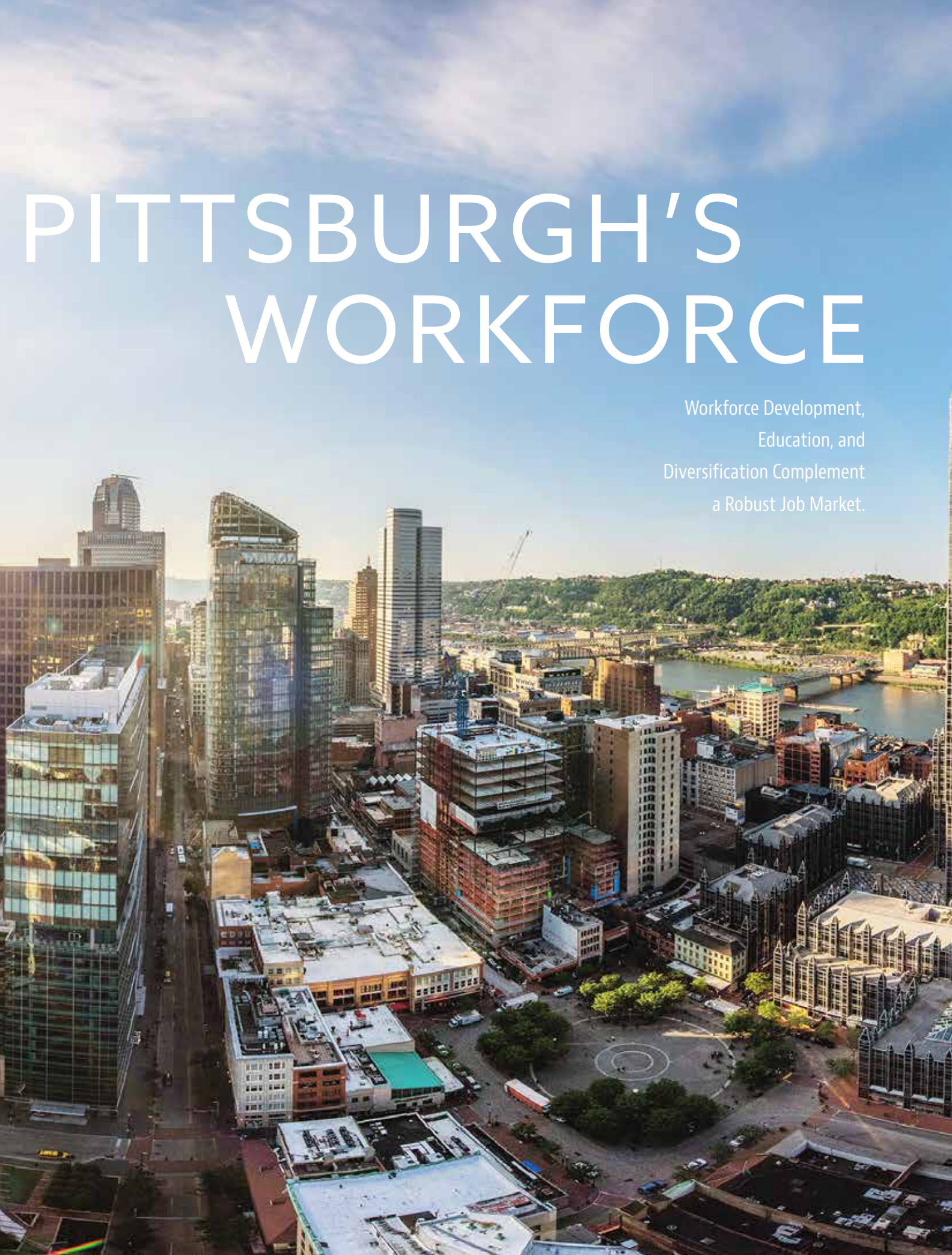


# THE FUTURE OF

An aerial photograph of Pittsburgh, Pennsylvania, taken during the golden hour of sunset. The sun is low on the horizon, creating a warm, golden glow over the city. The skyline is dominated by several tall skyscrapers, including the PPG Place and the PNC Tower. The Allegheny River flows through the city, with several bridges crossing it. The foreground shows a mix of older brick buildings and modern high-rises. The sky is filled with soft, wispy clouds, and the overall atmosphere is one of a vibrant, modern city.

**F**or years, Pittsburgh has been showing up on lists of America's most livable cities. Why? Because there's something for everyone here. While the region remains suitable to so many lifestyles, Pittsburgh's job market also offers something for everyone. No longer is Pittsburgh defined singularly by steel. Instead, job seekers can now choose from a range of industries, types of businesses, and employers ready to hire.

