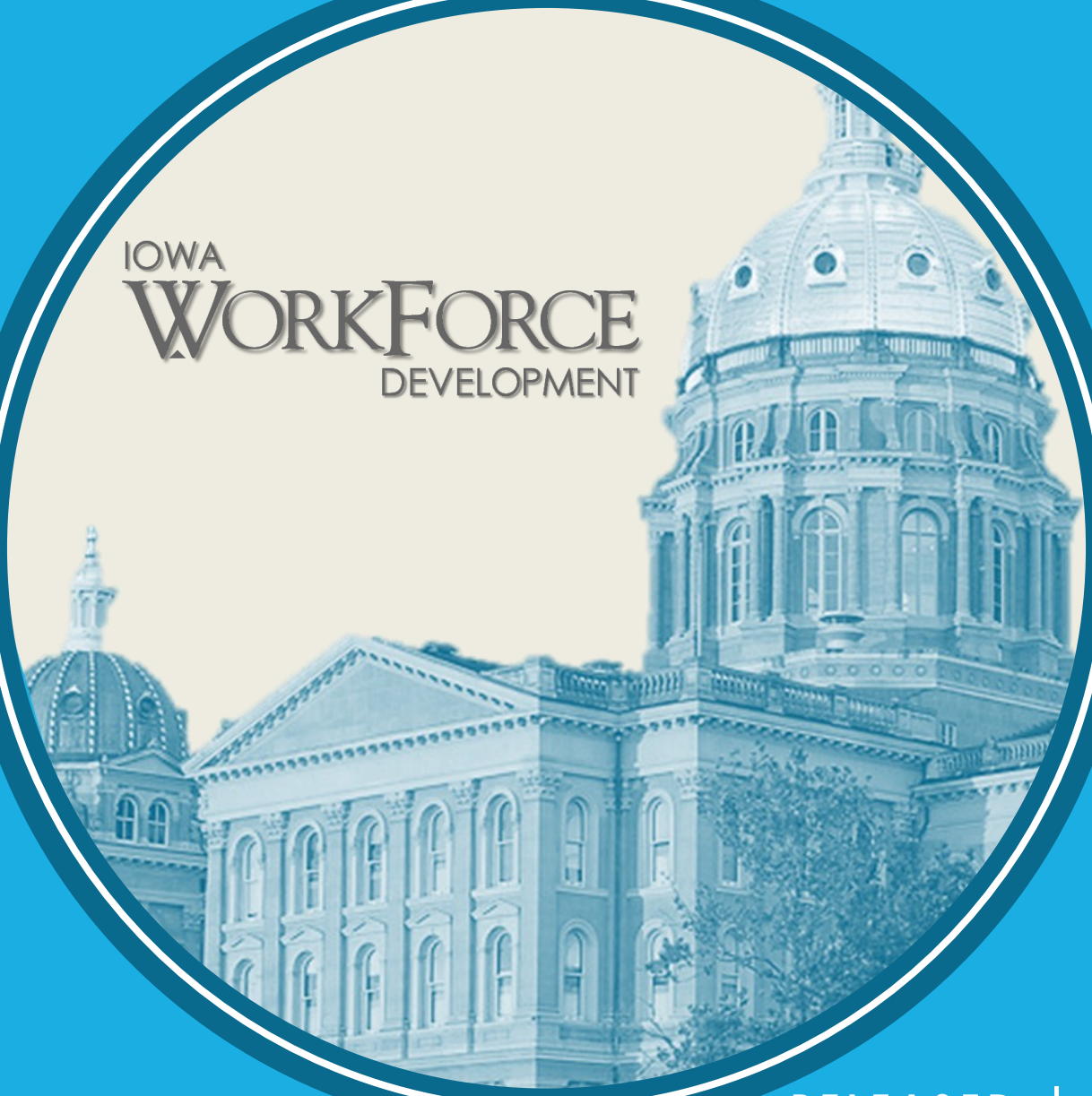
STATE OF IOWA

LABORSHED ANALYSIS

A STUDY OF WORKFORCE CHARACTERISTICS



IOWA WORKFORCE DEVELOPMENT

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STATEWIDE LABORSHED ANALYSIS

The purpose of this analysis is to measure the availability and characteristics of workers within the State of Iowa using Iowa Workforce Development's Laborshed Survey. The data generated will aid state and local development officials in their facilitation of industry expansion and recruitment and their service to existing industry in the State. All such entities require detailed data describing the characteristics of the available labor force including current/desired wage rates and benefits; job qualifications and skills; age cohorts; residence/ work location; employment requirements/obstacles; and the distances individuals are willing to travel for employment.

Community Laborshed analyses are a valuable and unique resource for local economic development. Regional Laborshed analyses are an aggregation of individual Laborshed areas into a defined region. Regional Laborshed reports assist businesses, developers and site selectors in identifying the strengths of a region. This information is then used for retaining or expanding their existing businesses or attracting prospective new employers into the area.

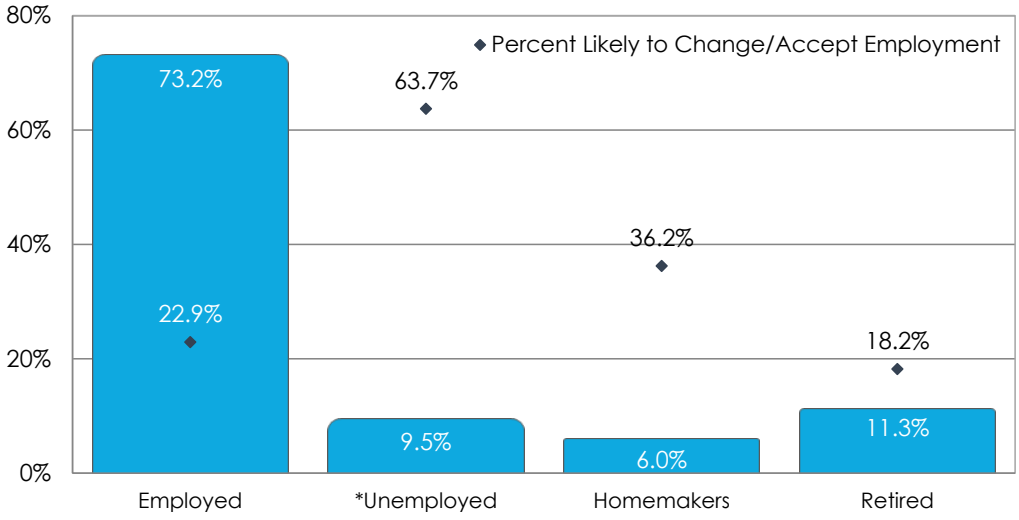
This statewide analysis is composed of 4,071 telephone survey responses of individuals in the State of Iowa. These responses were extracted from the statewide Laborshed database of 7,365 surveys conducted between February and December, 2015. Surveys were conducted in each ZIP code based on a random sample of the population between 18 and 64 years of age and weighted by the total number of households in each ZIP code (**Appendix A**).

