



**LEHIGH VALLEY**  
**EDUCATION &**  
**TALENT SUPPLY**  
**REPORT**



**LEHIGH VALLEY**  
economic development

2018  
SUMMER

# EXECUTIVE SUMMARY

Access to talent is one of the driving influences when businesses consider where to establish new or expand existing operations, and the regions with a workforce with the right skills and necessary experience are the ones that will win the battle for new jobs and business growth. Companies in the Lehigh Valley are poised for growth, with a vast majority planning to hire over the next 12 months.

The availability of skilled labor and the gap between the existing workforce and the skills employers need are a key economic challenges, particularly when combined with historically low national unemployment rates. These challenges are far from exclusive to the Lehigh Valley, but rather are faced by most growing economic regions across the United States. That's why the Lehigh Valley is taking a proactive approach to bridging this talent gap.

To that end, the Lehigh Valley Economic Development Corporation (LVEDC) has created a talent supply initiative to identify talent supply and demand issues and create strategies that result in a broader, ongoing understanding of the Lehigh Valley workforce among employers, educators, and other stakeholders, and an increased alignment within the talent pipeline. These efforts are taking place in conjunction with the LVEDC Education and Talent Supply Council, the establishment of which was one of the innovative first steps in solving the talent gap issue.

As part of that talent supply initiative, LVEDC and the Workforce Board Lehigh Valley (WBLV) commissioned MDB Insight to conduct a regional study involving interviews, focus groups, and surveys with businesses from five targeted industry sectors and other stakeholders across the region. This study has resulted in the development of a strategic action plan that will guide communication and implementation strategies that are intended to improve the Lehigh Valley talent market.

Much of this initiative is made possible by state funding to make the Lehigh Valley a pilot program for all of Pennsylvania, establishing the region as a leader in developing, retaining, and attracting talent. The Lehigh Valley has the means available to address the skills gap challenge, as well as an ample pool of talent from which to draw, including more than 10,000 postsecondary graduates from regional colleges and universities on an annual basis.

Using the data and findings from this study, the Lehigh Valley will blaze new trails in how we grow, recruit, and retain talent by creating new approaches for developing workplace skills and preparing students and adults to compete and succeed in high-demand careers.

## FIVE TARGET INDUSTRY SECTORS:



Manufacturing  
(Advanced and  
Food & Beverage)



High-Value  
Business Services



Life Science  
Research &  
Manufacturing



Transportation,  
Warehousing,  
Logistics & Wholesale



Health Care

This document is a summary of some of the key findings, research points, and recommendations of the MDB Insight study. The full study is also available separately through the LVEDC website, [www.lehighvalley.org](http://www.lehighvalley.org).

# KEY FINDINGS

## Skilled Workforce

There is wide agreement among employers in the Lehigh Valley that **a skilled workforce is essential for the future growth of business operations**. Among the more than 300 Lehigh Valley employers surveyed, 89.8 percent responded that a skilled workforce is important.

## Hiring

A large majority of employers have hired and intend to hire new employees in the Lehigh Valley. Ninety-one percent of employers surveyed said they have hired workers within the past 12 months; **89 percent said they plan to hire within the next 12 months**.

## Labor Availability

A majority of surveyed employers indicated they have had difficulties hiring in the Lehigh Valley. **Seventy one percent said their business has experienced challenges in recruiting, hiring, or retaining talent over the past 12 months**. In all but one of the study's five target sectors, at least two-thirds of respondents said this is a problem.

## Employability Skills

Lehigh Valley employers see the need for employability skills training to improve job readiness and retention. Fifty-two percent of respondents said they were dissatisfied with the availability of workers with the necessary employability skills (such as communication skills, attendance at work, punctuality, strong work ethic, positive attitude, collaboration and teamwork) to fill positions.

## Talent Strategies

Although a majority of employers said they have had problems hiring, a significant portion of respondents have done little or do not have a strategy to address this issue. Twenty percent of those surveyed said they have not addressed this issue, or that they don't not have a plan to address it in the future. Of those who are attempting to address it, the most common solution (14.3 percent) is increasing salaries and bonuses.

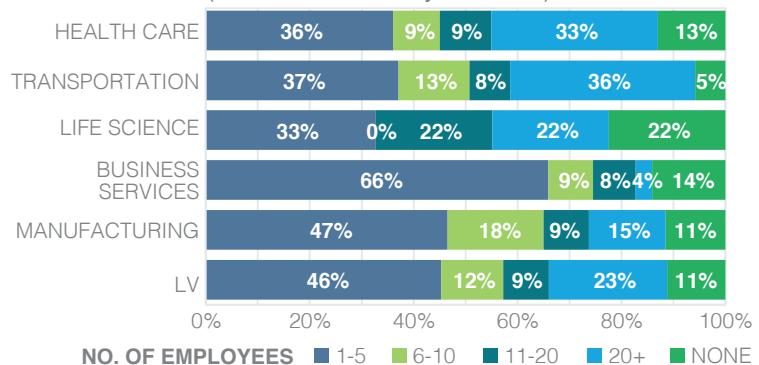
## Education

Educators who participated in the focus groups feel that high school and middle school students are unaware of all the opportunities that exist in the Lehigh Valley and would benefit from greater exposure to career information, job pathways, and internships. They see a need for a stronger focus on collaborating with mid-sized and small businesses, rather than focusing predominantly on large employers. They would like to make it easier for small companies to engage with schools via workplace opportunities, job fairs, advisory boards, panels, and on-campus recruiting.

