



LEHIGH VALLEY

economic development

610-266-6775

| LehighValley.org

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Our Mission

The mission of the Lehigh Valley Economic Development Corporation is to market the economic assets of the Lehigh Valley and to serve as a regional shared services and resource center to help businesses to come, grow and start here.

Our Vision

Our vision is of a Lehigh Valley with a diverse economic base in our cities and counties that enable businesses to come here, start here and flourish here in order to create jobs and opportunities for all of our residents.

Our Values

- **Find a way:** We do what it takes to solve the problem or find the answer
- **Build the team:** We work with each other and all of our partners
- **Collaborate:** We are the region's connector
- **Inspire trust:** We focus on the big picture and treat all equally
- **Results first:** We ensure that our efforts are focused on outcomes, not process

Our Principles

To Best Use What We're Given... We will serve the people, the businesses and the governments of the Lehigh Valley by optimizing the use of the financial resources and partnerships that are available to us in an efficient, effective and professional manner.

To Know Thyself... We will be the leading source of economic data and market intelligence on the Lehigh Valley's economic assets and resources to serve our economic strategies, marketing efforts and the needs of our stakeholders.

To Tell Our Story... We will tell our economic story to increase awareness both inside and outside our region and the United States of the economic assets, advantages and strength of the Lehigh Valley to attract new companies.

To Grow Our Businesses... We will be a shared services and resource center to make it easier for businesses to grow by marshaling and increasing access to capital, making the complicated simple and identifying challenges faced by our existing and start-up businesses.

To Advocate and Coordinate... We will advocate for the improvement of economic assets and policies and will help to coordinate regional efforts to develop industrial sites, prepare our workforce, create opportunity for small business and grow our entrepreneurs.

Our Priorities

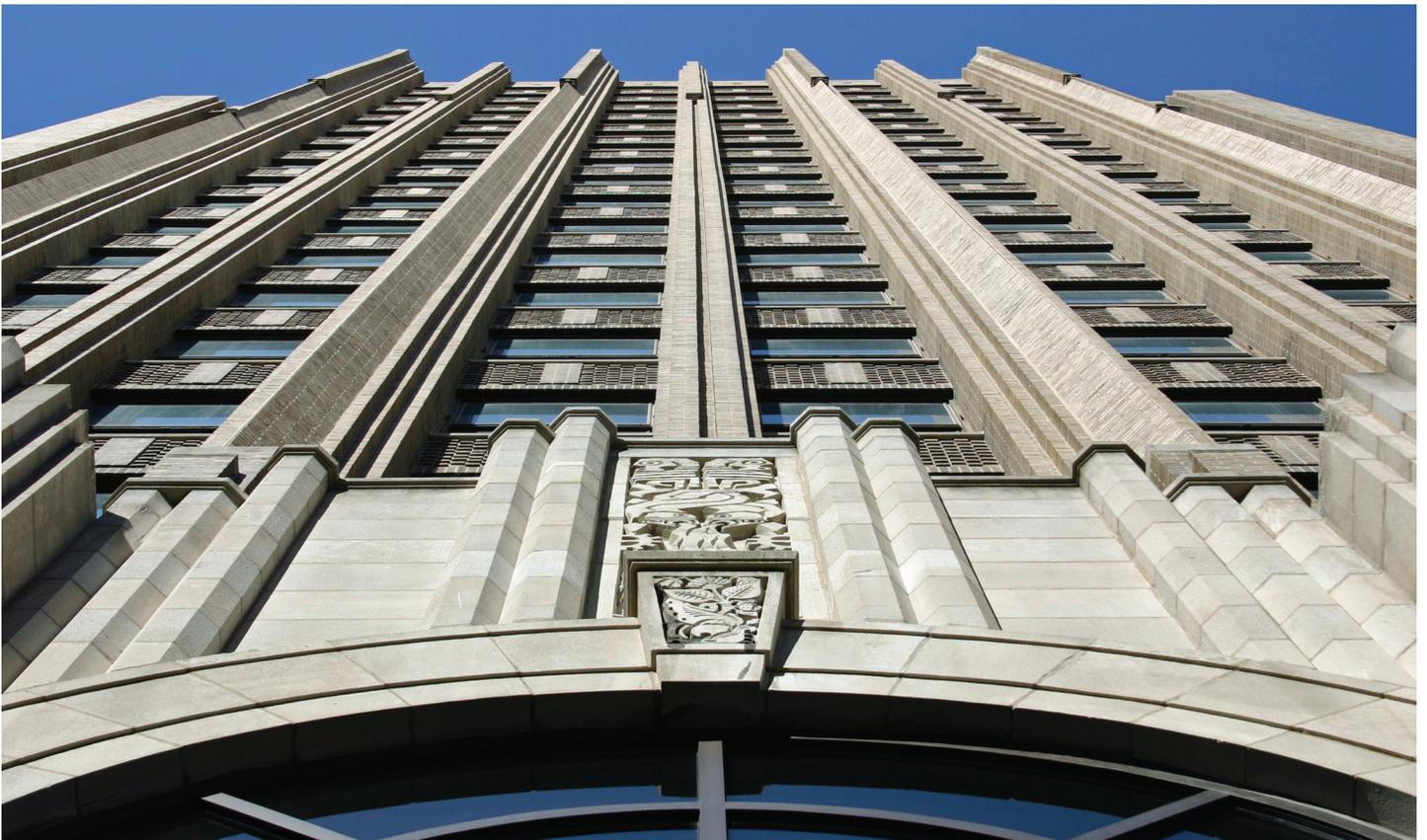
- Marketing Economic Assets
- Coordinating a Prepared Workforce
- Focusing on City and Urban Development
- Serving as a Shared Services Center
- Providing Access to Capital
- Building our Resources and Engaging Stakeholders



LEHIGH VALLEY
economic development

2014–2017 Strategic Plan

July 16th, 2014



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BACKGROUND

In 2015, the Lehigh Valley Economic Development Corporation (LVEDC) will be 20 years old. The regional economic development organization was started in 1995 by the leadership of the region's largest businesses and employers in concert with the counties of Lehigh and Northampton as a public-private partnership to brand and market the economic assets of the Lehigh Valley and to create a central shared services center to assist businesses to come, grow and start in the Lehigh Valley.

The organization has been present throughout the region's monumental transformation from an economy dominated by traditional heavy industry and manufacturing, anchored by the once dominant presence of the Bethlehem Steel Corporation and Mack Trucks, into a diversified and multi-faceted economy without one large anchor industry.

During those two decades, the principal cities of Allentown, Bethlehem and Easton have seen tremendous resurgence. First, while losing core retail and manufacturing centers, the cities struggled with the loss of tax base and the shift of retail to suburban malls. In recent years, each at its own pace, those cities capitalized on their architectural and historic assets and available and redevelopable property to become the cultural and entertainment hubs of the region through the creation of professional offices, high quality restaurants, and entertainment and cultural arts assets and festivals. In that same time period, the once sparsely populated townships and much of the farmland in those municipalities have been developed into residential neighborhoods, office parks and commercial centers.

During the most recent five years, the Lehigh Valley has been the fastest growing region in Pennsylvania with its top growth in the health care, transportation and logistics, and food and beverage sectors. The area's location and ease of access to nearly all of the Northeast United States core markets has helped to fuel a renaissance of growth in the region not seen since the Industrial Revolution of the late 19th Century. For 2013, Site Selection magazine reported that the Lehigh Valley had the second most development projects of any area of 200,000 to 1 million people in the United States.

The Lehigh Valley Economic Development Corporation is a coalition organization funded by both public and private dollars that is only as strong and effective as the continued voluntary participation of its private sector investors and partners and its governmental and non-profit regional economic development partners. Its board is comprised of 25 private sector leaders, the area's three city mayors, county executives and legislative chairs and the heads of other large regional organizations.

Throughout the last 19 years, LVEDC has persevered through the difficulty of creating a regional organization in two distinct counties and 62 municipalities during a period of unprecedented economic change and transformation. During that time, there were several abrupt changes in the organization's leadership and board membership resulting in various programmatic pursuits and strategic directions. Despite the turbulence, LVEDC has been a significant player in supporting the region's growth, has become one of only about 30 economic development organizations in the nation certified by the International Economic Development Council and is well positioned as it enters the start of its third decade to play a larger and more-effective role in helping to create jobs and to develop the Lehigh Valley.

MISSION, VISION, VALUES, PRINCIPLES AND PRIORITIES

There's never been a more important time in LVEDC's history to clearly define its missions, priorities and objectives and to communicate those broadly to its partner governments and organizations, its investors, customers and stakeholders.

Toward that end, during the last 18 months, the new leadership of LVEDC has embarked on a SWOT analysis of the organization, how it is viewed by its major customers, stakeholders and partners, and what they see as the central mission and core role of the organization. In addition, LVEDC engaged Garner Economics of Atlanta, GA, an economic consultant, to review LVEDC's operations, assess the economic strengths and weaknesses of the Lehigh Valley relative to the United States, Pennsylvania and comparable regions and to both recommend improvements for LVEDC and for the Lehigh Valley to build an economic development strategy for a new era.

The dominant point of feedback and a precursor for organizational success is for LVEDC to clearly define and communicate its mission. The focus on regionalism in the Lehigh Valley during the last two decades has led to the development of a multitude of regional organizations, each with its own area of specialty and its own, often confusing, array of acronyms. In addition, the Lehigh Valley is rich with educational institutions, non-profits and community collaborations that serve a myriad of roles in the realm of community and economic development. The governments of the cities, in a pressing need to redevelop and generate new jobs, tax base and economic activity, have expanded their economic development staffs, incentive programs and support agencies, as have the county governments to both support the cities and the outlying municipalities, most of which also desire growth.

What is needed today is a clear mission and understanding of each organization and elimination of redundancies in the system. The number of organizations with a specific geographic or subject specialty creates a greater need for a clear regional economic development plan and an LVEDC focused on connecting the pieces, serving the functions that only it can serve and being an advocate when needed.

We need only look back to our founding for direction on a clear mission.

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Our Priorities

- Targeted industry marketing
- Workforce preparedness
- City and urban core revitalization
- Access to capital
- Shared services resource center
- Enhancing resources
- Build councils to engage

INITIATIVES

With a clear mission, vision and set of principles the organization can focus on a set of initiatives for the next three years that supports that mission. While the region has realized much economic success during the last 20 years, LVEDC still lacks some core systems and operations to support a more robust and proactive role in economic development. The economic development landscape will become more difficult in the future as available land diminishes, the region becomes more congested and neighboring states react and change economic policies to be more competitive. Business as usual will not generate the same level of success. The traditional LVEDC was built well to handle opportunity that arrived at the door. The organization has been undergoing change to make it more proactive, more intelligent and more effective and efficient. Recruitment strategy and identification of targeted industry sectors is critical to future success, as is getting deeply involved with the needs and understanding of the existing businesses and start-ups in the Lehigh Valley.

Our global economy has changed greatly in just the last five years. Technology is driving incredible change. New jobs are being created weekly as old ones disappear. New skills are needed. Many old ones are not. The region that provides the best assets and quality of place along with the best people, meaning trained and available workers, will thrive. That reality makes it necessary for economic development organizations to focus in the area of workforce preparedness, skills gap assessments and education in a way not needed in the past.

The rapid pace of information transfer and an era of a metadata are also driving needed changes to the way we market and communicate. Information and data is needed in a moment's notice and has to be available in much greater quantity. As was noted in the Garner Economics study and recommendations, there is much work that needs to be done to improve our marketing materials and vehicles and outreach to support a more robust and proactive business development strategy.

The Garner Report recommendations served as a foundation for the development of a proposed set of initiatives for the next three-year plan. Here are the Garner recommendations related to LVEDC operations:

Execute Effectively	Tell the Story
<ol style="list-style-type: none"> 1. Hire or promote a Chief Economic Development Officer 2. Reorganize and rename the Development unit to a Business Investment function 3. Continue to strengthen business retention and expansion efforts 4. Encourage municipals to identify a Municipal Economic Development Ombudsman 5. Include public advocacy of economic development 6. Create a Workforce Alliance Leadership group 7. Engage outside counsel for funding 	<ol style="list-style-type: none"> 1. Conduct an image survey to assess external perceptions of the Valley 2. Develop a unified brand for the region 3. Enhance the LVEDC website to address the needs of location consultants 4. Establish target industry working groups for each of the four focused targets 5. Execute a process for lead generation and target profiling 6. Enhance the region's marketing collateral, media, and public relations efforts 7. Actively solicit and provide information to location consultants 8. Develop familiarization (FAM) events 9. Actively solicit and provide information to international prospects (international travel/business solicitation) 10. Open a Foreign Direct Investment (FDI) office abroad 11. Create a cadre of LVEDC Ambassadors to extend the region's brand

Initiatives in Summary

Development

1. Market & Attract Growth from Targeted Sectors

The Lehigh Valley as a whole must become and remain proactive in shaping its economic future, focusing on optimal industry targets based on the site-specific characteristics of the Lehigh Valley economy. Using results from the previously completed Competitive Realities Report, the Assets and Challenges Assessment, focus groups, and field visits, four industry targets were chosen that best match the unique competitive advantages of the area to the needs of particular industry sectors. The targeted sectors are Food & Beverage Manufacturing, High Performance Manufacturing, Life Sciences Research & Manufacturing and High Value Business Services.

2. Increase Market Intelligence & Available Information

Helping the Lehigh Valley remain globally competitive in the modern era requires the transformation of the organization into the leading source of information on the regional economy. To stimulate business investment and spur economic development, LVEDC will create a systematic structure of collecting, analyzing and disseminating information related to demographics, business presence, investment, workforce, real estate and more.

3. Coordinate a Regional Business Outreach Program

In order to remain responsive to the private sector that founded and sustains LVEDC, the regional economic development organization must create and coordinate a Lehigh Valley-wide, seamless, integrated business calling program designed to collect, catalog and analyze information through site visits and interviews. The program will employ the resources of LVEDC's many economic development partners in other economic development organizations and will drive many of the other initiatives in this plan.

4. Develop and Help to Facilitate a Regional Workforce Plan

Historically, companies made location decisions based on geographic proximity to market or other available natural and built infrastructure. In an economy where companies can be anywhere, they are increasingly choosing to be close to high-quality workers. It is incumbent upon LVEDC to play a role in the future of the Lehigh Valley's labor market in order to win deals in the future. LVEDC will work with its regional partners to develop a Workforce and Economic Development Strategic Plan to assess the current state of alignment between the many providers and coordinators of workforce development services and the needs to support continued economic growth in the region.

5. Coordinate Regional Efforts to Develop Industrial Sites, Create Opportunity for Small Business and Grow Entrepreneurs

LVEDC's many great regional partners in economic development fill a critical need in the communities that they serve and benefit enormously from a coordinating entity that ensures that they are never needlessly competing or worse, acting at cross purposes. While LVEDC cannot run a program to address all of the economic development needs of the region, it can serve as a catalyst, a coordinator and an investor of resources and talent to advance the development of commercial and industrial sites in the Lehigh Valley, to stimulate the reuse and redevelopment of the urban core and industrial sites, to create connections between small businesses to large local buyers and to help strengthen the Lehigh Valley's entrepreneurial ecosystem and foster the area's start-up community.

Marketing

6. Upgrade LVEDC Website and Improve Content & Data

An economic development organization's website is its most important marketing tool to provide economic information and to attract and grow business in the region. The current LVEDC website has information and data gaps, difficult-to-find sections, and out-of-date content. The LVEDC website will receive a content upgrade to offer the resources that meet the needs of its primary and specific audiences, with navigation, functionality, graphic appeal, and available data built and directed to external audiences.

7. Enhance and Improve Marketing Materials and Presentations

Increased interest in the region means that marketing materials cannot be custom-built from scratch for every prospect. LVEDC will create an easily accessible – and clearly indexed – library of customized collateral, data points, PowerPoints, videos and more for each LVEDC department and for each audience they may encounter during presentations.

8. Create and Maintain a Dashboard to Report & Measure Activity

LVEDC has not historically used data to evaluate itself or allow itself to be evaluated. What's more, the successes of the organization and level of activity in which we are always engaged are often underappreciated. A segmented dashboard for varying audiences, ranging from organization leadership, board members, news media and general public will be created and maintained to report on key indicators and measures on a regular and ongoing basis.

9. Improve and Expand Customer Segmentation Lists and Data Bases

Marketing messages are only as effective as the audiences they reach. LVEDC messaging should reach its intended audience; we need to know "who" receives "what". LVEDC will create streamlined process for keeping contact lists updated and accurate, with newly segmented lists that will be used to ensure our messages get to their intended targets.

10. Establish an Ambassadors Program to Help Market & Grow Businesses

The Lehigh Valley is rich with business executives who travel the globe for their respective companies – and promote Lehigh Valley here and on the road. LVEDC can leverage those local connections and engage those executives to promote business investment in Lehigh Valley. Such third-party testimonials are an effective way to promote the area to their peers internationally. LVEDC will develop an ambassadors program to convince willing business leaders to assist the organization in extending the brand of the Lehigh Valley as a place to do business. LVEDC staff would provide the ambassadors with access to key data and talking points to help them tout the region's business attributes.

Finance

11. Increase Demand for Financing Programs

Financing economic development projects both provides needed revenue to LVEDC and fulfills our mission of helping companies start, grow and come to the Lehigh Valley. LVEDC's Finance Department recently completed a business development plan to promote greater and more consistent loan volume and will fully implement the plan.

12. Create and Coordinate a Capital Access Network of Debt & Equity

Given its central role in the region and its partnerships with many of the Lehigh Valley's financing entities, there is an opportunity to create a coordinated financing network that will enable new businesses, expanding business or business looking to locate in the region to easily access the loans and equity investment they need to ensure success. LVEDC will develop a program that will allow prospects to take advantage of a single-point of contact for financing their project. This tool will be unique among economic development organizations, and will create a point of differentiation for LVEDC in securing deals.

13. Revitalize the Lehigh Valley Regional Loan Pool

Lehigh Valley's Regional Loan Pool has played a part in some of the most significant economic development projects that the region has attracted, but its profile has dipped in recent years, leaving a powerful tool underutilized. A revitalized regional loan pool will help to secure future Lehigh Valley business expansions and relocations. LVEDC will bring the loan pool back to prominence and will seek to position the pool as the financing agent for Neighbor Improvement Zone (NIZ), Community Revitalization and Improvement Zone (CRIZ) and Tax Increment Financing (TIF) projects throughout the Lehigh Valley.

14. Grow Regional Shared Services Function by Seeking Contract Opportunities

The regional SBA 7(a) Lenders are seeking opportunities to contract with an entity to perform loan servicing on their SBA applications. LVEDC already provides administrative services to four non-profit and for-profit companies, and can leverage the experience gained from those relationships to provide revenue opportunities in support of the larger mission of helping companies grow in the Lehigh Valley.

15. Advocate for Improved Finance Program Effectiveness, Expanded Eligibility and Reduced Risk

Beyond effectively executing programs that provide greater access to capital for companies seeking to locate and grow in the Lehigh Valley, LVEDC must ensure that its ability to continue to serve as the primary regional resource for economic development financing is well protected. LVEDC will advocate for improved use of Area Loan Organizations as part of the commonwealth's economic development financing philosophy, greater effectiveness in the execution of financing programs in Harrisburg, and a reduction in loss-sharing ratios that significantly hinder the financial strength of economic development lenders.

Administration & Stakeholders

16. Strengthen Stakeholder Involvement through Councils and Programs

LVEDC draws much of its strength from the quality of its relationships with external stakeholders, such as commercial real estate professionals, local governments, economic development partners and others. There is a vital, two-way communication between the organization and its councils which will be strengthened through continued focused events, additional branding, and the development of new councils as appropriate.

17. Be a Connector for Regional Groups & Resources and an Advocate for Economic Development Needs and Improvements

Economic development organizations can play an important and crucial role in improving the economic assets that they market to companies considering a move. As the Lehigh Valley's only regional economic development organization, LVEDC occupies a special position from which it can affect positive change that will contribute to the economic health of the region. LVEDC will work to build cooperation between municipalities, communicate the needs of the region to state and federal policy makers, and ensure that Lehigh Valley's assets continue to rate well against competitor regions.

18. Increase Private Sector Investment to Support Economic Development

LVEDC's \$2 million operating budget does not provide sufficient resources to run a competitive economic development program. To continue to compete with other top-75 markets, LVEDC must increase its overall budget and the share of that budget that comes from private sources. LVEDC will develop and continuously improve upon an investor relations program that not only delivers increased revenue in support of LVEDC's mission, but also creates real value for the companies that drive our regional economy.

19. Upgrade Information & Central Data Systems to Support All LVEDC Initiatives

An economic development organization participating in a modern economy traffics in one good: information. Effectively delivering useful information to customers and coordinating internal communications will allow LVEDC to win deals. LVEDC will develop and implement central data systems that support communication across the organization and with key stakeholders.

20. Optimize and Develop LVEDC Talent, Staffing Structure and Resource Use

LVEDC has an excellent group of economic development professionals working toward its mission, but without the proper organization and direction, they risk becoming an agglomeration of independent contractors, focused on a single goal at the expense of corporate unity. We will grow LVEDC into an organization that can attract and retain the best economic development talent, effectively and efficiently deploy that talent, and deliver superior value to its customers.

DETAILED WORK PLANS, METRICS AND DESCRIPTIONS OF INITIATIVES

Development

1. Market & Attract Growth from Targeted Sectors

Goal

To increase investment and job creation in the Lehigh Valley with specific industries that have above average wages, projected positive growth, and participation in commercial activities that will create wealth in Lehigh Valley both long term and short term.

Reasoning

The strategy is based on the assumption that the region as a whole must become and remain proactive in shaping its economic future but with a more targeted approach. LVEDC, as the region's lead economic development marketing organization, must focus its marketing and service delivery to support and augment the Lehigh Valley's ability to attract high-quality jobs and talent to the region.

Strategic Plan

Targeted Industry Clusters

The optimal industry target selection is based on the site-specific characteristics of the Lehigh Valley economy. Using results from the previously completed Competitive Realities Report, the Assets and Challenges Assessment, focus groups, and field visits, "four" industry targets were chosen that best match the unique competitive advantages in the area to the needs of particular industry sectors. The targeted sectors are as follows:

- Food & Beverage Manufacturing
- High Performance Manufacturing
- Life Sciences/Research & Manufacturing
- High Value Business Services

Foreign Direct Investment (FDI)

Along with the industry sectors, the plan will focus on attracting foreign direct investment (FDI). Cost considerations, customer market, recent "re-shoring" trends, and the political and economic stability of the United States are all driving jobs and investment back to the country.

This initiative creates a comprehensive marketing and attraction strategy that focuses on targeting the decision makers within the industry sectors; which includes but not limited to corporate executives, national site selectors, corporate real estate professionals, specialty service providers, international consultants and media members.

The following includes a summary of some of the action items that will be incorporated in the strategy.

- Enhancements and content additions to www.lehighvalley.org and LVEDC collateral materials.
"Marketing Initiative 1 & 2"
- Familiarization (FAM) tours of the Lehigh Valley for Site Selectors, media, companies.
- Active participations in the sectors top conferences, trade shows and events for the industry sectors.
- Relationships matter – keep building relationships by arranging personal visits and follow up through all forms of communication and media (emails, phone, visits, newsletters, marketing pieces, news stories...)
 - Keeping targets aware of current status of incentive programs, new sites, recent project successes, and other economic news.

- Ambassador Program “Marketing Initiative 5”
- Identify potential customers and supply chain partners of current Lehigh Valley business and leverage those relationships to encourage expansion/investment opportunities. This will allow LVEDC to make a stronger value proposition to our attraction targets and leverage the relationships to help LVEDC “get in the door”.
- Conduct and capture data from surveys/reviews on successful projects (why did they land here?).
- Yearly “Targeted Attraction” Review Report - This yearly report will be both a look back on the past years recruitment activities and a look forward to next year’s recruitment agenda, goals, and metrics. This report will serve as a living history of the experiences, value and insider insights of past recruitment efforts such as trade shows, trip reports, marketing visits, and interactions with the recruitment targets. This effort will give LVEDC a better understanding of what is working and not working and make tactical adjustments to strategy and understand the true expense to the organization. It will allow us to better set metrics, direct financial resources and bring continuity when internal changes occur

Timeline

Aspects of the plan are already underway while other components will be performed at different times through the life of the plan and beyond.

Resources

- The Development Department will need additional staff resources. This staffing need includes realignment of some current staff responsibilities to help with data collection/analysis (market intelligence) and supporting the service delivery.
- An additional project manager dedicated to the attraction initiatives is also needed, as well as a potential increase or shift in the LVEDC budget for travel/conferences.

Metrics

Activities (actionable items)

- # of leads/prospects (by sector)
- # and type of business assistance given
- # of meetings held with targeted audiences
- # of tours hosted, events, conferences/forums attended, media.
- # of marketing / advertising initiatives undertaken – i.e. collateral and print

Outcomes (results of actionable items)

- # of successful attraction projects
- # jobs created and retained by sector
- Capital investment
- # of website visits, PDFs downloaded, time spent on site, pages looked calls triggered.
- # Leads/New Relationships from conferences
- # Attendees of events/FAM Tours

Targets (measuring against benchmarks)

- National Rankings on projects
- LV vs PA, USA on job growth, investment, GDP

2. Increase Market Intelligence & Available Information

Goal

To transform LVEDC into the leading source of information on the economy for business investment and economic development to create a systematic structure of collecting and analyzing information related to demographics, business presence, investment, workforce, real estate and more.

Reasoning

LVEDC is positioned to create a living database of information that will provide intelligence on regional assets and the capacity for economic growth. Through a centralized collection of information, we will be able to better analyze and understand economic trends that allow us to report and make recommendations to meet the region's economic goals. Stakeholders already look to LVEDC for guidance and insight on the various informational categories, so a more efficient and robust data collection/analysis system creates a real value proposition for the organization.

Working with partners:

A successful strategy cannot be accomplished without working with our public and private sector partners who already do research and have access to data such as LV Planning Commission, Discover LV, City and County partners.

Our goal is not to compete or create redundant systems but to share and leverage the information to allow for better analysis. While other organizations collect/analyze data, LVEDC is looking at all aspects of economic development information (site and utility information, business data, incentives, demographics, workforce trends) and interfaces directly with customers who could supply and supplement the data sources.

Strategic Plan

LVEDC, through its activities of financing, prospecting, business retention, councils and other relationship networks, is continuously amassing data. Having all this information be filtered into a central intake system, along with data from other sources (Census, CoStar, Planning Commission data...) gives us the ability to layer and merge the data. This overlaying of information helps to create a meaningful context and better understanding.

Timeline

Have the software component in place by 2015. Data collection and analysis is currently ongoing and continuous but can be leveled with additional staff resources.

Resources

This effort should be led by both Development and Administration Departments and transition to one of the departments to have oversight of the ongoing management. A dedicated staff person would be tasked to concentrate on the collecting and centralizing data. Outside assistance may be needed on evaluating and implementing software. Additional funds would need to be allocated for software, training and staff.

Metrics

- Implementation
- Data projects/reports
- Customers assisted
- Internal and external review of effectiveness

3. Coordinate a Regional Business Outreach Program

Goal

Create and coordinate a Lehigh Valley wide, seamless, integrated business calling program that works with all partners in economic development to; identify regional challenges, advocate for solutions, identify opportunities for growth and be a business connector.

Reasoning

An important aspect to the success of a business retention and expansion program will be working with partners. Partner outreach began in January of 2014 to re-launch the program and a partner meeting will be held in the first part of May to formally launch the program.

Strategic Plan

According to the Competitive Realities Report survey of local decision makers, government officials and private sector partners, business retention was cited as the most important role of LVEDC. However, there are 15,000 businesses in the Lehigh Valley and the question of where to start becomes important given limited resources.

A prioritization of businesses will begin with categorizing them into the following: referred, top industry segment, growth industry, top 40 employer, distressed/red flags, and those that access services on their own or self-access.

Businesses will then be scored across four areas or criteria. These are: 1. High Value; If they left, it would significantly impact the community. 2. Core to Mission; They will be creating jobs. 3. Relationship: A relationship with them is important, either because they are a partner, a large employer, a board member, etc. 4. Success Rate: We can actually help them and have the appropriate tools to do so (i.e., financing, incentives, referral to partners, etc.)

Timeline

The program will be launched in two ways. The first will be to the partners in a formal kick-off meeting on May 13, 2014. The second will be to the business community and is targeted for July, 2014. This will include a news conference, press releases, interviews, and updates to the Website.

Resources

Primary staffing and management of the program will be done via the Director of Regional Competitiveness, a role that was budgets specifically to create and launch this program. The role also oversees efforts around workforce development, small business, and entrepreneurship, all of which have corresponding integration points to the Business Outreach Program.

It has been determined that Salesforce.com be utilized to track processes, workflow, and calendaring for the BOP. This comprehensive system will provide the central database to track visits and also provide an interface to external partners for capturing of visits. LVEDC will also act as the lead coordination of all follow-up visits, assignment of tasks to partners, and follow-up to ensure timely resolution of identified action items.

Metrics

LVEDC will strive to conduct 3 visits per week, or approximately 150 annually. Partners will be encouraged to conduct 1 visit on their own per month. MRC has also agreed to an aggressive outreach strategy of 150 visits annually and the City of Allentown has agreed to 2 a week.

4. Facilitate and Help to Develop a Regional Workforce Plan

Goal

To be a facilitator in the workforce conversation in the Lehigh Valley happening among a number of organizations, educational institutions, and private sector partners.

Reasoning

There are many players in the workforce ecosystem currently in the Lehigh valley and many who have a shared passion for addressing the challenges in this space. LVEDC's role includes:

- Providing a high-level view of what's happening in the Valley with ALL workforce initiatives.
- Communicating to the various partners about what is going on at the high-level.
- Trying to eliminate duplication of effort among service providers.
- Trying to determine the gaps in the workforce ecology.

Strategic Plan

LVEDC and LVWIB will develop a Workforce and Economic Development Strategic Plan (WEDSP) to assess what training exists in the region. It will include a gap analysis to clearly identify what is needed to support continued economic growth in the region with a special focus on the four target areas of LVEDC. The WEDSP will include recommendations on what the region must do to develop a workforce with the required capabilities of the employers. The WEDSP will align the workforce investment activities with economic development goals.

- Assessment of training providers that includes analysis of how programing aligns with the targeted industry (include how many completions each year and what employers are engaged in developing this curriculum)
- Outline all industry partnerships, training councils, etc. (include where they are housed, what companies are engaged, when they meet)
- Gap analysis to identify areas the need for increased workforce training, certifications, credentials, articulation agreements, career and educational pathways including higher education classes (locations, topics, skills)
- Recommendations to improve workforce development opportunities that align with economic development work that includes time-phased supply/demand forecasting of hiring skills, certification and training requirements.

The WEDSP is a critical as it will map the region's workforce training providers and quantify the trained workforce. This information will support economic development business recruitment efforts. It will give the economic development professionals information that can be used to market the region to prospective employers. In addition, the WEDSP will identify gaps in training topics/opportunities. JOBS1st Lehigh Valley Partners will move quickly to work with education providers to fill these gaps in the workforce development system.

Timeline

- July 2014: Issue RFP for consulting work by LVWIB.
August 2014: Award contract for development of the Strategic Plan.
- January 2015: Issue final draft of the Lehigh Valley Workforce and Economic Development Strategic Plan.

Resources

The Jobs1st grant proposes that a marketing piece be developed that can be left behind by all partners conducting visits that outlines the options available from a workforce training perspective. The budget for this piece is \$15,000

and a timeframe for completion is September, 2014. Staffing and support of the Workforce initiative is done via the Director for Regional Competitiveness. Development of a council of LVEDC for Workforce is currently being considered.

Metrics

Complete a strategic plan for Workforce Development in the Lehigh Valley by September 2014. Develop a marketing brochure that describes the workforce ecosystem for use in Business Outreach Program (BOP) in 2014. (This is where there is synergy between Development Initiative 3 and 4.)

5. Coordinate Regional Efforts to Develop Industrial Sites, Create Opportunity for Small Business and Grow Entrepreneurs, Create Opportunity for Small Business and Increase Local Spend

Goal

To encourage ongoing business to business transactions between our larger businesses and local smaller suppliers with the goal of reducing export investment and creating a stronger local economy.

This program is two-pronged:

Working with Buyer and Large LV Businesses:

Large (20+ employees) businesses will be identified and used in a pilot program. These businesses will be asked to commit a dollar amount or percentage of “spend” that can shift from going outside our economy (out of state) to local suppliers, assuming that all else is equal (quality, value priced, etc.)

Small businesses will then be identified and introduced matched to the supplier. Due diligence will then be conducted by the large business to determine whether this is a fit.

In the event a large business is seeking a particular supplier, this program may have the opportunity to help support that search through contact with LVEDC partners.

Meet the Buyers Expo:

In 2013, LVEDC coordinated an event via the Women and Minority Business Owners (WAMBO) Council and 11 business organizations, to provide an opportunity to match local large purchasers of good and services at local companies with smaller suppliers in the Lehigh Valley. This was the first year of this program and it was very well received by both parties.

It was determined that the Expo be conducted every other year. The next expo will be in 2015. LVEDC will again coordinate the efforts of the collaborating partner organizations.

Marketing the Program: The supply chain program will be continued via outreach to both the suppliers and also the large purchasers. In addition, the partner organizations (SBDC, CACLV, MRC) will provide support and preparatory services to small businesses in anticipation of the Expo.

Also, important lessons will be captured from the Pilot program that will be incorporated into the Expo. In addition, the feedback received from the 1st Expo will be considered and where possible included in the expo for 2015.

LVEDC will look to recognize and acknowledge the efforts of those businesses that participate in developing this local supply chain effort. This will be done through e-blast, newsletters and at appropriate events.

Tracking and Reporting: ESPI conducted an internal analysis of LVEDC processes and recommended Salesforce.com be utilized to track processes, workflow, and calendaring. This comprehensive system will provide the central database to track business outreach visits and could potentially house a database of suppliers and buyers.

Metrics

Meet the Buyers – success will be tracked through both the increased attendance of “buyers” and small business. 2013 had 38 company buyers and 240 business attendees. The follow up survey will again track the overall reaction and suggestions as well as attempt to quantify the business opportunities.

Entrepreneurship

Goal

To encourage support, and be a facilitator in the entrepreneurial dialog in the Lehigh Valley happening among a number of organizations, educational institutions, and private sector partners.

Reasoning

LVEDC will continue to support entrepreneurship (Come Here, Grow Here, Start Here, Stay Here) use its marketing power to support and promote the region’s startups, early stage companies, and small businesses, within the Lehigh Valley; celebrating the region’s entrepreneurs and their successes.

Marketing initiatives include:

- Continue to support grassroots activities like hackathon, Startup Weekend, Mini Maker Faire and others in order to support the creation and growth of the region’s creative economy.
- Regularly feature a startup or early stage company in LVEDC’s marketing materials. Perhaps do a “Where are they now?” feature that shows-off the region’s more successful firms.
- Bring back the Entrepreneur of the Year award at the annual LVEDC Awards.
- Encourage Connections Between Entrepreneurs and Larger Companies: By connecting small companies to larger companies, supply chains can be shortened and economic activity can increase within the region. This can mean real bottom-line improvements for both groups of companies. Additionally, there are several opportunities where large companies can encourage and invest in the creation of new companies.
- Via the Business Outreach Program (BOP) and the Meet the Buyers Expo, entrepreneurs can have access to these larger organizations. (This is also an example where Development Initiatives 3 and 5 become synergistic.)
- Support Existing Financing Programs: Take a more active role in helping the Lehigh Valley Angel Investor Network to grow and make smart investments in start-ups and early stage companies. Continue to seek ways to establish relationships with more venture capital funds to match with startups in the Lehigh Valley.
- Continue Support for the ITE Internship Program: Continue to fund and maintain the ITE Internship Program seen by the Council as one of the most successful programs to date. An addition to the program would be to have a private company match the LVEDC grant to extend the program to more students.

Resources

The Innovation, Talent and Entrepreneurship Council (ITE) is a council of LVEDC and is staffed by the Director of Regional Competitiveness with support from the Director of External Affairs. The council meets monthly and during the February meeting, LVEDC requested that the ITE council provide a list of suggested ways for LVEDC to engage with the entrepreneurial community in the Lehigh Valley. Those recommendations were received and some have been incorporated in this initiative.

These efforts will be ongoing over the next three years and will also evolve given the interaction and feedback from the council.

Metrics

Sponsor 2-3 entrepreneurial events annually, attend and support all ITE Council meetings, highlight entrepreneurs and their successes and stories in at least 5 weekly LVEDC newsletters.

Redevelopment of Industrial Sites

Goal

To assess and bring the resources necessary for clean-up, market awareness and financial/ technical assistance for brownfields, abandoned or underutilized sites, vacant lots, contaminated properties and other challenged sites. To increase the local tax base, create wealth and job opportunities by facilitating the redevelopment and reuse of former industrial sites in the Lehigh Valley.

Reasoning

Our region will achieve economic, environmental and community benefits from the redevelopment and reuse of sites. This success includes job creation, increases in the local and county tax base, encouragement of private investment, tax payer savings with reuse of existing infrastructure, eradication of blight, the protection of human health and the environment, the revitalization of neighborhoods and local communities, increases in property values and the preservation of open space. This initiative has additional economic benefit in the Lehigh Valley - as the region has a mature industrial market making availability, costs, and other barriers to greenfield development more challenged; while our older urban cores have the largest concentration of redevelopment sites.

Working with Partners:

Working with public and private stakeholders in redevelopment will allow the most efficient and effective way to identify opportunities and bring together vital resources and technical expertise.

Strategic Plan

To reduce or eliminate impediments to redevelopment:

Continuing and expanding access to resources and incentives that will aid in redevelopment.

Administration of EPA brownfield grants, various state programs that can be applied to sites as applicable for cleanup and redevelopment efforts. Identifying the 'unknown' potential environmental impacts at sites throughout the Lehigh Valley.

Performing an analysis of development data internally creating a prioritized list of development opportunities.

Marketing the priorities identified as development opportunities.

Promoting and educating various audiences on the importance of redevelopment and availability of assistance from the Lehigh Valley Land Recycling Initiative.

Maintaining and building quality relationships with the regulatory bodies to ensure the smoothest possible review of reports necessary to cleanup brownfields.

Timeline

Aspects of the plan are already underway while other components will be performed at different times through the life of the plan and beyond.

Resources

Staff time and administrative support to ensure strategy is implemented through project management, grant writing, grant administration and relationship building. Funding for technical assistance to be achieved through grants and continuation of our repayment fund program. Continual education to improve staff knowledge and resources available for redevelopment.

Metrics

- Number of leads and prospects
- Number of sites identified
- Number of sites assisted
- Number of dollars leveraged
- Amount of resources accessed
- Number of educational outreach events

Marketing

6. Upgrade LVEDC Website and Improve Content & Data

Goal

Enhance the LVEDC website, www.lehighvalley.org, to address the needs of location consultants and potential investors. However, it is important to also retain and enhance the data needed and sought by our regional partners and existing investors.

Reasoning

Though the LVEDC website contains information that is of value to potential investors in many facets, it is difficult to find existing data on the current website. An EDO's website is its most important marketing tool to attract investment into the region. As such, the LVEDC site needs to be designed to offer the resources that meet the needs of its primary and specific audiences. As LVEDC strengthens its business development and marketing efforts for the region, its website should be adjusted to be aimed at the information needs and the interests of location advisory audiences and companies doing site searches on their own. The site's navigation functionality, graphic appeal, and available data should be built and directed to these external audiences.

Strategic Plan

Per recommendations of consultant Jay Garner, the LVEDC website needs to be updated and revised. Below is an outline of content to be added and/or revised.

- Demographic data (Population, etc.)
- Cost of Living (benchmarked against comp regions and national)
- Education and Training highlights (public schools, higher ed, workforce training)
- Workforce and Labor Statistics
- Business and Industry (major employers, foreign owned companies, employment distribution)
- Income (wages)
- Utility and Tax rates
- Transportation (facts on transportation, and proximity to big cities)
- Lifestyle (highlight Lehigh Valley's arts and recreation areas)
- Add our four target sectors as their own landing pages with the data from Garner.

Per IEDC Data Standards (a key site selector checklist)

- Leading Employers
- New Companies in the Area
- Average Salary by Occupation
- Worker's Compensation and Unemployment Insurance
- Percent of Workforce organized
- Real and personal property tax
- Average costs of sites
- Utilities
- Quality of life data for the central city and selected suburban school districts

This data set contains over 1,200 data elements organized into 25 spreadsheets, aimed at presenting a comprehensive set of data standards to present to site selection consultants and potential businesses. Once assembled, the data set only needs regular updating.

Timeline

- Summer - Fall 2014: strategic meetings with Data & Research.
- Summer - Fall 2014: strategic meetings with a site designer.
- 2014-2015 (ongoing) – Pages updated, sections added as data acquired.
- January 2015 – New website marketed to region/nation/world.

Resources

Money for website enhancements has been budgeted for 2014 (\$40,000). Also, in 2014, PPL awarded us a \$5,000 Blue Ribbon grant for this project.

Metrics

- Pages/sections added/updated
- IEDC Data Standards met
- Website visits
- PDFs downloaded
- Time spent on site
- Pages looked at
- Calls triggered

7. Enhance and Improve Marketing Materials and Presentations

Goal

Create an easily accessible – and clearly indexed – library of customized campaigns, collateral materials, data, PowerPoints, videos, PDFs, brochures, magazines, publications, print and Web ads, and more for each LVEDC department and for each audience they may encounter during presentations.

Reasoning

Our marketing materials need to inform, inspire and persuade our various audiences. Our materials need to be strong enough and deep enough to help our presenters make a strong connection with their audience. This should become a “pull-and-play” proposition. We will do this by creating a library of customized materials easily accessible and frequently updated so each LVEDC department can quickly compile the compelling materials needed for a specific audience. According to the Blueprint for Success report: “We need to do a better job at telling the story. One of the best ways to tell our story is through targeted presentations.”

Strategic Plan

We’ll take inventory of available materials – the collateral, videos, one-pagers, brochures, etc. – and determine which remain current and compelling, and which need to be dumped or updated.

We’ll then survey each LBEDC department to determine specific needs – and the variety of material required to present to a different audiences.

We’ll then set to work updating, creating and organizing these clearly marked materials into our Web and print storage areas.

For PowerPoint presentations, we’ll start with a basic LVEDC template – one that spells out who we are, what we do and why we do what we do. From there, we’ll create various formats for each LVEDC department and for each audience they encounter.

While development, finance, marketing, etc. should all share a common narrative with the groups and individuals they encounter, each department should also have easy access to mission-specific materials. For instance, development would utilize tools and materials that showcase particular locations, while finance would utilize tools and materials that would breakdown the available loans and rates for new and existing clients.

While creating the tools and materials for the various departments, marketing will keep in mind “who is relaying” and “who is hearing” the messaging. This will allow for pinpointed presentations that share a common foundation yet project a specific message.

Timeline

- Summer 2014: Begin working on the departmental surveys of needs and inventorying existing materials for messaging and currency.
- Summer-Fall 2014: Start working with the director of communications to create and update needed materials, while enlisting a designer to make this new messaging appealing and engaging.

- Fall 2014: We'll catalog, index and rename materials and instruct LVEDC staff on where to locate these materials.
- Ongoing: We'll set up a schedule for frequent material reviews and tweaks – with input from LVEDC department heads and their latest “wish lists” of departmental materials.

Resources

The surveys, cataloging, creating and updating work can be done in house. Money will need to be budgeted for design and printing of new or updated materials.

Metrics

- New collateral
- New campaigns
- New brochures
- New one-pagers
- New videos
- Trade publication appearances (ads and content)
- Updates performed in all collateral formats

8. Create and Maintain a Dashboard to Report & Measure Activity

Goal

A need exists for an internal/external dashboard – a place for our Key Performance Indicators to reside and be regularly updated. This dashboard will report, highlight and measure the departmental activities that best showcase our progress, effectiveness and promotions. Dashboard information – in pre-determined formats and category depth – will be made available to our board of directors, investors, partners, site selectors, website visitors and media.

Reasoning

The value of a dashboard is being able to quickly make data-driven decisions and to share important information that positively impacts the organization. To make such decisions requires context and interaction. The internal and external versions of our dashboard will help us showcase our work to those sectors we wish to engage.

Strategic Plan

Working with our LVEDC colleagues, we'll develop a list of departmental KPI's and set about creating a dashboard to list the ongoing activities that matter to each department and the organization as a whole.

We'll determine which information we share publicly; which information is kept for internal use and learning.

We'll organize quarterly media events to share key economic information that's gleaned from our dashboard.

We'll share in-depth information with board members, departmental heads, stakeholders and possibly site selectors and investors.

A number of “in-the-box” marketing dashboards already exist. Rather than start from scratch, one of these products could give us a strong foundation for our dashboard. We'll research best practices and settle on a product or program that provides and compiles the information needed to make good business decisions, while keeping our board, investors, partners and other stakeholders informed.

Some of the items that could be included in our dashboard include projects steered to Lehigh Valley, projects financed by LVEDC, clients assisted and jobs created or retained.

Timeline

- Summer 2014: Begin identifying and researching existing dashboard products, while working with key LVEDC staff members to determine the KPI's we'd like to monitor.
- Summer-Fall 2014: Choose an already created dashboard product or create our own internal/external dashboard reporting system. One dashboard will reside at a location accessible to the media and public; the other will be accessible internally to department heads, board members, partners, investors and other key stakeholders.
- Fall 2014: Begin streaming the identified KPI's into our dashboards.
- Ongoing: Monitor and update frequently, share via media events on a quarterly basis (or “immediately” if a key event or data surge occurs), and make business decisions based on the information we've compiled.

Resources

Some budget money may be needed for the purchase or creation of a dashboard system, but much of the work can and will be handled by the marketing/communications team with input from key staff.

Metrics

- Projects steered to Lehigh Valley
- Projects financed by LVEDC
- Clients assisted
- Jobs created or retained
- LVEDC events/meetings scheduled
- Outside events/conferences attended
- CEO speaking engagements
- Event sponsorships
- Collateral and other materials created
- Marketing campaigns
- BREP visits
- Reports on website visitors, open and click rates
- Social media follower and fan counts
- Number of times LVEDC is mentioned by the media

9. Improve and Expand Customer Segmentation Lists and Data Bases

Goal

The LVEDC mailing lists need to be vetted and further segmented so our messaging reaches its intended audience. We need to know “who” is receiving “what” – and we need a more streamlined process for keeping our lists updated and accurate.

Reasoning

Marketing messages are only as effective as the audiences they reach. The newly segmented lists will be heavily used to ensure our messages get to our intended targets.

The goal of email marketing is relevance and action. Recipients want emails that speak directly to them and are interesting to them, while marketers want emails that get results. The first and most important step towards improved email relevancy and results is targeting. A recent case study suggests a 208% higher conversion rate for targeted emails over regular, untargeted email blasts.

Simply put: We want to be reaching the “right” people and we want the “right” people at our events. The “right” people depends on the list, but generally includes community leaders, investors, potential investors, business partners, heads of larger companies, and major stakeholders.

Strategic Plan

First, we need to identify who the right people are. This can be accomplished by a canvassing of LVEDC staff and department heads. Then we need to print out our current lists of contacts – investors, e-communication recipients, government leaders, site selectors, brokers & developers, etc. – and have a team of LVEDC staff read through and comment on accuracy of current data, missing elements and individuals, etc.

We have as many as 1,500 names and addresses in our current data base. We need to ensure our messaging is being sent to the people who should be seeing it. This is important in many ways, including:

- Investor retention
- New investor acquisition
- Event attendance
- Partner communication

Timeline

- Spring 2014: Determine who needs to be on what lists.
- Spring 2014: Determine if Mail Chimp is the best way to support our messaging and lists.
- Spring 2014: Bulldog our way through existing lists.
- Rest of 2014 and ongoing – Systemically update agreed-upon lists.

Resources

The bulk of the work can be handled internally by marketing and other LVEDC staff. It will include streamlining the collection and segmentation of our contacts – and the creation of a process for smooth, continual updates.

Metrics

- E-mail opens rate
- E-mail responses
- Invitation response rate
- Event attendance (with an eye on reaching and attracting the individuals most desirable to LVEDC and its mission).

We will compare the email open and email click-through rate of our list segments to the open and click-through rates when we send to our mass list. If the targeted segments are not doing better, then we've crafted the segment, the messaging or the content poorly.

10. Establish an Ambassadors Program to Help Market & Grow Businesses

Goal

Create a cadre of LVEDC Ambassadors to extend the region's brand. We will enlist Lehigh Valley professionals from the industry sectors, (corporate executives, university leaders, legislators, etc.) to help promote business investment in the region. Through BREP and other means of cultivating relationships, we will identify potential candidates to participate and help us promote Lehigh Valley.

Reasoning

The Lehigh Valley is rich with business executives who travel the globe for their respective companies – and promote Lehigh Valley here and on the road. LVEDC can leverage those local connections and engage those executives to promote business investment in Lehigh Valley. Such third-party testimonials are an effective way to promote the area to their peers internationally.

LVEDC should develop an ambassadors program to convince willing business leaders to assist the organization in extending the brand of the Lehigh Valley as a place to do business. LVEDC staff would provide the ambassadors with access to key data and talking points to help them tout the region's business attributes.

Strategic Plan

This program can work in multiple ways:

LVEDC Ambassadors will be drafted to spread the word of Lehigh Valley while traveling internationally; they can also assist LVEDC with the attraction process by being on hand to greet potential clients.

Marketing will collect video third-party endorsements and published quotes – and used these in promotional campaigns and/or on the LVEDC website and in special collateral pieces and presentations.

Marketing and development will own this program. Development will provide many of the potential candidates, while marketing will create collateral (web, print, video) around the Ambassadors and set up a distribution strategy.

Timeline

- Summer 2014: Determine prime candidates for our Ambassador program.
- Summer 2014: Collect third-party endorsements for print usage.
- Fall 2014: Arrange for video shoots featuring some of our most powerful Ambassadors.
- Fall 2014: Create a compilation video of the best comments. Use snippets on the Web and in digital e-communications.
- Fall 2014: Open our library of resources to the Ambassadors (for background info on Lehigh Valley and important speaking points).
- Ongoing – Employ the Ambassadors for help with businesses considering relocation to Lehigh Valley.
- Ongoing: Have our Ambassadors promote Lehigh Valley as a great place to live and work (when they're traveling).

Resources

Money will be budgeted for video shoots, video editing, and collateral design and creation.

Metrics

- Number of participants.
- Number of clients our Ambassadors engage.
- Number of times Ambassadors are mentioned by clients impressed with their passion for Lehigh valley (and, on a smaller basis, their passion for LVEDC).

Finance

11. Increase Demand for Financing Programs

Goal

To increase demand for our financing programs.

Reasoning

LVEDC's Finance Department recently completed a Business Development Plan to promote greater and more consistent loan volume. This plan must be fully implemented and maintained as a living document to provide continuous deal flow into our programs.

Strategic Plan

This plan focuses on the primary target audiences for business development activities of the Finance Department and the process by which we will attempt to market our resources directly and indirectly to businesses in the Lehigh Valley.