An aerial photograph of Pittsburgh, Pennsylvania, showing a dense urban landscape with numerous skyscrapers and buildings. The city is situated along the banks of a river, with a bridge visible in the distance. The sky is blue with some light clouds. The text 'PITTSBURGH'S WORKFORCE' is overlaid in large white letters at the top of the image.

# PITTSBURGH'S WORKFORCE

Workforce Development,  
Education, and  
Diversification Complement  
a Robust Job Market.

# The Pittsburgh Story

## Three Primary Points

Transformed, balanced and future-focused, that's Pittsburgh. Over two generations, public and private sector leaders across the region have found common ground, overcome huge environmental and economic challenges, and captured opportunities. Such achievements are grounded in three key strategies that have guided - and continue to guide - our transformation.

1

**Build a Balanced, Knowledge-Intensive Economy**



**5 Key Sectors**

balance our economy and GDP



**\$3 Billion**

annual funding to government, corporate and academic R&D



**3rd Highest**

proportion for young people with bachelor's degrees or higher among 15 benchmark cities

2

**Create a Valuable Energy Portfolio**



**\$1 Billion**

annual funding to energy R&D



**Marcellus Shale**

is the world's 2nd largest natural gas play



**284 LEED**

certified projects

3

**Invest in Quality-of-Life Improvements**



**#1 Food City**

(Zagat)



**500+**

arts & cultural institutions



**The Great Allegheny Passage**

bike trail connects Pittsburgh to D.C.

Now, when the conversation turns to Pittsburgh, you can add context about our story. We're collaborating to create an economy that's neither old nor new, but uniquely ours and a place that continues to evolve to become the best it can be for everyone who lives, works and visits here.



In only the past decade, the region's most visible employment sectors have given Pittsburgh a new identity. Now, we have abundant jobs in the health care sector. We have a tech sector producing careers of the future such as autonomous vehicle engineers and technicians or machine learning scientists. We have construction jobs vying to keep pace with Pittsburgh's staggering rate of development. Along with these key sectors, administrative, sales, service, and other types of more traditional occupations underlie the workforce. The Greater Pittsburgh region also possesses a deep capacity to educate its population and workers, with 61 colleges, universities and other post-secondary institutions. Among these schools, the area's community colleges and other institutions are putting new focus on adult learners and on the continuing education that's needed to harness tomorrow's jobs today.

### Today's and Tomorrow's Workforce

There isn't a shortage of work in Pittsburgh; rather, the challenge seems to be connecting the right people with the right jobs. Across many job fields in the United States, there are more open jobs than available workers to fill them. The same is true in Pittsburgh, says Linda Topoleski, vice president of workforce operations and programs at the Allegheny Conference on Community Development, a civic leadership organization improving Pittsburgh's economic future. Some sectors of the regional economy are growing faster than others, she says, but every sector has opportunities for a range of occupations.

From health care to finance to energy and education, the region's leading sectors continue to trend upward. Yet more remarkable has been their ability to do so in unison. Pittsburgh's key industries and job fields have grown in harmony, on the whole. The 10-county Pittsburgh region added more than 6,600 new jobs in 2017, according to the Allegheny Conference.

Yes, year-to-year employment numbers and gains fluctuate among these sectors, but no one sector has become as encompassing an employment force as

## FEATURE

the steel industry used to be. “Since the decline and collapse of the steel industry, we have not necessarily been overly dependent on one sector over another,” says Topoleski. “We’ve become more balanced,” she adds—and that’s a good thing.

The region’s employment outlook benefits from certain qualities inherent to the leading industries. Pittsburgh’s booming tech sector, for example, will require leading minds in engineering, software, and IT; such workers will be highly educated and skilled. Yet, these top-tier workers won’t necessarily crowd out other skilled workers and those seeking jobs that don’t require a four-year degree, because even the tech sector can provide jobs for workers across the spectrum. Whether working in autonomous vehicles, advanced manufacturing or cybersecurity, the tech sector will require technicians of various abilities and skills, for example.

Expansions in tech jobs have seen community colleges and other educational institutions offer new initiatives for training technicians, Topoleski says. Nontraditional adult learners who did not have a digital, computer-centered career path may still be a key cohort of the tech sector’s workforce and the workforce of other information-oriented fields.

But if Pittsburgh’s workforce is to fulfill the potential behind the region’s bustling economic sectors, it will require importing talent to the area. Agencies like the Pittsburgh Technology Council, Vibrant Pittsburgh and the Allegheny Conference are all working to recruit new people to meet the information technology sector’s growing need for employees. “One of the overarching strategies is to attract more diverse talent here and retain more diverse talent, because that’s the only way we’re going to grow,” Topoleski says.