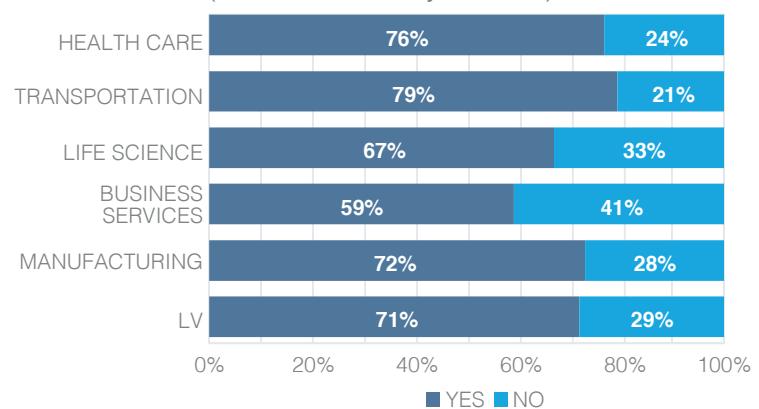
## Opportunities

If the Lehigh Valley takes no actions to address workforce issues, the region could experience a net deficit of nearly 10,000 workers over the next 10 years. The study found that 90,665 people could leave the workforce, while only 80,952 will enter. If that occurs, jobs may go unfilled and the Lehigh Valley may lose opportunities for employers to expand or move to the region.

## Hiring within the Past 12 Months (Based on Survey Results)



## Challenges Hiring & Retaining Workers (Based on Survey Results)



# WORKFORCE CHARACTERISTICS

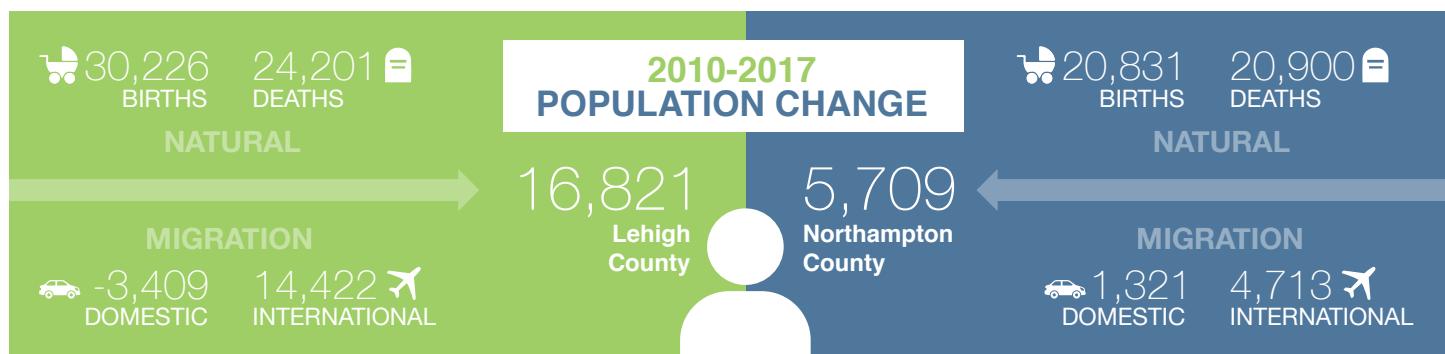
The Lehigh Valley is a growing region with a diverse economy and a history of innovation, positioned at the center of the massive East Coast market. By population, it is the 69th largest metropolitan area in the United States. Education is a strength; Lehigh Valley colleges award more than 10,000 degrees per year.

**Lehigh Valley Population**  
(2017 Census Bureau Estimate)

 669,899

## Net Migration

Lehigh and Northampton counties saw a combined population increase of 22,530 people from 2010 to 2017. They are two of only 18 counties in Pennsylvania which have had an increase in population in that time period.



Source: Census Bureau, American Community Survey 2017 Estimate

## Age Distribution of Lehigh Valley Population



Source: Census Bureau, American Community Survey 5-Year Estimate (2012-2016)

## Shifting Demographics Over 10 Years

If all measures stay equal, the Lehigh Valley could face a net deficit of nearly 10,000 workers.

**Incoming Workers**  
(population ages 6-15)

80,673

**Outgoing Workers**  
(population ages 55-64)

90,665



**Total Workforce**  
(2017)  
344,623

Source: Chmura JobsEQ® Platform

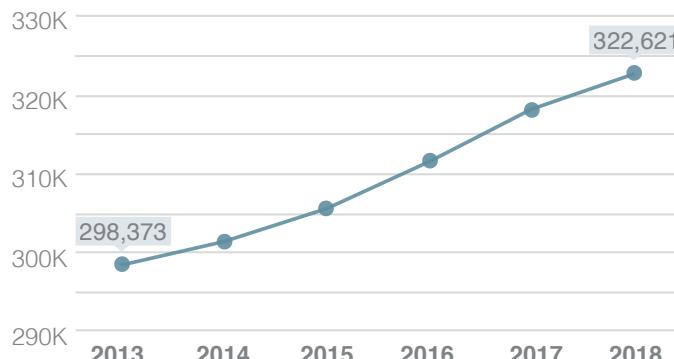
**Median Household Income**  
(2016)  
\$59,989

Source: Census Bureau,  
American Community Survey  
5-Year Estimate (2012-2016)



## 5-Year Employment Growth

The Lehigh Valley has seen a net employment growth of more than 24,000 in the past five years, an increase of 8 percent.

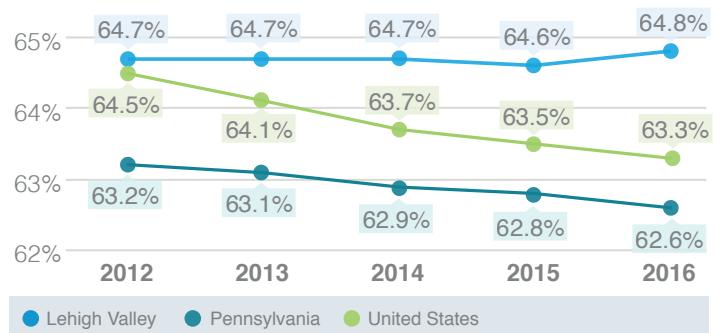


Source: Chmura JobsEQ® Platform

## 5-Year Labor Force Participation Rates

(Population 16 and older)

The Lehigh Valley has a slightly higher labor force participation rate than the rest of the state and nation.



Source: Chmura JobsEQ® Platform

## Commuting Patterns

There are more Lehigh Valley residents commuting outside the region to work than there are out-of-area commuters coming into the Lehigh Valley to work.