The following sections of this report summarize the results of the Laborshed surveys that were conducted across the state. Due to the magnitude of the survey results, it is not practical to review each set of variables. Iowa Workforce Development (IWD) has focused on the factors that have been found to be the most valuable to existing and future businesses. However, upon request, IWD will conduct additional analyses for further review of specific variable(s) or sets of responses.

EMPLOYMENT STATUS

The results of the statewide survey show that 73.2 percent of all respondents identified themselves as being employed at the time they were contacted (**Figure 1**). The majority (71.5%) of the employed are working in positions that are considered full-time (**Figure 2**).

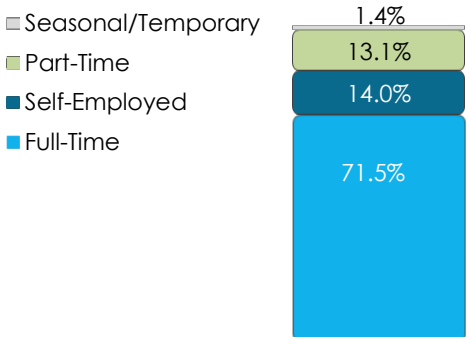
Figure 1
Employment Status of Survey Respondents



**Employment status is self-identified by the survey respondent. The unemployment percentage above does not reflect the unemployment rate published by the U.S. Bureau of Labor Statistics, which applies a stricter definition.*

Over one-tenth (14.0%) of the employed respondents are self-employed. The types of businesses they are operating include farming (30.7%), personal services (15.4%), construction/handyman (10.7%), retail (7.6%), professional services (6.8%), child care (5.7%), healthcare & social services (5.5%), consulting (3.1%), trucking/logistics (3.1%), automotive service/repair (2.6%), artist/writing/music/photography (2.1%), lawn care/snow removal (2.1%), computer-based business (1.6%), manufacturing (1.6%), or restaurant (1.6%). The self-employed have been operating their businesses for an average of 20 years, ranging from less than one to 47 years.

Figure 2
Type of Employment



Only responses that indicated a type of employment are included in calculation.

INDUSTRIES OF THE EMPLOYED

To provide consistency with other labor market information, the industrial categories identified in this analysis follow a similar format to the 2012 North American Industry Classification System (NAICS).

Survey respondents were asked to identify the industry in which they are currently working. **Figure 3**, on the next page, reflects the percentage of employed respondents by industry. The top industries in Iowa are wholesale and retail trade (14.4%); healthcare and social services (14.3%); education (13.5%); and manufacturing (13.2%).

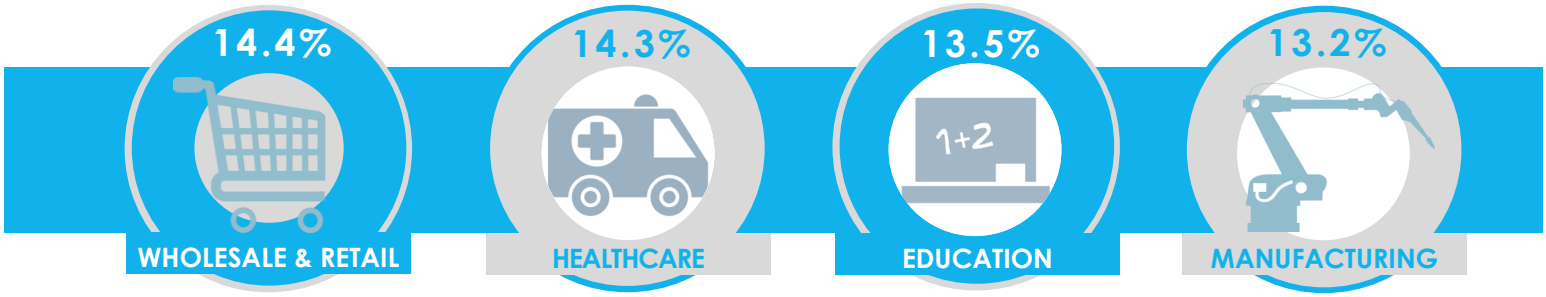
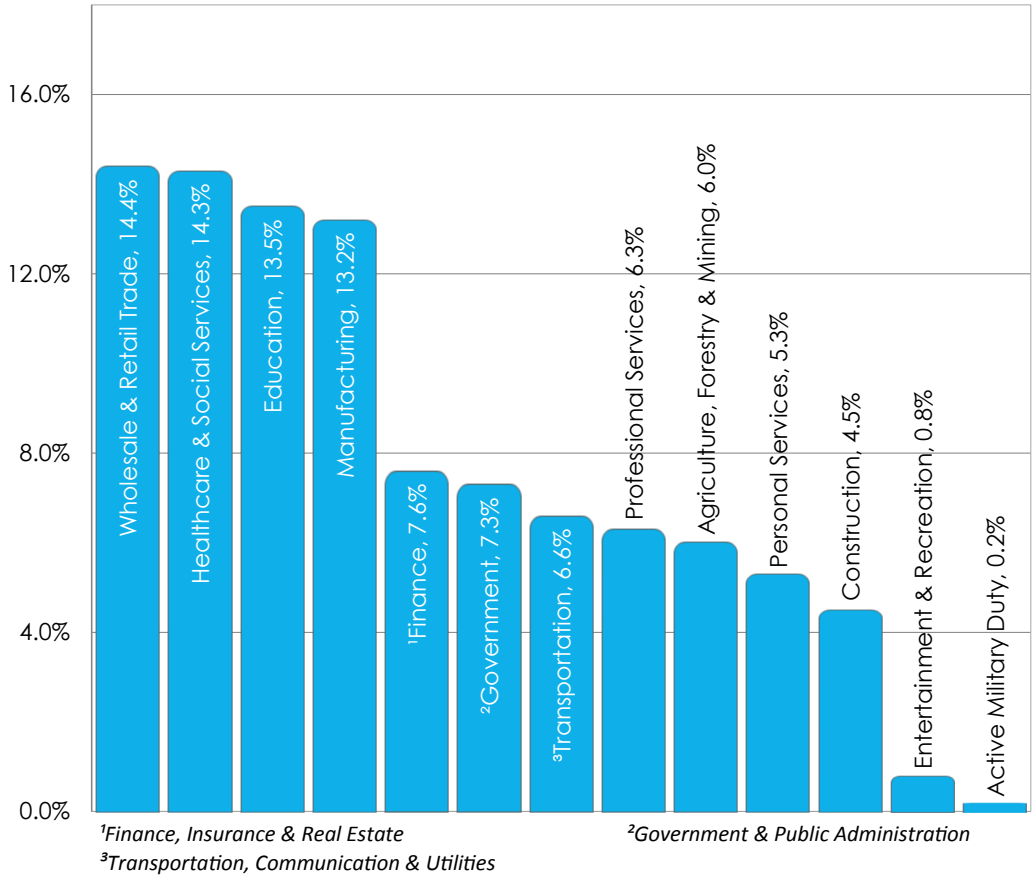