So, how will Pittsburgh’s future workforce be different? “The underlying theme for the entire workforce is that we all will need to continually up-skill, particularly when it comes to digital skills,” Topoleski says. “Being ready to face the future entails employees becoming more



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## Labor Stats - 2016

Area	Labor Force	Employed	Unemployed	Enemployment Rate	No. of Businesses
<b>United States</b>	<b>253,538,000</b>	<b>151,436,000</b>	<b>7,751,000</b>	<b>4.9%</b>	<b>17,124,646</b>
Pennsylvania	6,472,000	6,120,000	352,000	5.4%	656,473
10-County Region	1,317,400	1,240,900	145,700	5.8%	135,568
Pittsburgh MSA <sup>1</sup>	1,217,700	1,148,500	69,300	5.7%	127,770
Allegheny County	649,700	615,700	34,000	5.2%	68,709
Armstrong County	33,400	30,800	2,500	7.6%	2,777
Beaver County	86,000	80,600	5,400	6.3%	7,329
Butler County	98,500	93,500	5,100	5.1%	10,447
Fayette County	58,800	54,000	4,800	8.2%	6,148
Greene County	17,500	16,100	1,400	7.8%	1,638
Indiana County	40,500	37,500	3,000	7.3%	3,857
Lawrence County	41,700	38,900	2,800	6.8%	4,395
Washington County	107,400	100,700	6,600	6.2%	11,705
Westmoreland County	183,900	173,100	10,800	5.9%	18,563
City of Pittsburgh	157,648	149,201	8,447	5.4%	N/A

<sup>1</sup>Pittsburgh MSA consists of Allegheny, Armstrong, Beaver, Butler, Fayette, Washington and Westmoreland counties; including the city of Pittsburgh  
 Source : U.S. Bureau of Labor Statistics; PA Department of Labor and Industry; Hoovers





# ALLEGHENY COUNTY ECONOMIC DEVELOPMENT

Allegheny County and the Pittsburgh region is a destination for new and expanding businesses, technology companies, leisure travelers, restauranters, students, artists and millennials alike. Thanks to the county's affordability, we continue to be a hub for innovation, education, medicine, STEM (Science, Technology, Engineering, Math) based initiatives, and so much more.

Our residents aren't the only ones noticing the transformation of the region. Over the past few years, we have received numerous national and international accolades:

- 'Airport of the Year' (Air Transport World Magazine 2017)
- 'Top 5 City for Foodies' (Smart Asset 2017)
- Travel & Leisure readers voted Pittsburgh one of their favorite U.S. cities (2016)
- WalletHub named Pittsburgh 7th best city for an active lifestyle (2017)
- Top 10 cities for STEM professionals (Wallethub 2017)
- Number 1 city in America to buy your first home (SmartAsset and the Business Insider 2017)
- One of the 'most affordable' places to live in the U.S. (US News 2016)
- Top 20 of 100 Best Places to Live (Livability.com 2017)

As the county's leading residential and commercial economic development agency, Allegheny County Economic Development continues to make investments that create vibrant places for residents and visitors to live, work and play. We have focused on planning and designing active transportation improvements that encourage connectivity through walking and bicycling. We continue to work towards the construction of a bus rapid transit system that will connect our two largest job centers, while also making access easier from the surrounding communities into downtown Pittsburgh. We have committed to cleaning up and revitalizing once blighted and environmentally hazardous brownfield sites and, as a result, have made our riverfront communities safe, healthy and productive. We continue to partner with public and private entities to support development throughout the county by investing in our arts and cultural amenities, riverfront trails and historic sites, neighborhood business districts and county parks. This collaboration leads to a memorable experience for residents and visitors.

We are proud of our accomplishments, but have never been one to rest on our laurels. Improving our region and the quality of life for our residents is our priority. With a strong work ethic, where everyone rolls up their sleeves and gets to work, we look forward to celebrating even more successes in the future and are excited about working together with you.



**Rich Fitzgerald**  
Allegheny County Executive





digitally fluent, for example, being able to learn data visualization or basic coding skills. Learning these skills sooner rather than later would be beneficial because the pace of change will only accelerate, Topoleski says.

Possessing the resources and time to further educate and train employees may be the prerogative of larger, wealthy companies. But mid-size companies will not necessarily be denied similar opportunities. The Allegheny Conference is considering a shared services model for the region so mid-size companies can equally leverage training and employee education initiatives; it's an example of the workforce community's shared efforts to ready employees and employers for tomorrow's dynamic job demands. "There will be a shift in the way employers think about investing in talent and not just being consumers of talent. The worker as a commodity probably will change," says Philip Cynar, senior communications specialist at the Allegheny Conference. "Employers will want to make sure there are options for helping their employees to become the best versions of themselves that they can be."

