was a victory for Greater Philadelphia.

Greater Philadelphia is an interesting destination. It's not just one county. It's not just one state. The region is comprised of Philadelphia and 10 neighboring counties in Pennsylvania, New Jersey, and Delaware. And while such a wide and diverse geographic footprint offers many advantages, it also presents many challenges.

One of the greatest challenges our region has overcome is that of thinking regionally instead of locally when it comes to economic development. And, even that has expanded to thinking globally. However, we weren't always so regionally focused. Joseph "Chip" Marshal, vice chairman, Stevens & Lee law firm in Greater Philadelphia, voiced what others in the business community were feeling back in the fall of 2003: "Why are we all competing to just move pieces around in the area?" There was a pervasive sense within the business community that regional and state level organizations were "poaching" companies across county and state lines.

So, the question was asked, "What if each county and each state stopped worrying about poaching within the region and began to put energy and money into marketing Greater Philadelphia as a great business location to companies outside the region? Even on a global stage?" In October 2003, 110 partners from business communities met what Marshal calls "the first big challenge to the business community to put its money where its mouth is" and formed Select Greater Philadelphia (Select). Select promotes the strengths of the region as a whole and serves as the economic development arm of the Greater Philadelphia Chamber of Commerce.

> Select takes a multi-pronged approach to marketing. To market Greater Philadelphia, Select enlists word-of-mouth initiatives, targeted media partnership opportunities, event marketing, enhanced industry trade engagements, and a website packed with data about Greater Philadelphia and how we compare to other regions.

Select is a unique economic development partnership in that it spans 11 county lines, crosses three state lines, and overcomes numerous political boundaries.

And, unlike most economic development organizations, Select, a 501 (c)(6) non-profit, is funded primarily by private investors. At the inception of Select, the city of Philadelphia gave $1 million in seed

SUCCESS AT A LOCAL LEVEL MEANS THE ENTIRE REGION SUCCEEDS

The business leaders of Greater Philadelphia knew that the region they live and work in offers many advantages to businesses. The unique challenge was – how to market a tri-state region with 11 counties globally instead of locally? In October of 2003, Select Greater Philadelphia (Select) was created to promote the strengths of the region as a whole and serve as the economic development marketing arm of the Greater Philadelphia Chamber of Commerce. Select took a multi-pronged approach to marketing the entire region. Some of the methods that Select enlisted have been met with the success of businesses choosing to locate to the Greater Philadelphia region. The methods include cultivating partnerships with local business leaders, reaching out to local organizations with international contacts, facilitating business connections across state lines, and overcoming political boundaries

Select is a unique economic development partnership in that it spans 11 county lines, crosses three state lines, and overcomes numerous political boundaries.

With a gross metro product of more than $390 billion in 2012, Greater Philadelphia is the country's 7th largest U.S. metro area. The region has a total land area of 4,507 square miles covering 11 counties in three states and boasts a prime location between New York City and Washington, D.C.

money. Corporate leaders raised an additional $15 million. With $16 million to fund four years of operation, Select Greater Philadelphia was launched to market the Greater Philadelphia region to companies in other parts of the United States and to the world.

Nine years later, Select has 14 employees and is in its third cycle of raising another round of funding.

PUTTING THE REGION ON THE RADAR

Greater Philadelphia sits right in the middle of the financial titans in New York City and the political powerhouses in Washington, D.C. And, it's less expensive to live and do business in Greater Philadelphia than New York or Washington, D.C.

Living and working in Greater Philadelphia seems like an obvious and smart choice. What Select found through a perception study done seven years ago was our region's reputation wasn't bad but Greater Philadelphia just wasn't on people's radar.

Taking a regional approach, Select promotes the strengths of Greater Philadelphia as a whole. Although the region is most well-known for being an "eds and meds" hub, our most obvious asset is our location in the heart of America's most powerful markets.

Select takes a multi-pronged approach to marketing. To market Greater Philadelphia, Select enlists word-of-mouth initiatives, targeted media partnership opportunities, event marketing, enhanced industry trade engagements, and a website packed with data about Greater Philadelphia and how we compare to other regions.

OUR SECRET WEAPON

"Local business leaders are Select Greater Philadelphia's 'secret weapon' in attracting companies to locate here." - Rob Wonderling, president and CEO of the Greater Philadelphia Chamber of Commerce.

Perhaps Select Greater Philadelphia's greatest strength is cultivating partnerships with local business leaders. After all, who better to talk with potential locates than local executives who live and work in the region?

So far, Select has helped nearly 100 companies locate to Greater Philadelphia and projects over 4,000 jobs will be created in the region by 2014 by the newly located companies. Over 6,000 additional, indirect jobs will support these companies as they set up shop; jobs in construction and technology as well as in the service industries such as legal and banking.

All the companies that located to our region were made possible because all or a combination of local business leaders; local businesses; and city, county, and state representatives came together and made it happen. Everyone worked together, across state lines, county lines, and political boundaries for the good of furthering the growth and economic well-being of Greater Philadelphia.

Here are four companies that Select, with the help of many partners, helped locate to our region. Each company represents a success for the region. Each stands as an example of opportunities that were seized and challenges that were overcome.

THE MARK GROUP

A "Behind-the-Scenes" Team Effort

Pennsylvania State University received federal grants from the Department of Energy, and from the state of Pennsylvania to create an Energy Innovation Hub, now called Energy Efficient Buildings Hub (EEB). The EEB Hub, located at Philadelphia's Navy Yard, was built to focus on developing energy-efficiency technologies for buildings.

Mark Group installs an energy efficient attic upgrade using EcoFill, a glass-fiber based insulation manufactured with over 60 percent post-consumer recycled material and 100 percent formaldehyde-free. EcoFill is GREENGUARD certified for use in schools and hospitals.

The Commonwealth of Pennsylvania, the city of Philadelphia, and regional economic development organizations made a concerted effort to promote the EEB Hub as a center for energy companies.

This joint effort paid off when Mark Group, a global leader in providing energy efficiency analysis and upgrades to residential and commercial property owners, selected the Navy Yard's Clean Energy Campus as its new U.S. headquarters in October 2010.

"A great many people have worked hard behind the scenes to make this investment possible, and we are grateful for their support," said Jeff Bartos, the president and CEO of Mark Group's North American operations.

Working "behind the scenes" together to make the case for Greater Philadelphia as a premier business destination for Mark Group were Select, the city of Philadelphia, the Pennsylvania Department of Community and Economic Development, the Philadelphia Industrial Development Corporation, and PECO's economic development department.

Site tours and business connections were arranged. Greater Philadelphia's strategic location, great highway access, and tremendous regional business support coupled with its major academic institutions and world-class airport with strong service to Europe were significant factors in the company's decision to locate to our region.

The Governor's Action Team offered Mark Group a $3.28 million funding offer that includes a $2 million Pennsylvania Industrial Development loan, a $500,000 opportunity grant, a $638,000 job creation tax credit, and $143,550 from WEDnet, a workforce web portal that is devoted to advancing the training and education needs of workers and employers in Pennsylvania.

Mark Group has hired over 90 new employees since October 2010 and continues to grow with two new offices in New Jersey.

And, as Mark Group continues to grow and thrive in Greater Philadelphia, so does its commitment to the region. Mark Group has partnered with Drexel University, LaSalle University, the University of Pennsylvania, and Independence Blue Cross to offer home energy analyses to all employees. In addition, Mark Group has joined with Penn Home Ownership Services (PHOS) at the University of Pennsylvania to offer "Penn sustainability @ home." Through the program, university employees are granted access to home performance-focused educational workshops, free home energy assessments, and discounted rates for energy efficiency home improvements.

RENMATIX

The Local Business Community Rallies

In September of 2011, Renmatix, a leading producer of cellulosic sugars for the global renewable chemicals and fuels markets, opened its headquarters and technology center in King of Prussia, Pennsylvania.

It was truly a team effort, on the part of our region's state and local partners, throughout the entire courtship that led to Renmatix's successful expansion into our region.

Renmatix was looking for a location where they could recruit talent, be in proximity to other chemical companies, and have access to vendors serving those companies. The abundance of available hardwood was another future benefit that was not lost on the company, as it weighed competing alternatives.

When a local business partner identified the project to Select, we anticipated a competitive edge given the CEO of Renmatix's prior role with Rohm and Haas

Renmatix CEO Mike Hamilton at the company's Kennesaw, GA, demonstration facility that processes three dry tons of biomass into sugars daily.

in Greater Philadelphia. He knew how well suited the region is for chemical companies to grow and thrive here. One of our major selling points was that Renmatix recognized the depth of high-quality talent in material science already residing in the region.

Select worked with the Commonwealth of Pennsylvania's Governor's Action Team to connect Renmatix with financial resources. Local business leaders "rallied" and met with Renmatix executives. During those meetings, our business leaders emphasized the importance of their connections to the local universities. Greater Philadelphia has some of the leading colleges and universities in the world and partnerships between companies and the educational institutions are beneficial and often critical to both.

Select Greater Philadelphia also helped coordinate a large "welcome" event with the region's business community, stakeholders, and of course, the media. Select feels strongly that it's important to assist a company at the very least, until they are out of the gate – success doesn't just end with a company's decision to locate here. This approach helps their success as well as ours.

Mike Hamilton, CEO of Renmatix, spoke these words at the launch event. "The ease of working with Governor Corbett's administration, the incredible technical talent in the region, and the attractive economic climate all combined to make Pennsylvania the perfect partner for Renmatix."

PHOTOCURE

Across the River Cooperation

When Photocure looked to establish its U.S. sales and marketing offices to build its dermatology business, it was attracted to Greater Philadelphia primarily for ready access to two large airports, the Newark Liberty International Airport, Newark, New Jersey, and the Philadelphia International Airport, Philadelphia, Pennsylvania. Both airports feature direct, nonstop flights to the entire U.S. and Newark has direct flights to Oslo, Norway, home to Photocure's headquarters. The fact that Greater Philadelphia has a robust life sciences cluster certainly didn't hurt either.

Photocure was looking at both New Jersey and Pennsylvania as potential locations. Select's Business Development team coordinated meetings between Photocure and the biotech trade group representing each state. As a result, the company was able to meet with BioNJ one day. The next day, it met with PA Bio. Photocure representatives were then able to compare the assets of each state within a very short period of time and then make the best informed decision for their company.

Select also helped the company set up the first steps in its search for an office location and also local networking for service providers. Also aware of the critical components to the success of Photocure, Select facilitated conference calls to help the company identify and apply for incentives.

Photocure ultimately selected Princeton, New Jersey.

When you look at the big picture, this was a huge win for Princeton, New Jersey. In Greater Philadelphia, we all look at it as an even bigger win for our entire region.

SPECOPS SOFTWARE

An International Reach and the Help of Local Friends

Specops Software, a global innovation company based in Stockholm, Sweden, specializing in desktop management and password management software chose Greater Philadelphia as the place to open its U.S. headquarters.

Specops already had customers in the U.S. Greater Philadelphia appealed to Specops as a location for its headquarters because of the proximity to its U.S. customer base between Washington, D.C. and New York; lower cost of doing business; and our region's hub of colleges, universities, and healthcare facilities and organizations.

Business executives, the city of Philadelphia, the Commonwealth of Pennsylvania, and Select Greater Philadelphia all played a part in bringing Specops to Greater Philadelphia. What made this project special was the help we received from a local Chamber organization, the Swedish American Chamber of Commerce of Philadelphia (SACC). Working with groups like SACC allows Select to demonstrate to local groups and organizations that there are no "turf" issues when it comes to bringing new business to the region. We are here to help them with resources and business connections. For example, as with every potential locate, Select provided quite a bit of data to Specops to help them make the best decision for their company.

CEO Tobias Öien at the Specops CIO SummIT held at the Philadelphia University campus.

"We couldn't have made our expansion this fast and solid in the U.S. without all the help we got from Select Greater Philadelphia," said Tobias Öien, the CEO of Specops Software Inc. "Working with groups like Select Greater Philadelphia and SACC allows us to get connected to local groups and organizations and to enable new business to the region. They were here to help us with all resources and business connections with great success."

Specops moved from a modern, European office setting to a modern-industrial, urban office space with a European vibe in Old City, Philadelphia, which is fast becoming a tech and entrepreneurial hot-spot in the region.

A win-win all around, Specops is now a member of the Swedish American Chamber and one of SACC's former interns from Sweden is now working for Specops. The experience also forged a positive outlook for working on future trade missions between the Greater Philadelphia region and Sweden.

Specops has formed symbiotic friendships, forged business partnerships, and found success in Greater Philadelphia. They recently expanded and added another location in the region. Specops has grown significantly in North America, and they are adding another location in Philadelphia to further accelerate their growth on the East Coast and across the U.S.

NEWARK TRAIN STATION

Linking a Transportation Facility to Economic Development Potential

It is mission critical to assist companies in choosing to locate and stay in our region, but Select also realizes that as a region, we must remain an attractive place to grow and conduct business.

The CEO Council for Growth provides strategic counsel to Select Greater Philadelphia. The CEO Council is a distinct group of business, higher education, and civic leaders committed to the growth and prosperity of our 11-county region.

The CEO Council for Growth's objectives include conducting privately funded, actionable analysis to advance large scale regional projects and advocating for a multifaceted agenda focused on the federal role in innovation, regional mobility, and talent.

A great example of the support the CEO Council for Growth and Select can provide to regional initiatives is the recent U.S. Department of Transportation award of a $10 million TIGER IV grant to the Newark Regional Transportation Center Station Improvement Project, to be located on the University of Delaware's Science, Technology and Advanced Research (STAR) Campus.

Select and the CEO Council for Growth recognized the positive impact a new regional transportation center at the site of the University of Delaware's STAR Campus would have on the entire region. The closed Chrysler Assembly Plant would be re-used. New jobs would be created. The freight and rail capacity would be expanded. The southern-most anchor to our region would be better accessed with low-cost commuter rail. And, with a robust rail reach, the University of Delaware's research and development commercial applications would be better supported and have an even greater positive economic impact on the region.

Select and the CEO Council for Growth wrote a letter to the U.S. Secretary of Transportation urging his support for the TIGER IV grant.

The grant was awarded in June 2012. Funds will improve the Newark Train Station into a multi-modal hub, while maintaining or even expanding the operations in the adjacent freight rail yard, and will serve as a transit-oriented development catalyst for the University of Delaware's STAR Campus.

Photo Credit: Ryan Keene

TIGER Funds will improve the Newark Train Station, Delaware, by creating a multi-modal transportation hub that will include service to the University of Delaware's STAR Campus and by maintaining or even expanding the adjacent freight rail yard.

This project is part of a larger development plan being led by the University of Delaware. It will help further potential development of the STAR Campus, which will include a health sciences complex with the University of Delaware's College of Health Sciences and a Bloom Energy manufacturing facility, as well as retail and residential space.

In addition to the development potential, the completion of this project could facilitate future Amtrak and passenger train service (including to downstate areas that are not currently served) and allow expanded SEPTA/MARC commuter rail service while maintaining existing freight operations.

The Newark station was selected for funding by the U.S. Department of Transportation in a competitive evaluation process that took into account the potential for the project to improve mobility, boost economic growth, and reduce environmental impacts.

WILMAPCO, the lead sponsor of the project, requested a $10 million grant as part of the $26 million project to construct the redesigned station. The project is also funded by the state of Delaware, University of Delaware, city of Newark, and New Castle County. A second phase of this project, which will further improve both freight and passenger travel, is currently proposed, and officials are working to identify public and private funding sources.

"The Newark Regional Transportation Center is an example of how public, private, and educational agencies can work together to build multi-modal transportation alternatives for riders in the region. It is our hope that this center, along with the STAR Campus, will spur greater economic benefit for Newark, New Castle County, the state of Delaware, and the Northeast region in general," said Shailen Bhatt, Delaware Transportation Secretary.

WHAT'S NEXT?

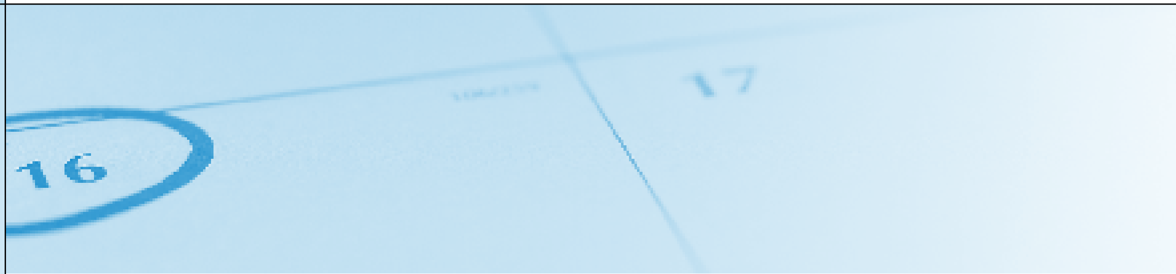
Cranes in the Sky

It is in thanks to local business leaders, business partners, and county and state organizations as well as the steadfast support of Select's investors that these and many more companies now call Greater Philadelphia home.

It's an exciting time in Greater Philadelphia. As we recover from the recession, we are seeing cranes in the sky again. We are focusing our efforts on branding our region as being knowledge-based with a highly skilled and diverse workforce. Advanced manufacturing, clean economy and our entrepreneurial community are growing, garnering more recognition and with that, our attention. We are preparing to explore what Marcellus Shale development will mean for businesses in our region. We'll also continue to promote our strengths in IT & Communications, Life Sciences and Healthcare, Professional & Business Services, Clean Economy, and Retail. We will promote all of these areas of strength. And, we'll do it together because leaders in Greater Philadelphia realize that a success locally contributes to success for the entire region.

It's an exciting time in Greater Philadelphia. As we recover from the recession, we are seeing cranes in the sky again. We are focusing our efforts on branding our region as being knowledge-based with a highly skilled and diverse workforce.

CALENDAR OF EVENTS



IEDC sponsors an annual conference and a series of technical conferences each year to bring economic development professionals together to network with their peers and learn about the latest tools and trends from public and private experts.

IEDC also provides training courses and web seminars throughout the year for professional development, a core value of the IEDC. It is essential for enhancing your leadership skills, advancing your career, and, most importantly, plays an invaluable role in furthering your efforts in your community.

For more information about these upcoming conferences, web seminars, and professional development training courses, please visit our website at www.iedconline.org.

