



Talent Demand
Working Group

AUGUST 2017

 TALENT 2025

West Michigan Talent Assessment and Outlook

Fourth Edition



Talent demand analysis and insights
for West Michigan education, workforce, and business leaders



About Talent 2025

Talent 2025 is a catalyst for an integrated talent development system for West Michigan. Composed of 100 CEOs from the region's 13 counties, the organization strives to be a driving force for an ongoing supply of world-class talent by convening leaders and organizations who will help shape a thriving economy.

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all of whom made this edition of the report possible!

INTRODUCTION AND PURPOSE

West Michigan community leader,

This is the fourth annual West Michigan Talent Assessment and Outlook report, the result of an ongoing collaboration between employers, educators, economic and workforce development, the State of Michigan, and civic, community, and nonprofit organizations across the West Michigan region.

The report is a critical strategy in Talent 2025's effort to catalyze an aligned talent system to meet the current and future needs of West Michigan's employers by providing actionable talent demand data and analysis for stakeholders in the region's talent system.

The previous reports were embraced by stakeholders as a vital resource for investing in training and development programs and promoting in-demand jobs. Each year, we've sought to improve the information and analysis to make it as impactful as possible.

The current state of West Michigan's labor market and the needs of employers has changed dramatically since the inaugural report in 2014. Today, regional unemployment stands at well under 5 percent. This has created a challenging environment for employers to find talent at all levels – entry level, semi-skilled, and skilled.

Many employers have responded by increasing wages to attract and retain talent, invest in the training and development of new and incumbent employees, and partnering with education and workforce organizations to develop talent pipelines.

Education and workforce organizations have stepped up with new training programs for semi-skilled and skilled labor, promoting in-demand jobs and careers to middle and high school students, and more.

We hope this report is helpful to you and your organization, whether you are an employer, education or training institution, or community organization. Thank you to our partners for their help in creating this report. It is unique in the country and another manifestation of the collaborative nature of West Michigan.

Regards,



Kevin Stotts, President

Talent 2025

NOTES FOR THE READER

- All the data discussed or shown in graphs and charts throughout the report are available on the [Talent 2025 website](#) in a useable Excel document.
- Insights gathered from the industry sector focus groups are clearly marked within the Sector Focus section of this report. Conclusions drawn from these focus groups are a reflection of the responses given at those sessions with those specific employers, and should not be taken as generalizations about all employers within that sector.
- On three occasions throughout this year’s report, we have included a callout box titled “Area Comparison.” To better understand and benchmark West Michigan in comparison to similar regions throughout the country, Talent 2025 has created a list of peer communities that are similar in size and industry makeup (these areas have populations within 30 percent of the population of the Grand Rapids-Wyoming-Muskegon, MI CSA, as well as over 10 percent of employment in *Manufacturing*). Background data for these regions can be found in Appendix 1. These 11 Combined Statistical Areas (CSAs) are:
 - Birmingham-Hoover-Talladega, AL CSA
 - Buffalo-Cheektowaga, NY CSA
 - Dayton-Springfield-Sidney, OH CSA
 - Greensboro-Winston-Salem-High Point, NC CSA
 - Greenville-Spartanburg-Anderson, SC CSA
 - Harrisburg-York-Lebanon, PA CSA
 - Hartford-West Hartford, CT CSA
 - Knoxville-Morristown-Sevierville, TN CSA
 - Louisville/Jefferson County-Elizabethtown-Madison, KY-IN CSA
 - Rochester-Batavia-Seneca Falls, NY CSA
 - Tulsa-Muskogee-Bartlesville, OK CSA
- Sector-level competency data was generated using the O*Net database and Talxcellenz©. Importance and Level scores for the top occupations in the sector were averaged to create the given competencies. More on the methodology and the scores can be found in Appendix 3.
- If you have any further questions on the data sourcing or methodology used throughout the report, please contact Ryan Gimarc at r.gimarc@talent2025.org. We would be happy to answer your questions.

Counties in West Michigan region:

Allegan	Montcalm
Barry	Muskegon
Ionia	Newaygo
Kent	Oceana
Lake	Osceola
Mason	Ottawa
Mecosta	



EXECUTIVE SUMMARY

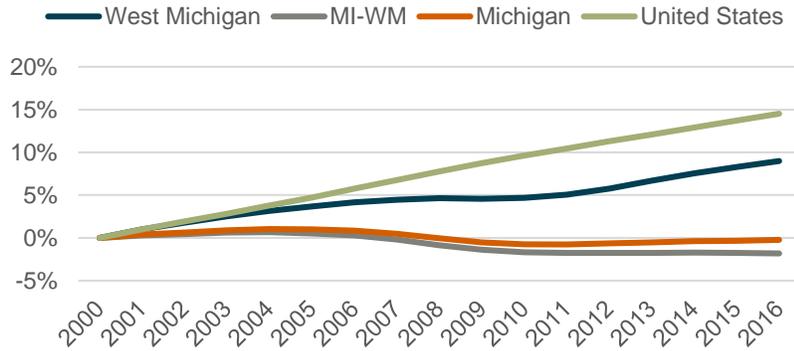
- West Michigan experienced continued population growth over the year, adding over 10,000 new residents to bring the population of the region to 1,580,955. However, this growth comes despite continued negative net migration to counties outside of the state of Michigan. The vibrant communities throughout West Michigan continue to be attractive destinations to residents in other parts of the state who may already be familiar with the region, but West Michigan still sees a strong outflow of migration to southern states such as Florida, North Carolina, and Mississippi.
- Educational attainment in West Michigan continues to move in a positive direction, with 58.3 percent of adults in West Michigan achieving some form of education beyond high school in 2015. With a goal of 64.0 percent for this indicator (as projected by the W.E. Upjohn Institute for Employment Research), stakeholders throughout the region are working to ensure that the labor force is prepared for what skills and credentials will be needed in 2025. Related to this, over 10 percent of the adult population does not have a high school diploma or GED. These individuals face enormous odds to gaining and keeping sustained employment due to issues of hard technical skills as well as potential issues around literacy. For those with literacy issues, this can have a generational effect by way of the children of individuals who cannot read, making this an issue of continued importance in our communities.
- Job growth continued at a steady pace from 2015 to 2016, adding over 25,000 jobs within the region at a strong rate of 4.1 percent over the year. Proportionally, West Michigan is the fastest of Michigan's ten Prosperity Regions in terms of job growth during that time, boosted by the region's largest industry, *Manufacturing*. Private-sector *Manufacturing* has added over 4,400 jobs over the year, and has grown by 33.3 percent since the trough of the recession in 2009, adding almost 38,000 jobs.
- Sector strategies continue to be a leading practice in workforce planning. The middle of this report supports regional initiatives such as the West Michigan Health Careers Council, Discover Manufacturing, the Construction Workforce Development Alliance of West Michigan, and West Michigan Tech Talent. We also provide competency and occupation information for the Agriculture and Energy (as a subset of Construction and Energy) sectors, as well as two new industry sectors: Professional Services and Retail and Hospitality Services.
- Four themes emerged from the industry sector focus groups that will play a pivotal role in the future of talent planning in the region: Millennials (and more broadly the generational shift with the retirement of the Baby Boomer generation), flexibility in work schedules and other benefits, diversity and inclusion, and the use of social media in talent acquisition.
- New occupational projections from the State of Michigan's Bureau of Labor Market Information and Strategic Initiatives for the forecasting period 2014 to 2024 show strong expected growth in occupational employment in West Michigan, outpacing the state and every other Prosperity Region. Much of the employment growth will come in two staple occupational categories to the region: *Healthcare practitioners and technical* and *Production* occupations.

POPULATION

According to the 2016 annual estimates, the population of West Michigan is 1,580,955. This is an increase from 2015 of 10,349 residents, which is a growth rate of 0.7 percent. This is the seventh straight year of population growth, during which time the region has added nearly 64,000 residents.

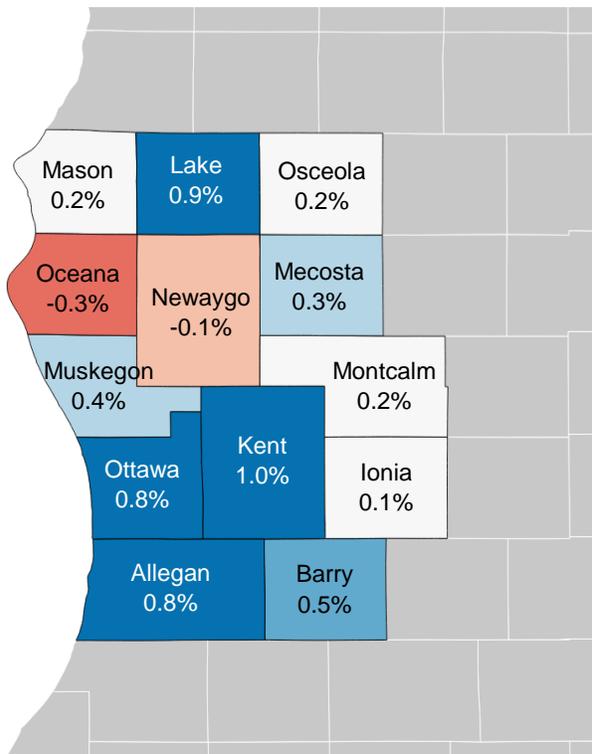
Because of the lackluster population growth seen statewide (0.1 percent from 2015 to 2016) which translates to a slight net loss in the 70 counties in the state besides West Michigan, the share of population living in the Talent 2025 region increased again, and is now at 15.9 percent. Over the past five years, the share of the state population residing in our region has grown by nearly half a percentage point.

Population Change, Indexed to 2000



Graph 1

Percent Population Change, 2015 to 2016



Map 1

Over the year, Kent and Lake Counties experienced the highest proportional population growth, with Kent County (the region's largest county) adding 6,078 residents (1.0 percent growth) and Lake County adding 103 residents (0.9 percent growth). Another notable driver of population growth is Ottawa County, which added 2,227 residents from 2015 to 2016, enough for 0.8 percent growth.

Area Comparison

Peers

3rd

of 12

Overall

63rd

of 171

In comparison to the 11 similar regions, West Michigan's 3.7 percent population growth over the last five years ranks third. The top comparison region, Greenville-Spartanburg-Anderson, South Carolina, experienced just over a 5.0 percent rate of population growth from 2011 to 2016, well above the 3.7 percent growth seen for the nation as a whole. Our rate is most similar to Tulsa-Muskogee-Bartlesville, Oklahoma, which also grew by 3.7 percent over the period. The Talent 2025 region would rank 63rd compared to all 171 Combined Statistical Areas nationwide.

MIGRATION PATTERNS

West Michigan is seeing positive signs when it comes to migration into and out of the region, centrally the strong positive net migration between the region and the other 70 counties in Michigan. West Michigan also sees a net inflow between the region and the other counties in Michigan combined with migration with the rest of the United States.

Using the 5-year estimates available from the U.S. Census Bureau, we can see that 48,192 residents of other counties throughout Michigan and the 49 other states (plus Washington D.C. and Puerto Rico) moved to West Michigan, with 46,872 West Michigan residents leaving the area for a domestic destination. All told, this balances to a net inflow of 1,320 new residents.

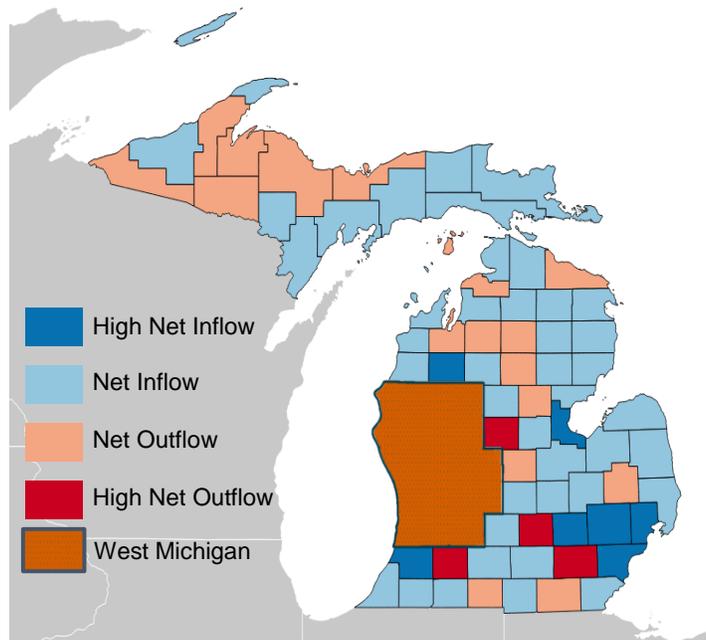
As a part of those numbers, 27,943 of those new West Michigan residents moved from one of Michigan's 70 other counties, while the region lost 24,313 former residents to other parts of the state, ending in a net gain of 3,630 migrants from other parts of Michigan. Among the top destinations in Michigan from the region was Kalamazoo County (3,393), Ingham County (2,475), Washtenaw County (1,336), and Wayne and Oakland Counties (1,276 and 1,204, respectively). However, because of the large inflows of new residents coming from the east side of the state, the top three counties in Michigan in terms of net migration to West Michigan were all in the Detroit metro area: Wayne County (net 1,190 residents for West Michigan), Oakland County (1,187), and Macomb County (683). West Michigan experienced a net gain of migrants from 49 of the 70 other counties in Michigan.