91,230      186,170  
Work in Lehigh Valley,  
live elsewhere      Live and work in  
Lehigh Valley

99,138  
Live in Lehigh Valley,  
work elsewhere

Source: Census Bureau, Center for Economic Studies



## Lehigh Valley Educational Attainment (ages 25 and over)

No high school diploma	<b>8.0%</b>	2-Year degree	<b>10.4%</b>
High school graduate or GED	<b>31.4%</b>	4-Year degree	<b>19.8%</b>
Some college, no degree	<b>19.1%</b>	Postgraduate degree	<b>11.2%</b>

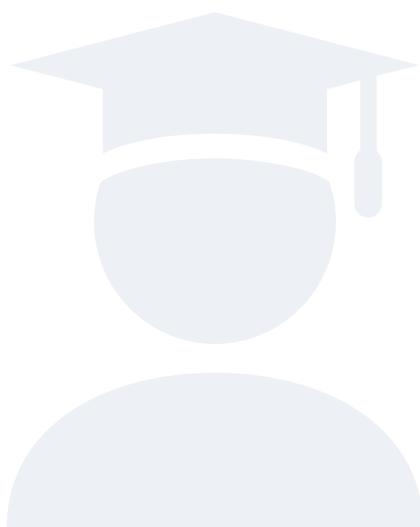
Source: Census Bureau, American Community Survey



## Degrees Awarded by Lehigh Valley Colleges & Universities (2016-17 academic year)

Cedar Crest College	<b>384</b>
DeSales University	<b>804</b>
East Stroudsburg University	<b>1,516</b>
Kutztown University	<b>1,927</b>
Lafayette College	<b>606</b>
Lehigh Carbon C.C.	<b>755</b>
Lehigh University	<b>1,915</b>
Moravian College	<b>501</b>
Muhlenberg College	<b>582</b>
Northampton C.C.	<b>1,233</b>
Penn State Lehigh Valley	<b>105</b>
<b>Total degrees awarded</b>	<b>10,328</b>

Source: National Center for Education Statistics



**1,988**  
**Associate's degrees  
awarded**

**14 percent of all  
Associate's degrees  
awarded in Pennsylvania  
were from Lehigh Valley's  
two community colleges.**

Source:  
National Center for  
Education Statistics

# TALENT MARKET FINDINGS

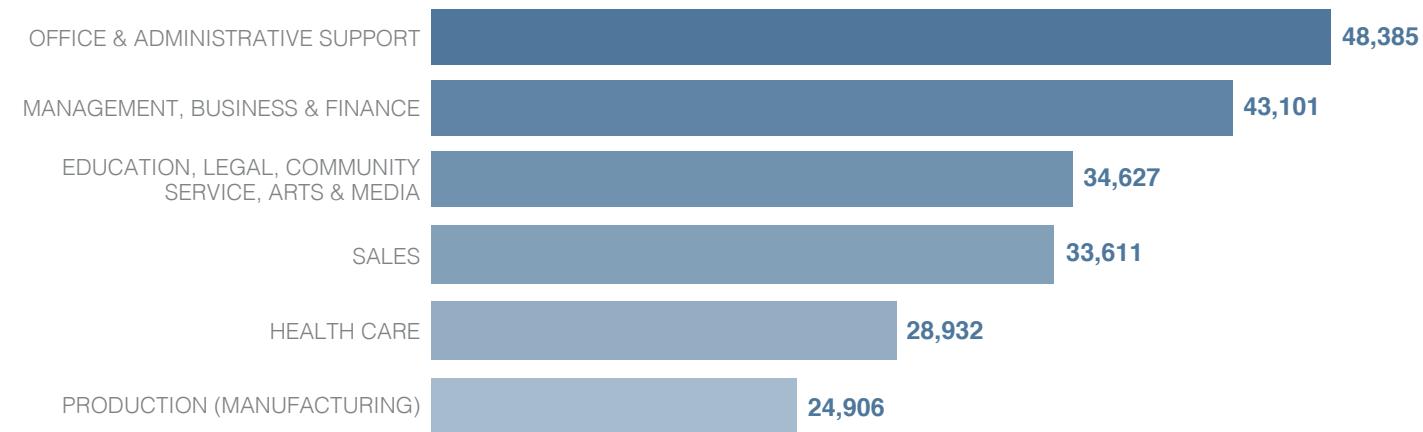
## Employment Forecast

Replacement Demand represents the sum of employment growth, the number of workers exiting the sector (retirement) and the number of workers transferring from the sector (to jobs in other sectors).<sup>1</sup> The job market is fluid with individuals entering, leaving, and returning to the workforce, and changing jobs across industries.

	Current employment	Forecast employment in 2022	Expected growth	Replacement demand <sup>1</sup>
 <b>Manufacturing</b>	24,764	23,955	-809	11,956
 <b>Business Services</b>	53,126	54,835	1,709	28,952
 <b>Life Science</b>	10,388	10,953	565	5,354
 <b>Transportation</b>	34,271	35,734	1,463	20,978
 <b>Health Care</b>	53,056	57,395	4,339	29,586
<b>Total Target Sectors</b>	<b>175,605</b>	<b>182,872</b>	<b>7,287</b>	<b>96,826</b>

Source: Chmura JobsEQ® Platform

## Top Occupations in the Lehigh Valley



Source: U.S. Census Bureau, American Community Survey

The employment numbers above are based on job titles, not the industry in which the people work. For example, if an employee at a health network worked in an administrative position, they would be listed above under "Office & Administrative support," not under "Health Care."