CONFERENCES

2013 Annual Conference
October 6-9
Philadelphia, PA

2014 Leadership Summit
February 2-4
Irvine, CA

2014 Federal Forum
March 23-25
Alexandria, VA

2014 Spring Conference
June 1-3
Greater Minneapolis,
Saint Paul, MN

2014 Annual Conference
October 19-22
Fort Worth, TX

2013 TRAINING COURSES

Business Retention and Expansion
June 20-21
Baltimore, MD

Workforce Development
July 18-19
Madison, WI

Economic Development Credit Analysis
July 31-August 2
Minneapolis, MN

Economic Development Strategic Planning
August 15-16
Madison, WI

Business Retention and Expansion
August 29-30
Atlanta, GA

Entrepreneurial and Small Business Development Strategies
September 12-13
Baltimore, MD

Real Estate Development and Reuse
September 19-20
Denver, CO

Economic Development Marketing & Attraction
October 3-4
Philadelphia, PA

Real Estate Development and Reuse
October 24-25
Atlanta, GA

Economic Development Strategic Planning
November 7-8
Phoenix, AZ

Economic Development Credit Analysis
December 4-6
San Antonio, TX

2013 CERTIFIED ECONOMIC DEVELOPER EXAMS

October 5-6
Philadelphia, PA
(Appl. Deadline: August 5)

December 14-15
Atlanta, GA
(Appl. Deadline: October 15)

2013 WEB SEMINARS

July 11
Your Veterans: Skilled Workers for Job Creation and Economic Growth

August 28
Generate New Revenue: Leverage Your EDO's Capabilities

September 11
Turn Your Board Members into Change Agents

October 16
Diversifying Your Economy: Creating Opportunities and Transforming Sectors

November 14
Unlock Strategies to Attract Investment from Asia

December 12
Partner with Your Local Healthcare Industry and Grow Your Economy

RECERTIFICATION FOR CERTIFIED ECONOMIC DEVELOPERS

Fulfill a recertification requirement without tapping into your budget!

Earn two credits towards your next recertification by having an article published in the *Economic Development Journal*, IEDC's quarterly publication.

This is one of a number of ways that you can pursue recertification credits. Submissions are accepted throughout the year. The Journal Editorial Board reviews all articles and determines which articles are accepted for publication.

For more information contact Jenny Murphy, editor, at murp@erols.com **(703-715-0147)**.

INTERNATIONAL ECONOMIC DEVELOPMENT COUNCIL

NEWS FROM IEDC

FREE WEBINARS ON DISASTER PREPAREDNESS & RECOVERY

IEDC has produced the *2013 Disaster Preparedness & Economic Recovery* Webinar Series with funding from a grant from the U.S. Economic Development Administration. Attend these free, interactive webinars to learn how your organization can be better equipped to handle a major disruption. Remaining topics for 2013 include: establishing a small business emergency loan fund program; effective communication methods; collaborating with federal partners; and post-disaster workforce training.

The recordings of previous webinars include: post-disaster redevelopment financing; strategic planning after a disaster; and preparedness activities for a chamber. These are on RestoreYourEconomy.org, where you can also register.

EXTENSIVE RESEARCH ON IMPACTS OF IMMIGRATION TO BE RELEASED SOON

The latest research by IEDC's internal think tank, the Economic Development Research Partners (EDRP) Program, is examining the impacts of immigration in the U.S. The wide-ranging study is an attempt to fully understand, based on empirical data and analysis, the economic development impacts of immigrants, whether high-skilled, undocumented, and everything in between. It is not a policy debate.

The paper will also include examples of strategies from communities and organizations that are implementing programs to help immigrants be more productive contributors to the local economy. The report will be available for download free for members on the IEDC website and in print for non-members.

DELIVERING ENTREPRENEURSHIP WORKSHOPS IN BEAUMONT, TX, WITH DISASTER FUNDS

IEDC delivered two entrepreneurship training workshops in Beaumont, TX, on April 11-12, with disaster recovery grants from the U.S. EDA. These workshops were a follow-up to technical assistance delivered to Greater Beaumont. Led by Charles D'Agostino of the Louisiana Business and Technology Center, the first workshop included strategies to connect local entrepreneurs to sources of capital.

The second workshop introduced strategies on sustainable financial structures, operations, and management for university-based business incubators. The workshop shared insights from other communities regarding how to develop entrepreneurship-led economic diversification initiatives, identify revenue streams, create sustainable budgets, and form regional partnerships to leverage resources.

AEDO PROGRAM ADDS TWO NEW MEMBERS

IEDC is proud to announce the accreditation of two new organizations: the City of Hamilton Economic Development Division (HEDD) and the Denton Economic Development Partnership (DEDP). Located in Hamilton, Ontario, HEDD has been led by Director Neil Everson, EcD, since 2000. Located in Denton, Texas, DEDP has been led by Vice President Karen Dickson, CEcD, since 2005. These organizations represent the high quality and dedication to excellence that the Accredited Economic Development Organization (AEDO) program demands.

Earning accreditation is a great way for economic development entities to increase their visibility in the community and gain independent feedback on their organizational operations. For more information about becoming one of the AEDO program's members, now totaling 34, please visit the AEDO webpage or contact Program Manager Tye Libby at tlibby@iedconline.org.

ASSESSING RECOVERY NEEDS FOR FY2011 DISASTER-IMPACTED COMMUNITIES ALONG THE EAST COAST

IEDC in partnership with the National Association of Development Organizations Research Foundation (NADO) recently received grants from the U.S. EDA regional offices in Atlanta and Philadelphia to assist FY2011 disaster-impacted communities in the U.S. Southeast and Northeast.

The first initiative underway is a needs assessment that will include an electronic scan to collect community responses on economic impact as well as geographic analysis of federal data. This needs assessment will inform the programming of IEDC and NADO training and technical assistance services and resources for long-term economic recovery and resiliency. For more information, contact Carrie Mulcaire, cmulcaire@iedconline.org

a river runs through them

By Thomas Corcoran, Anthony Perno, III, and Jenny Greenberg

Credit: Cooper's Ferry Partnership

Visitors disembark from the RiverLink Ferry on the Camden Waterfront. The RiverLink provides a fun and scenic way to travel between the two sides of Philadelphia and Camden's growing regional waterfront destination.

The cities of Philadelphia, Pennsylvania, and Camden, New Jersey, are two distinct municipalities in two different states. Yet, one can stand at Penn's Landing on Philadelphia's Central Delaware Waterfront and see visitors at the Camden Waterfront, a mere 2,200 feet away, across the Delaware River.

Both cities are engaged in dramatic transformations of their downtown waterfronts from post-industrial abandonment to an era of revival through which the riverfront is once again becoming a center for commercial and cultural activity. Just as Philadelphia and Camden's waterfronts were interconnected through trade for over two centuries, there is an opportunity to re-integrate the two sides of the riverfront as a single signature waterfront destination in the Philadelphia metropolitan area.

Inspired by the highly successful model of Baltimore's Inner Harbor, since the 1970s, Philadelphia and Camden have worked to re-invent their downtown waterfronts as regional destinations offering a mix of large-scale family entertainment attractions, public events, festivals, concerts, and fireworks displays.

Today, the master plans for Philadelphia and Camden include significant low-to-mid-rise housing components, integrated with retail and restaurants along with public amenities including parks and trails. Philadelphia and Camden have come to view their downtown waterfronts as assets that must be leveraged to serve residents of the city and region, as well as visitors.

Today, employment in education and the health services sector has replaced industrial activity as the principal driver in Philadelphia and Camden. The "eds and meds" account for 43 percent of employment in Camden and 37 percent in Philadelphia. (*The Camden Higher Education and Healthcare Task Force: A Winning Investment for the City of Camden, 2012*) In both cities, educational and medical institutions attract knowledge workers who are seeking amenities including vibrant waterfronts. Both cities have the opportunity to provide housing as well as a diverse mix of commercial activity, cultural attractions, and recreational opportunities to attract and retain these knowledge workers.

This article will tell the stories of Camden and Philadelphia's downtown waterfront revival efforts. Both cities were faced with hundreds of acres of vacant and underutilized land along the Delaware Riverfront in the post-industrial era. Weak market conditions along with fragmented land ownership, environmental contamination, and inadequate and aged infrastructure have made redevelopment of these orphaned sites a slow and complex process that has required a combination of big vision, detail-oriented tenacity, and creativity around leveraging and packaging private and public resources.

In this vein, Philadelphia and Camden are now working together across state lines, with the recognition that physical transportation linkages and programmatic synergy between the two waterfronts will make them greater than the sum of their parts.

Thomas Corcoran is the president of the Delaware River Waterfront Corporation. (tcorcoran@drwc.org)

Anthony Perno is chief executive officer of Cooper's Ferry Partnership. (perno@coopersferry.com)

Jenny Greenberg is a fundraising consultant and writer, who works on both sides of the waterfront. (jgreenberg@drwc.org)

THE STORY OF PHILADELPHIA AND CAMDEN'S DOWNTOWN WATERFRONT REVIVALS

Camden and Philadelphia's downtown waterfronts are in a process of transformation, from disconnected and underutilized assets into a single world-class waterfront destination for the Philadelphia region.

Credit: Camden Riversharks

Camden Riversharks fans cheer for the home team at Campbell's Field. Views of the Ben Franklin Bridge and Philadelphia skyline offer a stunning backdrop.

THE CAMDEN WATERFRONT

The city of Camden originated from small settlements along the Delaware River in the 17th century that were reliant on trade and connected by ferry to the city of Philadelphia. At their peak, in 1925, eight steam ferries operated by Pennsylvania Railroad travelled back and forth across the river between Camden and Philadelphia.

In the late 19th and early 20th century, the city of Camden grew to an economic and transportation hub and was the civic and cultural center of Southern New Jersey with major employers including Campbell Soup Company, Victor Talking Machine Company (later RCA Victor), and New York Shipbuilding Corporation.

In the second half of the 20th century, an extreme loss of industry and coinciding suburban development led to large population declines. Camden went from roughly 125,000 residents in 1950, to just over 77,000 by 2010. *(U.S. Census)* While the city continued to serve as the county seat and retained corporate and institutional employers including Campbell Soup Company's World Headquarters, Rutgers University Camden campus, and Cooper Hospital, there was a dramatic decentralization of population, business and civic infrastructure away from the city of Camden into the Southern New Jersey suburbs.

In 1980, city and corporate leaders began an initiative to capitalize on Camden's downtown waterfront as an underutilized asset that could be redeveloped to breathe new economic vitality into the city. By the late 1980s, the infrastructure of an obsolete rail yard and ferry system was cleared away, and the remaining heavy industrial facilities had reached the end of their productive lives.

In 1984, the three principal owners of the waterfront land – the city of Camden, Campbell Soup Company, and RCA – jointly commissioned a planning study to evaluate the development potential of their collective holdings of roughly 120 acres of waterfront land located between the Ben Franklin Bridge and the South Jersey Port. The study determined that the waterfront could support a carefully planned, mixed-use development of family entertainment, recreational, and cultural attractions.

As a result of this cooperative effort, Cooper's Ferry Development Association was founded as a private, nonprofit corporation dedicated to creating and implementing a vision for Camden's downtown waterfront. Known today as Cooper's Ferry Partnership (CFP) after a strategic merger with Camden's downtown special services district in 2011, this organization has provided consistent leadership for the downtown waterfront for nearly 30 years, serving as overall planner, promoter, and master developer.

An organization of 14 staff, CFP is funded through foundation and corporate contributions, along with the management fees that it generates on public infrastructure and other development projects. Working in cooperation with local, state, and federal public sector partners, as well as the private sector, CFP has been able to put into place the building blocks for a vibrant, mixed-use waterfront community anchored by family entertainment attractions.

CFP has coordinated more than $75 million of infrastructure development, which was implemented in successive phases over 25 years to create a framework for new private development. This included extending the downtown street and utility grid to the waterfront, creating a linear park along the river to permanently preserve public access, and implementing streetscape enhancements throughout much of downtown Camden.

Recognizing the importance of establishing Camden as a transportation hub, CFP played an active role in establishing the alignment of the New Jersey Transit RiverLINE through downtown Camden to the waterfront. The Camden to Trenton line connects the city into Amtrak's Northeast corridor service. CFP is also advocating for the extension of rail service south to Rowan University's main campus in Woodbury, New Jersey. In 1991, CFP also established the RiverLink, offering ferry service between Camden and Philadelphia's Penn's Landing for the first time in 40 years. CFP is also currently developing a regional bicycle trail network that emanates from Camden.

These investments in public infrastructure and transportation have leveraged a critical mass of development projects. On the Camden Waterfront, 5 percent of the city's total land mass is generating 18 percent of tax revenue collected by the city. These developments have established a new center of economic activity in Camden, creating job opportunities and improving the city's image as a place to live, work, and invest.

Development projects include key family entertainment anchors: New Jersey State Aquarium (1992); Susquehanna Bank Center, a 25,000-seat outdoor/indoor concert venue operated by Live Nation (1995); the Camden Children's Garden (1999); Campbell's Field, home of the minor league baseball team, the Camden

Riversharks (2001); Battleship New Jersey Memorial and Museum (2001); and the Adventure Aquarium (2005 expansion and privatization of the NJ State Aquarium).

Office developments have included Camden Aerospace Center, leased to L-3 Communications (1992); One Port Center, headquarters of the Delaware River Port Authority (1997); New Jersey Economic Development Authority High Tech Center (2006), site of high tech companies and a business incubator; and Ferry Terminal Office Building (2007), home to Susquehanna Bank's corporate headquarters, the first privately financed office building built on spec on the waterfront.

In 2005, the former RCA "Nipper Building" was converted by developer Dranoff Properties into 340 luxury waterfront apartments, the first new housing on the waterfront and first market rate housing in the city in 30 years. Environmental remediation is underway on the conversion of a second RCA building into 80 condominiums. The redevelopment of the waterfront has also spurred a renaissance in the adjacent historic Cooper-Grant neighborhood, where Pennrose Properties recently developed 30 infill townhouses. Housing values in Cooper Grant have doubled since 2000 and maintained their value after the recent national housing market collapse.

While retail and restaurant development has been slower to take root, there are five successful ground floor retail food establishments on the waterfront as well as a bank branch.

In 2006, Camden Town Center, a private development group, which was responsible for the privatization and expansion of the Adventure Aquarium, announced a partnership with Dranoff Properties to develop the balance of the master plan. The overall master plan calls for the phased development program of 1,200 new units of market rate housing; 500,000 square feet of Class A commercial office; 100,000 square feet of retail, dining, and entertainment; and a hotel conference center.

While the pace of development has slowed with recent weak economic times, the waterfront is positioned for the next upswing in the economy and is currently building out the remaining $4 million of public infrastructure improvements.

Today, the Camden Waterfront attracts close to three million visitors a year. The waterfront has retained and generated in excess of 2,200 full time jobs and 1,000 seasonal positions. New development contributes about $3 million to the city's tax base, mostly in the form of Payments in Lieu of Tax (PILOTS) and has generated in excess of $2.3 million in sales tax revenues from parking, ticketing, and food and beverage sales.

Credit: Cooper's Ferry Partnership

An aerial view of the Camden Waterfront.

The Camden Waterfront has also served as a catalyst for downtown redevelopment by playing a pivotal role in overcoming suburban fears about coming into Camden. As a result of media portrayals of urban decay and crime, in the 1990s, there was a significant psychological barrier to overcome to attract visitors to the waterfront.

By establishing a critical mass of high-quality family entertainment anchors, investing in infrastructure and public transportation, as well as marketing and programming of public spaces, today the Camden Waterfront is perceived as welcoming, safe, and easy to access. The Camden Waterfront has had increasing success attracting high-profile touring events including RedBull Flugtag and Cirque de Soleil. This has been pivotal in changing the public image of Camden and fostering optimism about its future.

This shift is reflected in the massive investments that have been made by Camden's anchor downtown institutions in the educational and medical services sector. In 2012, Rutgers University opened a $55 million graduate student dormitory with ground floor retail. Cooper Medical School of Rowan University began its inaugural class of medical students in its new $139 million facility. Cooper University Hospital broke ground on a new $100 million Cancer Institute and in the past five years has made significant investments in new housing, enhanced public spaces and programming in Cooper Plaza, near the hospital. Despite the national economic downturn, the educational and medical services sector in Camden saw a 4.4 percent increase in employment from 2002 to 2012. (*The Camden Higher Education and Healthcare Task Force: A Winning Investment for the City of Camden,* CAMConnect, 2012.)

The Camden Waterfront is positioned to provide the housing, restaurants, and entertainment and recreational amenities that will help Camden's educational and medical anchor institutions to attract and retain students and workers, driving Camden's emergence as an integral part of a regional knowledge center as well as a tourism destination.

PHILADELPHIA'S CENTRAL DELAWARE WATERFRONT

In Camden, development success on the waterfront has helped to build confidence and momentum for new investment in the downtown. Across the river, the dynamics are different. Philadelphia has developed strategies to draw residents, workers, and visitors from its thriving Center City down to the waterfront.

Credit: Ed Savaria

With spectacular views and a dramatic ramp rising 12 feet into the air along the north face of the Benjamin Franklin Bridge, the new Race Street Pier has quickly become a favorite spot on Philadelphia's Central Delaware Waterfront.

Center City Philadelphia and adjacent residential communities have seen dramatic residential and business reinvestment in recent years. According to Philadelphia's Center City District, the downtown residential population grew 27 percent in the past two decades to 93,000, making it the third largest in the United States. Center City also has the third largest downtown employment center in the country. Street life is flourishing in this highly walkable city where there are hundreds of new sidewalk cafes and fine dining restaurants have increased 328 percent in ten years. (*State of Center City Philadelphia 2011,* Center City District) Unfortunately, this vitality and economic growth has not extended down to the Central Delaware Waterfront.

Philadelphia recently completed a new master plan, which set forth a roadmap for breathing life back into the waterfront that was once the center of Philadelphia's economy and an international hub for manufacturing and shipping.

In the 1970s and 80s, Philadelphia built Penn's Landing between Market Street and Lombard Street which is home to the Independence Seaport Museum, the Great Plaza, a large-scale civic space for large public events, a promenade, and marina, where a collection of historic ships are berthed. The popular Independence Blue Cross RiverRink and Festival Pier were developed in the 1990s.

Despite the popularity of these attractions, Penn's Landing does not have the vibrant environment and commercial activity that would draw the public from Center City down to the riverfront in number. For several decades, large-scale private redevelopment proposals for Penn's Landing emerged and failed to come to fruition.

One major challenge for the redevelopment of the Central Delaware Waterfront is the infrastructure of I-95, which runs along the waterfront creating a psychological and physical barrier between the waterfront and Center City.

To the north and south of Penn's Landing, the waterfront is almost completely inaccessible, with vacant land and decaying piers, effectively cutting vital neighborhoods off from the river. Until recently, weak land use controls and the lack of a current, compelling master plan allowed for ad-hoc development to take place in an uncoordinated manner.

Finally, in 2006, two pending waterfront casinos galvanized public concerns that without a coherent plan and coordinated redevelopment approach, Philadelphia would squander its opportunity to create a world-class waterfront. With support from the William Penn Foundation, PennPraxis, the applied research arm at the School of Design at the University of Pennsylvania spearheaded a citizen-engagement and visioning process, which generated *A Civic Vision for the Central Delaware*. This vision called for a balance of the public access, open space, and quality urban development for the waterfront.

Building on the momentum from the *Civic Vision*, in 2009, Mayor Michael Nutter turned a fresh page in the history of Philadelphia's Central Waterfront by establishing the Delaware River Waterfront Corporation (DRWC), a new 501(c)3 nonprofit corporation. DRWC was established to act as the steward of the waterfront and to transform it into a vibrant destination for recreational, cultural, and commercial activities that would benefit all citizens and visitors to Philadelphia.