States with High and Low Net Migration with West Michigan

State	Net Migration
Remainder of Michigan	3,630
Illinois	829
Alabama	426
Pennsylvania	345
Texas	-430
Arizona	-452
Mississippi	-468
North Carolina	-621
Florida	-1,479

Chart 1

Net Migration with Other Michigan Counties, Annual Average, 2010-2014



Map 2

Excluding the remainder of Michigan, West Michigan experienced a net loss of 2,310 residents to the other 49 states (plus Washington D.C. and Puerto Rico). The top destinations for former West Michigan residents included states from the south (Florida, Texas, North Carolina), Midwest (Illinois, Indiana, Ohio), and West (California and Arizona). In terms of net migration to other states, West Michigan gains the most residents from Illinois (+829 residents), Alabama (426), and Pennsylvania (345) while losing the most residents to Florida (-1,479) and North Carolina (-621).

EDUCATIONAL ATTAINMENT

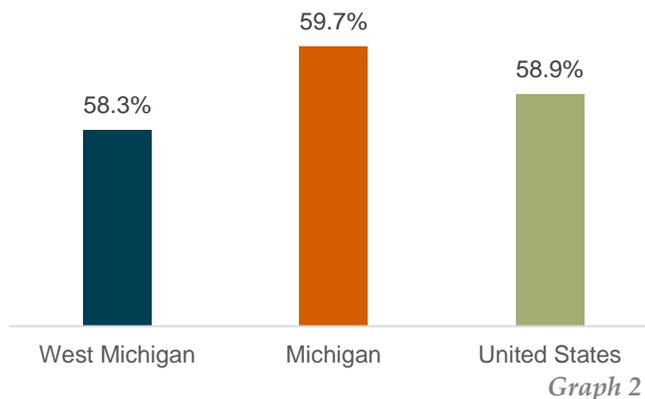
The educational attainment of the adult population in a region is a leading indicator of the success of the corresponding labor market, and as jobs become more advanced, so too become the skills necessary for employment. In fact, the W.E. Upjohn Institute estimates that 64 percent of the adult population in West Michigan will need some education beyond a high school diploma in order to meet the needs of the region in 2025.

In 2015, West Michigan stands at 58.3 percent for this indicator. While the educational attainment in the region is on track to meet the Upjohn forecast in the next ten years, there is still work to be done. West Michigan trails the state as a whole (inclusive of West Michigan, the state is at 59.7 percent) as well as the country, where 58.9 percent of the adult population has education beyond high school.

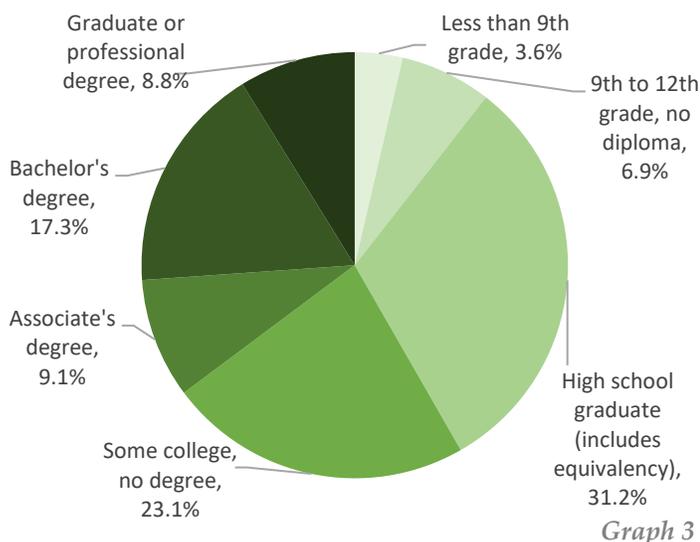
More specifically, 26.1 percent of adults in West Michigan have a Bachelor's, graduate, or professional degree, slightly less than the Michigan rate of 27.0 percent. Both of these levels trail the national postsecondary attainment rate of 29.7 percent.

Adult illiteracy is still a major barrier for some employees in West Michigan, and this is generally with regards to adults with education less than high school—10.5 percent of adults in West Michigan do not have a high school diploma or equivalent degree. As a stark reminder to the challenges they may face in securing lasting employment, this translates to over 100,000 individuals throughout the region.

Percent of Adults with Education Beyond High School, 2015



Educational Attainment West Michigan, 2015



Area Comparison



Peers
4th
of 12

Overall
78th
of 166

In comparison to the 11 similar regions, West Michigan's 58.3 percent of adults with education beyond high school ranks fourth. The top comparison region, Hartford-West Hartford, Connecticut, sees a 62.4 percent level of attainment for this metric, over four percentage points higher than our own. Of peer areas, our rate is most similar to Tulsa-Muskogee-Bartlesville, Oklahoma at 57.8 percent. The Talent 2025 region would rank 78th compared to all 166 Combined Statistical Areas nationwide.

COMMUTING PATTERNS

Commuting patterns can be utilized to identify labor sheds at the regional and sub-regional levels, which can help employers determine how wide to cast their local net for talent.

The OnTheMap online tool from the U.S. Census Bureau was updated with 2014 data on commuting patterns in March 2016. This data utilizes unemployment insurance-covered employers and Census data from individuals to determine commuting patterns at many geography levels.

Although this data has not been updated since last year's report, we will provide a brief overview of what was done last year, before taking a deeper dive into some place-specific commuting patterns.

Commuting in and out of West Michigan

According to Census data, 630,774 individuals were employed in the West Michigan region in 2014, regardless of whether they lived in the region or not. Corollary to this, 644,596 individuals who live in West Michigan were employed in any location. This discrepancy is explained by the 105,362 individuals who commute into West Michigan for work (and live outside of West Michigan) and the 119,184 individuals who make the opposite trip out of West Michigan for work. Therefore, 525,412 individuals work and live in West Michigan, and have a commute that falls fully within the region; this accounts for 81.5 percent of all those living in West Michigan who are employed.

Commuting within West Michigan

Grand Rapids

In 2014, 121,271 individuals were employed in the city of Grand Rapids, with over three-quarters of those workers commuting from outside of the city (94,042 individuals). Of the 76,422 employed individuals who are living in the city of Grand Rapids, only 35.6 percent of them stay within the city for their job, with the other 64.4 percent commuting to somewhere else. These residents are primarily leaving for work in Wyoming, Kentwood, Walker, and Forest Hills.

Muskegon

The city of Muskegon has just 2,917 individuals who are both living and employed within city limits. However, a further 19,760 individuals commute into the city for work, meaning that 22,677 are employed in the city of Muskegon.

Conversely, about 9,323 of the employed individuals who live in the city of Muskegon leave for a place of work outside of the city, primarily to destinations in Norton Shores, Grand Rapids, Grand Haven, Muskegon Heights, and Roosevelt Park.

Holland

According to the U.S. Census Bureau, 26,874 individuals are employed in the city of Holland, with the vast majority of workers (83.5 percent) commuting from outside of the city for work. The remainder, some 4,439 individuals, both live and work in the city of Holland.

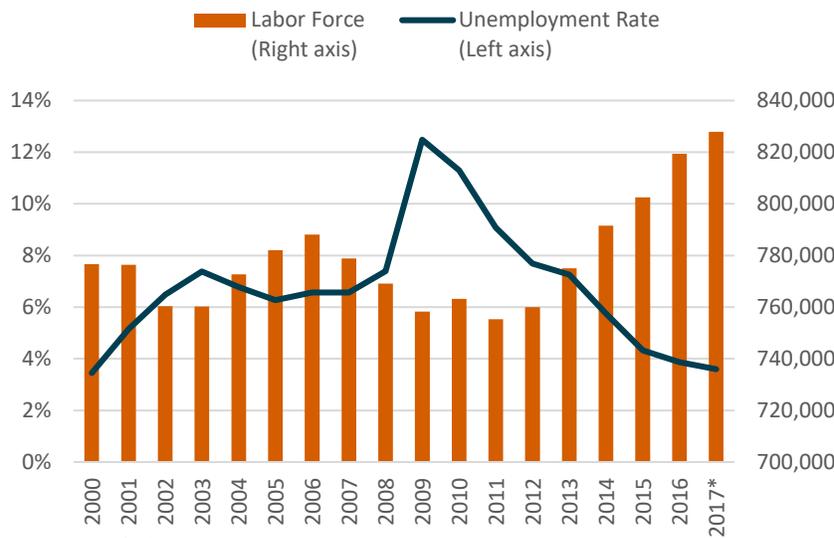
Additionally, 10,194 residents of the city commute outside of the city for work, or about 69.7 percent of the employed individuals living in the city of Holland.

LABOR FORCE AND EMPLOYMENT

West Michigan has returned to pre-recession levels in several important indicators, including the labor force level and the unemployment rate. Yet the recovery has been uneven throughout the region, while certain other facets of the labor market have continued to drag behind.

The unemployment rate through the first half of 2017 in West Michigan is 3.6 percent, which is the lowest rate seen in the region since 2000 when the unemployment rate stood at 3.4 percent. After reaching an

Labor Force and Unemployment Rate West Michigan, 2000 to 2017*



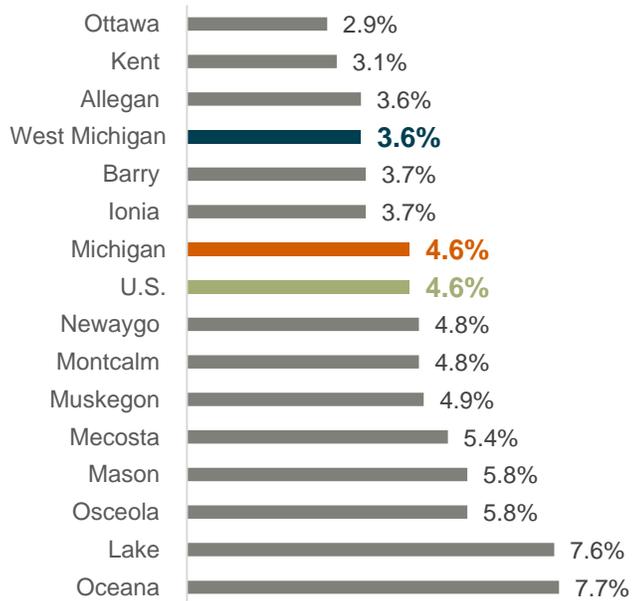
Graph 4
*January - June 2017

annualized peak of 12.5 percent in 2009, the unemployment rate has decreased over each of the past eight years.

West Michigan's unemployment rate is one percentage point lower than both the Michigan unemployment rate and the corresponding national rate, which are both at 4.6 percent through the first six months of 2017. Michigan's unemployment rate (which also hit a peak in 2009) touched 13.7 percent nine years ago, while the national unemployment rate peaked a year later in 2010 at 9.6 percent.

As Talent 2025 has previously documented, even the unemployment rate, having seemingly hit pre-recessionary levels as quickly as 2014, is still not uniformly lower than the state or the nation. Although the largest counties within the region, such as Kent, Ottawa, and Allegan Counties (3.1 percent, 2.9 percent, 3.6 percent) pull down the West Michigan average, areas large and small still see stubborn unemployment rates that are above the state and national average. Muskegon County, home to over 173,000 residents, has an unemployment rate of 4.9 percent, while the three smallest counties in West Michigan (Lake, Osceola, and Oceana counties) also have the three highest unemployment rates (7.6 percent, 5.8 percent, and 7.7 percent, respectively).