## Connecting Graduates to Their First Jobs in Pittsburgh

With so many and such diverse colleges and universities in Pittsburgh, local schools have the unique opportunity to cultivate and prepare students for careers in Pittsburgh. Part of the disconnect between graduating students and unfilled open regional jobs could stem from students still being unaware of opportunities in Pittsburgh. While we no longer see an exodus of recent college graduates from the region, it's still common to lose graduates to places like Washington, D.C., Philadelphia, New York City, and the West Coast. Yet, the Allegheny Conference's Topoleski says, tours that bring groups of local students to workplaces representative of high-demand college majors have successfully connected graduates to internships and jobs right here.

And there's good reason for local companies to put the spotlight on themselves. The secret is out on Pittsburgh in so many ways, including its ability to mint such talented, workforce-ready graduates from its higher education institutions each year. But, while local companies vie for Pittsburgh-educated

new grads, so too do big, enticing companies like Google, Facebook, Amazon, and Microsoft (some of which have offices right here in Pittsburgh). These companies, for example, crowd the career centers and online recruiting platforms at Carnegie Mellon University and other schools here each year looking to attract some of Pittsburgh's best.

Exposure to local companies and industries throughout students' college experiences may be the most effective means of keeping young job seekers in Pittsburgh after graduation. At Point Park University's Rowland School of Business, Dean Stephen Tanzilli says that internships, co-ops, and shadowing of companies are a key part of students' education and the curriculum. "One of our goals, of course, is to try to really retain so much of our young talent and getting them engaged with companies very early on in their college career," Tanzilli says. "We start as early as freshman year. My hope is that we're not only providing them with employable skill sets but that it helps keep them in Pittsburgh and Western Pennsylvania. I think that's a good thing for everybody."

Pittsburgh's colleges and local companies benefit from a symbiotic, even



interdependent relationship. Tanzilli says his school works with and seeks advice from companies in the financial services, energy, and many other sectors to shape curriculum. Students are then better equipped for the local job market and beyond.

While the spotlight on Pittsburgh's economy frequently falls on industries like IT and health care, these fields offer opportunities even for graduates with seemingly disparate backgrounds. Tanzilli points to these industries' needs for financial analysts, managers, marketers, social media experts, and more. "I see a lot of technical-based opportunities, but these technical-based opportunities need people that are steeped in business acumen in order to help manage and run these companies," he says. Students, he says, have been noticing these opportunities, too. "That's probably the best news, that students are starting to understand that those opportunities that used to be thousands of miles away are a few blocks down the street," Tanzilli says.

## Booming Development and Construction Jobs to Match

Without a doubt, Pittsburgh's economy has transformed. Within the past

decade—or even more recently, by some standards—the region has experienced a surge in its tech sector, health care, and financial fields, among others. The resulting economic and jobs-based growth ties into literal growth made visible by new buildings and infrastructure sprouting up all over the region.

Booming industries require new offices, warehouses, hospitals, labs, centers, and much more. Still other visible construction projects involve repurposing the infrastructure of Pittsburgh's past; the 200,000-square-foot former Ford Motor Company assembly plant in Bloomfield that used to mint new Model Ts will become the UPMC Immune Transplant and Therapy Center. The abandoned steel mill at the riverfront Hazelwood Green site in Hazelwood is undergoing revitalization to provide a new headquarters for Pittsburgh's Advanced Robotics for Manufacturing Institute—they're prime examples of historical sites given new life that reflects the future of our economy and the world for that matter.

All of this building, rebuilding, and revitalization means that the forecast for construction jobs has reached new heights. While it's difficult to pinpoint a

ratio between the cost of a construction project and the number of jobs it creates, the past few years have seen more than just an uptick of construction jobs and opportunities, says Jeff Nobers, executive director of the Builders Guild of Western Pennsylvania. Of the various trade unions represented by the Builders Guild, some 3,000 of the 45,000 individual members of the trade unions are first-year apprentices. As recently as a few years ago, there were only around 1,000 first-year apprentices, Nobers says.

Pittsburgh's rapid growth has made these new entries into the construction trades possible. "If the work isn't there and we can't send an apprentice out, we don't want to bring them in," Nobers says. But that's hardly been the case. Not only did new-employment numbers jump a few years ago, so too did the dollars going into construction. The 10-county Pittsburgh region averaged \$2.8 to \$3 billion in non-residential construction projects per year. Beginning around three years ago, those figures shot upward, Nobers says. 2018 may see \$5.8 to more than \$6 billion in construction.

Yes, there's growing demand for construction and contractor work in Pittsburgh. But what's also grown are the



## FEATURE

skillsets and requirements of these jobs, Nobers says. “The days of just looking at a tradesperson—or a journeyman, as we used to call them—as being a person that lugs along some tools, cuts some wood, or puts some bricks down are way behind us,” Nobers says. “These careers, and they are careers, require a level of technological skills. They require you to be analytical in your thinking; you have to be a problem solver; you have to be able to communicate effectively.” The act of building has also arguably become more involved, and not only concerning high-tech hospitals and research centers. Office buildings, for example, Nobers says, have more environmental considerations in their construction than they used to.