DRWC has a staff of 15 full time people who work on planning, development and public programming. The organization is funded by a combination of tenant leases and revenues from parking and other concessions. DRWC serves as a catalyst for high quality investment in public parks, trails, maritime, residential, retail, hotel, and other improvements that create a vibrant amenity, extending Philadelphia to the river's edge.

Unlike its successor organization, the Penn's Landing Corporation, which operated from 1972 to 2009 and focused solely on the waterfront adjacent to Center City, DRWC 's geographic scope was broadened to include the entire Central Delaware Waterfront from Allegheny Avenue in the north to Oregon Avenue in the south. The project area encompasses almost six linear miles of waterfront and over 1,100 acres of property.

DRWC was charged with looking comprehensively at this area through a citizen-driven master planning process in order to provide an implementable long-range plan to transform the Central Delaware Waterfront. This plan was to provide strategies that would both create regional amenities and reconnect the city's residents and visitors to the waterfront.

DRWC completed the *Master Plan for the Central Delaware* in October 2011 through an 18-month process with a multi-disciplinary design team, led by Cooper, Robertson & Partners, with OLIN, Kieran Timberlake, and HR&A Advisors. DRWC worked with governmental, nonprofit, and civic organizations; property owners; and other stakeholders to develop a detailed framework of open space, cultural and environmental resources, transportation, and economic development.

The Master Plan has been widely embraced and was adopted by the Philadelphia Planning Commission as well as receiving a 2012 American Institute of Architects' (AIA) Honor Award.

For the heart of the Central Waterfront, the Master Plan calls for a mixture of residential, entertainment, and retail uses organized around a network of high-quality open spaces and served by an improved transportation system. The Master Plan provides strategies to extend the vibrant environment of Center City and adjacent communities to the waterfront by creating nodes of low-to-mid-rise housing with supporting service retail, cafes, restaurants, and entertainment that will establish a year-round destination and serve both existing and new residential communities.

The Master Plan emphasizes the importance of the public realm, composed of regularly spaced public and civic spaces, and a waterfront trail to connect these parks and frame private development. Waterfront parks will incorporate best practices in sustainability to restore ecological health to the river.

The Master Plan identifies three priority sites – Washington Avenue, Penn's Landing, and Spring Garden Street – where strategic public investment should be focused first. Public sector investments should be targeted here first to catalyze short and mid-term investments.

In addition to parks, the Master Plan calls for public investment focused on improving transportation connections. While for the most part, the Master Plan's approach to confronting the challenge presented by I-95 is to improve the existing connector streets that cross under the highway, making these routes more welcoming and safe. The one exception is the block between Chestnut and Walnut Streets where the plan recommends a new park constructed from the riverfront, capping over I-95 and Columbus Boulevard into Old City.

Even while the plan was in development, DRWC focused on early implementation projects to get the public to the waterfront to increase public access and stewardship of the riverfront. In 2011, DRWC completed the widely acclaimed Race Street Pier park and is working to develop additional pier parks, with boardwalks and fishing piers, as well as a multi-use waterfront trail that will extend along the length of the project area. DRWC is also creating new programming that will get the public out onto the water, including a kayak and swan boat rental program.

DRWC has begun to implement connector street enhancement projects using intensive streetscaping, lighting, and artistic treatments as well as traffic calming measures to improve pedestrian and bicycle safety and to draw the public down to the waterfront. The Race Street Connector was completed in 2011, transforming the connection between the Old City neighborhood and the new Race Street Pier.

DRWC is also working to animate the public spaces on the riverfront, using creative placemaking strategies that put the arts at the center of its efforts to draw the public to the waterfront, and to demonstrate to the business community a growing dynamism. DRWC is working with many partners to bring the vitality of Philadelphia's burgeoning arts scene down to the waterfront.

These efforts are gaining momentum. DRWC is attracting visitors from the art galleries in Old City on First Fridays, down to the Race Street Pier for live music and where it also hosts the Art Star Craft Bazaar. Philadelphia's Office of Arts, Culture and the Creative Economy is working with DRWC to create a large-scale interactive art installation by Numen/For Use, a Croatian-Austrian design collective at the Race Street Pier Park. Across the street from the Pier, the Philadelphia Live Arts Festival and Philly Fringe is transforming a former fire hydrant pumping station into a new highly synergistic performing arts center.

Credit: Ed Savaria

A capacity crowd enjoys a summer concert on the Great Plaza at Penn's Landing.

GREATER THAN THE SUM OF THEIR PARTS

While engaged in their unique redevelopment initiatives, Camden and Philadelphia are also looking across the water for partnership on the implementation of a strategy of key importance for the success of both cities. Although a river, state, and municipal boundaries divide them, the cities of Philadelphia and Camden correctly see themselves as sharing one waterfront. By tying together their redevelopment efforts with marketing, programmatic, and transportation linkages, they can begin forming a single destination. Camden and Philadelphia's unified waterfronts will continue to grow in visitorship, private investment, and economic impact for their respective cities and states.

Together, the Greater Philadelphia Waterfront receives roughly 3.5 million visitors a year. With 28 million people living within 100 miles of Philadelphia, it is clear that there is untapped potential. Through packaging of Camden and Philadelphia's waterfronts together as a premier waterfront destination and by tying into Philadelphia's historic district, Camden and Philadelphia could start to draw more visitors for longer stays.

As two cities each operating within different local and state jurisdictions, Camden and Philadelphia are fortunate to have quasi-public nonprofit waterfront development and marketing organizations that understand and share this vision for a unified waterfront destination.

Early coordination between DRWC and CFP has focused on joint programming of holiday fireworks events. Twice a year, on New Year's Eve and 4th of July weekend, a major fireworks display over the river is choreographed to music that is simulcast on Penn's Landing and the Camden Waterfront. This joint programming is symbolic but also has real economic value.

A recent economic impact study conducted in 2010 by Urban Partners found that "New Years Eve fireworks directly motivated visitors to come to Philadelphia, and that these visitors utilized an estimated 1,720 hotel room nights and expended nearly $1.25 million beyond what would have occurred in the absence of the Fireworks program. In addition, another 4,700 persons viewed the fireworks from the Battleship New Jersey, Adventure Aquarium, and other Camden waterfront venues and added $115,000 in spending in New Jersey." The total direct and indirect economic impact generated by the fireworks was $2.871 million within the Philadelphia region. (*Economic Impact of Penn's Landing Fireworks,* 2010, Urban Partners).

As two cities each operating within different local and state jurisdictions, Camden and Philadelphia are fortunate to have quasi-public nonprofit waterfront development and marketing organizations that understand and share this vision for a unified waterfront destination.

Since 2010, New Year's Eve fireworks have been expanded from one nightly display to a 6pm and a 12am display. Estimated crowds of viewers on the Camden Waterfront have grown to over 15,000 and on Penn's Landing to 50,000. DRWC and CFP plan to expand joint programming to coordinate activities for many other major holidays including Memorial Day and Labor Day.

There are additional opportunities to take existing annual multi-day festivals such as the XPoNential Music Festival in Camden and the WHYY Connections Festival in Philadelphia and to work with organizers to plan these events to straddle the river. Following this model, in the summer of 2013, the WXTU country music event will hold concerts on both sides of the waterfront for the first time. DRWC and CFP believe there is also an opportunity to take a more coordinated

Credit: Cooper's Ferry Partnership

Visitors bask in the sun, enjoying river breezes and great entertainment on the Camden Waterfront.

approach to attracting national touring events. DRWC and CFP have also begun to market upcoming events on the other's waterfront, projecting a sense of connectedness and coordination between the two sides.

Another area for a growing partnership is in joint marketing of the waterfronts as a single destination, as exemplified in Fodor's online guide for The Camden Waterfront and Penn's Landing:

"Perfectly located along the scenic Delaware River, the Camden Waterfront shares the river's banks with Penn's Landing, just one mile from Philadelphia's historic district, forming a unique two-sided waterfront destination that bubbles over with fun."

A key marketing strategy is to promote awareness of both waterfronts to visitors at Philadelphia's historic district. In 2010, 2.4 million visitors came to the Independence Visitors Center seeking information about their stay in Philadelphia. (*Philadelphia Area Hospitality Snapshot*, Greater Philadelphia Tourism and Marketing Corporation, 2011.) Staff at the Independence Visitors Center, located just four blocks from the river, could be promoting visitation to attractions on both waterfronts.

Ultimately, in order to significantly expand joint programming and marketing it will be necessary to forge more integrated organizational capacity and to work with regional and state partners. DRWC and CFP are exploring the possibility of appointing shared marketing professionals who could jointly program two-sided events and develop marketing materials featuring attractions on both sides.

Collaborative efforts can be augmented through regional organizations including the Greater Philadelphia Tourism and Marketing Corporation, the Pennsylvania Convention and Visitors Bureau, and the South Jersey Tourism Bureau to market both sides to national and international tourists and conventioneers coming to Philadelphia. In addition, Camden and Philadelphia need to seek resources and support from the Pennsylvania and New Jersey state tourism bureaus for marketing the two-sided waterfront.

In addition to enhanced programming and marketing, it is essential to focus on improving physical linkages and multi-modal transportation options between Camden and Philadelphia. The Delaware River Port Authority (DRPA), the bi-state agency that operates several bridges that span the river as well as the RiverLink Ferry and PATCO high-speed line, is a critical partner in this effort.

The RiverLink provides ferry service during the summer months between Penn's Landing and the Camden Waterfront. Camden and Philadelphia would like to expand water transportation in the future with year round ferry service, more frequent trips, and more stops on both sides. DRWC has secured a small fleet of water taxis to use in the future to provide point-to-point service. These options would not only support tourism but would make commuting via water transportation an option for people who live in one city and work or go to school in the other.

Another transit option is the PATCO line, which travels between Center City and South Jersey, stopping in downtown Camden. While currently not open, the Franklin Square station stop at 4th and Race could create rail connections on both sides of the river.

Both cities are also working on improved bicycle linkages between their waterfronts. New traffic patterns, designated bike lanes, and signage in Camden and Philadelphia's downtown districts are improving safety and awareness of bicycle routes to the river. To connect these improved routes, CFP is working with the DRPA to rebuild the pedestrian and bicycle pathway on the Ben Franklin Bridge, making it easier to travel from the bridge into Camden.

The pathway on the Ben Franklin Bridge offers not only a functional route for pedestrians and bicycles to cross the river, but also a spectacular experience, with sweeping views up and down the river far above vehicular traffic. The bridge serves literally and symbolically as a bi-state venue that is popular for charity race events and presents an opportunity for additional types of shared programming.

In addition to ferry, rail, and bicycle connections, Camden and Philadelphia would also like to offer bus service from various Center City locations to the attractions on the Central Delaware Waterfront and to the RiverLink Ferry terminal for passage to Camden.

The Adventure Aquarium has been at the lead with this strategy. The Aquarium packaged an excursion from the Independence Visitors Center, where the Philly Phlash, a tourist jitney, picked up visitors and transported them to the RiverLink Ferry terminal for a scenic 12-minute ride across the river.

Both Camden and Philadelphia's waterfronts are on trajectories of growth and regained economic significance in the region. By working in tandem to create a signature regional waterfront destination, both cities and the region will benefit from direct and indirect economic impacts including additional housing demand on both waterfronts, growth in supporting retail services, and extended stays in both Philadelphia and future Camden hotels.

supporting the
SOUTHEASTERN PENNSYLVANIA LIFE SCIENCES INDUSTRY

By Anthony P. Green, Ph.D. and RoseAnn B. Rosenthal

RoseAnn B. Rosenthal is president and CEO of Ben Franklin Technology Partners/SEP. (roseann@sep.benfranklin.org).

Anthony P. Green, Ph.D., is vice-president, Technology Commercialization: Life Sciences of Ben Franklin Technology Partners/SEP (anthony@sep.benfranklin.org) and **Ben Franklin** director, The Nanotechnology Institute.

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The Building 100 Innovation Center, Ben Franklin's headquarters at The Navy Yard Clean Energy Campus, was created by Ben Franklin, the Delaware Valley Industrial Resource Center and the Philadelphia Industrial Development Corporation as a catalyst for renewed attention to the region's physical sciences and engineering strengths.

"When you're finished changing, you're finished." – Ben Franklin

INTRODUCTION

Pennsylvania's life science industry is an economic powerhouse employing more than 79,000 people directly and generating annual wages of $7.2 billion. An unmatched concentration of global biopharmaceutical, medical device, and diagnostic companies; world-class academic and private research organizations; capital and talent; facilities and infrastructure; and nationally-recognized health care delivery systems – in both urban and rural settings – it's all here in Pennsylvania. (Life Science Leadership Advisory Council: Life Sciences Leadership for the Next Decade, May 2012).

In Southeastern Pennsylvania, the concentration of life sciences activities is an even more important contributor to the regional economy through its research institutions, and pharmaceutical and biotechnology (biopharmaceutical) companies. With basic research, supported by over $1 billion in R&D funding in 2011 to the $250M in venture capital to the region also in 2011, collectively, the region's life science community ranks with Boston and Silicon Valley as a powerhouse of innovation and now accounts for 15 percent of the economic activity and one in six jobs in the Greater Philadelphia region (Milken Study, 2009; Greater Philadelphia 2012 Regional Report, Select Greater Philadelphia).

THE ORIGINS OF A CLUSTER

The academic origins of the industry in Southeastern PA trace to the establishment of the University of Pennsylvania in 1740, The Philadelphia College of Pharmacy and Science in 1821, and the Wistar Institute in 1982. The growth of the chemical industry in the 1800s amassed new resources and talent that provided a foundation for the new pharmaceutical industry, with William H. Rorer in 1910 and Merck Sharpe & Dohme in 1953; then onward to the creation of the region's first biotechnology company, Centocor, in 1979.

THE FIRST 30 YEARS OF INNOVATION & GROWTH

Technology innovation, job creation and economic development are inextricably bound and require continuous evolution of models for service delivery. Ben Franklin Technology Partners/SEP has successfully addressed this challenge. Now celebrating its 30th anniversary, this article summarizes BFTP/SEP's success supporting the region's life sciences industry – a dominant technology sector in Southeast Pennsylvania. Catalyzing efforts to rebuild Pennsylvania's economy through science and technology focused on a regional agenda that prioritizes science, technology, entrepreneurship & innovation as a growth strategy, BFTP/SEP executes its mission through a comprehensive framework for regional growth: Capital, Knowledge, and Networks with a commitment to implementation, through funding, engagement, education, and advocacy.

The region's emerging biotechnology industry was given further impetus in 1982 via the first economic development effort directed to leverage the area's intellectual and commercial assets as part of a statewide, technology-based economic development strategy. Now known as the Ben Franklin Technology Partners of Southeastern PA, BFTP/SEP initially invested $20 million to support the formation of University Centers of Excellence and provided the first state funding for biotechnology enterprises, $9.5M into over 100 companies, among them companies such as Centocor and Cephalon.

*Ben Franklin Technology Partners of Southeastern Pennsylvania is a national, award winning organization for **Stimulating Entrepreneurial Potential**, through entrepreneurship, technology and innovation. Celebrating our 30th Anniversary, Ben Franklin has provided the **Capital, Knowledge and Networks** that help innovative enterprises compete in the global marketplace, generating wealth and supporting regional economic growth.*

Centocor and Cephalon's history are informative to the growth of the region: each grew to become major revenue and employment generators, culminating with Centocor's purchase by Johnson & Johnson in 1999 for $4.9B and Cephalon's acquisition by Teva in 2011 for $6.8B. The Centocor story has been well documented (see *Miracle Medicines: Seven Life Saving Drugs and the People Who Created Them*, Robert Schook, pp. 192-241; 2007).

Centocor moved to the Philadelphia suburbs in 1981 from the University City Science Center and with the success of groundbreaking drugs Remicade (now $7B in annual revenue) and ReoPro, J&J has continued to maintain significant operations in Malvern and Springhouse with over 2000 employees. Its senior management, the "University of Centocor," have ascended into key leadership positions within J&J or remained in the region to lead new companies: former Centocor President Dave Holveck became president of Johnson & Johnson Development Corporation before becoming president of Endo Solutions, a $2B public company headquartered in Chadds Ford, Pennsylvania; VP for Finance Dominic Caruso is now J&J CFO; former CFO Bruce Peacock went on to become COO of Cephalon as well as two additional start-up companies in the region; and Chris Molineaux, VP Communications, moved to J&J Corporate Communications before assuming his current position as president of Pennsylvania Bio.

Morphotek is a biopharmaceutical company focused on the discovery and development of therapeutic antibodies for the treatment of cancer, inflammatory and infectious diseases. They have grown from four to more than 100 employees since Ben Franklin first invested in 2000, and is growing rapidly. In 2010, the region celebrated when Morphotek broke ground on a new $80M, 60,000 sq. ft. pilot manufacturing plant in Chester County to develop drugs for clinical trials.

GROWTH OF AN INDUSTRY… GROWTH OF A CLUSTER

As the biotechnology industry began to develop and grow, so did BFTP/SEP's approach to its engagement. From playing a catalytic role by funding University Centers of Excellence that attracted federal R&D funding, BFTP/SEP moved on to funding joint industry/university research projects, seeding emerging biotechnology enterprises, and funding and supporting the creation of concentrations of industry formation across the region, producing the Commonwealth's first statewide report on the bio/life sciences sector in 1997; investing in the formation of BioAdvance Ventures, a private regional fund catalyzed by Tobacco Settlement proceeds; and created as part of the state's increased investment in the bio sector manifest with the formation of three, regional life science greenhouses, and actively sponsoring industry events and PA Bio, the industry's advocacy organization.

SUCCESS STORY: MORPHOTEK

Morphotek was founded on technology licensed from Johns Hopkins that improves the efficacy of existing biopharmaceuticals or creates new biopharmaceuticals. BFTP/SEP invested a total of $200,000 in seed capital in Morphotek in 2000 and 2001, and helped refine the business plan and private investment pitch. The result of these efforts was the 2007 acquisition by the Japanese company, Eisai Pharmaceuticals for $325M. Since that initial investment, Morphotek has grown from four to over 180 employees.

As important as the monetary compensation was, equally important and often overlooked was the decision by Eisai to keep the company and its jobs here in Southeast Pennsylvania, an unusual event in this age of company consolidation and retrenchment. As a result, Morphotek recently invested $80 million to build a new 60,000-square-foot FDA-compliant pilot plant facility. This will enable Morphotek to maximize the efficiencies of its product development process and move closer to its goal of becoming a fully integrated biopharmaceutical company. The facility, located across from its Exton, PA headquarters, opened in August 2012, leading to an estimated 90 new jobs. The impact to the region allows us to trumpet: What grows in Philly stays in Philly.

The Pennsylvania Biotechnology Center of Bucks County was launched by the Hepatitis B Foundation, Delaware Valley College and Drexel University in 2006, with a focus on research and entrepreneurship. Ben Franklin supported the development of the Center and is a primary partner.