Unemployment Rate January - June 2017



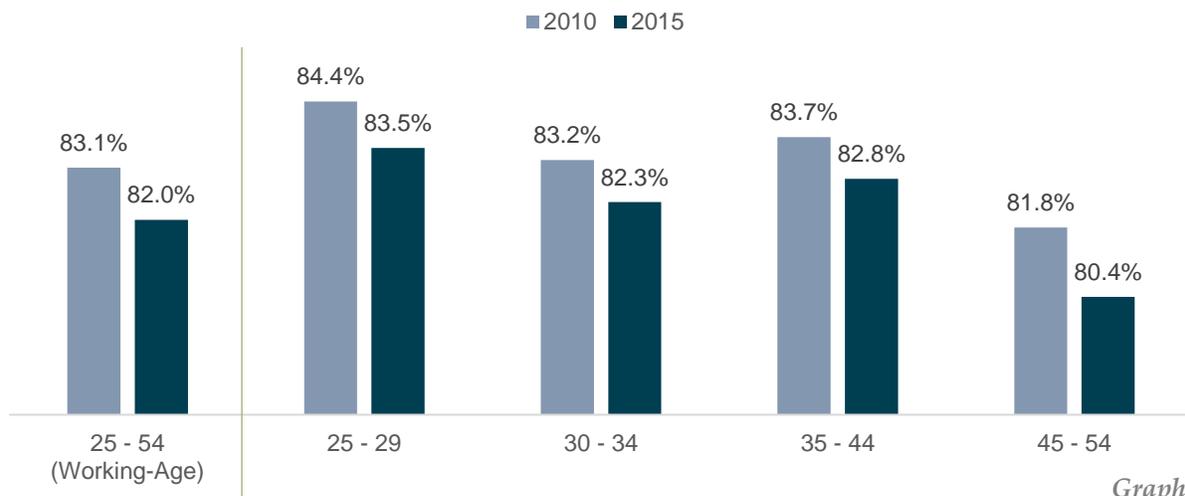
Graph 5

Labor Force Participation Rate

One area of concern in the labor market both locally and on a national scale is the labor force participation rate, which is the proportion of individuals in the labor force (employed or looking for work) out of the total non-institutional civilian population (adults who are not inmates in an institution and who are not in active duty in the Armed Forces). The labor force participation rate that is widely reported comes from the U.S. Bureau of Labor Statistics and is for the adult (16+) population. Through the first half of 2017, the labor force participation rate for adults in Michigan was 61.4 percent, and 62.9 percent for the nation as a whole.

Talent 2025 has adopted what is called the working-age labor force participation rate, which is calculated the same way as the reported-on rate but is banded to those ages 25 to 54. This measure can be obtained at any geographic level on an annual basis from the U.S. Census Bureau’s American Community Survey.

Labor Force Participation Rate by Age Group, West Michigan, 2010 and 2015



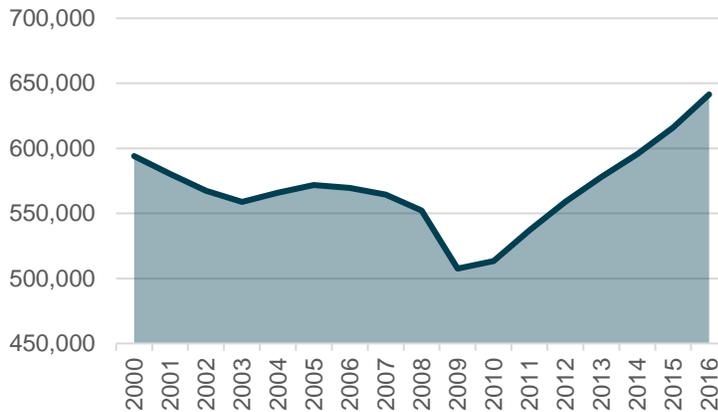
In 2015, the working-age labor force participation rate in West Michigan is 82.0 percent, with 76.0 percent of the 25-54 population employed and 5.9 percent unemployed. This number compares favorably to the rate seen statewide (80.8 percent) and nationally (81.5 percent). However, over the past five years, the rate for West Michigan has declined, both for the broad 25-54 age group as well as each age bracket within the “working-age” population. If West Michigan could raise the working-age labor force participation rate, this would translate to nearly 22,000 new members of the workforce.

<p>Area Comparison</p> 	<p>Peers 5th of 12</p> <p>Overall 68th of 166</p>	<p>In comparison to the 11 similar regions, West Michigan’s working-age labor force participation rate of 82.0 percent in 2015 ranks fifth. The top comparison region, Hartford-West Hartford, Connecticut, sees a 85.5 percent level of participation for this metric, which puts that region at 19th in the nation. Our rate is most similar to Louisville/Jefferson County—Elizabethtown—Madison, KY-IN CSA (81.9 percent) out of the comparative areas. The Talent 2025 region ranks 68th compared to all 166 Combined Statistical Areas nationwide.</p>
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INDUSTRY JOBS

Private-sector payroll jobs continue to trend upward in West Michigan from 2015 to 2016 at the highest rate seen over the past five years. Over the year, the region added 25,359 new private payroll jobs for a new total of 641,463. This is a 4.1 percent growth rate, which is the highest seen since the region grew by 4.6 percent from 2010 to 2011.

Private Sector Payroll Jobs West Michigan, 2000 - 2016



Graph 7

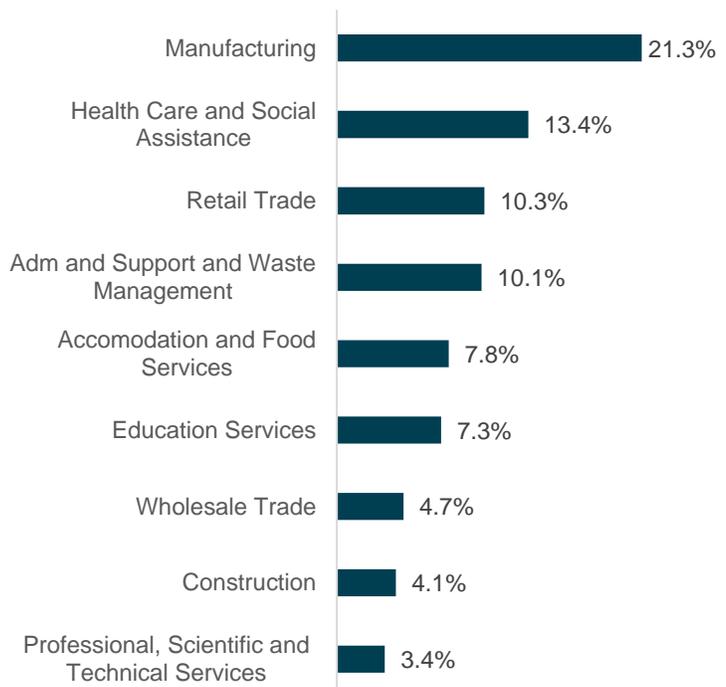
This new private-sector job total is 8.0 percent higher than the jobs level in 2000, and an impressive 26.4 percent increase since the recessionary trough in 2009. Both of these points compare very favorably to the state as a whole: Michigan's private-sector payroll job count has actually declined by 6.2 percent since 2000, while growing by 16.9 percent since 2009. Additionally, West Michigan is proportionally the fastest growing region compared to the other nine Prosperity Regions in the state over the year and since 2009.

Industry overview

With over a fifth of total payroll jobs in West Michigan in 2016, *Manufacturing* continues to be the largest sector for jobs in the region, accounting for 21.3 percent of jobs. Following this is *Health care and social assistance* with 13.4 percent of total jobs in the region, and *Retail trade* with 10.3 percent. The fourth largest industry, and the only other one with more than a tenth of total payroll jobs, is *Administrative and support and waste management services*, which accounts for 10.1 percent of total jobs in West Michigan.

The region's largest industry, *Manufacturing*, added 4,422 jobs from 2015 to 2016, which slightly lagged private-sector job growth across the board at 3.0 percent. However, the industry has grown by 33.3 percent since 2009, adding nearly 38,000 jobs during that time.

Jobs by Industry West Michigan, 2016



Graph 8

Recession Recovery

Although the number of total private-sector payroll jobs in West Michigan has seen a dramatic bounce back since the trough of the recession in 2009, the gains have been unevenly distributed among the different industries.

Of the 133,892 jobs added since 2009 within the region, 28.3 percent of them have come in *Manufacturing*, which has added 37,853 jobs, for a growth rate of 33.3 percent within this sector. Numerically, the industry that has adding the second-most jobs was *Administrative and support and waste management services*, which added 31,988 jobs (this industry includes jobs such as *Janitors and cleaners* and *Security guards*). Combined, these two industries account for over half of the job gains since 2009.

Proportionally, other industries in the region that have grown substantially are *Management of companies and enterprises* (+1,583 jobs, +32.3 percent), *Wholesale trade* (+7,133 jobs, +27.5 percent) and *Transportation and warehousing* (+3,436 jobs, +27.1 percent). *Construction* was the only other industry to grow at a faster rate than the regional payroll jobs economy as a whole at 26.8 percent by adding 6,003 jobs since 2009.

Concentration of Industries

A Location Quotient (LQ) measures the relative concentration of employment in a local industry as compared to a larger area (in this case, Michigan as a whole). An LQ which is greater than 1.0 means that there is a higher concentration locally, and vice versa (while an LQ of 1.0 signifies that the two areas have the same employment concentration).

The top eight sub-industries with the highest LQ levels (and employment above 1,000) all fall within two major industries: *Manufacturing* and *Agriculture, forestry, fishing, and hunting*. The latter has an industry-wide LQ of 2.2, meaning that the share of jobs locally in *Agriculture* is more than double the share seen statewide. This is driven in part by the proportionally large number of jobs in *Animal production and aquaculture* (which has an LQ of 2.6) and *Crop production*, which has an LQ of 2.3.

Manufacturing, with an LQ of 1.5, is led by *Leather and allied product manufacturing* (LQ of 5.0). In other words, the share of total private employment that is in *Leather and allied product manufacturing* is five times the share seen statewide. Following this is *Furniture and related product manufacturing* (LQ of 4.2), *Computer and electronic product manufacturing* (2.8), and *Food manufacturing* (2.5). In fact, 16 sub-industries within *Manufacturing* have an LQ over 1.0.

Location Quotient by Sub-Industry, West Michigan, 2016

High Employment Concentration Industries	LQ	Employment
Furniture and Related Product Manufacturing	4.2	16,250
Computer and Electronic Product Manufacturing	2.8	9,375
Animal Production and Aquaculture	2.6	4,075
Food Manufacturing	2.5	15,925
Crop Production	2.3	6,800
Chemical Manufacturing	1.8	9,200
Electrical Equipment and Appliances	1.7	3,950
Nonmetallic Mineral Product Manufacturing	1.7	3,075
Wood Product Manufacturing	1.7	2,925
Primary Metal Manufacturing	1.7	6,375

Chart 2

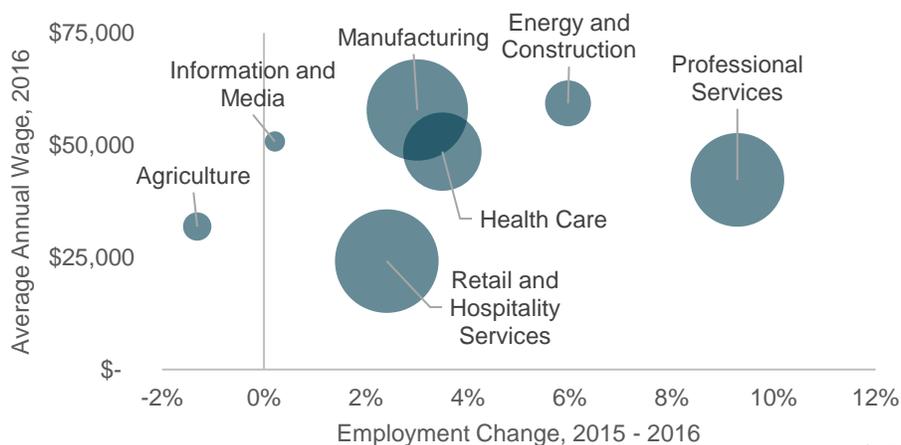


SECTOR FOCUS

- Sector strategies are collaborative efforts between various community stakeholders around particular industry sectors. In coming together, stakeholders like employers, workforce development organizations, two- and four-year postsecondary institutions, community organizations, and other training institutions can help ensure an efficient talent pipeline and transparent, regular sending of signals between the supply and demand side of the talent system.
- The information found in this section can help inform the work of the various sector strategies initiatives happening across the West Michigan region, such as the West Michigan Health Careers Council, Discover Manufacturing, the Construction Workforce Development Alliance of West Michigan, and West Michigan Tech Talent.
- To create the datasets here, 19 private-sector industries (by 2-digit North American Industry Classification System, or NAICS, codes) were divided into nine industry sectors based on commonalities of occupations within the industries (see Appendix 2). In this section, we take a deeper look into seven of the nine industry sectors. Two of these sectors, Professional Services and Retail and Hospitality Services, are being analyzed for the first time in this report.
- Included within each sector is:
 - Employment and compensation information for the entire sector,
 - Output from the industry focus group(s),
 - Competency data reflective of the competencies needed for top occupations, ordered by Importance score (see Appendix 3),
 - Top Occupations by several growth and wage measures. These occupations have been presented to the sector focus group and is discussed in the focus group output.
- Following the Retail and Hospitality Services section, we have synthesized four topics that were important commonalities across several sector focus groups, which are:
 - Millennials,
 - Job flexibility and benefits,
 - Diversity and inclusion, and
 - Social media in talent acquisition.