In the coming years, a short list of trade fields likely to need workers includes insulators, steamfitters, laborers, bricklayers, carpenters, ironworkers, electricians, plumbers—virtually every field involved in construction and contracting work, Nobers says.

### Shell Plant to Produce Plastics—and Jobs

When a new employer comes to town, the local workforce takes note. But that’s an understatement to describe the excitement over the construction jobs and 600 permanent positions that the Shell ethane cracker plant in Potter Township, Beaver County, will provide. The plant will take ethane from nearby natural gas sites and “crack” the ethane molecules, converting them to ethylene to be used in plastics and other materials. The facility will anchor the emerging petrochemical industry in the region, producing some 3.5 billion pounds of polyethylene pellets annually.

Construction on the massive site has already begun. Peak construction will occur likely sometime in 2019, with 6,000 construction jobs demanded, says Michael Marr, business integration lead with Shell Pennsylvania Chemicals. The majority of this construction workforce is made up of contractors and members of trade unions.

In choosing Beaver County and, in effect, the Greater Pittsburgh region, for its plant site, Shell had to be sure the region could supply the necessary skill and

construction-worker numbers needed to fulfill such a grand project. After consulting with builders and trade unions, Marr says, Shell was quickly assured.

Once open for operations, which will be sometime in the early 2020s, the plant will require chemical, mechanical, and electrical engineers to manage the site and its production processes. Environmental engineers will also be needed to handle water treatment and oversee emissions and air quality. Plant operator positions will more commonly require a two-year degree and technical experience suited for operating and maintaining the plant’s machinery and infrastructure.

Hiring for some of these positions has already begun, and Marr says Shell has been very happy with the number and quality of applicants so far. The company has even been working with the Community College of Beaver County to develop a process technology degree program geared toward operator work at the plant as well as jobs with other regional employers in similar capacities.

The Shell site could also provide new opportunities for military veterans. “It is a priority of Shell to find and hire qualified local veterans into our operations generally, but that’s definitely the case here in Western Pennsylvania,” Marr says. In May 2018, Shell held a military recruitment event at Heinz Field to inform regional veterans how they can leverage military experience or get additional training to pursue jobs with Shell and at the plant.

### Prosperity for All: Pittsburgh’s Rising Challenge

As Pittsburgh’s tech sector and related fields continue to boom, such growth will continue to strengthen Pittsburgh’s economic vitality and shape its redefined identity. Yet this expansion and reemergence also presents one of the city’s greatest challenges. The tech sector, energy firms, health care providers, and other growing industries will add more jobs to the region, inject further investment dollars, and continue to reshape Pittsburgh’s reestablished pride. However, can all Pittsburghers share in this new identity? Will such

unprecedented growth and potential be inclusive across the board?

As a region, we’ve long been aware of and said that creating and attracting new jobs must include opportunities not only for the PhD holder but for the GED graduate as well. Further, while such rapid growth in various industries has built up and beautified some of Pittsburgh’s neighborhoods, others are waiting for prosperity to make a more visible impact. Therefore, inclusion among all populations, among all Pittsburghers, remains an underlying challenge.

Investors and technology companies looking to establish new roots or to expand in Pittsburgh can bring a bevy of new jobs to the region. Their companies and businesses can also affect communities, bringing jobs to where they’re needed most or, conversely, displacing residents from homes. The remaking of Pittsburgh and the future of its workforce will continue to be affected by outside companies coming to town and by the birth of new businesses and places of employment in our own backyard.

Such growth will deliver new opportunities for all as long as a comprehensive, inclusive approach remains a priority for Pittsburgh. We’ve seen companies launch partnerships aimed at developing or further educating the workforce. We’ve seen companies establish initiatives to strengthen communities. Pittsburgh’s workforce is robust, but there are some challenges to work on to make it more diverse. Our workforce needs to more completely reflect the diversity of the many communities that make up the Pittsburgh region. Employers, educators and employees will need to come together like never before to make sure that everyone who wants to work in the region will have the skills and opportunities to do so. Connecting all of the dots will require some ambition, but by no means an unrealistic pursuit. [mg](#)