While, ultimately, our clients are the businesses which need capital for expansion related investment, our traditional channels for prospect development have been service companies that use our programs as a way to provide added value to their services. We have traditionally targeted banks for greater access to prospects, but in recent years we have expanded these targets to include:

- Accounting firms
- Legal firms
- Real-estate brokers and developers
- Other economic development entities
- Directly targeting industrial and manufacturing companies

Our value propositions to the Customer include: (1) preservation of working capital due to a lower down payment; (2) fixed rates provide a hedge against the potential for increases in interest rates; and (3) use of the programs allows for a lower cost of funds from both the incentive program and, potentially, from the bank due to subordination/risk mitigation.

The value of our programs to our partnering banks include: (1) risk mitigation through subordinated financing, (2) the ability to reduce industry and client concentrations and increase maximum lending; (3) Utilizing our programs to provide for a lower blended cost of funds, in complement to a bank's existing products, can help win new business; and (4) the economic development financing programs can promote client retention as our role is transactional.

Marketing and business develop efforts will include (specifically targeted to each audience):

Utilization of the LVEDC website and periodic e-newsletters

Monthly or quarterly email correspondence to targeted audiences that include updated interest rates, current status of lending programs, recent project successes, and other economic news.

Participating & networking at conferences/events/seminars.

Working with other staff/divisions of LVEDC to focus on target audiences i.e. business recruitment and business retention.

Direct meetings with individuals and group meetings with targeted audiences i.e. bank, accounting and law firm staff meetings, workshops, conferences, etc.

In addition to further crafting and targeting our message, we need to strategically grow the SBA 504 Program beyond the borders of the Lehigh Valley. Opportunities exist to leverage our relationships with lending institutions that work in the Lehigh Valley as well as our neighboring counties to increase demand for this important source of business financing and recurring revenue to LVEDC.

Timeline

Various components of the plan will be performed at different times and all work will be continuous throughout the life of the plan and beyond.

Resources

Existing Finance Department and Marketing staff will perform all work. The associated marketing budget will need to include refreshing of the financing collateral piece and the related website information. Local travel expense will increase.

Metrics

Process Metrics

- # of group program update emails sent to audiences
- # of meetings held with targeted audiences to discuss programs
- # of conferences/workshops participated in
- # of general marketing / advertising initiatives undertaken – i.e. collateral and print advertising

Production Metrics

- # of Prospects Developed
- # of Projects Developed
- # of Loans approved

12. Create and Coordinate a Capital Access Network of Debt & Equity

Goal

To create a coordinated financing (debt & equity) network that will enable new businesses, expanding business or business looking to locate in the region to easily access the loans and equity investment they need to ensure success.

Reasoning

Access to capital is no longer the issue it was during the recession that has defined much of this decade. Economic development financing organizations must now turn their attention towards providing efficient access to a broad array funding resources, constituting debt and equity, to provide agile capital to company's making decisions with a moment's notice. LVEDC is positioned perfectly to be able to advise business clients on the types of financing available and to provide expeditious coordinated access to all potential resources available. Alignment of the resources into an electronic network is imperative as it will offer the ability to attract multiple layers of debt and/or equity simultaneously, thereby allowing our customers the ability to efficiently access the best possible financing to support their growth. Additionally, it is appropriate for our organization to engage those who desire to invest in Lehigh Valley companies and provide them with channels to put their money to work in our region's economy.

Strategic Plan

LVEDC has already invested significant time and effort in the development of the Lehigh Valley Lending Network and will soon solicit bank participation in the program. To provide access to equity resources in the region, LVEDC will seek to partner with the Lehigh Valley Angel Investors and will develop an inventory of individuals and businesses seeking opportunities for investment in local businesses. This inventory will be populated through our business retention activities and through our consulting with customers in our business development and financing activities. LVEDC Finance Department staff will then use these equity resources to pair companies with the appropriate investment.

Timeline

- Spring - Summer 2014: Solicit bank membership into Lending Network, develop partnership framework with LVAI.
- Fall - Winter 2014: Develop cloud-based project management system, finalize lending network participation and hold press conference announcing the opening of the program.
- Winter - Spring 2015: Begin work on developing database for equity investors.
- Summer - Fall 2015: Develop and implement marketing to attract investors to the program.
- Winter 2015/2016: Announce equity networking program.

Resources

Existing staff and a formal internship program, undertaken with local colleges and universities, will provide the manpower to staff these programs. The cost of information technology will be small initially, but could grow depending on the complexity and sophistication of the system desired. Marketing expense including the development of collateral materials will be paid for from the revenues that will be derived from operating the program (i.e. bank participation fees).

Metrics

- Number of Inquiries Processed
- Number of Loans Placed / Investments Made
- % of Inquiries Placed / Investments Made
- Total \$ Amount of Loans Placed / Investments Made
- Number of Loans Placed with Banks
- Number of Loans Placed with ED Partners

13. Revitalize the Lehigh Valley Regional Loan Pool

Goal

To repurpose and reinvigorate the Lehigh Valley Regional Loan Pool. Raise the profile of the Loan Pool as a large project participated lender. If possible, seek to position the Regional Loan Pool as the de facto financing agent for Neighbor Improvement Zone (NIZ), Community Revitalization and Improvement Zone (CRIZ) and Tax Increment Financing (TIF) projects throughout the Lehigh Valley.

Reasoning

The LV Regional Loan Pool is underutilized. Banking regulations and internal lending policies have made it increasingly difficult for the Loan Pool to take the types of risk that are at the core of its foundation. An effort must be made to keep this organization relevant, as it is the only collection of leading lending institutions currently organized to do larger participated loans in the region. Furthermore, it is one of the few remaining non-micro lending loan pools left in the Commonwealth. This organization's ability to bring 10 of the region's most respected lending institutions together to finance larger projects in the Lehigh Valley is simply too valuable to remain idle and languish. To strengthen its position, strategic marketing should be undertaken to inform high-profile businesses and community organizations of the Loan Pool's existence and its ability to offer large projects (up to \$10,000,000) exposure to the most active and engaged lending institutions in the Lehigh Valley. Also, the Loan Pool should be situated as a primary lender for NIZ, CRIZ and TIF-related projects.

To some banks, even some of those involved in the Loan Pool, the Neighborhood Improvement Zone in Allentown and the Community Revitalization Improvement Zone in Bethlehem are uncharted territories and their underlying incentives are too esoteric for conservative lenders to consider as a form of debt service. At the same time, the banks' that are at the forefront of understanding these new economic development tools are running into concentration limits in the NIZ. With this in mind, we should bring the Loan Pool into prominence as the preferred financing agent for NIZ, CRIZ and perhaps even TIF related projects. It would make sense for this body to possess the highest level of expertise on these financing tools and, thereby, obviate itself as the primary source for financing these projects. The use of the Loan Pool for this purpose will allow banks to mitigate the risk of considering non-traditional debt service as a primary form of repayment and it will also allow the borrowers (the developers) to create strong lasting relationships with a number of our area lenders at one time. In essence: the banks can spread the risk and the developers can spread the wealth.

Strategic Plan

Making this possible will require actions on two fronts. 1) LVEDC will need to persuade the authorities and their related governmental units that oversee the NIZ, CRIZ and TIF programs to recommend the use of the Loan Pool as their primary lender and, in order for this to happen; 2) The Loan Pool members will need to be fully educated (and demonstrate expertise) on the subject matter and they will also need to be able to act expeditiously and decisively on these requests.

Existing Staff and the Loan Pool Solicitor can address the work to redefine the loan pool program and administer the repurposed organization, but they will need outside professional support to provide the legal and credit-related insight on the specific programs outlined above. Norris McLaughlin, as Solicitor to the Loan Pool, Broughal & Devito, as experts on the CRIZ, Parente Beard & King Spry, as experts on the NIZ, should be engaged as key partners. These entities would probably be willing to extend their services to assist in informing the loan pool pro-bono, with the likelihood that their own businesses would benefit from these relationships.

Timeline

- Summer 2014: Meet with our Solicitor and Leadership of the Loan Pool to discuss a repurposing strategy.
- Fall 2015 – Summer 2016: Execute Plan.

Resources

Existing finance department staff, the Loan Pool solicitor and external partners will provide the work.

Metrics

- Authorities agreeing to use the Loan Pool as primary financing agent
- # of related applications submitted and loans approved

14. Grow Regional Shared Services Function by Seeking Contract Opportunities

Goal

To develop new contracted partners where synergies exist and offer services as an SBA Lender Service Provider to our regional SBA 7(a) Lenders.

Reasoning

LVEDC provides administrative services to four non-profit and for-profit companies. These relationships have been critical to the consolidation of economic development resources under our umbrella. The vast majority of our financing efforts are dedicated to projects that are financed by one or more of our contracted partners. Additionally, opportunities exist to provide back-office support to commercial lenders engaged in SBA 7(a) lending. It is common now for CDC's, like LVEDC, to engage in Lender Service Agreements to allow our expertise in SBA lending to assist our private sector counterparts. Many lending institutions are seeking to reduce the overhead associated with this highly specialized form of lending. With our expertise in SBA Standard Operating Procedure and the related CFR, these relationships can be mutually beneficial.

Strategic Plan

We will continue to seek-out strong synergistic relationships with other economic development financing organizations in need of administrative assistance, where there is significant mutual benefit and where our businesses align. Our value proposition is simple: we are a fully staffed, well experienced, loan origination and servicing center with extensive relationships in the business community and comprehensive knowledge of commercial lending, economic development finance and credit management. These opportunities will largely result from conversations with other economic development organizations on the value we can offer them as a regional partner.

As it relates to providing back-office support to banks in their 7(a) lending endeavors, this is a longer lead-time initiative as we will need to complete our process of standardization, in order to ensure commercial quality support, prior to initiating broad-scope contracts for services. However, it is possible that limited support can be offered during the timeframe contemplated in this plan. As we have already been approached by a number of banks related to this service. As such, it is important that we begin to develop a formal offering.

Timeline

- Spring - Fall 2015: Meet with regional banks (we know to be interested in this service) to determine levels of service required.
- Winter 2015-2016: Develop initial service offerings and template service agreements.
- Spring - Summer 2016: Roll-out initial offering and solicit initial business.

Resources

We will need to add additional staff depending on the needs of the contracted entity, but these costs and related overhead will be built into our service agreements to ensure, at the very minimum, cost-neutrality.

Metrics

- % of program documentation completed
- Agreements signed

15. Advocate for Improved Finance Program Effectiveness, Expanded Eligibility and Reduced Risk

Goal

To provide advocacy support to our Area Loan Organizations to increase the effectiveness of the State financing programs, expand eligibility and reduce risk.

Reasoning

The Board of Lehigh's Economic Advancement Project (LEAP) and Northampton County New Jobs Corporation (NCNJC) recently approved an advocacy plan that was a year in the making. This plan recommends that staff (LVEDC) should work with Pennsylvania Department of Community and Economic Development officials to: (1) enhance the positioning of the Area Loan Organization in the context of the state ED financing programs, (2) improve responsiveness of the programs to the needs of the business community and (3) reduce loan-loss liability to the organization. These issues are also important to LVEDC as their resolution should result in increased loan volume and the potential for these organizations to use greater portions of their fund balances to promote economic development initiatives.

Strategic Plan

Priority 1

Seek the dissolution of (or modify) the loss sharing agreement with the Pennsylvania Industrial Development Authority (PIDA) Program by working with other ALOs that recognize the problem and others, as appropriate, to communicate these concerns to PIDA.

There is a 30 year-old agreement between our ALOs and PIDA that provides that in the event of default and liquidation of a PIDA loan, the respective ALO will be responsible to repay 50% of any remaining loan balance (over a 20 to 30 year period at 0% interest).

LEAP and NCNJC recognize and understand these obligations as they are outlined in the loss-sharing agreement. However, since they do not make the final decision on the loan and do not earn sufficient revenue to accumulate reserves to cover any losses, they should not be held to the level of obligation currently required. Furthermore, the inequity that exists between the risk taken on each PIDA loan and the compensation offered in the form of loan fees is unreasonable and untenable.

Priority 2

Communicate with state officials about the economic development benefits of addressing the increasingly risk averse nature of the programs, specifically as they relate to collateral and conditions.

PIDA & Small Business First (SBF) often create significant collateral incompatibilities with our partnering commercial lenders. The state programs seek commercial-grade collateral support for their loans. Frequently, this is not available. Even when it is possible, our lending partners are often not happy with the final structure, and are, as a result, less likely to consider recommending the programs be used in future situations. Also, our lien positions can get in the way of future growth of the company - as they seek to borrow additional funds to support their growth, additional collateral must be pledged. Many times, subordinating the State's security interests is problematic.

It is the consensus of the LEAP & NCNJC Boards that the terms and conditions of these loans should be tiered to provide greater benefit to borrowers with higher credit quality and projects that provide better economic development returns.

Priority 3

Increase the number of resources available to ALOs to address the financing needs of the business community by endorsing the Pennsylvania Business Development Authority (PBDA) initiative or by advocating for similar measures. Also, promote the use of the ALOs as the required applicant for other PA DCED financing programs including MELF. Finally, work to have eligibility broadened to include other industries that will create quality jobs (i.e. service companies).

There are a wide variety of lending products that are not currently available through the state that are often requested, and cited as needed, by our borrowers. For example, lines of credit, a machinery & equipment loan that would bridge the gap between the SBF program and the MELF program; as well as, greater flexibility in addressing the working capital needs of the borrower.

The PBDA Program would: (1) expand resources for the ALO's to administer, by adding working capital programs, (2) result in greater flexibility in making changes to the state programs on an ongoing-basis, (3) remove the PIDA loss-sharing obligation and (4) add an interest-sharing ("revenue-sharing") component to the programs that would lead to increased revenue to the ALOs.

Priority 4

Provide targeted information that will help state officials understand that additional funding for the ALOs, i.e. Partnership for Regional Economic Performance, (PREP) & Discovered and Developed in PA (D2PA), will help the state meet its objective of retaining and creating quality jobs in the region and allow for cost efficiencies in the administration of economic development in the commonwealth.

The process ALO's currently utilize in getting a loan approved by the state is lengthy and layered in redundant reviews. ALO's have undergone a comprehensive certification process to ensure that they have the professional capabilities to manage these programs. To improve the efficiencies of the state's economic development financing programs, ALO's should seek greater autonomy in making a loan decision and in closing the resulting loan. Working through the bureaucracy within the Pennsylvania Department of Community and Economic Development (PA DCED) extends the approval and closing timelines dramatically, to the frustration of all involved. Furthermore, these redundancies create cost inefficiencies of administering the program at both the ALO and state levels.

Timeline

- Summer 2014 - Fall 2014: Meeting with Other Local Area loan Organizations to understand the issues they are dealing with and build consensus.
- Fall 2014: Draft / finalize position paper.
- Fall 2014 – Spring 2015: Begin coordinated meetings with the State to review position paper.

Resources

Existing staff will perform all work and utilize their relationships with PEDA and key State-officials, legislators and related parties to promote the plan. New budget expenses will consist primarily of additional local travel and related costs.

Metrics

- Favorable ALO policies established by the State
- # of State Loans Approved / Closed
- Total \$ Amount of Loans Approved / Closed
- \$ value of ALO investment in new economic development initiatives

Administration & Stakeholders

16. Strengthen Stakeholder Involvement through Councils and Programs

Goal

To foster continued relationships and maintain open lines of communication with Lehigh Valley stakeholders to ensure pertinent issues are being discussed among the most reputable leading industry experts. To help position LVEDC as a nationwide leader in the coordination of regional talent, efforts, and resources.

Reasoning

Council membership consists of diverse industry professionals that are actively engaged in promoting economic development in the region. Events will be held as needed to educate stakeholders on the specific needs of the economic development community. The topics of these events will continue to be developed around time-relevant subjects and priority topics to involve two-way communication and engage LVEDC stakeholders.

The increased exposure of council members' expertise will ensure that membership continues to attract leaders from throughout the Lehigh Valley. The intent is to engage and attract the most-qualified professionals and stakeholders in discussions.

Strategic Plan

Market and brand LVEDC councils as an attractive group with which a leader will feel compelled to volunteer their time

Develop a comprehensive set of standard operating procedures for each council, not for the purpose of exclusion, but rather to ensure the absolute best candidates are recruited and selected for their respective councils

Regularly survey and solicit council feedback on the structure of each council to ensure it is best meeting the needs of the intended target audience

Develop Council events around relevant topics to ensure optimal quality programming, sponsorship, and attendance

Resources

Director of External Affairs (40%), Director of Regional Competitiveness (20%), VP of Development (20%), VP of Administration (20%) and other staff when necessary

LVEDC Council event budget, to be supplemented and increased through the raising of sponsorship dollars
Higher value of sponsorship through a higher quality of events

Councils will be a self-sustaining source of revenue through events

Metrics

- Analysis of the members serving on LVEDC's five Councils
- Requests from high-level stakeholders to join LVEDC Councils
- Increased number of high-level attendees at Council events
- Total dollar amount raised through sponsorship of Council events

17. Be a Connector for Regional Groups & Resources and an Advocate for Economic Development Needs and Improvements

Goal

Streamline communications to consolidate regional efforts, increase awareness of economic development needs in the region, and act as a centralized source of economic development data and resources for site selectors, developers and legislators

Reasoning

We will advocate for the improvement of economic assets and policies and will help to coordinate regional efforts to develop commercial and industrial sites, strengthen our urban cores, prepare our workforce, create opportunity for small business and grow our entrepreneurs. Public policy advocacy of economic development projects and the need for regional solutions to improve the foundation for growth in the region is important. We will continue to work with local, county and state government to develop ombudsmen to work with them to propose solutions.

Strategic Plan

Advocate for the improvement of economic assets and policies

Ensure that legislators are continually aware of the needs of the economic development community and are working to embrace policies that will continue to establish Lehigh Valley as a business-friendly community

Work with local, county, and state government to develop economic development ombudsmen and Establish relationships with single points of contact in each of the 62 municipalities to determine individual needs

Act as a facilitator to combine efforts of regional organizations to prepare our workforce and create opportunities for small businesses and entrepreneurs and create an inventory of ongoing partnerships/projects to eliminate duplication and miscommunication

Work with Lehigh Valley companies to ensure the workforce talent required is being educated and trained at Lehigh Valley institutions, and that trained talent can find relevant employment in the Lehigh Valley upon completion of training

Manage ongoing relationships within a centralized CRM that can be easily shared with outside parties in a timely manner

Resources

- CEO relationship with key executives and legislators
- Local and national press relationships
- Development Department and Marketing Department

Metrics

- Continued recognition of Lehigh Valley as a business-friendly environment
- Success and collective buy-in of the Regional Partners council
- Establishment of relationships and meetings with 62 municipalities and local legislators and their representatives

18. Increase Private Sector Investment to Support Economic Development

Goal

Create an investor relations program that funds LVEDC's operations and strengthens private sector support for the organization

Reasoning

LVEDC's \$2 million operating budget does not provide sufficient resources to run a competitive economic development program. Because LVEDC has limited ability to raise funds through hotel tax or through fees for service, LVEDC must turn to the region's private sector. Private sector investors are always seeking a return on their investment, which often goes beyond support of an organization's mission. LVEDC must develop a program that not only funds its operations, but creates real value to investors, and will likely increase participation of high-value ambassadors for the Lehigh Valley.

Timeline

Prepare an in-depth analysis of previous fundraising efforts and results

Analyze Lehigh Valley's population of 15,000 companies to identify those companies that should be members of LVEDC and which existing investors can contribute more

Develop a standard process to securing commitments, collecting pledges, thanking investors, and following up to determine satisfaction

Create tangible benefits for investors, designed to make them feel special

Investor recognition functions (e.g., luncheons, sports outings, facility tours)

Investor-only reports on regional economy

Using LVEDC's 2014-2017 Strategic Plan and Garner Economics' Blueprint for Success, build a case for investment in LVEDC, to be used on visits to companies

Build a fundraising pyramid with expected contributions at each level, determining what the ask will be of each company

Visit decision-makers at each candidate company to secure commitments to invest

Employ the administration department of LVEDC to collect on commitments

Assure that all investments are appropriately recognized

Resources

CEO and VP of Investor Relations will spend 15-20% of their time on this initiative

RDG has already been engaged at \$25,000 for case development, candidate identification, and program development

Development of collateral material will require time from LVEDC Marketing department and subcontracting to design firms for additional collateral work (budget of \$10,000).

Metrics

- Percent improvement over 2013 investment levels
- Total number of new investors, annually
- Number of investors that have increased their annual commitment, and total dollar value of increased commitments
- Conversion of asks to commitments and commitments to collections

19. Upgrade Information & Central Data Systems to Support All LVEDC Initiatives

Goal

Develop cross-organizational tools that will allow LVEDC employees to share information to better deliver value to customers and communicate activities to stakeholders.

Reasoning

An economic development organization participating in a modern economy traffics in one good: information. Fundamental to LVEDC's ability to deliver on its mission are efficient business processes, supported by appropriate technologies and executed by trained professionals. Effectively delivering useful information to customers and coordinating internal communications will allow LVEDC to win deals.

Strategic Plan

- Document procedures and policies related to customer intakes and management of information across the organization
- Create buy-in to a set of practices and activities related to the collection and communication of information
- Bring all existing reports and documents to the new standard in Microsoft Excel, in preparation for an eventual export to a more robust management tool
- Organize meetings of representatives from economic development, finance and investor relations to coordinate data management activities under the Director of Information Systems
- Develop a customer relationship management tool (CRM) customized to LVEDC's operations
- Train staff to use the CRM and comply with standards for data management.
- CRM will integrate with Commonwealth-mandated systems and will employ previously developed procedures and data standards.

Resources

- Director of Information Systems will work at the direction of VP of Administration, and will spend 60-75% of his/her time on this initiative.
- Outside software development assistance (budget of less than \$10,000)
- Additional training for Director of Data (budget of less than \$5,000)

Metrics

- Percent adoption by customer facing staff
- Percent of customer contacts captured by CRM
- # of indicators made available to organizational dashboard

20. Optimize and Develop LVEDC Talent, Staffing Structure and Use of Resources

Goal

To grow LVEDC into an organization that can attract and retain the best economic development talent, effectively and efficiently deploy that talent, and deliver superior value to its customers.

Reasoning

In some sense, this is the most important component of any organization's plan. LVEDC has an excellent group of economic development professionals working toward its mission, but without the proper organization and direction, they risk becoming an agglomeration of independent contractors, focused on a single goal at the expense of corporate unity. LVEDC must develop and employ a more sophisticated approach to the management of its human resources in order to best help the Lehigh Valley maintain its competitive edge in the economic development marketplace. This warrants special consideration as an initiative of the strategic plan, and a concerted effort to execute.

Strategic Plan

- Conduct an assessment of the knowledge, skills, and abilities held by LVEDC's staff
- Seek training solutions for skills gaps among existing employees
- Update policies and publish a new employee handbook
- Develop a method for performance review and assist managers with the execution of those reviews
- Continue to build a culture of customer service, seeking assessment tools for measuring customer satisfaction and improving on areas of deficiency

Resources

- A training budget of approximately \$10,000 to \$15,000 per year
- Continued participation in SHRM-LV by Administration Department

Metrics

- Employee turnover
- Percent of operations staff members that have attended IEDC Basic Course
- Percent of staff members that have completed courses certifications in their functional areas (i.e. RMA training for ED Finance staffers)



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January 31, 2014

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for Sustainable Growth in the Lehigh Valley



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EXECUTIVE SUMMARY

In June 2013, the Lehigh Valley Economic Development Corporation (LVEDC) retained Garner Economics, LLC to develop a sustainable economic development strategy that will build on the LVEDC’s 2009 Strategic Plan and identify ways to effectively grow the Lehigh Valley economy. The Lehigh Valley metro area, defined by the federal government as the Allentown-Bethlehem-Easton MSA, is the 68th largest metro in the United States out of 381 metros. The goal of this strategy is to support the region’s rich natural, cultural, and historical resources and to meet the goals of the HUD Sustainable Communities Regional Planning Grant.

The end result, ***A Blueprint for Success: An economic development strategy for sustainable growth in the Lehigh Valley***, is a road map that will help the LVEDC strengthen the region’s existing industries and assist the Lehigh Valley with getting to the next level. For the region, this will mean a stronger focus and emphasis on economic development so that the Valley builds a high-caliber business climate and infrastructure that positions it well against peer regions and attracts the types of high-quality jobs its citizens seek. This ***Blueprint*** will ensure that the Lehigh Valley fully leverages its many assets to create an environment where cutting-edge companies and

world-class talent will want to locate. Similarly, it will help the LVEDC (and other partners and stakeholders) identify and market to emerging industries that are an optimal fit for the region and will ensure economic prosperity for the Lehigh Valley.

The process to build the ***Blueprint*** is described in Figure 1. Together, the three phases provide:

- (1) A comprehensive and holistic assessment of key forces driving the Lehigh Valley economy and shifting dynamics;
- (2) An Assets and Challenges Assessment (A&C) of the region from the eyes of a site location consultant that facilitates investment decisions;
- (3) Recommended business targets suitable for the Valley; and finally,
- (4) A set of implementable recommendations that the region can utilize to enhance the economic well-being of the area, strengthen its desirability as a business location, and position the LVEDC as the “go-to” business development entity for the Lehigh Valley.

FIGURE 1: PROJECT PHASES

Phase I: Discovery	Phase II: Strategy	Phase III: Implementation Recommendations
Evaluate the Lehigh Valley competitive position from a site selection perspective <ul style="list-style-type: none"> ▪ Economic Analysis ▪ Labor Analysis ▪ Assets and Challenges Assessment (A&C) ▪ Cluster Analysis/Business Target Identification 	Position the LVEDC to achieve success based on qualitative and quantitative analysis collected in Phase I <ul style="list-style-type: none"> ▪ Short- and long-term strategies (one- through five-year) including product improvement needs and industry targeting 	Actionable items <ul style="list-style-type: none"> ▪ Marketing and promotion ▪ Workforce development recommendations ▪ Organizational recommendations ▪ Transformational recommendations to enhance the Valley’s competitiveness

Building on Solid Foundations

The Lehigh Valley has a rich history of creating and investing in economic development foundations and assets to make it a good location for business. This asset base is key to the region's competitiveness. The principles upon which the foundations have been built will serve the region well as it looks to take the next step in targeting and coordinating its marketing efforts and telling the world of the varied attributes of the Lehigh Valley. Among these economic development principles that the Valley should continue to build are:

- **Effective use of available land and sites.** The region has long known that it must be able to provide suitable and ready sites in order to attract companies to locate in the Valley. In 1959, the region recognized the need to diversify the regional economy and established Lehigh Valley Industrial Park, Inc. (LVIP). Its original mission was “to secure new business and industries in the Lehigh Valley area—provide suitable sites and increase employment.” Today, the seven parks within the LVIP system are home to more than 470 businesses employing more than 22,000 people. The concept is touted by many as a best practice in industrial park development as well as a sustainable and effective public-private sector partnership.
- **Best practice redevelopment programs.** The region has put a premium on redeveloping its downtowns and industrial sites. The Land Recycling Initiative run by LVEDC is a model program to reuse brownfields. The nearly complete redevelopment of the 1,800-acre former Bethlehem Steel site is evidence of that. The Neighborhood Improvement Zone (NIZ) in Allentown is not only spurring nearly \$800 million in redevelopment projects that are transforming the core of Allentown with a minor league hockey arena, new office buildings, apartments, retail, and restaurants, but the program is looked to nationally as a best practice example for reinvigorating urban cores. The addition of the City Revitalization and Improvement Zone (CRIZ) in Bethlehem is expected to encourage similarly transformational change. Together, these Districts have done, and will do, much to enhance the quality of place of the region and attract private investment.
- **Developing workforce talent.** While workforce concerns were often voiced in the focus groups and within the electronic survey, many in the region have developed innovative approaches to filling their talent pipeline. One example is the partnerships that St. Luke's University Health Network and the Lehigh Valley Health Network have established with existing medical schools. By setting up the programs with Temple University and the University of South Florida respectively, the hospitals are taking advantage of their proximity to the New York/New Jersey and Philadelphia markets and relationships on the East Coast.
- **Creative local funding streams.** Recognizing the need for a consistent funding source for economic development initiatives, the region instituted a hotel tax for Northampton and Lehigh counties to fund economic development efforts in the two counties and the operations of the Lehigh Valley Convention and Visitors Bureau (now Discover Lehigh Valley). In 2005, the tax was increased to fund the AAA Baseball stadium. Through an agreement negotiated by the Lehigh Valley Partnership, a portion of the funding for Discover Lehigh Valley is given to LVEDC.

CHAPTER 1: WHERE THE LEHIGH VALLEY STANDS AS A PLACE FOR BUSINESS A SUMMARY OF THE COMPETITIVE REALITIES REPORT

Grounded by decades of economic development, site location analysis, and industry cluster targeting experience, Garner Economics began the project by using a rigorous set of techniques based on fully sourced and reliable data sets to completely understand the current economic state of the Lehigh Valley.

The resulting *Competitive Realities Report (CRR)* was the first of two reports provided to the LVEDC. The CRR is a compilation of local facts and data points with quantitative analysis and some subjective opinions noted in the Assets and Challenges Assessment.

Together, the Assets and Challenges Assessment, Benchmarking Scorecard, and Stakeholder Input documented where the Valley stands against its benchmark regions, its assets and challenges as a business location, and provided feedback and perceptions from a broad range of stakeholders.

As the summary below indicates, of the 66 variables analyzed, 38 are considered an Asset and 11 a Challenge (17 rated as Neutral). **This ratio of Assets to Challenges is one of the strongest positive ratios we have conducted and analyzed over the last 11 years.** The diverse and rich assets of the Lehigh Valley have made the region a global competitor. Better leveraging the region's assets will be key as the Lehigh Valley capitalizes on its position among the top-fifth of metropolitan areas nationwide.

Assets and Challenges

The Assets and Challenges Assessment began with a windshield tour of the region during which the Lehigh Valley was assessed against a set list of 66 criteria from a site-selection perspective. Garner Economics assessed the region based on the qualities, elements, and infrastructure that a business will look for when considering the Valley as a place for its operations.

The assessment was both an objective and subjective evaluation of the Valley and employs the following dashboard to illustrate the results. By knowing what challenges or gaps exist, the region can take the steps necessary to ameliorate a negative situation, strengthen its overall “product,” and be a more attractive business location. Likewise, by knowing the region’s strengths, the LVEDC can better market them in its efforts to attract external businesses.

REPORT DASHBOARD



Indicates the Valley is better (more positive) compared to a majority of the benchmark geographies or points to a positive trend or asset within the area.



Indicates the Valley is neutral, neither positive nor negative. Indicator may represent an observation or be in the middle of the benchmark geographies.



Indicates the Valley is worse compared to a majority of the benchmark geographies or points to a negative trend or challenge within the area.

FIGURE 2: ASSETS AND CHALLENGES

	Assets	Challenges
Access to Markets	<p>Access to Markets</p> <ul style="list-style-type: none"> Centrally located for major regional market Centrally located for national market Well positioned to serve international markets Interstate highways Rail service Port facilities (water or inland) Within 90 minutes of commercial air passenger service General aviation airport capable of handling corporate aircraft Broadband speeds and availability 	<p><i>No relative challenges</i></p>
Labor	<ul style="list-style-type: none"> Cost of labor Availability of post-secondary vocational training Within 1/2 hour of major university/college Availability of engineering program 	<ul style="list-style-type: none"> Availability of technicians and scientists Availability of managerial personnel Percent unionization (private and public)
Access to Resources	<ul style="list-style-type: none"> Availability of agricultural products for food processing Availability of manufacturing processes Availability of water and sewer capacity 	<ul style="list-style-type: none"> Cost of electricity for industrial/commercial use c/kWh
Economic Development Program	<ul style="list-style-type: none"> Adequate level of professional staff Involvement of both public and private sectors Level of funding for local economic development program 	<p><i>No relative challenges</i></p>



	Assets	Challenges
Access to Space	<ul style="list-style-type: none"> • Availability of suitable office space 	<ul style="list-style-type: none"> • Availability of suitable industrial space
Access to Capital	<ul style="list-style-type: none"> • Availability of low-interest loans for small business 	<p><i>No relative challenges</i></p>
Government Impact on Business	<ul style="list-style-type: none"> • Availability of adequate water and sewer lines to industrial sites • Availability of tax incentives (state and local) • Quality of local elementary and secondary education • Quality of post-secondary education • State overall business tax climate index as ranked by the Tax Foundation.Org • State and local sales and use taxes; service taxes • Personal income taxes 	<ul style="list-style-type: none"> • Level of traffic-carrying capacity of local streets and highways • Level of state costs for unemployment insurance • Local business permitting procedures and costs • Corporate income taxes • Local property taxes
Quality of Life	<ul style="list-style-type: none"> • Availability of executive-level housing • Availability of moderate-cost housing • Availability of apartments or rentals • Level of crime • Level of cultural activity • Availability of recreational opportunities • Presence of major sporting events • Availability of adequate medical facilities • Quality of local restaurants • Appearance of the Central Business District(s) 	<ul style="list-style-type: none"> • Level of air pollution

Labor and Economic Trends

In addition to assessing the Lehigh Valley through the criteria and measures employed by site selectors, work during Phase I examined the region’s economic position against the three benchmark economies: Allegheny County, PA and the counties of Guilford and Forsyth, NC (Greensboro and Winston-Salem). These benchmark geographies were selected by the LVEDC project team. As with the Assets and Challenges Assessment, Garner Economics used data that can be verified and, for which, comparisons with other cities or

regions can be made at the level of detail preferred by most site selection professionals. The most detailed demographics data, industry statistics, and comparative rankings were used because businesses considering the Lehigh Valley will do the same.

As the scorecards presented in the CRR and replicated below indicate, the Valley has mixed results in terms of demographics, labor, and economics.

Demographic & Labor Dynamics	
	Lehigh Valley has experienced a population increase of 12.8 percent, or 74,404 more residents, over the last twelve years. The rate is above the nation, the state, and one benchmark community.
	Lehigh Valley has grown at an annual rate of 1.0 percent since 2000, above all examined geographies except Forsyth/Guilford.
	At 52.1 percent, domestic in-migration has accounted for the majority of Lehigh Valley’s net new residents since 2000. Natural growth has contributed 22.5 percent of growth and international accounted for the remaining 25.3 percent.
	The share of growth from domestic in-migration has been steadily declining each year, resulting in its first net loss in year 2012 (domestic out-migration exceeded domestic in-migration).
	At 39.9 years, the median age in Lehigh Valley is slightly lower than Allegheny County and the state but above Forsyth/Guilford and the nation.
	Lehigh Valley has a higher relative proportion of residents in ages 45-54 years and a lower relative proportion in ages 20-34.
	At 9.0 percent, unionization among private businesses in the Allentown-Bethlehem-Easton metro is above the Greensboro/Winston-Salem metros, the state, and the nation.
	Measuring crimes in those cities with populations greater than 10,000, Lehigh Valley has lower violent crime rates compared to both benchmark communities and the average among all US cities in the same population range.
	Measuring crimes in those cities with populations greater than 10,000, Lehigh Valley has lower property crime rates compared to one benchmark community and the average among all US cities in the same population range.

Demographic & Labor Dynamics (continued)

	Compared to the state, the nation, and both benchmark communities, Lehigh Valley has a higher relative proportion of residents whose highest level of educational attainment is 9 th to 12 th grade, no diploma.
	Lehigh Valley has higher relative proportions of bachelor's degree attainment in the fields of <i>Biological, Agricultural, and Environmental Sciences; Engineering; and Education</i> .
	Lehigh Valley's 2012 SAT composite scores are above the state, the nation, and Forsyth/Guilford.
	Measured as completions per 100,000 residents and compared to the benchmarks, Lehigh Valley is mostly above Forsyth/Guilford and below Allegheny County for the number of associate's, bachelor's, and master's degree completions in STEM fields.
	Within STEM fields, the highest number of associate's degree completions in Lehigh Valley is in <i>Computer Science</i> , and the highest number of bachelor's, master's, and doctor's degree completions are all in <i>Engineering</i> .
	Compared to the state, the nation, and benchmark communities, Lehigh Valley attracts a higher proportion of new residents, ages 25 and older, with the highest level of educational attainment at <i>Less than high school graduate</i> .
	Annually, 8.7 percent of the population ages 15 and over is enrolled in a college or graduate school in Lehigh Valley. The percentage is lower than both of the benchmark communities, the state, and the nation.
	From 2002 to 2011, the number and proportion of workers who both live and work in the Lehigh Valley has increased by 4 percent or 6,885 more workers.

Economic Dynamics

	Over the last ten years, real GDP in Allentown-Bethlehem-Easton increased by \$1.4 billion or 5.7 percent, a rate below all but the Winston-Salem metro.
	Measured in per capita terms, at \$32,887 in 2012, Allentown-Bethlehem-Easton has a lower relative amount of economic activity than the benchmark metros, the state, and the nation.
	Over the last ten years, real per capita GDP in Allentown-Bethlehem-Easton declined by \$1,247 or 3.3 percent, while over the last five years, real per capita GDP declined by \$19 or 0.1 percent.
	Lehigh Valley's average wage per job is 8.1 percent below the nation, 3.2 percent below the state, and 13.8 percent below Allegheny County.
	After adjusting for inflation, over the last 10 years, growth in real values of the average wage per job in Lehigh Valley increased by 3.6 percent (\$1,231). In the last five years, it has declined by 0.1 percent (-\$37). The pace is below the nation, the state, and one benchmark community.
	Lehigh Valley's per capita income is 3.7 percent below the nation, 5.6 percent below the state, and 21.8 percent below Allegheny County.
	Over the last 10 years, growth in real values for the per capita income in Lehigh Valley has increased by 2 percent (\$604) and, in the last five years, by 0.4 percent (\$111). The pace is below the nation, the state, and one benchmark community.
	In per capita terms, at \$3,553, Allentown-Bethlehem-Easton exports are below the nation and two benchmark metros.
	From 2005 to 2012, per capita exports increased 95.4 percent in the Allentown-Bethlehem-Easton metro—a rate that is above the nation, the state, and two benchmark metros.
	As of 2011, proprietors accounted for 17.2 percent of total employment in Lehigh Valley—a rate below the nation and state but above both benchmark communities.
	Over the last 10 years, the number of proprietors in Lehigh Valley has increased by 37.4 percent, outpacing all but Forsyth/Guilford.
	In 2011, per capita income for nonfarm proprietors in Lehigh Valley was \$25,978. The amount is below the state, the nation, and both benchmark communities.
	Lehigh Valley has a higher proportion of employment in <i>Transportation and Warehousing and Arts, Entertainment, and Recreation</i> .
	Over year 2012, total employment in Lehigh Valley is up, on average, 2.1 percent or 5,693 more jobs. The pace is above the nation, the state, and both benchmark communities.



Economic Dynamics <i>(continued)</i>	
	Recession losses were not severe in Lehigh Valley, with the greatest losses at -4.2 percent or 11,716 fewer jobs, which is a rate lower than what was experienced in the nation, the state, and one benchmark.
	The average unemployment rate over the last year in Lehigh Valley has averaged 8.3 percent (representing 28,554 unemployed persons). The rate is below the nation, the state, and one benchmark community.
	At 101.8, the composite Cost-of-Living Index score in the Allentown-Bethlehem-Easton metro is above both benchmark communities.
	Measured as the percentage of households that have the availability to select broadband offerings, Lehigh Valley places well, ranking highest or second highest in comparison to the nation, the state, and both benchmark communities.

Local Specialization, Competitiveness & Growth

Below are general observations from an in-depth analysis of industry sectors, occupational groups, and industry clusters in Lehigh Valley. This information is not benchmarked to other communities:

- ✓ Over the last five years, the largest absolute employment gains came from *Healthcare & Social Assistance* (up 5,758 jobs or 12 percent). Other significant gains were made in *Transportation & Warehousing* (up 4,567 jobs or 32 percent) and *Arts, Entertainment & Recreation* (up 3,877 jobs or 54 percent).
- ✓ The greatest job losses have come from the *Construction* industry sector, down 2,758 jobs or 15 percent. The majority of remaining absolute losses came from *Government* (down 1,858 jobs or 5 percent) and *Information* (down 1,679 jobs or 24 percent).
- ✓ Lehigh Valley's industrial average earnings significantly exceed the national same-industry average in only two industries: *Utilities* and *Management of Companies*.
- ✓ Earnings gaps, where Lehigh Valley's industry averages are notably lower than in the nation, exist in *Finance & Insurance*; *Information*; *Professional, Scientific & Tech Services*; and *Real Estate*.
- ✓ Over the last five years, the largest absolute occupational gains came from *Transportation & Material Moving* (up 2,904 jobs or 12 percent). Other significant gains were made in *Personal Care & Service* (up 2,368 jobs or 18 percent) and *Healthcare Practitioners & Technical* (up 1,699 jobs or 9 percent).
- ✓ Lehigh Valley's occupational average earnings significantly exceed the national average in four areas: *Military*; *Education*, *Training & Library*; *Building and Grounds & Maintenance*; and *Management*.
- ✓ The *Transportation & Logistics* cluster has experienced the strongest growth (up 4,425 jobs over the last five years) and has a high degree of local specialization (location quotient of 1.69). Another cluster with strong growth and high specialization is *Healthcare & Life Sciences*. The *Electrical Equipment & Component Manufacturing* cluster demonstrates the highest measure of local specialization with a location quotient of 2.61.
- ✓ The three clusters demonstrating the strongest local competitive effect are: *Transportation & Logistics*; *Arts, Entertainment, Recreation & Visitor Industries*; and *Healthcare & Life Sciences*.
- ✓ Using standard major industry classifications, the *Management of Companies* industry sector demonstrates the highest degree of local specialization with a location quotient of 2.4. *Healthcare & Social Assistance* and *Transportation & Warehousing* both experienced strong growth and exhibit high local specialization.
- ✓ Using standard major industry classifications, a strong local competitive effect is exhibited in four industry sectors: *Transportation & Warehousing*; *Arts, Entertainment & Recreation*; *Health Care & Social Assistance*; and *Manufacturing*.
- ✓ Three occupational groups share high specialization and strong growth: *Transportation & Material Moving*, *Healthcare Practitioners & Technical*, and *Healthcare Support*.

What Stakeholders Think

In September 2013, in order to complement the data collection to determine the Lehigh Valley’s economic state, Garner Economics held eight focus group sessions with LVEDC stakeholders to solicit their perceptions and opinions of the Valley’s business climate.

A total of 100 people participated in the eight groups. The focus groups were organized into the following categories: large employers, small and medium-sized employers, entrepreneurs, educators, manufacturers, government officials, regional partners, and brokers and developers.

Additionally, an electronic survey based on the focus group responses was distributed to a select group of employers in the Valley from October 16-25, 2013 to further test and validate a subset of the questions asked in the focus groups. Eighty-two people completed the survey.

Figure 2 describes the stakeholders represented in the focus groups and survey respondents, and Figure 3 summarizes the most frequently provided responses by the participants of each.

FIGURE 2: PARTICIPANTS

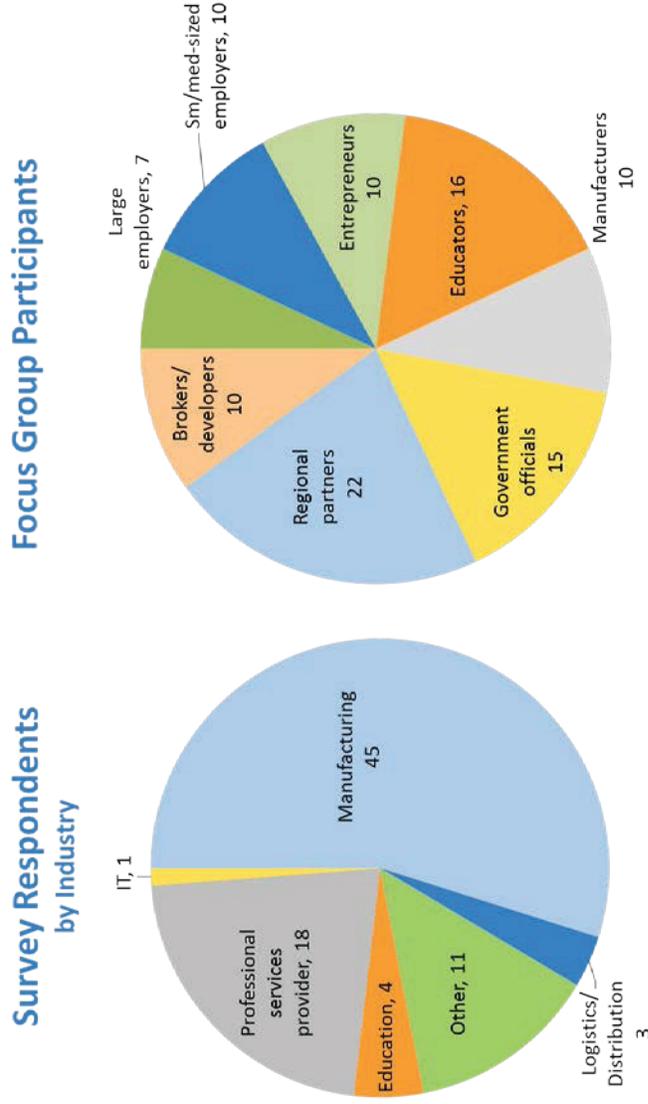
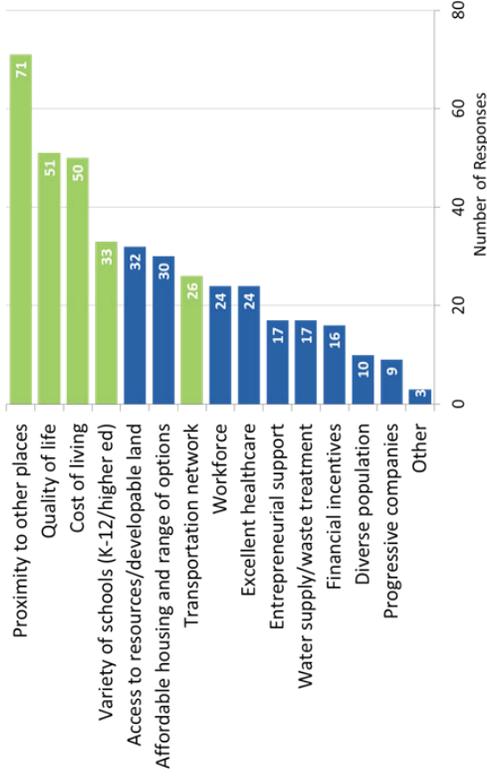
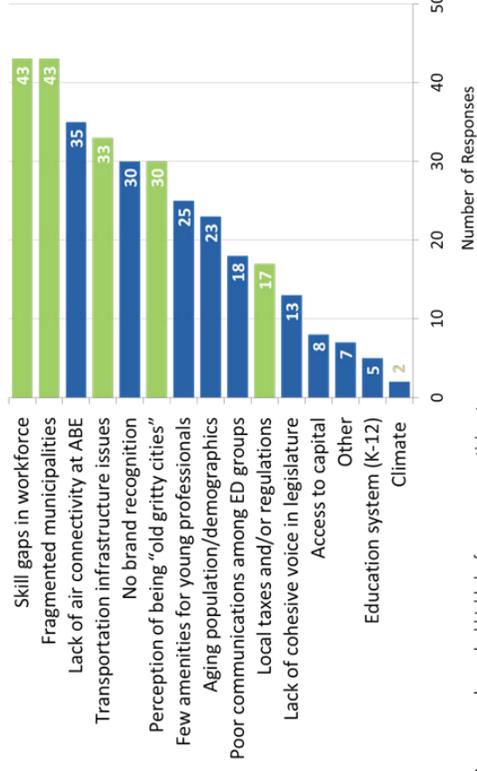


FIGURE 3: MOST FREQUENT RESPONSES

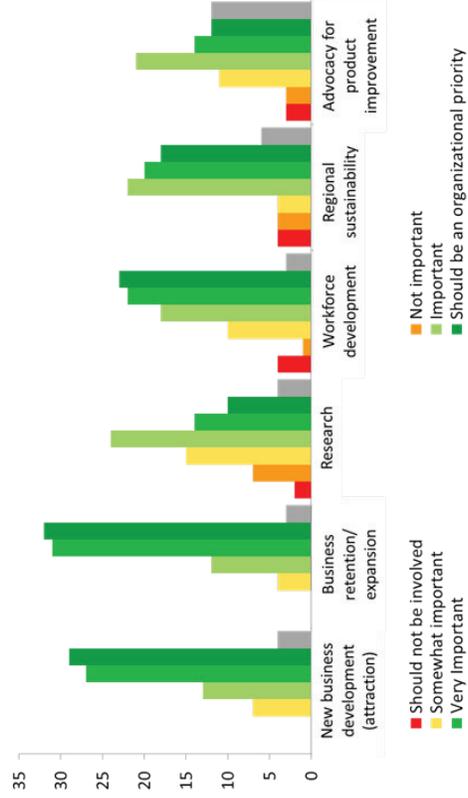
What are some of the strongest assets the Lehigh Valley has in retaining and attracting businesses to the region?



What do you think are some of the biggest obstacles that inhibit the Lehigh Valley in its ability to attract, expand, or retain businesses and investment?



How important are the following programs if the Lehigh Valley Economic Development Corporation (LVEDC) is to be an effective partner in the region's economic development efforts?



Top items survey respondents would like to see the region's leadership take on to strengthen its ability to attract quality companies and talent to the Lehigh Valley in the next five to ten years*

- Create a strategic plan to support the region's infrastructure
- Provide incentives for existing business to expand in the region
- Consolidate government
- Passenger rail to NYC and Philadelphia

*Respondents were asked to choose among a list of initiatives

CHAPTER 2: OPTIMAL TARGETS



The optimal industry target selection is based on the site-specific characteristics of the Lehigh Valley economy. Using results from the previously completed *Competitive Realities Report*, the Assets and Challenges Assessment, focus groups, and field visits, four industry targets were chosen that best match the unique competitive advantages in the area to the needs of particular industry sectors. Special attention is given to industries in the midst of significant change or innovative transformation with the strong likelihood that there will be increased interest in adding or moving operational sites. Each sector selected has a record of above-average wages, projected positive growth, and participation in commercial activities that will create wealth in Lehigh Valley in both the short- and long-term.

Because economies are dynamic and impossible to precisely predict, these four optimal targets offer opportunities across several non-competing sectors, affording a means to diversify economic development strategies and avoid risky over-concentration.

Prospects are particularly interested in an established and skilled workforce as well as the region's capacity to supply newly trained workers, so special efforts were made to link in-demand occupations and training to the region's available workforce and supply pipeline.

The target information is presented in a practical and workable format, avoiding complex analysis and extensive projections of future outcomes. Instead, the justifications for the targets should be clearly apparent and make sense to the average practitioner. Under each major target sector a list of individual subsectors is provided with accompanying NAICS classifications. A full description for each subsector target can be found in Table 13 (page 29). Detailed subsector targets help to bridge the gap from broad economic concepts to a workable means for identifying specific prospective industries and firms.

For each target, a bulleted list of rationales is presented and identified as appealing to the needs of prospects **(P)** or the community **(C)**. This material can be used in marketing and community support efforts or to help economic development personnel prioritize targeting efforts.



SUBSECTORS



HIGH PERFORMANCE MANUFACTURING



Lehigh Valley is well positioned to take advantage of expanding opportunities in the manufacturing sector. After several decades of employment decline, US manufacturing switched direction mid-2010 and has since been adding workers at an annual pace of more than 200,000 net new jobs. The High Performance Manufacturing target is a select group of high-wage industries that are expected to experience exceptional growth and align well with Lehigh Valley’s unique assets (Table 1).