Sector Comparison, West Michigan

(Bubble size = 2016 employment)



Graph 9



AGRICULTURE

2016 Employment	Trend	Average Compensation	Total Wages
11,831	▼ (-1.3%)	\$31,775 Annual, 2016	\$376 million in 2016

Agriculture is an important sector in the West Michigan economy. Accounting for almost \$400 million in wages paid in the region in 2016, this sector can be found throughout the region, in the populated counties of Kent and Ottawa to the more rural counties found in the northern half of the West Michigan region.

Focus Group Insights

Note: These focus group insights are based off feedback from Agriculture and Food Processing employers. For quantitative data, Food Processing is a sub-industry in the Manufacturing sector.

Agriculture and Food Processing is a complicated industry sector. Some employers have steady work year-round, while others ramp up and scale down throughout the year. While the sector used to feature many part-time workers, the consensus with focus group participants was that many are looking for full-time hires, especially once the employer is confident in the quality of the hire.

Career ladders are a struggle for most of the employers interviewed—particularly when it comes to the decision to hire non-entry-level positions from outside the company or within. Oftentimes, there simply isn't a talent pool with the right mix of hard and soft skills for positions that require training beyond high school, particularly in rural areas. However, the employer will have a difficult time filling the position of someone who is promoted internally because of the fierce competition locally for entry-level talent.

While attracting new talent, and finding new talent pools, was identified as the key struggle by many employers, one prominent employer in Mason County described their main struggle as “closing the back door”, i.e. retention. In fact, several employers noted the issue of employees finding a better offer within their local area and simply leaving the job without notice.

While many of the top occupations within the sector resonated with focus group participants, most noted that wages (which are, in this report, reflective of national data) are often higher in the north half of West Michigan. By one account, the lowest one employer will hire in *Inspectors, testers, sorters, samplers, and weighers* is at \$12 per hour, whereas even in the front office, positions like *Secretaries and administrative assistants...* can make \$16 to \$22 per hour.

One occupation that was identified by most focus group participants (albeit by different titles) was Sanitation Technicians, or *Cleaning, washing, and metal pickling equipment operators and tenders* (SOC code 51-9192). These positions do not generally require a post-secondary degree and are often trained in house by employers. They are perhaps not as numerous as some of the other positions that these employers hire, but are nonetheless important to the process and hard to find applicants for.

Top Sector Competencies (with Importance and Level scores; see Appendix 3)

Knowledge		Skills	
Customer and Personal Service	69, 62	Active Listening	66, 53
English Language	67, 53	Speaking	66, 52
Administration and Management	59, 52	Critical Thinking	64, 53
Abilities		Work Activities	
Oral Comprehension	71, 58	Getting Information	82, 59
Oral Expression	69, 56	Communicating with Supervisors...	77, 64
Written Comprehension	66, 54	Making Decisions/Solving Problems	75, 61

Top Occupations in the Agriculture Sector

Title	Wages*		Growth 10-Year	Annual Openings Due to Growth
	Starting	Median		
Accountants and Auditors	\$25.71	\$30.57	15.0%	70
Bookkeeping, Accounting, and Auditing Clerks	\$14.21	\$18.70	13.1%	96
Chief Executives	\$47.46	\$79.43	9.1%	24
Computer and Information Systems Managers	\$44.60	\$52.57	15.2%	14
Computer User Support Specialists	\$18.19	\$23.18	20.0%	43
Customer Service Representatives	\$14.39	\$17.84	12.8%	147
Electricians	\$16.38	\$20.65	16.0%	50
Financial Managers	\$40.49	\$51.37	11.9%	28
First-Line Supervisors of Mechanics, Installers, and Repairers	\$20.86	\$28.12	11.3%	26
First-Line Supervisors of Office and Administrative Support Workers	\$18.49	\$25.19	11.8%	57
General and Operations Managers	\$26.21	\$38.69	13.8%	109
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$18.05	\$24.73	20.9%	20
Heavy and Tractor-Trailer Truck Drivers	\$14.05	\$17.51	13.5%	144
Industrial Machinery Mechanics	\$13.10	\$19.89	29.4%	90
Inspectors, Testers, Sorters, Samplers, and Weighers	\$10.53	\$12.37	18.3%	86
Market Research Analysts and Marketing Specialists	\$21.93	\$28.35	30.7%	47
Operating Engineers and Other Construction Equipment Operators	\$16.45	\$18.78	21.8%	31
Sales Managers	\$41.30	\$49.91	11.1%	20
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$18.88	\$27.82	11.6%	114
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$10.79	\$13.94	13.0%	102

Color key:

West Michigan data

National data

These occupations were chosen by a combination of the sum of percent ranks over four variables of interest: the projected 10-year growth rate, the median wage, the projected number of annual growth openings, and the projected number of annual replacement openings. They are listed here alphabetically.

Starting wages refer to the 25th percentile within the area, while median is equal to the 50th percentile. The ten-year percentage growth and annual average openings due to growth are from the Bureau of Labor Market Information and Strategic Initiative's Long-Term Occupational forecasts for the 13-county West Michigan Region.

* Wage data is reflective of the occupations specifically within the industry sector, rather than the wages for the occupation throughout the economy.



ENERGY AND CONSTRUCTION

2016 Employment	Trend	Average Compensation	Total Wages
31,029	▲ (6.0%)	\$59,300 Annual, 2016	\$1.84 billion in 2016

The energy and construction industries are considered together as an industry sector, given the broad overlap in occupations between the two distinct industries. In fact, this sector includes three interdependent industries when it comes to talent: *Construction, Utilities, and Mining, quarrying, and oil and gas extraction*. While the latter two industries experienced slight employment decline over the past year, a strong 6.9 percent growth in *Construction* employment buoyed this \$1.84 billion industry.

Focus Group Insights

Construction tends to be a seasonal industry, which can be a drawback in hiring compared to local manufacturers who can often offer a more steady number of hours on a year-round basis. However, several employers attempt to find work of some kind for their employees during the slow season. One employer has a five-step sequence they use with their employees each fall, which gives them four opportunities to retain an employee through the winter before the fifth option, which is a layoff.

Career ladders are a point of emphasis (and pride) for many West Michigan construction companies and contractors. Many of the employers present introduce potential career paths to job applicants and candidates during the hiring process, cementing their importance with new hires. Employers also pair this with mentorship programs, where new hires are paired with experienced crew members to make sure that there is cultural assimilation as well as an opportunity for new hires to ask questions.

Welders, cutters, solderers, and brazers, while not making the list of occupations seen to the right, were identified by several employers as a particular pain point in hiring, mainly in terms of a small local talent pool. Another occupation not found on the list are business development or salespeople for construction.

Despite this, most of the construction employers agreed that hiring for most front office positions was not a particular pain point, and that in one case, there are “plenty of people out there” for those positions. Instead, the focus of trying to find new talent pools was squarely for occupations on the job site: HVAC, all the skilled trades, and especially *Electricians*.

Top Sector Competencies (with Importance and Level scores; see Appendix 3)

Knowledge		Skills	
Customer and Personal Service	64, 58	Active Listening	62, 49
English Language	63, 48	Speaking	61, 47
Mathematics	59, 51	Critical Thinking	59, 48
Abilities		Work Activities	
Oral Comprehension	67, 54	Getting Information	81, 55
Near Vision	67, 51	Communicating with Supervisors...	77, 62
Problem Sensitivity	65, 47	Making Decisions/Solving Problems	72, 60

Top Occupations in the Energy and Construction Sector

Title	Wages*		Growth 10-Year	Annual Openings Due to Growth
	Starting	Median		
Bookkeeping, Accounting, and Auditing Clerks	\$15.73	\$19.06	13.1%	96
Brickmasons and Blockmasons	\$17.24	\$22.28	33.9%	10
Carpenters	\$16.37	\$20.57	21.1%	66
Construction Managers	\$36.83	\$46.38	16.5%	28
Cost Estimators	\$21.51	\$29.13	22.6%	30
Customer Service Representatives	\$14.53	\$19.14	12.8%	147
Electrical Power-Line Installers and Repairers	\$28.87	\$36.12	6.8%	3
Electricians	\$19.85	\$29.21	16.0%	50
First-Line Supervisors of Construction Trades and Extraction Workers	\$23.44	\$28.34	22.0%	52
General and Operations Managers	\$33.61	\$50.57	13.8%	109
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$16.99	\$21.60	20.9%	20
Heavy and Tractor-Trailer Truck Drivers	\$15.63	\$18.16	13.5%	144
Office Clerks, General	\$13.12	\$17.22	6.5%	118
Operating Engineers and Other Construction Equipment Operators	\$17.55	\$22.06	21.8%	31
Plumbers, Pipefitters, and Steamfitters	\$21.21	\$29.87	18.8%	31
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$14.15	\$17.76	13.0%	102
Sheet Metal Workers	\$19.60	\$24.24	17.6%	12

Color key:

West Michigan data Statewide data

These occupations were chosen by a combination of the sum of percent ranks over four variables of interest: the projected 10-year growth rate, the median wage, the projected number of annual growth openings, and the projected number of annual replacement openings. They are listed here alphabetically.

Starting wages refer to the 25th percentile within the area, while median is equal to the 50th percentile. The ten-year percentage growth and annual average openings due to growth are from the Bureau of Labor Market Information and Strategic Initiative's Long-Term Occupational forecasts for the 13-county West Michigan Region.

* Wage data is reflective of the occupations specifically within the industry sector, rather than the wages for the occupation throughout the economy.



HEALTH CARE

2016 Employment	Trend	Average Compensation	Total Wages
90,362	 (3.5%)	\$48,600 Annual, 2016	\$4.39 billion in 2016

Over the past year, Health Care has continued as a premier example of the positive impact collaboration can have in an industry sector. Through the West Michigan Health Careers Council, local employers, training institutions, and workforce development professionals can help better align the needs of employers with the programs training individuals throughout the region. Reflecting the collaboration and hard work that has already been happening, the group was awarded the America's Promise Grant in late 2016, a \$6 million federal grant that will provide training to new and incumbent workers throughout the region for health care employers.

Focus Group Insights

The talent market in the Health Care sector is, in a word, complicated. Single employers are often hiring for skill levels across the spectrum, for positions part-time, full-time, and many grades in between.

Another complication can be the competition employers face for certain positions. While in some sectors, competition is defined by other employers in the same industry in or around the region, in health care, it can be broader. For several nursing positions, West Michigan employers identified travel nursing programs and lucrative job offers from insurance companies as tough competition when it comes to talent retention for those positions.

Physical therapists, ranked second on our top occupations list to the right, was highlighted by several employers as a flooded market when it comes to talent. Although it rose near the top of this list due to the high pay and the many expected openings between now and 2024, most job openings are accounted for by graduates of local programs such as the Grand Valley State University Physical Therapy Program.

Customer service representatives were identified by one large area employer as a point of high turnover. Some of this churn is good (e.g. someone moving into a better-paying and higher-skill role within the company), however, many employers lose employees in this position to other call centers in other industry sectors.

Talent attraction, according to several of the employers present, can look very different depending on the position. For *Registered nurses*, where the need is perhaps the most immediate, talent acquisition teams will try to attract talent through internal referrals and even cold calling. For some positions, using social media like LinkedIn and Facebook to create a long-term relationship with a candidate has recently become a more common practice.