Clients represent innovations in biopharmaceuticals, devices, and diagnostics. Of these, the most critical has been our investments in emerging companies. Always in partnership with private investors, early funding for companies such as Centocor and Cephalon were joined by successes such as Adolor, Viropharma, Immunicon, and Morphotek (see Success Story and Table 2), which have created hundreds of high-wage jobs, successfully commercialized their technologies, and gone public or been acquired while remaining in the region.

Our current portfolio of 37 life science companies reflects the increasing diversity of the sector with innovations in medical devices, drug delivery, and diagnostics, as well as the related growth of the newest health services sector: healthcare IT management and analytics. Investment in an emerging enterprise is the start of a close relationship with the company…one in which our goals and the goals of our client are highly aligned. As a result, we focus our efforts to provide the input, advice, and resources that will help our client achieve important milestones and attract follow-on investment and strategic market partners.

LOCATION, LOCATION, LOCATION

Many early biotech companies found a receptive start-up location at the University City Science Center in West Philadelphia, the nation's first urban research park. With funding and mentoring from Ben Franklin and easy access to the university community in space that met their specialized needs, a new generation of biotechnology companies got underway. Soon their numbers began to reshape the landscape as new corporate parks along the Route 202 highway around Philadelphia emerged to accommodate their expansion.

The growth and diversification of the region's life sciences sector spurred the formation of concentrations of company formation, networking and support resources across the region. The early private investment in suburban office and research parks along Route 202 created a dispersed pattern of location options across the five-county region.

Following the market's lead, public policy initiatives emerged to leverage this investment and address service gaps with the goal of further accelerating new company formation. BFTP/SEP supported the first of these through a partnership in 1996 with the Delaware Valley College, a 116-year-old college with its roots in agriculture; Thomas Jefferson University; and the Hepatitis B Foundation. The result was the formation of the Ben Franklin Innovation Center on the campus of the Delaware Valley College in Doylestown, Bucks County.

The Innovation Center provided on-site services to the companies forming and residing at the Center. Driven by the vision of Dr. Timothy Block, this early effort, over the years, grew into its own free standing facility, developed with funding from the U.S. EDA, the Commonwealth of PA, and program support from BFTP/SEP. Today, the Pennsylvania Biotechnology Center in Doylestown is a 62,000-square-foot building that sits in a tax-advantaged Keystone Innovation Zone and houses over 30 biotechnology companies. Its enterprises have created over 900 jobs and over $500M in company valuation.

Doylestown and its biotech community were soon joined by other programs to support early-stage technology companies, including Pennsylvania's Keystone Innovation Zones (KIZs) in 2007 and five additional incubators focused on life sciences. The KIZs and incubators accommodate growing concentrations of activity through public/private partnerships that target services at the very earliest phases of company formation and provide a pipeline to BFTP/SEP and other regional seed investors. Their programming provides emerging companies with easy and multiple connections to the support network and multiple opportunities to collaborate, coalesce, and compare lessons learned.

More recently, regional nodes of technology companies have been complemented with a surge in university programs to support translational research, among them the University City Science Center's QED program and Drexel University's Coulter Foundation Program in biomedical engineering. The 12-year-old, Commonwealth-funded Nanotechnology Institute, formed and overseen by a partnership of BFTP/SEP, Drexel University, and the University of Pennsylvania, focuses on the intersection of nanotechnology and the life sciences and has been effective in focusing resources on the critical proof of concept phase of development.

Today, another concentration of life sciences is emerging at the "new" Philadelphia Navy Yard, our home since 2007. A target of Department of Defense closures 20 years ago, with the resultant loss of over 8,000 jobs, the Navy Yard today is home to over 10,000 employees. An important element of its reuse strategy provides locational options to capture growing and expanding life sciences and health care companies. The 2013 move of GlaxoSmithKline's (GSK) 1,800 employees to a new Navy Yard facility and Iroko Pharmaceuticals' dedication of its new headquarters designed to accommodate 200 employees have the strategy off to a strong start.

BFTP/SEP AND THE LIFE SCIENCES/HEALTH CARE SECTOR TODAY

BFTP/SEP deploys its programs and services through the lens of Capital, Knowledge, and Networks (See Figure 1). Each is designed to provide resources and custom solutions to companies, whether it is with pre-seed, seed or growth capital; hands on, dedicated mentoring and advice; and/or connections to research, investment, and business development resources – all with the expectation that our efforts will accelerate commercialization, improve chances for success, and increase job creation for the region.

Our approach, to seed, link, integrate and leverage innovation assets, recognizes the different cultures, realities, and expectations of the various contributors to an innovation ecosystem even as we maintain our focus on the entrepreneur – the ultimate driver of economic growth. These contributors include:

- Research universities seeking ways to license and commercialize their technologies and provide support for entrepreneurial activities;
- Start-up enterprises trying to figure it all out;
- Large corporations defining what innovation means for them and how to fill their pipeline;
- Angel investors and venture capital firms seeking viable investment opportunities in companies that can articulate an exit strategy;
- Community-based institutions seeking ways to engage in emerging growth sectors;
- Value chain enterprises and service providers needing a robust pipeline of business opportunities; and
- Public policy makers interested in outcomes: new companies, new jobs, and new revenues.

Addressing these expectations is a long-term play, in ever-changing circumstances, that requires consistent attention and resources, a flexible framework, committed regional leadership engagement, and professional staff to create an adaptable organization that can anticipate and respond to future challenges and opportunities.

Today, Ben Franklin's mission of regional growth through technology-based entrepreneurship and innovation remains the same as it was 30 years ago; and the basic premise of rooting entrepreneurial growth within the region's assets continues to demonstrate validity (see Figure 2): It's the "how" that has changed. Ben Franklin today is:

- Seeding emerging technology enterprises that have gone on to become leading technology employers and partnering to create private investment pools for seed and early-stage investment;
- Providing the facilities, business and technical advice, mentoring, coaching, and the networks that help emerging and growing enterprises thrive;

FIGURE 1. WHAT WE DO: Seed, Link, Integrate and Leverage Innovation Assets

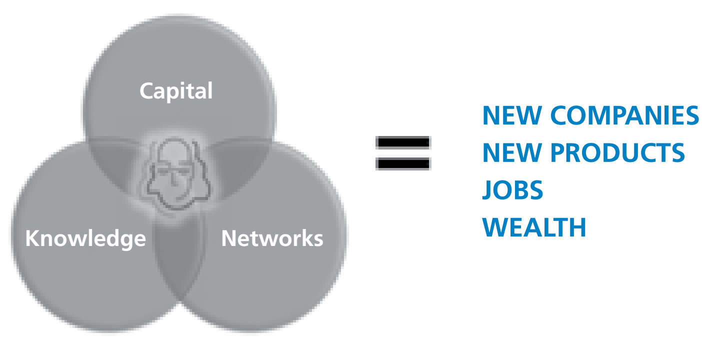
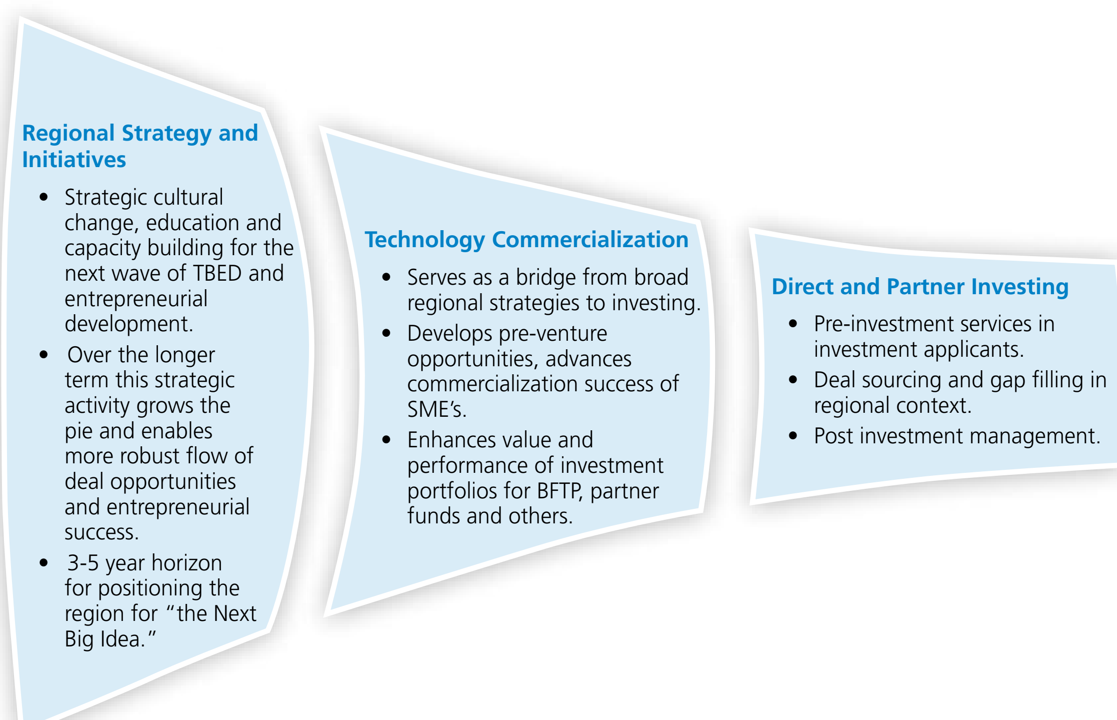


FIGURE 2. THE BFTP/SEP CONTINUUM



- Seeding, supporting, and launching new initiatives and events in the region that are strengthening our innovation infrastructure and ecosystem;
- Developing new pathways to accelerate intellectual property discovered in universities and federal laboratories to the marketplace;
- Helping existing manufacturers and research development companies to source and provide funding to execute the specific technical and business assistance they need to move a concept to the marketplace quickly, leveraging their existing capacity to generate new revenues;
- Working with leading technology corporations to identify open innovation partners and approaches that can help fill their new product pipeline; and

TABLE 1. Life Sciences Financing 2001 – 2012

Financing Vehicle	No. Companies	Amount funded
Direct Company Support		
Investments	47*	$ 19,824,428
Technology Engagement Grants	91	$ 947,521
Technology Commercialization Loans	5	$ 299,445
Nanotechnology Institute NanoApplication Fund Loans	4	$ 200,000
Direct Company Support Total	**147**	**$ 21,271,394**
Funding to Institutional Researchers	**No. Projects**	
Nanotechnology Institute: Sponsored Research Match	5	$ 230,121
Nanotechnology Institute: Translational Research Grants	53	$ 6,556,930
Coulter Foundation/ Drexel University funding	7	$ 100,000
Institutional Researcher Grants Total	**65**	**$ 6,887,051**
Total Life Sciences Support 2001 – 2012		**$ 28,158,445**

*Individual companies: does not include 37 follow-on funding investments

TABLE 2. Life Science Portfolio Acquisitions or Significant IPOs

Company	Exit
Acuity	Acquired by Opko
BioRexis	Acquired by Pfizer
Centocor	IPO and acquired by J&J
Cephalon	IPO and acquired by Teva
Immunicon	IPO and acquired by J&J
Morphotek	Acquired by Eisai
NuPathe	IPO
Orthovita	IPO
Protez	Acquired by Novartis
Topaz	Acquired by Sanofi
ViroPharma	IPO

- Collaborating with institutions and diverse constituencies to develop regional core competencies into robust economic development strategies that leverage our strengths to address regional challenges to future growth and prosperity.

CAPITAL: DOLLARS TO LAUNCH

The Life Sciences and Health Care sector presents particular challenges: Length of time for approval and commercialization of drugs, devices, and diagnostics; tremendous regulatory hurdles and turbulent regulatory environment; extraordinary costs; and retraction of capital markets today and the resultant impact on the flow of risk capital to this sector. Nonetheless, BFTP/SEP continues to work with our region's talented innovators.

Since 2001, BFTP/SEP has provided over $70M to over 650 companies, of which $21M has been used to support 150 companies in life sciences (see Table 1). These companies have leveraged follow-on capital of $78M, a ratio of 3.7:1, and have created or retained over 3,800 jobs. Equally important, of the companies funded between 2002 and 2006, over 75 percent are still in business and 91 percent have secured follow-on funding. Many companies have gone on to IPO or acquisition (Table 2). With an additional $16M in grants through our university/industry partnership programs ($6.9M in life sciences), BFTP/SEP has provided over $28M in early-stage life science funding to the region. Our current life sciences/health care portfolio of 34 companies represents a commitment of $12.5M (Table 3), co-invested with private investors and venture funds (see Table 4).

KNOWLEDGE: SMALL AND EMERGING COMPANY ASSISTANCE

The life science companies in the region benefit from BFTP/SEP's programs to support technology commercialization. In addition to direct financing, BFTP/SEP supports early, emerging and growth companies through:

- Hands-on, **customized assistance** to portfolio companies.
- Assignment of **Portfolio Managers** to provide strategic input to advance company success.
- The **BFTP/SEP Almanack Series and Annual Venture Showcase** present portfolio companies to the investment community for potential funding or programs.
- **Success Teams** for companies to learn and share experiences.
- Access to resources at the region's research institutions, both to help small companies and help institutions collaborate with companies. This is accomplished through our **Tech Commercialization Network**, a consortium of 25+ universities, government, and private partnerships to help companies gain access to resources not available internally. As shown in Table 1, we have funded 91 projects since 2001 in Life Sciences.

- Assistance with Open Innovation Strategies through **Tech Enterprise Solutions**, which works with companies to help advance their pipeline by identifying strategic partnerships with other companies or research institutions.
- Assistance with federal grant opportunities through the **Innovation Partnership** (IPart) program, which provides one-on-one counseling and business support services to clients seeking federal funding through the SBIR/STTR Programs.

KNOWLEDGE: TRANSLATING DISCOVERIES TO MARKET OPPORTUNITIES

Another seminal BFTP/SEP program is the establishment of University/Industry Partnership programs. These are comprehensive partnerships among research institutions and companies designed around a specific technology focus with the objective of accelerating technology commercialization.

Currently, BFTP/SEP is engaged in 10 regional programs either as direct manager or as a commercialization partner. Technology sectors include nanotechnology, energy, water, advanced textiles, energy-efficient building technology, and additive and advanced manufacturing. The flagship Nanotechnology Institute (NTI) is a nationally recognized, multi-institutional, non-profit organization whose unique mission is to accelerate nanotechnology commercialization through interdisciplinary translational research from academic laboratories to industry (see www.nanotechinstitute.org). Founded in 2000 by the University of Pennsylvania, Drexel University, and BFTP/SEP with funding from the Commonwealth of Pennsylvania's Ben Franklin Technology Development Authority, the NTI comprises 13 Southeastern PA research institutions with over 4,000 research faculty and over $1 billion of annual research expenditures.

The NTI's goal is to bridge the gap between nanotechnology research and commercialization and to leverage the region's life sciences strengths as a driver for the regional economy. Its unique features address the intellectual property issues of multi-institutional partnerships and a groundbreaking revenue return model. Activities include support to research faculty for late translational research, matching funds for sponsored research agreements, and loans to small companies that work with NTI institutions.

NTI's work has been recently published (*Nanotechnology Law & Business*, Fall 2011, 176-193) and in 2011 it received the IEDC Honorable Mention Award for "Partnership with Educational Institutions". As noted in Table 1, the NTI has awarded $7M to life science researchers and companies in all technology areas: therapeutics, diagnostics, and devices. Of these projects, over 20 licenses have been executed, including three multi-institutional technologies in intracellular probes, diagnostics, and nanofiber-based vascular grafts.

TABLE 3.
Current Life Science Portfolio Companies (all sources of funding)

Biopharmaceuticals	Diagnostics	Medical Devices
Ceptaris	Aviana Molecular*	Essential Medical
Corridor Pharmaceuticals	Bioconnect	EyeIC
DermaAvance Pharmaceuticals	BioNano Genomics	Gentis
Eagle Vision Pharmaceutical	Leversense	Infrascan
Jenrin Discovery	MicroMRI	Kerathin
Keystone Nano*	Molecular Detection	NeoForce Group
Midway Pharmaceuticals	Neuro Diagnostic Devices	Stabilize Orthopaedics
NexusPharma	Optofluidics*	Technical Vision*
Niiki Pharma	QLIDA	ZSX Medical*
Onconova Therapeutics	RealTime Tomography	
Prezacor	Sunstones*	
QR Pharma		
Relmada Therapeutics		
Retinapharma Technologies		
Therimunex*		

*Support from Technology Commercialization Loan Program or NanoApplication Fund Loan

TABLE 4. BFTP/SEP Funding and Venture Capital Partners (Partial List)

- Angle Technology Ventures
- Axiom Capital/Livingston Capital
- Battelle Ventures
- BioAdvance (the Pennsylvania Life Sciences Greenhouse)
- Cardinal Health Partners
- Domain Ventures
- Emerald Stage2 (a BFTP/SEP fund)
- Greater Philadelphia Alliance for Capital and Technologies (PACT)
- Harris & Harris
- LORE (Loosely Organized Retired Executives)
- Mid-Atlantic Angel Group (MAG)
- New Spring Capital
- Philadelphia Industrial Development Corporation
- Phoenix IP Ventures
- Quaker Partners
- Robin Hood Ventures
- Safeguard Scientific
- SR One Ltd
- University City Science Center
- Independent Angel Investors

SUCCESS STORY: BIOLEAP

Not all companies need direct investment or large amounts of funding to validate and accelerate the commercialization of their technology. For BioLeap, a molecular design company, a $4,000 Technology Commercialization Engagement grant enabled BioLeap to engage Nova Screen Biosciences Corp. to demonstrate proof-of-concept for its first candidate compound designed using its proprietary technology. Founded in 2004 in New Hope, PA, BioLeap's proprietary technology allows for improved identification and optimization of difficult to synthesize and formulate compounds. BioLeap used the project results to secure research contracts with GSK, Lycera, Unilever, Syngenta, DuPont, and SRI and successfully raised $8 million in investment from Quaker Partners, Adams Capital, and Syngenta.

NETWORKS: STRENGTHENING THE REGION'S INNOVATION INFRASTRUCTURE

The importance of an active, supportive *ecosystem* for spawning technology enterprises is widely recognized today and the value of public/private partnerships and of entities that perform enabling and integrating functions in this arena is just beginning to be understood and recognized.

Over the years, BFTP/SEP has initiated, funded, supported, and been the convener for a wide variety of large and small initiatives, industry reports, informational resources, and events that have resulted in more resources for emerging entrepreneurs; multiple options for anyone interested in this arena to connect; and a more varied, dense, and networked community. Our active participation in the life sciences community was recognized in 2011 with the Local Venture Impact Award of the Philadelphia Business Journal's 2011 Life Sciences Awards. As the industry continues to adjust to new realities, we expect to remain engaged and supportive of this critical economic engine.