## Growing Occupations in the Lehigh Valley Within the Five Target Industry Sectors

Occupation	Current Employment	Projected Annual Growth (2017-2022)
Home Health Aide	1,858	3.6%
Personal Care Aide	4,585	3.2%
Medical Assistant	1,803	2.4%
Software Developer, Applications	1,056	2.2%
Phlebotomist	453	2.1%
Mental Health and Substance Abuse Social Worker	404	2.0%
Mental Health Counselor	387	2.0%
Social and Human Services Assistant	791	1.9%
Medical Secretary	1,471	1.8%

### Top Critical Occupations

(most mentioned by survey respondents)

1. Truck driver/CDL driver
2. Engineer
3. Machinist
4. Marketing and sales
5. Mechanic
6. Nurse

### Difficult Occupations to Hire/Retain

(most mentioned by survey respondents)

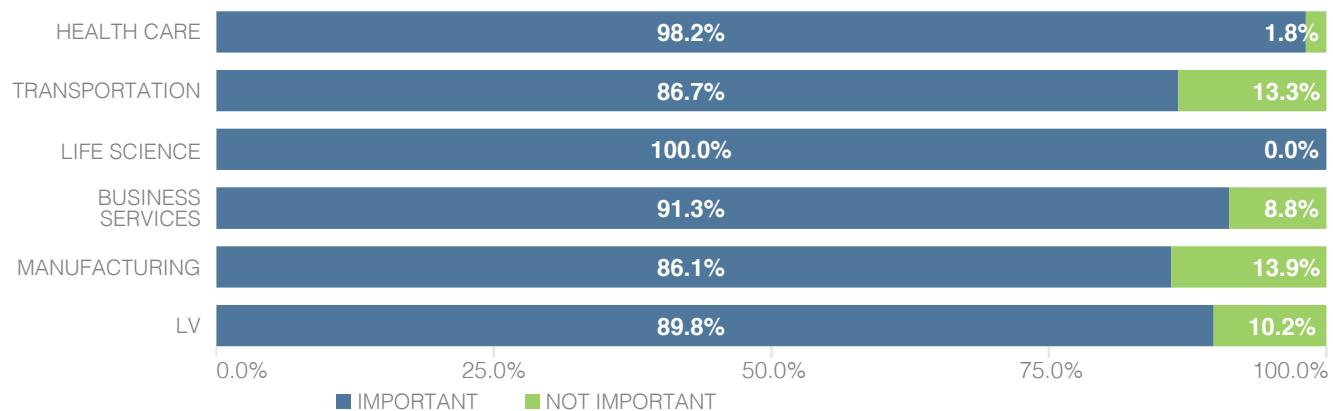
1. Truck driver/CDL driver
2. Machinist
3. Engineer
4. Mechanic
5. Nurse



Source: MDB Insight's survey of Lehigh Valley businesses

## Importance of a Skilled Workforce

(Based on Survey Results)



Source: MDB Insight's survey of Lehigh Valley businesses

# MANUFACTURING



Manufacturing is the second-largest economic sector in the Lehigh Valley, contributing \$6.89 billion toward the region's \$39.1 billion gross domestic product, or nearly 18 percent of the total regional GDP. According to the National Science and Technology Council, manufacturing has the greatest economic multiplier of any other sector, creating four additional jobs for every one job in manufacturing. The impact of manufacturing is expected to grow with the development of new technology and processes, which will require a large number of highly skilled workers. Nationally, a projected 3.5 million new manufacturing jobs are expected to be created in the next decade, with 2 million of those positions remaining unfilled due to a skills gap.

**Employees:** 24,764

**Employers:** 317

**Employment Change (Five-Year):** 2,564

**Average Annual Growth Rate:** 8% 

**Average Compensation (annual):** \$70,302

**Total Wages:** \$1.74 billion

Source: Employer data comes from U.S. Census Bureau's 2015 County Business Patterns  
All other data in this box comes from Chmura JobsEQ® Platform

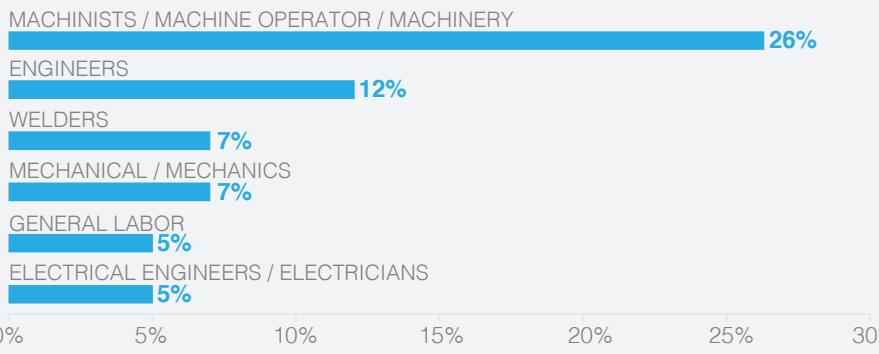
## Top Regional Manufacturing (Advanced and Food & Beverage) Occupations & Wages\*

Occupation Title	Employment	Employment per 1,000 jobs	Mean hourly wage	Annual mean wage
<b>TOTAL (Production Occupations)</b>	<b>26,730</b>	<b>75.348</b>	<b>\$18.64</b>	<b>\$38,770</b>
Team assemblers	3,080	8.693	\$16.72	\$34,780
Inspectors, testers, sorters, samplers, and weighers	2,060	5.813	\$19.46	\$40,470
First-line supervisors of production and operating workers	1,990	5.602	\$30.26	\$62,940
Packaging and filling machine operators and tenders	1,980	5.582	\$16.15	\$33,590
Helpers – production workers	1,180	3.337	\$13.62	\$28,320
Electrical and electronic equipment assemblers	1,170	3.303	\$16.43	\$34,170
Computer-controlled machine tool operators, metal and plastic	850	2.395	\$18.12	\$37,680
Welders, cutters, solderers, and brazers	820	2.323	\$21.13	\$43,950
Machinists	730	2.057	\$20.24	\$42,100
Sewing machine operators	720	2.027	\$11.04	\$22,970

Source: Bureau of Labor Statistics May 2016  
This is only a partial list with the top 10 by employment number; the rest of the list can be found in the full MDB Insight report



**What specific skills, trades, or occupations do you find difficult to hire or retain for your operations in the Lehigh Valley?**



## Regional Graduates with Degrees Related to Manufacturing

Related Programs/Degrees	2015	2016	2017
Automotive technology	107	119	119
Civil engineering	75	63	68
Electrical and electronics engineering/technology	171	192	214
Engineering	362	337	273
Industrial systems engineering	92	82	89
Manufacturing degrees	87	112	120
Materials science and engineering	394	374	376
Mechanical engineering and technology	314	320	341
<b>Total graduates</b>	<b>1,602</b>	<b>1,599</b>	<b>1,600</b>

Source: LVEDC Education Survey, 2018

## PROJECTIONS:

Our demand forecast indicates the manufacturing (advanced and food & beverage) sector in the Lehigh Valley will need to replace nearly 12,000 workers during the next five years. Approximately 4,685 workers are anticipated to exit the workforce during the next five years, with another 8,074 workers transferring to another industry. This sector is in the midst of a significant upheaval; as customer demands change, numerous new subsector opportunities have arisen with this target sector. However, the Lehigh Valley boasts a unique mix of assets to accommodate this fast-changing sector and is well-positioned to continue advancing manufacturing activity.