Top Sector Competencies (with Importance and Level scores; see Appendix 3)

Knowledge		Skills	
Customer and Personal Service	80, 72	Active Listening	73, 56
English Language	74, 56	Speaking	72, 54
Medicine and Dentistry	61, 45	Reading Comprehension	68, 55
Abilities		Work Activities	
Oral Comprehension	76, 60	Getting Information	86, 61
Oral Expression	75, 59	Documenting/Recording Information	83, 61
Problem Sensitivity	71, 56	Communicating with Supervisors...	82, 64

Top Occupations in the Health Care Sector

Title	Wages*		Growth 10-year	Annual Openings Due to Growth
	Starting	Median		
Billing and Posting Clerks and Machine Operators	\$14.68	\$16.96	17.3%	31
Customer Service Representatives	\$13.73	\$15.91	12.8%	147
Dental Hygienists	\$26.90	\$29.34	20.6%	30
First-Line Supervisors of Office and Administrative Support Workers	\$19.59	\$23.72	11.8%	57
Healthcare Social Workers	\$20.60	\$25.45	24.4%	16
Licensed Practical and Licensed Vocational Nurses	\$18.59	\$21.05	20.5%	75
Medical and Clinical Laboratory Technicians	\$13.20	\$14.44	29.2%	28
Medical and Clinical Laboratory Technologists	\$23.46	\$27.84	17.4%	16
Medical and Health Services Managers	\$35.46	\$43.40	22.4%	37
Medical Assistants	\$13.26	\$15.33	20.8%	62
Medical Secretaries	\$13.52	\$15.68	29.6%	37
Mental Health and Substance Abuse Social Workers	\$18.98	\$23.30	17.7%	22
Nursing Assistants	\$12.19	\$13.53	19.6%	169
Occupational Therapists	\$29.22	\$34.29	26.4%	21
Physical Therapists	\$33.61	\$39.32	30.5%	37
Physical Therapist Assistants	\$18.72	\$22.48	36.5%	19
Physician Assistants	\$43.45	\$50.45	32.2%	20
Radiologic Technologists and Technicians	\$20.83	\$23.71	22.9%	22
Registered Nurses	\$25.90	\$29.07	23.7%	304
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$13.58	\$15.93	13.0%	102

These occupations were chosen by a combination of the sum of percent ranks over four variables of interest: the projected 10-year growth rate, the median wage, the projected number of annual growth openings, and the projected number of annual replacement openings. They are listed here alphabetically.

Starting wages refer to the 25th percentile within the area, while median is equal to the 50th percentile. The ten-year percentage growth and annual average openings due to growth are from the Bureau of Labor Market Information and Strategic Initiative's Long-Term Occupational forecasts for the 13-county West Michigan Region.

* Wage data is reflective of the occupations specifically within the industry sector, rather than the wages for the occupation throughout the economy.



INFORMATION TECHNOLOGY AND MEDIA

2016 Employment	Trend	Average Compensation	Total Wages
6,062	▲ (0.2%)	\$50,800 Annual, 2016	\$308 million in 2016

Information Technology and Media is a small but critical sector of employment in West Michigan and beyond. With the third highest average annual wage of the seven industry sectors highlighted in this report, the IT and Media sector has plenty of opportunity to attract and retain talent from around the region, state, and even nationally. The work of West Michigan Tech Talent helps catalyze alignment of efforts between employers, training institutions, and other community organizations and partners.

Focus Group Insights

Many of the employers present were specifically interested in planning for the future. With the first open-ended question, the discussion quickly arrived at working very early in the pipeline, in elementary and middle schools, to make sure that the talent shortage (specifically for jobs like developers) doesn't last "for the next 20 years."

As in previous focus group sessions for IT and Media, the role a company's culture plays in its talent attraction and retention successes and struggles is a point focus group participants emphasized. Several of the organizations have adopted a "flatter" organizational structure less dependent on job titles. This can help assimilate new, early-in-career hires to the company and allow them to work on projects they really care about very quickly. Additionally, a positive company culture can often be the best line of defense against an experienced employee leaving for another company. A few of the employers present agreed that, with a few exceptions, a higher-salary offer often plays less of a factor in the decision-making of an experienced employee leaving or staying than does culture.

This more flexible organization structure that some of the employers present have adopted does make career ladder planning more difficult; however, many see the benefit as more important. Because of this flexibility, employers can organize project teams based on enthusiasm and passion rather than traditional markers like tenure. In doing so, this can help foster the growth and retention of younger employees, who often move from company to company not for pay, but instead to look for a professional challenge.

Many of the employers present were admittedly unsatisfied by Standard Occupation Code titles, especially given the fluidity and ever-changing nature of IT positions. However, many of the salaries (which for this sector are statewide) tracked with what many of the employers are seeing in the region. Additionally, several key areas stood out as both having large growth down the road, as well as a more immediate hiring need: developers of all kind (web, front-end, cloud, software); project managers with some technical understanding; machine learning; business analytics and what we traditionally think of as "big data"; and finally security, which is often related to health care. These latter two categories were highlighted by several Grand Rapids employers as being pain points with regards to stolen talent from employers outside of the region and even outside of Michigan.

Top Sector Competencies (with Importance and Level scores; see Appendix 3)

Knowledge		Skills	
Customer and Personal Service	70, 63	Active Listening	69, 55
English Language	69, 56	Speaking	68, 55
Computers and Electronics	66, 65	Reading Comprehension	67, 57
Abilities		Work Activities	
Oral Comprehension	72, 60	Getting Information	82, 61
Oral Expression	72, 58	Interacting with Computers	82, 59
Written Comprehension	70, 57	Communicating with Supervisors...	79, 66

Top Occupations in the IT and Media Sector

Title	Wages*		Growth 10-Year	Annual Openings Due to Growth
	Starting	Median		
Accountants and Auditors	\$24.15	\$30.56	15.0%	70
Bookkeeping, Accounting, and Auditing Clerks	\$15.46	\$20.15	13.1%	96
Computer and Information Systems Managers	\$44.41	\$57.53	15.2%	14
Computer Systems Analysts	\$33.42	\$41.46	26.8%	38
Computer User Support Specialists	\$18.58	\$23.58	20.0%	43
Customer Service Representatives	\$14.89	\$21.39	12.8%	147
Financial Managers	\$44.12	\$59.72	11.9%	28
First-Line Supervisors of Mechanics, Installers, and Repairers	\$27.42	\$33.44	11.3%	26
First-Line Supervisors of Non-Retail Sales Workers	\$25.74	\$34.08	11.5%	22
First-Line Supervisors of Office and Administrative Support Workers	\$22.83	\$31.99	11.8%	57
General and Operations Managers	\$30.06	\$49.60	13.8%	109
Human Resources Specialists	\$26.51	\$33.72	9.7%	17
Maintenance and Repair Workers, General	\$14.11	\$18.88	11.5%	70
Market Research Analysts and Marketing Specialists	\$24.83	\$28.90	30.7%	47
Network and Computer Systems Administrators	\$27.95	\$35.73	14.0%	19
Sales Managers	\$51.86	\$64.56	11.1%	20
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$22.38	\$30.43	11.6%	114
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$28.45	\$38.68	15.3%	15
Software Developers, Applications	\$31.17	\$40.37	24.2%	33
Software Developers, Systems Software	\$33.42	\$41.32	17.2%	20

Color key:

West Michigan data Statewide data

These occupations were chosen by a combination of the sum of percent ranks over four variables of interest: the projected 10-year growth rate, the median wage, the projected number of annual growth openings, and the projected number of annual replacement openings. They are listed here alphabetically.

Starting wages refer to the 25th percentile within the area, while median is equal to the 50th percentile. The ten-year percentage growth and annual average openings due to growth are from the Bureau of Labor Market Information and Strategic Initiative's Long-Term Occupational forecasts for the 13-county West Michigan Region.

* Wage data is reflective of the occupations specifically within the industry sector, rather than the wages for the occupation throughout the economy.



MANUFACTURING

2016 Employment	Trend	Average Compensation	Total Wages
151,388	 (3.0%)	\$57,850 Annual, 2016	\$8.76 billion in 2016

With over 150,000 employees in West Michigan, the Manufacturing industry sector has continued on a strong growth trajectory since the end of the recession at the end of the last decade. Paying nearly \$9 billion in wages in 2016, initiatives such as Discover Manufacturing and MiCareerQuest help to align efforts across the region to show off what modern manufacturing is all about.

Focus Group Insights

With several manufacturers, mostly in the small to medium size class, the prominent observation on everyone's mind was simply the current and future problem associated with the size of the talent pool available in the future compared to the age of the talent currently employed. Several of the employers who carry out in-house talent planning with regards to retirement are nervous about the large number of retirements expected over the next five to ten years. Many of these retirements will be skilled individuals with a lot of institutional knowledge who delayed retirement because of the recession.

Because of this and other talent challenges, almost all of the employers present pointed to many different types of partnerships and trainings going on throughout the region. Sometimes these were collaborative efforts, such as Manufacturing Day or MiCareerQuest. Other times these were more specific partnerships with local universities and technical training institutions, and together some of the employers have created apprenticeship programs, co-ops, and even an annual summer intern program. One manufacturer noted that these efforts are often time-intensive, although generally carry high value.

The occupation that received the most attention on the Top Occupations list was *Maintenance and repair workers, general*. Most of the employers speaking to this occupation stated that generally, higher-level offers were needed to actually get an offer accepted, with one stating that employers can't hire that position for "much under \$20 per hour." Another employer cited that, when they brought in an experienced candidate for that position, the candidate had already received 26 offers from other regional employers, and they needed to make an offer on the spot in order to try and keep the candidate.

One final theme that emerged was the emphasis on evolving and better communicating employee benefits beyond wages. One employer has consolidated personal leave, sick leave, and vacation days into paid time off (PTO) for employees to draw from as they need, while others are continuing to improve working conditions (like air conditioned shop floors) and advertising these changes during the talent attraction process.

Top Sector Competencies (with Importance and Level scores; see Appendix 3)

Knowledge		Skills	
English Language	64, 50	Active Listening	62, 49
Mathematics	60, 55	Critical Thinking	62, 52
Customer and Personal Service	59, 53	Speaking	60, 49
Abilities		Work Activities	
Oral Comprehension	66, 57	Getting Information	80, 54
Problem Sensitivity	66, 50	Communicating with Supervisors...	76, 63
Oral Expression	64, 55	Making Decisions/Solving Problems	74, 61

Top Occupations in the Manufacturing Sector

Title	Wages*		Growth 10 Year	Annual Openings Due to Growth
	Starting	Median		
Accountants and Auditors	\$24.81	\$31.75	15.0%	70
Architectural and Engineering Managers	\$42.74	\$52.46	12.7%	16
Computer-Controlled Machine Tool Operators, Metal and Plastic	\$13.00	\$16.68	30.1%	90
Computer User Support Specialists	\$19.48	\$26.49	20.0%	43
Customer Service Representatives	\$16.32	\$19.86	12.8%	147
Electricians	\$23.83	\$27.76	16.0%	50
Financial Managers	\$40.73	\$52.97	11.9%	28
First-Line Supervisors of Mechanics, Installers, and Repairers	\$27.81	\$34.60	11.3%	26
General and Operations Managers	\$39.24	\$54.72	13.8%	109
Heavy and Tractor-Trailer Truck Drivers	\$15.95	\$17.75	13.5%	144
Industrial Engineers	\$29.38	\$35.94	14.8%	59
Industrial Machinery Mechanics	\$18.67	\$22.50	29.4%	90
Inspectors, Testers, Sorters, Samplers, and Weighers	\$12.24	\$15.57	18.3%	86
Machinists	\$13.63	\$18.18	21.0%	98
Maintenance and Repair Workers, General	\$15.95	\$19.80	11.5%	70
Mechanical Engineers	\$28.12	\$34.59	11.5%	24
Sales Managers	\$42.29	\$56.86	11.1%	20
Sales Representatives, Wholesale and Manufacturing...	\$22.64	\$30.43	11.6%	114
Team Assemblers	\$11.68	\$14.04	16.2%	234
Tool and Die Makers	\$18.12	\$23.43	15.3%	60

These occupations were chosen by a combination of the sum of percent ranks over four variables of interest: the projected 10-year growth rate, the median wage, the projected number of annual growth openings, and the projected number of annual replacement openings. They are listed here alphabetically.

Starting wages refer to the 25th percentile within the area, while median is equal to the 50th percentile. The ten-year percentage growth and annual average openings due to growth are from the Bureau of Labor Market Information and Strategic Initiative's Long-Term Occupational forecasts for the 13-county West Michigan Region.

* Wage data is reflective of the occupations specifically within the industry sector, rather than the wages for the occupation throughout the economy.



PROFESSIONAL SERVICES

2016 Employment	Trend	Average Compensation	Total Wages
129,334	 (9.3%)	\$42,250 Annual, 2016	\$5.47 billion in 2016

Professional Services is one of two new industry sectors highlighted in this year’s Talent Assessment and Outlook report. The sector is composed of five industries (in order of 2016 employment): *Administrative and support and waste management and remediation services*; *Professional, scientific, and technical services*; *Finance and insurance*; *Management of companies and enterprises*; and *Real estate and rental and leasing*. This broad sector is growing faster than any other industry sector in West Michigan.