While diverse in products made and markets served, the entities that comprise the target group all share a heavy reliance on engineering skills. Overall engineering occupations comprise 4.6 percent of total manufacturing employment in the United States; whereas, the High Performance Manufacturing target demands that 9.5 percent of its workers are in engineering occupations. The high

proportion of engineering skills places the group among those industries expected to benefit from advances in additive or 3D manufacturing, industrial robotics, digitalization, and the movement towards more in-house prototyping and design.

The targeted subsectors are mostly mid-stream operations—meaning they serve several downstream sectors and benefit from not having to rely on a narrow client base or single industrial trend. Two major developments underlie future growth. One is the demand to replace and modernize the global network of aged and outdated infrastructure systems. This development is epitomized by growing demands from utilities, new domestic energy markets, and advances in chemical manufacturing processes. The other development is the rush to respond to technological change. The rise in final product innovations, rapidly changing customer demands, increasingly complex computerized systems, and new applications in automation are a few of the trends that characterize the pressures and opportunities around which this target is positioned to take advantage.

	Rationale
<ul style="list-style-type: none"> • Presence of Lehigh University’s Center for Manufacturing Systems Engineering. (P) • Among top recommended industry target in stakeholder focus groups. (C) • Central location and well-developed transportation infrastructure. (P) • Availability of water and sewer lines to industrial sites. (P) • High relative proportion of residents with bachelor’s degrees in engineering. (P) • 740 post-secondary completions in year 2012 from local institutions in engineering fields. (P) • <i>Electrical Equipment & Component Manufacturing</i> cluster demonstrates the highest measure of local specialization. (P) 	<ul style="list-style-type: none"> • Local <i>Manufacturing</i> sector exhibits a strong local competitive effect. (P) • High relative broadband rank, measuring access and capacity. (P) • Average target subsector national earnings of \$80,533. (C) • Average target subsector five-year forecasted growth of 10.5 percent. (C) • Strong existing local pool of high-demand occupations (Table 2). (P) • 422 annual post-secondary completions in critical fields from local institutions (Table 3). (P) • Local <i>Production</i> occupations earn 9.1% above the same group national median. (C) • Quality of place assets: ample opportunities for cultural activities, recreation, shopping. (P)

Table 1: High Performance Manufacturing Subsectors

NAICS	Description	National Earnings	Five-Year National Forecast
332911	Industrial Valve Manufacturing	\$78,019	8.1%
332996	Fabricated Pipe and Pipe Fitting Manufacturing	\$67,545	10.0%
333298	Industrial Machinery Manufacturing	\$76,017	15.0%
333314	Optical Instrument and Lens Manufacturing	\$92,850	8.5%
334418	Printed Circuit Assembly (Electronic Assembly) Mfg.	\$60,685	12.3%
334516	Analytical Laboratory Instrument Manufacturing	\$106,945	8.5%
335999	Electrical Equipment and Component Manufacturing	\$81,672	11.0%

Source: Economic Modeling Specialist, Garner Economics

Table 2: High Performance Manufacturing - Lehigh Valley Existing Labor Pool of High Demand Occupations - 2013 3Q

Occupation	Employed in Lehigh Valley	Occupation	Employed in Lehigh Valley
Accountants and Auditors	3,296	Industrial Production Managers	454
Architectural and Engineering Managers	314	Industrial Truck and Tractor Operators	2,672
Coil Winders, Tapers, and Finishers	180	Inspectors, Testers, Sorters, Samplers, and Weighers	1,203
Computer Hardware Engineers	181	Laborers and Freight, Stock, and Material Movers, Hand	6,343
Computer-Controlled Machine Tool Operators, Metal and Plastic	343	Machinists	1,463
Customer Service Representatives	6,417	Market Research Analysts and Marketing Specialists	1,321
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	439	Mechanical Drafters	254
Electrical and Electronic Equipment Assemblers	883	Mechanical Engineers	587
Electrical and Electronics Engineering Technicians	381	Purchasing Agents, Except Wholesale, Retail, & Farm Products	748
Electrical Engineers	294	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	651
Electromechanical Equipment Assemblers	278	Semiconductor Processors	30
Electronics Engineers, Except Computer	481	Shipping, Receiving, and Traffic Clerks	1,993
First-Line Supervisors of Production and Operating Workers	1,377	Software Developers, Applications	1,162
General and Operations Managers	3,227	Software Developers, Systems Software	671
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	293	Structural Metal Fabricators and Fitters	272
Industrial Engineers	592	Team Assemblers	2,854
Industrial Machinery Mechanics	1,176	Welders, Cutters, Solderers, and Brazers	572

Source: Economic Modeling Specialist, Garner Economics

Table 3: High Performance Manufacturing - Lehigh Valley Annual Postsecondary Completions in Critical Fields - 2012

Program	Annual Completions	Institution
Certificates		
Industrial Electronics Technology/Technician	4	Northampton County Area Community College
Welding Technology/Welder	74	Welder Training and Testing Institute, Northampton County Area Community College
Associate's Degrees		
Electrical, Electronic and Communications Engineering Technology/Technician	7	Lehigh Carbon Community College, Northampton County Area Community College
Electromechanical Technology/Electromechanical Engineering Technology	10	Northampton County Area Community College
Engineering, General	30	Northampton County Area Community College, Lehigh Carbon Community College
Industrial Electronics Technology/Technician	13	Northampton County Area Community College, Lehigh Carbon Community College
Manufacturing Engineering Technology/Technician	3	Lehigh Carbon Community College
Nanotechnology	3	Lehigh Carbon Community College
Quality Control Technology/Technician	4	Northampton County Area Community College
CAD/CADD Drafting and/or Design Technology/Technician	6	Northampton County Area Community College
Mechanical Engineering/Mechanical Technology/Technician	5	Lehigh Carbon Community College

Program	Annual Completions	Institution
Bachelor's Degrees		
Electrical and Electronics Engineering	50	Lehigh University, Lafayette College
Engineering, General	32	Lafayette College,
Industrial Engineering	33	Lehigh University
Logistics, Materials, and Supply Chain Management	27	Lehigh University
Manufacturing Engineering	8	Lehigh University
Materials Engineering	23	Lehigh University
Master's Degrees		
Electrical and Electronics Engineering	31	Lehigh University
Engineering, General	8	Lafayette College,
Industrial Engineering	15	Lehigh University
Logistics, Materials, and Supply Chain Management	9	Lehigh University
Materials Engineering	8	Lehigh University
Doctor's Degrees		
Electrical and Electronics Engineering	8	Lehigh University,
Industrial Engineering	7	Lehigh University
Materials Engineering	4	Lehigh University

Source: National Center for Education Statistics, Garner Economics

HIGH VALUE BUSINESS SERVICES



The *High Value Business Services* target leverages Lehigh Valley's unique asset mix with a select group of industries benefiting from the convergence of significant economic and technological forces (Table 4).

Subsector targets are responding to the demands of corporations that are seeking to adapt to rapid changes in customer expectations (increased online commercial operations, cloud computing, debit/credit card use, and smart phone transactions) while desiring to maintain focus on their core business activities. The forces driving growth in the *High Value Business Services* target can be summarized into four major themes:

- Cost reduction: increased demand by firms to lower in-house costs by outsourcing non-core services to firms that benefit from cost efficiencies by specializing in a specific back office service.
- Specialized expertise: increased demand by firms to outsource non-core activities that are becoming increasingly complex and require specialized skills or training.
- Technology: increased demand by firms to utilize third-party specialized-computing resources to meet requirements for greater speed or capacity.
- Regulation: increased demand by firms to satisfy the changing regulatory environment by outsourcing non-core activities that have high compliance costs to third-party experts.

Rationale

- Central location and well-developed transportation infrastructure. **(P)**
- High relative broadband rank, measuring access and capacity. **(P)**
- Availability of suitable office space. **(P)**
- Competitive earnings rate in *Business & Financial Operations* occupations. **(P)**
- Competitive earnings rate in *Computer & Mathematical* occupations. **(P)**
- Average target subsector 2012 national earnings of \$73,588. **(C)**
- Average target subsector five-year forecasted growth of 11.2 percent. **(C)**
- Strong existing local pool of high-demand occupations (Table 5). **(P)**
- 1,275 annual post-secondary completions in critical fields from area institutions (Table 6). **(P)**
- Quality of place assets: ample opportunities for cultural activities, recreation, shopping, restaurants, and sporting events. Strong healthcare system. **(P)**

Table 4: High Value Business Services Subsectors

NAICS	Description	National Earnings	Five-Year National Forecast
518210	Data Processing, Hosting, and Related Services	\$84,078	6.3%
522320	Financial Transactions Processing, Reserve, and Clearinghouse Activities	\$81,346	15.6%
524292	Third Party Administration of Insurance and Pension Funds	\$64,361	7.5%
541214	Payroll Services	\$72,088	8.3%
541611	Administrative Management & Management Consulting Services	\$80,146	17.6%
561110	Office Administrative Services	\$59,506	11.9%

Source: Economic Modeling Specialist, Garner Economics

Table 5: High Value Business Services - Lehigh Valley Existing Labor Pool of High Demand Occupations - 2013 3Q

Occupation	Employed in Lehigh Valley	Occupation	Employed in Lehigh Valley
Accountants and Auditors	3,296	First-Line Supervisors of Non-Retail Sales Workers	1,377
Actuaries	70	First-Line Supervisors of Office and Administrative Support Workers	2,870
Bookkeeping, Accounting, and Auditing Clerks	4,061	General and Operations Managers	3,227
Claims Adjusters, Examiners, and Investigators	511	Insurance Claims and Policy Processing Clerks	497
Compliance Officers	419	Insurance Underwriters	287
Computer and Information Systems Managers	455	Lawyers	1,042
Computer Hardware Engineers	181	Legal Secretaries	225
Computer Network Architects	133	Loan Officers	453
Computer Programmers	585	Management Analysts	1,787
Computer Systems Analysts	1,002	Market Research Analysts and Marketing Specialists	1,321
Computer User Support Specialists	1,118	Network and Computer Systems Administrators	761
Customer Service Representatives	6,417	Office Clerks, General	8,458
Data Entry Keyers	547	Paralegals and Legal Assistants	448
Database Administrators	223	Secretaries and Administrative Assistants	6,235
Electrical Engineers	294	Securities, Commodities, and Financial Services Sales Agents	1,872
Executive Secretaries and Executive Administrative Assistants	1,259	Software Developers, Applications	1,162
Financial Analysts	895	Software Developers, Systems Software	671
Financial Managers	1,261	Web Developers	416
Financial Specialists, All Other	205		

Source: Economic Modeling Specialist, Garner Economics

Table 6: High Value Business Services Lehigh Valley Annual Post-secondary Completions in Critical Fields - 2012

Program	Annual Completions	Institution
Certificates		
Business Operations Support and Secretarial Services	115	Pennsylvania School of Business
Accounting Technology/Technician and Bookkeeping	21	Northampton County Area Community College, Lehigh Carbon Community College
Computer Programming/Programmer	3	Northampton County Area Community College
Associate's Degrees		
Business Administration and Management	102	Lehigh Carbon Community College, Northampton County Area Community College
Business/Commerce	117	Northampton County Area Community College, Lehigh Carbon Community College, Pennsylvania State University-Penn State Lehigh Valley
Accounting Technology/Technician and Bookkeeping	48	Northampton County Area Community College, Lehigh Carbon Community College
Computer and Information Sciences and Support Services	41	Lincoln Technical Institute-Allentown, Lehigh Carbon Community College, Pennsylvania School of Business
Computer Science	10	Northampton County Area Community College,
Computer Systems Networking and Telecommunications	38	Lehigh Carbon Community College, Northampton County Area Community College
Computer and Information Systems Security/Information Assurance	18	Northampton County Area Community College, Lehigh Carbon Community College
Computer Programming/Programmer	5	Northampton County Area Community College, Lehigh Carbon Community College

Program	Annual Completions	Institution
Bachelor's Degrees		
Business Administration and Management	213	DeSales University, Muhlenberg College, Moravian College
Finance	203	Lehigh University, Muhlenberg College, DeSales University
Business/Managerial Economics	43	Lehigh University
Computer and Information Sciences and Support Services	51	Lehigh University, DeSales University, Lafayette College,
Computer Science	21	Lehigh University, Moravian College
Information Science/Studies	20	Lehigh University, DeSales University, Pennsylvania State University-Penn State Lehigh Valley
Master's Degrees		
Business Administration and Management	120	DeSales University, Moravian College
Finance	52	Lehigh University
Business/Managerial Economics	15	Lehigh University
Computer Science	11	Lehigh University
Doctors Degree		
Business/Managerial Economics	3	Lehigh University
Computer Science	5	Lehigh University
Business Administration and Management	213	DeSales University, Muhlenberg College, Moravian College
Finance	203	Lehigh University, Muhlenberg College, DeSales University

Source: National Center for Education Statistics, *Garner Economics*

LIFE SCIENCES RESEARCH & MANUFACTURING



The *Life Sciences Research & Manufacturing* target aligns Lehigh Valley's competitive advantages in the Life, Biological & Biomedical Sciences fields with new opportunities emerging in the fast-changing life sciences commercial environment (Table 7). Firms seeking to prosper in the current uncertain market will be actively seeking to advance new products and services and, along with the expected increase in mergers and acquisitions, should afford Lehigh Valley attractive new prospect possibilities.

Underlying forces driving the expected growth and change in *Life Sciences Research & Manufacturing* subsector industry targets are:

- Expansion in the number of people covered under private health insurance due to the Federal Affordable Care Act.
- Increasing access and demand for generic drugs and medical services.
- Search for more cost-effective treatments and developments of early detection technologies.
- Aging baby boomer demographic boosting demand for medical industry services and products.
- Continued customer demand for medical innovation and new product development.
- Increasing trends in market globalization and expansions of export opportunities.

	Rationale
<ul style="list-style-type: none"> • Presence of Temple University School of Medicine/St. Luke's University Health Network. (P) • Presence of Lehigh Valley Health Network's independent residency program; clinical campus of University of South Florida's College of Medicine. (P) • Presence of Lehigh University's Center for Manufacturing Systems Engineering. (P) • Among top recommended industry target in stakeholder focus groups. (C) • Central location and well-developed transportation infrastructure. (P) • Availability of adequate water and sewer lines to industrial sites. (P) • High relative proportion of residents with bachelor's degrees in engineering. (P) • 740 post-secondary completions in year 2012 from local institutions in engineering fields. (P) • 384 post-secondary completions in year 2012 from local institutions in Biological & Biomedical Sciences fields. (P) 	<ul style="list-style-type: none"> • Strong recent growth and high local specialization in <i>Healthcare & Life Sciences</i> cluster. (P) • Local <i>Manufacturing</i> sector exhibits a strong local competitive effect. (P) • Local <i>Production</i> occupations earn 9.1% above the same group national median. (C) • Local <i>Healthcare Practitioners & Technical</i> occupations earn 2.2% above the same group national median. (C) • Strong recent growth of local <i>Healthcare</i> cluster. (P) • Demonstrated strong local competitive effect of local <i>Healthcare</i> cluster (P) • Average target subsector national earnings of \$117,090. (C) • Average target subsector five-year forecasted growth of 9.5 percent. (C) • Strong existing local pool of high-demand occupations (Table 8). (P) • 1,117 annual post-secondary completions in critical fields from local institutions (Table 9). (P) • Quality of place assets: ample opportunities for cultural activities, recreation, shopping, restaurants, and sporting events. Strong healthcare system. (P)

Table 7: Life Sciences Research & Manufacturing

NAICS	Description	National Earnings	Five-Year National Forecast
325412	Pharmaceutical Preparation Manufacturing	\$151,668	1.3%
325413	In-Vitro Diagnostic Substance Manufacturing	\$138,131	19.5%
325414	Biological Product Manufacturing	\$122,835	11.6%
339112	Surgical and Medical Instrument Manufacturing	\$108,656	8.9%
339113	Surgical Appliance and Supplies Manufacturing	\$96,545	3.1%
541711	Research and Development in Biotechnology	\$133,631	8.9%
621511	Medical Laboratories	\$68,163	13.3%

Source: Economic Modeling Specialist, Garner Economics

Table 8: Life Sciences Research & Manufacturing Lehigh Valley - Existing Labor Pool of High Demand Occupations - 2013 3Q

Occupation	Employed in Lehigh Valley	Occupation	Employed in Lehigh Valley
Biochemists and Biophysicists	47	Market Research Analysts and Marketing Specialists	1,321
Biomedical Engineers	50	Mechanical Engineers	587
Chemical Engineers	124	Medical and Clinical Laboratory Technologists	605
Chemical Equipment Operators and Tenders	76	Medical and Health Services Managers	798
Chemical Technicians	341	Medical Appliance Technicians	47
Chemists	289	Medical Scientists, Except Epidemiologists	75
Computer Hardware Engineers	181	Microbiologists	27
Computer-Controlled Machine Tool Operators, Metal and Plastic	343	Natural Sciences Managers	86
Customer Service Representatives	6,417	Ophthalmic Laboratory Technicians	66
Dental Laboratory Technicians	80	Packaging and Filling Machine Operators and Tenders	1,253
Electromechanical Equipment Assemblers	278	Packers and Packers, Hand	2,623
Electronics Engineers, Except Computer	481	Pharmacists	493
First-Line Supervisors of Production and Operating Workers	1,377	Pharmacy Technicians	754
General and Operations Managers	3,227	Production, Planning, and Expediting Clerks	990
Industrial Engineers	592	Secretaries and Admin Assistants, Except Legal, Medical, & Exec	6,235
Industrial Machinery Mechanics	1,176	Shipping, Receiving, and Traffic Clerks	1,993
Industrial Production Managers	454	Software Developers, Applications	1,162
Inspectors, Testers, Sorters, Samplers, and Weighers	1,203	Software Developers, Systems Software	671
Laborers and Freight, Stock, and Material Movers, Hand	6,343	Team Assemblers	2,854
Machinists	1,463		

Source: Economic Modeling Specialist, Garner Economics

Table 9: Life Sciences Research & Manufacturing - Lehigh Valley Annual Postsecondary Completions in Critical Fields - 2012

Program	Annual Completions	Institution
Certificates		
Business Operations Support and Secretarial Services	115	Pennsylvania School of Business
Business Operations Support and Secretarial Services	115	Pennsylvania School of Business
Associate's Degrees		
Medical/Clinical Assistant	30	Lincoln Technical Institute-Allentown, Lehigh Carbon Community College
Biotechnology	9	Northampton County Area Community College, Lehigh Carbon Community College
Bachelor's Degrees		
Biology/Biological Sciences	408	Muhlenberg College, Lehigh University, Lafayette College, Moravian College, DeSales University
Neuroscience	94	Muhlenberg College, Lehigh University, Lafayette College, Moravian College
Chemistry	43	Lehigh University, Muhlenberg College, Cedar Crest College, DeSales University, Lafayette College
Chemical Engineering	65	Lehigh University
Industrial Engineering	33	Lehigh University

Program	Annual Completions	Institution
Master's Degrees		
Chemistry	34	Lehigh University
Chemical Engineering	2	Lehigh University
Industrial Engineering	15	Lehigh University
Molecular Biology	8	Lehigh University
Doctors Degree		
Chemistry	2	Lehigh University
Chemical Engineering	5	Lehigh University
Industrial Engineering	7	Lehigh University
Molecular Biology	5	Lehigh University

Source: National Center for Education Statistics, *Garner Economics*

FOOD & BEVERAGE PROCESSING



The *Food & Beverage Processing* target represents a distinct area focused on leveraging Lehigh Valley's economic assets with numerous new subsector opportunities driven largely by the industry's response to changing customer demands (Table 10).

The *Food & Beverage Processing* sector is in the midst of significant upheaval and presents substantial opportunities for new firm attraction and development. Consumer demand divided across a wide range of eating preferences is rapidly fragmenting the industry. Product innovation is being driven largely by evolving consumption desires in variety, health, and convenience. A sample of the developing food categories demonstrates the immense variety in the sector: ethnic, fresh, organics, restaurant-quality frozen, meal kits, handheld entrees, fortified, and gluten-free. Growth of the beverage market, characterized in the breweries and wineries subsectors, demonstrate the rising appeal of craft and unique local offerings.

Rationale

- Presence of Lehigh University's Center for Manufacturing Systems Engineering. **(P)**
- Among top recommended industry target in stakeholder focus groups. **(C)**
- Central location and well-developed transportation infrastructure. **(P)**
- Availability of agricultural products for food processing. **(P)**
- Water and sewer capacity. **(P)**
- Availability of water and sewer lines to industrial sites. **(P)**
- Local *Manufacturing* sector exhibits a strong local competitive effect. **(P)**
- Average target subsector national earnings of \$71,219. **(C)**
- Average target subsector five-year forecasted growth of 5.6 percent. **(C)**
- Strong existing local pool of high-demand occupations (Table 11). **(P)**
- 111 annual post-secondary completions in critical fields from local institutions (Table 12). **(P)**
- Quality of place assets: ample opportunities for cultural activities, recreation, shopping, restaurants, and sporting events. Strong healthcare system. **(P)**

Table 10: Food & Beverage Processing Subsectors

NAICS	Description	National Earnings	Five-Year National Forecast
311230	Breakfast Cereal Manufacturing	\$89,412	4.1%
311513	Cheese Manufacturing	\$60,547	5.9%
311919	Snack Food Manufacturing	\$59,587	2.1%
311941	Mayonnaise, Dressing & Prepared Sauce Manufacturing	\$59,211	2.7%
311942	Spice and Extract Manufacturing	\$76,228	8.2%
311111	Dog and Cat Food Manufacturing	\$75,280	5.3%
312120	Breweries	\$89,424	6.5%
312130	Wineries	\$60,063	10.1%

Source: Economic Modeling Specialist, Garner Economics

Table 11: Food & Beverage Processing: Lehigh Valley - Existing Labor Pool of High Demand Occupations - 2013 2Q

Occupation	Employed in Lehigh Valley	Occupation	Employed in Lehigh Valley
Agricultural and Food Science Technicians	38	Inspectors, Testers, Sorters, Samplers, and Weighers	1,203
Bakers	408	Laborers and Freight, Stock, and Material Movers, Hand Light Truck or Delivery Services Drivers	6,343
Chemical Technicians	341		2,412
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	185	Machinists	1,463
Driver/Sales Workers	1,135	Maintenance and Repair Workers, General	3,493
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	228	Maintenance Workers, Machinery	284
First-Line Supervisors of Production and Operating Workers	1,377	Market Research Analysts and Marketing Specialists	1,321
Food Batchmakers	271	Mixing and Blending Machine Setters, Operators, and Tenders	190
Food Scientists and Technologists	38	Packaging and Filling Machine Operators and Tenders	1,253
General and Operations Managers	3,227	Packers and Packagers, Hand	2,623
Heavy and Tractor-Trailer Truck Drivers	5,733	Production, Planning, and Expediting Clerks	990
Helpers—Production Workers	1,176	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	3,968
Industrial Engineers	592	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	40
Industrial Machinery Mechanics	1,176	Shipping, Receiving, and Traffic Clerks	1,993
Industrial Production Managers	454	Stock Clerks and Order Fillers	4,325
Industrial Truck and Tractor Operators	2,672	Team Assemblers	2,854

Source: Economic Modeling Specialist, Garner Economics

Table 12: Food & Beverage Processing Lehigh Valley Annual Postsecondary Completions in Critical Fields - 2012

Program	Annual Completions	Institution
Certificates		
Chemical Technology/Technician	10	Lehigh Carbon Community College, Northampton County Area Community College
Manufacturing Engineering Technology/Technician	3	Lehigh Carbon Community College
Quality Control Technology/Technician	4	Northampton County Area Community College
Associate's Degrees		
Chemical Technology/Technician	10	Lehigh Carbon Community College, Northampton County Area Community College
Manufacturing Engineering Technology/Technician	3	Lehigh Carbon Community College
Quality Control Technology/Technician	4	Northampton County Area Community College
Bachelor's Degrees		
Industrial Engineering	33	Lehigh University
Logistics, Materials, and Supply Chain Management	27	Lehigh University
Manufacturing Engineering	8	Lehigh University
Master's Degrees		
Industrial Engineering	15	Lehigh University
Logistics, Materials, and Supply Chain Management	9	Lehigh University
Polymer/Plastics Engineering	2	Lehigh University

Source: National Center for Education Statistics, Garner Economics

Table 13
Industry Descriptions

Food & Beverage Processing	
NAICS 311230	Breakfast Cereal Manufacturing
This industry comprises establishments primarily engaged in manufacturing breakfast cereal foods.	
NAICS 311513	Cheese Manufacturing
This industry comprises establishments primarily engaged in (1) manufacturing cheese products (except cottage cheese) from raw milk and/or processed milk products and/or (2) manufacturing cheese substitutes from soybean and other nondairy substances.	
NAICS 311941	Mayonnaise, Dressing & Prepared Sauce Manufacturing
This industry comprises establishments primarily engaged in manufacturing mayonnaise, salad dressing, vinegar, mustard, horseradish, soy sauce, tartar sauce, Worcestershire sauce, and other prepared sauces (except tomato-based and gravy).	
NAICS 311919	Snack Food Manufacturing
This US industry comprises establishments primarily engaged in manufacturing snack foods (except roasted nuts and peanut butter). Illustrative examples: Corn chips and related corn snacks manufacturing, Popped popcorn (except candy-covered) manufacturing, Pork rinds manufacturing, Potato chips manufacturing, Pretzels (except soft) manufacturing, and Tortilla chips manufacturing.	
NAICS 311942	Spice and Extract Manufacturing
This industry comprises establishments primarily engaged in (1) manufacturing spices, table salt, seasonings, flavoring extracts (except coffee and meat), and natural food colorings and/or (2) manufacturing dry mix food preparations, such as salad dressing mixes, gravy and sauce mixes, frosting mixes, and other dry mix preparations.	
NAICS 311111	Dog and Cat Food Manufacturing
This industry comprises establishments primarily engaged in manufacturing dog and cat food from ingredients, such as grains, oilseed mill products, and meat products.	
NAICS 312120	Breweries
This industry comprises establishments primarily engaged in brewing beer, ale, malt liquors, and non-alcoholic beer.	
NAICS 312130	Wineries
This industry comprises establishments primarily engaged in one or more of the following: (1) growing grapes and manufacturing wines and brandies, (2) manufacturing wines and brandies from grapes and other fruits grown elsewhere, and (3) blending wines and brandies.	

High Performance Manufacturing	
NAICS 332911	Industrial Valve Manufacturing
This industry comprises establishments primarily engaged in manufacturing industrial valves and valves for water works and municipal water systems.	
NAICS 332996	Fabricated Pipe and Pipe Fitting Manufacturing
This industry comprises establishments primarily engaged in fabricating, such as cutting, threading, and bending metal pipes and pipe fittings made from purchased metal pipe.	
NAICS 333298	Industrial Machinery Manufacturing
This industry comprises establishments primarily engaged in manufacturing industrial machinery. Illustrative examples: Chemical processing machinery and equipment manufacturing, Cigarette making machinery manufacturing, Glass making machinery (e.g., blowing, forming, molding) manufacturing, Petroleum refining machinery manufacturing, Plastics working machinery manufacturing.	
NAICS 333314	Optical Instrument and Lens Manufacturing
This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing optical instruments and lens, such as binoculars, microscopes (except electron, proton), telescopes, prisms, and lenses (except ophthalmic); (2) coating or polishing lenses (except ophthalmic); and (3) mounting lenses (except ophthalmic).	
NAICS 334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing
This industry comprises establishments primarily engaged in loading components onto printed circuit boards or who manufacture and ship loaded printed circuit boards. Also known as printed circuit assemblies, electronics assemblies, or modules, these products are printed circuit boards that have some or all of the semiconductor and electronic components inserted or mounted and are inputs to a wide variety of electronic systems and devices.	
NAICS 334516	Analytical Laboratory Instrument Manufacturing
This industry comprises establishments primarily engaged in manufacturing instruments and instrumentation systems for laboratory analysis of the chemical or physical composition or concentration of samples of solid, fluid, gaseous, or composite material.	
NAICS 335999	Electrical Equipment and Component Manufacturing
This industry comprises establishments primarily engaged in manufacturing industrial and commercial electric apparatus and other equipment. This industry includes power converters (i.e., AC to DC and DC to AC), power supplies, surge suppressors, and similar equipment for industrial-type and consumer-type equipment.	

Life Sciences Research & Manufacturing	
NAICS 621511	Medical Laboratories
This US industry comprises establishments known as medical laboratories primarily engaged in providing analytic, testing, or diagnostic services.	
NAICS 325412	Pharmaceutical Preparation Manufacturing
This industry comprises establishments primarily engaged in manufacturing in-vivo diagnostic substances and pharmaceutical preparations (except biological) intended for internal and external consumption in dose forms, such as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.	
NAICS 325413	In-Vitro Diagnostic Substance Manufacturing
This industry comprises establishments primarily engaged in manufacturing in-vitro (i.e., not taken internally) diagnostic substances, such as chemical, biological, or radioactive substances. The substances are used for diagnostic tests that are performed in test tubes, petri dishes, machines, and other diagnostic test-type devices.	
NAICS 325414	Biological Product (except Diagnostic) Manufacturing
This industry comprises establishments primarily engaged in manufacturing vaccines, toxoids, blood fractions, and culture media of plant or animal origin (except diagnostic).	
NAICS 541711	Research and Development in Biotechnology
This industry comprises establishments primarily engaged in conducting biotechnology research and experimental development: Biotechnology research and experimental development involves the study of the use of microorganisms and cellular and biomolecular processes to develop or alter living or non-living materials. This research and development in biotechnology may result in development of new biotechnology processes or in prototypes of new or genetically altered products that may be reproduced, utilized, or implemented by various industries.	
NAICS 339112	Surgical and Medical Instrument Manufacturing
This industry comprises establishments primarily engaged in manufacturing medical, surgical, ophthalmic, and veterinary instruments and apparatus (except electrotherapeutic, electromedical, and irradiation apparatus). Examples of products made by these establishments are syringes, hypodermic needles, anesthesia apparatus, blood transfusion equipment, catheters, surgical clamps, and medical thermometers.	
NAICS 339113	Surgical Appliance and Supplies Manufacturing
This industry comprises establishments primarily engaged in manufacturing surgical appliances and supplies. Examples of products made by these establishments are orthopedic devices, prosthetic appliances, surgical dressings, crutches, surgical sutures, personal industrial safety devices (except protective eyewear), hospital beds, and operating room tables.	

High Value Business Services	
NAICS 518210	Data Processing, Hosting, and Related Services
This industry comprises establishments primarily engaged in providing infrastructure for hosting or data processing services. These establishments may provide specialized hosting activities, such as web hosting, streaming services or application hosting; provide application service provisioning; or may provide general time-share mainframe facilities to clients. Data processing establishments provide complete processing and specialized reports from data supplied by clients or provide automated data processing and data entry services.	
NAICS 522320	Financial Transactions Processing, Reserve, and Clearinghouse Activities
This industry comprises establishments primarily engaged in providing one or more of the following: (1) financial transaction processing (except central bank); (2) reserve and liquidity services (except central bank); and/or (3) check or other financial instrument clearinghouse services (except central bank).	
NAICS 524292	Third Party Administration of Insurance and Pension Funds
This industry comprises establishments primarily engaged in providing third party administration services of insurance and pension funds, such as claims processing and other administrative services to insurance carriers, employee-benefit plans, and self-insurance funds.	
NAICS 541214	Payroll Services
This US industry comprises establishments (except offices of CPAs) engaged in the following without also providing accounting, bookkeeping, or billing services: (1) collecting information on hours worked, pay rates, deductions, and other payroll-related data from their clients and (2) using that information to generate paychecks, payroll reports, and tax filings. These establishments may use data processing and tabulating techniques as part of providing their services.	
NAICS 541611	Administrative Management & Management Consulting Services
This industry comprises establishments primarily engaged in providing operating advice and assistance to businesses and other organizations on administrative management issues, such as financial planning and budgeting, equity and asset management, records management, office planning, strategic and organizational planning, site selection, new business startup, and business process improvement. This industry also includes establishments of general management consultants that provide a full range of administrative, human resource, marketing, process, physical distribution and logistics, or other management consulting services to clients.	
NAICS 72233	Office Administrative Services
This industry comprises establishments primarily engaged in providing a range of day-to-day office administrative services, such as financial planning, billing and recordkeeping, personnel, and physical distribution and logistics for others on a contract or fee basis. These establishments do not provide operating staff to carry out the complete operations of a business.	

Source: US Census Bureau, Garner Economics

CHAPTER 3: OBSERVATIONS, CONCLUSIONS, AND RECOMMENDATIONS



As illustrated by the *Competitive Realities Report*, the Lehigh Valley is asset rich. However, while the region has enjoyed success in attracting new businesses and making substantial improvements to enhance its urban cores, there has not been an effective, proactive effort focused on regional marketing for business (economic) development. As a result, the Lehigh Valley has not fully taken advantage of its many assets or economic development success, nor has it leveraged its status as a large and growing metropolitan area in an equally dynamic region. As the region's lead economic development marketing organization, the LVEDC seeks to continue to calibrate its marketing efforts and become a more effective salesman for the region.

Given the analysis of the consulting team from a site-selector perspective, the following recommendations were developed to suggest ways to ensure that the Lehigh Valley is a place where the world's most innovative companies and talent want to locate and live. The strategy is based on the assumption that the region as a whole must become and remain proactive in shaping its economic future but with a more targeted approach and better defined roles and responsibilities. The Valley's fundamentals—strong schools, redevelopment and revitalization efforts, a locally strong real estate development community, and its geographic location—are vital ingredients to its economic development success. However, to build a sustainable economic future for the Lehigh Valley, the entire region must work together to leverage and position all of these elements effectively.

This strategy's first objective is to provide a framework for the LVEDC to more effectively deploy its economic development service delivery and activities to support and augment the Valley's ability to attract high-quality jobs and talent to the region. Therefore, many of these recommendations are designed to enable the LVEDC to better connect and leverage the region's talent and workforce, entrepreneurship, infrastructure, and business climate toward the Valley's economic development goals. By working with others to calibrate and enhance the Valley's product, the LVEDC will have a strong product to market and sell.

Yet, the LVEDC cannot accomplish the enhancements outlined in the *Blueprint*, alone. Within the strategy, there are actions that the LVEDC can and should take independently, but there are many more for which it can only be a catalyst. To fully succeed in carrying out the *Blueprint*, the Lehigh Valley will have to work together and be committed to raising the bar for economic development in its fast growing and asset-rich region.

Going forward, the LVEDC should make the case with local and state partners and stakeholders for how new initiatives or the changes in policies will improve the Valley's business climate and, in turn, how such changes will allow the LVEDC and other economic development groups in the region to provide world-class economic development marketing and service delivery. Inherent in this will be the need for strong public and private leadership throughout the region within all of its many organizations, jurisdictions, and municipalities.

Over the last few years, the LVEDC has made tremendous strides in articulating and showing its value to the region as the lead economic development marketing organization; however, not all of the municipalities and jurisdictions that it serves fully appreciate the change nor do they fully understand the role they must play to raise the competitive position of the region. As such, in beginning this new strategy, the LVEDC should cultivate buy-in throughout the community. It should help celebrate the successes accomplished and the existing foundations the Lehigh Valley can build upon, as well as identify challenges and gaps that need to be mitigated or filled. In some instances, the LVEDC will serve as the

catalyst or facilitator to encourage change; in others, it may be a partner. The level of engagement and leadership within the Valley and, where applicable, by the LVEDC specifically, is calibrated and described within each recommendation.

Recommendations for action are categorized under three areas of opportunity: **Organizational (Execute Effectively)**, **Product Marketing (Tell the Story)**, and **Product Improvement (Develop Transformational Assets and Capitalize on Existing Ones)**. The success of the economic development strategy for the Lehigh Valley will depend on the region and the LVEDC having well-defined priorities and creative but actionable policies in each of these areas.

RECOMMENDATIONS SUMMARY

Execute Effectively

1. Hire or promote a Chief Economic Development Officer
2. Reorganize and rename the Development unit to a Business Investment function
3. Continue to strengthen business retention and expansion efforts
4. Encourage municipalities to identify a Municipal Economic Development Ombudsman
5. Include public advocacy of economic development projects in the mission of the LVEDC
6. Create a Workforce Alliance Leadership group
7. Engage outside counsel for funding

Tell the Story

1. Conduct an image survey to assess external perceptions of the Valley
2. Develop a unified brand for the region
3. Enhance the LVEDC website to address the needs of location consultants
4. Establish target industry working groups for each of the four focused targets
5. Execute a process for lead generation and target profiling
6. Enhance the region's marketing collateral, media, and public relations efforts
7. Actively solicit and provide information to location consultants
8. Develop familiarization (FAM) events
9. Actively solicit and provide information to international prospects (international travel/business solicitation)
10. Open a Foreign Direct Investment (FDI) office abroad
11. Create a cadre of LVEDC Ambassadors to extend the region's brand

Develop Transformational Initiatives and Assets

1. Participate in advocacy for sustainable funding for the region's economic development infrastructure
 - a. Fully fund the existing airline subsidy
 - b. Create a deal closing fund
2. Participate in efforts to consolidate the region's government
3. Support efforts to create a STEM Early College High School
4. Facilitate regional efforts to grow the Talent Pipeline
5. Advocate for the creation of a pharmacy school in the region

Within all three sections, the following recommendations may note which organization in the region should be the lead, best practice example(s), and cost data, all where applicable.

EXECUTE EFFECTIVELY (ORGANIZATIONAL)

If the LVEDC, Lehigh County, and Northampton County (and the municipalities within the counties) are to enhance their role as a leader in economic development for the region, economic development groups must align their mission and focus on those areas that will directly impact economic growth.

Strategy:

Build a focused economic development service delivery mechanism for existing and potential businesses in the region and collaborate with county and municipal economic development entities to work more seamlessly as a region and present a unified brand to external clients.

Goal/Results:

The LVEDC is better able to help the region attract the types of industries and talent that will make the Lehigh Valley competitive. In doing so, the LVEDC will serve the region as a deal flow catalyst that delivers high-value business services to its customers and constituents.

The LVEDC business development activities appear to be reactive. This perception was shared by many participants in the focus groups and was observed by Garner Economics. The tactics and recommendations that follow provide suggestions to make the organization more proactive in its role as the regional economic development lead.

Because the LVEDC is concerned primarily with the organization's business development functions, recommendations will focus specifically on the current Development and Marketing functions. Changes to the LVEDC's remaining three departments—Administration, Finance, and External Affairs—are not addressed but may be warranted, depending on the extent to which the LVEDC adopts the changes below.

1. Hire or promote, based on the appropriate skill sets, a Chief Economic Development Officer

Observation: The LVEDC was chartered with a mission of serving as a regional economic development entity and to generate prospect activity for the two counties and respective communities.

An effective economic development organization (EDO) is proactive in its role and effort in serving as a catalyst and facilitator in generating company leads. Best practice regional groups serve as the marketing agent for the region, but economic development is sold on the local level. In the Lehigh Valley, the two counties and a few of the municipalities are organized effectively to serve as the deal closer while the LVEDC should be working on a global basis to generate deal flow.

Many focus group participants and electronic survey respondents felt that the LVEDC was reactive at best. Our observations resulted in the same conclusion. However, there is strong consensus that the relatively new CEO of the LVEDC, Don Cunningham, is doing an excellent job of having the organization focus on its core mission as a marketing entity and prospect lead generator. But, the CEO's lead focus is to build regional and local trust and acceptance of the "new" LVEDC.

Recommendation: A staff member, other than the CEO, is needed whose total focus is the economic development of the region and what it takes to keep the Lehigh Valley in a globally competitive position. The person holding this position must have strong experience as a leader in the economic development profession, someone who is known and respected by site location advisors and companies based on their professional contacts, and someone who has the vision and managerial expertise to guide a marketing and business development unit. That person currently does not exist within the current LVEDC structure. The creation of a *Chief Economic Development Office* would fill that void.

Best practice examples: Nashville, TN; Pittsburgh, PA

<http://www.alleghenyconference.org/StaffDirectory.php>

<http://www.nashvillechamber.com/Homepage/ContactUs/ChamberStaffDirectory.aspx>

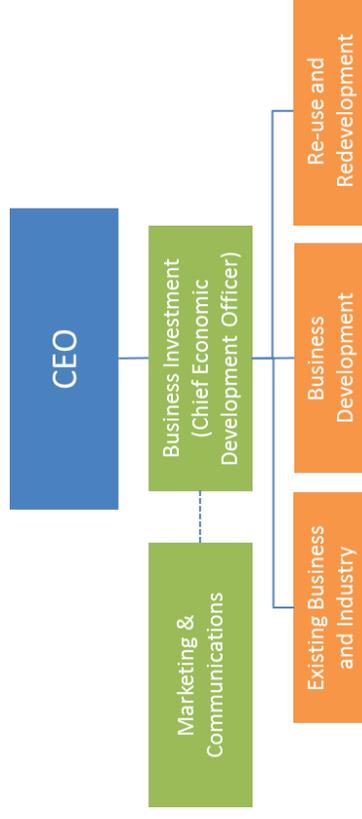
2. Reorganize and rename the Development unit to a Business Investment function

Observation: The current organizational structure of the LVEDC Development unit is convoluted and confusing, both by name and job responsibilities. Prospective companies looking to expand in, or relocate to, the Lehigh Valley region and local entities that need to collaborate with the LVEDC unit will likely find the function and role of the unit confusing.

Recommendation: Focus and structure needs to be established within the LVEDC’s regional business development activities so the customer (the potential investor) will have a clearer idea of how they will be served. The suggested organizational structure noted in Figure 2 clarifies the former Development unit function to one of “Business Investment” which includes attraction,

retention/expansion, and redevelopment. A dotted line function from the Marketing unit to the newly reorganized Business Investment unit shows the natural synergy and dynamics of the two, though the Marketing unit will serve the entire organization and not just the Business Investment unit.

FIGURE 2: PROPOSED STRUCTURE



Best practice example: Pittsburgh Regional Alliance

3. Continue to strengthen business retention and expansion efforts

Observation: The LVEDC recently created a business retention and expansion (BRE) initiative and named the initiative one of “regional competitiveness.” While many will appreciate that serving and supporting existing businesses plays a key role in determining the region’s overall competitiveness, the choice of names for the new initiative only adds to the existing confusion related to the LVEDC’s organizational structure).

Recommendation: The LVEDC should fully staff and resource this position as the first point of contact with existing companies and

clarify the role of the position by considering a name change. A key function of a BRE effort should be to serve as an intermediary with existing businesses and to help companies break down the business climate barriers so that they can expand their operations or choose to remain in the Lehigh Valley. As such, the position should be named appropriately to convey this role. In practice, an EDO has little impact on what it can actually do to assist an existing business with an issue since the resolution of those issues are either controlled by public policymakers or revolve around the need for resources or capital. Usually an EDO merely serves as a facilitator or catalyst to direct the existing company's concerns to the appropriate entities; in short, they serve as a messenger. Nevertheless, this role is critical and is appreciated by the company because it relieves them of one more task to be addressed. Moreover, national data shows that approximately 50% of all new jobs are created by existing business. Hence, efforts to assist in the region's BRE program are critical.

On-site visits at company locations or surveys are usually the most frequent method of communication and a vehicle by which this position will learn its constituency. The purposes of these visits are to help facilitate the resolution of any business climate or regulatory issues for existing companies that may impede their expansions plans. The visits also serve as business intelligence for the LVEDC to learn about issues that affect industry clusters from a specific industry's perspective.

For the initiative to be successful, the LVEDC should also encourage its local partners to identify a point of contact for this new position. It is critical that the respective communities/counties have a person who will participate with the LVEDC on local company BRE calls so that the respective community can address issues of concern directly (see recommendation 4 below).

Lead organization: The LVEDC (See organization chart in recommendation 2 above)

4. Encourage municipalities to identify a Municipal Economic Development Ombudsman

Observation: The larger municipalities and two counties in the region have a dedicated staff person to serve as the liaison for jobs and investment support. Many other municipalities do not have a true economic development professional on staff to help existing and new businesses through the maze of government policies and procedures when those businesses are seeking to develop, grow, or expand in the Lehigh Valley. As a result, those communities are often passed over in location selection because their assets and qualifications as a prospective site are not readily known and/or because location advisors or those looking to expand facilities have found that it is too onerous to work with them.

“There needs to be a closer alignment of regional economic development efforts—we need a one-stop system for companies to locate here.”

—Focus Group Participant

Recommendation: Since most assistance that can be provided to existing companies from BRE concerns typically emanates from local government, all of the municipalities in the Lehigh Valley need to have a strong business retention and expansion initiative. Most important—and a point discussed by many in the business climate focus groups conducted for this exercise—is for government staff associated with economic development to be customer-friendly and willing to identify alternative resolutions to an issue rather than taking an attitude of “no.” Being adaptive and flexible is important in garnering success with companies in job creation and capital investment. **It is a necessity to have an individual like the city managers from these smaller municipalities participate in local BRE calls.**

Lead organization(s): The regional municipalities

5. Include public advocacy of economic development projects in the mission of the LVEDC

Observation: Marketing the region for business attraction and expansion is important, but having the infrastructure to support and nurture those companies is paramount to any successful economic development strategy. Infrastructure such as air service, consolidated government, an effective incentive policy, broadband development, and tax competitiveness are just a few examples of government-supported services and programs that today’s companies expect of a competitive marketplace.

Recommendation: The LVEDC has recently hired a Director of External Affairs for a multitude of projects, including legislative and policy outreach. Additionally, under the leadership of CEO Don Cunningham, the LVEDC has engaged outside counsel for external public policy advocacy.

The LVEDC’s efforts in business investment (new and existing) and public advocacy for economic development initiatives are strongly interconnected. The LVEDC should continue to use its status as the region’s lead economic development group to advocate for these types of infrastructure and other product improvement with appropriate state and local government entities. The LVEDC can point to its expertise in what companies are looking for to differentiate the Lehigh Valley as their choice location for business investment as justification and validation of the needs. These efforts will need to be sustained and grown over time.

In doing so, the LVEDC should also look to help local officials recognize the impact of their support and leadership in enhancing the economic vitality of the region. Much of the success in economic development wins is directly attributable to state and local policy from elected officials. Understanding their role in contributing to success should serve as further motivation for officials to support economic development and drive investment in the region.

Lead organization: The LVEDC; other not for profits engaged in public policy advocacy

Best practice example: JAXUSA Regional Partnership (Jacksonville, FL). The Chamber’s Public Policy Division coordinates actions to create and protect a healthy business environment by educating elected and government officials about critical issues impacting Northeast Florida, and rallies the business community to take action on specific legislation.

<http://www.jaxchamberadvocacy.com/>

6. Create a workforce alliance leadership group

Observation: Input from stakeholders representing employers of all sizes and industries were adamant in their challenges to find a talented, qualified workforce in a multitude of skill sets. While this problem is not unique to the Lehigh Valley, successful regions have addressed the challenge by developing an integrated, customer-focused approach that places the needs of industry at the forefront.

Recommendation: The LVEDC should create a workforce alliance leadership group to address unmet industry needs and potential opportunities (including those forecasted within the target industries) and identify major demand occupations/industries and skill gaps. The group could help regional leaders establish workforce priorities to address employer occupational demand, facility collaboration between industry representatives and the PK-12 community to discuss potential industry-oriented or skills-based curricula, and other programs and initiatives to remedy the identified skills gaps.

Lead organization: The LVEDC can serve as a catalyst and facilitator with the area workforce boards.

Best practice example: Charlotte, NC is just one of several examples of regions that are being proactive by bringing the many entities that serve as facilitators to workforce development and the service delivery together at one table, with the end goal of building the talent pipeline. Formed several years ago, the Competitive Workforce Alliance is the workforce network for the greater Charlotte region. Together, the Alliance members are driving solutions to workforce and business issues in the region. Mirroring the Charlotte



Regional Partnership's 16 counties (in two states), Alliance members saw the value in speaking as one workforce voice for the entire economic development region. This unique alliance provides resources, training, and business services through a network of JobLink/One-Stop Career Centers. Local Workforce Boards are encouraged to preserve and promote their own unique services and relationships in their counties.

<http://www.agreatworkforce.com/index.cfm>

7. Engage outside counsel for private funding

Observation: Currently, 80% percent of the LVEDC budget is derived from public funds. While there seems to be continued support for the LVEDC and its role in regional economic development, such activities—and support thereof—are often the first to be cut from local budgets when financial difficulties arise. Additionally, the experience of other successful regional economic development entities suggests that companies and private sector partners who make financial investments in a program are apt to be more engaged in the success of the organization.

The Lehigh Valley MSA (ABE MSA) is the 68th largest metro in the United States (out of 381). Many best practice, proactive EDOs are most effective as a public-private partnership, but a large number of effective public-private partnerships are driven by private sector funding.

The table below (Figure 3) shows effective economic development organizations, how much they derive from the private sector, and the ratio of private-to-public funding. The Allentown-Bethlehem-Easton MSA GDP is indicative of perhaps a lower GDP as a result of the LVEDC not having the financial resources to be as proactive as the region's best practice EDO benchmarked competitors (Allegheny and Greensboro), as evidenced in Figure 4.

FIGURE 3: COMPARISON OF EDO FUNDING SOURCES

Region	Organization	Population	Per Capita on ED	Annual	Private/ Public Split
Greensboro, NC	Greensboro Partnership	500,000	\$3.40	\$1,700,000	80%/20%
Baton Rouge	Baton Rouge Area Chamber	800,000	\$3.12	\$2,500,000	70%/30%
Omaha	Greater Omaha Economic Development Partnership	900,000	\$5.11	\$4,600,000	80%/20%
Tulsa	Tulsa Regional Chamber	900,000	\$3.55	\$3,200,000	90%/10%
Oklahoma City	Greater Oklahoma City Chamber	1,200,000	\$3.78	\$4,500,000	75%/25%
Jacksonville, FL	JAXUSA Partnership	1,300,000	\$1.69	\$2,200,000	100% Private
Columbus, OH	Columbus 2020	1,750,000	\$3.43	\$6,000,000	75%/25%
Pittsburgh	Allegheny Conference	2,500,000	\$2.08	\$5,200,000	100% Private
Lehigh Valley	LVEDC	655,000	\$ 2.35	\$2,100,000	20%/80%

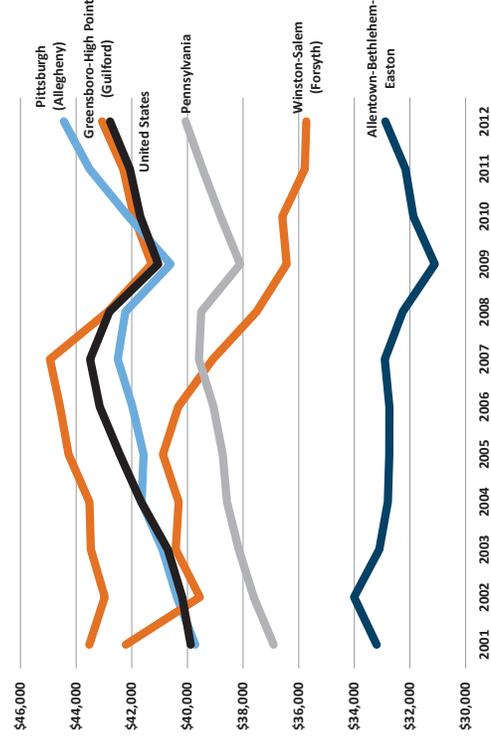
Source: Resource Development Group

Recommendation: The LVEDC needs to grow its funding from the private sector so as not to be as reliant on public sector funding and to engender more substantive engagement by private sector partners. To gauge the feasibility and begin the effort, the LVEDC should engage and retain a professional capital campaign solicitor to do a five-year campaign. The first step in this process is conducting a feasibility analysis to see if a capital campaign can be successful based on a predetermined goal and plan.