**Forecasted Employment in 2022:** 23,955

**Anticipated Employment Change (2017-22):** -809

**Total Replacement Demand:** 11,956

**Anticipated Exits (2017-22):** 4,685

**Anticipated Transfers (2017-22):** 8,074

Source: Chmura JobsEQ® Platform



# HIGH-VALUE BUSINESS SERVICES



The high-value business services sector responds 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. Demand is driven by new business growth, job growth, increasing corporate involvement, and increasing disposable income. While large companies may operate globally or within a specific region, many business services firms serve smaller geographic areas near their headquarters. These sectors will continue to grow as the U.S. economy continues to transition towards service industries. Professional and business services (contained in high-value business services) contributes \$5.3 billion to the Lehigh Valley's \$39.1 billion gross domestic product.

**Employees:** 53,126

**Employers:** 2,853

**Employment Change (Five-Year):** 1,358

**Average Annual Growth Rate:** 2% 

**Average Compensation (annual):** \$64,953

**Total Wages:** \$3.45 billion

*Source: Employer data comes from U.S. Census Bureau's 2015 County Business Patterns  
All other data in this box comes from Chmura JobsEQ® Platform*

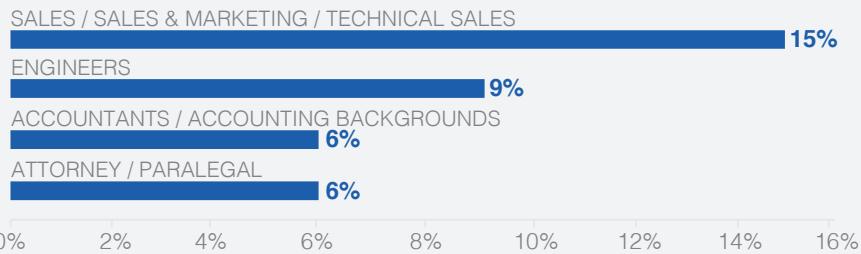
## Top Regional High-Value Business Services Occupations & Wages\*

Occupation Title	Employment	Employment per 1,000 jobs	Mean hourly wage	Annual mean wage
<b>TOTAL (Business and Financial Operations Occupations)</b>	<b>13,090</b>	<b>36.899</b>	<b>\$34.36</b>	<b>\$69,810</b>
Accountants	2,880	8.111	\$37.01	\$75,020
Market research analysts and marketing specialists	1,490	4.2	\$29.20	\$60,170
Human resources specialists	1,300	3.658	\$30.40	\$64,000
Purchasing agents, except wholesale, retail, and farm products	810	2.282	\$30.37	\$62,230
Business operations specialists, all other	810	2.282	\$35.63	\$70,610
Management analysts	690	1.935	\$43.95	\$84,180
Training and development specialists	530	1.493	\$29.68	\$59,410
Cost estimators	470	1.328	\$30.12	\$64,730
Claims adjusters, examiners, and investigators	390	1.091	\$34.38	\$68,240
Loan officers	390	1.904	\$34.60	\$61,660

*Source: Bureau of Labor Statistics May 2016  
This is only a partial list with the top 10 by employment number; the rest of the list can be found in the full MDB Insight report*



**What specific skills, trades, or occupations do you find difficult to hire or retain for your operations in the Lehigh Valley?**



## Regional Graduates with Degrees Related to High-Value Business Sector

Related Programs/Degrees	2015	2016	2017
Accounting and finance	519	525	518
Communication	28	29	22
Economics and statistics	48	61	49
Human resource management	21	25	28
Information technology	414	432	433
Management and business	255	268	301
Marketing	87	112	120
<b>Total graduates</b>	<b>958</b>	<b>1,020</b>	<b>1,038</b>

Source: LVEDC Education Survey, 2018

## PROJECTIONS:

The Lehigh Valley is well-positioned to serve this sector. The region's central location puts companies in close proximity to the financial and insurance capitals of the nation, like New York and Philadelphia. A strong cluster of shared service and back office facilities already exist in the Lehigh Valley, which has supported the continued growth of this target sector. High-value business services will need to replace 28,952 workers during the next five years. Approximately 10,930 workers are anticipated to exit the workforce in the next five years, with another 16,313 workers transferring to another industry. Despite the sector being quite volatile, is it still forecasted to add another 1,709 workers in the next five years.

**Forecasted Employment in 2022:** 54,835

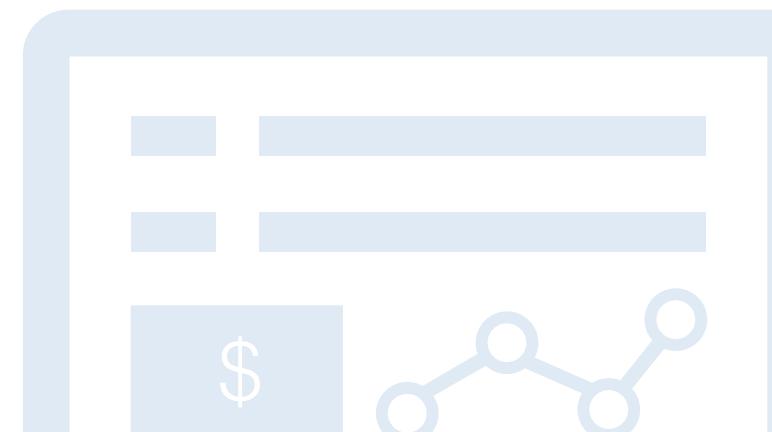
**Anticipated Employment Change (2017-22):** 1,709 