Focus Group Insights

A topic that emerged in several focus groups but was discussed the most in the Professional Services focus group was diversity. The employers present stated that, with a lot of retirements expected, it will be important to make sure their respective industries are diverse. The main challenge is that this oftentimes requires recruiting outside the region: the diverse candidates who are already within the region are often highly sought after.

The second point that seemed to resonate with nearly every employer is that technology is changing the workplace, and this change is being felt in every role, from low-skill and entry-level positions to experienced positions and those at the high end of the wage scale. This has (and will continue to) required plenty of in-house retraining and upskilling, and has even gone so far as to eliminate some positions (note: the employers who brought this up noted that technology has not been forcing firms to lay off individuals, but rather, some positions in certain occupations are not filled as quickly as fewer individuals are needed over time).

A theme that was brought up by several employers was different types of employment arrangements that are not typical of their occupations, such as part-time and remote-working arrangements. However, a few of the employers present have approached and experimented with these types of arrangements hesitantly: one local branch of a national company said that they do offer remote employment opportunities to proven employees who they would really like to retain, however, they still do see a decrease in productivity and office efficiency even in the best scenarios.

The main addition noted by some of the employers present to the Top Occupation list were human resources functions, from management level to recruiters. One employer noted the high turnover associated with recruiters, and so this is typically an occupation for which they are hiring.

Top Sector Competencies (with Importance and Level scores; see Appendix 3)

Knowledge		Skills	
English Language	72, 59	Active Listening	70, 55
Customer and Personal Service	70, 64	Speaking	68, 54
Computers and Electronics	60, 59	Reading Comprehension	68, 58
Abilities		Work Activities	
Oral Comprehension	73, 61	Getting Information	83, 63
Oral Expression	72, 60	Interacting with Computers	79, 54
Written Comprehension	71, 59	Making Decisions/Solving Problems	78, 64

Top Occupations in the Professional Services Sector

Title	Wages*		Growth 10-Year	Annual Openings Due to Growth
	Starting	Median		
Accountants and Auditors	\$24.86	\$29.06	15.0%	70
Bookkeeping, Accounting, and Auditing Clerks	\$14.56	\$17.78	13.1%	96
Civil Engineers	\$27.81	\$34.25	21.7%	16
Computer Systems Analysts	\$27.94	\$36.52	26.8%	38
Computer User Support Specialists	\$13.54	\$19.33	20.0%	43
Customer Service Representatives	\$12.69	\$15.56	12.8%	147
Financial Managers	\$36.19	\$47.04	11.9%	28
First-Line Supervisors of Office and Administrative Support Workers	\$19.66	\$25.22	11.8%	57
General and Operations Managers	\$33.30	\$45.20	13.8%	109
Inspectors, Testers, Sorters, Samplers, and Weighers	\$10.37	\$13.35	18.3%	86
Insurance Sales Agents	\$17.57	\$23.26	15.5%	46
Lawyers	\$32.00	\$39.23	10.8%	20
Maintenance and Repair Workers, General	\$12.91	\$16.84	11.5%	70
Management Analysts	\$24.27	\$32.91	13.6%	18
Market Research Analysts and Marketing Specialists	\$20.31	\$24.91	30.7%	47
Mechanical Engineers	\$34.25	\$43.08	11.5%	24
Personal Financial Advisors	\$24.95	\$33.96	20.7%	18
Sales Representatives, Wholesale and Manufacturing...	\$20.09	\$26.84	11.6%	114
Secretaries and Administrative Assistants...	\$12.61	\$16.09	13.0%	102
Software Developers, Applications	\$28.28	\$35.41	24.2%	33

Color key:

West Michigan data Statewide data

These occupations were chosen by a combination of the sum of percent ranks over four variables of interest: the projected 10-year growth rate, the median wage, the projected number of annual growth openings, and the projected number of annual replacement openings. They are listed here alphabetically.

Starting wages refer to the 25th percentile within the area, while median is equal to the 50th percentile. The ten-year percentage growth and annual average openings due to growth are from the Bureau of Labor Market Information and Strategic Initiative's Long-Term Occupational forecasts for the 13-county West Michigan Region.

* Wage data is reflective of the occupations specifically within the industry sector, rather than the wages for the occupation throughout the economy.



RETAIL AND HOSPITALITY SERVICES

2016 Employment	Trend	Average Compensation	Total Wages
158,116	 (2.4%)	\$24,175 Annual, 2016	\$3.82 billion in 2016

Retail and Hospitality Services, a new industry sector to the Talent Assessment and Outlook report this year, is the largest of the seven sectors. This broad sector encompasses four industries: *Retail trade*, *Accommodation and food services*, *Other services*, and *Arts, entertainment and recreation*. All four of these industries showed growth from 2015 to 2016, ranging from 1.4 to 3.8 percent.

Focus Group Insights

As one local employer put it, Retail and Hospitality Services is a numbers game. By this, most of the employers present agreed that there is generally high demand for talent at all levels, but particularly for entry-level positions. Another employer called it a “retention-based industry”, meaning that employers need to have a particular emphasis on keeping turnover low, which is tough in the present economy. One employer said that while their entry-level turnover during the recession was as low as 20 percent, it has more recently been triple that. There are a lot of applications, but perhaps fewer still that are qualified.

The qualities that most of the employers are looking for is customer service, a soft skill that is in-demand across many sectors, but is perhaps more a point of emphasis for employers in Retail and Hospitality Services. Many of the employers present said that they have either started or continued to fine-tune their hiring and interviewing process to better test for customer service acumen, an example of what a sought-after skill it is.

A theme that quickly emerged and was common to most of the sub-industries present was the importance of good onboarding. While not every employer claimed that they had best practices in place when it comes to onboarding, they still agreed that the first few months are the most important with regards to retention of entry-level employees. A local entertainment employer made the point that explaining and showing culture during the onboarding process is far more important than sharing rules and guidelines, which are things that new hires will hopefully pick up on regardless.

Most of the jobs on the Top Occupations list were agreed as having a high volume of hiring. One large employer made the addition that the main occupations not on the list were fairly specific and low volume, but of high importance, such as meat cutters and bakers. These can be fairly high-paying positions but are often hard to find because of the basic level of knowledge and skill needed in a candidate before hiring.

Top Sector Competencies (with Importance and Level scores; see Appendix 3)

Knowledge		Skills	
Customer and Personal Service	75, 63	Active Listening	65, 49
English Language	62, 48	Speaking	65, 48
Administration and Management	54, 43	Reading Comprehension	60, 51
Abilities		Work Activities	
Oral Comprehension	70, 55	Getting Information	78, 52
Oral Expression	68, 54	Communicating with Supervisors...	72, 54
Speech Recognition	63, 47	Making Decisions/Solving Problems	68, 52

Top Occupations in the Retail and Hospitality Services Sector

Title	Wages*		Growth 10-Year	Annual Openings Due to Growth
	Starting	Median		
Automotive Body and Related Repairers	\$15.68	\$20.12	15.0%	16
Automotive Service Technicians and Mechanics	\$12.04	\$16.90	13.6%	41
Bookkeeping, Accounting, and Auditing Clerks	\$12.15	\$15.33	13.1%	96
Customer Service Representatives	\$10.02	\$12.36	12.8%	147
First-Line Supervisors of Food Preparation and Serving Workers	\$11.30	\$14.68	13.1%	48
First-Line Supervisors of Mechanics, Installers, and Repairers	\$22.16	\$27.40	11.3%	26
First-Line Supervisors of Office and Administrative Support Workers	\$15.39	\$21.55	11.8%	57
First-Line Supervisors of Retail Sales Workers	\$14.58	\$18.13	8.9%	64
Food Service Managers	\$18.11	\$23.98	6.1%	8
General and Operations Managers	\$25.64	\$35.15	13.8%	109
Hairdressers, Hairstylists, and Cosmetologists	\$9.42	\$12.06	10.8%	35
Hotel, Motel, and Resort Desk Clerks	\$9.06	\$9.69	22.8%	18
Light Truck or Delivery Services Drivers	\$9.93	\$12.42	8.8%	44
Maintenance and Repair Workers, General	\$11.34	\$14.65	11.5%	70
Nonfarm Animal Caretakers	\$9.00	\$9.58	16.1%	13
Office Clerks, General	\$10.20	\$13.83	6.5%	118
Pharmacists	\$49.69	\$55.74	14.3%	19
Pharmacy Technicians	\$11.34	\$14.01	16.7%	30
Receptionists and Information Clerks	\$9.44	\$10.84	9.5%	39
Secretaries and Administrative Assistants, Except Legal, Medical...	\$11.94	\$13.91	13.0%	102

Color key:

West Michigan data Statewide data

These occupations were chosen by a combination of the sum of percent ranks over four variables of interest: the projected 10-year growth rate, the median wage, the projected number of annual growth openings, and the projected number of annual replacement openings. They are listed here alphabetically.

Starting wages refer to the 25th percentile within the area, while median is equal to the 50th percentile. The ten-year percentage growth and annual average openings due to growth are from the Bureau of Labor Market Information and Strategic Initiative's Long-Term Occupational forecasts for the 13-county West Michigan Region.

* Wage data is reflective of the occupations specifically within the industry sector, rather than the wages for the occupation throughout the economy.

FOCUS GROUP INSIGHTS

The nine sector focus groups spanned seven different industry sectors, and four themes emerged that were common to many employers across different sectors.

Millennials

Millennials, and more generally the topic of the generation shift occurring in the labor force, was a frequent topic of discussion in this year's employer focus groups, despite no specific questions about the topic. The discussion around younger workers (although the term "Millennials" was frequently used specifically) generally came up around discussions of career ladders, retention, and recruiting tactics.

Some of the messages around Millennials were the same, but different firms saw some characteristics of younger workers as either positives or negatives for employers. One professional services firm stated that Millennials seemed to want variety and that they want a myriad of experiences, which is tough for certain employers to provide. A local manufacturer said that they generally try to help their Millennial employees with shorter-term goal setting so that they're continually working toward something. This has been a shift for the firm, which has generally worked on long-term career goals with employees.

Culture, as a broad topic, was frequently brought up during discussions of Millennials. Many employers from across sectors noted that Millennials often bring up a company's culture as a point of emphasis, either during the hiring phase or soon after they've been hired. A local manufacturer noted that community engagement and volunteerism comes up a lot in interviews with Millennial job candidates. Meanwhile, an IT firm on the lakeshore has monthly events for staff such as lab day, where employees can work on whatever they'd like, and lunch-and-learn events for the whole staff to broaden their knowledge base as a team. These efforts have been well received by the company's younger workers, but also their older employees. Flexibility in job hours and duties, which will be discussed further below, also is often tied to the company culture Millennials are looking for.

Several employers spoke to the "impatience" of Millennials, with some seeing this as more of a negative than others. One firm spoke of impatience as not a behavior in that Millennials are necessarily quitting jobs faster, but simply that younger workers want to move from one project to the next faster. Another firm mentioned which Millennials are often looking at promotion opportunities faster, even if the promotions are not necessarily into management roles. Because of this, a local IT firm said that they've been switching how they staff projects; whereas project assignments used to be awarded by tenure, they now base many of those decisions on enthusiasm and passion for the project.

Job Flexibility and Benefits

Although largely tied with the discussion of Millennials, job flexibility and job benefits that reflect this flexibility were an emerging topic among employers during this year's focus groups. According to many employers in various industries, employees young and old have become somewhat easier to retain with flexible options, leading employers to experiment with various job setups.

For several professional services firms, the importance of job flexibility can lie in keeping new parents in the workforce. They stressed that oftentimes, if these employees are not "kept on" to some degree (i.e. part-time, or with some days/hours done from home), many would leave the workforce entirely.

Several employers stated that transparency around schedules is important, and it can be complicated. This point was made by an IT firm on the lakeshore, who mentioned that they have a work-from-home option for two days out of every week. They implemented this recently, and it has been fairly popular, although the employer was hesitant to describe it as a success full-stop; it was a bit expensive for the firm to implement, and there has been some efficiency lost. Despite this, they plan on continuing the program and experimenting further with how to improve it.

Diversity and Inclusion

A third topic to emerge in many of the focus groups this year was diversity and inclusion, specifically the difficulty in finding diversity in employers' talent pools, but also the necessity for employers now and in the future to cultivate a diverse workforce and an environment that's welcoming to diversity.

Speaking to the difficulty in hiring diverse talent, several professional services employers said that West Michigan can be "a bit closed off," and therefore that makes diversity tough to find and sustain in hiring. One firm in particular noted the necessity to attract diverse candidates from outside West Michigan, because often local diverse talent are heavily sought after.