Lead organization: The LVEDC

Cost: \$25,000 for the feasibility analysis to determine if private funds can be raised at the level needed

FIGURE 4: PER CAPITA REAL GROSS DOMESTIC PRODUCT (inflation adjusted to 2005)



TELLING THE STORY (PRODUCT MARKETING)



In being more proactive, the LVEDC has the opportunity to tell the region’s story more effectively and to be a better spokesperson for the economic dynamism of the area. Site location advisors and companies within the targeted industries and clusters are the primary audience for such efforts (as opposed to the complementary efforts taking place regionally to reach Valley citizens and the community as a whole). All of the recommendations below are for the LVEDC as the lead, unless otherwise noted.

Strategy:

Tell the Lehigh Valley’s economic development story more effectively to a more targeted audience of potential companies and investors.

Goal/Results:

The region is better able to attract the types of companies that will leverage the Valley’s many assets and increase the quantity and quality of economic opportunities for the Valley’s citizens.

1. Conduct an image survey to get an assessment of external perceptions of the Valley

Observation: The Lehigh Valley has had a long and successful history of being a center for manufacturing excellence. Today, 10.6% of the workforce in the region is employed in the manufacturing industry. Conversely, the region has a higher union profile than many of its competitors and benchmarked regions (See Figure 5).

FIGURE 5: UNIONIZATION RATES (%) 2012

	Private	Public
Allentown-Bethlehem-Easton	9.0%	46.3%
Pittsburgh	9.8%	58.2%
Greensboro/Winston Salem	0.9%	7.7%
Pennsylvania	7.8%	54.6%
United States	6.6%	35.9%

Source: © 2012 by Barry T. Hirsch and David A. Macpherson

“We don’t market what we have well. People don’t know about the Valley.”

—Focus Group Participant

This and other contrasting data often result in decision-makers having a perception of the region based on narrow or outdated data sets.

Recommendation: To address these misperceptions, the LVEDC should conduct a brand identity and image survey of the region with site location consultants, companies within the targeted industry recommendations and clusters, and large existing employers. The result of this effort will help the LVEDC to craft brand messaging based on the assets and challenges of the region as perceived by the customer and potential client. This should be done in partnership with other external organizations involved in economic development, such as the local economic development organizations, the Convention and Visitors Bureau, and any other ancillary group that markets the region externally for investment.

The LVEDC will need to engage a firm that specializes in brand analysis and recommendations. These types of firms are typically found in large urban areas such as Chicago, Cincinnati, Philadelphia and New York and can communicate and analyze the opinion of the LVEDC's many customers about how the region is perceived.

Cost: \$20,000 +/-

2. Develop a unified brand for the region

Observation: Input during the discovery phase and independent analysis validate the assertion that the term "Lehigh Valley" is not well-recognized outside of the immediate geographic region. While it does have a valid internal geographic connotation with the citizens of the area and immediate region, it means nothing externally to those who have no knowledge of the ABE MSA. The situation is made more difficult as there is no lead city or "place on a map" to associate with the name "Lehigh Valley." (e.g., when driving on the PA Turnpike north from Philadelphia, the first

mention of the Lehigh Valley with an official highway mileage sign is 15 miles from the Allentown exit).

Recommendation: Groups that have some form of external marketing effort, led by the LVEDC, should create a unified external brand identity for the region based on the feedback noted above. Creation of this unified message and graphic identity will help in global brand awareness and will better leverage marketing dollars and efforts. The region will need to brand itself effectively with an external logo or image to leverage marketing opportunities.

Best practice examples: Kansas City Area Development Corporation; Team NEO (Northeast Ohio of Cleveland, Akron, Canton and Youngstown); Kokomo, IN

Cost: \$25,000- 40,000, depending on the number of entities utilizing the brand



Greater Kokomo's unified brand

3. Enhance the LVEDC website to address the needs of location consultants and potential investors

Observation: Though the LVEDC website contains information that is of value to potential investors in many facets, it is difficult to find existing data on the current website. An EDO’s website is its most important marketing tool to attract investment into the region. As such, the LVEDC site needs to be designed to offer the resources that meet its primary and specific audiences’ needs.

Recommendation: As the LVEDC strengthens its business development and marketing efforts for the region, its website should be adjusted to be aimed at the information needs and the interests of location advisory audiences and companies doing site searches on their own. The site’s navigation functionality, graphic appeal, and available data should be built and directed to these external audiences.



From the perspective of a location advisory firm, Garner Economics suggests the following recommendations to enhance the LVEDC’s website:

- The central homepage paragraph should describe the mission of the LVEDC and the site’s purpose.
- Navigation should be restructured to better serve target audiences, especially for recruitment. Successful web sites have oriented navigation by audience type, such as the four industry targets.

- While advisors will begin their expansion or location search via the Internet, eventually, real-time contact with considered locations is made. Contact information (especially phone) should be clearly visible on each page (e.g. in the header of the site) and on all material for printing or downloading.
 - Data most commonly considered in the location process by site selectors and corporate end-users should be available and easily accessible.
 - A PDF creator should be employed so that visitors can customize documents for printing or downloading.
 - The resulting new brand for the Lehigh Valley should be integrated into the site. Especially given the challenge to define the Valley as a specific geography, branded, thematic maps should be created to orient and inform website visitors.
 - Social media tools should be integrated into the website’s strategy given the local audience and investors that use such tools. Site location consultants and many companies that are engaged in the site location search will not use social media as frequently; however potential work talent and employees do and may influence their company’s location decision.
 - Content providing a regional overview and statistical data should be created and translated into the languages of potential international clients (e.g., Japanese, Chinese, Korean, German, Spanish, Portuguese, and Hebrew - great growth opportunity from Israeli companies). The LVEDC should also consider other languages from countries that have an influx or interest in the Lehigh Valley.
- Best practice examples:** EDC of Southwest Indiana (<http://www.southwestindiana.org>); Charlotte Regional Partnership (<http://charlotteusa.com>)

Cost: \$40,000-50,000

4. Establish target industry working groups for each of the four focused targets

Observation: Often the best “salespeople” are those who have already chosen the Lehigh Valley as their business location. Launching and pursuing the industry targets identified in this report will be an important element in building a sustainable economic growth strategy for the Lehigh region.

Recommendation: The LVEDC should create task forces or working groups that seek input into the knowledge of other local business leaders within the clusters and industry targets identified in this strategy (High Performance Manufacturing, High Value Business Services, Life Science Research and Manufacturing, and Food and Beverage Manufacturing). These business experts can help the LVEDC craft specific messages and marketing activities to their peers that related to the clusters and the related targeted industries.

Cost: Reallocation of staff responsibilities within the Business Investment unit

5. Execute a process for lead generation and target profiling

Observation: Historically, the LVEDC has not proactively pursued targeted industries, nor has it institutionalized a lead generation program. Such a program would allow the LVEDC to effectively identify and prioritize prospects and would provide the industry expertise to qualify such prospects.

Recommendation: To offer the region the best opportunities for investment, the LVEDC should engage a firm that will target the universe of companies within the industry targets and sub-targets noted in this report that will offer the region the best opportunity for investment within each sector.

The targeting process is scientific in nature and evaluates key company performance metrics, including sales, employment, growth, number of locations, and other relevant factors. Company activities and events that indicate expansion or consolidation—such as mergers and acquisitions, executive changes, technology development, and overall industry trends—are used to identify the target companies that have the means and indicative corporate behavior to consider an expansion opportunity in the short- and medium-term. Engaging a firm with such capacity will better enable the LVEDC to conduct its marketing efforts in a very focused and direct manner.

(Garner Economics has successfully partnered with Applied Marketing Sciences as specialists in this quantitative approach to lead generation; their product or a product of equal quality should be sought to begin this process.)

Cost: \$35,000

6. Enhance the region’s marketing collateral, media, and public relations efforts

Observation: While the LVEDC has collateral to describe its many programs, marketing materials need to be updated to embrace the revised brand and focused toward the primary audience of location advisors and companies looking to locate their investments in the Lehigh Valley. Such collateral should provide the types of data and information that are important to site location advisors and be updated on a regular basis. The added functionality of the website noted above will support this task.



Recommendation: The LVEDC should develop targeted marketing materials for its business and talent recruitment efforts and better leverage software and online tools to facilitate contact and prospect management. The LVEDC should also consider establishing a contract with top public relations (PR) firm or individual to promote the region in local, state, and national press.

The materials should leverage the positive perceptions identified in the suggested image survey and address those issues that remain a challenge for the region. Collateral that should be created or updated include:

- Target audience datasheets that highlight the region’s assets specifically to the targeted clusters
- A branded slide library and PowerPoint template to create custom sales presentations
- A monthly e-newsletter (for external audiences) that communicates newsworthy items of interest for potential corporate investors, site location consultants, and economic development allies. (The current newsletter appears limited and not directed to many who would be able to facilitate investment decisions).

Cost: No less than \$55,000 in year one of implementation. Most of the cost is related to contracting with the PR firm.

7. Actively solicit and provide information to site location consultants

Observation: Because the business development efforts of the LVEDC have historically been reactive, little has been done to proactively provide information to location consultants. While most site location advisors maintain their own databases based on published data and news reports, the firms also appreciate customized outreach from the regions to alert them to

developments or improvements that may not be captured by the above sources. In addition to reminding the location consultants of the Lehigh Valley’s assets, such outreach also serves to help build an on-going relationship with the given firm.

Recommendation: The LVEDC should call on site location consultants that represent these targeted companies to explain the benefits of locating in the region. Many of these consultants are based in Atlanta, Chicago, Dallas, and the New York/New Jersey metro area. The LVEDC should have a formalized visitation program to update firms in each of these cities one or two times a year.

Cost: \$15,000 annually for one staff member

8. Develop familiarization (FAM) events for consultants and companies

Observation: While the Lehigh Valley can present itself and its assets well on paper (and on its website), the best

way to introduce the many assets the region has to offer to location advisors and companies is to allow them to experience the region firsthand. Site location consultants typically handle 30% of all location advisory work in the United States (which means companies do 70% of their investment analyses internally). Engaging these consultants is a cost-effective way to introduce the Lehigh Valley to corporate relocation decision-makers and extend the Lehigh Valley brand. Especially given the tremendous change the region has undergone in recent years, as well as the mixed perceptions that external audiences appear to have of the Lehigh Valley, the LVEDC has an opportunity to make a new impression on this important audience.



Recommendation: Once a year, the LVEDC should contract with the **Site Selectors Guild**, an association of the world's foremost professional site selection consultants, to conduct a 2-day tour of the region. Such "familiarization" or "FAM" events allow experts to discover the region firsthand and/or be briefed on updates and enhancements to the region's business climate since their last visit. Successful FAM events are predicated on having some sort of draw that will attract high-quality consultants and that reinforces the unique brand of the region and its value as a business location.

<http://siteselectorsguild.com/customfamtours.php>.

Best practice example: Des Moines, IA; Minneapolis, MN; Austin, TX

Cost: \$50,000-80,000 each year, depending on the number of consultants or interactions desired.

9. Actively solicit and provide information to international prospects (international travel/business solicitation)

Observation: Business solicitation efforts know no boundaries. Especially for markets like the Lehigh Valley that are proximate to global entrée points into the United States, potential locates are just as likely to come from international sources as domestic ones. Efforts to reach this audience will be more effective if the LVEDC recognizes that international business development is a long-term effort and works to target those international markets that have the strongest concentration of prospects for the Valley's target industries. To be successful in any investment solicitation effort, the targeted foreign direct investment needs to be a part of an overall economic development strategy.

Recommendation: The Lehigh Valley should pursue targeted businesses wherever it exists around the globe. However, it is

crucial that the LVEDC manage expectations with local stakeholders to understand that such recruitment is a long-term proposition (at least five years of focused effort). Similarly, the LVEDC should invest in programs to familiarize staff with foreign direct investment cultural protocol, specific to the target country. Finally, LVEDC stakeholders should recognize that the organization has done its due diligence in identifying the appropriate markets and actors within those markets that have the highest probability of resulting in leads for the Lehigh Valley.

Best practice example: Charlotte Regional Partnership; Greater Richmond Partnership; Mobile Area Chamber of Commerce

Cost: \$35,000-40,000 per year, depending on how proactive the outreach

10. Open a Foreign Direct Investment (FDI) office abroad

Observation: Proactive regional economic development groups throughout the United States have engaged consultants abroad to serve as their region's FDI office in other countries. These offices solicit foreign companies considering a US operation within the country to consider locating operations in their region. Cost considerations, customer market, recent "re-shoring" trends, and the political and economic stability of the United States are all driving jobs and investment back to the country as noted in the annual jobs and investment scorecard authored by IBM¹.



Richmond Worldview

¹ http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=XB&infotype=PM&appname=GBSE_GB_TI_USEN&tmfid=GBE03582USEN

Recommendation: Based on the strength and growth projections of the current industry clusters and the existing employer base in the Lehigh Valley, the LVEDC should consider creating a European office to proactively solicit business emanating from those regions. Asian-based companies continue to experience dynamic income growth and investment activity, especially from Japan. An Asian office would be a second-stage consideration for the LVEDC.

Best practice example: The Greater Richmond Partnership maintains two international offices in the United Kingdom and Germany and has created the website portal “Richmond Worldview” to describe the region’s assets to international audiences. <http://www.richmondworldview.com/index.php>

Cost: \$50,000 per year

11. Create a cadre of LVEDC Ambassadors to extend the region’s brand



Observation: The Lehigh Valley is rich with business executives who travel the globe for their respective companies.

The LVEDC can leverage those local connections and engage those executives to promote business investment in the Valley. Such third-party testimonials are an effective way to promote the area to their peers internationally.

Recommendation: The LVEDC should develop an ambassadors program to train willing business leaders to assist the organization in extending the brand of the Lehigh Valley as a place to do business. LVEDC staff would provide the ambassadors with talking points and collateral to help them tout the region’s business attributes.

Best practice example: The Greater Richmond Partnership

<http://www.grpva.com/news-and-media/details/rva-agents-mission-possible>

DEVELOP TRANSFORMATIONAL INITIATIVES AND ASSETS (PRODUCT IMPROVEMENT)

The region’s “product” is defined as the infrastructure—including a favorable business climate—needed to attract investment in the Valley. Regional marketing efforts are only successful if the region has a strong “product” to sell, including sites and buildings, transportation infrastructure, utility infrastructure, workforce development, leadership, and incentives.

Recommendations followed by a (T) are considered Transformational in nature and those that Garner Economics believes would have a profound, positive, long-term economic impact to the region’s economy if implemented.

Strategy:

Strengthen the region’s assets and develop transformational, game-changing assets and initiatives in key areas that support the region’s desire to attract and grow more high-quality economic activities in the region.

Goal/Results:

The Valley transforms itself from a historically industrial economy to one that better leverages its economic fundamentals and geographic proximity to leading markets. In doing, so the Lehigh Valley will have a business climate and quality of place that attracts the world’s most talented people and companies.

1. Participate in advocacy for sustainable funding for the region’s economic development infrastructure and catalyze programs to use the monies effectively (T)

Observation: Separate entities within the Lehigh Valley have done an admirable job in building and investing in key infrastructure or programs to enhance the Valley’s attractiveness as a location for business. Nevertheless, several needs exist to strengthen the region’s economic development infrastructure that require large investments or recurring funding. Such transformational efforts are necessary to differentiate the Lehigh Valley as an innovative region by creating a dedicated and sustainable funding source for tools that will help the Lehigh Valley compete with peer regions in winning large projects and improving the region’s business climate. A sustainable funding source for the Lehigh Valley would serve as a catalyst for regional initiatives that are needed but otherwise would be problematic to implement.



One precedent of the need and impact of such foresight is the State of Texas. In 1979, the Texas Legislature decentralized economic development by giving cities and counties more control over their destinies. It allowed each entity to vote on a one-cent sales tax for tools and investments needed to better “sell” themselves as a location for business (e.g. deal closing funds, entrepreneurial development, venture capital or early stage investment funding, and product improvement such as infrastructure or increased air service). As a result, Texas is ranked by most in the industry as having a strong economic program and is the best practice example of sustainable funding for economic development on the local level.

Recommendation: Create a sustainable funding source. The counties of Lehigh and Northampton should create a sustainable funding source for economic development that will benefit the region as a whole. This approach, if successfully enacted, is transformational in nature and would have a profound positive impact on the area.

According to the LVEDC and the PA Department of Revenue, the two counties had combined taxable retail sales remittances to the Commonwealth in FY 2012-13 of approximately \$200 million. A \$.01 sales tax devoted to product development following the Texas model would generate approximately \$33 million on an annual basis (a half-cent would be \$16 million; still a significant funding mechanism). This type of initiative is transformational and would truly set the region apart from many communities in the United States. It would allow for mega site development, municipal water and sewer in more areas of the counties, broadband connectivity in the rural areas, subsidized air service, deal closing opportunities, and more. **This single effort would do more to transform the Lehigh Valley economically and help to diversify its economy than any other recommendation noted.**

Lead organization(s): The Greater Lehigh Valley Chamber of Commerce; the Lehigh Valley Partnership; LVEDC

Best practice example: Oklahoma City, OK; Charleston, SC; Topeka, KS; most Texas communities

<http://www.okc.gov/maps/index.html>

Assuming that the Lehigh Valley creates and enacts the above funding stream, the following two initiatives, in particular, would enhance the region's "tool kit" and ability to attract high-quality companies and talent to the region.

a. Advocate for funding the existing airline subsidy

Observation: Many focus group participants and electronic survey respondents noted the need for additional air service and more affordable rates out of the Lehigh Valley International Airport (ABE). With ABE being between Philadelphia (PHL) and Newark (EWR)—both hub facilities, fares and schedule options make it more challenging for ABE to attract additional airline service solely on ridership. In fact, in conversations with senior management of ABE, a 2013 leakage survey should that 70% of potential ABE ridership are using either PHL or EWR for the reasons noted above. The most realistic way for ABE to enhance its air service is by subsidizing an airline (revenue guarantee). ABE has a subsidy in place; however, it is not funded to a level where it can be effective.



Recommendation: Assuming that the region is able to obtain a sustainable funding source for economic development, one of the programs that should have priority is better funding for the current airline subsidy. As federal subsidies for airlines may diminish in the short- and medium-term, it will be incumbent upon local communities who desire enhanced airline service to subsidize desired airline service if early ridership does not make it feasible for the airline to operate profitably out of the given airport. The LVEDC should join with other entities in the region to advocate among local government agencies to increase funding for the existing subsidy at ABE. Although it is an expensive tool and there is no guarantee to keep an airline after the subsidy timeframe has expired, it is one of the few ways to compel airlines to act. A catchment survey will validate the feasibility of potentially new service for ABE.

Lead organization: Lehigh Northampton Airport Authority

Best practice examples: Panama City, FL; Wichita, KS with Southwest Airlines.



b. Establish a deal closing fund and incentive policy

Observation: The Lehigh Valley is competing both globally and among jurisdictions in the region to attract economic activity within its borders.

Specifically, it often must compete with locations not only in the northeast, but throughout the United States that may offer incentives as a tool to attract or retain employers and investment. At least 20 states and some cities (many in Texas as part of a sales tax to fund economic development initiatives on a local level) have a deal closing fund that gives economic development authorities additional funds to use as incentives to attract businesses. Typically such funds come into effect to counter incentive packages made by competing locations. A formalized and financed deal closing fund can serve as a tie breaker or even tip the momentum to the Lehigh Valley's favor. Though many states have a deal closing fund, not as many municipalities are as fortunate. By creating and sustaining a deal closing fund for the region, the program would differentiate the Valley in the eyes of potential investors in helping to facilitate a project to a successful conclusion.

Recommendation: The LVEDC should work with the county executives of Lehigh and Northampton Counties and identify and endow a substantial deal closing fund which will attract and retain employers in the Valley if the sustainable funding source for economic development is created. The deal closing fund can be capitalized through a sustainable funding source noted in recommendation #1 of this section.

Additionally, the two counties and respective municipalities should adopt specific guidelines on an **incentive policy** that incorporates the value of the incentives based on the parameters of the project (jobs created, capital investment, return on investment analysis) and create clawback provisions so that taxpayers are protected in the event that the company does not meet the agreed-upon commitment related to its economic impact.

Best practice examples: The City of Denver maintains a Job Creation and Capital Investment Incentives program that supports projects creating a significant number of new jobs operating in key, targeted industries:

<http://www.denvergov.org/oed/DenverOfficeofEconomicDevelopment/BusinessServices/Incentives/tabid/435889/Default.aspx>

Wichita and Sedgwick County, Kansas each adopted a joint incentive policy specifying the parameters of how companies qualify for incentives within their respective jurisdictions and what the value of those incentives would be based on the company's investment:

http://www.wichita.gov/NR/rdonlyres/5C4F7504-A681-47EC-8369-F1AD7C400FAE/0/City_CountyEcoDevoPolicyUpdate08142012CCapproved.pdf

2. Participate in efforts to consolidate the region's government (T)

Observation: In many of the focus groups we conducted with employers of all sizes and on the electronic survey, comments were made about the need for local government(s) to operate more cost-effectively and efficiently and with better customer service towards the public they serve. Economic growth and development occurs when a community can provide a competitive advantage and create an atmosphere of success for individuals and firms when they make a capital investment in the community. Government's role is to provide a business climate that nurtures and promotes effective growth without being onerous for businesses of all sizes to operate profitably.

The Lehigh Valley is comprised of two counties and 62 municipalities. The scale of perceived—and, as noted by the taxpayer (businesses interviewed), real—inefficiencies in providing community services is significant. Oftentimes, to a non-resident, there is no separation of lines when traveling from one municipality to another.

Recommendation: Rather than the LVEDC, we would encourage the regional Chamber of Commerce to engage one of the regional academic institutions that has a public administration program to

conduct a Cost/Benefit Analysis of consolidated government or, at the very least, consolidated services in the region. We recognize some consolidation of services has occurred with police and fire protection. More needs to be done if the region is to compete effectively in the global arena. Successful examples of consolidated government include Nashville, TN, Jacksonville, FL, (both doing quite well in their job-creation and wealth-building efforts) and most recently, Macon, GA (effective 1/1/2014).

Lead organization(s): The Greater Lehigh Valley Chamber of Commerce; the Lehigh Valley Partnership

There is a wide variety of [economic development] throughout the region. You have to look at each municipality—they are very different within each county. Some are very progressive and want to attract business; others don't want anything. Companies will try to do business in municipalities that are easier to deal with. There are townships that should just be avoided."

—Focus Group Participant

3. Support efforts to create a STEM Early College High School (T)



First Robotics Competition

Observation: Degree completions in STEM fields (Science, Technology, Engineering, and Mathematics) are an important indicator of regional competitiveness and economic potential. STEM-related careers are among some of the best-paying jobs, typically having excellent potential for future growth.

Measured as completions per 100,000 residents, and compared to the benchmarks, Lehigh Valley is mostly above Forsyth/Guilford and below Allegheny County for the number of associate's, bachelor's, and master's degree completions in STEM fields.

Within STEM fields, the highest number of associate's degree completions in Lehigh Valley is in computer science, and the highest number of bachelor's, master's, and doctor's degree completions are all in engineering.

Recommendation: The multitude of school systems in the region (17 of them) should consider partnering with a like college or university to offer a STEM Early College High School (or schools) in the region, thus raising the bar for education options for public school students who academically qualify for admission. Early College High Schools allow students to graduate high school with enough college credits for either an associate arts degree or two years of credits for a four-year college.

Lead organizations(s): The 17 area school districts

Best practice example: Greensboro/Guilford County, NC

<http://schoolcenter.gcsnc.com/education/school/school.php?sectionid=40135>

4. Facilitate regional efforts to grow the Talent Pipeline (T)



Observation: Tomorrow's companies will demand different skill sets. The next generation of Lehigh Valley's workforce will need to be better educated, adaptable, and agile to meet growing global competition and serve the needs of the different types of businesses the region hopes to attract. While the Lehigh Valley has the fundamentals in place to begin to attract the target industries, it must also be able to produce the types of workers that will help these businesses thrive.

Data and feedback from the focus groups and electronic survey suggests that Lehigh Valley's workforce often cannot meet business needs. Specifically, focus group participants representing employers

"Industry needs to figure out how to partner better with community colleges and train and source labor: rather than relying on importing talent, we need to figure out how to train from within our industries."

—Focus Group Participant

of all sizes were adamant about the deficiencies in the skilled and technical workforce. Also, in the opinion of many of the employers, there may be a disconnect between what the end-user (the customer) needs and what is being taught in the schools.

Recommendations:

- a. Nurture and grow the talent pipelines to support sustainable growth in the region's identified clusters. **The utilization of career academies or career pathways in middle and high school with a curriculum that meets the needs of businesses in the identified clusters will help sustain and grow the talent pipeline.**
- b. Engage the K-12 school systems, the two community colleges, the workforce investment board, and the area four-year institutions to work with the area high schools so that **each high school student has the ability and option to graduate from an area high school with an associate arts degree from an area community college or two years of credit hours from a four-year university (related to recommendation #3).**
- c. Create career awareness of cluster occupations through internships. In our focus groups with employers, a concern they identified was a lack of awareness of existing firms and specific job openings within the region. The various employment organizations need to feature these companies and employment opportunities with students, graduates, and educators.

A best practice example is the Intern to Earn program sponsored by HIRE, an alliance of colleges and universities in the Louisville, KY region. It is a program for identifying internships opportunities. The program works to improve the talent pool of workers and young talent in the Louisville area by recognizing

that interns tend to return to the communities in which they interned, if they leave the area in the first place.

The program is sponsored by the Greater Louisville Chamber of Commerce. <http://www.greatertolouisville.com/InternToEarn/>

Lead organization(s): The LVEDC and its BRE program to serve as a facilitator with the many organizations that are engaged in workforce preparedness.

5. Advocate for the creation of a pharmacy school in the region

Observation: The region has a world-class healthcare system and two medical schools, but no pharmaceutical school. Currently, there are 7 degreed pharmacy schools in the state².



Recommendation: The LVEDC should advocate for the creation of a pharmacy school at one of the private universities in the area to complement the suggested industry target of life sciences research and manufacturing. The development of a degreed pharmacy school will serve as part of the region's attraction for companies engaged in pharmacology.

Lead organization: The LVEDC to serve as an advocate and catalyst

² http://education-portal.com/pharmacy_schools_in_pennsylvania.html

CHAPTER 4: CONCLUSION



The Lehigh Valley location, innovative redevelopment programs, education foundation, and committed stakeholders are solid foundations the region can build upon to better position itself as a leading metropolitan area. But as the lead economic development marketing organization of an asset-rich region, the LVEDC is at a turning point. While much has been accomplished in recent years to better focus and direct the organization to fulfill its mission of leading economic prosperity, it has several opportunities to refine its operations and create a more effective economic development service delivery system to better support the region as the Lehigh Valley looks to rise to the next level.

Nevertheless, perceptions of the region as comprising old industrial towns, the lack of skilled-workers, and the existence and autonomy of multiple municipalities and areas of jurisdiction may inhibit the Valley in its ability to attract high-quality companies and world-class talent. Going forward, the Valley must take steps to be more proactive in marketing the region if it is to be successful in its business

development efforts. Additionally, it should be actively engaged in efforts to mitigate challenges that affect its competitiveness as a place for business.

Through the *Blueprint* Strategy for the Lehigh Valley, the LVEDC can facilitate and, in some instances, lead the region in beginning this transformation. It can simultaneously catalyze and strongly encourage initiatives to strengthen the region's business climate, while taking on strategic organizational changes to improve its economic development service delivery and set the Lehigh Valley apart from competing areas. By taking a leadership position in reshaping the region's business "product" and being more proactive and targeted in its marketing and business development efforts, the Valley can take bold, strategic, steps that will further evolve the region into a place that attracts quality talent and companies.

In order to create such an advantage, however, the Valley and LVEDC will need to do things differently. Together, the region will need to take the lead in proposing state legislation to consolidate the several jurisdictions within the region's borders, as well as restructuring the



way the various entities collaborate. Mitigating challenges and working together to grow the region's talent pipeline will be the first—and crucial—steps.

For the LVEDC, efforts to focus its marketing and attraction efforts will complement the region's work to transform its business climate and the spaces and places where activity will occur. With added focus and investment by all parties, the Valley can make huge strides in recapturing its prominence as a leading region for commerce and helping companies, talent, and the site location advisory community appreciate and leverage the vast transformations that have occurred—and the future opportunity the region holds.

Garner Economics would like to thank Don Cunningham, the LVEDC leadership and staff for their help and assistance during this process. Their compilation of data and past studies as well as their openness and willingness to explore various opportunities to strengthen operations have contributed to the richness and rigor of this report.

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RECOMMENDATIONS SUMMARY

Strategy	Goal/Results	Actions
<p>Build a focused economic development service delivery mechanism for existing and potential businesses in the region and collaborate with county and municipal economic development entities to work more seamlessly as a region and present a unified brand to external clients.</p>	<p>The LVEDC is better able to help the region attract the types of industries and talent that will make the Lehigh Valley competitive. In doing so, the LVEDC will serve the region as a deal flow catalyst that delivers high-value business services to its customers and constituents.</p>	<ol style="list-style-type: none"> 1. Hire or promote a Chief Economic Development Officer 2. Reorganize and rename the Development unit to a Business Investment function 3. Continue to strengthen business retention and expansion efforts 4. Encourage municipalities to identify a Municipal Economic Development Ombudsman 5. Include public advocacy of economic development projects in the mission of the LVEDC 6. Create a Workforce Alliance Leadership group 7. Engage outside counsel for private funding
<p>Tell the Lehigh Valley's economic development story more effectively to a more targeted audience of potential companies and investors.</p>	<p>The region is better able to attract the types of companies that will leverage the Valley's many assets and increase the quantity and quality of economic opportunities for the Valley's citizens.</p>	<ol style="list-style-type: none"> 1. Conduct an image survey to get an assessment of external perceptions of the Valley 2. Develop a unified brand for the region 3. Enhance the LVEDC website to address the needs of location consultants 4. Establish target industry working groups for each of the four focused targets 5. Execute a process for lead generation and target profiling 6. Enhance the region's marketing collateral, media, and public relations efforts 7. Actively solicit and provide information to location consultants 8. Develop familiarization (FAM) events 9. Actively solicit and provide information to international prospects (international travel/business solicitation) 10. Open a Foreign Direct Investment (FDI) office abroad 11. Create a cadre of LVEDC Ambassadors to extend the region's brand



Strategy	Goal/Results	Actions
<p>Strengthen the region's assets and develop transformational, game-changing assets and initiatives in key areas that support the region's desire to attract and grow more high-quality economic activities in the region.</p>	<p>The Valley transforms itself from a historically industrial economy to one that leverages its economic fundamentals and geographic proximity to leading markets to create a business climate and quality of place that attracts the world's most talented people and companies.</p>	<ol style="list-style-type: none"> 1. Participate in advocacy for sustainable funding for the region's economic development infrastructure <ol style="list-style-type: none"> a. Fully fund the existing airline subsidy program b. Create a deal closing fund and incentive policy 2. Participate in efforts to consolidate the region's government 3. Support efforts to create a STEM Early College High School 4. Facilitate regional efforts to grow the Talent Pipeline 5. Advocate for the creation of a pharmacy school in the region

Garner

Economics LLC
solutions that work

November 15, 2013

A Competitive Realities Report of Lehigh Valley, Pennsylvania

Prepared for the

Lehigh Valley Economic Development Corporation



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INTRODUCTION

The Lehigh Valley Economic Development Corporation (LVEDC), an economic development organization representing both Lehigh and Northampton counties, retained Garner Economics, LLC in July 2013. Our task is to recommend an economic development strategy that will build on the region’s rich natural, cultural, and historical resources and develop an action plan to strengthen existing industries and to identify emerging ones to increase private investment and job retention.

The focus of this engagement is for the region to understand the product improvement, marketing, and organizational changes it must make to ensure that the LVEDC and the Lehigh Valley strengthen their competitive positions and are able to attract and retain the types of businesses that will create jobs and opportunities for their citizens.

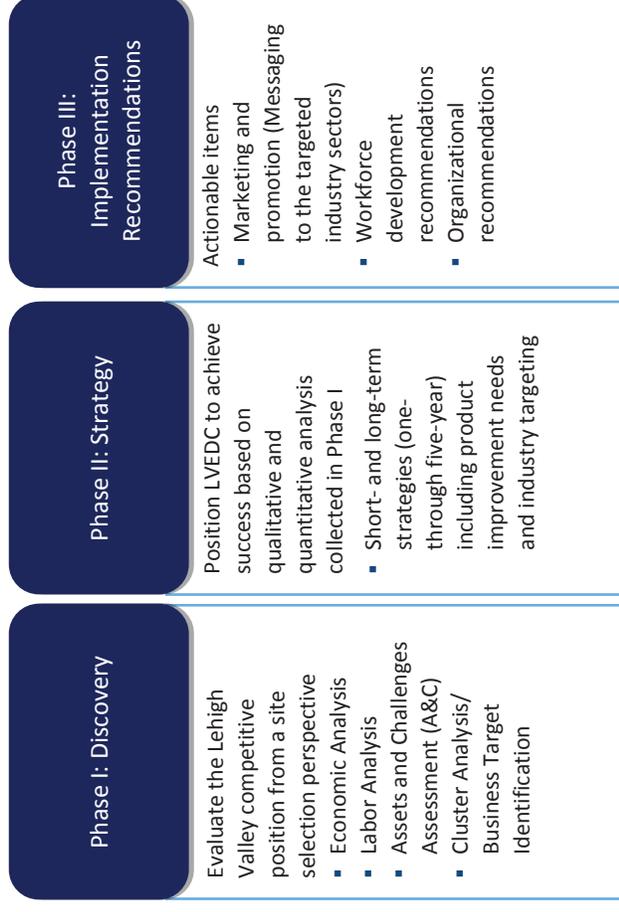
Specifically, the scope of services for the overall project includes:

- (1) A comprehensive and holistic assessment of key forces driving the economy and its shifting dynamics;
- (2) An Assets and Challenges Assessment (A&C) of the region from the eyes of a site location consultant that facilitates investment decisions;
- (3) Recommended business targets suitable for the region based on our research and analysis; and, finally,

- (4) A set of implementable recommendations that the leadership in the region can utilize to enhance the economic well-being of the area, and make the Lehigh Valley a desirable business location and enhance its quality of place.

This *Competitive Realities Report (CRR)* is the first of two reports that will be provided to the LVEDC. It documents the work of the first two elements of the project scope and summarizes the findings of Phase I.

ECONOMIC DEVELOPMENT STRATEGIC PLANNING PROCESS



METHODOLOGY



The CRR is a compilation of local facts and data points with quantitative analysis and some subjective opinions noted in the Assets and Challenges Assessment (A&C). Together, the Assets and Challenges Assessment, Benchmarking Scorecard, and Stakeholder Input form a body of knowledge and data around which the strategy and its recommendations will be built.

The CRR offers no recommendations. (The final strategy report will consist of the business target recommendations along with conclusions and recommendations of how the LVEDC can enhance its global competitiveness. It will be presented in early 2014.)

Assets and Challenges Assessment

Our approach to creating the CRR began with the consulting team conducting an Assets and Challenges Assessment of the region. This was done through a windshield tour of the region and against a set list of 66 criteria that were used to evaluate the area from a site-selection perspective. Garner Economics assessed the region based on the qualities, elements, and infrastructure that a business will look for when considering Lehigh and Northampton counties as a place for its operations.

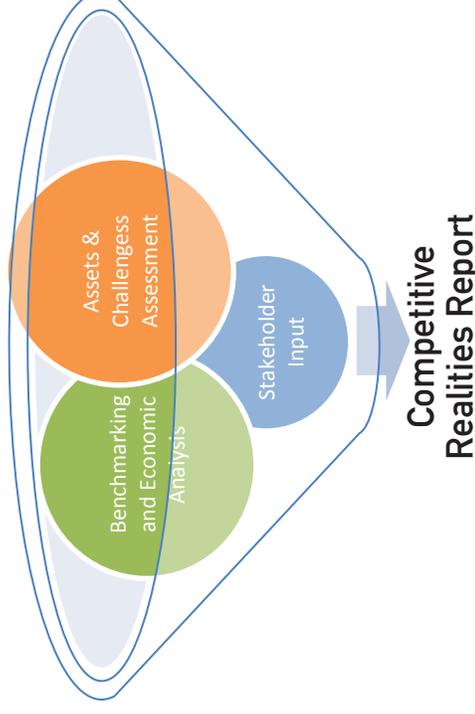
The assessment is both an objective and subjective evaluation of the area. We applied many of the same criteria to assess Lehigh Valley that we use when engaged by a corporate client to evaluate communities for possible investment. The assessment allows us to document challenges that exist in the region that constitute barriers for successful economic development to occur. By knowing what

challenges or gaps exist, Lehigh Valley can take the steps necessary to ameliorate the situation, strengthen its overall “product,” and be a more attractive business location. Likewise, by knowing its strengths, Lehigh Valley can better leverage them in its efforts to attract businesses.

The objectives of the Assets and Challenges Assessment are to:

- Help regional leaders understand the Valley’s potential so that they can best develop realistic goals;
- Identify key strengths to emphasize in economic development marketing efforts; and
- Identify key weaknesses that may limit investment in the region so that remediation of these local challenges may occur.

The findings of the A&C will supplement the economic analysis to be conducted in the business targeting scope element.



Benchmarking

Because the Lehigh Valley must compete with other geographies—including those globally—it is important to understand where the region stands compared to those key competitors. To conduct such benchmarking, Garner Economics evaluated key demographic and economic indicators for the region and compared the Lehigh Valley to statewide and national level data, as well as to Allegheny County, PA and the counties of Guilford and Forsyth, NC (Greensboro and Winston-Salem). These benchmark geographies were selected by the LVEDC project team.

The variables against which the Lehigh Valley and the other benchmark cities, the nation, and the state were compared include:

- Growth trends
- Age group composition
- Race and ethnicity
- Crime rates
- STEM completions
- Migration trends & sources of change
- Composition & sources of income
- Proprietor trends
- Wage comparison
- Retail leakage analysis
- Employment growth
- Unemployment trends
- Exports

Stakeholder Input

Finally, as a complement to the assessment of how the physical and regulatory structure of the Lehigh Valley stands against its benchmarked peers, Garner Economics conducted eight focus groups with regional stakeholders to solicit a variety of perceptions of the region's business climate and areas for improvement. The focus groups were followed by an electronic survey to help validate and gain further perspectives on issues that were raised in the focus groups. One hundred people participated in the eight focus groups, and 82 people completed the electronic survey.

The following chapters describe our findings within a cohesive economic assessment of the LVEDC and Lehigh Valley's current state and economic potential. It sets the groundwork for developing strategies and recommendations to assist the LVEDC in providing excellent economic development service delivery within the scope of its mission.

CHAPTER 1: STAKEHOLDER INPUT ON BUSINESS CLIMATE AND ECONOMIC COMPETITIVENESS



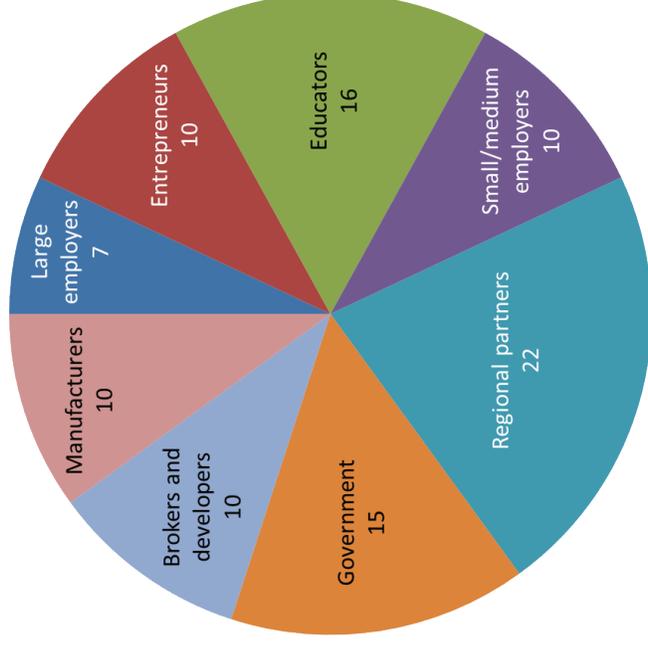
Garner Economics held eight focus group sessions, September 10-11, 2013, with stakeholders of the Lehigh Valley Economic Development Corporation (LVEDC) to solicit their perceptions and opinions of the Valley’s business climate. A total of 100 people participated in the eight groups.

The focus groups were organized into the following categories: large employers, small- and medium-sized employers, entrepreneurs, educators, manufacturers, government officials, regional partners, and brokers and developers. Invitations to participate in one of the focus groups were distributed by LVEDC.

An electronic survey based on the focus group responses was distributed to a select group of employers in the Valley to further test and validate a subset of the questions asked in the focus groups. The survey was open October 16-25, 2013. Eighty-two people completed the survey.

The first half of this chapter summarizes the key themes emerging from the focus group exercise and includes a summary of the responses received from the various groups. The second half of the chapter provides the results of the electronic survey.

Focus Group Participants



Focus Group: Key Themes

Among the eight focus groups, the following key themes emerged.

Note: These are specific comments from the focus groups and survey respondents. Garner Economics recognizes that they may not necessarily be statements of fact, but are opinions and/or perceptions.

Assets

- The Lehigh Valley has many assets upon which to draw in attracting and retaining companies. Among these are a strong quality of place, geographic location (especially proximity to major markets), strong institutes of K-12 and higher education, a reputation for being family-friendly, excellent healthcare facilities, economic growth, and increasing economic diversity.
- Participants pointed to the success of the redevelopment in downtown and south Bethlehem and the ongoing transformation of downtown Allentown as positive trends that are working to attract a younger and different demographic to the region. They also noted the impacts of the Ben Franklin Technology Partners in supporting the technology-focused entrepreneurs in the region.

Challenges

- Conversely, participants in all of the groups suggested that the number of municipalities and jurisdictions in the Valley are a hindrance to attracting new businesses and growing existing ones. While they point to some best-in-practice examples being undertaken by some of the municipalities in regard to redevelopment, they also point to the lack of growth or anti-business attitude in others. The several layers of government

and the balkanized nature of the Valley contribute to a perception of parochialism. Other negative effects cited include a wide variance in the region's public school systems (K-12), duplicative services that would benefit from consolidation and economies of scale, difficulty for the business community in dealing with the different regulations per jurisdiction, and a sense of zero-sum competition for resources rather than a regional approach.

- Another inhibitor to a stronger business climate is the lack of a clear regional vision and regional planning. One participant summed up the situation in the following manner: "We tend to plan on what we are today versus what we want to be." With the exception of one group that noted the great strides accomplished in the last 5-10 years, the majority of participants feel that the Lehigh Valley lacks a sense of regionalism and tends to act as individual townships and cities.
- Coupled with the lack of regionalism, participants also believe the Valley struggles with a lack of brand recognition. While the internal market and, to a limited extent, a regional market (i.e., Philadelphia and New York City) are familiar with the phrase "Lehigh Valley" and may understand what and where it is, national and international audiences are not as familiar with it. Participants noted several attempts to brand the Valley (e.g., the Knowledge Valley), but noted that execution of those campaigns has not been good.

Challenges, continued

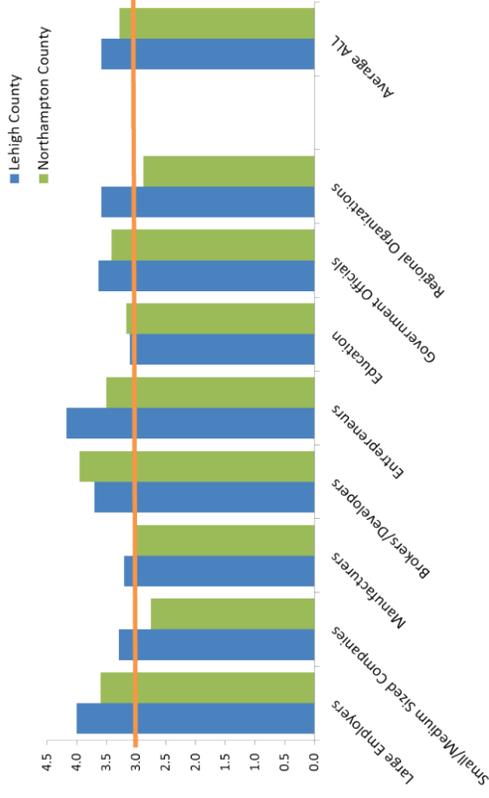
- The availability of quality labor was also noted as an inhibitor for existing companies in the Valley. Businesses reported difficulty in finding highly skilled workers with the necessary training, especially in light of the aging workforce and the lack of a pipeline of workers to fill those openings. They also noted having trouble filling entry-level positions due to a lack of work ethic and basic skills available in the workforce.

Business Climate

- When asked to rank the business climate for Northampton and Lehigh Counties on a scale of 1 to 5 (with 5 being the highest), participants as a whole gave Lehigh County a score of 3.59 and Northampton a score of 3.28.1. A rating of 3 is considered average. Anything higher than 3 is considered good; a score below 2 is poor.
- Respondents noted that it was difficult to give one score since the jurisdictions within each county vary so greatly. The scores given are meant to be an average for all jurisdictions in each county.
- On a whole, responses were average or above, with a low variance of scores among focus groups. With the exception of two groups (brokers and educators), Lehigh County received higher scores than Northampton. The regional partners group produced the greatest variance in scores between the counties. Within all focus groups, five participants gave scores of 2, and three gave scores of 5.

¹ Business climate is defined by those policies and laws enacted by the local government(s) that impact local businesses.

On a scale of 1-5, with 5 being "Very Strong," how would you rate the business climate of the following jurisdictions?



"The Lehigh Valley is a good place to live—there are plenty of recreational activities, and it is aesthetically pleasing. We could do a better job of countering some of the negative perceptions. Businesses still think of us as gritty industrial cities."

—Focus Group Participant

Needs

- When asked what infrastructure (hard or soft)² is lacking in the Valley, the groups noted the need to update and enhance all infrastructure with special emphasis on the road system. Many noted that the State is reactive in terms of repairs and planning. As a result, many roadways in the Valley reach capacity soon after they are opened.
- Participants noted that the level of connectivity at Lehigh Valley International Airport (ABE) is lacking, and that travelers often opt to access flights out of Philadelphia or Newark for access to destinations and price rather than utilize ABE. They noted that public transportation is lacking within the region and that passenger rail is needed to connect the Valley to Philadelphia and New York.
- A few of the focus groups noted that, while broadband Internet is good in the urban areas, the quality and availability of the service decreases farther out from the core areas.

² Hard infrastructure is defined as the physical networks such as roadways, sewer, broadband internet, airports and/or ports; soft infrastructure refers to institutions or places that support the economic, health, and cultural climate of a place, such as the education system, the healthcare system, system of government, and/or parks.

Companies to Attract/Best Practices to Follow

- When asked what types of businesses or industry LVEDC should work to attract to the region, participants most frequently noted advanced manufacturing, pharmaceuticals, innovative or technology-based companies (to attract a younger demographic and encourage graduates from regional colleges and universities to stay), finance-related, and those that would leverage the region's water resources and agricultural strengths.
- Participants were asked to name initiatives or best practices they have encountered in other areas that could be applicable to the Valley to help increase its competitiveness. The examples cited include: Portland (for its land planning and core revitalization), the Allegheny Conference (for regional partnership), Philadelphia (signage), Sioux Falls (incentives to attract business), University Park at MIT (mixed-use development anchored by a university), Philadelphia Navy Yard, Pittsburgh, Chattanooga (brownfield redevelopment), Central Piedmont Community College (apprenticeship programs), and Providence (downtown development).

"The Lehigh Valley does a lot of things well (to attract and keep businesses) that people don't appreciate until they go to other places and see that those things aren't done."

Of course, we can and should always try to do better."

—Focus Group Participant

Economic Development Support

- As a whole, the group had mixed reviews of economic development support of entrepreneurs and businesses. They noted that several resources exist for entrepreneurs but that more needs to be done to communicate those resources to the people businesses that need them. They also noted the perception that there is a lack of venture capital and angel investors in the region.
- Organizationally, the participants felt that there are an abundance of economic development entities in the region, and there is confusion as to which does what. While the groups were complimentary of the broad array of efforts and the work done by many, they noted that there are too many and that it is often difficult to know which one should be approached. The perception is that they are disjointed and that there is no comprehensive, regional strategy to coordinate all of the activities. Nevertheless, they believe that such an effort is needed and agree with the approach of identifying industries that would be a good fit for the region.

- When asked specifically about LVEDC and its current mission and whether any elements should be added or omitted to/from it, participants suggested that LVEDC should focus on marketing the region and retaining the businesses that are already in the Valley. A part of that effort would be working with local representatives in the Commonwealth General Assembly and the Congressional delegation to support and obtain resources for product improvement efforts. They also suggested that more outreach is needed to the jurisdictions in the region—both to update them on the organization’s activities as well as to better learn about their assets so the jurisdictions can be marketed as part of the Valley most effectively.

“There are so many ‘economic development’ groups in the Valley. It’s hard to know who to go to or where. For small businesses, especially, it’s time consuming and hard.”

—Focus Group Participant

Suggested Actions

Focus group participants were asked to describe an initiative that they would enact to boost the Valley's business climate and counter the aforementioned challenges. Participants were asked to brainstorm ideas without regard to resources or politics. The following suggestions were made:

- Create a shared vision for economic development in the region, develop a regional economic development strategy to attain the vision, and execute it accordingly. Land-use planning and better leveraging the Lehigh Valley brand should be part of this. Jurisdictions should be mandated to participate and more attention should be paid to retaining companies (not just attracting them).
- Find ways to consolidate government in the Valley, including shared or common services. This would also include simplifying the current regulatory environment.

- Improve the K-12 education system and create stronger linkages between the schools, higher education institutes, and business. The result would be an education system that rivals the best in the world and would be uniformly excellent throughout the Valley. The system should also teach life skills as well as academics and provide some type of scholarship to those seeking higher education or training.
- Greatly enhance the region's transportation system. This would mean focusing on better roadway and infrastructure connectivity, planning for a 10-20 year vision and not being reactive, finding creative solutions to public transportation, and creating passenger rail service to New York City and Philadelphia.
- Cultivate true regional leadership—both within government and among the corporate and business leaders. Along with the above regional plan, such leadership would ensure the Valley keeps the long-term goal in mind rather than focusing only on incremental progress.

Responses to Questions

The following table summarizes the responses to specific questions posed during the focus group. The number in parentheses indicates the number of groups in which the comment was raised.