**Total Replacement Demand:** 28,952

**Anticipated Exits (2017-22):** 10,930

**Anticipated Transfers (2017-22):** 16,313

Source: Chmura JobsEQ® Platform



# LIFE SCIENCES



The life sciences sector is on the rise nationally in tandem with the increasing demand for health services. Pennsylvania is a national leader in the life science industry, and the Lehigh Valley in particular offers tremendous competitive advantages in the life, biological, and biomedical science fields. According to the Life Sciences Pennsylvania, over half of the industry establishments in the state have fewer than 10 employees, and the sector contributes a total (direct and indirect) state economic output of \$88.5 billion. Between 2011 and 2016, Pennsylvania experienced modest life sciences employment growth in comparison to peer states due to a decline in pharmaceutical manufacturing in the Commonwealth and concurrent gains in research, testing and medical laboratories.

**Employees:** 10,388

**Employers:** 108

**Employment Change (Five-Year):** 214

**Average Annual Growth Rate:** -1% ↓

**Average Compensation (annual):** \$86,441

**Total Wages:** \$898 million

Source: Employer data comes from U.S. Census Bureau's 2015 County Business Patterns  
All other data in this box comes from Chmura JobsEQ® Platform

## Top Regional Life Science Research & Manufacturing Occupations & Wages\*

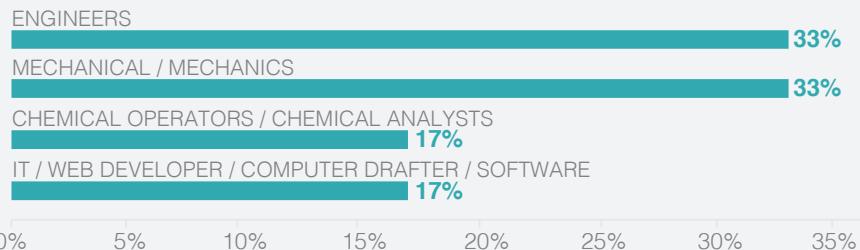
Occupation Title	Employment	Employment per 1,000 jobs	Mean hourly wage	Annual mean wage
<b>TOTAL (Life, Physical, and Social Science Occupations)</b>	<b>1,840</b>	<b>5.183</b>	<b>\$36.29</b>	<b>\$75,480</b>
Chemical technicians	350	0.975	\$26.01	\$54,090
Chemists	290	0.831	\$40.17	\$83,560
Biological technicians	80	0.233	\$19.62	\$40,800
Environmental scientists and specialists, including health	70	0.188	\$31.04	\$64,550
Life, physical, and social science technicians, all other	70	0.19	\$21.36	\$44,420
Food scientists and technologists	60	0.158	\$30.62	\$63,680
Biochemists and biophysicists	50	0.136	\$33.58	\$69,840
Environmental science and protection technicians, including health	50	0.131	\$21.89	\$45,520
Social science research assistants	30	0.088	\$22.23	\$46,240

Source: Bureau of Labor Statistics May 2016

This is only a partial list with the top 10 by employment number; the rest of the list can be found in the full MDB Insight report



**What specific skills, trades, or occupations do you find difficult to hire or retain for your operations in the Lehigh Valley?**



## Regional Graduates with Degrees Related to Life Sciences Sector

Related Programs/Degrees	2015	2016	2017
Behavioral neuroscience	29	48	28
Biochemistry	45	34	45
Bioengineering	43	57	48
Biology	229	256	248
Biotechnology	73	81	101
General bio/life sciences	129	118	128
Information technology	414	432	433
<b>Total graduates</b>	<b>962</b>	<b>1026</b>	<b>1031</b>

Source: LVEDC Education Survey, 2018

## PROJECTIONS:

The life science research and manufacturing sector has boasted many success stories in the Lehigh Valley. Over the last five years, this \$898 million in wages industry was at the forefront of combating viruses such as Ebola. A specialized industry, life science research and manufacturing activities remain a critical sector for local post-secondaries. A strong growth in the health care services industry also complements the importance of this target sector. Our forecast shows this sector will need to replace nearly half of its existing workers during the next five years. Approximately 2,000 workers are anticipated to exit the workforce during the next five years, with another 2,789 workers transferring to another industry. The sector is also forecasted to add another 565 workers.

**Forecasted Employment in 2022:** 10,953

**Anticipated Employment Change (2017-22):** 565 ↑

**Total Replacement Demand:** 5,354

**Anticipated Exits (2017-22):** 1,999

**Anticipated Transfers (2017-22):** 2,789

Source: Chmura JobsEQ® Platform



# TRANSPORTATION, WAREHOUSING & LOGISTICS



The rise of e-commerce has increased the importance of the transportation, warehousing and logistics sector. It is the fastest-growing sector in the Lehigh Valley economy, with a 9.5 percent year-over-year growth in economic output, adding 10,000 jobs in the last five years. This is fueled in part by the construction of new fulfillment centers by such companies as Amazon, Walmart, and Zulily. The region's central location makes us a prime location for companies in this sector, and that is not expected to change absent major changes in technology.