Figure 3
Industries of the Employed



OCCUPATIONS OF THE EMPLOYED

To remain consistent with other available occupational data, IWD recodes job titles into groupings based on the Standard Occupational Code (SOC) system. **Figure 4** shows the percentage employed within the State of Iowa by occupational classification grouping. The greatest percentage of respondents are employed in management (19.5%) followed by office and administrative support (12.8%).

Figure 4
Occupations of the Employed

Occupation	% Employed	Occupation	% Employed
Management	19.5%	Architecture & Engineering	2.2%
Office & Administrative Support	12.8%	Building/Grounds Cleaning & Maintenance	2.2%
Education, Training & Library	8.0%	Food Preparation & Serving Related	2.2%
Production	7.6%	Community & Social Services	1.9%
Sales & Related	6.4%	Healthcare Support	1.9%
Healthcare Practitioner & Technical	6.3%	Arts, Design, Entertainment, Sports & Related	1.7%
Business & Financial Operations	5.9%	Legal	1.3%
Transportation & Material Moving	4.7%	Life, Physical & Social Science	1.2%
Installation, Maintenance & Repair	4.0%	Farming, Fishing & Forestry	0.8%
Construction & Extraction	3.6%	Protective Service	0.8%
Personal Care & Service	2.6%	Military Specific	0.1%
Computer & Mathematical Science	2.3%	**Total**	**100%**

Occupations Continued in Next Column

DEMOGRAPHICS OF THE EMPLOYED

The gender breakdown of those respondents who are employed is 52.0 percent male and 48.0 percent female. The average age of the employed is 50 years old. A small portion (5.4%) of employed respondents speak more than one language in their household. Of those respondents, 63.3 percent speak Spanish.

EDUCATION & TRAINING

Nearly three-fourths (72.9%) of the employed respondents within the State have some level of education/training beyond high school. **Figure 5**, to the right, breaks down these respondents' education/training by degree level. Nearly two-fifths (37.7%) have an undergraduate degree or higher.

Figure 6, below, provides an overview of the educational fields of study of those who are currently employed living in the State of Iowa.

Figure 5
Education Level

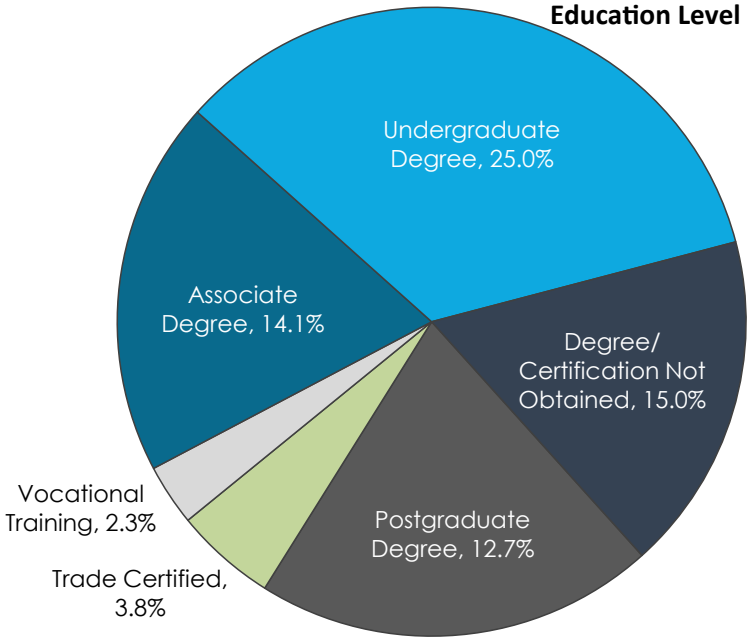


Figure 6
Educational Fields of Study

24.0%	Social Sciences
18.8%	Business, Public Administration & Marketing
11.7%	Healthcare/Medical Studies
11.5%	Business Administrative Support
9.5%	Education
8.2%	Vocational Trades
4.3%	Computer Applications/Programming/Technology
3.8%	Math & Science
3.6%	Agricultural Studies
2.6%	General Studies/Liberal Arts
2.0%	Engineering & Architecture