Question	Response
<p>1. What are certain words or phrases that describe Lehigh Valley, good or bad?</p>	<p>Participants were both positive and negative in their descriptions of the Lehigh Valley. Participants were complimentary of the region’s quality of life and geographic location. They noted that it is an area with a strong sense of community and work ethic. Negative comments pointed to the large number of jurisdictions in the region and the tendency to be territorial.</p> <p>The most frequently provided descriptors included:</p> <ul style="list-style-type: none"> • Geographic location (7) • Parochial (6) • Dynamic, evolving (4) • High Quality of Life (4) • Growing (4) • Opportunity (3) • Diverse (economically and ethnically) (3) • Suspicions among groups, territorial (2) • Affordable cost of living (2) • Good logistics infrastructure (2) • Sense of Community (2) • Strong work ethic (2) • Higher education (3) • Better schools (K-12) (2)
<p>2. What do you think are some of the biggest obstacles that inhibit Lehigh Valley in its ability to attract, expand, or retain businesses and investment?</p>	<p>Similar to the above question, participants mentioned the large number of municipalities and the several layers of government that must be worked through as a major inhibitor to attracting and retaining business in the Valley. Additionally, participants alluded to skills gaps in the workforce and the region’s aging infrastructure as obstacles to attracting investment, as well as the lack of access to capital and incentives and external confusion regarding the “Lehigh Valley” brand.</p> <p>The most frequently raised comments included:</p> <ul style="list-style-type: none"> • Fragmented municipalities (too many, parochialism) (6) • Skill gaps in workforce (5) • Infrastructure issues—transportation (e.g., Route 22) (5) • External perception of being “old gritty cities” (5) • Local taxes and/or regulations (5) • Access to capital (4) • Lack of recognition for “Lehigh Valley” name/brand (2) • Lack of incentives (2)

Question	Response
<p>3. On a scale of 1 to 5, with five being best, how would you rate the business climate of: Lehigh County? Northampton County?³</p>	<p>When asked to rank the business climate for Lehigh County and then Northampton County separately on a scale of 1 to 5 (with 5 being the highest), participants as a whole gave both jurisdictions slightly “above average” scores. Respondents noted that it was difficult to give one score for each county since the jurisdictions within each county vary so greatly.</p> <p>The eight focus groups combined gave Lehigh County a score of 3.59 and Northampton County a score of 3.28. The Entrepreneurs and Brokers and Developers groups gave the Counties the highest scores, while the Small- and Medium-sized Employers group gave the lowest scores. Within all focus groups, five participants gave scores of 2, and three gave scores of 5.</p> <p>When asked what the two Counties could do to improve their scores, participants again noted the difficulty for new or existing businesses to make additions and changes to buildings because of the time commitment to go through the various levels of jurisdictions to make changes. Specific to Northampton County, participants noted that the County often appears to be less proactive than Lehigh County and that the jurisdictions often “play one township off another.” Another participant described jurisdictions in Northampton as seeming to see things as a zero-sum and not acting as regionally as the jurisdictions in Lehigh County.</p>
<p>4. What do businesses need that they can't find in Lehigh Valley?</p>	<p>On a whole, focus group participants identified only a few things that businesses are not able to find in the Valley. Employee and transportation needs were among those most frequently mentioned, specifically:</p> <ul style="list-style-type: none"> • Skilled employees (4) • Lack of public transportation (3) • Air connectivity (2) • Younger workforce (2) • Market that accommodates economies of scale (2)

³ Business climate is defined by those policies and laws enacted by the local government that impact local businesses.

Question	Response
<p>5. What do you see as the Region's assets?</p>	<p>The most often mentioned assets of the region included its quality of place (including education opportunities), proximity to other places, and the internal accessibility (road network) throughout the Valley.</p> <p>Specific strengths noted include:</p> <ul style="list-style-type: none"> • Variety of schools: K-12 and higher education (6) • Proximity to other places (5) • Quality of life (leisure and recreation activities, arts and culture, amenities) (5) • Transportation network/internal accessibility within the Valley (3) • Cost of living (3) • Water and industrial waste treatment (2) • Access to resources (2) • Excellent healthcare (2) • Affordable housing and range of options (2) • Location—access for business and living (2) • Workforce (2)
<p>6. What assets and attributes of the Region do you believe are underutilized in investment attraction?</p>	<p>The majority of groups (five) noted that the region is not fully leveraging the higher education institutions in the region—neither tapping into graduates and encouraging them to stay nor “selling” the various programs at the colleges and universities. Other underutilized attributes mentioned in the separate groups include: natural resources, the high concentration of unemployed/underemployed professionals in the region, and the region’s gains in arts and culture and in building an urban lifestyle.</p>
<p>7. What is the Region doing well and, perhaps, not so well in growing entrepreneurship?</p>	<p>Participants responded that the Valley and State have several assets for entrepreneurs—the best example being the Ben Franklin Technology Partnership—but that the efforts are not available regionally and are not communicated well. Furthermore, a few groups noted the lack of venture capital in the region.</p> <p>Specific responses include:</p> <ul style="list-style-type: none"> • Ben Franklin Technology Partnership (5) • Powerful incubators in the region and State • Difficulty to get resources to those who need them (3) • Not enough venture capital (2) • Needed to link funders to companies (2) • Lack of awareness among young companies of resources that exist (2) • No regional plan for servicing entrepreneurs (2)

Question	Response
<p>8. How do you see the current labor situation in the area (both quality and employee attraction and availability)?</p>	<p>While focus group participants lauded the work ethic that can be found in the region, many groups believe that the quality of the workforce is low (especially for entry-level and low-skill jobs), and that existing companies should be more involved in training efforts. They noted that there are good community colleges and technical schools in both counties, but they tend to be in the suburbs where the people who could most take advantage of the training cannot access them. Various participants also added that the local market does not support the salaries that will keep skilled workers, and that there is no regional workforce development plan. Finally, many participants suggested that the region could do better in leveraging the population of unemployed or underemployed workers in the region.</p>
<p>9. Give some examples of local unique and innovative programs or initiatives that you believe are having a positive impact on increasing the competitiveness of the Valley.</p>	<p>Many of the suggestions centered on the Ben Franklin Technology Partnership and the positive impact the Neighborhood Improvement Zone has had on Allentown. Participants also cited the work of the community colleges and the efforts the cities in the region have made to revitalize their downtown areas. Other specific programs mentioned include the investments in industrial waste pre-treatment that were instrumental in attracting Coca-Cola, Ocean Spray, and Sam Adams to the region, as well as the work of the Green Knight Economic Development Corporation to use proceeds from converting landfill gas to energy to stimulate economic development and support local non-profit organizations providing social services in Pen Argyl, Wind Gap and Plainfield Township.</p>
<p>10. Are there programs in peer/competitor regions that the LVEDC should consider for this region?</p>	<p>When asked for innovative examples outside the region, respondents provided a variety of suggestions including the State of Texas for its allowance of using a special sales tax to fund economic development; successful downtown redevelopment in places like Providence, CT; Cambridge, MA; and San Antonio, TX; effective regional planning efforts such as Portland, OR and Pittsburgh; regional advocacy on the Federal level; Central Piedmont College's (Charlotte, NC) apprenticeship program; and common signage that brands a region (e.g., Greater Philadelphia's vehicular and pedestrian signage).</p>
<p>11. What infrastructure is missing or unsatisfactory in the Region (soft and hard infrastructure)?</p>	<p>Three themes noted by six of the eight focus groups include the need for passenger rail to New York City and Philadelphia, better air service/connectivity out of ABE, and a regional financial strategy to repair and maintain the region's aging infrastructure.</p> <p>Other frequently mentioned needs include:</p> <ul style="list-style-type: none"> ● Fragmentation of water and sewer system throughout the region (4) ● Public transportation—internal access—between cities and out of region (4) ● High speed Internet at affordable cost in the northern part of the region (3) ● Highway infrastructure to reach rural areas (2)

Question	Response
<p>12. Without regard to money or politics, what would you work to change about the Region?</p>	<p>Most of the comments given in response to this question reiterated points made earlier. The three ideas most frequently noted include the idea of consolidating the region’s government (cited by 7 of the 8 groups); improving the K-12 education system to ensure it is equitable, uniformly excellent, and rivals the best in world; and instituting some form of passenger rail to New York City and Philadelphia.</p> <p>Other initiatives addressed were: the need to improve and update the region’s infrastructure, additional efforts to strengthen the region’s talent pipeline, and efforts to improve the region’s quality of place through beautification and anti-gang efforts.</p>
<p>13. What types of companies do you think would be a good fit for the Region?</p>	<p>The most frequently suggested industries include:</p> <ul style="list-style-type: none"> • Advanced manufacturing (5) • Technology-based companies (5) • Agriculture-based or food and beverage (4) • Medical-tech and manufacturing (2) • Businesses that can take advantage of existing clusters (2) • Less warehousing (2) • Pharmaceuticals (2) • Logistics-related (2) • Financial services (2) • Companies that attract young professionals (2)
<p>14. What are your past experiences with, and current perceptions of, various economic development efforts by the LVEDC, the two Counties, the Cities, and any other group(s) involved in investment attraction and retention? How could these efforts or groups be improved?</p>	<p>Participants noted that it is difficult to know which organization does what and, as a result, know which is more effective in assisting the region. Many noted that LVEDC is improving; but that more clarity is needed as to the part they play in the region’s economic development efforts. Some participants also noted that LVEDC’s marketing efforts could be improved.</p> <p>Participants also noted that the region would benefit from consolidating some of the redundant efforts and a better system of tracking the implementation of the initiatives that are undertaken. Several groups noted that various programs such as “College Valley” or “DRIVE” were good ideas but never took off. A few participants singled out the Lehigh Valley Industrial Partnership as an example of a program that is working and that has been successful in helping bring companies into the region.</p>

Question	Response
<p>15. What programs should LVEDC be engaged in, including current and potential new ones? Currently, their mission directs them to serve as the lead in new business development (attraction), retention, research, and workforce development.</p>	<p>Many groups noted that historically, LVEDC appears to try to be all things for all people and that it has lacked a focus in recent years. They note that LVEDC could add the most value by marketing the region externally and “selling” the Valley as a whole. Some groups suggest that LVEDC provide strategic input to other organizations to impact workforce development rather than building a separate program. Finally, a few groups noted the need for LVEDC to better define itself and communicate its impact and to play a role in advocating for regional product improvement needs to the state delegation.</p>
<p>16. Are there any other issues of concern to you we did not ask?</p>	<p>One theme offered for further consideration is the need to ensure that any economic development plan provide opportunities to all groups within the Valley. Participants urged that the resulting strategy not leave “too many people behind.” Additionally, groups suggested that efforts should also address the needs of the smaller communities in the region that most often need the most help with economic development.</p>

“The Lehigh Valley Economic Development Corporation is back on track but could do a better job at defining themselves. There have been a lot of changes in recent years, but they don’t broadcast what they do or what they’ve done. They need to do three things: define, communicate, and measure results.”

—Focus Group Participant

Electronic Survey Results

As noted above, an electronic survey was created using the aforementioned feedback to test and validate some of the key themes and issues raised by the focus groups among a select group of employers. The list of options for the close-ended questions for the survey was created from input received during the focus groups. For many of the questions, respondents were allowed the opportunity to leave additional comments. In addition to a targeted list of LVEDC member companies, the survey was distributed among the Manufacturer Resource Center. A total of 82 stakeholders responded to the survey.

As would be expected, the comments from the survey participants tended to be more candid and direct in their praise or concern of the Valley.

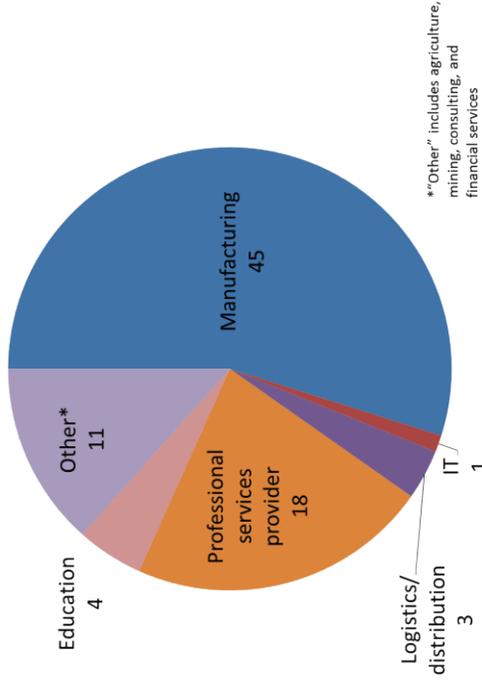
Key Themes

As with the focus groups, a number of trends emerged from the survey responses that reiterated the perceived skills gap and the areas in which LVEDC could provide the most value in regional economic development efforts. Survey respondents also echoed the difficulty in dealing with the various levels of jurisdictions and the need to find better career paths or training programs for the Valley’s workforce.

On a positive note, survey respondents also believe that the region’s quality of place and location are among its key assets.

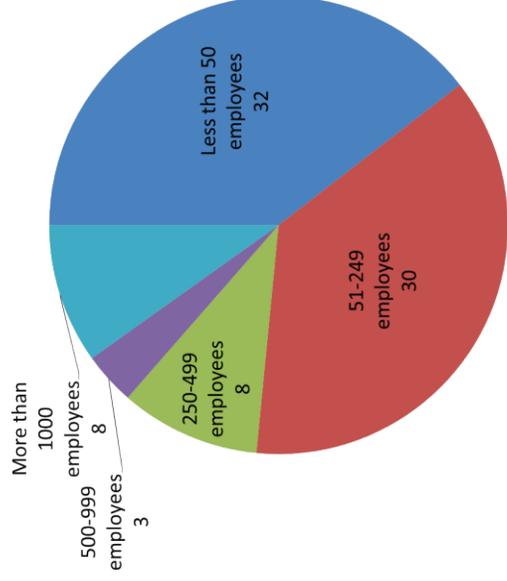
The graphs on the following pages illustrate the survey respondents’ main sentiments around some of the key themes emanating from the survey.

Participants by Industry
Number of respondents



**Other* includes agriculture, mining, consulting, and financial services

Participants by Size of Company
Number of respondents



Key Inhibitors

As in the focus groups, the number of jurisdictions in the region was ranked as the top inhibitor to attracting and retaining investment in the Lehigh Valley. Respondents also ranked the lack of a skilled workforce as another major inhibitor. Transportation infrastructure deficiencies (including lack of service at Lehigh Valley International Airport) and the external perception of the Valley being one of “old, gritty cities” were also mentioned as elements that detract investment.

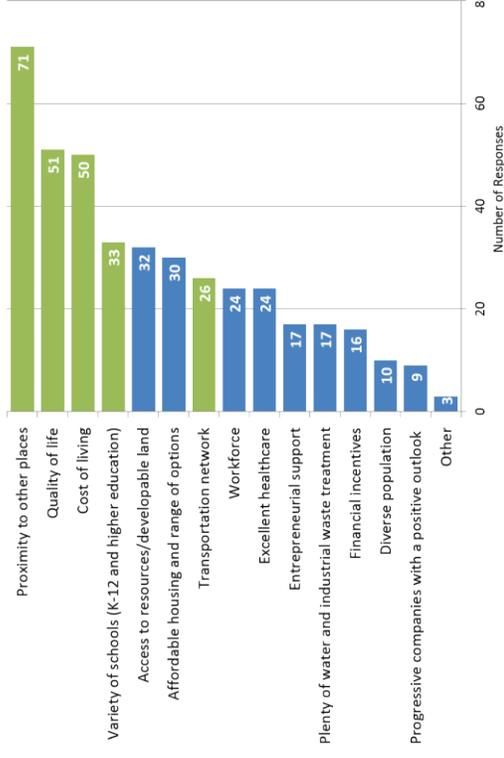
Key Assets

Conversely, respondents also agreed with the focus group participants that the region’s proximity to other areas and quality of place are key assets. Respondents were slightly more positive than focus group participants in touting the region’s education assets (K-12 and higher education).

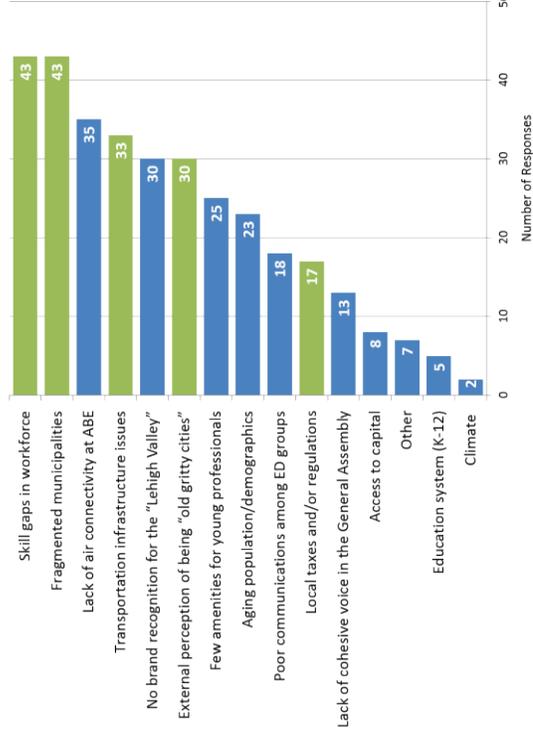
Companies to Attract

Similar to the focus group participants, respondents believe that companies in the pharmaceuticals, advanced manufacturing, or medical-tech and manufacturing industries would fit well in the region. Respondents also noted that businesses that build on existing clusters would excel in the Valley.

What are some of the strongest assets the Lehigh Valley has in retaining and attracting businesses to the region?



What are some of the biggest obstacles that inhibit the Lehigh Valley in attracting, expanding or retaining businesses?



■ Responses that also ranked high among focus group respondents.

Vision and Goals

Survey respondents were given a list of initiatives the region’s leadership could take on that, if implemented, would improve the Valley’s competitive position to attract and retain quality companies and talent to the Lehigh Valley. The top responses pointed to improving infrastructure needs and policy changes that would consolidate government and provide incentives for existing companies to expand in the region.

LVEDC Role

Survey respondents are, overall, satisfied with the performance of LVEDC, with 52.6 percent either satisfied or very satisfied with the organization’s efforts. This compares to scores of 24.7 percent and 23.1 percent satisfaction rates for Lehigh County and Northampton County economic development activities, respectively.

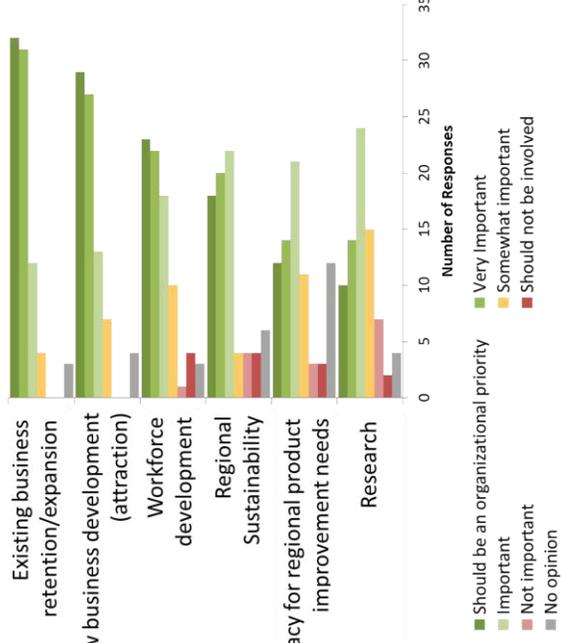
Survey respondents believe that LVEDC should focus on core economic development roles as the center of their mission. In particular, respondents believe that working with existing companies to either retain and/or expand in the Valley and new business development should be at the core of the organization’s operations.

Top items survey respondents would like to see the region’s leadership take on to strengthen its ability to attract quality companies and talent to the Lehigh Valley in the next five to ten years*

- Create a strategic plan to support the region’s infrastructure
- Provide incentives for existing business to expand in the region
- Consolidate government
- Passenger rail to NYC and Philadelphia

*Respondents were given a set list of initiatives to rank.

How important are the following programs for LVEDC?



CHAPTER 2: ASSETS AND CHALLENGES ASSESSMENT



The Lehigh Valley of Pennsylvania, consisting of Lehigh and Northampton counties (region), offers a tremendously strong mix of assets for businesses that are contemplating relocation or expansion. Our approach in conducting the Assets and Challenges Assessment (A&C) is to employ the same criteria and methodology we use when we conduct a community evaluation for our corporate clients when exploring locations for investment. By understanding its assets and challenges from a location strategy perspective, we believe that the region will be better positioned to compete more effectively and to resolve area challenges that are likely inhibitors to investment projects. By recognizing and understanding the region's strengths and opportunities, the region will ultimately be able to determine the proper target audience of companies to which it should effectively communicate the area's assets.

Garner Economics analyzed 66 community and regional factors as part of the assessment. Ratings were identified by evaluating the Region's position for each of the factors against the Commonwealth of Pennsylvania, the United States, and, in many instances, the benchmarked geographies of Allegheny County as well as the combined counties of Guilford and Forsyth, NC (as selected by the LVEDC to benchmark).

We define a Neutral rating as normal in the realm of economic development opportunity and competitiveness. An Asset rating indicates a positive feature of the area that would be evaluated and rated as a competitive strength versus the benchmark locations. A

Challenge rating identifies a factor that is considered a relative deficiency compared to other locations, which should be addressed for future remediation and may be an impediment to economic development if not resolved over time.

Of the 66 variables analyzed, 38 are considered an Asset and 11 a Challenge (17 rated as Neutral). This ratio of Assets to Challenges is one of the strongest positive ratios we have conducted and analyzed over the last 11 years. The diverse and rich assets of the Lehigh Valley have made the region a global competitor and differentiate the area from many of the 3,141 counties that exist in the United States.

To enable a summary overview of the report's main findings for readers, a set of dashboard icons is presented. Each finding has an accompanying icon to assist with interpretation. Readers are encouraged to review the supporting data to gain a more complete understanding in those areas of interest in the full report.

REPORT DASHBOARD



Indicates the Region is better (more positive) compared to a majority of the benchmark geographies or points to a positive trend or asset within the area.



Indicates the Region is neutral, neither positive nor negative. Indicator may represent an observation or be in the middle of the benchmark geographies.



Indicates the Region is worse compared to a majority of the benchmark geographies or points to a negative trend or challenge within the area.

Access to Markets

The geographic location of the Lehigh Valley and its transportation infrastructure make the region asset-rich with companies engaged in distribution and logistics. The Lehigh Valley is within a one-day drive to one-third of all United States consumers and one-half of all Canadian consumers. The region is well positioned to access national and international markets. Interstate 78 runs east/west and I-80 (which also runs east/west) is close by in a neighboring county. There is one north/south corridor, the Pennsylvania Turnpike's Northeast Extension (I-476).

Foreign Trade Zone #272 is located in Lehigh Valley, and three commercial airports are within a 90-mile drive and offer either nonstop or one-stop international air service: Lehigh Valley International (ABE), Pittsburgh International (PIT), and Newark International (EWR). There are three general aviation airports that are capable of handling corporate aircraft: ABE, Queen City-Allentown, and Braden Airport (which may be facing future closure). The Lehigh Valley Region is served by two Class 1 railroads (Norfolk Southern and CSX) and there is an Intermodal Terminal located in Northampton County. Two deepwater ports, Port Newark/Elizabeth Marine Terminal and Port of Philadelphia, are within 90 minutes of Lehigh Valley.

Lehigh Valley ranks high in national broadband rankings when compared to its benchmark communities, using data published by the National Telecommunication and Information Administration.

ACCESS TO MARKETS	RATING
Centrally located for major regional market	1 
Centrally located for national market	2 
Well positioned to serve international markets	3 
Interstate highways	4 
Rail service	5 
Port facilities (water or inland)	6 
Within 90 minutes of commercial air passenger service	7 
General aviation airport capable of handling corporate aircraft	8 
Broadband speeds and availability	9 

Labor

Cost of labor is an asset for employers considering Lehigh Valley as a place to do business. Labor costs are below the benchmarks of the US, Commonwealth of PA, and Allegheny County, but higher than Forsyth/Guilford County, NC. Vocational and technical education is also an asset with institutions like Lehigh Carbon Community College and Northampton Community College. Lehigh Valley is also the home to seven four-year and postgraduate degree higher education institutions with more than 50,000 full- and part-time students. Lehigh University and Lafayette College offer four-year and postgraduate degrees in various engineering curriculum.

Focus group respondents and data analysis from Garner Economics note shortages in available technicians and scientists, and from managerial personnel. Public and private unionization is also higher than all but one benchmark.

LABOR	RATING
Availability of skilled industrial workers	 10
Availability of skilled clerical workers	 11
Availability of technicians and scientists	 12
Availability of managerial personnel	 13
Cost of labor	 14
Percent unionization (private and public)	 15
Availability of post-secondary vocational training	 16
Within ¹ / ₂ hour of major university/college	 17
Availability of engineering program	 18

Access to Resources

The Lehigh Valley has a long history as a manufacturing and agricultural region. Regional manufacturing employment is 11% compared to the US average of 9%. Excess water and wastewater/sewer capacity in Lehigh Valley creates advantages and opportunities. There are more than 20 water and sewer authorities in the Valley with water capacity in excess of 136 mgpd and an average daily usage of 50 mgpd. Sewer/wastewater capacity is equally advantageous. Equally important is the value of agriculture to the region. Lehigh and Northampton counties rank 20 and 23 respectively out of 67 PA counties in the value of agricultural production.

Commercial and industrial electric rates are higher than the benchmark communities of Allegheny County, PA and Greensboro/Winston Salem, NC.

ACCESS TO RESOURCES	RATING
Availability of agricultural products for food processing	 19
Availability of manufacturing processes	 20
Availability of business and professional services	 21
Cost of electricity for industrial/commercial use c/kwH	 22
Cost of natural gas	 23
Availability of water and sewer capacity	 24

Local Economic Development Program

The LVEDC is a well-funded and well-staffed organization (perhaps over-staffed, based on their mission). LVEDC has a 2013 budget of \$2.0073 million. However, the vast majority of that funding is public. There needs to be a greater mix of private dollars to more adequately balance the budget as a public/private partnership. There are numerous local economic development partners, which is acceptable when following the mantra of marketing the region by organization (LVEDC) and selling the community locally. With a total of 62 municipalities comprising the Lehigh Valley, multiple local economic development efforts are expected.

LOCAL ECONOMIC DEVELOPMENT PROGRAM	RATING
Adequate level of professional staff	
Involvement of both public and private sectors	
Local economic development organization has a strategic plan	
Level of leadership support of economic development program	
Level of cooperation between various organizations involved in economic development activity	
Level of awareness of community regarding economic development	 ²⁵
Level of funding for local economic development program	 ²⁶

Access to Space

Lehigh Valley has industrial and office sites that meet the definitions of fully served and shovel-ready sites. The region ranked neutral in regards to access to reasonably priced and suitable industrial and office space. According to a 2013 3Q report by NAI Summit, there is 56,801,599 sq. ft. of industrial space, of which 4.1 mm sq. ft. is available for rent—a 7.3% vacancy rate. This limited sq. ft. availability will stress business development opportunities within the industrial sector. As it relates to office space, there is 11,443,045 sq. ft. of space, of which 1.5 mm sq. ft. is available—a 13.4% vacancy rate.

ACCESS TO SPACE	RATING
Reasonably priced properties	
Availability of suitable industrial space	 ²⁷
Availability of suitable office space	 ²⁸

Access to Capital

There are several programs that can provide low-interest or no-interest financing to fund construction, land, equipment, and working capital. The LVEDC is a conduit for many of these programs. Early stage or venture capital availability gets mixed reviews by entrepreneurs and small businesses that participated in focus groups. However, as it relates to technology-based companies, the Ben Franklin Fund of NE PA was looked upon favorably for those companies that fit within its mission of providing funds for early stage and startup operations.

ACCESS TO CAPITAL	RATING
Availability of tax-exempt financing for new industrial facilities	
Availability of low-interest loans for small business	 ²⁹
Availability of venture capital from local sources for business startups	 ³⁰

Government Impact on Business

The Lehigh Valley has effective incentive programs that can provide significant benefit to qualifying projects. The Keystone Opportunity Zone, the Keystone Innovation Zone, and the Allentown Neighborhood Improvement Zone are all key initiatives that can have a significant financial impact on qualifying companies. The region’s labor-training incentives are competitive but not exemplary compared to some other states. Lehigh Valley ranked higher than Pennsylvania and the United States in combined SAT Scores. The region faces challenges in regards to unemployment insurance costs, corporate income taxes, and property taxes.

According to the Tax Foundation, Pennsylvania ranks 19th overall on the business tax climate index compared to North Carolina at 44th. However, property tax rates are higher in Lehigh and Northampton than most other Pennsylvania counties and nearly all of the 100 counties in North Carolina.

GOVERNMENT IMPACT ON BUSINESS	RATING
Availability of adequate water and sewer lines to industrial sites	
Condition and maintenance of local streets	
Level of traffic-carrying capacity of local streets and highways	31
Availability of tax incentives (state and local)	32
Availability of labor training incentives	33
Quality of local elementary and secondary education	34
Quality of post-secondary education	
State overall business tax climate index as ranked by the Tax Foundation.Org	35
Level of state costs for unemployment insurance	36
Local business permitting procedures and costs	37
Corporate income taxes	38
Local property taxes	39
State and local sales and use taxes; service taxes	40
Personal income taxes	41

Quality of Place

Housing options for moderate and executive-level choices are an asset in the region. Cost of housing is consistent with the national average. The level of violent and property crime is below most of the benchmarks and, as such, is considered a strength.

There are ample opportunities for cultural activities, recreation, shopping, restaurants, and sporting events. The central business district in Bethlehem and Easton show well, however, the Allentown CBD ranks as neutral. Air quality is rated as a Challenge. Both Lehigh County and Northampton County are in nonattainment for both 8-hour ozone and particulate matter. Health care is particularly strong in the Valley with two major health care providers: St. Luke's University Health Network and the Lehigh Valley Health Network. Both systems have medical schools.

QUALITY OF PLACE	RATING
Availability of executive-level housing	 42
Availability of moderate-cost housing	 43
Availability of apartments or rentals	 44
Cost of housing	 45
Level of crime	 46
Level of cultural activity	 47
Availability of recreational opportunities	 48
Presence of major sporting events	 49
Level of air pollution	 50
General appearance of the community	
Availability of major shopping facilities	
Availability of adequate medical facilities	 51
Availability of first-class hotels, motels, and resorts	 52
Quality of local restaurants	
Appearance of the Central Business District(s)	 53

The following endnotes support the rankings offered in the Assets and Challenges Assessment.

- ¹ One day's drive to 1/3 of all US consumers and 1/2 of all Canadian consumers, according to data provided by LVEDC.
- ² Ibid
- ³ Ibid, FTZ #272 is located in the Lehigh Valley. Three commercial airports with either nonstop or one-stop international air access is located within a 90-minute drive (ABE, PHI and EWR).
- ⁴ I-78 (East/West), I-476 (North/South)
- ⁵ Class 1 – Norfolk Southern Rail; Class 1 – CSX Rail; Intermodal Terminal in Northampton County (Bethlehem)
- ⁶ Lehigh Valley Rail Management, LLC operates an intermodal terminal in Bethlehem, PA. The terminal consists of two adjacent areas for handling conventional intermodal (TOFC/COFC) and Triple Crown Services (Roadrailer equipment) with a total of more than 4.6 miles of track; Port Newark/Elizabeth Marine Terminal (NJ/NY) – 90 minutes; Port of Philadelphia – 75 minutes. There is discussion about creating an Inland Port in Bethlehem connected to the Port of New York/New Jersey and Norfolk Southern RR
- ⁷ Lehigh Valley International Airport Newark; Liberty International Airport (90 minutes); Philadelphia International Airport (75 minutes)

Airports 2012

	Passenger (arrivals)		Freight / Mail (lb.)		Scheduled Flights (Departures)	
	#	Rank	#	Rank	#	Rank
Allentown/Bethlehem/ Easton: Lehigh Valley International (ABE)	317k	140	31m	112	8,322	135
Pittsburgh, PA: Pittsburgh International (PIT)	3,801k	45	167m	46	52,971	43
Greensboro/High Point, NC: Piedmont Triad International (GSO)	867k	89	164m	47	20,283	80

US flights only, rank among 827 US airports

Source: US Department of Transportation

⁸ ABE; Queen City – Allentown; Braden Airpark, Northampton County (possible future closure)

⁹ **Broadband: 2012 Percent of Households with Access & Capacity**

	Symmetrical Digital Subscriber Line (SDSL)	3+ Wireline Broadband Providers	>25M Uplink	>100M Downlink	Broadband Copper
Lehigh Valley	36.8%	95.1%	56.3%	54.2%	74.8%
Allegheny	56.9%	81.2%	3.8%	1.3%	81.9%
Forsyth / Guilford	15.1%	61.6%	10.5%	0.4%	54.9%
Pennsylvania	29.8%	64.3%	35.9%	54.8%	50.0%
United States	26.2%	55.1%	15.9%	46.9%	46.1%

Source: National Telecommunications and Information Admin

¹⁰ Based on feedback from focus group respondents; a Location Quotient of 1.23 according to Garner Economics and Economic Modeling Specialist

¹¹ Ibid; a Location Quotient of 1.12 according to Garner Economics and Economic Modeling Specialist

¹² Ibid; a Location Quotient of 0.73 according to Garner Economics and Economic Modeling Specialist

¹³ Ibid; a Location Quotient of 0.75 according to Garner Economics and Economic Modeling Specialist

¹⁴ **Average Wage Per Job**

	2011	5Y % CHG	10Y % CHG
Lehigh Valley	\$44,683	11.5%	31.6%
Allegheny	\$50,867	15.0%	35.0%
Forsyth/Guilford	\$43,818	11.6%	27.4%
Pennsylvania	\$46,100	13.9%	34.6%
United States	\$48,301	13.1%	34.0%
Lehigh	\$46,522	11.2%	31.3%
Northampton	\$41,519	11.5%	31.6%

¹⁵ **2012 Percent Union Membership (metro)**

	Private	Public
Allentown-Bethlehem-Easton	9.0	46.3
Pittsburgh, PA	9.8	58.2
Greensboro/Winston Salem	0.9	7.7
Pennsylvania	7.8	54.6
United States	6.6	35.9

Source: *Union stats by Barry T. Hirsch and David A. Macpherson*

¹⁶ Lehigh Carbon Community College; Northampton Community College
¹⁷ Within the two counties that comprise the Lehigh Valley, there are seven colleges and universities, two community colleges, multiple technical and trade schools; the Lehigh Valley has more than 50,000 full-time and part-time students.

¹⁸ Lafayette College and Lehigh University offer four year and postgraduate degrees in various engineering curriculum.

¹⁹ Lehigh and Northampton counties rank 20 and 23 respectively out of 67 PA counties in the value of Ag production.

²⁰ **Percent Total Employment Manufacturing, 2012 4Q**

Lehigh Valley	10.6%
Allegheny	5.3%
Forsyth/Guilford	10.6%
Pennsylvania	10.0%
United States	8.9%
Lehigh	9.6%
Northampton	12.3%

Source: *US Bureau of Labor Statistics*

²¹ In some employer focus group responses, respondents said they use specialized legal, accounting, engineering, or other professional services found more readily in the NY Metro area or in Philadelphia

²² Benchmarked to Allegheny County, PA (Duquesne Light) and Greensboro/Winston Salem, NC (Duke Energy Carolinas), based on industrial and commercial rates. Source: AEP, Edison Electric Institute and the US Energy Information Admin, 2013

	PPL Electric Utilities Corp	Duquesne Light Co	Duke Energy Carolinas, LLC
Residential	12.12	15.84	10.15
Commercial	13.43	9.55	7.96
Industrial	11.86	8.62	6.01
Total Average	12.25	13.58	8.35

²³ **Lehigh Valley**

Provider: UGI CENTRAL PENN GAS INC
Commercial: \$9.81/mcf
Industrial: \$9.20/mcf

Allegheny County

Columbia Gas of Pennsylvania
Commercial: \$10.07/mcf
Industrial: \$9.77/mcf

Equitable Gas

Commercial: \$10.80/mcf
Industrial: \$10.63/mcf

Peoples Natural Gas

Commercial: \$8.89/mcf
Industrial: \$7.57/mcf

²⁴ According to data provided by the LVEDC, there are more than 20 water and sewer authorities in the Valley with water capacity in excess of 136 mgpd and an average daily usage of 50 mgpd. Sewer/wastewater capacity is equally advantageous.

²⁵ Garner Economics observed a lack of understanding of the principles and execution of successful economic development efforts by many focus group respondents

²⁶ Current budget (2013) is \$2.073MM, primarily from the room tax. However, there needs to be more private funding injected into the organization.

²⁷ According to a 2013 3Q report by NAI Summit, there is 56,801,599 sq. ft. of RBA of which 4.1 mm sq. ft. is available for rent, or a 7.3% vacancy rate. This limited sq. ft. availability will stress business development opportunities.

²⁸ IBID, 11,443,045 sq. ft. RBA of which 1.5 mm sq. ft. is available, or a 13.4% vacancy rate.

²⁹ There are numerous programs promoted to assist small businesses at various stages of their existence and noted on the LVEDC web site. <http://www.lehighvalley.org/get-financing/>. Many of these programs were reacted to favorably by focus group respondents

³⁰ Ben Franklin Fund of NE PA, et al <http://www.lehighvalley.org/get-financing/other-funding-programs/>

³¹ Based on feedback from focus group respondents

³² Keystone Innovation Zone and Keystone Opportunity Zone; NIZ in Allentown which has financial benefits to developers within a specific area of downtown Allentown

³³ PA's labor training incentives are competitive, but not unique or exemplary compared to other states, e.g. NC, GA, LA, AL, and OK.

³⁴ **2012 SAT Scores**

	Verbal	Math	Writing	Combined
Lehigh Valley	505	512	491	1509
Allegheny	507	519	497	1523
Forsyth/Guilford	483	497	465	1445
Pennsylvania	487	499	475	1461
United States	496	514	488	1498
Lehigh	511	519	499	1529
Northampton	498	504	483	1485

Sources: *Pennsylvania Department of Education, North Carolina Department of Public Instruction, Garner Economics*

³⁵ PA ranks 19 compared to NC at 44, 2013.

³⁶ Rank 36 by the Tax Foundation, 2013

³⁷ According to a majority of focus group respondents when asking this question

³⁸ Rank 46 by the Tax Foundation, 2013

³⁹ Lehigh and Northampton median property tax rates are higher than Allegheny and most other PA Counties. NC counties are considerably lower. <http://www.tax-rates.org/pennsylvania/property-tax>

⁴⁰ Rank 20 by the Tax Foundation, 2013

⁴¹ Rank 12 by the Tax Foundation, 2013

⁴² 648 properties per Zillow.com, price range of \$376K-\$1mm

⁴³ 5155 properties per Zillow.com, price range of \$85K to \$375K.

⁴⁴ 2325 apartments or houses available to rent, per Apartment Finder

⁴⁵ **2011 Housing Costs as a Percentage of Median Household Income**

Lehigh Valley	22.6%
Allegheny	19.9%
Forsyth/Guilford	22.4%
Pennsylvania	20.8%
United States	22.9%
Lehigh County	22.9%
Northampton County	22.2%

Source: US Census Bureau, *Garner Economics*

⁴⁶ **2011 Crime Rates**

	Violent	Property
Lehigh Valley*	226.6	2406.4
Allegheny County*	410.9	2121.1
Forsyth/Guilford**	486.4	4611.9
Lehigh Valley (Cities Population >10,000)	420.3	3237.4
Allegheny (Cities Population >10,000)	578.1	2707.2
Forsyth/Guilford (Cities Population >10,000)	631.2	5668.0
US Cities (Population >10,000)	548.5	3487.4
Pennsylvania total	355.0	2222.3
United States total	386.3	2908.7
Lehigh County*	242.0	2559.9
Northampton County*	208.4	2225.0
Allentown-Bethlehem-Easton, PA-NJ M.S.A.	214.2	2277.8
Winston-Salem, NC M.S.A.	476.9	4431.4
Pittsburgh, PA M.S.A.	299.7	1924.0

Sources: *Pennsylvania State Police, **North Carolina Department of Justice; all other: Federal Bureau of Investigation, Greensboro metro not reported.

⁴⁷ http://en.wikipedia.org/wiki/Lehigh_Valley#Arts

⁴⁸ Ibid

⁴⁹ http://en.wikipedia.org/wiki/Lehigh_Valley#Sports



⁵⁰ **Nonattainment**

8-Hour Ozone (2008)	Lehigh Co
	Northampton Co
	Allegheny Co
Particulate Matter (PM-2.5) 2006 Standard	Lehigh Co
	Northampton Co
	Allegheny Co

Source: U.S. Environmental Protection Agency

⁵¹ **Sperling's, 2013**

Health	Allentown-Bethlehem-Easton, PA	United States
Physicians per 100k	283.9	261.3

⁵² There are no 4 diamond or higher hotels as rated by AAA

⁵³ Bethlehem and Easton shows well. The Allentown CBD ranks a neutral.

CHAPTER 3: DASHBOARD INDICATORS SUMMARY



The following analysis examines the economic position and competitiveness of the Lehigh Valley, Pennsylvania economy, which is comprised of Lehigh and Northampton counties. Besides the nation and Commonwealth of Pennsylvania, this report also compares Lehigh Valley to two benchmark communities: Allegheny County in Pennsylvania, and the combined Forsyth and Guilford counties of North Carolina.

For several variables, only data at the Metropolitan Statistical Area or metro level is available. In those cases, the *Allentown-Bethlehem-Easton* metro is used for Lehigh Valley, *Pittsburgh* for Allegheny

County, and the *Greensboro and Winston-Salem* metros for Forsyth and Guilford counties.

This analysis relies heavily on raw objective data collected by impartial governmental or impartial third-party agencies. In all cases, the original and most current available data as of October 2013 is used. All unique calculations and computations from the original data were conducted by Garner Economics, who will gladly share methodology to clients upon request.

Demographic & Labor Dynamics

-  Lehigh Valley has experienced a population increase of 12.8 percent or 74,404 more residents over the last twelve years. The rate is above the nation, state, and one benchmark community
-  Lehigh Valley has grown at an annual rate of 1.0 percent since 2000, above all examined geographies except Forsyth/Guilford.
-  At 52.1 percent, domestic in-migration has accounted for the majority of Lehigh Valley's net new residents since 2000. Natural growth has contributed 22.5 percent of growth and international accounted for the remaining 25.3 percent.
-  The share of growth from domestic in-migration has been steadily declining each year, resulting in its first net loss in year 2012 (domestic out-migration exceeded domestic in-migration).
-  At 39.9 years, the median age in Lehigh Valley is slightly less than Allegheny and the state but above Forsyth/Guilford and the nation.

Demographic & Labor Dynamics, continued

Lehigh Valley has a higher relative proportion of residents in ages 45-54 years and a lower relative proportion in ages 20-34.



At 9.0 percent, unionization among private businesses in the Allentown-Bethlehem-Easton metro is above the Greensboro/Winston Salem metros, the state, and nation.



Measuring crimes in those cities with populations greater than 10,000, Lehigh Valley has lower violent crime rates compared to both benchmark communities and the average among all US cities in the same population range.



Measuring crimes in those cities with populations greater than 10,000, Lehigh Valley has lower property crime rates compared to one benchmark community and the average among all US cities in the same population range.



Compared to the state, nation, and both benchmark communities, Lehigh Valley has a higher relative proportion of residents whose highest level of educational attainment is *9th to 12th grade, no diploma*.



Lehigh Valley has higher relative proportions of Bachelor's degree attainment in the fields of *Biological, Agricultural, and Environmental Sciences; Engineering; and Education*.



Lehigh Valley's 2012 SAT composite scores are above the state, nation, and Forsyth/Guilford.



Measured as completions per 100,000 residents and compared to the benchmarks, Lehigh Valley is mostly above Forsyth/Guilford and below Allegheny County for the number of Associate's, Bachelor's, and Master's degree completions in STEM fields.



Within STEM fields, the highest number of Associate's degree completions in Lehigh Valley is in *Computer Science*, and the highest number of Bachelor's, Master's, and Doctor's degree completions are all in *Engineering*.



Compared to the state, nation, and benchmark communities, Lehigh Valley attracts a higher proportion of new residents, ages 25 and older, with the highest level of educational attainment at *Less than high school graduate*.



Annually, 8.7 percent of the population ages 15 and over is enrolled in a College or Graduate school in Lehigh Valley. The percentage is lower than both of the benchmark communities, the state, and the nation.



From 2002 to 2011, the number and proportion of workers who both live and work in the Lehigh Valley has increased by 4 percent or 6,885 more workers.

Economic Dynamics

-  Over the last ten years, real GDP in Allentown-Bethlehem-Easton increased by \$1.4 billion or 5.7 percent, a rate below all but the Winston-Salem metro.
-  Measured in per capita terms, at \$32,887 in 2012, Allentown-Bethlehem-Easton has a lower relative amount of economic activity than the benchmark metros, the state, and the nation
-  Over the last ten years, real per capita GDP in Allentown-Bethlehem-Easton declined by \$1,247 or 3.3 percent, while over the last five years, real per capita GDP declined by \$19 or 0.1 percent.
-  Lehigh Valley's average wage per job is 8.1 percent below the nation, 3.2 percent below the state, and 13.8 percent below Allegheny County.
-  After adjusting for inflation, over the last ten years, growth in real values of the average wage per job in Lehigh Valley has increased by 3.6 percent (\$1,231). In the last five years, it has declined by 0.1 percent (-\$37). The pace is below the nation, state, and one benchmark community.
-  Lehigh Valley's per capita income is 3.7 percent below the nation, 5.6 percent below the state, and 21.8 percent below Allegheny County.
-  Over the last ten years, growth in real values for the per capita income in Lehigh Valley has increased by 2 percent (\$604) and in the last five years by 0.4 percent (\$111). The pace is below the nation, state, and one benchmark community.
-  In per capita terms, at \$3,553, Allentown-Bethlehem-Easton exports are below the nation and two benchmark metros.
-  From 2005 to 2012, per capita exports increased 95.4 percent in the Allentown-Bethlehem-Easton metro—a rate that is above the nation, state, and two benchmark metros.
-  As of 2011, proprietors accounted for 17.2 percent of total employment in Lehigh Valley—a rate below the nation and state but above both benchmark communities.
-  Over the last ten years, the number of proprietors in Lehigh Valley has increased by 37.4 percent, outpacing all but Forsyth/Guilford.
-  In 2011, per capita income for nonfarm proprietors in Lehigh Valley was \$25,978. The amount is below the state, nation, and both benchmark communities.
-  Lehigh Valley has a higher proportion of employment in *Transportation and Warehousing and Arts, Entertainment, and Recreation*.

Economic Dynamics, continued

Over year 2012, total employment in Lehigh Valley is up on average 2.1 percent or 5,693 more jobs. The pace is above the nation, state, and both benchmark communities.



Recession losses were not severe in Lehigh Valley, with the greatest losses at -4.2 percent, or 11,716 fewer jobs, which is a pace less than what was experienced in the nation, state, and one benchmark.



The average unemployment rate over the last year in Lehigh Valley has averaged 8.3 percent (representing 28,554 unemployed persons). The rate is below the nation, state, and one benchmark community.



At 101.8, the composite Cost-of-Living Index score in the Allentown-Bethlehem-Easton metro is above both benchmark communities.



Measured as the percent of households that have availability to select broadband offerings, Lehigh Valley places well, ranking highest or second highest in comparison to the nation, state, and both benchmark communities.

Local Specialization, Competitiveness & Growth

Below are general observations from an in-depth analysis of industry sectors, occupational groups, and industry clusters in Lehigh Valley. This information is not benchmarked to other communities:

- ✓ Over the last five years, the largest absolute employment gains came from *Health Care & Social Assistance* (up 5,758 jobs or 12 percent). Other significant gains were made in *Transportation & Warehousing* (up 4,567 jobs or 32 percent) and *Arts, Entertainment & Recreation* (up 3,877 jobs or 54 percent).
- ✓ The greatest job losses have come from the *Construction* industry sector, down 2,758 jobs or 15 percent. The majority of remaining absolute losses came from *Government* (down 1,858 jobs or 5 percent) and *Information* (down 1,679 jobs or 24 percent).
- ✓ Lehigh Valley's industrial average earnings significantly exceed the national same-industry average in only two industries: *Utilities* and *Management of Companies*.
- ✓ Earnings gaps, where Lehigh Valley's industry averages are notably lower than in the nation, exist in *Finance & Insurance; Information; Professional, Scientific & Tech Services; and Real Estate*.
- ✓ Over the last five years, the largest absolute occupational gains came from *Transportation & Material Moving* (up 2,904 jobs or 12 percent). Other significant gains were made in *Personal Care & Service* (up 2,368 jobs or 18 percent) and *Healthcare Practitioners & Technical* (up 1,699 jobs or 9 percent).
- ✓ Lehigh Valley's occupational average earnings significantly exceed the national average in four areas: *Military; Education, Training & Library; Building and Grounds & Maintenance; and Management*.
- ✓ The *Transportation & Logistics* cluster has experienced the strongest growth (up 4,425 jobs over the last five years) and has a high degree of local specialization (location quotient of 1.69). Another cluster with strong growth and high specialization is *Healthcare & Life Sciences*. The *Electrical Equipment & Component Mfg.* cluster demonstrates the highest measure of local specialization with a location quotient of 2.61.
- ✓ The three clusters demonstrating the strongest local competitive effect are: *Transportation & Logistics; Arts, Entertainment, Recreation & Visitor Industries; and Healthcare & Life Sciences*.
- ✓ Using standard major industry classifications, the *Management of Companies* industry sector demonstrates the highest degree of local specialization with a location quotient of 2.4. *Health Care & Social Assistance* and *Transportation & Warehousing* both experienced strong growth and exhibit high local specialization.
- ✓ Using standard major industry classifications, a strong local competitive effect is exhibited in four industry sectors: *Transportation & Warehousing; Arts, Entertainment & Recreation; Health Care & Social Assistance; and Manufacturing*.
- ✓ Three occupational groups share high specialization and strong growth: *Transportation & Material Moving, Healthcare Practitioners & Technical, and Healthcare Support*.

CHAPTER 4: DEMOGRAPHIC & LABOR DYNAMICS



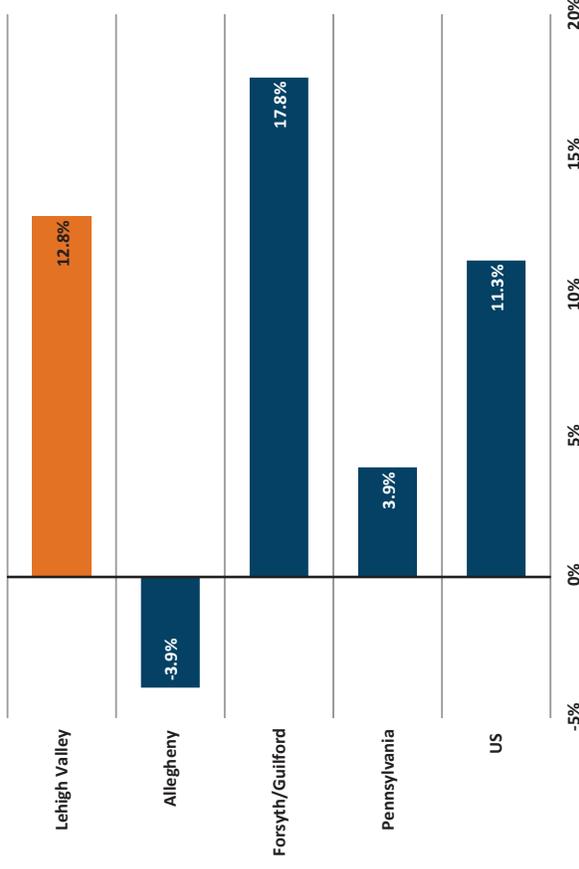
Population Growth

The rate of population growth can be a significant factor in local economic health and is often a key consideration in business expansion and site selection decisions. Most firms are wary of areas with population declines, very slow growth rates, or significant amounts of domestic out-migration

According to the 2012 Census figures, the total population of Lehigh equals 654,512. This marks an increase of 12.8 percent or 74,404 more residents over the last twelve years. The rate is above the nation, state, and one benchmark community (Figure 1 and Table 1).