**Employees:** 34,271

**Employers:** 698

**Employment Change (Five-Year):** 10,019

**Average Annual Growth Rate:** 5%

**Average Compensation (annual):** \$54,743

**Total Wages:** \$1.88 billion

Source: Employer data comes from U.S. Census Bureau's 2015 County Business Patterns  
All other data in this box comes from Chmura JobsEQ® Platform

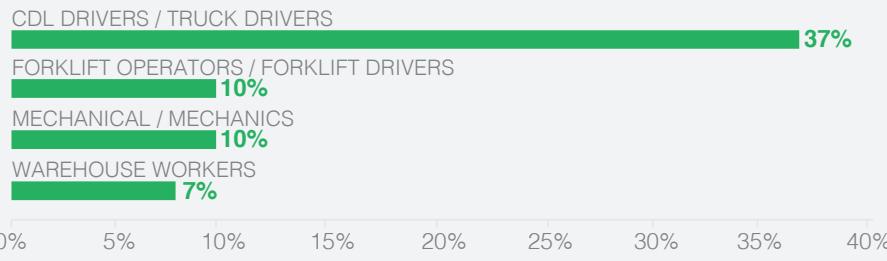
## Top Regional Transportation, Warehousing, & Logistics Occupations & Wages\*

Occupation Title	Employment	Employment per 1,000 jobs	Mean hourly wage	Annual mean wage
<b>TOTAL (Transportation and Material Moving Occupations)</b>	<b>35,410</b>	<b>99.835</b>	<b>\$17.02</b>	<b>\$34,540</b>
Workers and freight, stock, and material movers, hand	13,870	39.097	\$14.29	\$30,080
Heavy and tractor-trailer truck drivers	6,120	17.242	\$23.22	\$45,730
Industrial truck and tractor operators	3,700	10.421	\$17.39	\$34,890
Packers and packagers, hand	2,090	5.898	\$13.42	\$27,580
Light truck or delivery services drivers	2,060	5.799	\$17.67	\$35,540
Bus drivers, school or special client	1,670	4.695	\$16.82	\$34,560
Driver/sales workers	1,300	3.659	\$13.93	\$24,200
Cleaners of vehicles and equipment	890	2.507	\$12.83	\$24,100
First-line supervisors of helpers, workers, and material movers, hand	680	1.931	\$25.80	\$53,660
First-line supervisors of transportation and material-moving machine and vehicle operators	580	1.627	\$32.09	\$66,740

Source: Bureau of Labor Statistics May 2016  
This is only a partial list with the top 10 by employment number; the rest of the list can be found in the full MDB Insight report



**What specific skills, trades, or occupations do you find difficult to hire or retain for your operations in the Lehigh Valley?**



## Regional Graduates with Degrees Related to Transportation, Warehousing, and Logistics

Related Programs/Degrees	2015	2016	2017
CDL truck driver training	270	255	184
Logistics and supply chain management	135	104	65
CDL truck and bus driver	95	94	80
<b>Total graduates</b>	<b>500</b>	<b>453</b>	<b>329</b>

Source: LVEDC Education Survey, 2018

## PROJECTIONS:

The transportation, warehousing and logistics sector will need to replace 20,978 workers (over 60 percent) in the next five years; a projected 7,825 workers will exit the workforce within the next five years, while another 11,688 are expected to transfer to another industry. This sector is volatile and is forecasted to add another 1,463 workers in the next five years. As the sector becomes more important, there has been a much-publicized driver shortage in trucking seen as part of a larger employee shortage problem facing the entire transportation industry, including the warehouse and logistics sectors. This shortage of trained individuals to replace a rapidly aging workforce in trucking and warehousing may ultimately raise transport and storage costs for shippers.

**Forecasted Employment in 2022:** 35,734

**Anticipated Employment Change (2017-22):** 1,463 

**Total Replacement Demand:** 20,978

**Anticipated Exits (2017-22):** 7,825

**Anticipated Transfers (2017-22):** 11,688

Source: Chmura JobsEQ® Platform

# HEALTH CARE



The Lehigh Valley's top industry by employment is health care and social assistance. Specifically, health care is a significant contributor to the American economy, having risen from 13 percent of the national GDP in 1995 to 17 percent in 2014. Several major demographic shifts nationally have contributed to this industry's expansion, with further growth projected in the future. The number of Americans ages 65+ is projected to more than double from 46 million today to over 98 million by 2060, and that age group's share of the total population will rise from 15 percent to nearly 24 percent. Obesity rates among older adults have been increasing, standing at about 40 percent of 65-to-74-year-olds in 2009-2012.

**Employees:** 53,056

**Employers:** 1,489

**Employment Change (Five-Year):** 4,060

**Average Annual Growth Rate:** 2% 

**Average Compensation (annual):** \$46,452

**Total Wages:** \$2.46 billion

*Source: Employer data comes from U.S. Census Bureau's 2015 County Business Patterns  
All other data in this box comes from Chmura JobsEQ® Platform*

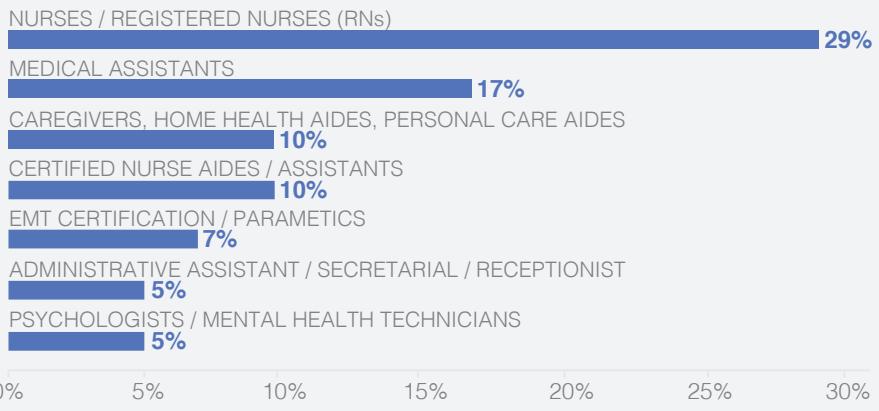
## Top Regional Health Care Occupations & Wages\*

Occupation Title	Employment	Employment per 1,000 jobs	Mean hourly wage	Annual mean wage
<b>TOTAL (Production Occupations)</b>	<b>12,260</b>	<b>34.556</b>	<b>\$14.75</b>	<b>\$30,680</b>
Nursing assistants	5,490	15.47	\$14.59	\$30,350
Medical assistants	2,100	5.914	\$15.21	\$31,640
Home health aides	1,750	4.93	\$10.99	\$22,870
Dental assistants	860	2.435	\$16.87	\$35,080
Phlebotomists	540	1.531	\$15.99	\$33,250
Orderlies	290	0.816	\$13.64	\$28,380
Physical therapist assistants	210	0.597	\$27.29	\$56,760
Veterinary assistants and laboratory animal caretakers	200	0.572	\$10.70	\$22,250
Occupational therapy assistants	160	0.439	\$25.68	\$53,420
Massage therapists	150	0.434	\$16.48	\$34,280