SUCCESS STORY: INFRASCAN

InfraScan has developed a practical solution to the problem of early identification of intracranial hematomas, exploiting the unique light-absorbing properties of hemoglobin and the non-invasive, non-ionizing nature of Near-Infrared technology. The solution was based on the groundbreaking discoveries of the late University of Pennsylvania Professor Britton Chance and fully developed through the collaboration with Drexel University's School of Biomedical Engineering. The resulting device, the Infrascanner, is a patented, hand-held diagnostic imaging device based on a PDA platform to rapidly detect bleeding in the brain. An initial field study performed with over 300 patients showed the device to be highly accurate in detecting brain hematomas and as a quick, affordable complement to CT scanning to improve treatment of patients with traumatic brain injury.

Funded initially through a Coulter Foundation Grant and armed with $500,000 in BFTP/SEP funding in 2006 and an additional $250,000 in 2007, InfraScan was able to develop its prototype instruments, complete critical proof-of-concept trials and production plans and submit for 510(k) approval to the FDA in February 2008. Deployed by the Marine Corps in Iraq from 2008-2010, the positive results that accrued helped validate its clinical utility and FDA approval was secured in December 2011.

In addition to the capital it provided, BFTP/SEP's continued support and mentoring of InfraScan throughout this long process was critical to its success. Today, InfraScan is continuing to improve its first and second generation devices and expand the life-saving applications of its Near-Infrared technology. The company recently received Pennsylvania Bio's first PA Bio Patient Impact Award.

InfraScan Inc. is a medical device company that has developed a patented, Near Infrared (NIR) technology for detecting brain hematomas. The Infrascanner enables clinicians to effectively, conveniently, and accurately screen for intracranial bleeding in patients with head trauma.

SUSTAINING THE ABILITY TO CHANGE

"Innovation is the only way to address the global challenges that exist at the beginning of the third millennium," said Bayer Healthcare Chief Marijn Dekkers. The hallmark of a sustainable organization is its ability to change and re-evaluate its programs and services – to evolve, to innovate. Over 30 years, BFTP/SEP has undertaken continuous evaluation and in many cases, made substantive and long-lasting changes to help assure our future, which in turn, increases the chances for the life science industry in SEP to survive. Where once we based our revenue return on royalties, we now provide convertible debt; where once we provided small technology grants, we now provide small loans; and where once we funded single institutions, today we create multi-institutional partnership programs.

We are also sensitive to the evolution of technology sectors themselves: the emergence of software and IT technology applied to life sciences is revolutionizing the delivery of healthcare. BFTP/SEP's approach to this was to establish a separate but related seed fund venture fund, Emerald Stage2 Ventures (ES2), a private limited partnership that is a source of follow-on capital to emerging regional Information Technology enterprises and to which BFTP/SEP is the General Partner and lead Limited Partner. ES2 has now committed over $9 million to nine healthcare IT companies.

We are in a unique and challenging time for the life sciences industry. The confluence of changes in health care economics and policy, patent expiration of enormously successful drugs, the constant ebb and flow of trends in technology commercialization, and the consolidation of the life science industry – all combined with the significant capital requirements – present an enormous challenge to the industry. These are all difficult challenges individually – collectively, these challenges require new thinking and new programs with a consistent commitment to help meet these challenges – it requires innovation.

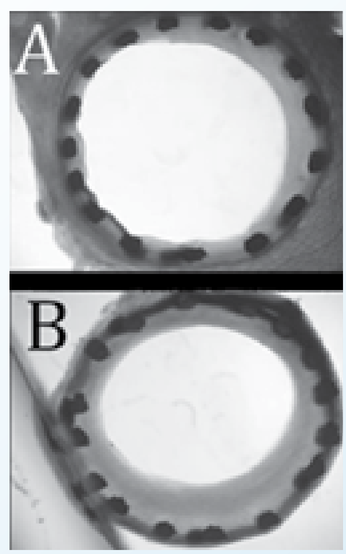
Innovation in all forms, job creation and economic development are inextricably bound. But innovation does not stop during poor economic times. Job creation and economic growth, by contrast, will: the lack of funds, and resolve to support not just innovation itself but those innovative programs that support innovation all but guarantees it. Leading these new ef-

Over 30 years, BFTP/SEP has undertaken continuous evaluation and in many cases, made substantive and long-lasting changes to help assure our future, which in turn, increases the chances for the life science industry in SEP to survive.

SUCCESS STORY: VASCULAR MAGNETICS, INC.

Dr. Robert Levy, a cardiologist at Children's Hospital of Philadelphia, has been studying mechanisms of heart valve disease for over 30 years. His recent advances to develop a revolutionary nanoparticle-based magnetically targeted drug delivery system for the treatment of peripheral artery disease have resulted in the creation of Vascular Magnetics, Inc., the first spin-out company from Children's Hospital of Philadelphia. In addition to significant funding from the NIH and the American Heart Association, Dr. Levy received $550,000 from the Nanotechnology Institute over five years and subsequently received an additional $200,000 from the University City Science Center's, Proof of Concept, QED Program.

NTI funding helped support critical proof-of-concept experiments to support and strengthen the company's Intellectual Property (five issued patents; eight applications). The QED funding helped advance the technology further and helped recruit a CEO for Vascular Magnetics, enabling the company to secure its first venture funding, $7M in Series A funding from the local venture firm Devon Park Bioventures in February 2012. The company, which is currently in pre-clinical discussions with the FDA, has identified key manufacturers for its stents and nanoparticles.



Vascular Magnetics Inc. has licensed a revolutionary nanoparticle-based magnetically targeted drug delivery system for the treatment of peripheral artery disease (PAD). This technology, developed by Dr. Robert Levy at Children's Hospital of Philadelphia, has received funding from NIH and the American Heart Association plus $550,000 in funding from The Nanotechnology Institute over five years and subsequently received an additional $200,000 from the University City Science Center's QED Program.

SUCCESS STORY: TECHNICAL VISION

Technical Vision is a Southampton, PA-based company whose objective is to develop a device to capture visually the environment of a visually-impaired person and deliver information in audio format. In 2008, BFTP facilitated and co-funded a project with Villanova University's Center for Non-linear Dynamics & Control to provide a technical assessment of the vision system and specific recommendations to support further commercialization of the technology. The engagement resulted in improvements in the technology and allowed the company to develop an updated LaserCane™, an advanced laser-based device that will allow individuals who are blind and visually impaired to find their way forward by identifying obstacles on the ground and at chest and head levels. The success of this engagement led directly to the approval of a loan from BFTP/SEP.

The company has now made over 20 prototype support canes that it will loan to private service organizations in the U.S. and abroad to public agencies. Technical Vision started the process of registering with local, state, and federal procurement groups.

forts is Ben Franklin Technology Partners/SEP. In the rarified world where BFTP/SEP resides, where $25,000 is meaningful money, BFTP/SEP will continue to support early stage life sciences in the region, to foster new and innovative solutions to meet the current challenges. Efforts to increase the commercialization of technologies emerging from our research universities, to provide critical financial support to early stage companies, organically grow regional partnerships, and foster a renewed spirit of cooperation among ALL stakeholders, will assure the region and the nation continue to lead in the development of life saving technologies.

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the world trade center

OF GREATER PHILADELPHIA

By Linda Mysliwy Conlin

The Export Finance Workshop brings the latest financial products to exporters. Thomas Cummings, Northeast and Mid-Atlantic Regional Director, Export-Import Bank of the U.S., addresses attendees.

In 1933, President Franklin D. Roosevelt designated the third week in May as "National Foreign Trade Week," stating that "Foreign Markets must be regained if American producers are to rebuild a full and enduring domestic prosperity for our people." Fifteen years later, in 1948, a poster promoting "World Trade Week" heralded the benefits of international trade with the message, "World Trade Makes Good Neighbors," underscoring that, in this post-World War II period, when trade crosses borders, armies are less likely to do so. U.S. exports now account for 14 percent of our country's gross domestic product. With 95 percent of the world's consumers living beyond our borders, global trade remains, as it was 80 years ago, a vital tool to help rebuild our nation's and the world's economy.

This holds true for Greater Philadelphia where exports are an important engine of economic growth and job creation. In fact, Pennsylvania and New Jersey rank among the nation's top 12 exporting states. According to the U.S. Department of Commerce, in 2011, Pennsylvania reached a record $41 billion in merchandise exports, a 17 percent increase over 2010, while New Jersey recorded exports of $38 billion, representing a 19 percent increase over the prior year. It is also interesting to note that, in both states, at least 90 percent of exporting companies were small and medium-sized businesses, and that over one-sixth of all manufacturing workers depend on exports for their jobs.

The Greater Philadelphia metropolitan area was among the nation's export all-stars, earning the designation as the 11th largest export market in the United States in 2011, with merchandise exports totaling $26.2 billion, reflecting a solid increase of $3.4 billion over 2010 exports. Top markets for the region included Canada, the United Kingdom, China, Mexico, and Germany, with chemicals, petroleum and coal products, computer and electronic products, transportation equipment and machinery among the leading merchandise exports.

So, when it comes to export growth, it should come as no surprise that metro areas like Greater Philadelphia are leading the way. According to the Brookings Institution, which is spearheading a Metropolitan Exports Initiative, "the 100 largest metropolitan areas in our country in 2010 produced 65 percent of U.S. exports, including 75 percent of service exports and 63 percent of manufactured goods sold abroad." For this reason, public and private sector leaders are working together, according to Brookings, "to make exports and

Linda Mysliwy Conlin is president of the World Trade Center of Greater Philadelphia. (lconlin@wtcphila.org)

DRIVING REGIONAL ECONOMIC GROWTH AND JOBS THROUGH EXPORTS

From its Center City Philadelphia location, the World Trade Center of Greater Philadelphia, a bi-state non-profit and membership organization, like its counterparts worldwide, serves as a single, powerful source of international business support for companies in the Southeastern Pennsylvania and Southern New Jersey regions. Experienced in more than 75 international markets, the WTCGP staff, on an annual basis, works with some 300-400 companies. Though the organization offers a range of trade services to meet the needs of its global business clients, the WTCGP focuses primarily on helping companies develop and execute successful export strategies. The success stories mentioned in this article are just a few of the hundreds generated by the WTCGP.

global engagement a central, consistent part of broader regional economic strategies."

As the region's leading global business resource, the World Trade Center of Greater Philadelphia (WTCGP), in its decade-long history, has helped area companies generate over $800 million in export sales, supporting 10,665 jobs. The organization is working with metro leaders and state and federal partners to integrate exports into a broader regional economic growth, job creation, and global competitiveness strategy.

PA Lt. Governor Cawley greets NY Canadian Consulate John Prato at meetings between Canadian Oil Sands companies and Southeastern PA manufacturers.

WORLD TRADE CENTERS: THE POWER OF A GLOBAL NETWORK

In 1959, David Rockefeller, as chairman of the Downtown-Lower Manhattan Association, initiated plans to construct a permanent building where, according to twin towers biographers, James Glanz and Eric Lipton,

> *The United States and foreign business and financial interests can meet to do business; where representatives of the United States and foreign governments are available for consultation and aid; and where facilities are available to expedite business transactions.*

In 1973, David Rockefeller's dream became a reality with the construction of The World Trade Center Twin Towers in New York, which served as the first home for the World Trade Centers Association (WTCA), spawning similar hubs for global commerce around the world. Today, 42 years after it was first established, the WTCA oversees a powerful network of more than 750,000 member companies belonging to more than 300 world trade centers in 100 countries, each sharing a common mission, reminiscent of that first "World Trade Week" slogan, of advancing peace and prosperity through trade.

Many of the centers offer commercial office, retail, and business conference space and services, some are associated with Chambers of Commerce and leading universities, but all are dedicated to providing a comprehensive roster of international trade services and programs to expand global opportunities for their business community. And, from a development perspective, many world trade centers, such as the Seaport World Trade Center in South Boston, have been an integral component in successful urban and port revitalization strategies.

THE REGION'S GLOBAL BUSINESS RESOURCE

From its Center City Philadelphia location, the World Trade Center of Greater Philadelphia, a bi-state non-profit and membership organization, like its counterparts worldwide, serves as a single, powerful source of international business support for companies in its region – Southeastern Pennsylvania and Southern New Jersey. WTCGP funding is derived through membership, grant funding, and corporate giving.

With a core mission of providing international trade services and key global connections to help companies succeed in global markets, the WTCGP contributes to economic growth and job creation in the region as a whole. Through individual trade counseling, educational programs, trade missions, and business networking events, the WTCGP helps companies target opportunities, develop market-entry strategies, and identify partners to sell into worldwide markets.

Experienced in more than 75 international markets, the WTCGP staff, on an annual basis, works with some 300-400 companies. Though the organization offers a range of trade services to meet the needs of its global business clients, including assisting importers with sourcing challenges and facilitating incoming foreign investment missions, the WTCGP focuses primarily on helping companies develop and execute successful export strategies. In this regard, the WTCGP serves as the Commonwealth of Pennsylvania's official Regional Export Network (REN) representative charged with helping companies in six counties of Southeastern Pennsylvania expand their export sales.

With a total of ten REN partners throughout the state, linking Pennsylvania companies with 21 representatives stationed in major markets around the world, the WTCGP belongs to what is nationally recognized as the most comprehensive state trade development program of its kind in the country. In fiscal year 2011/12 the *World Trade PA* program helped companies generate in excess of $831 million, supporting some 6,900 jobs statewide.

The WTCGP was responsible for nearly 20 percent of that total, or $161 million, helping Pennsylvania companies increase sales in markets such as China, Mexico, Germany, Brazil, and South Korea, among others. According to Pennsylvania Department of Community and Economic Development Secretary C. Alan Walker,

> *Growing private sector jobs is a top priority of the Corbett administration. Increasing the number of Pennsylvania businesses that are exporting will create new job opportunities in the state. Through working with our Regional Export Network partners like the World Trade Center of Greater Philadelphia, Pennsylvania's export assistance program continues to be the national model for providing businesses with the support they need to grow and create jobs.*

GROWING EXPORTS AND JOBS: ONE BUSINESS AT A TIME

Behind the number of exports generated and jobs created are the real life stories of the companies that have broken new ground in promising markets around the world. Seventy-five years ago, Harold Beck conceived of a process for improving the temperature controls of large industrial furnaces. With this early form of automatic process control, he won his first order a year later with the Carnegie Illinois Steel Company in Pittsburgh, going on to secure sales with other steel companies in Pittsburgh and Illinois.

Today, Harold Beck and Sons, Inc., is run by the third generation of the Beck family, Doug Beck, who oversees the Newtown, Bucks County, Pennsylvania company, producing state of the art actuators for important applications at coal-fired power plants across the United States. Under Beck's leadership, what began in the steel mills of Pittsburgh and Cleveland now includes installations in more than 70 countries around the world.

According to Bob Kritzer, director of Harold Beck and Sons' International Division, his company's success is based on having a high-quality product that fits an important niche, in addition to long-term and very dedicated employees, who, for example, despite a lack of power at the facility due to outages caused by Hurricane Sandy last fall, returned to the plant to process an order for an important customer. Maintaining a technically and highly-skilled workforce is critical; so Harold Beck has joined manufacturers in two suburban Philadelphia counties to form the Bux-Mont Manufacturing Consortium focused on developing a talent pipeline to train for and fill future manufacturing jobs.

Philadelphia Mayor Michael Nutter and Fred P. Hochberg, Chairman and President, Export-Import Bank of the U.S., attend WTCGP Global Business Conference at Drexel University.

With Canada and Mexico currently top markets for Harold Beck and Sons, Kritzer sees future growth in markets like China and India. Working with the WTCGP's staff and Pennsylvania's international trade representative in India, in 2005, the company was able to access valuable market research and assistance in organizing meetings in Delhi and Mumbai with key public and private sector leaders in the power, cement, and steel sectors.

"The WTCGP," Kritzer stated, "provided an important stepping stone for us to enter into the India market. Even today, we are still benefitting from those early contacts arranged by the WTCGP and the overseas representative in India. The work was so on-target that it has lasted." Selling directly into markets like India has helped Harold Beck and Sons more than double their international business, and, given today's challenging U.S. domestic market, has enabled the company to retain employees whose jobs, otherwise, may have been in jeopardy.

2013 Global Business Conference with (l to r): Eric Olson, Principal Commercial Officer, US Consulate Recife, Brazil; Linda Conlin, President, WTCGP; Anthony Bartolomeo, Chairman, WTCGP; PA State Senator Mike Brubaker; Thomas A. Shannon, U.S. Ambassador to Brazil; and Andrea Townrow, Executive Vice President, WTCGP.

CustomChill, Inc. is a Philadelphia-based company and manufacturer of thermoelectric chillers and cooling solutions for use in a variety of industries including medical lasers, orthopedic rehabilitation, industrial lasers, laboratory research, microprocessor cooling, and food service. According to CustomChill President Nathu Dandora, a friend contacted him to start a new company that, unlike conventional refrigeration, would apply a precision cooling and heating thermoelectric process for use in laser manufacturing or laser surgery.

Currently with 10 employees, CustomChill's secret to success is embodied in its name – designing products to meet the individual and specific needs of its customers. The company predominantly targets advanced markets with developed manufacturing and medical facilities in North America, Japan, and Europe, including customers manufacturing sophisticated lasers in Spain, Austria, and Germany.

A WTCGP trade specialist recommended that CustomChill participate in Pennsylvania's Pavilion at the November 2010 MEDICA Trade Show in Dusseldorf. Working with Pennsylvania's representative in Germany, meetings were organized with potential buyers that resulted in CustomChill landing a major, multi-million dollar sales order from an Austrian company.

Dandora states, "The contacts that the WTCGP has with the State, world trade centers and international organizations are unique and very beneficial for businesses…..everyone starts small – it's difficult to do on your own, and on your own you won't know where to go fishing – with the help of the WTCGP, you will locate areas where there are fish. Also, you don't stop there. (They) will provide assistance afterwards as well." CustomChill's growth in international sales has led to the hiring of staff to develop new products and expand sales and marketing efforts.

K'NEX Brands, LLP, a privately held company with headquarters and a manufacturing facility in Hatfield, Pennsylvania, is recognized as one of the most innovative and fastest growing construction toy companies in the world. Growing out of the Rodon Group, a plastic injection molding company founded by Irving Glickman, K'NEX was the brainchild of son Joel Glickman. After tinkering with straws at a wedding party, he conceived and developed what have become the elaborate construction toy sets of today, fueling the imagination of children of all ages with their abundance of wheels, pulleys, gears, and all manner of moving parts.

The company's products are now distributed in over 30 countries worldwide. If you ask K'NEX Brands President and Chief Executive Officer Michael Araten the secret to his success, he would say," We grow and succeed because K'NEX is a culture of innovation, integrity and entrepreneurship totally focused on Building Worlds Kids Love."

You would also hear him say that international sales have become a growing part of his business, anticipated to reach some 15 percent of overall sales in 2013, and directly supporting and enabling him to add to the K'NEX workforce, which now totals some 175 employees. The WTCGP, together with Pennsylvania's international representatives, helped the company identify a new distributor in Australia and, as a result of a WTCGP-organized trade mission to Brazil in October, 2011, K'NEX made its first sale with a major buyer in Sao Paulo, shipping two containers of its products to Brazil just six months later in April.