OCCUPATIONS & EXPERIENCES

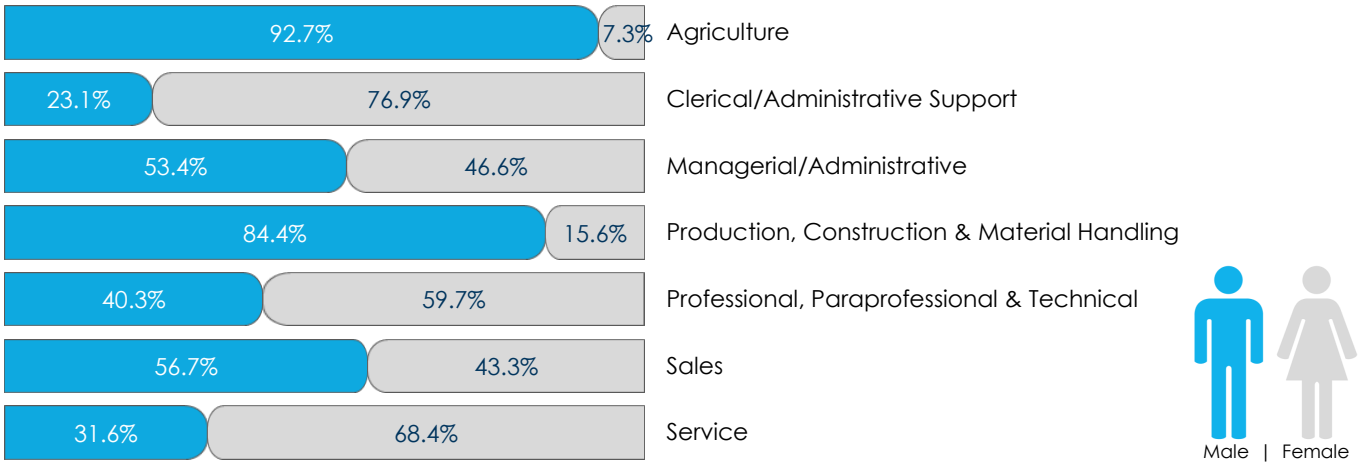
Iowa Workforce Development recodes the respondents' actual occupations into one of the seven Occupational Employment Statistics (OES) categories. The occupational categories represent a variety of specific occupations held by the respondents (see OES Category Structure - **Appendix D**). Classifying the employed by occupational group, **Figure 7** shows that the largest concentration of the workforce are employed within the professional, paraprofessional & technical occupational category. The agricultural occupational category represents the smallest sector of workers who are currently employed.

Figure 7
Percent of Workforce by Occupational Category

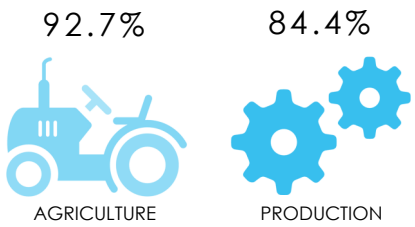
	% of Employed
Professional, Paraprofessional & Technical	30.9%
Production, Construction & Material Handling	19.9%
Managerial/Administrative	15.1%
Clerical/Administrative Support	12.8%
Service	9.7%
Sales	6.4%
Agriculture	5.2%
Total	**100%**

Figure 8, below, provides a comparison of the gender distribution within each occupational category.

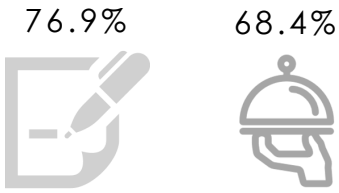
Figure 8
Occupational Categories by Gender



Top Male Dominated Occupational Categories



Top Female Dominated Occupational Categories



WAGE REQUIREMENTS

Respondents are asked if they are paid on either an hourly or salaried basis; hourly wages are not converted to annual salaries. The breakdown of respondents who indicated a type of compensation is as follows: 54.9 percent state they are currently receiving an hourly wage, followed by 39.6 percent that receive an annual salary, 4.7 percent that are on commission and 0.8 percent that are paid on an alternative basis. The current median hourly wage of those who are employed is $16.00 and the median salary is $60,000 per year.

Figure 9 provides the current median wages and salaries by industry of the respondents. This wage information is a statewide overview of all employed without regard to occupational categories or likeliness to change employment. If businesses are in need of wage rates within a defined Laborshed area, the survey data can be queried by various attributes to provide additional analysis of the available labor supply. The actual wage levels required by prospective workers will vary between individuals, occupational categories, industries and economic cycles.