Several retail and hospitality services employers said that a lot of times, they end up hiring the same seasonal employees year after year, and that a lot of their new hires are referrals (and therefore friends and acquaintances) of these same employees. This was a specific point made by many of the construction employers this year: several of them are actively moving away from referrals as their main source of talent (even though referrals are often a good source of talent) simply because they don't get a diverse candidate pool.

Social Media in Hiring

Social media has been used as a channel for recruiting talent each of the past several years we have conducted industry sector focus groups, but this year it stood out for two particular reasons: first is that sectors such as Agriculture and Food Processing that previously had not used social media as a tool for finding talent are experimenting or fully implementing recruitment tactics using social media. Second is that now that most industry sectors have some sort of an online presence on various social channels, many employers are using them to a much greater degree, and even rating them as more successful channels than some more traditional approaches like specific job boards.

As mentioned, employers in Agriculture and Food Processing, who previously didn't really have much of a social media presence, are beginning to actively engage with social networks, specifically Facebook. Several employers noted that in using Facebook as a means for employee referral (the employer posts a link to a job advertisement, which is then "shared" on the platform by employees to their own personal networks), they have found some success in bringing in more applicants.

Several employers across industry sectors are using social media for reasons beyond simply another form of posting jobs. Some use it to establish a presence online which can help attract candidates who are looking for employers with a positive profile, while others build their brand recognition through social media.

It should be noted that enthusiasm for social media is not currently being felt across the board, even with our small selection of employers. A manufacturer in the greater Grand Rapids area who just started on Facebook last year are trying in new social media profiles with a revamp of their website, but they aren't sure if they're seeing the returns yet. However, despite perhaps not seeing the number of hires from that channel that they would like, the employer said that they understand that it will be an important way of finding talent in the future, and plan to continue building those profiles. This sentiment was backed up by several area health care providers, who agreed that even if they aren't seeing the return on investment that they would like, they expect that it will become necessary in the future to have an established presence.

Many employers in several sectors are active on LinkedIn as well, with several purchasing admittedly-expensive "recruiter seats." A local retail and hospitality services employer said they "found some gems on LinkedIn" while several health care employers use it for passive recruitment of high-skill candidates, especially those outside of the region.

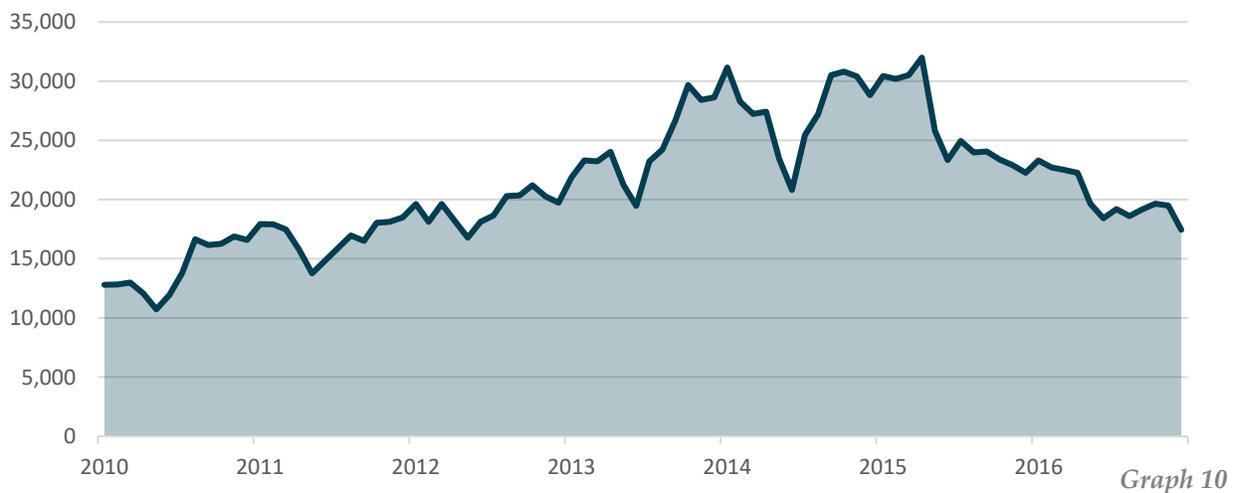
REAL-TIME DEMAND

Job advertisement aggregating services such as The Conference Board's Help Wanted Online © data series can help us better understand what occupations are most in-demand today according to the current hiring of local employers.

In July 2017, the West Michigan region had a demand of 17,449 advertisements. Employers with the most postings include Mercy Medical Center, Spectrum Health, and Meijer. During the same reference month, the state of Michigan as a whole had 144,847 job ads posted, meaning that West Michigan accounted for just over 12 percent of all ads.

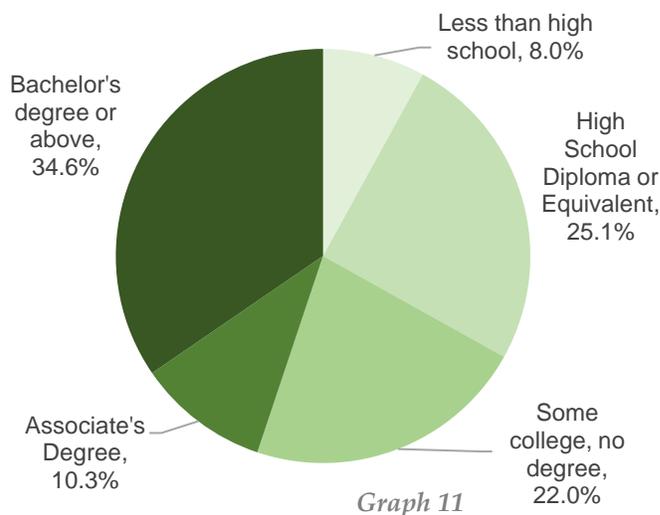
The total number of job ads within the region has been trending generally downward since the end of 2015. July counted as the eighth month in a row that the job ad total in the region was less than 20,000, and was the lowest level seen since December 2012 when West Michigan had 16,770 ads.

Online Job Advertisements Trend West Michigan, 2010 - 2017



Graph 10

Online Job Advertisements by Education Level, July 2017



Graph 11

When estimating the education level required for the job advertisements in West Michigan, we see that over two-thirds, or 66.9 percent, are for positions that generally need education beyond a high school diploma. Furthermore, 34.6 percent of job postings in July 2017 are for positions for which a Bachelor's degree or higher education is needed.

Leading the cities within the region with the most jobs posted (according to what the company posting put as the location) is Grand Rapids. At 7,043 advertisements, Grand Rapids accounts for 40.4 percent of the total ads posted in July 2017. Following Grand Rapids are Holland and Muskegon, with 1,549 and 1,361 ads posted, respectively.

Occupation Groups Hiring

Although *Health care* positions as an occupation group traditionally lead other occupation groups in terms of the number of job advertisements, *Sales and related occupations*, with 2,088 ads in July 2017, is the most advertised occupation group. This was largely driven by a high volume of job ads for *Retail salespersons*, with 554 job ads in July 2017.

Following this is *Office and administrative support occupations*, with 1,776 job ads. *Health care practitioners and technical occupations* and *Production occupations*, two mainstays on West Michigan job

boards, fall next with 1,605 and 1,502 job ads, respectively. Finally, *Transportation and material moving occupations* add a further 1,380 job ads in West Michigan. Combined, these top five occupation groups account for about half of all the job ads in the region in July 2017.

Online Job Advertisements by Occupational Category, West Michigan, July 2017

Occupational Category	Job Ads
Sales and Related	2,088
Office and Administrative Support	1,776
Healthcare Practitioners and Technical	1,605
Production	1,502
Transportation and Material Moving	1,380

Chart 3

Job Advertisements Posted for More than 90 Days

Job advertisements that have remained active and have been posted for more than 90 days are often considered “hard-to-fill,” or can also be postings for positions that experience high turnover. These postings generally reflect the larger landscape of all job ads, and include occupations from across the spectrum with regards to industry and education required. In July 2017, 24.0 percent of all job ads, or 4,189, are considered hard-to-fill.

The top occupation with regards to the number of hard-to-fill job postings is *Retail salespersons*, with 225 postings. This edges out the higher-skill *Registered nurses* with 224 postings. Compared to the total number of postings for *Registered nurses* in July 2017, about 34.8 percent of all job ads for the occupation are considered hard-to-fill. This metric is just over 40.6 percent for *Retail salespersons*. Other occupations considered hard-to-fill in West Michigan include *First-line supervisors of retail sales workers* (144 hard-to-fill ads), *Heavy and tractor-trailer truck drivers* (111 ads), and *Maintenance and repair workers, general* (105 ads).

Job Advertisements Active for 90+ Days by Occupation West Michigan, July 2017

Occupation	Postings Over 90 days
Retail Salespersons	225
Registered Nurses	224
First-Line Supervisors of Retail Sales Workers	144
Heavy and Tractor-Trailer Truck Drivers	111
Maintenance and Repair Workers, General	105

Chart 4

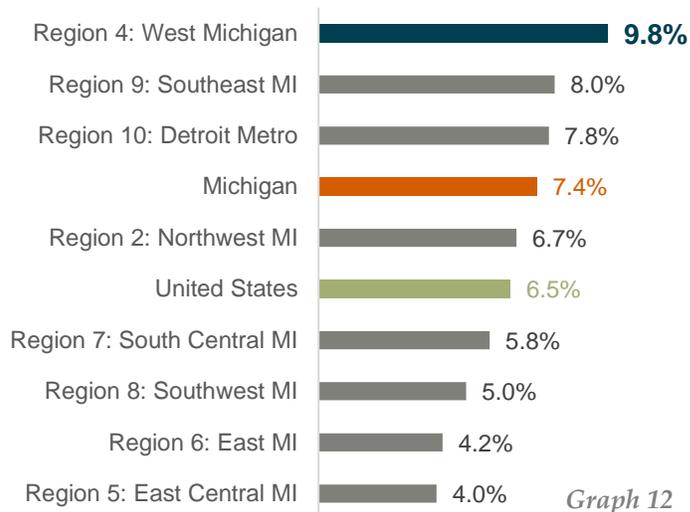
OCCUPATIONAL OUTLOOK

The Bureau of Labor Market Information and Strategic Initiatives produces Long-Term Occupational Outlook forecasts for regions throughout the state every two years. This year, the information is available for Michigan's ten Prosperity Regions for the period 2014 to 2024, as this new set of projections were released by the bureau in summer 2017.

For the ten-year forecasting period, West Michigan's occupational employment is expected to grow by 9.8 percent, an increase in employment of 72,815. Annualized over the period, this equates to just under 1.0 percent per year (with annual fluctuations expected). This ten-year percentage growth outpaces the 7.4 percent growth expected in Michigan during the same time period (via an added 327,030 jobs) as well as the projected 6.5 percent growth for the United States from 2014 to 2024, which translates to an additional 9,788,900 jobs.

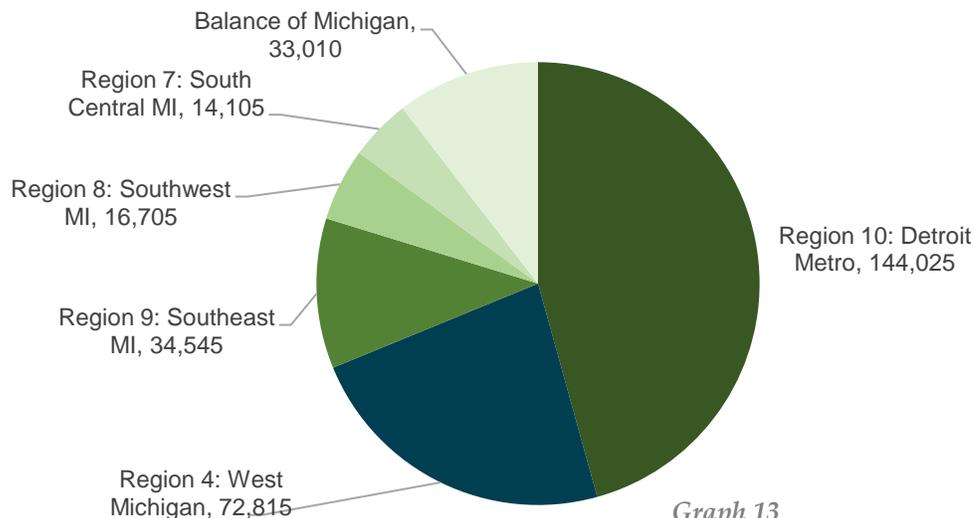
The anticipated 9.8 percent occupational employment growth in West Michigan is the highest of Michigan's Prosperity Regions, ahead of Region 9/Southeast Michigan (8.0 percent), Region 10/Detroit Metro (7.8 percent), and Region 2/Northwest Michigan (6.7 percent). In terms of future numeric job growth, West Michigan ranks behind Detroit Metro (144,025 expected added jobs) but well ahead of Southeast Michigan (34,545).