K'NEX is also re-shoring, returning manufacturing jobs from China, creating jobs locally, and supporting the local economy indirectly with the many print and production vendors and suppliers with whom it will be working as a result of this shifting of manufacturing back to Pennsylvania.

K'NEX President Michael Araten is an enthusiastic champion for the region, stating that, *"The Greater Philadelphia Region is an amazing place. It has rich history, as the birthplace of our nation. It is home to a diverse, educated and motivated workforce. Perhaps most notable, Greater Philadelphia has a network of business leaders that help each other and their community even as they drive growth in their own business. I love living here!"*

Photo credit: K'NEX

President Barack Obama joins Michael Araten (second from left), President of K'NEX and member of WTCGP, for a tour of their Hatfield, PA, plant.

GAINING A COMPETITIVE EDGE: COLLABORATING AND SHARING BEST PRACTICES

To augment its core trade services program, the WTCGP also organizes a roster of educational programs and business networking forums to help guide the global business strategies of companies, offering timely market information and opportunities for area firms to collaborate, share insight, and learn from one another. Examples include the award-winning *CEO's China Operations Club*, where companies active in the China market meet to hear presentations from leading experts on topics ranging from intellectual property protection to global banking issues and labor regulations. Informal discussions complement the formal sessions, where members share best practices and learn from one another.

WTCGP offers students an opportunity to engage in high-level international business networking and educational events.

With the *International Design and Engineering Consortium (IDEC)*, leading architectural, engineering, design, and construction management firms collaborate to strengthen and present winning bids for large, global infrastructure projects. And through its series of *Export Finance Workshops*, the WTCGP collaborates with leading international lenders such as HSBC, PNC, TD Bank, UPS Capital, and Wells Fargo Bank and government agencies like the Export-Import Bank of the United States and the U.S. Small Business Administration to mitigate risk and access capital and global banking solutions to support export sales transactions.

A WORLD-CLASS REGION: FOCUSING ON ITS STRENGTHS

In addition to Pennsylvania's Department of Community and Economic Development and New Jersey's Business Action Center, state agencies that support export development, the WTCGP has worked in partnership with local, county, and federal organizations to advance the global competitiveness of key technology and growth sectors for the region.

With the overall mission of "leading the federal economic development agenda by promoting innovation and competitiveness, preparing American regions for growth and success in the worldwide economy," the U.S. Economic Development Administration (EDA) understands that economic development takes place within a *global* economy. In partnership with the EDA and the region's leading technology investment and commercialization organizations like Ben Franklin Technology Partners of Southeastern Pennsylvania and the University City Science Center, the WTCGP developed export seminars to advance the global leadership of companies in the life sciences, biotech, and nanotech fields, and in the energy and environmental sectors. By aligning with the region's established growth drivers, the organization strengthens its role as a catalyst for regional economic growth.

Finally, Greater Philadelphia is home to over 100 colleges and universities. The WTCGP has helped attract and recruit international students to the region's campuses. Seeking to align classroom theory with practical experience in the conduct of international business, the organization created the "Export for Scholars Program," where graduate business students work alongside exporting companies, providing market research and participating in trade missions and sales meetings. The WTCGP is committed to working in partnership with leading institutions like Drexel University and its LeBow College of Business, Saint Joseph's University, Villanova University, Rutgers, Richard Stockton College of New Jersey, and Temple University's Fox School of Business and Center for International Business Education and Research, among others, to help prepare the next generation of global business leaders.

The Philadelphia region is looking outward, proud to promote its rich history and cultural attractions, centers of technology leadership and innovation, institutions of higher learning, its quality of life, and its people. Initiatives such as *World-Class Greater Philadelphia*, undertaken by The Economy League of Greater Philadelphia, have brought together business and civic leaders to craft and implement strategies to position Greater Philadelphia as a global leader. Following this trend, the Philadelphia City Council appointed Councilman-at-Large David Oh to chair a Committee on Global Opportunities and the Creative/Innovative Economy. Embarking upon his second term, Philadelphia Mayor Michael Nutter addressed a Greater Philadelphia Chamber of Commerce luncheon saying,

> *My Administration's approach to economic development, education, government reform and infrastructure renewal reflects a consistent philosophy that is aggressive, global in scope….Philadelphia's marketplace is global, integrated and increasingly competitive. ..we need to market ourselves globally.*

To achieve this vision of a "world-class" city and region, and, according to the Brookings Institution, "fully maximize the benefits of global trade and demand, exporting needs to be promoted as a key economic strategy within the region, as well as better integrated into existing regional economic growth strategies." Visiting Philadelphia's Sister City of Tianjin, China, and Beijing in November, 2012, Mayor Nutter is already making good on his second-term priority of advancing global trade and investment as important drivers of economic growth and jobs. Count on the WTCGP to be a key player in positioning Greater Philadelphia as a world-class destination and center for global commerce – one successful business at a time.

recession and recovery

By Luke A. Tilley, Ardy L. Wurtzel, and Noelle Risser

Given the challenges presented across all sectors of the economy by the recession, it is not surprising that recovery has been long and arduous. But firms continue to invest, expand, and hire, while households are increasingly finding jobs and returning to more normal spending patterns. There is much more work to be done to bring the tri-state economies back to the levels achieved before the recession, but we are moving in the right direction.

Luke A. Tilley is a regional economic advisor for the Federal Reserve Bank of Philadelphia.

Ardy L. Wurtzel is a senior research assistant for the Federal Reserve Bank of Philadelphia.

Noelle T. Risser is an outreach analyst for the Federal Reserve Bank of Philadelphia.

INTRODUCTION

The 2007-2009 recession was extremely sharp and severe, with the impacts still being felt several years later. The impacts differed for different states and regions in the United States, as would be expected since they differ in economic structure. The economies of the states in the Federal Reserve's Third District, which includes the tri-state area of Pennsylvania, New Jersey, and Delaware, have many similarities to the U.S. economy but some differences as well.[1]

This article details the economic performance in the tri-state area and contrasts the states' performance with that of the overall U.S. economy. The economic structure of the area is similar to that of the U.S. in terms of its contributions to GDP from the various sectors of the economy. Notable differences include the large Finance and Real Estate sector in Delaware and the relatively large Education and Health Services sector in Pennsylvania. Despite similarities in structure, the overall U.S. economy has outperformed the three states, as measured by the Philadelphia Fed's coincident indexes.

In terms of employment, the tri-state area has, in the aggregate, tracked fairly well with the U.S., but there are internal differences. Pennsylvania fared better in terms of job losses and in subsequent growth, while Delaware and New Jersey have performed worse. The combined unemployment rate of the three states remained below the U.S. rate throughout the recession and during most of the recovery until 2012, when the nationwide rate fell gradually and the tri-state rate rose.

Housing markets remain a trouble spot for all geographies. Mortgage delinquencies remain high but have come down from their peaks. New Jersey has the worst housing market in the tri-state area; the rate of seriously delinquent mortgages there has yet to peak and continues to rise. Home values in each area surged during the housing boom but declined sharply and remain well below their peaks, greatly affecting household wealth in the three states.

ECONOMIC STRUCTURE AND PERFORMANCE

Economic Structure

To compare the structure of the U.S. economy with the economic structure of the three states, it is useful to examine the sector contributions to gross domestic product (GDP) published by the Bureau of Economic Analysis (BEA). GDP for the states is available only on an annual basis, with 2011 being the most recent data available.

The table reveals differences between the states and the U.S. as well as similarities. At the national level, the largest sector share of GDP is that of the Finance and Real Estate (Finance) sector at 20.1 percent. The second largest is the Trade, Transportation and Utilities (Trade) sector's share at 16.2 percent, followed by Business and Professional Services (Business) at 12.7 percent.

The economic composition of the three states closely resembles that of the U.S., as the Finance sector contributes the largest share to the states' GDP. Pennsylvania's share is 19.4 percent and New Jersey's is 24.0 percent. Delaware's GDP also gets its biggest share from

ECONOMIC PERFORMANCE IN THE THIRD FEDERAL RESERVE DISTRICT

The 2007 - 2009 recession was the sharpest economic downturn in the United States since the Great Depression, and the impacts varied across the 50 states. Accordingly, states have experienced various levels of economic growth since the recovery began, due to fundamental differences in their economic structures. This article details the economic performance and structure of the tri-state area and contrasts the states' performance with that of the overall U.S. economy by reviewing the three states' GDP growth, coincident indices, employment/unemployment dynamics, and housing sector conditions.

the Finance sector, with nearly half of the state's total economic output coming from Finance. This shows the significant impact of several large financial service firms that conduct operations in the state, particularly credit card processing.

Both Pennsylvania and New Jersey mirror the U.S. economy in that the second and third largest contributing sectors to GDP are Trade, Transportation and Utilities and Business and Professional Services, respectively. In Delaware, those sectors also rank as the second and third largest economic contributors, but in reverse order.

Pennsylvania's sector shares bear the strongest resemblance to the U.S. sector share values, especially in manufacturing, an important source of job loss during the recession. For Pennsylvania, the most noticeable difference is the Education and Health Services (Health) sector, which contributes 12.6 percent of total GDP for the state compared with only 8.8 percent for the nation. Both New Jersey (9.0 percent) and Delaware (6.7 percent) are closer to the U.S. in that respect.

Coincident Indexes

State GDP data are convenient for comparing the economic structure and relative performance of sectors, but they lack the timeliness and frequency of monthly or even quarterly data.[2] The delay in their release creates the need for an alternative source for tracking state economic activity in a more timely fashion.

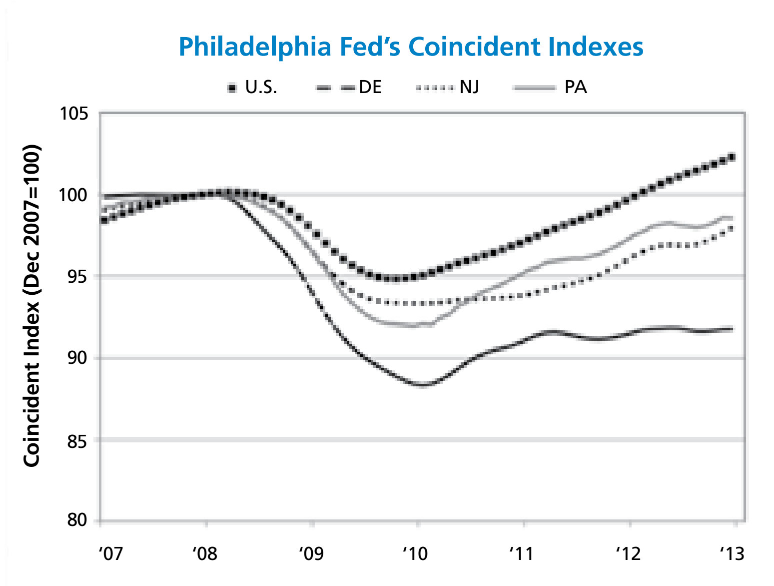
The state coincident indexes from the Federal Reserve Bank of Philadelphia are designed to accomplish that task. The indexes combine four state-level indicators to summarize current economic conditions in a single statistic. The four state-level variables in each coincident index are nonfarm payroll employment, average hours worked in manufacturing, the unemployment rate, and real wage and salary disbursements. The trend for each state's index is set to the trend of its gross domestic product (GDP), so long-term growth in the state's index matches long-term growth in its GDP. The Philadelphia Fed also compiles a coincident index for the U.S.[3]

To illustrate the usefulness of the coincident indexes for measuring output, one can compare the behavior of the U.S. index to GDP.[4] U.S. GDP peaked in the fourth quarter of 2007 and then fell 4.7 percent to its trough in the second quarter of 2009. The U.S. coincident index peaked in the first quarter of 2008, one quarter later than GDP, and reached a trough in the fourth quarter of 2009, two quarters later than GDP, falling 5.3 percent over that period. So the two measures move similarly, with the index reaching turning points later than GDP. This is not surprising given that the four components of the index are all driven in part by labor market factors, and the labor market often lags turning points in GDP. Although not exact, these two measures of changes in economic activity for the U.S. produce similar results. Thus, the U.S. coincident index is a good proxy for GDP.

2011 SECTOR SHARES OF TOTAL GDP (%)

Sector	U.S.	PA	NJ	DE
Agriculture, Forestry, & Fishing	1.2	0.6	0.2	0.5
Mining & Construction	5.4	4.7	3.0	2.6
Manufacturing	12.3	12.3	7.8	6.8
Trade, Transportation & Utilities	16.2	16.4	19.0	9.5
Information	4.4	3.9	4.4	1.6
Finance & Real Estate	20.1	19.4	24.0	48.6
Business & Professional Services	12.7	13.9	16.0	10.7
Education & Health Services	8.8	12.6	9.0	6.7
Leisure & Hospitality Services	3.9	3.5	3.2	2.5
Other Services	2.5	2.5	2.1	1.5
Government	12.6	10.2	11.2	9.1

Source: Bureau of Economic Analysis

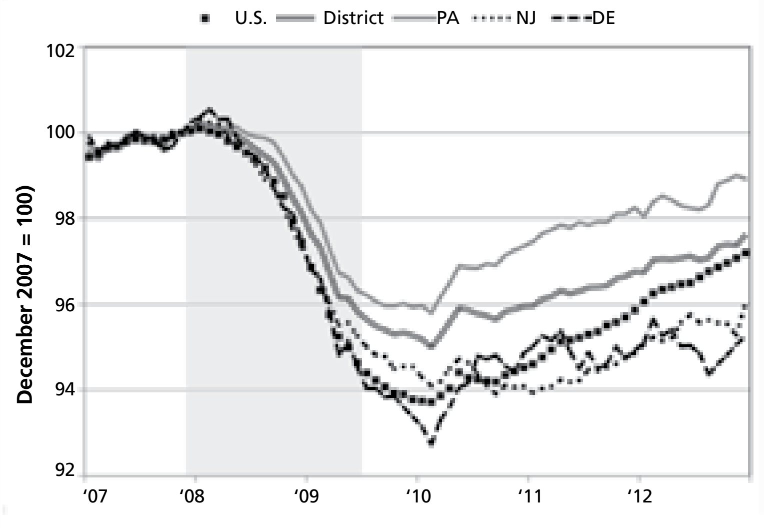


In analyzing the state coincident indexes for Pennsylvania, New Jersey, and Delaware over the same time period, we see that all three states have performed worse than the U.S. as each state experienced larger percentage declines from their respective peaks to troughs and smaller percentage increases from their respective troughs to peaks.

Pennsylvania's index declined 8.0 percent from its peak in December 2007 to its trough in December 2009. After the recession, the index increased 7.2 percent from the trough to December 2012, the largest of the three states' post-recession increases. Overall, Pennsylvania's index is 1.4 percent below its peak level.[5]

The coincident index for New Jersey experienced a 6.8 percent decline from its peak in February 2008 to its trough in December 2009. After the recession, New Jersey's index increased 5.0 percent from the trough to December 2012, worse than Pennsylvania and the na-

Total Nonfarm Employment



tion, but better than Delaware. Overall, New Jersey's index is 2.1 percent below its peak level.

Delaware's coincident index experienced the largest decrease, -11.7 percent, from its peak in January 2008 to its trough in January 2010. Additionally, Delaware has had the smallest post-recession rebound, just 3.9 percent. Overall, the index remains 8.2 percent below its peak level, the largest post-peak decline when compared with Pennsylvania, New Jersey, and the U.S.

JOB LOSSES AND GAINS

The figure shows total nonfarm employment in the relevant geographies. As with the coincident indexes, the series are indexed to equal 100 in December 2007, the official starting month of the recession. Each series, then, can be interpreted as percentage changes from the December 2007 level.[6]

As shown in the figure, firms in the three states as well as nationwide continued to add jobs into the first months of the recession. Employers started cutting jobs a few months after the declines in economic activity. This delay in job losses at the start of a recession is common, and the reverse occurs at the start of an economic recovery. As is shown, the official end of the recession is June 2009, but job losses continued for several months and job growth did not start until early 2010.

The nation and the tri-state area experienced sharp job losses in the face of the recession. From the peak of employment in early 2008 to the trough, employers cut nearly 8.8 million jobs nationwide, a decline of 6.4 percent. Employers in the tri-state area also cut jobs, although not quite as many in percentage terms. From peak to trough, net job losses totaled nearly 540,000 for a percentage decline of 5.2. The timing of the trough was identical, with both the national economy and the tri-state area bottoming out in February 2010 before starting to add jobs.

Of the three states, Pennsylvania fared the best, with total job declines of 4.4 percent (255,000), and reached its trough in the same month as the national economy. New Jersey fared considerably worse, with employers shedding a net 6.4 percent of jobs (261,000). Job losses at private employers in the state leveled off at the same time as the nation and Pennsylvania, but sharp cuts in the government sector protracted overall job losses until September 2010, a much later trough. Employers in Delaware reached their employment nadir at the same time as Pennsylvania and the nation, but the cuts were proportionally more drastic. Job losses amounted to 7.8 percent (34,400).

National job growth resumed eight months after the recession ended. It is not uncommon for this delay in hiring to occur. For employers to start hiring, they must first believe that the economic rebound will be sustained. Instead of hiring right away, firms often respond to increased business activity by asking existing employees to be more productive or to work longer hours. Only once employers believe the recovery is lasting do they increase hiring.

During the recovery, overall U.S. job growth surpassed that of the combined tri-state area. Nationwide, net job growth of nearly 4.8 million is more than half (54 percent) of the total jobs lost. In the Third District, growth has been slightly slower, with 50 percent (271,000) of lost jobs regained. Pennsylvania has by far outperformed its neighbors, regaining 73 percent (186,000) of lost jobs. New Jersey and Delaware have regained just 33 percent (86,000) and 38 percent (13,000), respectively, of the number of jobs lost.[7]

Construction and Manufacturing

The character of the job declines, in terms of sector breakdown, is very similar in the nation and the Third District, with the Construction and Manufacturing sectors experiencing the biggest losses. Of the 8.8 million net job losses nationwide from December 2007 to February 2010, 4.7 million (54 percent) were in the Manufacturing and Construction sectors. The figure is nearly identical for the tri-state area: 53 percent (285,000) of net losses were in those two sectors.

CONSTRUCTION JOB LOSSES

December 2007 to December 2012

	Thousands	(%)
U.S.	1,926.0	25.7
Third District*	78.0	16.2
Pennsylvania	41.7	16.1
New Jersey	45.8	26.8
Delaware*	8.8	33.0

* Construction jobs in Delaware are reported as a combined sector with Natural Resources & Mining

At the national level, the Construction sector had already been cutting jobs for two years before the start of the recession as housing starts plummeted. The three states did not experience a boom in housing construction nearly to the degree as other parts of the country, so losses in construction jobs did not start in earnest until the national recession slowed all activity in the sector. Only Pennsylvania showed any appreciable job gains in the sector during the recovery in 2010-2011, but even here, the course was reversed in 2012. The table shows total losses in the sector since the start of the recession.