Assessed as an average annual rate, Lehigh Valley has grown at a rate of 1.0 percent since 2000, above all examined geographies except Forsyth/Guilford (Figure 2 and Table 1).

Figure 1
2000-2012 Population Change (%)



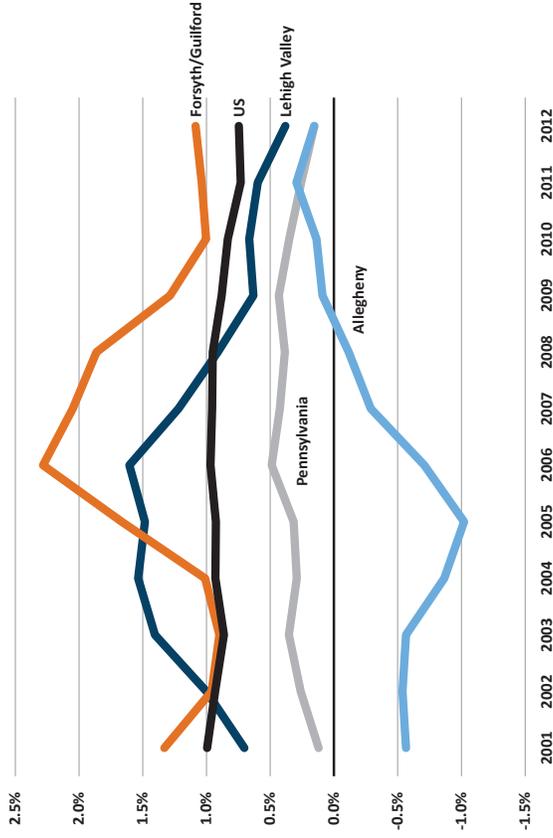
Source: US Census Bureau, Missouri Census Data Center, Garner Economics

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Figure 2

2000-2012 Annual Rates of Population Change (%)



Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Table 1
2000-2012 Population Change

	2000	2012	12-Year Change	12-Year Percent Change	Average Annual Rate
Lehigh Valley	580,108	654,512	74,404	12.8%	1.0%
Allegheny	1,279,651	1,229,338	-50,313	-3.9%	-0.3%
Forsyth/Guilford	729,480	859,016	129,536	17.8%	1.4%
Pennsylvania	12,284,173	12,763,536	479,363	3.9%	0.3%
United States	282,162,411	313,914,040	31,751,629	11.3%	0.9%

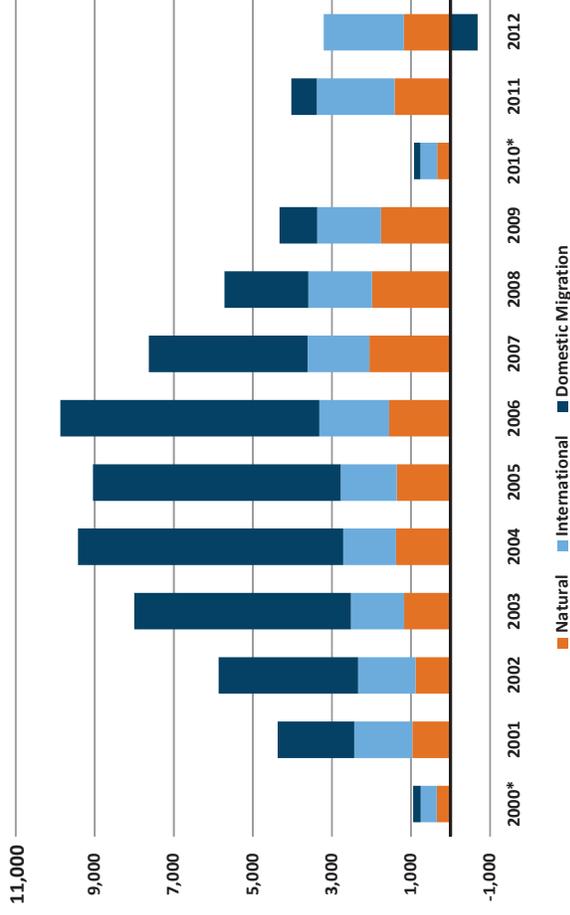
Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Sources of Population Change

Population change has three major sources: 1) natural (births minus deaths), 2) domestic migration, and, 3) international migration. In general, from a firm’s perspective, growth dominated from natural or international sources may signal a population less likely to satisfy immediate workforce demands. Other firms, depending on their workforce composition or global reach, may seek communities with strong international growth. In all cases, net domestic out-migration (out-migration exceeding in-migration) is a cause for concern.

At 52.1 percent, domestic in-migration has accounted for the majority of Lehigh Valley’s net new residents over the 2000-2012 period. Natural growth has contributed 22.5 percent of growth and international growth accounts for the remaining 25.3 percent (Figures 3 & 4 and Tables 2 & 3). The share of growth from domestic in-migration has been steadily declining, resulting in its first net loss in year 2012 (domestic out-migration exceeded domestic in-migration). Allegheny has only experienced growth from the international component, whereas Forsyth/Guilford experienced fairly balanced growth, with no source contributing more than 40 percent.

Figure 3
Lehigh Valley
Sources of Population Change
2000-2012



*Decennial Census, change in collection and methodology.

Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Table 2
Lehigh Valley
Sources of Population Change
2000-20012

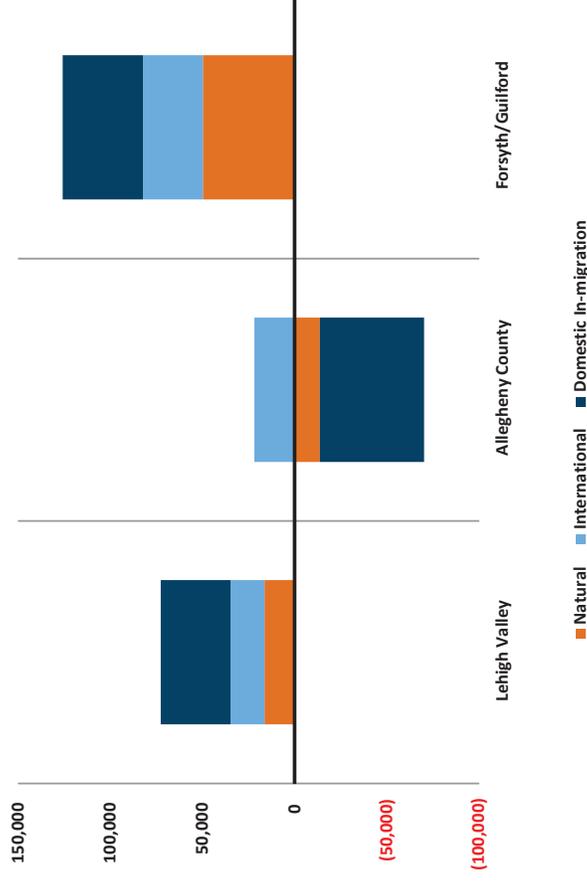
Year	Natural	International	Domestic In-migration
2000*	347	406	193
2001	965	1,472	1,933
2002	884	1,452	3,528
2003	1,174	1,347	5,480
2004	1,380	1,336	6,708
2005	1,356	1,423	6,267
2006	1,554	1,765	6,555
2007	2,053	1,564	4,015
2008	1,983	1,614	2,121
2009	1,757	1,617	950
2010*	335	425	160
2011	1,413	1,969	645
2012	1,181	2,027	(685)

Components do not total exactly due to inter-year residual adjustments made by the Census Bureau.

**Decennial Census, change in collection and methodology.*

Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Figure 4
Net Sources of Population Change
2000-2012



***Net Domestic Out-migration**
Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Table 3
Sources of Net Population Change
2000-2012

	Natural	International	Domestic In-migration
Lehigh Valley	16,382	18,417	37,870
Allegheny	(13,623)	21,829	(56,645)
Forsyth/Guilford	49,812	32,509	43,507

Components do not total exactly due to inter-year residual adjustments made by the Census Bureau.

Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Population by Race and Hispanic Origin

By itself, racial diversity is not a determinant factor in local economic competitiveness, although some firms may prefer higher rates of diversity in order to attract and retain certain workers. This is particularly true for multinational firms looking to attract workers from outside the United States.

At 84.4 percent, Lehigh Valley has as a higher relative proportion of its population categorizing themselves as *White* compared to the benchmarks, state, and nation (Table 4). The *Hispanic or Latino* population makes up a relatively larger proportion in Lehigh Valley than in both benchmark communities and the state, but not nationwide.

Table 4
2010
*Race & Hispanic Origin by Percent of Total Population**
Highest Relative Figure Shaded

	Lehigh Valley		Allegheny	Forsyth Guilford	PA	US
	#	%				
White	546,763	84.4%	81.5%	61.0%	82.5%	74.2%
Black or African American	36,516	5.6%	13.1%	29.7%	10.8%	12.6%
American Indian and Alaska Native	1,364	0.2%	0.1%	0.4%	0.1%	0.8%
Asian	17,749	2.7%	2.8%	3.2%	2.8%	4.8%
Some other race	29,328	4.5%	0.4%	3.7%	1.9%	4.8%
Two or more races	16,170	2.5%	2.0%	2.0%	1.8%	2.7%
Hispanic or Latino of any race	97,147	15.0%	1.6%	9.1%	5.7%	16.4%

**Race alone or in combination with one or more other races.*

Source: US Census Bureau, Garner Economics

Age

The age composition of a local population can be an important determinant in business decisions and competitiveness. The lack or underrepresentation of younger workers may deter firms from considering some communities for their long-term plans. Low proportions of middle-aged workers may prevent firms from initiating expansions requiring quick startup operations. A high proportion of older workers may indicate certain incumbent skills or the need to replace soon-to- retire workers.

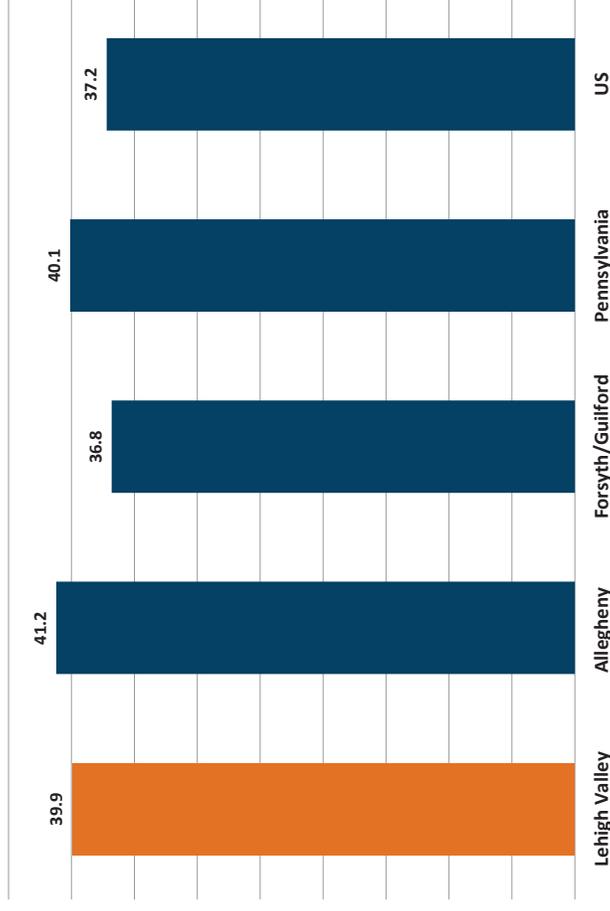
Median Age

At 39.9 years, the median age in Lehigh Valley is slightly lower than Allegheny and the state, but above Forsyth/Guilford and the nation (Figure 5 and Table 5).

Age Group Composition

Lehigh Valley has a higher relative proportion of residents in ages 45-54 years and a lower relative proportion in ages 20-34 (Figures 6 & 7 and Table 5).

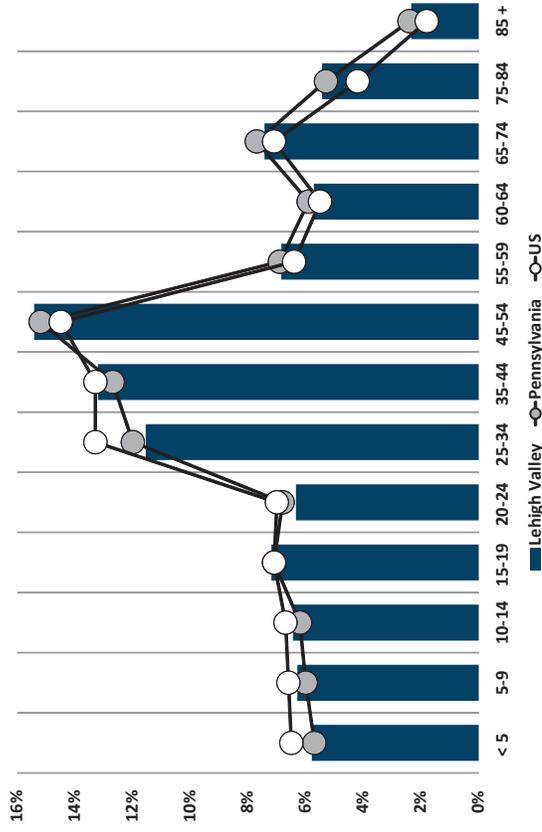
Figure 5
Median Age
2009-2011 (3-year estimates)



Source: US Census Bureau, Garner Economics

Figure 6

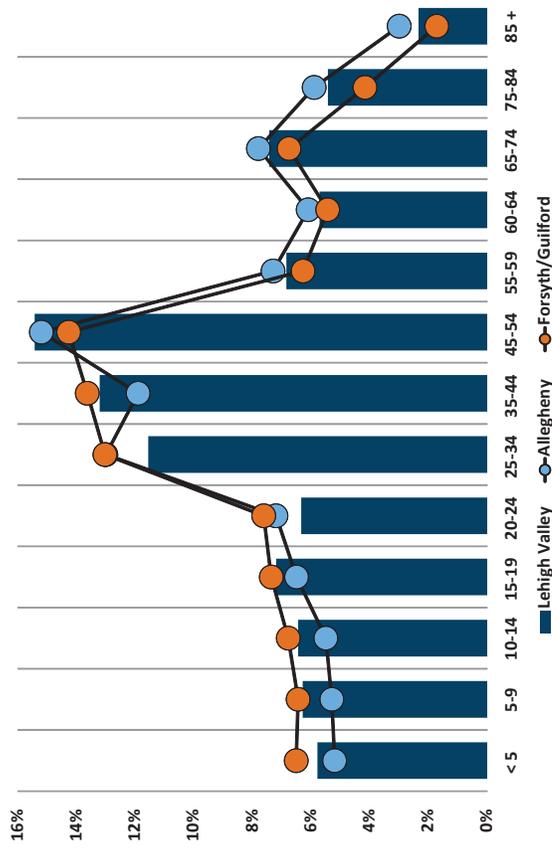
Age Groups by Percentage of Total Population
2009-2011 (3-year estimates)



Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Figure 7

Age Groups by Percentage of Total Population
2009-2011 (3-year estimates)



Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Table 5

Age Groups by Percentage of Total Population
2009-2011 (3-year estimates)
Highest Relative Figure Shaded

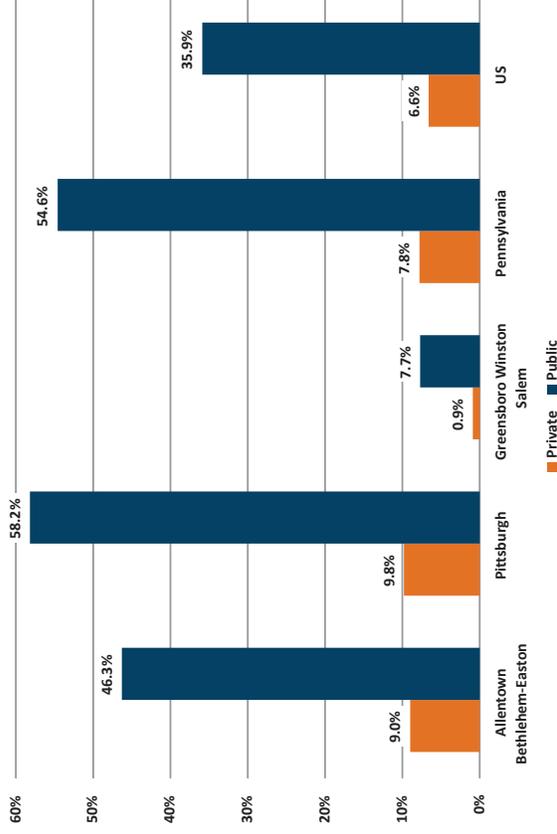
	Lehigh Valley	Allegheny	Forsyth Guilford	Pennsylvania	US
Median Age	39.9	41.2	36.8	40.1	37.2
< 5	5.8%	5.2%	6.5%	5.7%	6.5%
5-9	6.3%	5.3%	6.4%	6.0%	6.6%
10-14	6.4%	5.5%	6.8%	6.2%	6.7%
15-19	7.2%	6.5%	7.4%	7.1%	7.1%
20-24	6.3%	7.2%	7.6%	6.8%	7.0%
25-34	11.6%	13.0%	13.0%	12.0%	13.3%
35-44	13.2%	11.9%	13.6%	12.7%	13.3%
45-54	15.4%	15.2%	14.3%	15.2%	14.5%
55-59	6.8%	7.3%	6.3%	6.9%	6.4%
60-64	5.7%	6.1%	5.4%	5.9%	5.5%
65-74	7.4%	7.8%	6.8%	7.7%	7.1%
75-84	5.4%	5.9%	4.2%	5.3%	4.2%
85 +	2.3%	3.0%	1.7%	2.4%	1.8%

Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Unionization

At 9.0 percent, unionization among private businesses in the Allentown-Bethlehem-Easton metro is above the Greensboro/Winston Salem metros, the state, and the nation (Figure 8 and Table 6). The public sector unionization rate (46.3 percent) is above Greensboro/Winston Salem and the nation.

Figure 8
Unionization Rates (%)
2012



Source: © 2012 by Barry T. Hirsch and David A. Macpherson

Table 6
Unionization Rates (%)
2012

	Private	Public
Allentown-Bethlehem-Easton	9.0%	46.3%
Pittsburgh	9.8%	58.2%
Greensboro/Winston Salem	0.9%	7.7%
Pennsylvania	7.8%	54.6%
United States	6.6%	35.9%

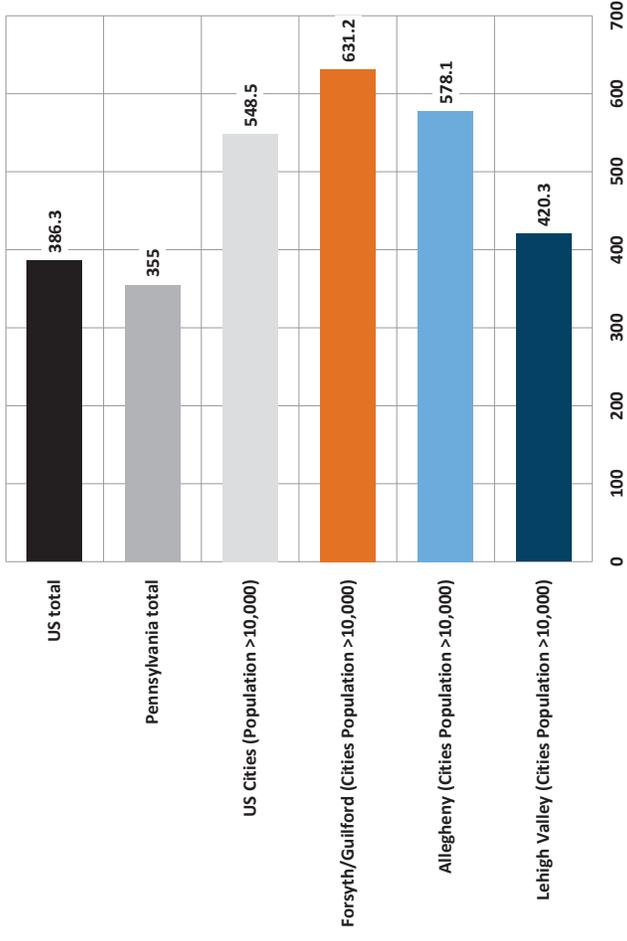
Source: © 2012 by Barry T. Hirsch and David A. Macpherson

Crime

Crime rates may seem outside the typical measures of economic competitiveness, but they represent a widely accepted objective gauge used by firms. Crime rates generally reflect underlying economic conditions and may signal deeper systemic problems better than standard economic measures.

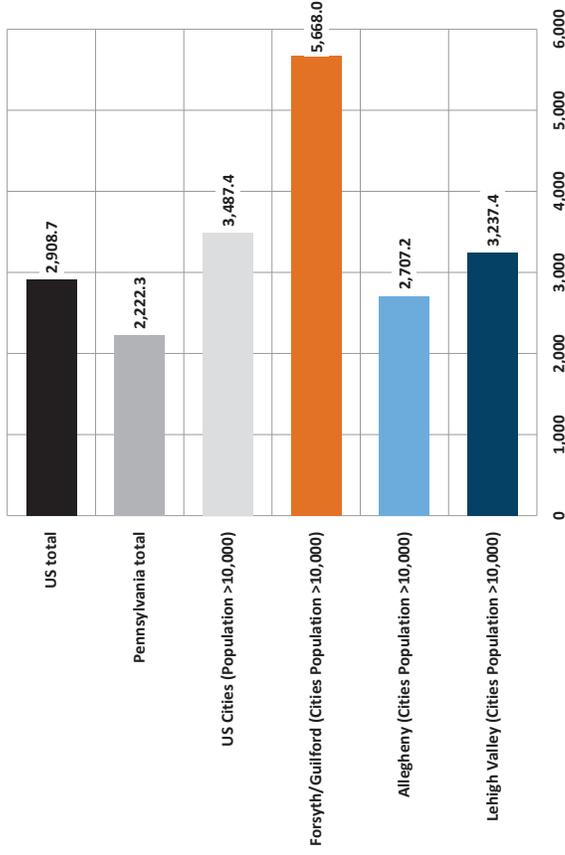
Measuring crimes in cities with populations greater than 10,000, Lehigh Valley has lower violent crime rates compared to the benchmark communities, and the average among all US cities in the same population range (Figure 9 and Table 7). Property crime rate comparisons are mixed; Lehigh Valley is lower than one benchmark community and average among all US cities in the same population range (Figure 10 and Table 7). Rates collected by state police departments representing entire counties were also lowest in Lehigh Valley compared to the benchmark communities.

Figure 9
Violent Crime Rates per 100,000 Residents
2011



Source: Federal Bureau of Investigation, Garner Economics

Figure 10
Property Crime Rates per 100,000 Residents
2011



Source: Federal Bureau of Investigation, Garner Economics

Table 7
2011 Crime Rates per 100,000 Residents
Highest relative rate shaded.

	Violent	Property
Lehigh Valley (Cities Population >10,000)	420.3	3,237.4
Allegheny (Cities Population >10,000)	578.1	2,707.2
Forsyth/Guilford (Cities Population >10,000)	631.2	5,668.0
US Cities (Population >10,000)	548.5	3,487.4
Pennsylvania total	355	2,222.3
United States total	386.3	2,908.7
Metropolitan Areas		
Allentown-Bethlehem-Easton	214.2	2,277.8
Winston-Salem	476.9	4,431.4
Pittsburgh	299.7	1,924.0
As reported by state police*		
Lehigh Valley	226.6	2,406.4
Allegheny	410.9	2,121.1
Forsyth/Guilford	486.4	4,611.9

Source: Federal Bureau of Investigation, Garner Economics
* Pennsylvania State Police, North Carolina Department of Justice

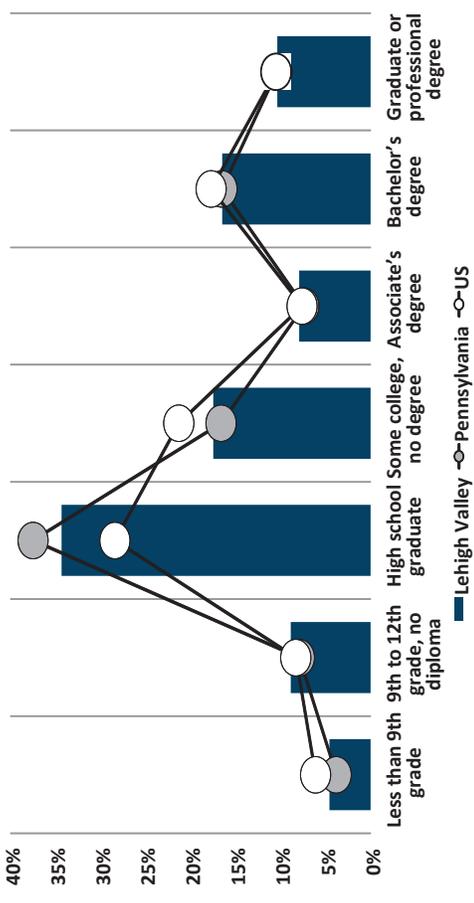
Education

Increasingly, the level of education of a community's population is becoming a decisive factor in economic competitiveness. Firms understand the need to operate in economies that offer a sufficient supply of workers that meet or exceed their demands. They also know that the lack of an educated workforce can significantly affect business performance.

Educational Attainment

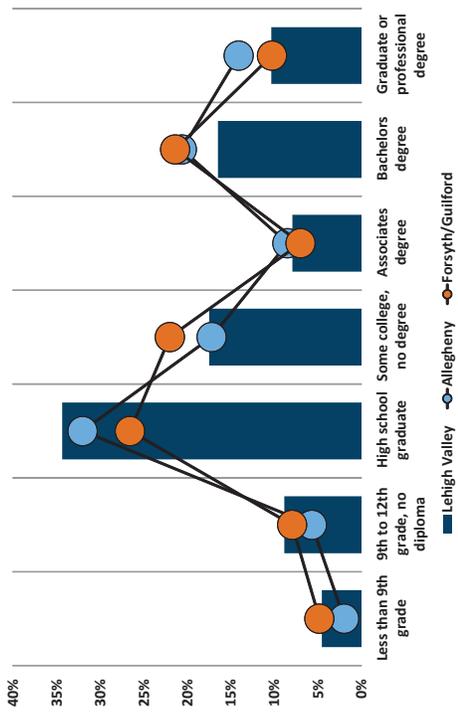
Comparing levels of educational attainment can reveal distinct characteristics among Lehigh Valley's residents ages 25 and over. Compared to the state, nation, and both benchmark communities, Lehigh Valley has a higher relative proportion of residents whose highest level of educational attainment is *9th to 12th grade, no diploma*. No other educational attainment category was strongly dissimilar, although the percentage of *Bachelor's degree* attainment tied with the statewide rate as lowest among all geographies examined (Figures 11 & 12 and Table 8).

Figure 11
Educational Attainment Percent Total Population Age 25+
2009-2011 (3-year estimates)



Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Figure 12
Educational Attainment Percent Total Population Age 25+
2009-2011 (3-year estimates)



Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Table 8
Educational Attainment Percent Total Population Age 25+
2009-2011 (3-year estimates)
Highest Relative Figure Shaded

	Lehigh Valley #	%	Allegheny	Forsyth Guilford	Pennsylvania	US
Less than 9th grade	20,075	4.6%	2.0%	4.8%	3.8%	6.1%
9th to 12th grade, no diploma	39,033	8.9%	5.7%	8.0%	7.9%	8.3%
High school graduate	151,148	34.3%	32.0%	26.6%	37.5%	28.4%
Some college, no degree	76,907	17.5%	17.2%	22.0%	16.6%	21.3%
Associate's degree	34,942	7.9%	8.5%	7.0%	7.4%	7.6%
Bachelor's degree	72,518	16.5%	20.6%	21.4%	16.5%	17.7%
Graduate or professional degree	45,583	10.4%	14.1%	10.3%	10.4%	10.5%

Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Field of Bachelor's Degree

Beyond the level of educational attainment, the specific fields in which residents hold degrees may offer implications on the competitiveness and applicability of local knowledge and skills. Lehigh Valley has higher relative proportions of Bachelor's degree attainment in the fields of *Biological, Agricultural, and Environmental Sciences; Engineering; and Education* (Table 9).

Table 9
Field of Bachelor's Degree by Percentage of Total Age 25+
2009-2011 3-Year Estimate (highest relative percentages in shaded)

	Lehigh Valley #	%	Allegheny	Forsyth Guilford	Pennsylvania	US
Computers, Mathematics, and Statistics	5,774	4.5%	5.5%	4.0%	4.2%	4.3%
Biological, Agricultural, and Environmental Sciences	8,185	6.4%	5.2%	5.9%	6.1%	6.0%
Physical and Related Sciences	5,191	4.0%	4.2%	3.8%	4.0%	3.7%
Psychology	6,916	5.4%	5.4%	5.7%	5.1%	4.8%
Social Sciences	8,454	6.6%	7.8%	8.2%	7.3%	8.2%
Engineering	11,329	8.8%	7.7%	5.7%	6.9%	7.5%
Multidisciplinary Studies	834	0.6%	0.5%	0.6%	0.6%	0.6%
Science and Engineering Related Fields	12,059	9.4%	9.5%	8.8%	9.9%	8.9%
Business	22,843	17.8%	19.3%	19.7%	18.4%	19.6%
Education	21,203	16.5%	12.2%	12.5%	15.9%	13.5%
Literature and Languages	5,973	4.6%	4.6%	5.0%	4.3%	4.7%
Liberal Arts and History	5,478	4.3%	5.0%	5.5%	5.2%	5.4%
Visual and Performing Arts	4,572	3.6%	3.9%	4.6%	3.5%	4.0%
Communications	3,870	3.0%	4.8%	3.9%	3.6%	3.7%
Other	5,916	4.6%	4.5%	6.2%	5.1%	5.2%

Source: US Census Bureau, Garner Economics

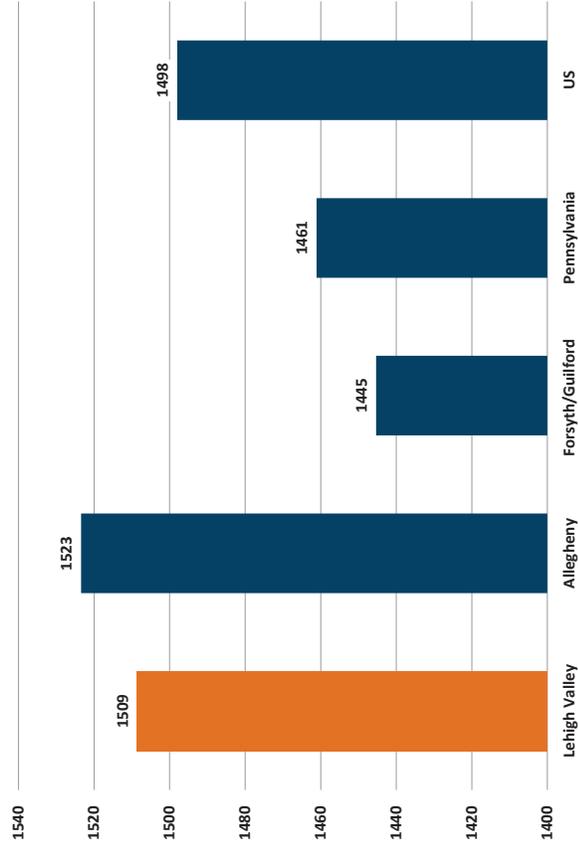
SAT Scores

The SAT Reasoning Test is a standardized test for college admissions in the United States and a widely accepted measure of education quality. SAT scores are especially relevant to businesses because they provide a measure of the “final product” of public schools as well as the educational quality of those entering the workforce.

At 1509, Lehigh Valley’s 2012 SAT composite scores are above the state, nation, and Forsyth/Guilford (Figure 13 and Table 10). Allegheny County displayed the highest composite and individual subject scores, while Lehigh Valley was second highest in each category (Figure 14 and Table 10).

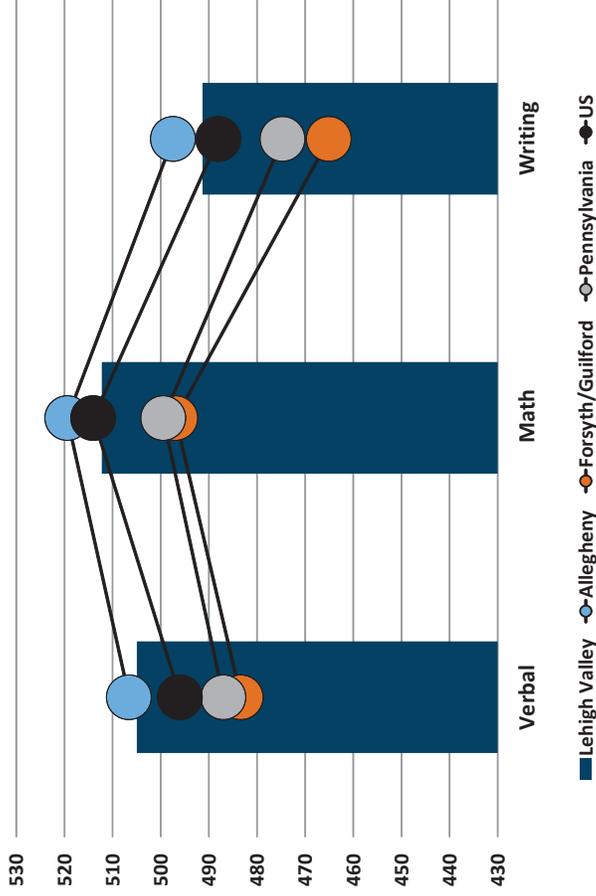
Figure 13

2012 SAT Combined Scores



Source: Pennsylvania Department of Education, North Carolina Department of Public Instruction, Garner Economics

Figure 14
2012 SAT Subject Scores



Source: Pennsylvania Department of Education, North Carolina Department of Public Instruction, Garner Economics

Table 10

2012 SAT Scores: Highest relative rates shaded.

	Verbal	Math	Writing	Combined Score
Lehigh Valley	505	512	491	1509
Allegheny	507	519	497	1523
Forsyth/Guilford	483	497	465	1445
Pennsylvania	487	499	475	1461
United States	496	514	488	1498

Source: Pennsylvania Department of Education, North Carolina Department of Public Instruction, Garner Economics

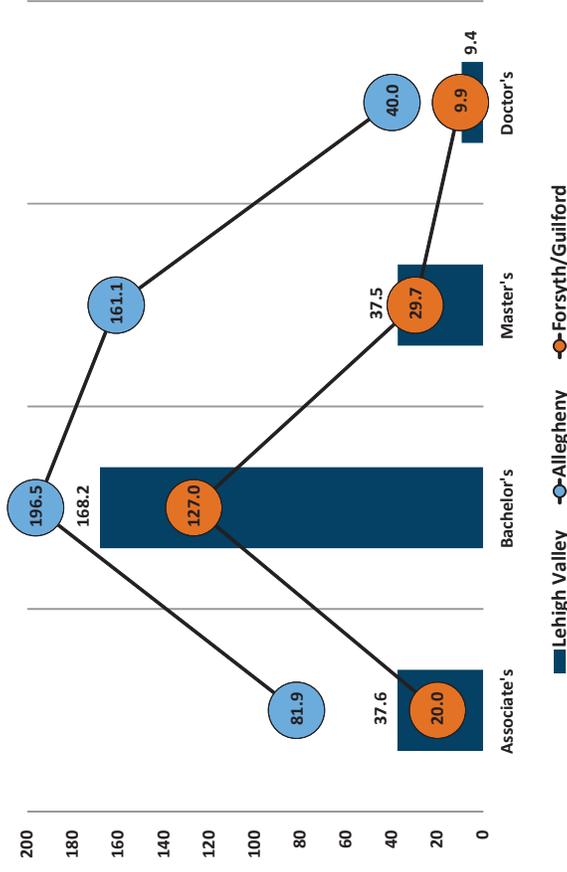
STEM Degree Completions

Degree completions in STEM fields (Science, Technology, Engineering, and Mathematics) are an important indicator of regional competitiveness and economic potential. STEM-related careers are among some of the best-paying jobs, typically having excellent potential for future growth.

Measured as *completions per 100,000 residents*, and compared to the benchmarks, Lehigh Valley is mostly above Forsyth/Guilford and below Allegheny County for the number of Associate’s, Bachelor’s, and Master’s degree completions in STEM fields (Figure 15 and Tables 11 & 12).

Within STEM fields, the highest number of Associate’s degree completions in Lehigh Valley are in *Computer Science*, and the highest number of Bachelor’s, Master’s, and Doctor’s degree completions are all in *Engineering* (Figure 16 and Table 13).

Figure 15
2012 STEM Degree Completions
Per 100,000 Residents



Source: National Center for Education Statistics, Garner Economics

Table 11
STEM Degree Completions 2012
Rate per 100,000 Residents
Highest relative rates shaded.

	Associate's	Bachelor's	Master's	Doctor's
Lehigh Valley	37.6	168.2	37.5	9.4
Allegheny	81.9	196.5	161.1	40.0
Forsyth/Guilford	20.0	127.0	29.7	9.9

Source: National Center for Education Statistics, Garner Economics

Table 12
STEM Degree Completions 2012

	Associate's	Bachelor's	Master's	Doctor's
Lehigh Valley	245	1,096	244	61
Allegheny	1,002	2,404	1,971	489
Forsyth/Guilford	166	1,055	247	82

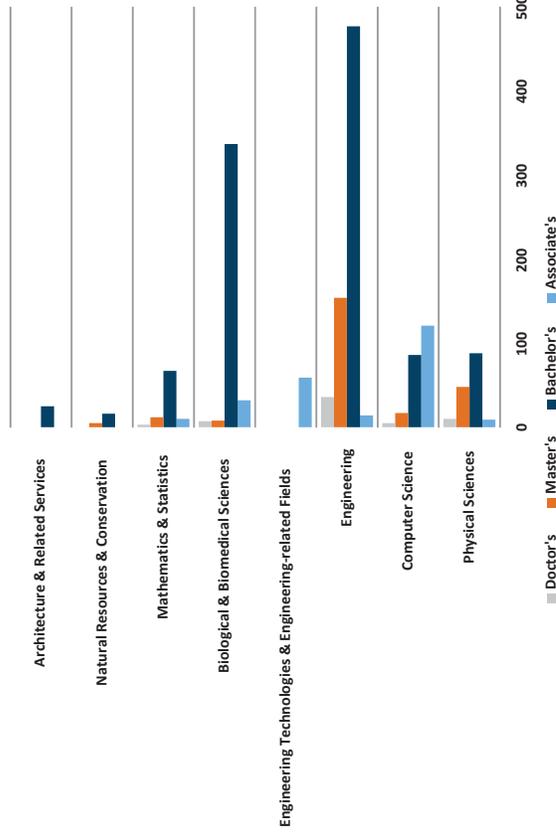
Source: National Center for Education Statistics, Garner Economics

Table 13
Annual STEM Completions
Lehigh Valley 2012
Highest relative number shaded.

	Associate's	Bachelor's	Master's	Doctor's
Physical Sciences	9	88	48	10
Computer Science	121	86	17	5
Engineering	14	477	154	36
Engineering Technologies & Engineering-related Fields	59	0	0	0
Biological & Biomedical Sciences	32	337	8	7
Mathematics & Statistics	10	67	12	3
Natural Resources & Conservation	0	16	5	0
Architecture & Related Services	0	25	0	0
Non-STEM	1,908	2,652	748	40

Source: National Center for Education Statistics, Garner Economics

Figure 16
Annual STEM Completions
Lehigh Valley 2012



Source: National Center for Education Statistics, Garner Economics

College or Graduate School Enrollment

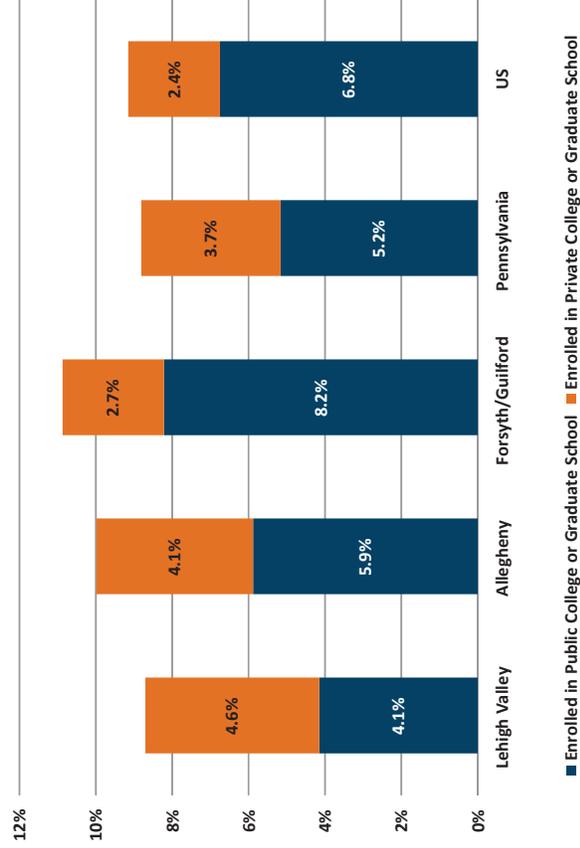
Annually, 8.7 percent of the population ages 15 and over are enrolled in a College or Graduate school in Lehigh Valley, of which 4.1 percent are in public schools and the remaining 4.6 percent in private schools (Figure 17 and Table 14). The total enrollment percentage is lower than both benchmark communities, the state, and the nation. Lehigh Valley had the largest comparable share (4.6 percent) of College or Graduate school enrollment in *private* schools.

Table 14
Percent Population Enrolled in College or Graduate School
Ages 15 and Over
2007-2011 Annual Estimates
Highest relative percentages shaded.

	Lehigh Valley	Allegheny	Forsyth	Pennsylvania	US
	#	%	Guilford		
Public	21,715	4.1%	8.2%	5.2%	6.8%
Private	23,851	4.6%	2.7%	3.7%	2.4%
Total	45,566	8.7%	10.9%	8.9%	9.2%

Source: US Census Bureau, Garner Economics

Figure 17
Percent Population Enrolled in College or Graduate School
Ages 15 and Over
2007-2011 Annual Estimate



Source: US Census Bureau, Garner Economics

Population In-migration by Educational Attainment

Compared to the state, nation, and benchmark communities, Lehigh Valley attracts a higher proportion of new residents, ages 25 and older, with the highest level of educational attainment at *Less than high school graduate* (Figure 18 and Table 15). Conversely, Lehigh Valley attracts a relatively smaller proportion of new residents with educational attainment of *Bachelor's* compared to the state, nation, and both benchmark communities.

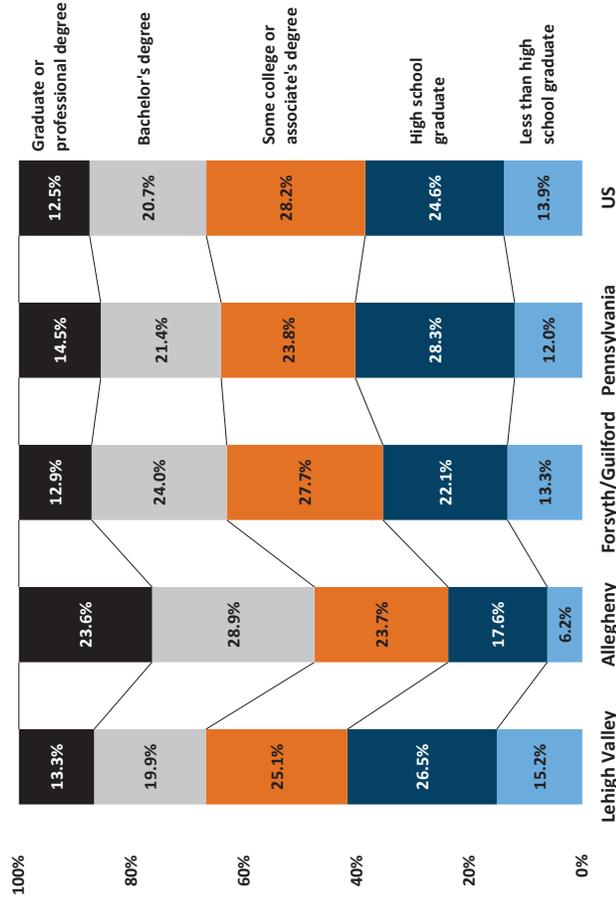
It should be noted that the data collection and methodology for these figures differs from that reported earlier pertaining to the *sources of population change*. The *In-migration by Educational Attainment* data sample is smaller and should be used as a measure of relative comparison across geographies, rather than an exact, absolute measure.

Table 15
In-migration Population Ages 25 and over
2007-2011 5-Year Annual Estimates (Highest relative percentages in shaded)

	Lehigh Valley	Allegheny	Forsyth Guilford	PA	US
	#	%			
Less than high school graduate	3,431	15.2%	6.2%	13.3%	13.9%
High school graduate	5,989	26.5%	17.6%	22.1%	24.6%
Some college or associate's degree	5,681	25.1%	23.7%	27.7%	23.8%
Bachelor's degree	4,491	19.9%	28.9%	24.0%	20.7%
Graduate or professional degree	3,013	13.3%	23.6%	12.9%	14.5%
					12.5%

Source: US Census Bureau, Garner Economics

Figure 18
Educational Attainment by Percent of In-migration Population
Ages 25 and over
2007-2011 5-Year Annual Estimates



Source: US Census Bureau, Garner Economics

Worker Flows

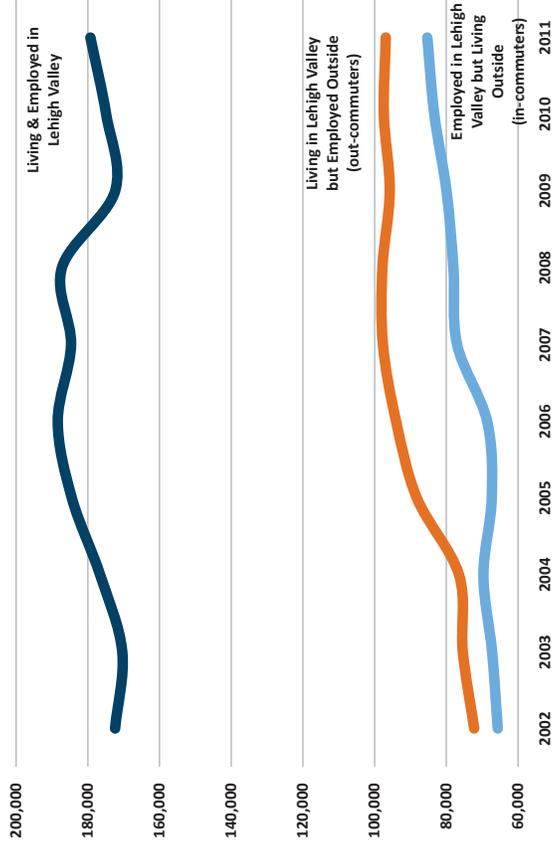
Worker flows help define the size of a local economy’s labor draw, and trends help describe attraction and regional competition. Worker flows represent both daily commuters and short-term away-from-home assignments (major construction projects, on-site consulting, etc.).

From 2002 to 2011, the number and proportion of workers who both live and work in the Lehigh Valley has increased by 4 percent or 6,885 more workers (Figure 19 and Table 16). Over the same period, the number of workers “Employed in the Lehigh Valley but Living Outside” increased by 34.2 percent or 24,669. Additionally, the number of workers “Living in the Lehigh Valley but Employed Outside” increased by 29.9 percent or 19,647 workers.

Among working residents of Lehigh Valley, 112,976 or 40.9 percent of the total are employed in Lehigh County. Northampton County is the work location of 66,317 Lehigh Valley resident workers or 24 percent of the total (Table 17).

Of all workers in Lehigh Valley, 100,821 or 38.8 percent of the total live in Lehigh County. Northampton County is the home of 78,472 or 29.7 percent of the total workers (Table 18).

Figure 19
Worker Flows
Lehigh Valley



Source: US Census Bureau, Garner Economics

Table 16
Worker Flows
Lehigh Valley

	2011	2002-2011 Change
Living & Employed in Lehigh Valley	179,293	6,885 4.0%
Living in Lehigh Valley but Employed Outside (out-commuters)	96,884	24,669 34.2%
Employed in Lehigh Valley but Living Outside (in-commuters)	85,292	19,647 29.9%

Source: US Census Bureau, Garner Economics

Table 17

Where Workers Who live in
Lehigh Valley are Employed
Top Ten 2011

County	Number	Percent
Lehigh County, PA	112,976	40.9%
Northampton County, PA	66,317	24.0%
Montgomery County, PA	13,033	4.7%
Bucks County, PA	10,134	3.7%
Philadelphia County, PA	6,229	2.3%
Berks County, PA	5,735	2.1%
Warren County, NJ	5,640	2.0%
Monroe County, PA	4,634	1.7%
Hunterdon County, NJ	3,624	1.3%
Chester County, PA	3,609	1.3%

Source: US Census Bureau, Garner Economics

Table 18

Where Workers Who are
Employed in Lehigh Valley Live
Top Ten 2011

County	Number	Percent
Lehigh County, PA	100,821	38.1%
Northampton County, PA	78,472	29.7%
Berks County, PA	11,331	4.3%
Bucks County, PA	9,449	3.6%
Carbon County, PA	7,074	2.7%
Montgomery County, PA	6,884	2.6%
Monroe County, PA	6,780	2.6%
Philadelphia County, PA	3,847	1.5%
Luzerne County, PA	3,570	1.3%
Schuylkill County, PA	3,382	1.3%

Source: US Census Bureau, Garner Economics

CHAPTER 5: ECONOMIC DYNAMICS



Gross Domestic Product

Gross Domestic Product (GDP) is the most comprehensive measure of economic activity or output. GDP for metro areas is derived as the sum of the GDP originating in all the industries in the area. GDP for metro areas is only available for the years 2001-2012. In 2012, the inflation-adjusted real GDP for the Allentown-Bethlehem-Easton metro totaled 27.2 billion (Table 19). Over the last ten years, real GDP in Allentown-Bethlehem-Easton increased by \$1.4 billion or 5.7 percent, a rate below all but the Winston-Salem metro (Table 19).

Measured in per capita terms, at \$32,887 in 2012, Allentown-Bethlehem-Easton has a lower relative amount of economic activity than benchmark metros, the state, and nation (Figure 20 and Table 20). Over the last ten years, real per capita GDP in Allentown-Bethlehem-Easton declined by \$1,247 or 3.3 percent, while over the last five years real per capita GDP declined by \$19 or 0.1 percent.