# FEATURE

## 10-County Region - Employment by Occupation (Q4 2016)

Occupation	SOC	Employed	Location Quotient <sup>1</sup>
<b>Total - All Occupations</b>		<b>1,170,421</b>	<b>1.01</b>
Management Occupations	11-0000	62,150	1.05
Chief Executives	11-1010	2,180	1.10
General and Operations Managers	11-1020	18,669	1.04
Marketing Managers	11-2021	1,880	1.15
Sales Managers	11-2022	3,139	1.03
Computer and Information Systems Managers	11-3020	3,055	1.06
Financial Managers	11-3030	5,404	1.23
Human Resources Managers	11-3120	1,161	1.16
Architectural and Engineering Managers	11-9040	1,780	1.21
Business and Financial Operations Occupations	13-0000	60,147	1.04
Management Analysts	13-1110	4,781	0.95
Accountants and Auditors	13-2010	11,081	1.08
Credit Analysts	13-2040	728	1.23
Computer and Mathematical Occupations	15-0000	33,084	0.98
Computer Systems Analysts	15-1121	4,804	1.03
Computer Programmers	15-1131	2,333	0.95
Software Developers and Programmers	15-1130	12,696	0.94
Software Developers, Systems Software	15-1133	3,168	0.95
Database Administrators	15-1141	1,003	1.05
Network and Computer Systems Administrators	15-1142	3,263	1.04
Computer Network Support Specialists	15-1152	1,504	0.98
Architecture and Engineering Occupations	17-0000	23,470	1.16
Architects, Except Landscape and Naval	17-1011	817	1.03
Chemical Engineers	17-2040	346	1.30
Civil Engineers	17-2050	2,997	1.35
Electrical Engineers	17-2071	1,915	1.27
Industrial Engineers	17-2112	2,079	1.02
Materials Engineers	17-2130	290	1.33
Mechanical Engineers	17-2140	2,790	1.22
Mining and Geological Engineers, Including Mining Safety Engineers	17-2150	118	2.00
Nuclear Engineers	17-2160	166	1.12
Petroleum Engineers	17-2170	514	2.01
Electrical and Electronic Engineering Technicians	17-3023	1,259	1.11
Electro-Mechanical Technicians	17-3024	144	1.23
Industrial Engineering Technicians	17-3026	463	0.91
Mechanical Engineering Technicians	17-3027	484	1.19
Life, Physical, and Social Science Occupations	19-0000	9,602	1.05
Chemists	19-2031	723	1.05
Chemical Technicians	19-4030	707	1.32
Community and Social Service Occupations	21-0000	18,841	1.12
Legal Occupations	23-0000	9,183	1.11
Lawyers	23-1011	5,461	1.14
Paralegals and Legal Assistants	23-2010	2,603	1.21
Education, Training, and Library Occupations	25-0000	63,475	0.94
Arts, Design, Entertainment, Sports, and Media Occupations	27-0000	13,924	0.91

Continued >

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Occupation	SOC	Employed	Location Quotient <sup>1</sup>
<b>Healthcare Practitioners and Technical Occupations</b>	29-0000	80,427	1.17
Pharmacists	29-1050	2,900	1.16
Registered Nurses	29-1140	27,956	1.17
Medical and Clinical Laboratory Technicians	29-2012	1,643	1.21
Medical and Clinical Laboratory Technologists	29-2011	1,662	1.18
Pharmacy Technicians	29-2052	3,679	1.15
<b>Healthcare Support Occupations</b>	31-0000	42,272	1.21
<b>Protective Service Occupations</b>	33-0000	23,168	0.97
<b>Food Preparation and Serving Related Occupations</b>	35-0000	105,669	0.99
<b>Building and Grounds Cleaning and Maintenance Occupations</b>	37-0000	32,818	0.87
<b>Personal Care and Service Occupations</b>	39-0000	47,048	1.14
<b>Sales and Related Occupations</b>	41-0000	116,236	0.97
First-Line Supervisors of Retail Sales Workers	41-1011	9,824	1.00
First-Line Supervisors of Non-Retail Sales Workers	41-1012	1,897	0.92
Advertising Sales Agents	41-3010	1,059	0.85
Insurance Sales Agents	41-3020	2,999	0.92
Securities, Commodities, and Financial Services Sales Agents	41-3030	2,971	1.11
Sales Representatives, Wholesale and Manufacturing, <b>Except</b> Technical and Scientific Products	41-4012	10,251	0.88
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	41-4011	2,495	0.90
Real Estate Brokers	41-9021	221	0.66
Sales Engineers	41-9030	595	0.99
Telemarketers	41-9040	1,773	0.94
<b>Office and Administrative Support Occupations</b>	43-0000	188,303	1.04
First-Line Supervisors of Office and Administrative Support Workers	43-1010	12,870	1.09
Bill and Account Collectors	43-3010	2,650	1.00
Customer Service Representatives	43-4050	22,103	1.02
Shipping, Receiving, and Traffic Clerks	43-5070	5,237	0.94
Executive Secretaries and Executive Administrative Assistants	43-6011	5,795	1.06
Computer Operators	43-9010	428	1.00
<b>Farming, Fishing, and Forestry Occupations</b>	45-0000	1,646	0.21
<b>Construction and Extraction Occupations</b>	47-0000	48,105	1.06
First-Line Supervisors of Construction Trades and Extraction Workers	47-1010	4,763	1.10
Brickmasons and Blockmasons	47-2021	673	1.31
Carpenters	47-2030	5,200	0.94
Cement Masons and Concrete Finishers	47-2051	1,381	0.96
Electricians	47-2110	4,708	0.95
Painters, Construction and Maintenance	47-2141	1,640	0.92
Plumbers, Pipefitters, and Steamfitters	47-2152	3,552	1.05
Roofers	47-2180	701	0.75
Rotary Drill Operators, Oil and Gas	47-5012	289	2.08
Roustabouts, Oil and Gas	47-5070	791	1.92
Service Unit Operators, Oil, Gas, and Mining	47-5013	703	2.05
Sheet Metal Workers	47-2210	1,111	0.98
Construction and Building Inspectors	47-4010	735	1.09
<b>Installation, Maintenance, and Repair Occupations</b>	49-0000	45,070	1.01
First-Line Supervisors of Mechanics, Installers, and Repairers	49-1010	3,789	1.04
Computer, Automated Teller, and Office Machine Repairers	49-2010	813	0.93
Telecommunications Equipment Installers and Repairers, Except Line Installers	49-2022	1,634	0.92
Medical Equipment Repairers	49-9062	375	1.07