Percent Employment Growth by Prosperity Region, State, and Nation, 2014 - 2024



Graph 12

Employment Growth by Prosperity Region, 2014 - 2024



Graph 13

Occupations and Areas of Growth

Of the 72,815 added jobs expected in West Michigan, over one in five are expected in just two occupational groups: *Healthcare practitioners and technical occupations* and *Production occupations*.

	Growth		Total Annual Openings
	#	%	
Total, All Occupations	72,815	9.8%	25,351
Healthcare Practitioners and Technical	7,530	19.8%	1,589
Production	7,470	7.5%	3,164
Transportation and Material Moving	6,250	10.6%	2,052
Education, Training, and Library	5,440	11.4%	1,551
Office and Administrative Support	5,025	5.0%	2,754

Chart 5

With an expected 19.8 percent change in employment from 2014 to 2024 by adding 7,530 in *Healthcare practitioners and technical occupations*. This employment change is projected to produce 1,589 annual openings, with nearly half of those openings (754) due to growth (rather than replacement of existing workers). Much of this growth is driven by the occupation category's largest occupation, *Registered nurses*, which is projected to add 3,275 jobs, resulting in 23.9 percent growth and 650 average annual openings. The next highest occupation in this category in terms of numeric growth is *Physical therapists*, which is expected to add 505 jobs, or 31.7 percent growth.

Production occupations, which is expected to become the largest occupational category by the year 2024, is projected to add 7,470 jobs, albeit by a slightly lower 7.5 percent growth. This will create 3,164 job openings each year; however, the majority of these (2,244 per year) will be replacing current employment. *Team assemblers*, already the largest occupation within the category, is projected to add 2,020 jobs during the forecasting period, which translates to 10.2 percent growth. This nearly doubles the numeric growth expected in *Machinists*, which will grow by 21.4 percent through 2024, an additional 1,040 jobs. Unlike *Healthcare practitioners and technical occupations*, there are several occupations in *Production* that are expected to lose employment during the forecasting period, most notably *Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic* and *Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic*. This is likely related to the skills and work activities needed for the positions, and the likelihood that those processes will become automated over time.

Other occupations that are perhaps not as large but are expecting the largest percentage growth in West Michigan are *Bus drivers, transit and intercity* (growing by 42.6 percent, adding 200 jobs), *Occupational therapists assistants* (37.7 percent, 130 jobs), *Physical therapist assistants* (37.2 percent, 305 jobs), and *Operations research analysts* (35.3 percent, 30 jobs).

Occupation	Growth Rate	Annual Openings
Bus Drivers, Transit and Intercity	42.6%	26
Occupational Therapist Assistants	37.7%	23
Physical Therapist Assistants	37.2%	54
Operations Research Analysts	35.3%	5

Chart 6

Of the 528 occupations published in the 2024 regional forecast, 436 are expected to grow in West Michigan. It is expected that there will be 25,351 total annual openings during the forecasting period.

FORECASTING COMPETENCIES

Using the Long-Term Occupational Forecasts, the Bureau of Labor Market Information and Strategic Initiatives is able to cross core competencies from the Department of Labor’s O*Net Online tool with job projections to gain an understanding of the knowledge, skills, abilities, and work activities that will be in demand through 2024. While the competencies identified in the Sector Focus section apply to the top occupations within those sectors, these areas of importance apply to all jobs within West Michigan, and how important they are in occupations which are expecting the most openings due to growth through 2024.

Knowledge

Knowledge areas are “Organized sets of principles and facts applying in general domains.” Two of the top knowledges that are important for growing occupations are English Language (necessary in 84.6 percent of annual openings due to growth) and Customer and Personal Service (71.1 percent). The latter of these fit into the Essential Skills Framework, a pilot program at Northview High School to help better prepare high schoolers for their careers.

Skills

Skills are defined as “Developed capacities that facilitate learning or the more rapid acquisition of knowledge.” Four of the top five skills with regards to being important for growing jobs are defined as “Basic Skills.” These are led by Active Listening (73.2 percent) and Speaking (70.5 percent).

Skills (non-Basic)

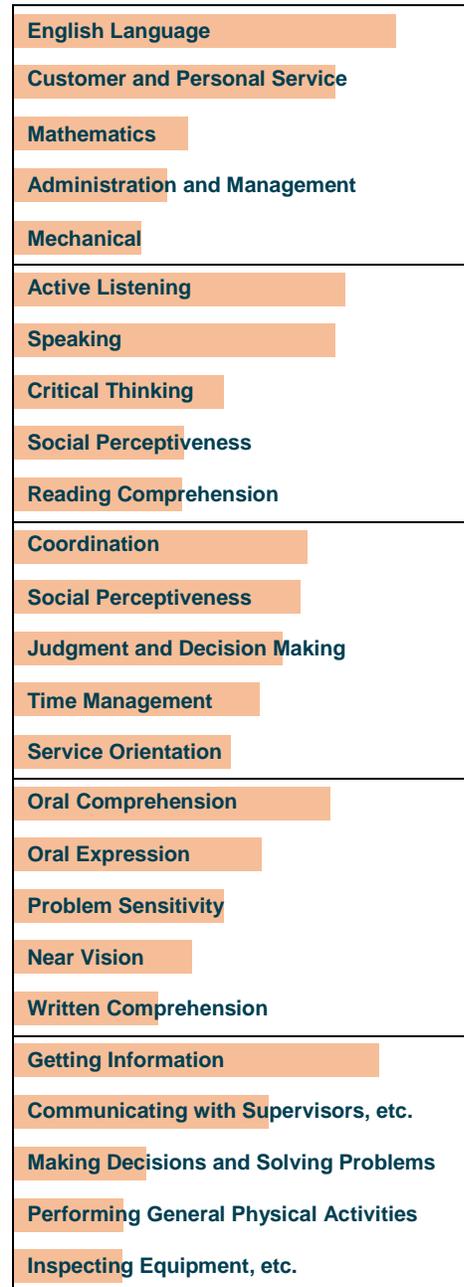
Because the top Skills tend to be classified as Basic Skills, we have also looked at how non-Basic skills cross with job projections. Here, we see that Coordination (64.7 percent), Social Perceptiveness (63.0 percent), and Judgment and Decision Making (59.4 percent) lead.

Abilities

Abilities are “Enduring attributes of the individual that influence performance.” As was the case with the last set of projections, four of the five Abilities which will be necessary in growth openings through 2025 are Cognitive abilities. Most prominent among growth openings are Oral Comprehension (70.0 percent) and Oral Expression (54.6 percent).

Work Activities

Work Activities are “General types of job behaviors occurring on multiple jobs.” The top activity, Getting Information, is found in 80.2 percent of annual openings due to growth in West Michigan. Behind this is Communicating with Supervisors, Peers, or Subordinates (56.1 percent) and Making Decisions and Solving Problems (29.5 percent).



SOURCES

Page	Source
10	U.S. Census Bureau, Population Estimates, 2016 Population Estimates U.S. Census Bureau, Population Estimates, 2000-2010 Intercensal Estimates
11	U.S. Census Bureau, American Community Survey, 2010-2014 5-Year Estimates, County-to-County Migration Tables
12	Erickcek, George A., Brain Pittelko, Claudette, Robey, Bridget Timmeney. 2013. "A Comprehensive Analysis of the Current and Future Talent Needs for the TALENT 2025 Region." Report prepared for TALENT 2025. U.S. Census Bureau, American Community Survey, 2011-2015 5-Year Estimates
13	U.S. Census Bureau, OnTheMap Application, Longitudinal-Employer Household Dynamics, 2014 data
14	DTMB, Bureau of Labor Market Information and Strategic Initiatives, Local Area Unemployment Statistics
15	U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics U.S. Census Bureau, American Community Survey, 2011-2015 5-Year Estimates
16-17	DTMB, Bureau of Labor Market Information and Strategic Initiatives, Quarterly Census of Employment and Wages
19-33	DTMB, Bureau of Labor Market Information and Strategic Initiatives, Quarterly Census of Employment and Wages U.S. Bureau of Labor Statistics, Occupational Employment Statistics O*Net Online Database Talxcellenz© DTMB, Bureau of Labor Market Information and Strategic Initiatives, Occupational Long-Term Forecast (2014-2024)
36-37	The Conference Board, Help Wanted Online© Data Series U.S. Bureau of Labor Statistics, Employment Projections Table 1.11
38-39	DTMB, Bureau of Labor Market Information and Strategic Initiatives, Occupational Long-Term Forecast (2014-2024)
40	DTMB, Bureau of Labor Market Information and Strategic Initiatives, Occupational Long-Term Forecast (2014-2024) O*Net Online Database

APPENDICES

Appendix 1

For the comparative areas, the 11 other regions were chosen because they met two criteria: population fell within 30 percent of the Grand Rapids-Wyoming-Muskegon, MI CSA, and the percent of total private employment that was in *Manufacturing* was over 10 percent. Population data is from the U.S. Census Bureau, Population Estimates Program, July 1st, 2016 population estimate. Employment data is from the U.S. Census Bureau, American Community Survey, 2015 1-Year Estimates.

For the purposes of the analysis in the call-out boxes, American Community Survey 2011-2015 5-Year Estimates data was used (since the West Michigan region must be built from the county level). In these rankings, the Grand Rapids-Wyoming-Muskegon, MI CSA was replaced by West Michigan.

Peer Region	% Employment in Manufacturing	2016 Population Estimate
Birmingham-Hoover-Talladega, AL CSA	11.3%	1,361,299
Buffalo-Cheektowaga, NY CSA	10.8%	1,210,481
Dayton-Springfield-Sidney, OH CSA	17.1%	1,074,617
Grand Rapids-Wyoming-Muskegon, MI CSA	21.9%	1,443,508
Greensboro—Winston-Salem—High Point, NC CSA	15.3%	1,650,019
Greenville-Spartanburg-Anderson, SC CSA	20.7%	1,442,117
Harrisburg-York-Lebanon, PA CSA	12.8%	1,252,820
Hartford-West Hartford, CT CSA	11.4%	1,476,637
Knoxville-Morristown-Sevierville, TN CSA	11.6%	1,117,758
Louisville/Jefferson County—Elizabethtown—Madison, KY-IN CSA	14.5%	1,510,945
Rochester-Batavia-Seneca Falls, NY CSA	11.8%	1,172,138
Tulsa-Muskogee-Bartlesville, OK CSA	12.1%	1,157,465

Appendix 2

The following NAICS industry assignments are made to create sector definitions:

NAICS	NAICS Industry Name	Sector
11	Agriculture, Forestry, Fishing and Hunting	Agriculture
21	Mining, Quarrying, and Oil and Gas Extraction	Energy and Construction
22	Utilities	
23	Construction	
62	Health Care and Social Assistance	Health Care
51	Information	IT and Media
31-33	Manufacturing	Manufacturing
52	Finance and Insurance	Professional Services
53	Real Estate and Rental and Leasing	
54	Professional, Scientific, and Technical Services	
55	Management of Companies and Enterprises	
56	Administrative and Support and Waste Management and Remediation Services	
44-45	Retail Trade	Retail and Hospitality Services
71	Arts, Entertainment, and Recreation	
72	Accommodation and Food Services	
81	Other Services (except Public Administration)	

Appendix 3

The four competency areas are defined as follows:

- Knowledge - Organized sets of principles and facts applying in general domains.
- Skills - Developed capacities that facilitate learning or the more rapid acquisition of knowledge.
- Abilities - Enduring attributes of the individual that influence performance.
- Work Activities - General types of job behaviors occurring on multiple jobs.

Using the Talxcellenz® online tool, we generate O*Net Online database competency scores for the combined top occupations within the given sectors, both for Importance and Level.

Importance and Level scores are the result of extensive, statistically random surveys of businesses about occupations at the O*Net code level.

Importance score: This rating indicates the degree of importance a particular descriptor is to the occupation. The possible ratings range from "Not Important" (1) to "Extremely Important" (5). It is then standardized on a scale of 0 to 100.

Level score: This rating indicates the degree, or point along a continuum, to which a particular descriptor is required or needed to perform the occupation.

Each level score can be further investigated on the O*Net Online database, with specific scales for each occupation. For the skill Reading Comprehension, the following example level scale is for Lawyers (23-1011):

70  **+** **Reading Comprehension** — Understanding written sentences and paragraphs in work related documents.



More information can be found at the [O*Net Online database](#).



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