Figure 9
Median Wages & Salaries by Industry

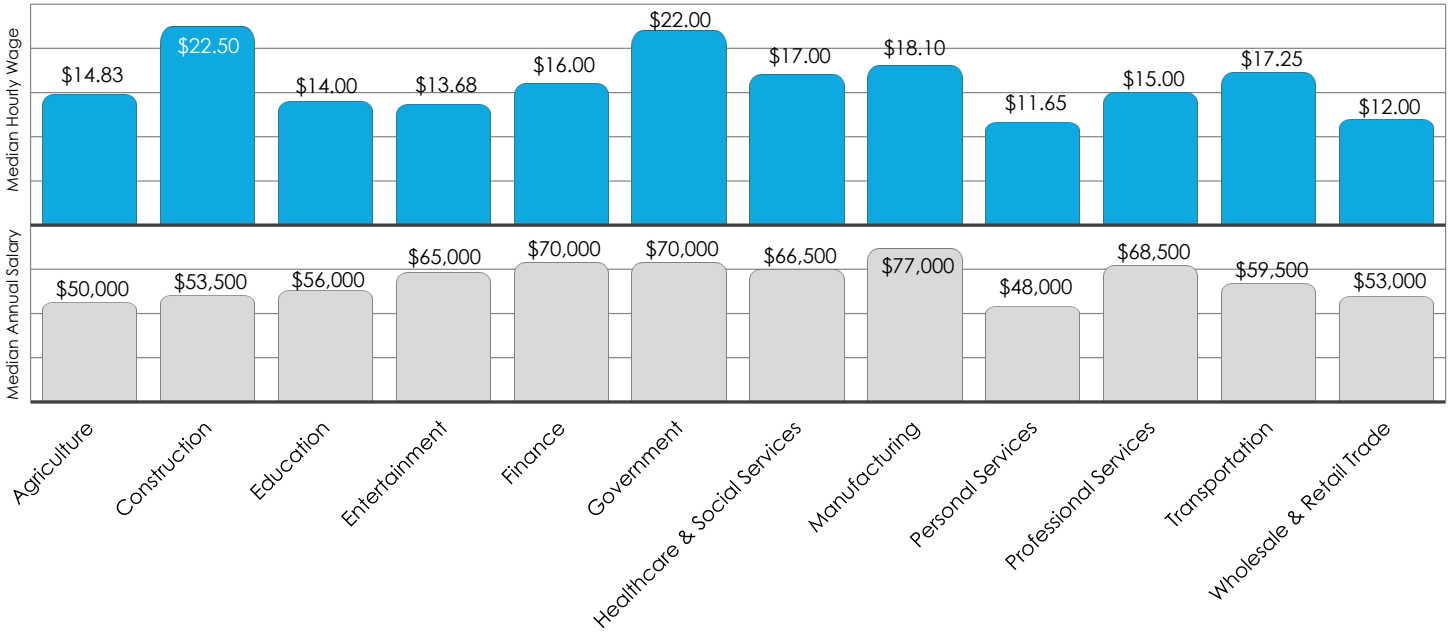


Figure 10 illustrates current wage rates of those who are currently employed within each defined occupational category.

Figure 10
Median Wages & Salaries by Occupational Category

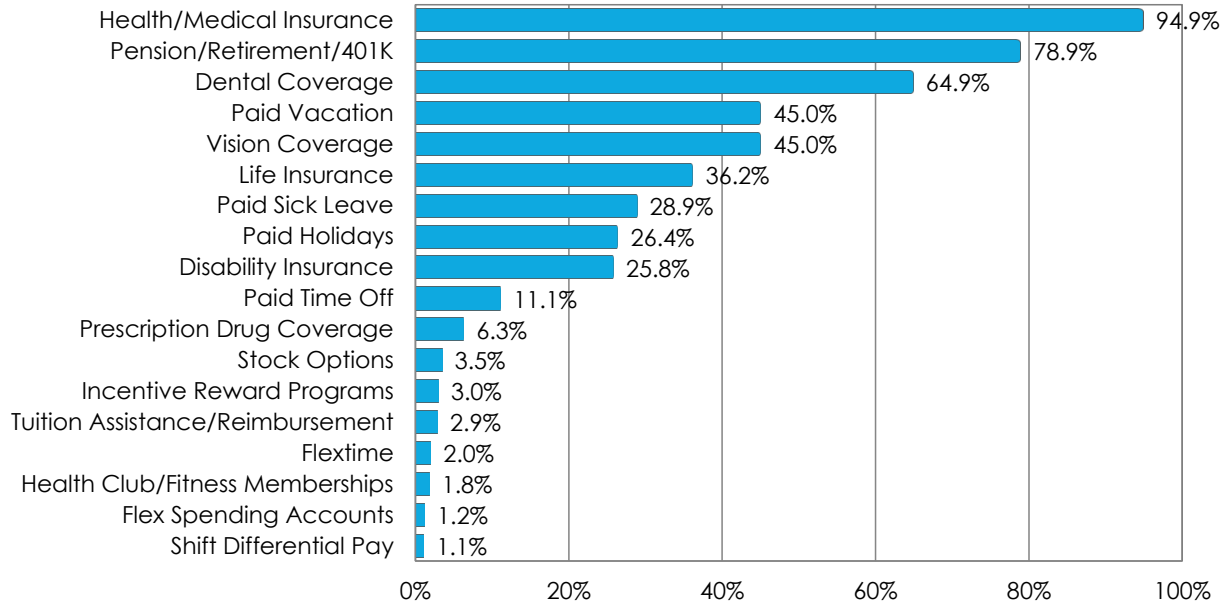
	Hourly Wage	Annual Salary
Agriculture	$ 12.75	$ 50,000
Clerical/Administrative Support	$ 15.00	$ 44,000
Managerial/Administrative	$ 18.00	$ 71,000
Production, Construction & Material Handling	$ 18.00	$ 51,000
Professional, Paraprofessional & Technical	$ 20.00	$ 62,000
Sales	$ 11.82	$ 50,000
Service	$ 12.00	$ 41,250

Wages differ by gender in the State of Iowa. The current median hourly wage of employed females in the State is $14.87 per hour while the current median hourly wage of employed males is $18.00 per hour. This $3.13 per hour wage difference has females in the State receiving an hourly wage of 17.4 percent less than males. Females who are receiving an annual salary also experience gender wage disparity ($15,000 per year). Currently females are making a median annual salary of $55,000 while males are making a median salary of $70,000 a year. This results in a 21.4 percent difference in annual salaries.