## FEATURE

Occupation	SOC	Employed	Location Quotient <sup>1</sup>
<b>Production Occupations</b>	51-0000	68,271	0.92
First-Line Supervisors of Production and Operating Workers	51-1010	4,988	1.00
Electrical and Electronic Equipment Assemblers	51-2022	1,925	1.12
Electromechanical Equipment Assemblers	51-2023	442	1.18
Structural Metal Fabricators and Fitters	51-2040	686	1.05
Computer-Controlled Machine Tool Operators, Metal and Plastic	51-4011	1,399	1.20
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	51-4021	793	1.34
Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	51-4023	894	3.61
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	51-4031	1,665	1.06
Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	51-4032	155	1.32
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	51-4033	795	1.36
Machinists	51-4040	3,900	1.25
Tool and Die Makers	51-4110	731	1.21
Welders, Cutters, Solderers, and Brazers	51-4121	3,427	1.11
Chemical Plant and System Operators	51-8091	298	1.04
Chemical Equipment Operators and Tenders	51-9011	566	1.02
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	51-9121	770	1.08
<b>Transportation and Material Moving Occupations</b>	53-0000	77,514	0.96
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	53-1030	1,721	1.02
Heavy and Tractor-Trailer Truck Drivers	53-3032	13,515	0.96
Light Truck or Delivery Services Drivers	53-3033	6,925	0.98
Crane and Tower Operators	53-7020	585	1.52
Industrial Truck and Tractor Operators	53-7050	3,844	0.84

<sup>1</sup> Location Quotient is a measure of the concentration of employment in a particular occupation relative to the national average. A Location Quotient above 1.00 indicates an above average concentration.

Source : JobsEQ

### Pittsburgh MSA - Employment by Industry

Sector / Industry	2012	2013	2014	2015	2016	% Change 2012-2016	Location Quotient <sup>1</sup>
<b>Total NonFarm</b>	1,157,400	1,157,500	1,159,600	1,161,700	1,163,200	0.5%	1.00
<b>Total Private</b>	1,036,400	1,038,000	1,041,600	1,044,800	1,047,100	1.0%	1.06
<b>Goods Producing</b>	153,700	153,100	154,400	153,500	147,700	-3.9%	0.93
<b>Mining and Logging</b>	9,900	10,700	11,800	11,200	8,700	-12.1%	1.59
<b>Construction</b>	54,000	53,000	53,900	54,500	53,900	-0.2%	1.00
Specialty Trade Contractors	31,100	31,300	31,400	31,900	31,800	2.3%	0.92
<b>Manufacturing</b>	89,800	89,400	88,600	87,700	85,100	-5.2%	0.85
Durable Goods	66,300	65,900	65,200	64,100	61,900	-6.6%	0.99
Primary Metal Industries	13,100	13,100	12,600	11,700	10,500	-19.8%	3.45
Iron and Steel Mills & Ferroalloy Production	7,100	6,900	6,800	6,300	5,400	-23.9%	8.01
Non-Durable Goods	23,500	23,600	23,500	23,600	23,200	-1.3%	0.62