Table 19
Real Gross Domestic Product
(millions of dollars - inflation adjusted to 2005)

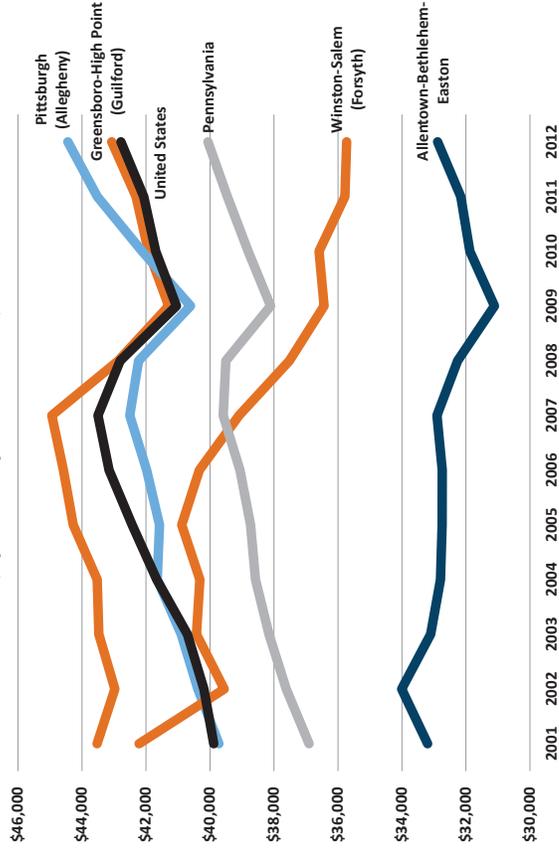
	2012	Ten-Year Change Dollars	%	Five-Year Change Dollars	%
Allentown-Bethlehem-Easton	\$27,203	\$1,469	5.7%	\$629	2.4%
Greensboro-High Point (Guilford)	\$31,702	\$3,432	12.1%	\$220	0.7%
Pittsburgh (Allegheny)	\$104,910	\$7,667	7.9%	\$4,639	4.6%
Winston-Salem (Forsyth)	\$23,142	\$29	0.1%	(\$1,214)	-5.0%
Pennsylvania	\$511,345	\$47,514	10.2%	\$13,989	2.8%
United States	\$13,430,576	\$1,870,775	16.2%	\$327,235	2.5%

Source: US Bureau of Economic Analysis, Telestrian, Garner Economics

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Figure 20
Per Capita Real Gross Domestic Product
(inflation adjusted to 2005)



Source: US Bureau of Economic Analysis, Telestrian, Garner Economics

Table 20
Per Capita Real Gross Domestic Product
(inflation adjusted to 2005)

	2012	Ten-Year Change		Five-Year Change	
		Dollars	%	Dollars	%
Allentown-Bethlehem-Easton	\$32,887	(\$1,124)	-3.3%	(\$19)	-0.1%
Greensboro-High Point (Guilford)	\$43,070	\$97	0.2%	(\$1,873)	-4.2%
Pittsburgh (Allegheny)	\$44,440	\$4,063	10.1%	\$1,933	4.5%
Winston-Salem (Forsyth)	\$35,730	(\$3,825)	-9.7%	(\$3,360)	-8.6%
Pennsylvania	\$40,063	\$2,448	6.5%	\$477	1.2%
United States	\$42,784	\$2,593	6.5%	(\$715)	-1.6%

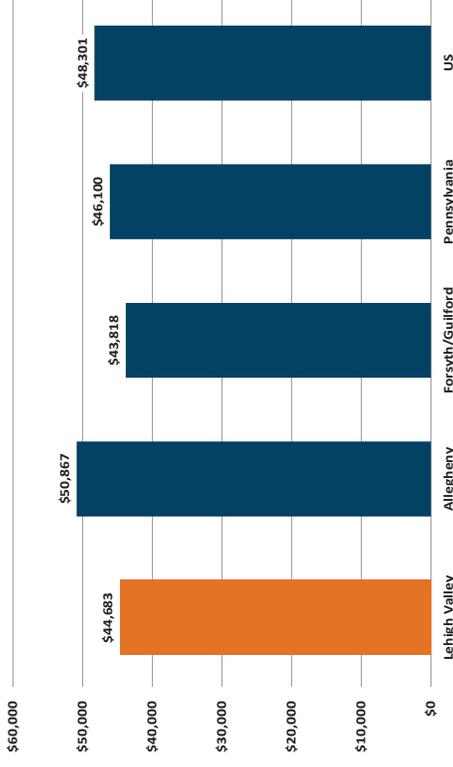
Source: US Bureau of Economic Analysis, Garner Economics

Average Wage Per Job

According to the US Bureau of Economic Analysis, in 2011, Lehigh Valley's average wage per job equaled \$44,683.⁴ The figure is 8.1 percent below the nation, 3.2 percent below the state, and 13.8 percent below Allegheny County. Lehigh Valley's average wage per job is 1.9 percent above Forsyth/Guilford (Figure 21). Over the last ten years, the nominal (unadjusted for inflation) average wage per job in Lehigh Valley has increased by 31.6 percent; the pace is above Forsyth/Guilford but below the nation, the state, and Allegheny County. Over the five most recent years, the rate of growth is 11.5 percent, a pace below the other geographies examined.

Correcting growth in the average wage per job to real values (adjusting for inflation) provides a more realistic view of the actual spending value of the wage dollars. Over the last ten years, growth in real values for the average wage per job in Lehigh Valley has increased by 3.6 percent (\$1,231) and, in the last five years, declined by 0.1 percent (-\$37) (Figure 22).

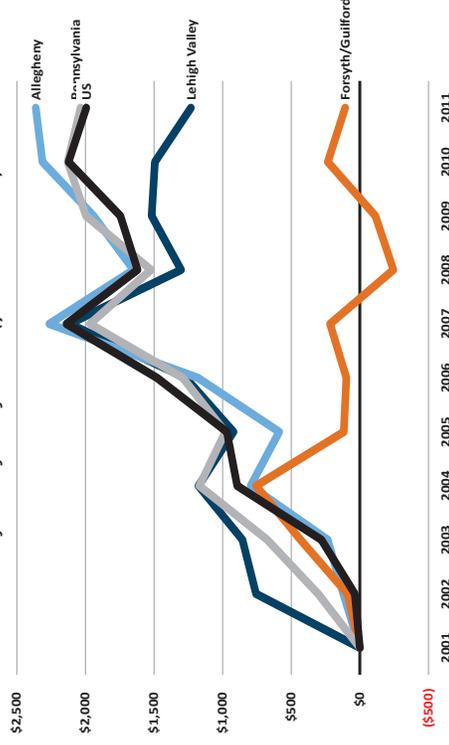
Figure 21
Average Wage Per Job - 2011



Source: US Bureau of Economic Analysis, Garner Economics

Figure 22

Ten-Year Change in Average Wage per Job Adjusted for Inflation (year 2001 = 0)



Source: US Bureau of Economic Analysis, Garner Economics

⁴Average wage per job is wage and salary disbursements divided by the number of wage and salary jobs (total wage and salary employment). Wage and salary disbursements consist of the monetary remuneration of employees, including the compensation of corporate officers; commissions, tips, and bonuses; and receipts-in-kind or pay-in-kind, such as the meals furnished to the employees of restaurants.

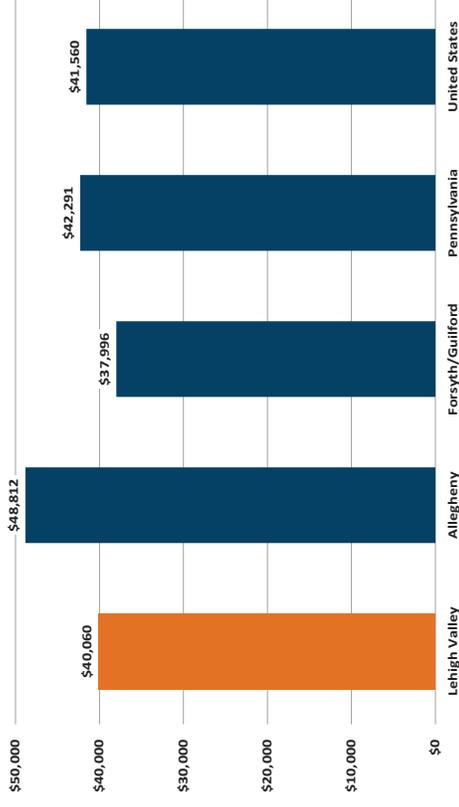
Per Capita Income

According to the US Bureau of Economic Analysis, in 2011, Lehigh Valley's per capita income equaled \$40,060.⁵ The figure is 3.7 percent below the nation, 5.6 percent below the state, and 21.8 percent below Allegheny County. Lehigh Valley's per capita income is 5.2 percent above Forsyth/Guilford (Figure 23 and Table 21).

Over the last ten years, the nominal (unadjusted for inflation) per capita income in Lehigh Valley has increased by 29.5 percent; the pace is below the nation, the state, and Allegheny County. Over the five most recent years, the rate of growth is 12 percent, below the nation and Allegheny County.

Correcting the growth in per capita income to real values (adjusting for inflation) provides a more realistic view of the actual change in the spending value of income dollars. Over the last ten years, growth in real values for the per capita income in Lehigh Valley has increased by 2 percent (\$604) and, in the last five years, by 0.4 percent (\$111) (Figure 24 and Table 21).

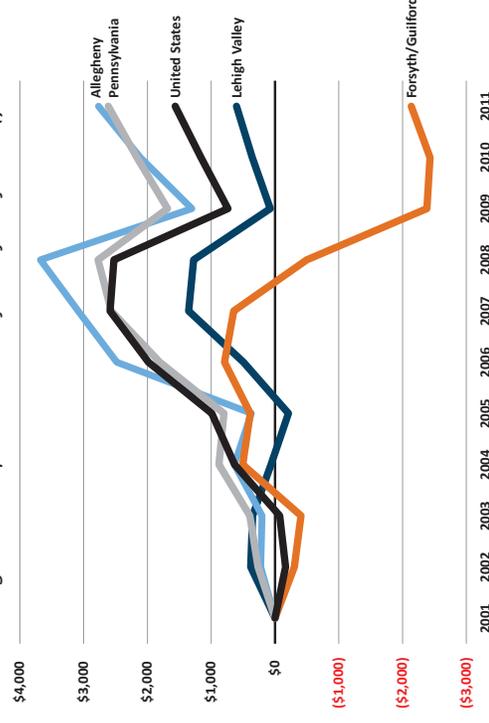
Figure 23
Per Capita Income - 2011



Source: US Bureau of Economic Analysis, Garner Economics

Figure 24

Ten-Year Change in Per Capita Income Adjusted for Inflation (year 2001 = 0)



Source: US Bureau of Economic Analysis, Garner Economics

⁵Per capita income is the income that is received by persons from all sources. It is calculated as the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income with inventory valuation and capital consumption adjustments, rental income of persons with capital consumption adjustment, personal dividend income, personal interest income, and personal current transfer receipts less contributions for government social insurance. This measure of income is calculated as the personal income of the residents of a given area divided by the resident population of the area.

Table 21
Per Capita Income
Highest relative figures shaded.

2011	10-Year Change			5-Year Change		
	Unadjusted \$	%	Inflation Adjusted \$	Unadjusted \$	%	Inflation Adjusted \$
Lehigh Valley	\$40,060	29.5%	\$604	\$4,283	12.0%	\$111
Allegheny	\$48,812	36.9%	\$2,767	\$5,391	12.4%	\$287
Forsyth/Guilford	\$37,996	18.5%	(\$2,137)	\$610	1.6%	(\$2,927)
Pennsylvania	\$42,291	37.8%	\$2,614	\$5,307	14.3%	\$807
United States	\$41,560	33.4%	\$1,564	\$3,835	10.2%	(\$419)

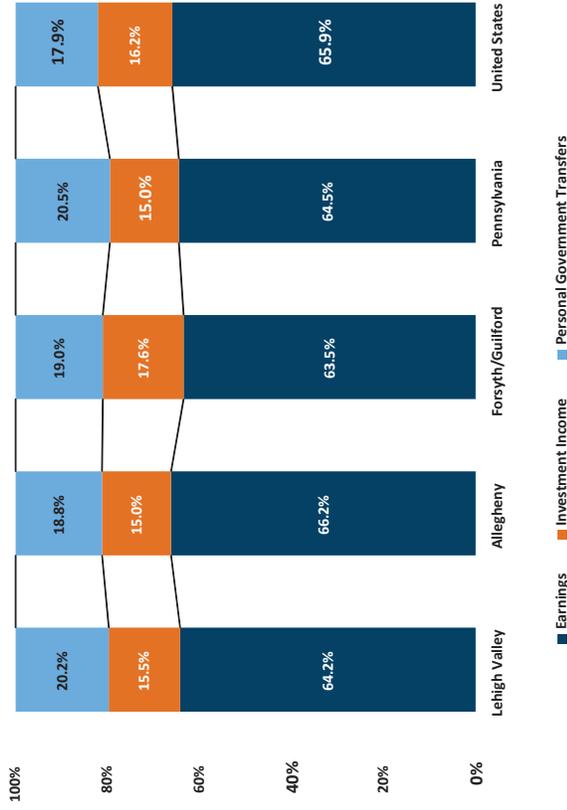
Source: US Bureau of Economic Analysis, *Garner Economics*

Components of Per Capita Income

Per capita income is the sum of earnings, investment income, and personal government transfer payments divided by the resident population. In 2011, earnings accounted for 64.2 percent of per capita income in Lehigh Valley, a proportion similar to the nation, the state, and both benchmark communities (Figure 25 and Table 22).

Figure 25

Components of Per Capita Income 2011



Source: US Bureau of Economic Analysis, STATA Indiana, Garner Economics

Table 22

Components of Per Capita Income -2011
Highest relative percentages shaded.

	Earnings	Investment Income	Personal Government Transfers
Lehigh Valley	64.2%	15.5%	20.2%
Allegheny	66.2%	15.0%	18.8%
Forsyth/Guilford	63.5%	17.6%	19.0%
Pennsylvania	64.5%	15.0%	20.5%
United States	65.9%	16.2%	17.9%

Source: US Bureau of Economic Analysis, STATA Indiana, Garner Economics

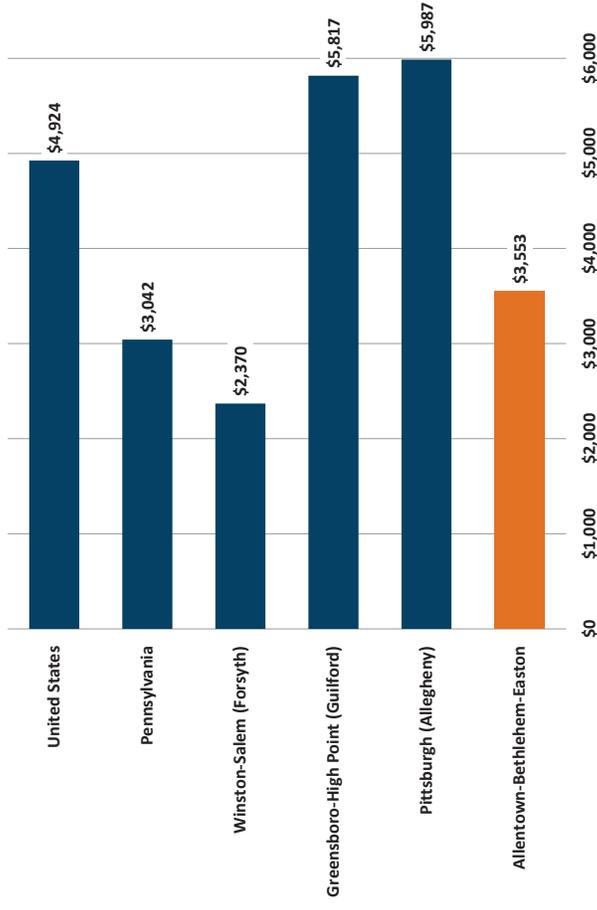
Exports

In a global economy, exports are playing a more critical role in local economic competitiveness. Exporting has proven to be a powerful means to generate wealth and provides evidence of an area's capacity to compete with firms outside the United States.

As of 2012, the Allentown-Bethlehem-Easton metro had exports totaling \$2.9 billion. In per capita terms, at \$3,553, Allentown-Bethlehem-Easton exports are below the nation and two benchmark metros (Figure 26 and Table 23). From 2005 to 2012, per capita exports increased 95.4 percent in the Allentown-Bethlehem-Easton metro—a rate above the nation, the state, and two benchmark metros (Figure 27 and Table 23).

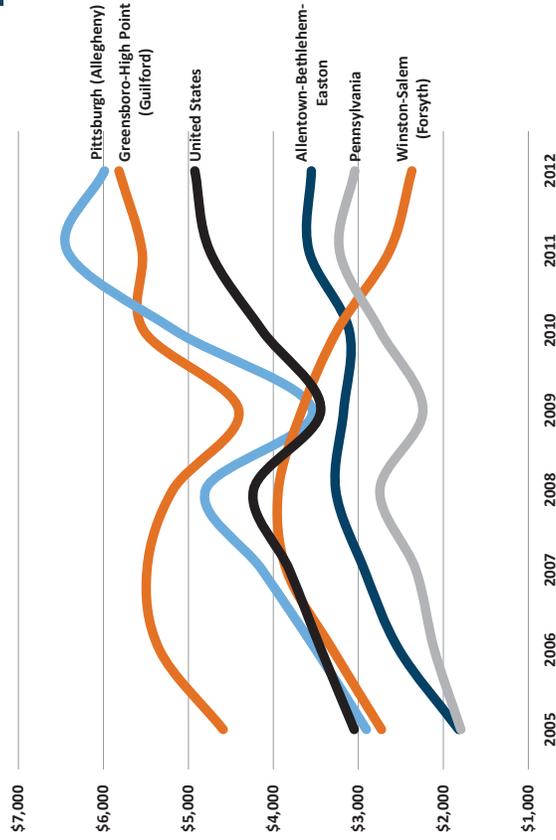
At 32.6 percent, *Chemical Manufacturing* comprised the greatest share of Allentown-Bethlehem-Easton's exports in 2012. The next largest contributor was *Machinery Manufacturing* at 14.8 percent of all exports.

Figure 26
Per Capita Exports - 2012



Source: Office of Trade and Industry Information, Manufacturing and Services, International Trade Administration, U.S. Department of Commerce, Garner Economics

Figure 27
2005-2012
Per Capita Exports



Source: Office of Trade and Industry Information, Manufacturing and Services, International Trade Administration, U.S. Department of Commerce, Garner Economics

Table 23
Exports

	2012 Total	2012 Per Capita	2005-2012 Change \$	%
Allentown-Bethlehem-Easton	\$2,939,010,235	\$3,553.09	\$1,734.43	95.4%
Pittsburgh (Allegheny)	\$14,134,705,525	\$5,987.42	\$1,226.76	26.7%
Greensboro-High Point (Guilford)	\$4,281,926,132	\$5,817.32	\$3,081.78	106.1%
Winston-Salem (Forsyth)	\$1,148,100,852	\$2,369.97	(\$358.24)	(13.1%)
Pennsylvania	\$38,829,058,903	\$3,042.19	\$1,248.30	69.6%
United States	\$1,545,708,500,116	\$4,923.99	\$1,874.81	61.5%

Source: Office of Trade and Industry Information, Manufacturing and Services, International Trade Administration, U.S. Department of Commerce, Garner Economics

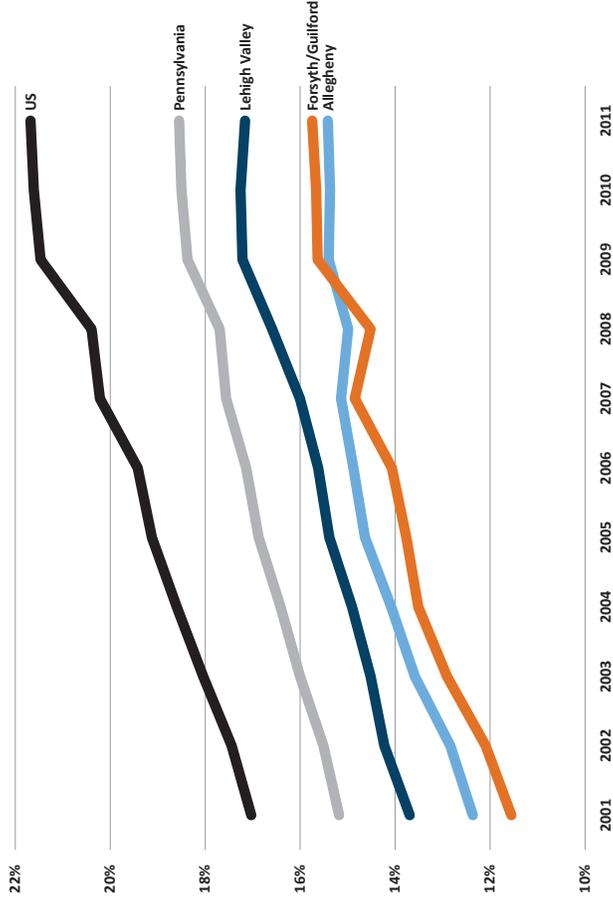
Proprietor Employment

Measuring the relative proportion of proprietor employment is a means to gauge entrepreneurial activity, which, in turn, can provide a view of local risk-taking and dynamism.

According to the US Bureau of Economic Analysis, as of 2011, proprietors accounted for 17.2 percent of total employment in Lehigh Valley—a rate below the nation and state but above both benchmark communities (Figure 28 and Table 24). Over the last ten years, the number of proprietors in Lehigh Valley has increased by 37.4 percent, outpacing all but Forsyth/Guilford.

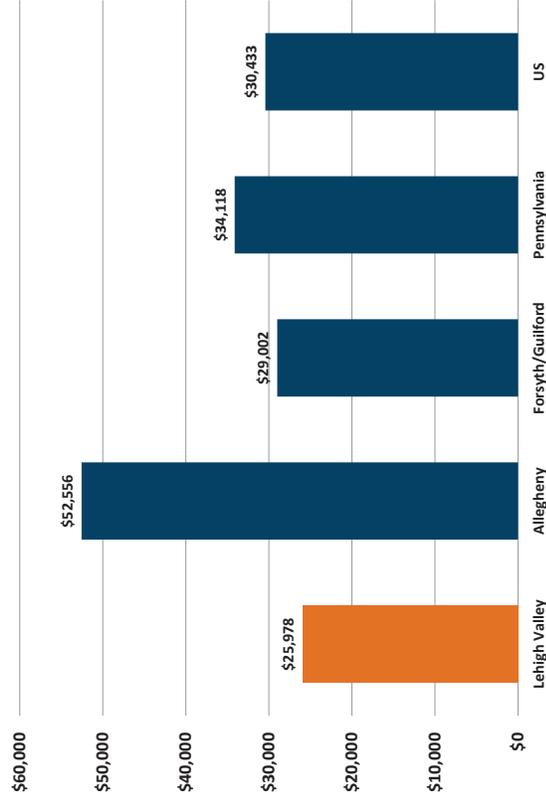
In 2011, per capita income for nonfarm proprietors in Lehigh Valley was \$25,978 (Figure 29 and Table 24). The amount is below the state, the nation, and both benchmark communities.

Figure 28
Proprietor Employment
Percent of Total Employment



Source: US Bureau of Economic Analysis, STATS Indiana, Garner Economics

Figure 29
Nonfarm Proprietors
2011 Per Capita Income



Source: US Bureau of Economic Analysis, STAS Indiana, Garner Economics

Table 24
2011
Proprietor Employment
Highest Relative Figures Shaded

	2011 Percent Total Employment	10-Year Percent Change	Nonfarm Per Capita Income
Lehigh Valley	17.2%	37.4%	\$25,978
Allegheny	15.4%	23.6%	\$52,556
Forsyth/Guilford	15.7%	39.7%	\$29,002
Pennsylvania	18.5%	27.4%	\$34,118
United States	21.7%	35.2%	\$30,433

Source: US Bureau of Economic Analysis, Garner Economics

Major Industry Sector Composition

A comparison of major industry employment composition provides a broad relative assessment of differences among economies and may help indicate areas of uniqueness. Lehigh Valley has a higher proportion of employment in *Transportation and Warehousing* and *Arts, Entertainment, and Recreation* (Table 25). The area is tied with the state on the proportion employed in *Retail Trade*. Conversely, the area has a lower relative proportion of employment in *Federal & State Government, Agriculture, Mining, Professional and Technical Services, Finance and Insurance, and Real Estate and Rental and Leasing*. A detailed analysis of Lehigh Valley’s industrial, occupational, and cluster specialization relative to the nation can be found in Section 6: Local Specialization, Competitiveness & Growth.

Table 25
Employment by Major Industry Sectors Percent of Total 2012
(highest relative percentages in shaded)

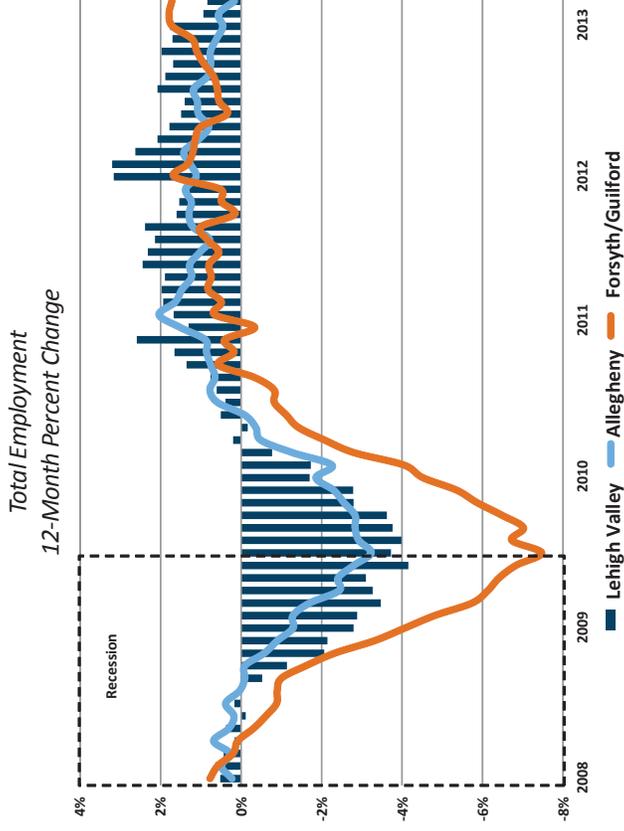
	Lehigh Valley	Allegheny	Forsyth Guilford	PA	US
Federal Government	0.7%	2.0%	1.3%	1.8%	2.1%
State Government	0.7%	0.7%	2.9%	2.4%	3.4%
Local Government	9.8%	7.0%	7.4%	8.2%	10.4%
Private, total	88.8%	90.4%	88.5%	87.6%	84.0%
Agriculture, forestry	0.0%	0.0%	0.1%	0.4%	0.9%
Mining, Quarrying, Oil & Gas	0.0%	0.3%	0.0%	0.6%	0.6%
Utilities	0.3%	0.4%	0.2%	0.4%	0.4%
Construction	3.4%	3.9%	3.3%	4.0%	4.2%
Manufacturing	10.6%	5.4%	10.7%	10.2%	9.0%
Wholesale Trade	4.1%	3.3%	4.8%	4.1%	4.3%
Retail trade	11.4%	10.8%	11.1%	11.4%	11.3%
Professional and Technical Services	3.8%	7.9%	4.2%	5.7%	6.0%
Management of Companies	3.6%	4.1%	2.9%	2.3%	1.5%
Administrative and Waste Services	6.7%	5.4%	8.5%	5.1%	6.1%
Educational Services	2.8%	5.2%	2.9%	3.3%	2.0%
Healthcare and Social Assistance	17.3%	17.6%	14.9%	16.5%	12.8%
Transportation and Warehousing	5.5%	2.5%	4.9%	3.7%	3.2%
Information	1.5%	1.9%	1.5%	1.6%	2.0%
Finance and Insurance	3.8%	6.7%	5.0%	4.5%	4.2%
Real Estate and Rental and Leasing	0.9%	1.4%	1.2%	1.0%	1.5%
Arts, Entertainment, and Recreation	2.2%	1.9%	1.2%	1.7%	1.5%
Accommodation and Food Services	7.6%	8.1%	8.6%	7.7%	8.9%
Other Services	3.0%	3.5%	2.5%	3.4%	3.5%

Source: US Bureau of Labor Statistics, *Garner Economics*

Total Employment

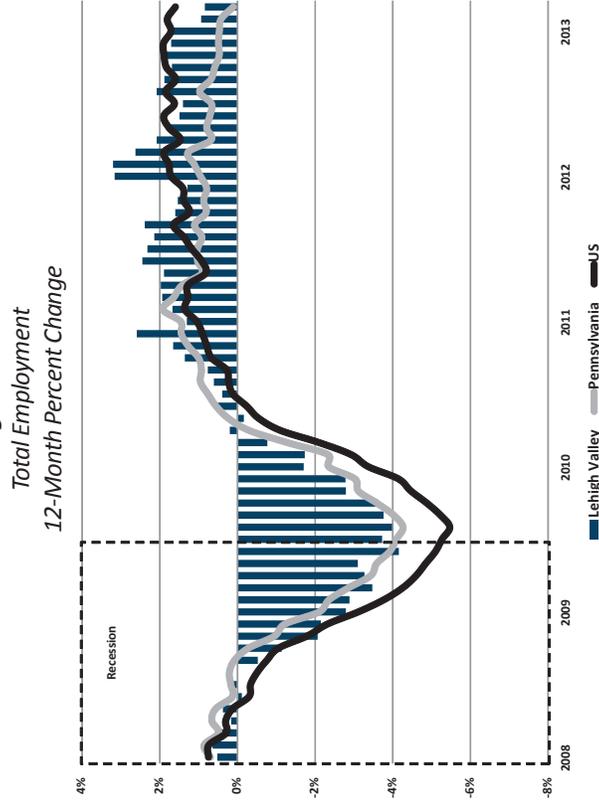
Over year 2012, total employment in Lehigh Valley is up 2.1 percent on average or 5,693 more jobs. The pace is above the nation, the state, and both benchmark communities. Since 2008, Lehigh Valley has experienced an annual average job growth rate of 0.2 percent, a pace also above the nation, the state, and both benchmark communities. Recession losses were not severe in Lehigh Valley, with the greatest losses at -4.2 percent, or -11,716 jobs, which is a pace less than what was experienced in the nation, the state, and one benchmark (Figures 30 & 31 and Table 26).

Figure 31



Source: US Bureau of Labor Statistics, Garner Economics

Figure 30



Source: US Bureau of Labor Statistics, Garner Economics

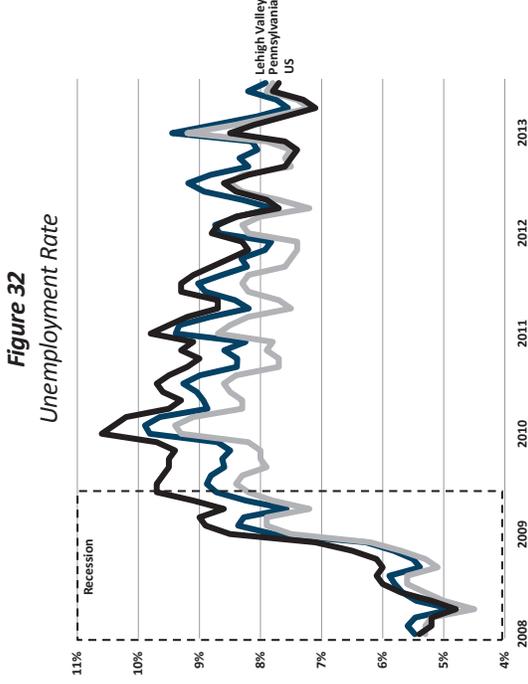
Table 26
2008-2013 1Q
Employment Trends
Highest Relative Number Shaded

	Lehigh Valley Jobs	Lehigh Valley Percent	Allegheny	Forsyth Guilford	Pennsylvania	US
2012 Average Job Growth Rate	5,693	2.1%	1.0%	1.0%	0.8%	1.8%
Highest Percent Job Loss	(11,716)	-4.2%	-3.2%	-7.5%	-4.3%	-5.5%
Highest Job Growth Rate	8,498	3.2%	2.0%	1.8%	1.9%	1.9%
5-Y Average Annual Job Growth Rate	412	0.2%	0.0%	-1.2%	-0.2%	-0.4%

Source: US Bureau of Labor Statistics, Garner Economics

Unemployment

The average unemployment rate over the last year in Lehigh Valley has averaged 8.3 percent (representing 28,554 unemployed persons). The rate is below the nation, the state, and one benchmark community (Figures 32 & 33 and Table 27). Over the last five years, the highest unemployment rate in Lehigh Valley was 9.9 percent (representing 32,489 unemployed persons), a rate above the state and one benchmark community. Over the entire 2008-2013 2Q period, the average unemployment rate in Lehigh Valley was 8.0 percent (representing 26,989 unemployed persons), a rate above the state and one benchmark community.

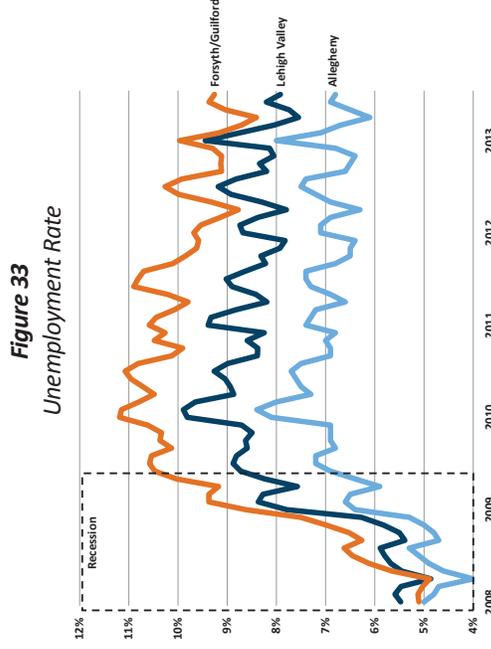


Source: US Bureau of Labor Statistics, Garner Economics

Table 27
2008-2013 2Q
Unemployment Trends (%)
Lowest Rates Shaded

	Lehigh Valley		Forsyth Guilford	Pennsylvania	US
	Unemployed	Percent			
Past Year Average Rate	28,554	8.3%	9.2%	7.9%	7.7%
5-Year Lowest Rate	15,982	4.9%	4.9%	4.5%	4.8%
5-Year Highest Rate	32,489	9.9%	11.2%	9.4%	10.6%
5-Year Average Rate	26,989	8.0%	9.2%	7.6%	8.3%

Source: US Bureau of Labor Statistics, Garner Economics

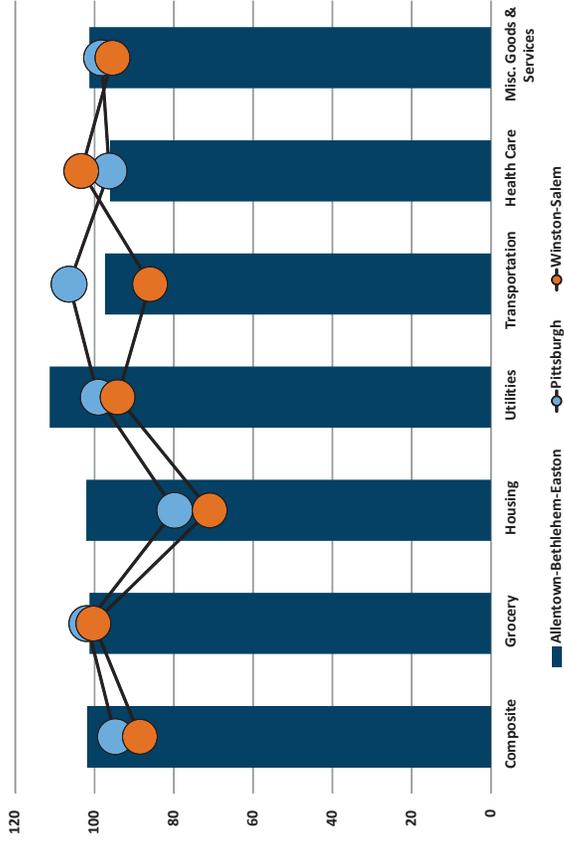


Source: US Bureau of Labor Statistics, Garner Economics

Cost of Living

At 101.8, the composite Cost-of-Living Index score in the Allentown-Bethlehem-Easton metro is above both benchmark communities (Figure 34 and Table 28). Among individual categories, the Allentown-Bethlehem-Easton metro has the highest index numbers in *Housing, Utilities, and Miscellaneous Goods & Services*.

Figure 34
Cost of Living Index
2012 1Q - 2013 1Q Average



Source: ACCRA, Garner Economics

Table 28
Cost of Living Index
2012 1Q - 2013 1Q Average
Highest relative number shaded.

	Composite	Grocery	Housing	Utilities	Transportation	Health Care	Misc. Goods & Services
Allentown-Bethlehem-Easton	101.8	101.3	102.1	111.3	97.4	96.1	101.3
Pittsburgh	94.7	101.9	79.8	99.1	106.4	96.3	98.2
Winston-Salem	88.5	100.3	70.9	94.2	86.0	103.3	95.5

Source: ACCRA, Garner Economics

Broadband

Measured as the percentage of households that have availability to select broadband offerings, Lehigh Valley places well, ranking highest or second highest in comparison to the nation, the state, and benchmark communities (Figure 35 and Table 29).

Figure 35
Broadband Availability 2012

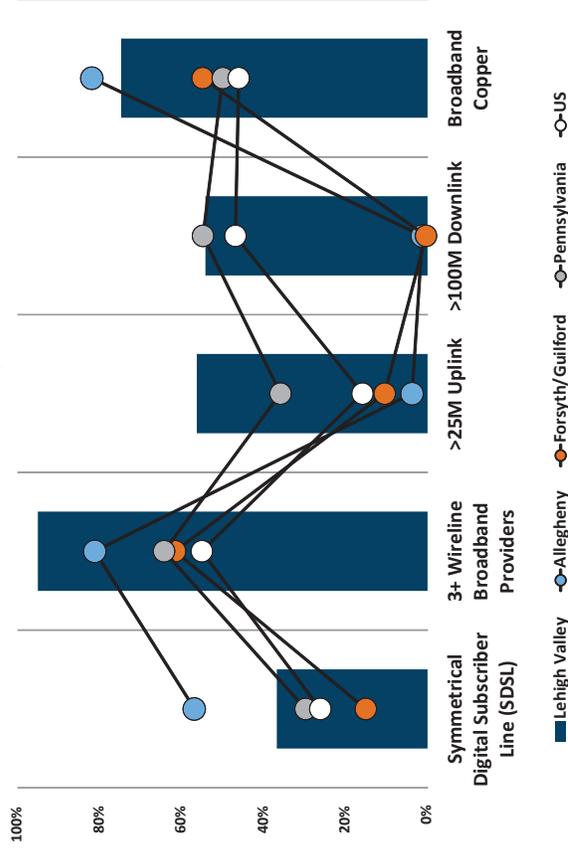


Table 29
Broadband Availability 2012
Highest relative percentages shaded.

	Symmetrical Digital Subscriber Line (SDSL)	3+ Wireline Broadband Providers	>25M Uplink	>100M Downlink	Broadband Copper
Lehigh Valley	36.8%	95.1%	56.3%	54.2%	74.8%
Allegheny	56.9%	81.2%	3.8%	1.3%	81.9%
Forsyth/Guilford	15.1%	61.6%	10.5%	0.4%	54.9%
Pennsylvania	29.8%	64.3%	35.9%	54.8%	50.0%
United States	26.2%	55.1%	15.9%	46.9%	46.1%

Source: National Telecommunications and Information Administration

Source: National Telecommunications and Information Administration

Airport Statistics

Among major airports in the United States, *Lehigh Valley International (ABE)* ranks 140th for the number of domestic passenger arrivals, 135th for scheduled flights, and 112th for the amount of freight/mail (Table 30). ABE ranks below both *Pittsburgh International* and *Piedmont Triad International*.

Table 30
Key Airport Statistics
US Flights Only

	Passengers Arrivals (1,000's)	Rank*	Scheduled Flights #	Rank*	Freight/Mail Mil lbs.	Rank*
Lehigh Valley International (ABE)	317	140	8,322	135	31	112
Pittsburgh International (PIT)	3,801	45	52,971	43	167	46
Piedmont Triad International (GSO)	867	89	20,283	80	164	47

* Among 827 US airports, 12 months ending March 2013
Source: US Department of Transportation, *Garner Economics*

CHAPTER 6: LOCAL SPECIALIZATION, COMPETITIVENESS & GROWTH



The following section provides a more detailed and in-depth assessment of the Lehigh Valley economy. The analysis examines the local economy from several different perspectives, each adding a supporting layer of information.

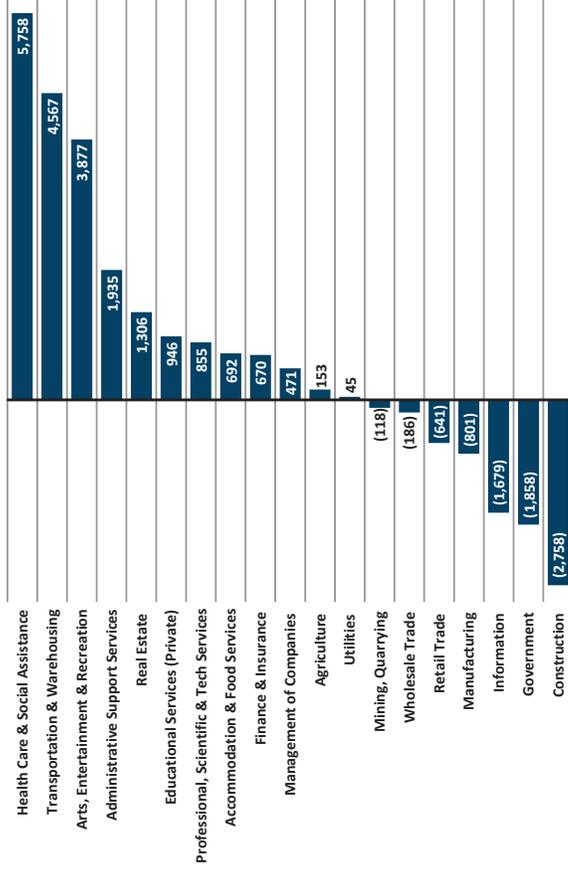
The assessment’s main goals are to provide historic context, reveal areas of unique specialization, gauge competitiveness, and help uncover emerging trends and opportunities.

The three main areas of analysis are: **major industries, occupations, and industry clusters**. For each area there are relative measures of specialization, growth, local competitiveness, and earnings.

Major Industry Sector Change

Over the last five years, the largest absolute employment gains came from *Health Care & Social Assistance* (up 5,758 jobs or 12 percent) (Figure 36 and Table 32). Other significant gains were made in *Transportation & Warehousing* (up 4,567 jobs or 32 percent) and *Arts, Entertainment & Recreation* (up 3,877 jobs or 54 percent). The greatest job losses have come from the *Construction* industry sector, down 2,758 jobs or 15 percent. The majority of remaining absolute losses came from *Government* (down 1,858 jobs or 5 percent) and *Information* (down 1,679 jobs or 24 percent). Of 19 major industry groups, losses were concentrated in seven.

Figure 36
Employment Change by Major Industry
Lehigh Valley 2008–2013 2Q



Source: *Economic Modeling Specialist, Garner Economics*

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Table 31

*Employment Change by Major Industry
Lehigh Valley 2008-2013 2Q*

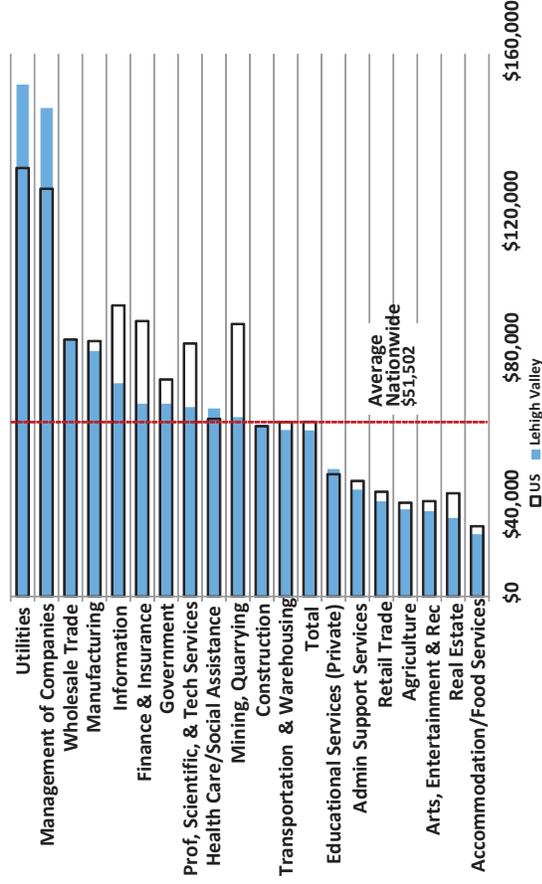
Major Industry Sector	2013 2Q Jobs	Employment Change #	%
Health Care & Social Assistance	54,957	5,758	12%
Transportation & Warehousing	18,639	4,567	32%
Arts, Entertainment & Recreation	10,999	3,877	54%
Administrative Support Services	22,707	1,935	9%
Real Estate	13,131	1,306	11%
Educational Services (Private)	12,437	946	8%
Professional, Scientific & Tech Services	18,275	855	5%
Accommodation & Food Services	22,883	692	3%
Finance & Insurance	17,370	670	4%
Management of Companies	10,498	471	5%
Agriculture	1,645	153	10%
Utilities	1,016	45	5%
Mining, Quarrying	433	(118)	-21%
Wholesale Trade	12,339	(186)	-1%
Retail Trade	38,258	(641)	-2%
Manufacturing	31,740	(801)	-2%
Information	5,308	(1,679)	-24%
Government	33,328	(1,858)	-5%
Construction	15,465	(2,758)	-15%

Source: Economic Modeling Specialist, Garner Economics

Industry Earnings

A comparison of Lehigh Valley's average industry earnings to national averages may offer insights into areas of unique expertise or cost-saving opportunities. Lehigh Valley's industrial average earnings meaningfully exceed the national same-industry average in only two industries: *Utilities* and *Management of Companies* (Figure 37 and Table 32). Earnings gaps, where Lehigh Valley's industry averages are notably lower than in the nation, exist in *Finance & Insurance*; *Information*; *Professional, Scientific & Tech Services*; and *Real Estate*.

Figure 37
Average Annual Industry Earnings Comparison
2013 2Q



Source: Economic Modeling Specialist, Garner Economics

Table 32
Average Annual Industry Earnings Comparison
2013 2Q

	Lehigh Valley	US	Difference (%)
Utilities	\$150,976	\$126,371	16.3%
Management of Companies	\$144,078	\$120,252	16.5%
Wholesale Trade	\$75,487	\$75,780	-0.4%
Manufacturing	\$72,417	\$75,337	-4.0%
Information	\$62,917	\$85,836	-36.4%
Finance & Insurance	\$56,860	\$81,255	-42.9%
Government	\$56,838	\$63,994	-12.6%
Professional, Scientific & Tech Services	\$55,855	\$74,601	-33.6%
Health Care & Social Assistance	\$55,479	\$52,362	5.6%
Mining, Quarrying	\$52,881	\$80,357	-52.0%
Construction	\$50,668	\$50,207	0.9%
Transportation & Warehousing	\$49,136	\$51,457	-4.7%
Total	\$48,983	\$51,502	-5.1%
Educational Services (Private)	\$37,576	\$36,050	4.1%
Administrative Support Services	\$31,522	\$34,084	-8.1%
Retail Trade	\$28,044	\$30,848	-10.0%
Agriculture	\$25,702	\$27,602	-7.4%
Arts, Entertainment & Recreation	\$25,140	\$28,075	-11.7%
Real Estate	\$23,187	\$30,442	-31.3%
Accommodation & Food Services	\$18,375	\$20,709	-12.7%

Source: Economic Modeling Specialist, Garner Economics

Major Occupational Change

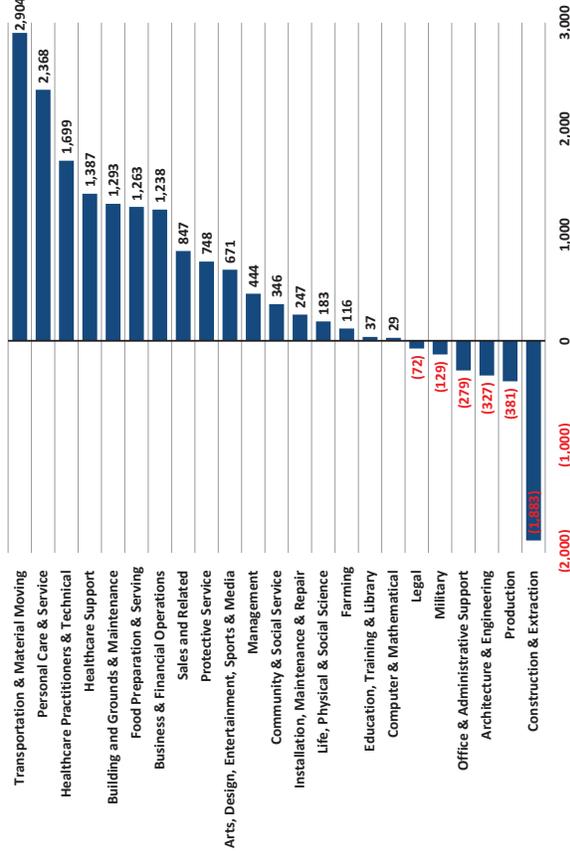
Over the last five years, the largest absolute occupational gains came from *Transportation & Material Moving* (up 2,904 jobs or 12 percent) (Figure 38 and Table 33). Other significant gains were made in *Personal Care & Service* (up 2,368 jobs or 18 percent) and *Healthcare Practitioners & Technical* (up 1,699 jobs or 9 percent). The greatest job losses have come from the *Construction & Extraction* group, down 1,883 jobs or 12 percent. The majority of remaining absolute losses came from *Production* (down 327 jobs or 4 percent) and *Architecture & Engineering* (down 327 jobs or 5 percent). Of 23 major occupational groups, losses were concentrated in six.