The Manufacturing sector was also sharply affected by the recession in terms of employment. It is important to note that employment in manufacturing at the national and District levels has been declining as a structural trend for decades as some operations have moved overseas and as the industry is continually becoming more mechanized and more productive. But recessions tend to accelerate declines in this sector. In this recession, manufacturing employment declined by 18.2 percent (2.5 million) nationwide, while states in the Third District fared similarly, with losses of 17.1 percent (173,000). During the recovery, manufacturing firms nationwide have added nearly half a million jobs, recouping about one-fifth of the losses, while the tri-state area in the aggregate has essentially been flat, with Pennsylvania adding jobs in the sector while declines have continued in New Jersey and Delaware.

Other Sectors

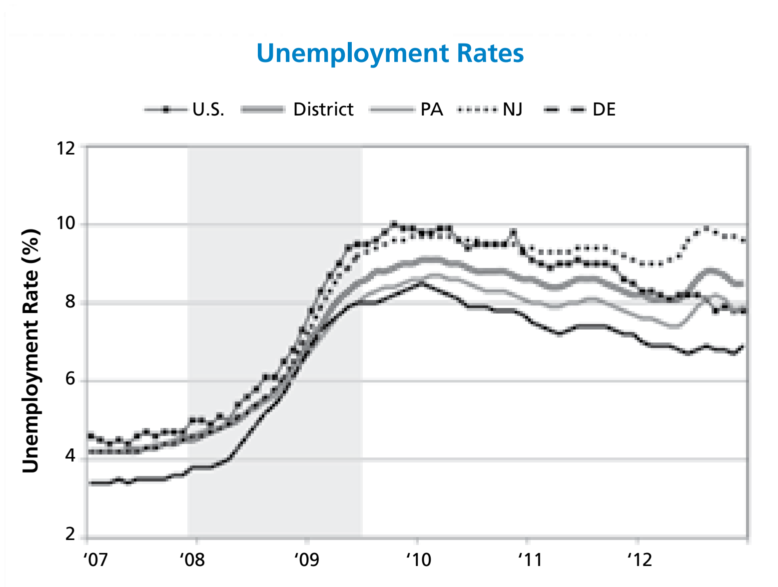
The jobs picture is strikingly more encouraging outside the Construction and Manufacturing sectors. The strongest growth at both the national and the local level has been in Education and Health Services. That sector is driven much more by demographics than by the business cycle, and it is the only nongovernment sector to add jobs over the course of the recession. Nationwide, employers in the sector have added nearly 2.0 million jobs since the start of the recession, an increase of 10.7 percent. In the tri-state area, Pennsylvania added 7.9 percent (86,000) in the sector, New Jersey added 9.7 percent (56,000), and Delaware added 14.1 percent (8,600).

In each state there are other sectors that have performed well in the recovery. In particular, jobs in the Professional and Business Services sector declined by a total of 100,000 across the three states, but the sector regained all of them. Firms in the Leisure and Hospitality sector cut 30,000 jobs during the recession and have hired double that amount in the recovery. Aggregating all nonmanufacturing and nonconstruction sectors across the three states, the total number of jobs is 8.9 million, the same as at the start of the recession. So the private sector, excluding construction and manufacturing, has fully regained the net number of jobs that were lost.

UNEMPLOYMENT

As would be expected with sharp job cuts, unemployment rates increased dramatically over the course of the recession, both nationwide and in the tri-state area. For decades, the combined unemployment rate of Pennsylvania, New Jersey, and Delaware tracked very closely with the national rate, both in terms of the level and the magnitude of fluctuations during recessions and recoveries. That dynamic changed over the course of the recent recession and the recovery. In the 214 months from January 1990 to December 2007, the difference between the two rates was less than half a percentage point in all but eight of those months. This is due to the economic structure of the tri-state area, which is very similar to the nation in terms of the share of jobs in each sector.

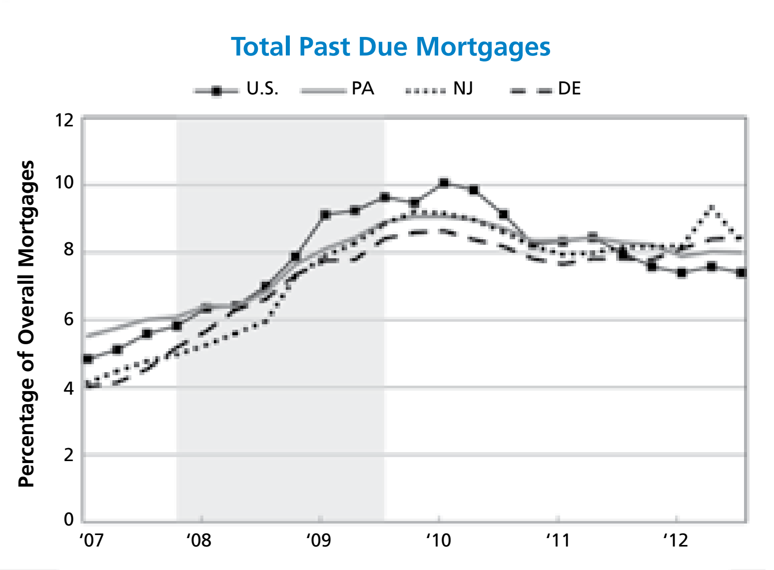
This tight relationship was broken in early 2009 in the depths of the recession. Job losses were more rapid and the unemployment rate rose more quickly in the nation than in the Third District, peaking at 10 percent in October 2009. The combined rate of the tri-state area peaked later but did not soar as high, maxing out at 9.1 percent in January, February, and March of 2010.

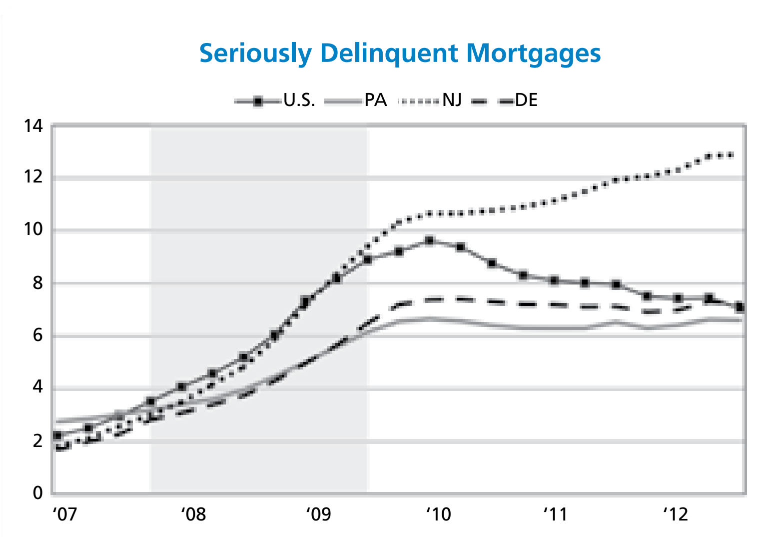


But while the tri-state area performed relatively better than the nation during the recession, the roles were reversed during the recovery. Both rates have declined since their peaks, but as the overall U.S. economy has generated jobs more quickly, the unemployment rates once again converged and were identical at 8.1 percent by April 2012. Increased labor force participation in the tri-state area in the second half of 2012, almost entirely in Pennsylvania, drove up the unemployment rate in the tri-state area, which exceeded the U.S. rate by more than a full percentage point by the end of the year.

HOUSING MARKETS

The recent recession was in large part driven by overinvestment in the housing sector, both in terms of new construction and inflated values of existing homes. As the housing market slowed in 2006-07, many households that could not afford their mortgages began missing payments and delinquency rates rose. As the recession started and then intensified, many more households became delinquent due to job and income losses, even if they were not recent buyers. The ensuing impacts on all areas of the housing sector including construction, home sales, and home values have been dramatic in the U.S. and in Pennsylvania, New Jersey, and Delaware. The decline in home values has reduced household wealth. For all areas, this decline in household wealth greatly affects saving and spending decisions.





Mortgage Delinquency

The figure shows the percentage of past due mortgages in each of the three states and the U.S.[8] At the height of the recession and well into the start of the recovery, delinquency rates in the tri-state area were below the U.S. total. In 2010, rates improved for all three states and the nation. Over the course of 2011, however, the U.S. rates continued to decline, while rates in the three states either leveled off or worsened. By the end of 2011 and into 2012, all three states had higher delinquency rate figures than the U.S.

Seriously Delinquent Mortgages

Another important measure of the housing market is seriously delinquent mortgages, a category that includes mortgages 90 or more days delinquent as well as those already in the foreclosure process. Similar to the discussion of the overall percentage of mortgages past due, in the period leading up to the recession, the three states reported figures under or around the national average.

Over the course of the recession, the U.S. rate and New Jersey's rate increased more quickly than Pennsylvania's or Delaware's. Since the start of the recovery, the overall U.S. figures have declined significantly, while Pennsylvania's and Delaware's are still hovering around their respective peaks of 6.6 percent and 7.4 percent. The rate of seriously delinquent mortgages has worsened significantly in New Jersey, even over the course of several years of economic recovery. In the third quarter of 2012, 12.9 percent of mortgages in New Jersey were more than 90 days past due or in foreclosure.

Foreclosure Inventory

The mortgage foreclosure inventory is a measure of the percentage of overall mortgages that have entered or were previously in foreclosure in a given quarter. This figure gives a measure of the inventory of homes on the market through foreclosure. Additionally, these homes likely put downward pressure on home prices.

Current national figures estimate that over 4 percent of mortgages in the country are in foreclosure, more than double the average figure over the past 40 years. The current foreclosure inventory in New Jersey is the most striking at nearly 9 percent of all mortgages and is more than double the national average. Through the recession and since the start of the recovery, Pennsylvania and Delaware have reported numbers under the U.S. figures; however, Pennsylvania is continuing to see an upward trend in this data series and is currently reporting nearly 4 percent of mortgages in foreclosure, which is a peak for the state.

Prime and Subprime Mortgages Past Due

As may be expected, the delinquency rate for subprime mortgages is significantly higher than that for prime mortgages, both nationwide and in the tri-state area. Prime mortgages are those conventional loans for which the borrower has an above-average credit rating and, consequently, a lower risk of defaulting on the loan. Subprime mortgages are given to borrowers with credit ratings that indicate to the lender that they have a higher risk of defaulting on the loan. Subprime mortgages usually carry a higher interest rate in order to compensate for the higher risk to the lender.

Of the three states, New Jersey had the largest portion of prime loans in past due status, 5.4 percent, as of the third quarter of 2012. However, for subprime loans, Pennsylvania and Delaware have higher delinquency rates than New Jersey, at 22.5 percent and 24.0 percent, respectively.

Home Prices

The housing market boom between the 2001 and 2007 recessions not only provided a surge in the construction of new homes but also boosted the values of existing homes. The impact on existing homes can be seen in the Federal Housing Finance Agency's (FHFA) home price index (HPI), which is available at the national and state levels. The overall HPI tracks the average change in home values as indicated by purchases of homes as well as when a home is refinanced and the updated home value is determined by an appraisal.

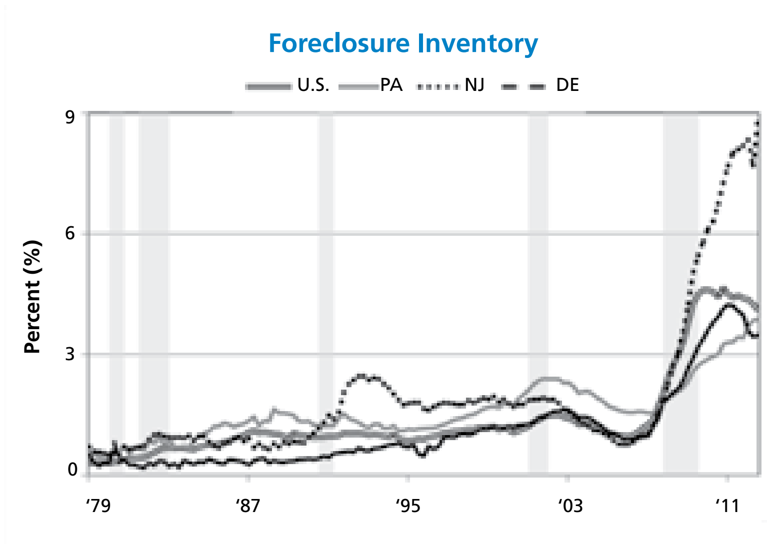
The figure shows the more restrictive purchase only HPI, which uses only the data for homes that are purchased on the market. This series is indexed to equal 100 in January 1991. From the end of the previous recession to the fourth quarter of 2007, the average increase in home values was significant nationally and in the Third District states.

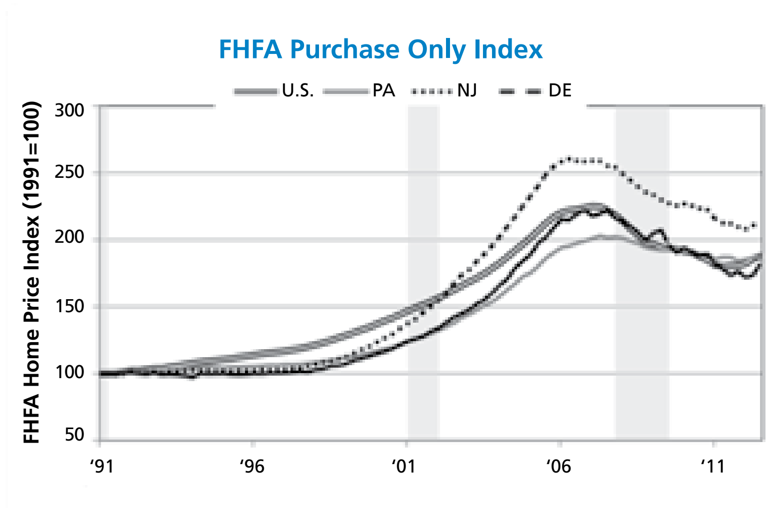
The highest appreciation was in New Jersey (74 percent), a peak reached in the second quarter of 2006. Delaware's appreciation was slightly lower (69 percent), reaching that peak in the fourth quarter of 2007. Although not quite as rapid, Pennsylvania's appreciation of 57 percent and the nationwide appreciation of 46 percent were also significant. Pennsylvania peaked in the second quarter of 2007, and nationwide prices peaked one quarter earlier. This appreciation gave homeowners a significant boost in wealth, which fed economic growth until the housing market collapsed.

Since peaking, each area has had a marked decrease in home values. Average home values in the U.S. finally started to increase in 2012, but as of the third quarter, they remained 16.6 percent below their peak. Home values in Pennsylvania also started to turn around in 2012 but remain 7.7 percent below peak levels as of the third quarter. Delaware's markets showed the strongest turnaround in 2012, but through the third quarter were still well below (17.4 percent) the peaks. New Jersey has the largest net decline at 19.4 percent and is the only area not showing signs of a turnaround in the HPI data.

CONCLUSION

The recent recession was sharp at both the national level and in the tri-state area. The recovery has been underway since mid-2009, and the economies of Pennsylvania, New Jersey, and Delaware have improved, albeit slowly, by nearly every measure, including economic activity, job growth, unemployment, and housing market indicators. But by nearly all measures, the regional economies remain below their previous peaks. In addition, high unemployment rates, high mortgage delinquencies, and decreased home values are often the economic indicators most visible to the public and the ones felt most personally, and a lack or improvement in these indicators may cause many people to feel as though the economy is still in recession.





There are reasons to be optimistic about the future. Data from the Federal Reserve Board of Governors show that consumers have substantially reduced their debt burdens after debt levels rose to historic peaks before the recession. Specifically, monthly debt payments as a share of disposable income are at their lowest level since the mid-1980s. The lower debt burden should support continued consumer spending going forward.

The Philadelphia Fed's Business Outlook Survey also reveals optimism in the tri-state manufacturing sector.

According to that survey, manufacturing activity has increased in 32 of the 42 months since emerging from declines in 2009. Moreover, firms participating in that survey consistently report they expect future activity to be higher than the current level.

Given the challenges presented across all sectors of the economy by the recession, it is not surprising that recovery has been long and arduous. But firms continue to invest, expand, and hire, while households are increasingly finding jobs and returning to more normal spending patterns. There is much more work to be done to bring the tri-state economies back to the levels achieved before the recession, but we are moving in the right direction.

ENDNOTES

1 The Federal Reserve Bank of Philadelphia helps formulate and implement monetary policy, supervises banks and bank and savings and loan holding companies, and provides financial services to depository institutions and the federal government. It is one of the 12 regional Reserve Banks that, together with the Board of Governors in Washington, D.C., make up the Federal Reserve System, the nation's central bank. The Philadelphia Fed serves eastern Pennsylvania, southern New Jersey, and Delaware. Although the Bank is responsible only for portions of Pennsylvania and New Jersey, all discussion of state economies in this article refers to data for the entire state.

2 The BEA has not yet published a release schedule for 2013 regional data. The 2011 data were released in June 2012, six months after the close of the year.

3 Historical data and the methodology for the coincident indexes are available on the Regional Economy section of the Philadelphia Fed's website: http://www.philadelphiafed.org/research-and-data/regional-economy/.

4 GDP data are released at quarterly frequency and the coincident indexes are monthly. For this comparison we collapse the U.S. Coincident Index to quarterly frequency by taking the average value of the relevant three months.

5 The original data for the coincident indexes are calculated so that January 1992 is set equal to a value of 100. For this analysis we have rescaled each index so that December 2007 is equal to 100 in order to more easily compare performance during the past five years.

6 Nonfarm employment data are from the Bureau of Labor Statistics.

7 This accounting of the percentage of lost jobs regained are updates of figures given by Loretta Mester, director of research at the Philadelphia Fed, in "Economic Developments and the Outlook," a keynote speech at the 2012 New Jersey Commissioner's Banking Symposium on November 28, 2012: http://www.philadelphiafed.org/publications/speeches/mester/.

8 Data are from the Mortgage Bankers Association and Haver Analytics.

transit-oriented
DEVELOPMENT IN THE GREATER PHILADELPHIA REGION

By Barry Seymour and Karin Morris

Turbo Lofts in Lansdale, PA, is the conversion of a former textile mill into 45 condominiums, within walking distance of the SEPTA Lansdale regional rail station.

Greater Philadelphia has one of the most extensive and varied rail infrastructure systems in the country, dating back to the first railroad that opened here in 1832. Attractive city and suburban neighborhoods developed along these early rail investments in subways, streetcars, and commuter rail, defining the patterns of settlement in the city and surrounding areas. Today many of these neighborhoods and towns with great transit access are the most desirable in the region and provide the template for transit-oriented development (TOD) throughout the country.

Transit-oriented development is compact, mixed-use development within an easy walk of a transit station. Its pedestrian-oriented design encourages residents and workers to drive their cars less and ride mass transit more. These "transit villages" are usually moderate to high density, matching the existing scale of development, and can be new construction or redevelopment. Land uses include residential, commercial, and office, or some combination.