Continued >

## FEATURE

Sector / Industry	2012	2013	2014	2015	2016	% Change 2012-2016	Location Quotient <sup>1</sup>
<b>Service-Providing</b>	<b>1,003,700</b>	<b>1,004,400</b>	<b>1,005,200</b>	<b>1,008,300</b>	<b>1,015,500</b>	<b>1.2%</b>	<b>1.01</b>
<b>Trade, Transportation, &amp; Utilities</b>	216,900	214,800	215,800	215,800	214,200	-1.2%	1.59
Wholesale Trade	46,400	45,100	45,100	44,600	43,800	-5.6%	0.93
Retail Trade	127,600	126,600	126,600	126,200	125,600	-1.6%	0.98
Transportation, Warehousing, & Utilities	42,900	43,000	44,100	45,000	44,800	4.4%	1.11
Utilities	5,800	5,600	5,600	5,800	5,800	0.0%	1.29
Transportation & Warehousing	37,100	37,400	38,500	39,200	39,000	5.1%	0.97
Truck Transportation	10,300	10,500	10,700	10,700	10,500	1.9%	0.90
<b>Information</b>	18,700	18,600	18,300	18,200	18,200	-2.7%	0.81
<b>Financial Activities</b>	70,900	71,200	70,600	70,300	70,900	0.0%	1.06
Finance & Insurance	57,300	57,800	56,700	56,200	56,700	-1.0%	1.15
Credit Intermediation & Related Services	29,300	28,900	28,000	27,600	28,000	-4.4%	1.33
Insurance Carriers & Related Services	21,700	22,800	22,200	22,000	22,100	1.8%	1.06
<b>Professional &amp; Business Services</b>	171,900	175,000	176,600	180,500	182,700	6.3%	1.13
Professional & Technical Services	74,300	77,200	79,700	82,900	85,600	15.2%	1.20
Architecture, Engineering & Related Services	18,400	18,600	18,800	18,800	18,300	-0.5%	1.61
Scientific Research & Development Services	6,800	6,900	7,100	7,500	8,100	19.1%	1.47
Management of Companies & Enterprises	38,400	39,700	39,600	39,700	39,600	3.1%	2.19
<b>Administrative &amp; Waste Services</b>	59,300	58,100	57,300	58,000	57,500	-3.0%	0.79
Administrative & Support Services	55,700	54,600	53,700	54,300	53,800	-3.4%	0.77
Employment Services	18,600	17,700	17,800	18,900	18,900	1.6%	0.66
<b>Education &amp; Health Services</b>	240,900	240,100	240,500	239,300	243,400	1.0%	1.34
Educational Services	53,200	51,900	51,700	50,600	51,500	-3.2%	1.79
Colleges, Universities & Professional Schools	38,600	38,400	38,700	37,600	38,400	-0.5%	1.85
Health Care & Social Assistance	187,700	188,200	188,800	188,700	191,800	2.2%	1.25
Ambulatory Health Care Services	64,900	65,800	66,900	66,700	67,800	4.5%	1.19
Offices of Physicians	25,100	25,200	25,100	24,600	24,900	-0.8%	1.22
Hospitals	55,500	55,600	54,600	53,900	54,100	-2.5%	1.34
Nursing & Residential Care Facilities	36,600	36,600	36,900	36,700	36,800	0.5%	1.38
Social Assistance	30,600	30,100	30,400	31,500	33,200	8.5%	1.13
<b>Leisure &amp; Hospitality</b>	111,700	114,000	114,300	115,800	118,800	6.4%	0.94
Accommodation & Food Services	91,600	93,200	93,900	95,200	97,400	6.3%	0.90
Food Services & Drinking Places	83,100	84,600	85,200	86,200	88,100	6.0%	0.96
Full-Service Restaurants	42,700	43,300	43,400	44,000	44,500	4.2%	1.03
Limited-Service Eating Places	29,800	30,500	30,800	31,200	32,400	8.7%	0.94
<b>Other Services</b>	51,700	51,200	51,200	51,400	51,300	-0.8%	1.12
<b>Government</b>	121,000	119,500	118,000	117,000	116,100	-4.0%	0.65
Federal Government	17,900	17,400	17,600	17,800	17,900	0.0%	1.68
State Government	15,300	15,100	15,200	15,100	15,000	-2.0%	0.37
Local Government	87,800	87,000	85,300	84,100	83,200	-5.2%	0.72
Local Government Educational Services	52,200	51,500	50,700	49,400	48,500	-7.1%	0.76
Local Government, Non-Educational	35,700	35,500	34,700	34,700	34,700	-2.8%	0.67

<sup>1</sup> Location Quotient is a measure of the concentration of employment in a particular occupation relative to the national average. A Location Quotient above 1.00 indicates an above average concentration.

Source : U.S. Bureau of Labor Statistics, CES State and Area Employment, Not Seasonally Adjusted