EMPLOYMENT BENEFITS

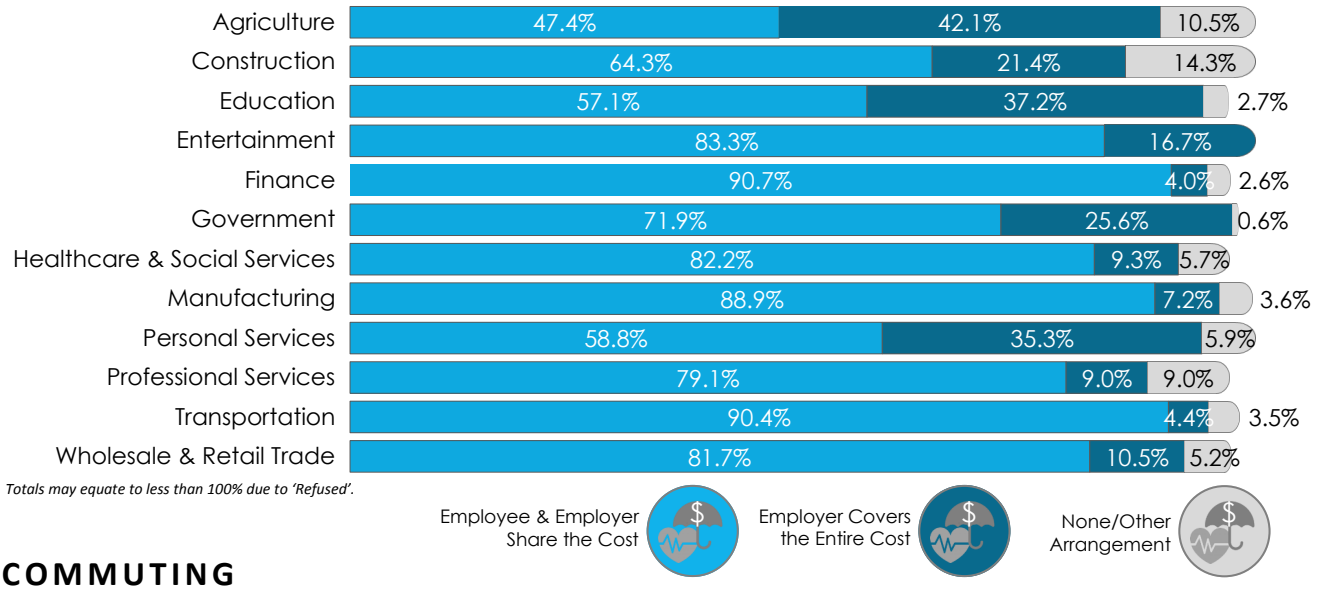
There are a variety of benefit packages offered to employees within the State in addition to wages received. Current benefits of those employed full-time are shown in **Figure 11**. Nearly four-fifths (78.4%) of the respondents employed full-time in the State of Iowa state they are currently sharing the premium costs of health/medical insurance with their employer, 15.4 percent indicate their employer covers the entire cost of insurance premiums while 6.2 percent indicate either that their employer does not pay any health/medical insurance premiums or the respondent refused to provide any information. **Figure 12** shows how health/medical insurance premium costs are covered for the full-time employed by industry.

Figure 11
Current Benefits of the Full-Time Employed



Responses equating to less than one percent are not reported.

Figure 12
Health/Medical Insurance Premium Coverage by Industry



Totals may equate to less than 100% due to 'Refused'.

COMMUTING

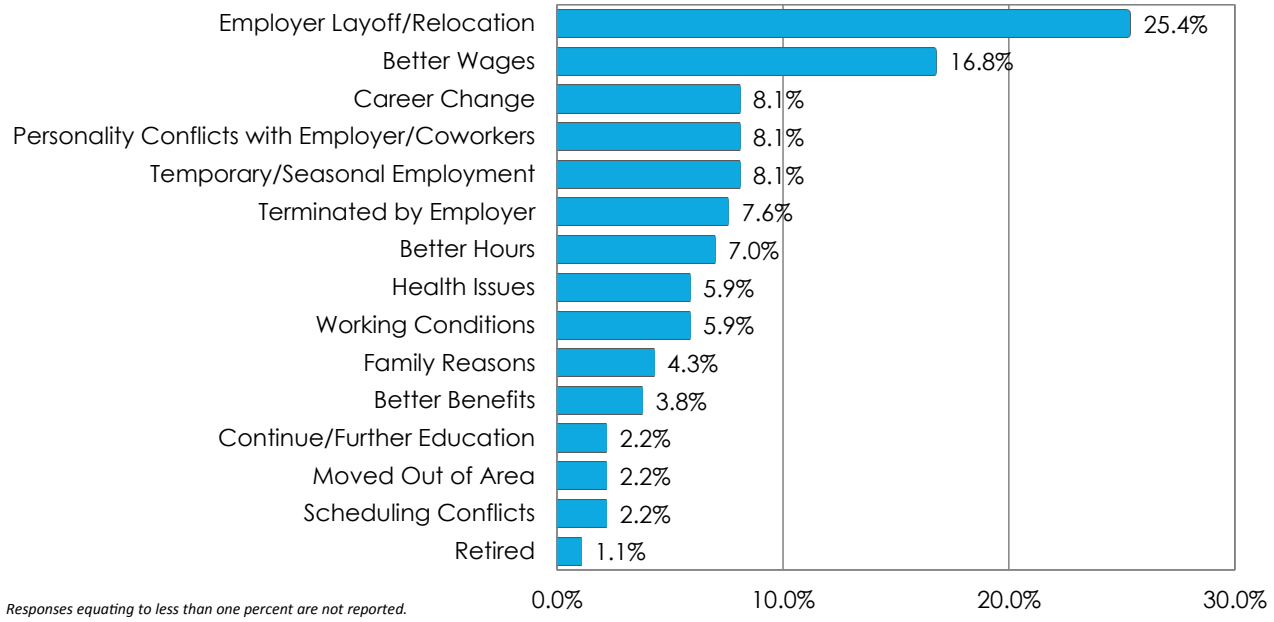
Commuting data collected by the Laborshed survey helps developers and employers understand how far employed residents are willing to commute for employment. Overall, individuals across the State are currently commuting an average of 10 miles one-way for employment opportunities. Respondents were also asked how much time (in minutes) they spend commuting. Overall, individuals across the State are currently spending an average of 15 minutes commuting one-way to work. It is important to keep in mind that when analysis is performed for local Laborshed nodes the average number of miles individuals are currently and/or are willing to commute can fluctuate significantly from one location to another.

EMPLOYED LIKELY TO CHANGE EMPLOYMENT

Analyzing the employed based on their likeliness to change employment creates a profile of individuals interested in changing from their current position. Survey data shows that 22.9 percent of the employed stated that they are either "very likely" or "somewhat likely" to change employers or positions if presented with the right job opportunity.

Figure 13 details the primary reasons given by those who are currently employed for considering changing employment.