As the region grew over the past century and the automobile became the dominant mode of travel, some of those original TOD communities turned their backs on their transit stations. But in the past decade, as individuals have both rediscovered these older communities and the advantages of riding transit, much progress has been made in promoting TOD and smart growth, and numerous new projects have been built or proposed. This article will explore how the Greater Philadelphia region has met these challenges, as an example to other older industrial cities and regions with the "great bones" of an extensive transit network and walkable downtowns.

PROGRESS TOWARD TOD: KEY FACTORS FOR SUCCESS

High Quality Transit Service: The Philadelphia region has a far-reaching and diverse transit system, with service and facilities provided by the Southeastern Pennsylvania Transportation Authority (SEPTA), the Port Authority Transit Corporation (PATCO), New Jersey Transit, and Amtrak. SEPTA is the largest system, with 153 regional rail stations, 52 subway stations, 75 light rail/trolley stations, plus 126 bus routes and various paratransit services. New Jersey Transit has three Atlantic City Line rail stations within the bi-state region and 20 River LINE stations, as well as numerous bus

Barry Seymour is executive director of the Delaware Valley Regional Planning Commission. (bseymour@dvrpc.org)

Karin Morris is manager of the Office of Smart Growth, Delaware Valley Regional Planning Commission. (kmorris@dvrpc.org)

PROGRESS, CHALLENGES, AND OPPORTUNITIES

Transit-oriented development (TOD) has gained greater attention and interest over the last ten years both nationally and in the Greater Philadelphia region. Successful TOD requires cooperation and commitment from all levels of government, as well as with developers and transit agencies. This article focuses on the progress that the Greater Philadelphia region has made in implementing TOD, including the key factors for success, as demonstrated through eight TOD projects. The article also discusses how regional growth can accommodate the demand for TOD and what challenges and opportunities lay ahead.

routes. PATCO's rail line from southern New Jersey into Philadelphia has 13 stations, and Amtrak operates 10 stations within the region, including the flagship 30th Street Station in Philadelphia, the second-busiest in the nation. This richness in the transit network means there are many redevelopment opportunities near rail stations and many areas well served by transit.

Regional Vision: The region's adopted long-range plan, *Connections - The Regional Plan for a Sustainable Future,* prepared by the Delaware Valley Regional Planning Commission (DVRPC), strongly supports TOD and smart growth as part of its overall vision for how the region should grow and how best to take advantage of the area's extensive existing transit assets. The city and county planning commissions in the region also support TOD and encourage station area planning. National attention on the issues of climate change also supports transit-oriented development and the importance of providing alternatives to the automobile, and rising gas prices have brought transit ridership to record levels.

Supportive Regional Policies: Working with its partner agencies, DVRPC has supported TOD for over a decade, having produced specific TOD plans for over 25 rail stations in-house and funded plans at over 45 stations through its Transportation and Community Development Initiative grant program. In 2003, DVRPC selected the top 45 TOD opportunity locations in the *Regional Inventory of TOD Sites*. In 2007, DVRPC published *On Track: Progress Toward TOD in the Delaware Valley*, which highlights TOD activity at over 100 rail stations. In 2009, DVRPC released *Demographics of Transit Zones*, with data on all transit-served areas in the region. DVRPC has also held TOD marketplaces, bringing developers together with municipalities that have development sites near transit.

Strong State Commitment: The Commonwealth of Pennsylvania enacted Act 238, the Transit Revitalization Investment District (TRID) Act in 2004, which created a mechanism to enable local municipalities to work with transit agencies on planning and funding TOD. In three phases and with community involvement, the municipality identifies a new district around a transit station to receive targeted public sector infrastructure improvements. Funded by the tax increment from new development, the recommended improvements are implemented and the value capture revenues are dispersed according to a predefined schedule. Bucks, Delaware, and Montgomery County communities, as well as the city of Philadelphia, are currently investigating this tool to support community development.

The Pennsylvania Department of Transportation (PennDOT) also emphasizes linking transportation and land use planning, which has generated interest in TOD. PennDOT has developed a web-based TOD Planning Toolkit (www.todtoolkitpa.com) that will assist and encourage Pennsylvania municipalities to promote TOD, improve access to transit, and improve the quality of existing and future transit facilities.

New Jersey's Department of Transportation has created policies and incentives for TOD, through the multi-agency Transit Village Initiative, which designates transit villages throughout the state through a competitive application process. Municipalities must meet stringent criteria, including: a demonstrated willingness to grow; an adopted TOD redevelopment plan or TOD zoning ordinance (with appropriate site design, architectural design, and TOD supportive parking); specific TOD projects ready-to-go; identified bicycle and pedestrian improvements; identified place making efforts around the transit station; and an established or planned management organization for the village.

In the first quarter of 2012, Americans took 5 percent more rides than a year earlier. High gas prices, changing demographics and lifestyle shifts, including retiring baby boomers, more singles, and overall smaller household sizes, support transit usage.

Engaged Transit Agencies: New Jersey Transit continues to be a strong supporter of TOD efforts, through its Transit-Friendly Communities program, offering direct technical assistance to municipalities. PATCO has also embraced TOD, not only at their kiss-and-ride stations, but also at the park-and-ride stations. A decade ago, PATCO was reluctant to pursue development at park-and-ride stations, due to their strong interest in retaining their surface parking lots. Today PATCO is discussing TOD, what the market may be, and at what ratios parking would be replaced with new development. SEPTA is also actively partnering with communities on how to improve station areas.

Transit-Supportive Culture: A transit-supportive culture is important to enabling better land use planning around transit stations, and policies that support TOD. According to the American Public Transit Association, public transit usage increased 33 percent from 1995 to 2011, which marked the second-highest annual ridership on public transit since 1957. In the first quarter of 2012, Americans took 5 percent more rides than a year earlier. High gas prices, changing demographics and lifestyle shifts, including retiring baby boomers, more singles, and overall smaller household sizes, support transit usage.

Long-Term Focus: A long-term focus is needed to support TOD, as policy, programs, and real estate development does not happen overnight. This focus has continued even through a downturn in the market, such as we have seen in the last several years. What seemed like an uphill battle ten years ago is one that has been slowly but steadily climbed, through policy changes and assistance to municipalities.

Community Revitalization: More local organizations, including community development corporations in the city of Philadelphia, have embraced TOD as a community building strategy for low-wealth areas. One of the main assets in many Philadelphia neighborhoods is the excellent access to transit, and building new mixed-income TOD is seen as a win-win, by connecting residents to jobs along the mass transit system. Providing housing for a mix of incomes in walkable, mixed-use neighborhoods near transit reduces household transportation costs, and expands the affordability of housing because families may need just one or even no cars, resulting in large annual savings. In suburban areas, many municipalities are revising their comprehensive or master plans to specifically encourage TOD and updating their zoning ordinances to allow transit-friendly land uses, moderate rather than low densities, smaller lot sizes, higher height limits, parking maximums, and design controls in station areas.

REGIONAL GROWTH AND DEMAND FOR TOD

Unlike other regions of the country that are growing rapidly and building their first transit systems, Greater Philadelphia is a mature region with an older existing transit system. This presents a challenge to encouraging TOD, as it is often easier to plan for TOD around new stations or in areas experiencing rapid growth, where the link between density and the feasibility of transit service can be made more easily. However, *Hidden in Plain Sight: Capturing the Demand for Housing Near Transit* (2004, with demand estimates updated in 2007), by Reconnecting America's Center for Transit-Oriented Development for the Federal Transit Administration, shows that demographics and other trends will cause the potential national demand for compact housing near transit to more than double by 2030.

Currently, six million U.S. households live within a half-mile of a transit stop. At least a quarter of all households that will be looking for housing in the next 20 years, or 15.2 million households, will be looking to rent or buy housing within a half-mile of a fixed-guideway transit stop. Meeting this demand would require building 2,000 residential units near every transit station in the U.S. today.

Station Square in Upper Gwynedd Township and Lansdale Borough, PA, is a mixed-use TOD built on a former EPA Superfund site next to the SEPTA Pennbrook regional rail station.

The study also lists the top metropolitan regions in the United States that show the potential to generate the most significant demand for housing in transit zones. In 2004, the study found that the Philadelphia region contains 496,141 households in transit zones (households within a half-mile radius around both existing and planned future stations), representing 20 percent of all households in the region.

In 2025, the potential demand for a house in a transit zone in the Philadelphia region is expected to be 820,908, representing 29 percent of all households in the region. The region's households are expected to grow by 15 percent by 2025, but demand for households in transit zones is expected to grow by 65 percent. The Philadelphia region ranks fifth in the top 10 metropolitan areas by potential demand for TOD housing in 2025, ahead of Boston (6th place), Washington, Portland, Miami, and Dallas, and after only New York (1st place), Los Angeles, Chicago, and San Francisco, respectively.

Station Areas with Development Potential: Over the past several years, many stations with development potential have been identified, both through the DVRPC *Regional Inventory* report published in 2003 (profiling 45 stations), and through other means. Stations with TOD potential include those that have the following characteristics: vacant or underutilized land or buildings near the station; development or growth pressure; presence of a TOD or redevelopment plan; half hour service frequency or better; good road access; and sewer and water infrastructure in place. Municipal support of TOD is also very important.

COMPLETED PROJECTS

Over 20 TODs have been built throughout the Greater Philadelphia region in the last ten years, with a dozen more moving through the development process, and over 25 more proposed. It is fitting that three of the built projects include "Station" in their name, marketing their primary appeal: walkable access to high quality transit service.

Station Square (SEPTA Pennbrook regional rail station, Upper Gwynedd Township and Lansdale Borough, Montgomery County, PA) represents the successful redevelopment of a vacant industrial parcel once home to a Ford Electronics plant. This EPA Superfund site required extensive remediation prior to redevelopment. The 30-acre property now contains 346 apartment units and 48,800 square feet of commercial space.

The commercial portion of the development consists of three buildings that combine ground floor retail shops, such as a dry cleaner and hair salon, and restaurants, such as a Japanese restaurant and a sandwich shop, with second floor office uses. The retail uses are located near the train station and a newly reconfigured

160-car commuter parking lot. The commercial buildings architecturally blend with the nearby apartment homes and are located to serve residents, local workers, and commuters.

The redevelopment of Station Square also involved the creation of a TOD zoning overlay district. Lansdale and Upper Gwynedd worked with the developer, Dewey Commercial Investors, L.P., to create new zoning standards that were supportive of public transit. The district encourages mixed-use development, promotes pedestrian-friendly design, and includes design standards for building placement, roadway and parking design, and open space.

Station Square at Ambler, in Ambler, PA, is a townhouse community built on former industrial land within walking distance of the SEPTA Ambler regional rail station.

Station Square at Ambler (SEPTA Ambler regional rail station, Ambler, Montgomery County, PA) was completed in 2009 and is within walking distance to the train station and downtown Ambler. It consists of 58 three-story townhomes arranged in groups of seven or eight along a series of new streets that connect to South Main Street. W.B. Homes developed Station Square on formerly industrial land. Major selling points for the property include the convenience of public transit and revitalized main street amenities located along Butler Avenue.

The property is part of Ambler's Redevelopment Overlay District, designed to encourage infill and reuse of vacant industrial sites in the station area. Additionally, Ambler was one of the first Pennsylvania communities to receive a grant to study the creation of a Transit Revitalization Investment District (TRID) to enhance the possibilities for redevelopment around the train station.

The Station at Bucks County (SEPTA Warminster regional rail station, Warminster Township, Bucks County, PA) is a new multifamily residential development immediately adjacent to Warminster station. Residents can directly access the train platform via a newly constructed ramp and stairway. Opened in April 2012, The Station at Bucks County includes 233 one- and two-bedroom rental units spread over 19 low-rise buildings. The 16-acre property formerly housed a medical supply company and included a vacant 130,000-square-foot building. Developer J.G. Petrucci Co. acquired the property and worked closely with state and municipal agencies to create a TOD zoning designation for the site.

Described as Warminster's first walking community, the development incorporates traditional architecture and includes internal sidewalks and pedestrian connections from the property to nearby retail shops. Garage spaces are located on the ground floor of some buildings and can be leased separately. The site includes approximately 5,000 square feet of space reserved for future retail use, such as convenience or neighborhood retail uses.

The LumberYard (PATCO Collingswood station, Collingswood, Camden County, NJ) is a mixed-use redevelopment project approximately a half mile from the train station. The LumberYard was built on a prominent vacant downtown site previously occupied by the Peter Lumber Company.

The development broke ground in 2006 and includes 65 one-to-three-bedroom residential units, 10 retail spaces, and a parking garage built over two phases. Residential units are divided between a mixed-use building with an interior courtyard and a row of stacked town homes. The development incorporates wide sidewalks, pedestrian bump-outs at street corners, and architectural features that complement the main street context.

The LumberYard was the culmination of many years of planning. The Borough of Collingswood undertook various large-scale planning efforts, including a state-funded smart growth study that identified several redevelopment opportunities in and around the downtown. After being designated a Transit Village by NJDOT in 2003, the Borough itself decided to act as the developer of the Peter Lumber site. Initial plans for the project, which called for 120 condominiums and 21 retail spaces, were scaled back due to economic conditions. The Borough also offered graduated reductions in property taxes to spur sales of units in the second phase. Buyers would pay discounted rates that rise every year until the fifth year when they pay 100 percent of the normal tax bill.

Station at Bucks County in Warminster, PA, opened in 2012 and features rental apartments with direct access to the adjacent SEPTA Warminster regional rail station.

The Borough of Collingswood, NJ, acted as developer of the LumberYard, which includes condos, ground floor retail, and a parking garage, within walking distance of the PATCO Collingswood rail station.

A third phase is planned for the LumberYard. However, instead of building an additional residential building as originally conceived, Collingswood is exploring opportunities for a commercial building that would combine office, retail, and professional space. New Jersey Future awarded The LumberYard a Smart Growth Award for Mixed-Use Downtown Design in 2007.

Silk Factory Lofts (SEPTA Lansdale station, Lansdale Borough, Montgomery County, PA) is a 116-rental unit development in the former Santerian Silk Factory, developed by Lansdale Realty Group in 2008. It is located in a historic rehabilitation overlay district.

Turbo Lofts at the same rail station is an adaptive reuse of a building that was formerly part of the Dexdale Hosiery Mill and later occupied by the Turbo Machine Company. Developer Moulton Builders worked closely with the Borough to remediate the site and modify its Village Overlay District to permit mixed-use. The site contains 45 condominiums within the mill building, along with an additional 26,000 square feet of retail space, and 8,000 square feet of second story office space, in new buildings fronting on to the Borough's main street. First floor retail tenants include national retailers such as Walgreens, Starbucks, Cold Stone Creamery, Blimpie, and Pizza Hut, and second floor office tenants include Edward Jones Investments, a martial arts studio, and a homecare staffing agency.

400 High Street (New Jersey Transit River LINE Burlington Town Centre station, Burlington City, Burlington County, NJ) is the adaptive reuse of the former Metropolitan Inn and includes 16 subsidized low-income senior units at the key intersection of Broad and High Streets. The same developer, Pennrose Properties, has also invested in **235 Penn Street** in down town Burlington City, by converting the former Budd Shoe Factory into 36 subsidized low-income senior apartments.

CONTINUING CHALLENGES AND OPPORTUNITIES

Funding for Transit: SEPTA, the Southeastern Pennsylvania Transportation Authority, continues to face fiscal constraints, which hinder the agency's long-range planning efforts and ability to dedicate funding for expansion of its system. PATCO, funded through Delaware River Port Authority (DRPA) bridge tolls, and New Jersey Transit, funded through the state transportation trust fund, have somewhat more stable funding, although still limited, and can therefore more effectively offer high quality transit service and plan ahead for system improvements and expansion.

Density to Support Transit: Many suburban communities still resist the medium to high densities that make transit and TOD successful. Recently built TODs in the region have gross densities of 12-16 dwelling units per acre, a modest yet significant increase near stations with development patterns with half of that density. Even modest gains in density are a significant improvement in centering development around rail, creating walkable environments, increasing transit service frequencies, and making retail within walking distance viable.

Silk Factory Lofts in Lansdale, PA, offers 116 loft rental apartments in a historic former silk stocking mill, within walking distance of the SEPTA Lansdale regional rail station.

Parking: Most TODs in the Philadelphia region, particularly in suburban locations, are still built with a significant amount of minimum parking and/or no reduction in typical parking requirements. Some zoning districts have been updated to reduce parking requirements for TODs, but the results of such ordinances largely have yet to be seen. Some developers and municipalities appear to still want to supply residential units near transit with more parking than perhaps is needed and have been hesitant to allow shared parking or provide credits for existing on-street parking.

Another opportunity is the unbundling of parking spaces from housing units, such that the cost of owning or renting a parking space is unbundled from the cost of owning or renting a housing unit. This strategy allows a developer to lease parking spaces at market rate to other residents or nearby businesses and allows a potential owner or renter of a housing unit to have the option to not purchase a parking space if one is not wanted.

Working with Communities: Local opposition to TOD in some communities can still be a challenge and often stems from a misunderstanding of the project, its benefits, and its advantages over more conventional residential or commercial development. Neighbors may fear increased road congestion, and while any development will cause more vehicle trips, TOD is designed to create less vehicle trips and to move some of these trips to transit. Neighbors may also fear the arrival of more school age children placing a burden on the local school district, though research has shown that TOD generates fewer schoolchildren than a conventional subdivision, given the smaller size of most of the housing units.

Developers have responded to these concerns by producing traffic studies, fiscal impact studies, and zoning build-out studies to analyze the impacts. These studies often show that under conventional zoning, the typical highway commercial development or residential subdivision will actually produce more traffic and/or more schoolchildren than a TOD. Developers may also offer annual payments to the school system beyond the tax revenues generated by the new TOD, or improvements to the rail station, local roadways and streetscapes, or improving or providing another community asset, such as a park or plaza.

Retail and Mixed-Uses Near Stations: Mixed-use can be harder to develop, since there are more partners and often different financing involved, raising the level of complexity. In addition, the old adage that one needs "rooftops before retail" is still true even with TOD. Retail and office often develop after the residential phase is complete. Some developers will reserve an area for a modest amount of retail/office space in the site plan for future build-out, if the current market does not support such uses.

Selling TOD: A few of the new TODs in the region used access to transit as a marketing strategy, such as Pennbrook's Station Square, where the apartments are a "commuter's dream," "right on the commuter line," and "allowing direct access to Center City Philadelphia." Two other recent examples have "Station" in their title, making that direct link to the location's prime advantage: transit. More developers, marketers, and real estate agents should embrace transit access and TOD as a selling point in their marketing materials.

In conclusion, the Philadelphia region continues to move forward but also in some ways "back to the future," toward more transit-oriented development. Significant progress has been made over the last decade in building projects and reducing the barriers to realizing TOD. The region is well poised to capture the market for TOD, to accommodate a significant portion of regional growth through TOD, and to turn TOD plans into TOD projects.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