Table 33
Employment Change by Major Occupational Group
Lehigh Valley 2008-2013 2Q

Major Occupational Groups	2013 2Q Jobs	Employment Change #	Employment Change %
Transportation & Material Moving	26,353	2,904	12%
Personal Care & Service	15,685	2,368	18%
Healthcare Practitioners & Technical	21,304	1,699	9%
Healthcare Support	11,832	1,387	13%
Building and Grounds & Maintenance	13,479	1,293	11%
Food Preparation & Serving	24,058	1,263	6%
Business & Financial Operations	18,032	1,238	7%
Sales and Related	46,066	847	2%
Protective Service	5,140	748	17%
Arts, Design, Entertainment, Sports & Media	8,762	671	8%
Management	18,582	444	2%
Community & Social Service	5,557	346	7%
Installation, Maintenance & Repair	13,148	247	2%
Life, Physical & Social Science	2,656	183	7%
Farming	686	116	20%
Education, Training & Library	20,290	37	0%
Computer & Mathematical	7,008	29	0%
Legal	1,756	(72)	(4%)
Military	1,622	(129)	(7%)
Office & Administrative Support	54,306	(279)	(1%)
Architecture & Engineering	5,091	(327)	(6%)
Production	23,103	(381)	(2%)
Construction & Extraction	13,900	(1,883)	(12%)

Source: *Economic Modeling Specialist, Garner Economics*

Figure 38
Employment Change by Major Occupational Group
Lehigh Valley 2008-2011 2Q

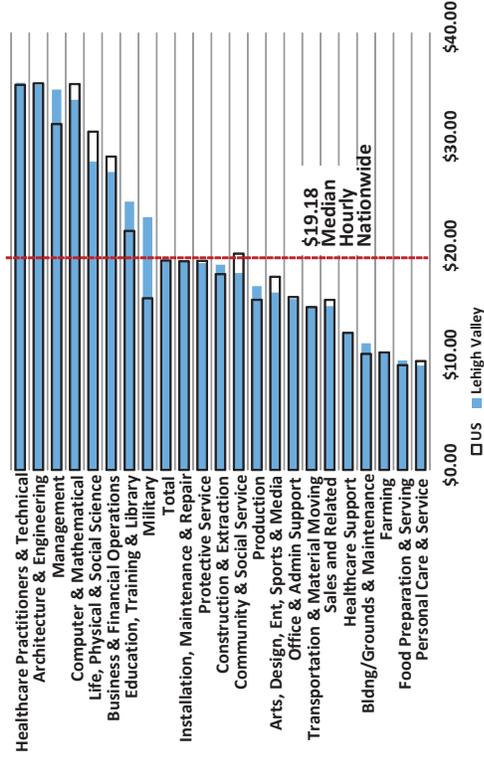


Source: *Economic Modeling Specialist, Garner Economics*

Occupational Earnings

A comparison of Lehigh Valley’s average same-occupational earnings to national averages may offer insights into areas of unique expertise or cost saving opportunities. Lehigh Valley’s occupational average earnings significantly exceed the national average in four areas: *Military, Education, Training & Library, Building and Grounds & Maintenance*, and *Management* (Figure 39 and Table 34). Earnings gaps, where Lehigh Valley’s averages are notably lower than the nation’s exist in *Community & Social Service* and *Life, Physical & Social Science* occupations.

Figure 39
Median Hourly Occupational Earnings Comparison 2013 2Q



Source: Economic Modeling Specialist, Garner Economics

Table 34

Median Hourly Occupational Earnings Comparison 2013 2Q

Source: Economic Modeling Specialist, Garner Economics

Major Occupational Groups	Lehigh Valley	US	Difference
Legal	\$40.18	\$39.18	2.5%
Healthcare Practitioners & Technical	\$36.06	\$35.25	2.2%
Architecture & Engineering	\$35.86	\$35.38	1.3%
Management	\$35.43	\$31.66	10.6%
Computer & Mathematical	\$34.48	\$35.32	-2.4%
Life, Physical & Social Science	\$28.73	\$30.96	-7.8%
Business & Financial Operations	\$27.75	\$28.68	-3.4%
Education, Training & Library	\$25.00	\$21.88	12.5%
Military	\$23.54	\$15.71	33.3%
Total	\$19.51	\$19.18	1.7%
Installation, Maintenance & Repair	\$19.43	\$19.11	1.6%
Protective Service	\$19.26	\$19.14	0.6%
Construction & Extraction	\$19.12	\$17.92	6.3%
Community & Social Service	\$18.34	\$19.80	-8.0%
Production	\$17.12	\$15.57	9.1%
Arts, Design, Entertainment, Sports & Media	\$16.53	\$17.68	-7.0%
Office & Administrative Support	\$15.92	\$15.83	0.6%
Sales and Related	\$15.26	\$15.56	-2.0%
Transportation & Material Moving	\$15.26	\$14.90	2.4%
Healthcare Support	\$12.78	\$12.55	1.8%
Building and Grounds & Maintenance	\$11.81	\$10.62	10.1%
Farming	\$10.94	\$10.76	1.6%
Food Preparation & Serving	\$10.20	\$9.60	5.9%
Personal Care & Service	\$9.73	\$9.97	-2.5%

Source: Economic Modeling Specialist, Garner Economics

Understanding Bubble/Scatter Charts

The following assessment tools include a series of bubble/scatter charts and tables. Axis and quadrant labels should be read as only general guides resulting from purely quantitative analysis, not definitive conclusions. Each chart and table is meant as only one piece of a multiple-part analysis. To assist the reader in interpreting the bubble charts, each axis and quadrant is labeled with broad descriptors.

Chart axis definitions:

- **Specialization:** measured using location quotient (LQ)*. Reflects the level of relative concentration of a particular occupation/industry/cluster in Lehigh Valley to the nation. In simple terms, a high LQ (above 1.2) indicates what a local economy is good at doing, and implies there are unique skills, institutions, raw materials, etc. that support this position.
- **Industry Effect:** The portion of growth/decline attributed to a particular industry or cluster nationwide. For example, if hospital employment grew by 5 percent nationwide in 2011, we would expect to see the same percentage increase locally, assuming that the forces driving nationwide growth would have a similar local impact.
- **Local Effect:** The proportion of growth/decline not captured by the industry effect, indicating unique local performance. The local effect measures local activity outside the expected nationwide trend. A consistent positive local competitive effect signals superior local performance.

Chart quadrant label definitions:

- **At-Risk:** Locally specialized and recent local job losses.
- **Declining:** Not locally specialized and recent local job losses.
- **Local Decline/National Growth:** Industry or occupation gains nationwide and local losses or gains below nationwide trend.
- **Local Growth/National Decline:** Industry or occupation losses nationwide and positive local gains or losses less than nationwide trend.
- **Local Decline/National Decline:** Industry or occupation losses nationwide and local losses or gains below nationwide trend.

*See Specialization note on following page. Detailed occupational and industry information for Lehigh Valley can be found in the **Appendices**.

Industry Cluster Specialization & Growth

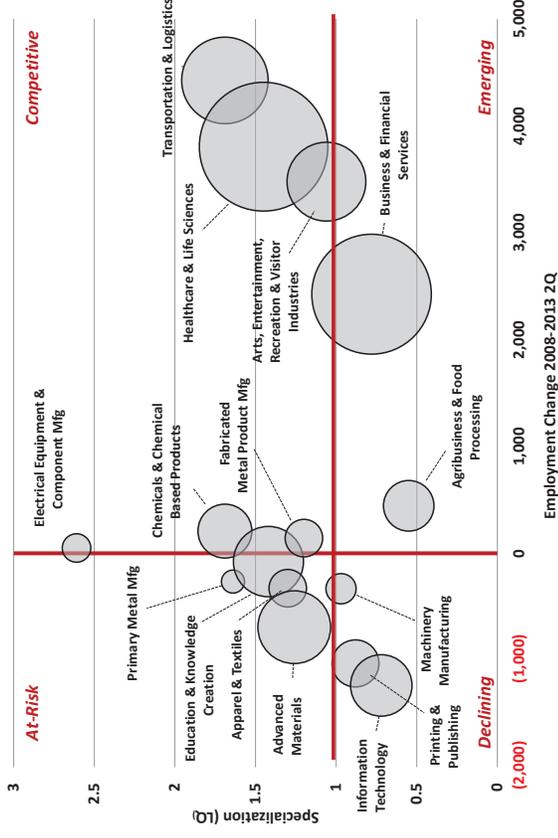
Industry clusters are geographic concentrations of interconnected businesses, suppliers, and associated institutions in a particular field. Clusters are considered to increase the productivity with which companies can compete, nationally and globally. For the analysis, we start with cluster definitions developed by the Purdue Center for Regional Development and the Indiana Business Research Center at Indiana University's Kelley School of Business through work funded by the US Commerce Department's Economic Development Administration. Garner Economics adjusts cluster components to better match each unique location and particular economic situation.

Observations: The *Transportation & Logistics* cluster has experienced the strongest growth (up 4,425 jobs over the last five years) and has a high degree of local specialization (location quotient of 1.69). Another cluster with strong growth and high specialization is *Healthcare & Life Sciences* (Figure 40 and Table 35). The *Electrical Equipment & Component Mfg.* cluster demonstrates the highest measure of local specialization with a location quotient of 2.61.

Note on Specialization: To measure local specialization, location quotients (LQs) for each occupation, industry, or cluster are derived. LQs are ratios of an area's distribution of employment for a specific occupation/industry/cluster compared to a reference or base area's distribution. In this analysis, the reference area is the United States. If an LQ is equal to 1, then the industry has the same share of its area employment as it does in the reference area. An LQ greater than 1 indicates an industry with a greater share of the local area employment than is the case in the reference area and implies local specialization. LQs are calculated by first dividing local industry employment by the all-industry total of local employment. Second, reference area industry employment is divided by the all-industry total for the reference area. Finally, the local ratio is divided by the reference area ratio.

Figure 40
Cluster Specialization & Growth
Lehigh Valley

Size of the bubble represents total employment.



Source: Economic Modeling Specialist, Garner Economics

Table 35
Cluster Specialization & Growth
Lehigh Valley

Cluster	Five-Year Job Change	LQ	2013 2Q Jobs
Competitive			
Transportation & Logistics	4,425	1.69	18,074
Healthcare & Life Sciences	3,805	1.45	40,010
Chemicals & Chemical Based Products	208	1.69	7,014
Fabricated Metal Product Mfg.	142	1.2	3,403
Electrical Equipment & Component Mfg.	50	2.61	1,964
At-Risk			
Education & Knowledge Creation	(77)	1.42	11,916
Primary Metal Mfg.	(264)	1.64	1,287
Apparel & Textiles	(326)	1.3	3,406
Advanced Materials	(691)	1.26	12,793
Emerging			
Arts, Entertainment, Recreation & Visitor Industries	3,478	1.06	15,019
Business & Financial Services	2,425	0.78	34,629
Agribusiness & Food Processing	445	0.55	6,182
Declining			
Machinery Mfg.	(331)	0.97	2,206
Printing & Publishing	(1,030)	0.88	5,335
Information Technology	(1,236)	0.72	9,130
Machinery Manufacturing	(331)	0.97	2,206

Source: Economic Modeling Specialist, Garner Economics

Industry Cluster Competitiveness

The Competitiveness screen seeks to reveal local competitive advantages (i.e. unique growth beyond what industry trends would achieve).

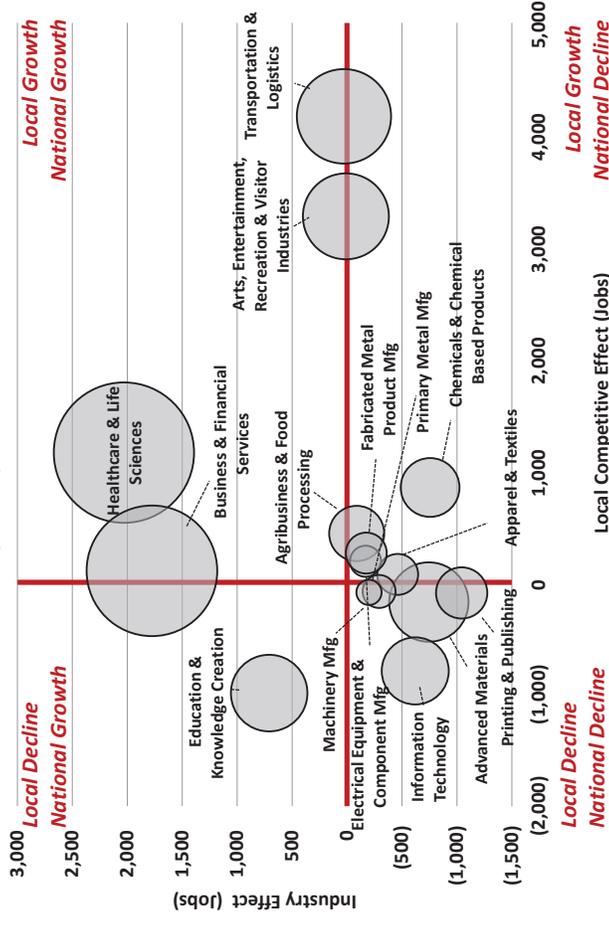
Observations: The three clusters demonstrating the strongest local competitive effect are: *Transportation & Logistics*; *Arts, Entertainment, Recreation & Visitor Industries*; and *Healthcare & Life Sciences* (Figure 41 and Table 36).

Table 36
Cluster Relative Components of Growth
2008-2013 2Q
Lehigh Valley

Cluster	Local Effect	Industry Effect	2013 2Q Jobs
Local Growth/National Growth			
Transportation & Logistics	4,165	28	18,074
Arts, Entertainment, Recreation & Visitor Industries	3,271	11	15,019
Healthcare & Life Sciences	1,159	2,031	40,010
Business & Financial Services	103	1,776	34,629
Local Growth/National Decline			
Chemicals & Chemical Based Products	848	(756)	7,014
Agribusiness & Food Processing	437	(88)	6,182
Fabricated Metal Product Mfg.	262	(175)	3,403
Electrical Equipment & Component Mfg.	188	(169)	1,964
Apparel & Textiles	71	(461)	3,406
Local Decline/National Growth			
Education & Knowledge Creation	(990)	709	11,916
Local Decline/National Decline			
Machinery Mfg.	(82)	(292)	2,206
Primary Metal Mfg.	(90)	(200)	1,287
Printing & Publishing	(95)	(1,043)	5,335
Advanced Materials	(176)	(745)	12,793
Information Technology	(792)	(620)	9,130

Source: Economic Modeling Specialist, Garner Economics

Figure 41
Cluster Relative Components of Growth
2008-2013 2Q
Lehigh Valley



Size of the bubble represents total employment.

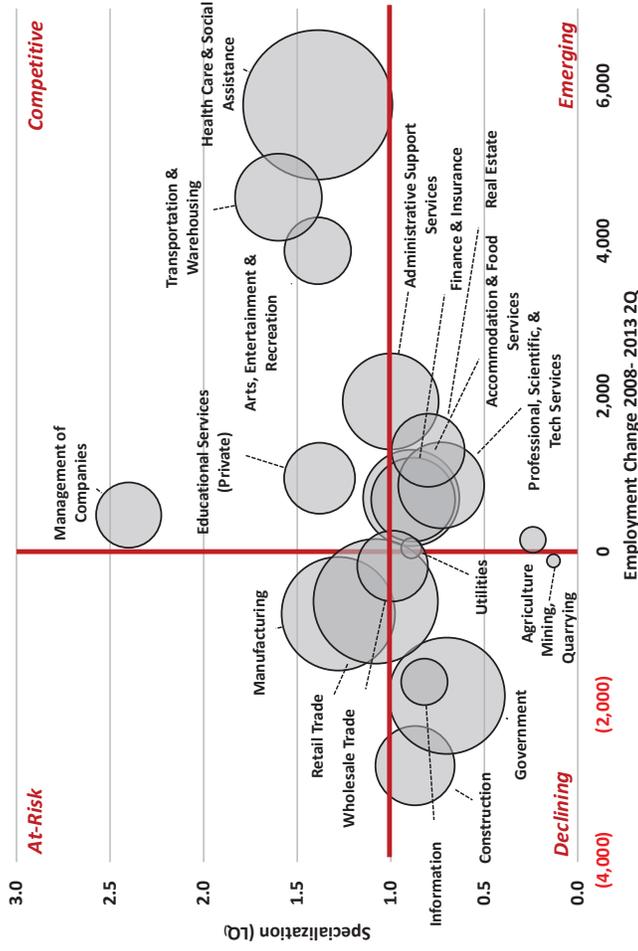
Source: Economic Modeling Specialist, Garner Economics

Industry Sector Specialization & Growth

Industry sectors are the standard industrial classifications used by government agencies based primarily on the grouping of similar final products or services. Unlike clusters, industries within the same classification groupings don't necessarily share a high degree of connectedness. This screen is similar to the cluster screen, only utilizing the standard NAICS classifications.

Observations: The *Management of Companies* industry sector demonstrates the highest degree of local specialization with a location quotient of 2.4 (Figure 42 and Table 37). *Health Care & Social Assistance* and *Transportation & Warehousing* both experienced strong growth and exhibit high local specialization.

Figure 42
Industry Specialization & Growth
Lehigh Valley



Size of the bubble represents total employment.
Source: Economic Modeling Specialist, Garner Economics

Table 37
Industry Specialization & Growth
Lehigh Valley

Industry Sector	Five Year Change	LQ	20113 2Q Jobs
Competitive			
Health Care & Social Assistance	5,758	1.39	54,957
Transportation & Warehousing	4,567	1.60	18,639
Arts, Entertainment & Recreation	3,877	1.39	10,999
Educational Services (Private)	946	1.38	12,437
Management of Companies	471	2.40	10,498
Emerging			
Administrative Support Services	1,935	1.00	22,707
Real Estate	1,306	0.80	13,131
Professional, Scientific & Tech Services	855	0.73	18,275
Accommodation & Food Services	692	0.89	22,883
Finance & Insurance	670	0.88	17,370
Agriculture	153	0.24	1,645
Utilities	45	0.89	1,016
At-Risk			
Retail Trade	(641)	1.08	38,258
Manufacturing	(801)	1.28	31,740
Declining			
Mining, Quarrying	(118)	0.13	433
Wholesale Trade	(186)	0.99	12,339
Information	(1,679)	0.82	5,308
Government	(1,858)	0.70	33,328
Construction	(2,758)	0.87	15,465

Source: Economic Modeling Specialist, Garner Economics

Industry Sector Competitiveness

The Competitiveness screen seeks to reveal local competitive advantages (i.e. unique growth beyond what industry trends would achieve).

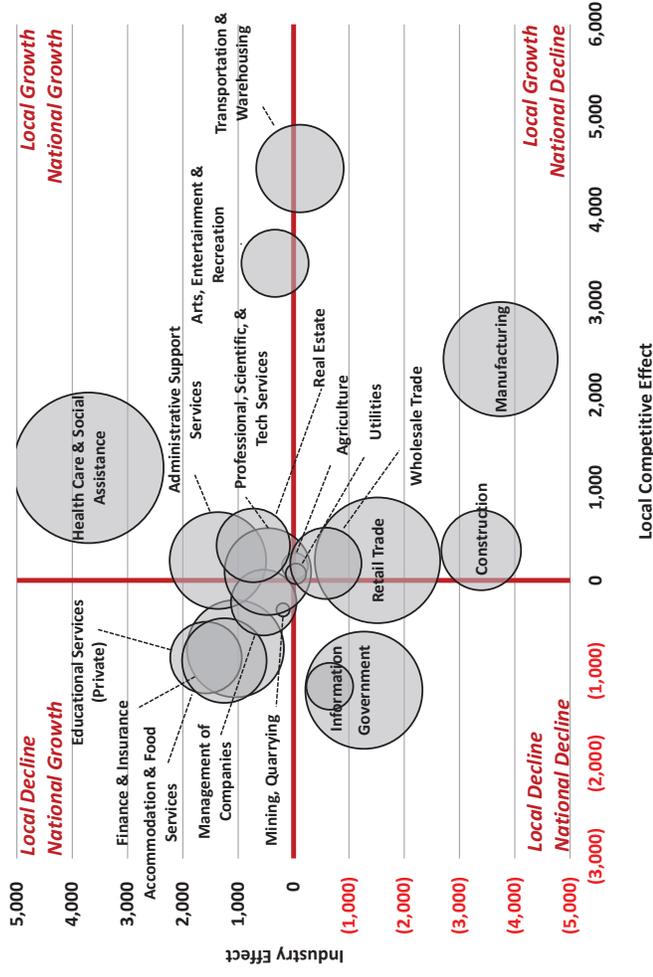
Observations: A strong local competitive effect is exhibited in four industry sectors: *Transportation & Warehousing*; *Arts, Entertainment & Recreation*; *Health Care & Social Assistance*; and *Manufacturing* (Figure 43 and Table 38).

Table 38
Lehigh Valley Industry Relative Components of Growth 2008-2013 2Q

Industry Sector	Competitive Effect	Industry Effect	2013 2Q Jobs
Local Growth/National Growth			
Health Care & Social Assistance	1,215	3,708	54,957
Administrative Support Services	215	1,367	22,707
Real Estate	378	727	13,131
Professional, Scientific & Tech Services	96	464	18,275
Arts, Entertainment & Recreation	3,422	334	10,999
Local Growth/National Decline			
Transportation & Warehousing	4,444	(117)	18,639
Manufacturing	2,388	(3,742)	31,740
Construction	325	(3,392)	15,465
Retail Trade	217	(1,518)	38,258
Wholesale Trade	185	(584)	12,339
Agriculture	155	(27)	1,645
Utilities	72	(43)	1,016
Local Decline/National Decline			
Educational Services (Private)	(832)	1,583	12,437
Finance & Insurance	(864)	1,250	17,370
Accommodation & Food Services	(736)	1,051	22,883
Management of Companies	(238)	539	10,498
Mining, Quarrying	(317)	189	433
Local Decline/National Decline			
Government	(1,185)	(1,271)	33,328
Information	(1,142)	(656)	5,308

Source: Economic Modeling Specialist, Garner Economics

Figure 43
Industry Relative Components of Growth 2008-2013 2Q Lehigh Valley



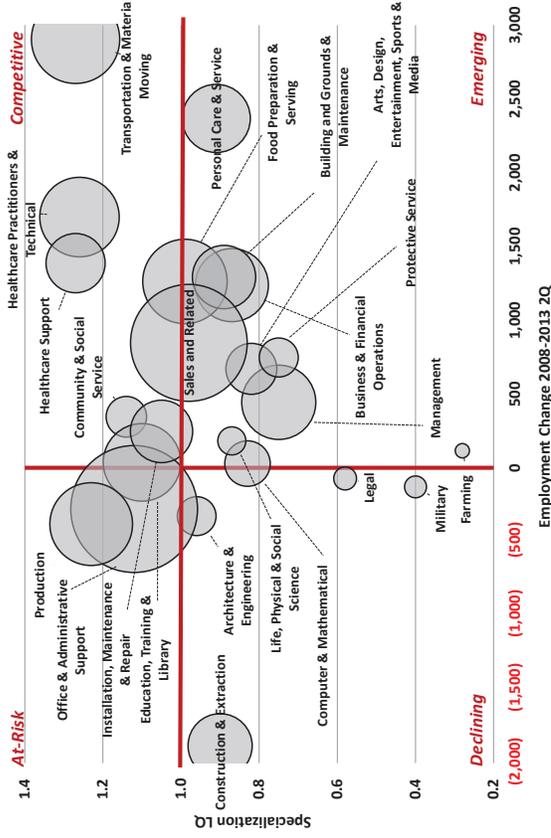
Size of the bubble represents total employment.
Source: Economic Modeling Specialist, Garner Economics

Occupational Specialization & Growth

Occupational groupings represent similar skills and educational qualifications. The groupings do not necessarily reflect any specific industry sectors or clusters.

Observations: Three occupational groups share high specialization and strong growth: *Transportation & Material Moving*; *Healthcare Practitioners & Technical*; and *Healthcare Support* (Figure 44 and Table 39).

Figure 44
Occupational Specialization & Growth
Lehigh Valley



Size of the bubble represents total employment.

Source: Economic Modeling Specialist, Garner Economics

Table 39

Occupational Specialization & Growth Lehigh Valley

Occupational Group	Five Year Change	LQ	2013 2Q Jobs
Competitive			
Transportation & Material Moving	2,904	1.27	26,353
Healthcare Practitioners & Technical	1,699	1.26	21,304
Healthcare Support	1,387	1.27	11,832
Community & Social Service	346	1.14	5,557
Installation, Maintenance & Repair	247	1.05	13,148
Emerging			
Personal Care & Service	2,368	0.91	15,685
Building and Grounds & Maintenance	1,293	0.89	13,479
Food Preparation & Serving	1,263	0.99	24,058
Business & Financial Operations	1,238	0.87	18,032
Sales and Related	847	0.98	46,066
Protective Service	748	0.75	5,140
Arts, Design, Entertainment, Sports & Media	671	0.82	8,762
Management	444	0.75	18,582
Life, Physical & Social Science	183	0.87	2,656
Farming	116	0.28	686
Computer & Mathematical	29	0.83	7,008
At-Risk			
Office & Administrative Support	(279)	1.12	54,306
Production	(381)	1.23	23,103
Declining			
Legal	(72)	0.58	1,756
Military	(129)	0.40	1,622
Architecture & Engineering	(327)	0.96	5,091
Construction & Extraction	(1,883)	0.90	13,900

Source: Economic Modeling Specialist, Garner Economics



ABOUT OUR COMPANY

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solutions that work

Garner Economics, LLC provides innovative economic and community development solutions in a competitive global market. We offer site selection, analytical research, industry targeting, strategic planning, and organizational development with a wealth of expertise to companies, communities, and organizations globally. Garner Economics is based in Atlanta, GA and has representative offices in both Europe and Asia.

Since 2003, our team has been headed by Jay Garner, a 33-year internationally recognized expert in the economic development, chamber of commerce, and site location consulting professions and rounded out by talented experts with CECD, CCE, CFRE designations and a nationally known research economist.

Tom Tveidt, research economics for Garner Economics, served as the author of the economic and labor analysis. Tina Valdecanas, Senior Associate and Strategist for Garner Economics, led the stakeholder input sessions and analysis.

APPENDICES

1. Lehigh Valley Industry Sector Details – 2013 2Q

Highly specialized industries (LQ greater than 1.20) or high relative earnings (above \$48,983, the average earnings per worker in Lehigh Valley) are highlighted in **green**.

Industry	2013 2Q Jobs	5-Year Change	LQ	Avg. Earnings
Agriculture, Forestry, Fishing, and Hunting	1,645	153	0.24	\$25,702
Crop Production	854	72	0.29	\$25,389
Animal Production	525	76	0.23	\$26,120
Forestry and Logging	24	(6)	0.12	\$30,376
Fishing, Hunting and Trapping	15	(6)	0.08	\$16,481
Support Activities for Agriculture and Forestry	228	17	0.17	\$26,019
Mining, Quarrying, and Oil and Gas Extraction	433	(118)	0.13	\$52,881
Oil and Gas Extraction	24	(5)	0.01	\$153,970
Mining (except Oil and Gas)	305	(163)	0.56	\$43,448
Support Activities for Mining	104	49	0.12	\$57,624
Utilities	1,016	45	0.89	\$150,976
Construction	15,465	(2,758)	0.87	\$50,668
Construction of Buildings	2,927	(716)	0.75	\$53,758
Heavy and Civil Engineering Construction	1,108	(8)	0.54	\$86,635
Specialty Trade Contractors	11,430	(2,034)	0.97	\$46,391
Manufacturing	31,740	(801)	1.28	\$72,417
Food Mfg.	2,362	(196)	0.79	\$64,664
Beverage and Tobacco Product Mfg.	1,786	383	4.35	\$85,541
Textile Mills	140	(63)	0.58	\$44,836
Textile Product Mills	287	(64)	1.13	\$51,109
Apparel Mfg.	1,359	(470)	3.64	\$36,194
Leather and Allied Product Mfg.	13	--	0.19	\$13,192
Wood Product Mfg.	598	(31)	0.77	\$44,137
Paper Mfg.	1,041	84	1.39	\$68,993
Printing and Related Support Activities	951	(559)	0.92	\$49,193

Industry	2013 2Q Jobs	5-Year Change	LQ	Avg. Earnings
Petroleum and Coal Products Mfg.	121	(3)	0.53	\$108,869
Chemical Mfg.	2,298	(106)	1.42	\$95,011
Plastics and Rubber Products Mfg.	2,422	321	1.85	\$65,021
Nonmetallic Mineral Product Mfg.	1,842	(54)	2.36	\$77,041
Primary Metal Mfg.	1,287	(347)	1.60	\$99,541
Fabricated Metal Product Mfg.	3,403	142	1.16	\$69,093
Machinery Mfg.	2,206	(331)	0.97	\$80,283
Computer and Electronic Product Mfg.	977	(236)	0.45	\$85,290
Electrical Equipment, Appliance, and Component Mfg.	1,964	50	2.61	\$92,306
Transportation Equipment Mfg.	1,903	422	0.63	\$69,574
Furniture and Related Product Mfg.	938	101	1.23	\$51,555
Miscellaneous Mfg.	3,840	148	2.83	\$67,943
Wholesale Trade	12,339	(186)	0.99	\$75,487
Merchant Wholesalers, Durable Goods	7,446	114	1.20	\$81,888
Merchant Wholesalers, Nondurable Goods	4,097	62	0.95	\$61,477
Wholesale Electronic Markets and Agents and Brokers	796	(362)	0.42	\$87,726
Retail Trade	38,258	(641)	1.08	\$28,044
Motor Vehicle and Parts Dealers	4,694	234	1.20	\$47,702
Furniture and Home Furnishings Stores	808	(326)	0.84	\$35,849
Electronics and Appliance Stores	838	(186)	0.83	\$42,732
Building Material and Garden Equipment and Supplies Dealers	2,096	(563)	0.87	\$36,166
Food and Beverage Stores	8,194	260	1.34	\$24,259
Health and Personal Care Stores	2,558	(167)	1.12	\$36,830
Gasoline Stations	1,855	320	1.05	\$22,612
Clothing and Clothing Accessories Stores	3,442	112	1.09	\$18,883
Sporting Goods, Hobby, Book, and Music Stores	1,569	71	1.06	\$21,124
General Merchandise Stores	5,178	(164)	0.82	\$23,268
Miscellaneous Store Retailers	3,427	159	1.08	\$19,552
Non-store Retailers	3,599	(391)	1.21	\$24,405
Transportation and Warehousing	18,639	4,567	1.60	\$49,136
Air Transportation	247	(19)	0.26	\$73,200
Rail Transportation	352	26	0.74	\$82,701

Industry	2013 2Q Jobs	5-Year Change	LQ	Avg. Earnings
Truck Transportation	4,663	712	1.16	\$55,156
Transit and Ground Passenger Transportation	1,656	257	1.18	\$36,428
Pipeline Transportation	271	(90)	3.00	\$144,835
Scenic and Sightseeing Transportation	13	(10)	0.16	\$24,750
Support Activities for Transportation	642	107	0.47	\$44,021
Couriers and Messengers	2,088	82	1.37	\$33,705
Warehousing and Storage	8,699	3,497	5.57	\$47,410
Information	5,308	(1,679)	0.82	\$62,917
Publishing Industries (except Internet)	1,429	(809)	0.83	\$61,301
Motion Picture and Sound Recording Industries	495	57	0.51	\$37,961
Broadcasting (except Internet)	900	(23)	1.36	\$64,150
Telecommunications	1,299	(930)	0.66	\$81,502
Data Processing, Hosting and Related Services	909	109	1.39	\$62,867
Other Information Services	276	(82)	0.56	\$24,792
Finance and Insurance	17,370	670	0.88	\$56,860
Credit Intermediation and Related Activities	4,190	(361)	0.74	\$51,313
Securities, Commodity Contracts, and Other Financial Investments and Related Activities	5,789	1,567	0.84	\$48,184
Insurance Carriers and Related Activities	7,353	(521)	1.24	\$66,832
Funds, Trusts, and Other Financial Vehicles	37	(15)	0.03	\$60,916
Real Estate and Rental and Leasing	13,131	1,306	0.80	\$23,187
Real Estate	11,921	1,187	0.80	\$20,581
Rental and Leasing Services	1,189	109	0.80	\$48,914
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	21	10	0.40	\$45,618
Professional, Scientific, and Technical Services	18,275	855	0.73	\$55,855
Management of Companies and Enterprises	10,498	471	2.40	\$144,078
Administrative and Support and Waste Management and Remediation Services	22,707	1,935	1.00	\$31,522
Administrative and Support Services	21,870	1,909	0.99	\$30,565
Waste Management and Remediation Services	838	27	1.07	\$56,519
Educational Services (Private)	12,437	946	1.38	\$37,576

Industry	2013 2Q Jobs	5-Year Change	LQ	Avg. Earnings
Health Care and Social Assistance	54,957	5,758	1.39	\$55,479
Ambulatory Health Care Services	20,673	2,738	1.31	\$71,795
Hospitals (Private)	16,180	1,338	1.71	\$62,725
Nursing and Residential Care Facilities	9,672	681	1.47	\$36,845
Social Assistance	8,431	999	1.09	\$22,946
Arts, Entertainment, and Recreation	10,999	3,877	1.39	\$25,140
Performing Arts, Spectator Sports, and Related Industries	3,308	573	0.83	\$19,673
Museums, Historical Sites, and Similar Institutions	236	(44)	0.82	\$26,643
Amusement, Gambling, and Recreation Industries	7,455	3,348	2.05	\$27,519
Accommodation and Food Services	22,883	692	0.89	\$18,375
Accommodation	1,771	(26)	0.45	\$23,667
Food Services and Drinking Places	21,112	719	0.98	\$17,932
Other Services (except Public Administration)	18,729	(258)	0.85	\$23,385
Repair and Maintenance	4,137	(506)	1.03	\$34,804
Personal and Laundry Services	7,319	566	0.90	\$21,772
Religious, Grantmaking, Civic, Professional, and Similar Organizations	6,309	(443)	1.02	\$20,182
Private Households	964	126	0.25	\$7,607
Government	33,328	(1,858)	0.70	\$56,838
Federal Government	3,542	(353)	0.36	\$56,973
State Government	2,083	(315)	0.20	\$61,948
Local Government	27,703	(1,190)	1.01	\$56,436
Total	360,156	12,975		\$48,983

Source: Economic Modeling Specialist, Garner Economics

II. Lehigh Valley Occupational Details – 2013 2Q

Highly specialized occupations (LQ greater than 1.20) or high relative earnings (above \$19.51, the median hourly wage in Lehigh Valley) are highlighted in **green**.

Occupational Group	2013 2Q Jobs	5-Year Change	LQ	Median Hourly Earnings
Management	18,582	444	0.75	\$35.43
Top Executives	4,422	(210)	0.86	\$47.68
Advertising, Marketing, Promotions, Public Relations, and Sales Managers	1,341	(16)	0.87	\$49.35
Operations Specialties Managers	3,404	83	0.9	\$46.39
Other Management	9,415	588	0.66	\$23.65
Business and Financial Operations	18,032	1,238	0.87	\$27.75
Business Operations Specialists	9,303	330	0.88	\$29.61
Financial Specialists	8,729	908	0.85	\$25.76
Computer and Mathematical	7,008	29	0.83	\$34.48
Computer	6,841	35	0.84	\$34.57
Mathematical Science	167	(5)	0.64	\$30.73
Architecture and Engineering	5,091	(327)	0.96	\$35.86
Architects, Surveyors, and Cartographers	372	(83)	0.75	\$35.28
Engineers	3,322	(109)	1	\$41.06
Drafters, Engineering Technicians, and Mapping Technicians	1,397	(135)	0.94	\$23.81
Life, Physical, and Social Science	2,656	183	0.87	\$28.73
Life Scientists	284	23	0.48	\$16.91
Physical Scientists	521	33	0.81	\$29.79
Social Scientists and Related Workers	1,167	78	1.08	\$35.02
Life, Physical, and Social Science Technicians	684	48	0.94	\$21.97
Community and Social Service	5,557	346	1.14	\$18.34
Counselors, Social Workers, and Other Community and Social Service Specialists	4,584	358	1.14	\$18.24
Religious Workers	973	(12)	1.15	\$18.82
Legal	1,756	(72)	0.58	\$40.18
Lawyers, Judges, and Related Workers	1,037	(70)	0.53	\$54.28
Legal Support Workers	719	(2)	0.69	\$20.00

Occupational Group	2013 2Q Jobs	5-Year Change	LQ	Median Hourly Earnings
Education, Training, and Library	20,290	37	1.1	\$25.00
Postsecondary Teachers	3,639	278	1.26	\$39.16
Preschool, Primary, Secondary, and Special Education School Teachers	10,069	(475)	1.25	\$26.86
Other Teachers and Instructors	2,716	364	0.72	\$14.15
Librarians, Curators, and Archivists	509	(27)	0.88	\$21.07
Other Education, Training, and Library	3,357	(103)	1.09	\$12.79
Arts, Design, Entertainment, Sports, and Media	8,762	671	0.82	\$16.53
Art and Design Workers	2,219	31	0.8	\$16.05
Entertainers and Performers, Sports and Related Workers	2,234	286	0.8	\$15.75
Media and Communication Workers	2,565	129	0.87	\$19.68
Media and Communication Equipment Workers	1,744	226	0.82	\$13.43
Healthcare Practitioners and Technical	21,304	1,699	1.26	\$36.06
Health Diagnosing and Treating Practitioners	13,251	1,020	1.22	\$45.17
Health Technologists and Technicians	7,765	654	1.33	\$20.87
Other Healthcare Practitioners and Technical	288	25	0.95	\$24.59
Healthcare Support	11,832	1,387	1.27	\$12.78
Nursing, Psychiatric, and Home Health Aides	7,514	1,014	1.34	\$11.79
Occupational Therapy and Physical Therapist Assistants and Aides	535	127	1.67	\$17.51
Other Healthcare Support	3,783	246	1.12	\$14.08
Protective Service	5,140	748	0.75	\$19.26
Supervisors of Protective Service Workers	187	23	0.35	\$41.38
Fire Fighting and Prevention Workers	332	(22)	0.53	\$27.06
Law Enforcement Workers	1,422	(19)	0.58	\$27.14
Other Protective Service Workers	3,198	766	1	\$13.43
Food Preparation and Serving Related	24,058	1,263	0.99	\$10.20
Supervisors of Food Preparation and Serving Workers	1,586	55	0.76	\$18.10
Cooks and Food Preparation Workers	6,483	363	1.04	\$10.53
Food and Beverage Serving Workers	13,335	737	0.99	\$9.34
Other Food Preparation and Serving Related Workers	2,654	108	1.01	\$9.01
Building and Grounds Cleaning and Maintenance	13,479	1,293	0.89	\$11.81

Occupational Group	2013 2Q Jobs	5-Year Change	LQ	Median Hourly Earnings
Supervisors of Building and Grounds Cleaning and Maintenance Workers	758	31	0.73	\$17.45
Building Cleaning and Pest Control Workers	9,922	947	0.88	\$11.23
Grounds Maintenance Workers	2,798	314	0.95	\$12.34
Personal Care and Service	15,685	2,368	0.91	\$9.73
Supervisors of Personal Care and Service Workers	733	136	0.96	\$12.22
Animal Care and Service Workers	1,471	119	0.73	\$9.48
Entertainment Attendants and Related Workers	1,688	674	1.41	\$8.44
Funeral Service Workers	191	10	1.38	\$14.40
Personal Appearance Workers	3,116	371	0.99	\$10.12
Baggage Porters, Bellhops, and Concierges	28	2	0.2	\$8.50
Tour and Travel Guides	117	(10)	0.75	\$14.16
Other Personal Care and Service Workers	8,340	1,066	0.86	\$9.48
Sales and Related	46,066	847	0.98	\$15.26
Supervisors of Sales Workers	5,369	159	0.91	\$17.84
Retail Sales Workers	20,087	385	1.11	\$10.48
Sales Representatives, Services	5,801	350	0.83	\$22.82
Sales Representatives, Wholesale and Manufacturing	4,601	(160)	1.09	\$29.85
Other Sales and Related Workers	10,207	112	0.87	\$12.31
Office and Administrative Support	54,306	(279)	1.12	\$15.92
Supervisors of Office and Administrative Support Workers	2,854	(39)	0.97	\$26.70
Communications Equipment Operators	351	(40)	1.25	\$22.45
Financial Clerks	8,364	(98)	1.09	\$16.73
Information and Record Clerks	12,885	47	1.14	\$14.48
Material Recording, Scheduling, Dispatching, and Distributing Workers	10,194	101	1.25	\$15.50
Secretaries and Administrative Assistants	8,666	(183)	1.01	\$16.29
Other Office and Administrative Support Workers	10,993	(65)	1.18	\$14.10
Farming, Fishing, and Forestry	686	116	0.28	\$10.94
Supervisors of Farming, Fishing, and Forestry Workers	31	2	0.28	\$12.58
Agricultural Workers	595	125	0.3	\$10.63
Fishing and Hunting Workers	24	(3)	0.13	\$12.93

Occupational Group	2013 2Q Jobs	5-Year Change	LQ	Median Hourly Earnings
Forest, Conservation, and Logging Workers	36	(8)	0.21	\$13.20
Construction and Extraction	13,900	(1,883)	0.9	\$19.12
Supervisors of Construction and Extraction Workers	1,146	(241)	0.73	\$26.56
Construction Trades Workers	11,085	(1,485)	0.93	\$18.43
Helpers, Construction Trades	337	(100)	0.72	\$12.89
Other Construction and Related Workers	1,193	(56)	1.31	\$19.43
Extraction Workers	140	(1)	0.22	\$24.89
Installation, Maintenance, and Repair	13,148	247	1.05	\$19.43
Supervisors of Installation, Maintenance, and Repair Workers	653	(2)	0.73	\$29.19
Electrical and Electronic Equipment Mechanics, Installers, and Repairers	1,085	(122)	0.79	\$21.25
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	4,067	89	1.11	\$16.89
Other Installation, Maintenance, and Repair	7,343	281	1.12	\$19.72
Production	23,103	(381)	1.23	\$17.12
Supervisors of Production Workers	1,390	(42)	1.15	\$31.28
Assemblers and Fabricators	4,958	222	1.39	\$15.66
Food Processing Workers	1,133	(52)	0.75	\$14.23
Metal Workers and Plastic Workers	4,859	(56)	1.25	\$18.09
Printing Workers	639	(258)	1.13	\$17.17
Textile, Apparel, and Furnishings Workers	1,961	(338)	1.15	\$12.11
Woodworkers	791	100	1.51	\$16.46
Plant and System Operators	827	(38)	1.35	\$25.80
Other Production	6,545	80	1.25	\$15.50
Transportation and Material Moving	26,353	2,904	1.27	\$15.26
Supervisors of Transportation and Material Moving Workers	901	115	1.15	\$25.43
Air Transportation Workers	170	2	0.36	\$52.31
Motor Vehicle Operators	11,462	969	1.21	\$16.15
Rail Transportation Workers	175	15	0.67	\$22.90
Water Transportation Workers	42	16	0.22	\$21.87
Other Transportation Workers	392	2	0.57	\$9.56
Material Moving Workers	13,212	1,786	1.47	\$13.40

Occupational Group	2013 2Q Jobs	5-Year Change	LQ	Median Hourly Earnings
Military	1,622	(129)	0.4	\$23.54
Unclassified Occupation	1,740	224	1.15	\$15.25
Total	360,156	12,975		\$19.51

Source: Economic Modeling Specialist, Garner Economics

III. Lehigh Valley Population and Demographic Detail

Total Population

	2000	2012	12-Y Change	%	Average Annual
Lehigh	312,368	355,245	42,877	13.7%	1.1%
Northampton	267,740	299,267	74,404	12.8%	0.9%

Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Race & Hispanic Origin-2010

	Lehigh	Northampton
White	81.9%	87.3%
Black or African American	6.2%	4.9%
American Indian and Alaska Native	0.2%	0.2%
Asian	2.9%	2.6%
Native Hawaiian and Other Pacific Islander	0.0%	0.0%
Some other race	6.1%	2.6%
Two or more races	2.7%	2.3%
Hispanic or Latino of any race	18.8%	10.5%

Race alone or in combination with one or more other races.

Source: US Census Bureau, Garner Economics

Sources of Population Change

	Year	Natural	International	Domestic In-migration
Lehigh	2000*	225	262	92
	2001	533	896	979
	2002	642	880	678
	2003	793	812	2,394
	2004	836	801	2,759
	2005	1,025	858	3,047
	2006	1,048	1,079	3,070
	2007	1,283	953	1,532
	2008	1,307	984	1,246
	2009	1,078	986	252
	2010*	248	289	53
	2011	1,153	1,341	968
Northampton	2012	1,044	1,371	(663)
	2000*	122	144	101
	2001	432	576	954
	2002	242	572	2,850
	2003	381	535	3,086
	2004	544	535	3,949
	2005	331	565	3,220
	2006	506	686	3,485
	2007	770	611	2,483
	2008	676	630	875
	2009	679	631	698
	2010*	87	136	107
2011	260	628	(323)	
2012	137	656	(22)	

*Decennial Census, change in collection and methodology.

Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Age Groups by Percent of Total Population

	Lehigh	Northampton
Median Age	39.1	40.9
< 5	6.1%	5.4%
5-9	6.5%	6.1%
10-14	6.6%	6.2%
15-19	7.0%	7.4%
20-24	6.1%	6.6%
25-34	12.2%	10.8%
35-44	13.2%	13.2%
45-54	15.3%	15.6%
55-59	6.8%	6.9%
60-64	5.4%	6.1%
65-74	7.3%	7.6%
75-84	5.2%	5.7%
85 +	2.3%	2.4%

Source: US Census Bureau, Missouri Census Data Center, Garner Economics

Crime Rates-2011

	Violent	Property
Lehigh	242.0	2,559.9
Northampton	208.4	2,225.0

Source: Pennsylvania State Police

IV. Lehigh Valley Education Detail

**Educational Attainment Percent Total Population Age 25+
2009-2011 (3-year estimates)**

	Lehigh	Northampton
Less than 9th grade	5.1%	4.0%
9th to 12th grade, no diploma	9.4%	8.2%
High school graduate, includes equivalency	33.9%	34.8%
Some college, no degree	17.0%	18.0%
Associate's degree	7.5%	8.4%
Bachelor's degree	16.2%	16.8%
Graduate or professional degree	10.7%	9.9%

Source: US Census Bureau, Missouri Census Data Center, Garner Economics

**Field of Bachelor's Degree by Percent of Total Age 25+
2009-2011 3-Year Estimate**

	Lehigh	Northampton
Computers, Mathematics and Statistics	4.3%	4.7%
Biological, Agricultural, and Environmental Sciences	6.6%	6.1%
Physical and Related Sciences	3.9%	4.1%
Psychology	5.7%	5.0%
Social Sciences	6.4%	6.8%
Engineering	9.7%	7.7%
Multidisciplinary Studies	0.7%	0.6%
Science and Engineering Related Fields	9.8%	8.8%
Business	17.3%	18.4%
Education	16.2%	16.8%
Literature and Languages	4.4%	4.9%
Liberal Arts and History	4.5%	4.0%
Visual and Performing Arts	3.5%	3.6%
Communications	2.7%	3.4%
Other	4.3%	5.0%

Source: US Census Bureau, Garner Economics

SAT Scores-2012

	Verbal	Math	Writing	Combined
Lehigh	511	519	499	1529
Northampton	498	504	483	1485

Source: Pennsylvania Department of Education

STEM Degree Completions 2012

	Associate's degree	Bachelor's degree	Master's degree	Doctor's degree
Northampton				
Physical Sciences	4	62	48	10
Computer Science	49	68	13	5
Engineering	12	477	154	36
Engineering Technologies and Engineering-related Fields	36	0	0	0
Biological and Biomedical Sciences	26	179	8	7
Mathematics and Statistics	5	47	12	3
Natural Resources and Conservation	0	10	5	0
Architecture and Related Services	0	25	0	0

	Associate's degree	Bachelor's degree	Master's degree	Doctor's degree
Lehigh				
Physical Sciences	5	26	0	0
Computer Science	72	18	4	0
Engineering	2	0	0	0
Engineering Technologies and Engineering-related Fields	23	0	0	0
Biological and Biomedical Sciences	6	158	0	0
Mathematics and Statistics	5	20	0	0
Natural Resources and Conservation	0	6	0	0
Architecture and Related Services	5	26	0	0

Source: National Center for Education Statistics, Garner Economics

Percent Population Enrolled in College or Graduate School Ages 15 and Over 2007-2011 Annual Estimate

	Lehigh	Northampton
Enrolled in public college or graduate school:	4.0%	4.3%
Enrolled in private college or graduate school:	3.8%	5.4%

Source: US Census Bureau, Garner Economics

Educational Attainment by Percent of In-migration Population Ages 25 and over 2007-2011 5-Year Annual Estimates

	Lehigh	Northampton
Less than high school graduate	16.7%	13.3%
High school graduate	28.1%	24.4%
Some college or associate's degree	23.6%	27.1%
Bachelor's degree	18.8%	21.3%
Graduate or professional degree	12.9%	13.9%

Source: US Census Bureau, Garner Economics

V. Lehigh Valley Employment Detail

Per Capita Income

	Lehigh	Northampton
2011	\$40,890	\$39,078
10-Year Change	\$8,996	\$9,262
10-Year Change (%)	28.2%	31.1%
5-Year Change	\$4,088	\$4,494
5-Year Change (%)	11.1%	13.0%

Source: US Bureau of Economic Analysis, Garner Economics

Average Wage Per Job

	Lehigh	Northampton
2011	\$46,522	\$41,519
10-Year Change	\$11,091	\$10,393
10-Year Change (%)	31.3%	31.6%
5-Year Change	\$4,682	\$4,506
5-Year Change (%)	11.2%	11.5%

Source: US Bureau of Economic Analysis, Garner Economics

Proprietor Employment

	Lehigh	Northampton
2011 Percent of Total	16.4%	18.4%
10 Year Percent Change	39.4%	34.5%
Nonfarm Per Cap Income	\$28,628	\$21,983

Source: US Bureau of Economic Analysis, Garner Economics

2008-2013 1Q

Employment Trends

	Lehigh	Northampton
2012 Average Job Growth Rate	1.2%	3.6%
Highest Percent Job Loss	-5.2%	-3.0%
Highest Job Growth Rate	3.0%	4.5%
5-Y Average Annual Job Growth Rate	-0.2%	0.8%

Source: US Bureau of Labor Statistics, Garner Economics

2008-2013 2Q

Unemployment Trends (%)

	Lehigh	Northampton
Past Year Average Rate	8.3%	8.2%
5-Year Lowest Rate	5.1%	4.6%
5-Year Highest Rate	9.9%	9.8%
5-Year Average Rate	8.1%	8.0%

Source: US Bureau of Labor Statistics, Garner Economics

**Employment by Major Industry Sectors
Percent of Total 2012**

	Lehigh	Northampton
Federal	0.5%	1.1%
State	0.9%	0.5%
Local	8.2%	12.6%
Private, total	90.4%	85.8%
Agriculture, Forestry, Fishing, and Hunting	0.0%	0.1%
Mining, Quarrying, and Oil and Gas Extraction	0.0%	0.0%
Utilities	0.3%	0.4%
Construction	3.3%	3.6%
Manufacturing	9.5%	12.5%
Wholesale trade	4.7%	3.2%
Retail trade	10.9%	12.4%
Professional and Technical Services	3.9%	3.5%
Management of Companies and Enterprises	5.0%	1.2%
Administrative and Waste Services	6.9%	6.4%
Educational Services	1.8%	4.5%
Healthcare and Social Assistance	20.5%	12.1%
Transportation and Warehousing	5.8%	5.1%
Information	1.5%	1.5%
Finance and Insurance	3.6%	4.2%
Real Estate and Rental and Leasing	0.9%	0.8%
Arts, Entertainment, and Recreation	1.8%	3.0%
Accommodation and Food Services	7.2%	8.4%
Other Services, except Public Administration	3.0%	3.1%

Source: US Bureau of Labor Statistics, Garner Economics