*Source: Bureau of Labor Statistics May 2016  
This is only a partial list with the top 10 by employment number; the rest of the list can be found in the full MDB Insight report*



**What specific skills, trades, or occupations do you find difficult to hire or retain for your operations in the Lehigh Valley?**



## Regional Graduates with Degrees Related to Health Care Sector

Related Programs/Degrees	2015	2016	2017
Nursing	626	629	618
Health-related degrees	613	543	556
Medical degrees	163	173	148
<b>Total graduates</b>	<b>1,402</b>	<b>1,345</b>	<b>1,322</b>

Source: LVEDC Education Survey, 2018

## PROJECTIONS:

Over the past five years, the health care sector has remained one of the largest industry sectors, with a multitude of facilities throughout the region everywhere from populated urban centers to more rural communities. The sector will need to replace 29,586 workers during the next five years. Approximately 12,330 workers are anticipated to exit the workforce during the next five years, with another 12,911 workers transferring to another industry. Perhaps unique to this target sector is the amount of anticipated new employment is needed, with approximately 4,339 workers added to the total employment demand.

**Forecasted Employment in 2022:** 57,395

**Anticipated Employment Change (2017-22):** 4,339

**Total Replacement Demand:** 29,586

**Anticipated Exits (2017-22):** 12,330

**Anticipated Transfers (2017-22):** 12,911

Source: Chmura JobsEQ® Platform

# KEY RECOMMENDATIONS

MDB Insight has identified 36 recommendations as part of its strategic action plan to guide talent supply communication and implementation strategies for the Lehigh Valley over the next five years.

**Below are the nine recommendations which LVEDC has identified as the highest-priority for immediate action.** The full list of recommendations can be found in the MDB Insight study at [www.lehighvalley.org](http://www.lehighvalley.org).

1. Conduct an annual “familiarization tour” of local businesses, inviting faculty members, career counselors, and administrators from educational institutions and the community to experience local workplaces.
2. Advocate for employability skills training programs across institutions to improve job preparedness and retention.
3. Develop a mentorship program connecting talent with existing leaders in target sector areas, exposing talent to the realities of the workplace and the types of skills needed for success.
4. Increase K-12 involvement in talent supply alignment work through direct outreach and engagement that supports information sharing and conversations about the economy and regional talent demand.
5. Create a regional database of workforce and professional training opportunities for employees and employers to access.
6. Offer easy-to-access training for managing diverse and multi-generational workplaces for employers to increase awareness and share strategies.
7. Create common messaging that showcases the Lehigh Valley’s assets and opportunities (housing, education, lifestyle, affordability, etc.) that can be used across organizations, employers, and stakeholder groups to promote the area with consistent messaging that strengthens the local brand.
8. Uncover migratory patterns of Lehigh Valley residents who leave for postsecondary, tracking where they go, what educational or workforce programming they seek and complete, and if and when they return.
9. Research skills, occupations, and zip codes of the Lehigh Valley residents who leave for employment outside of the area (commuters).

# METHODOLOGY

MDB Insight's approach to the Lehigh Valley Talent Supply and Industry Sector Analysis and Strategic Action Plan entailed quantitative data analysis about the region's talent market; consultations with employers, educators, and other important stakeholders; and development of a strategic plan based on the data collected.

Quantitative data sources included the Census Bureau, Bureau of Labor Statistics, National Center for Education Statistics, and others. Appendix A of the final report has a complete list of data sources used. Target industrial sectors were developed from industry titles listed in the North American Industry Classification System (NAICS) that LVEDC and MDB Insight selected based on current employment, projected growth, and specific competitive advantages of the Lehigh Valley.

Surveys, interviews, and focus groups provided qualitative data from employers, educators, non-profit organizations, and community leaders. This input was collected through telephone surveys of 315 randomly selected businesses in the target industrial sectors and 32 telephone interviews with business and community leaders completed between October 2017 and January 2018. In addition, eight focus groups were held with stakeholder groups: four in November 2017 and four in April 2018.

Analysis of the data resulted in observations and common challenges that formed the basis of a strategic plan for the Lehigh Valley's talent market. The plan provides a framework to help the region build on collaboration between employers and educators, increase awareness of skills that employers value and access to training for those skills, promote the Lehigh Valley as a community of choice to attract talent, and further research initiatives that increase knowledge about the regional talent market.

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## RESOURCES

Partners in the Lehigh Valley who assist with workforce training and development issues include:

**Workforce Board Lehigh Valley**

**Manufacturers Resource Center**

**Small Business Development Center**

**Lehigh Valley Inter-Regional Networking & Connecting Consortium (LINC)**

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## ACKNOWLEDGMENTS

This study was financed in part by grants from the Commonwealth of Pennsylvania, Department of Labor and Industry and Department of Community and Economic Development.

LVEDC acknowledges the support and involvement of its Education and Talent Supply Council members, the many local businesses and stakeholders who participated in the study, and the Lehigh Valley's 11 colleges and universities and three career and technical centers, who provided valuable data on recent graduates and current students in the region's talent supply pipeline.

LVEDC thanks the staff of MDB Insight for its extensive work, which has provided a fuller understanding of the Lehigh Valley's current talent market and a framework for ongoing research to identify and address future talent issues.



## Our Mission

The mission of the Lehigh Valley Economic Development Corporation is to market the economic assets of the Lehigh Valley and to create partnerships to lead the recruitment, growth, and retention of employers.

## Our Vision

Our vision is of a diverse Lehigh Valley economy that provides economic growth and opportunity for people of all skills and education and strengthens all our cities, boroughs, and townships.

## Our Priorities

- Market the economic assets of the Lehigh Valley
- Recruit companies in targeted economic sectors
- Support the growth and retention of new and existing employers
- Promote and coordinate a skilled and prepared workforce
- Provide intelligence and data on the Lehigh Valley economy
- Expand public and private LVEDC investment and build partnerships for economic growth

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