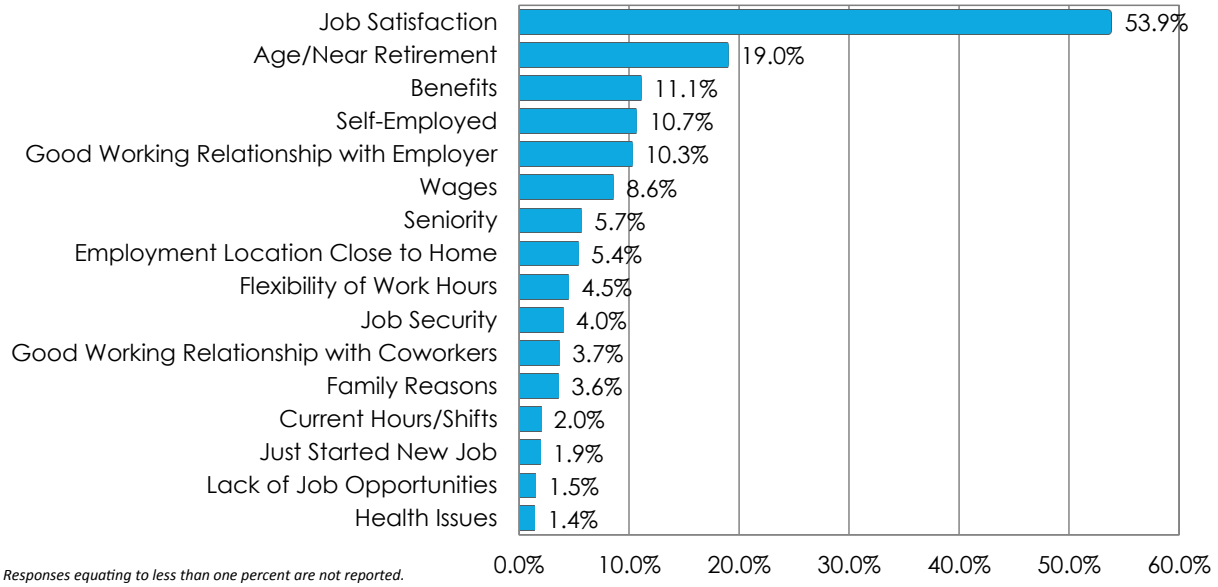
Figure 13
Primary Reasons for Changing Jobs



Responses equating to less than one percent are not reported.

Conversely, those that are currently employed that indicated they are unlikely to change employers gave the following reasons for not considering a change in employment (**Figure 14**).

Figure 14
Reasons Not to Change Employment

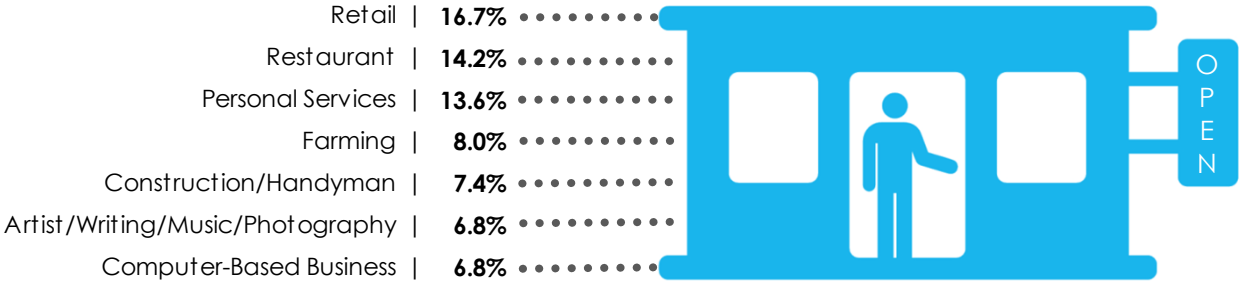


Responses equating to less than one percent are not reported.

Nearly one-fifth (14.7%) of those who are employed likely to change employment are working two or more jobs. This group may prefer to work full-time hours for one employer versus working for multiple employers to accomplish full-time employment. Those who are employed likely to change are currently working an average of 41 hours per week. Nearly one-fifth (19.2%) would consider employment offers that require them to work more hours. Further analysis finds that 75.0 percent would prefer to work full-time positions (35+ hrs/week), while 25.0 percent prefer positions with less than full-time hours. Seasonal employment opportunities would interest 39.3 percent of those currently employed likely to change positions, while 33.7 percent would consider a seasonal employment offer.

When asked about their interest in entrepreneurship opportunities, 30.9 percent of the employed that are likely to change employment expressed an interest in starting a business. The types of businesses they are primarily interested in starting are detailed in **Figure 15**.

Figure 15
Top Business-Types for Potential Start-Ups



The majority (71.4%) find access to capital/start-up funds is the primary impediment of operating their own business venture followed by development of a business plan (9.7%), risk involved (9.7%), time requirements (7.0%), finding a prime business location (4.3%), tax/regulatory laws (4.3%), marketing expertise (3.8%), concerns about the economy (2.7%), human resources/hiring procedures (1.6%), accounting/bookkeeping expertise (1.1%), age (1.1%), education/training required (1.1%) and insurance issues (1.1%).

AGE AND GENDER

The gender breakdown of those likely to change employment is distributed 51.9 percent male and 48.1 percent female.

The average age of those likely to change employment is 48 years of age. **Figure 16** provides a breakdown by age range of employed respondents who are likely to change employment.

Figure 16
Age Range Distribution

	% of All Employed Likely to Change by Age Range	% of Employed Likely to Change within Each Age Range
18 to 24	4.7%	47.1%
25 to 34	8.7%	31.3%
35 to 44	19.2%	25.4%
45 to 54	33.6%	24.5%
55 to 64	33.8%	18.2%
Total	**100%**	**-**

EDUCATION & TRAINING

Survey results show that 73.6 percent of the respondents likely to change employment have some level of education/training beyond high school. **Figure 17**, on the next page, breaks down these respondents' education/training by degree level. As with other segments of this study, education levels vary by industrial and occupational categories, gender and age groups.

Figure 17
Education Level of Employed Likely to Change

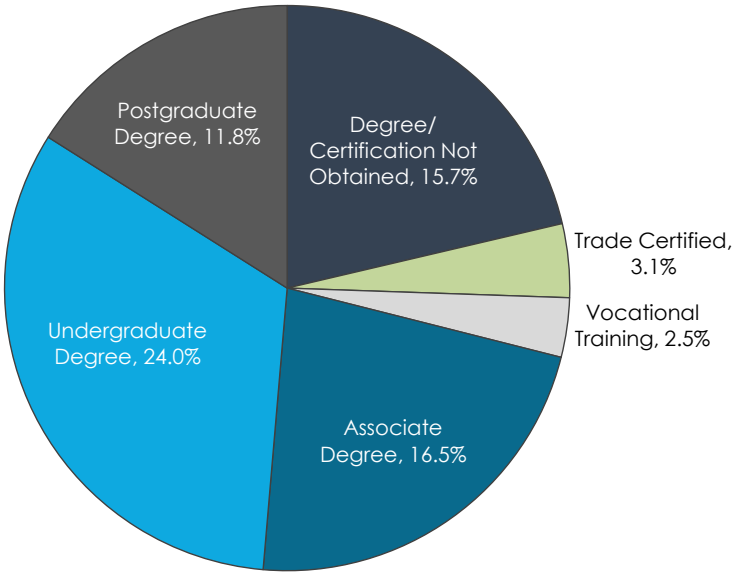
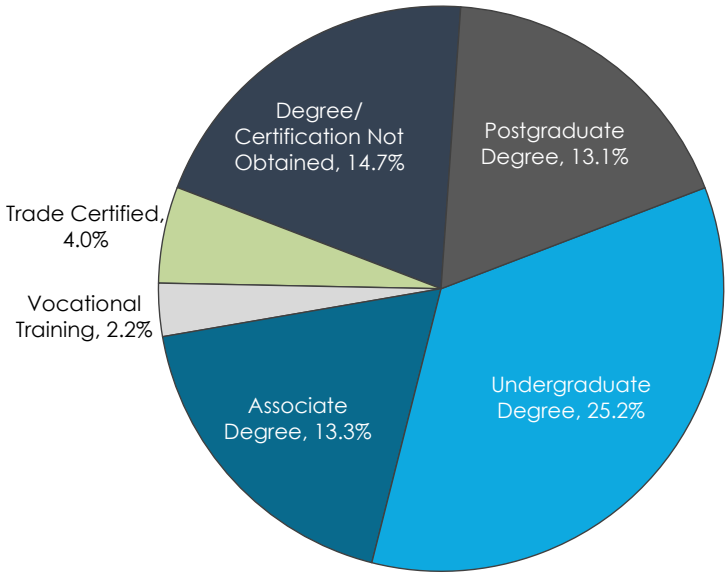
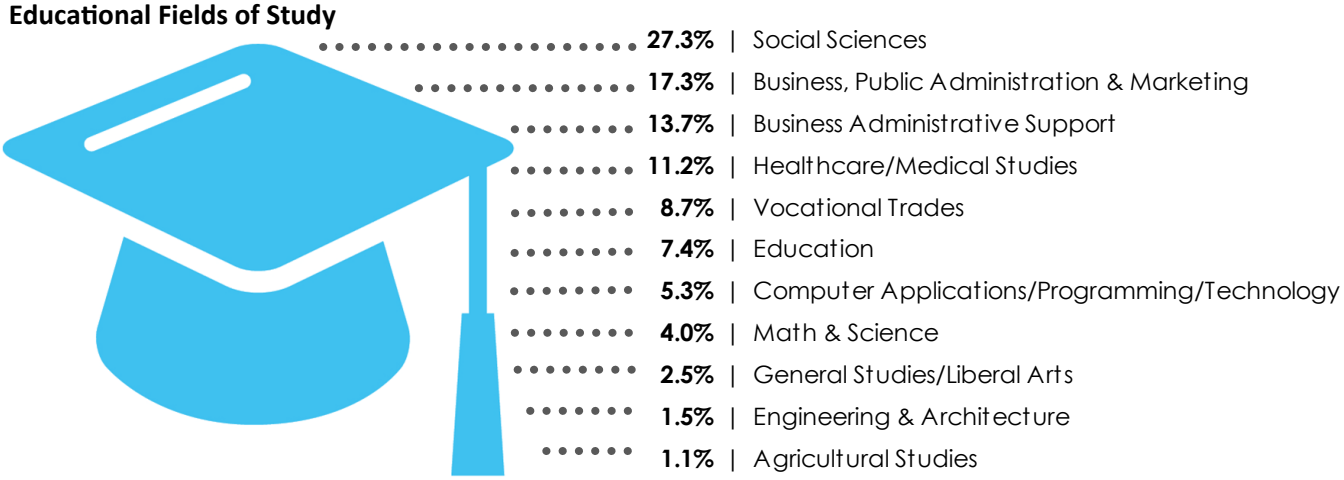


Figure 18
Education Level of Employed Unlikely to Change



The distribution of respondents by education level that are employed and *unlikely* to change employment is similar to those that are employed *likely* to change (**Figure 18**). **Figure 19** provides an overview of the educational fields of study for those who are employed and likely to change employment.

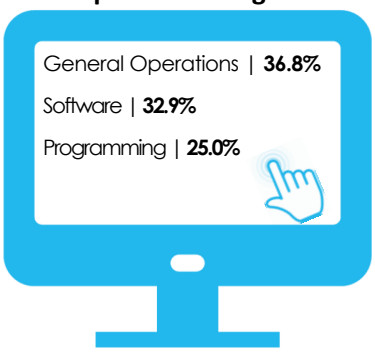
Figure 19
Educational Fields of Study



Nearly half (49.9%) of the employed likely to change employment realize that to make a successful transition to new employment or be promoted within their current organization, they will need additional education/training.

Those respondents cited the following desired education/training: start/finish college degree (36.5%), attend computer courses (21.9%), obtain continuing education units "CEU's" (9.7%), participate in on-the-job training (9.4%), attain trade certification (6.3%), attend vocational training (6.3%) and participate in job preparedness classes (0.6%). The primary areas of computer training which they want to take are detailed in **Figure 20**.

Figure 20
Computer Training Desired



Over one-fourth (26.4%) are likely to seek additional training/education within the next year. Financing (43.9%), lack of time (work scheduling conflicts) (25.2%) and age (16.1%) are the primary obstacles to obtaining their educational/training needs.

OCCUPATIONS & EXPERIENCES

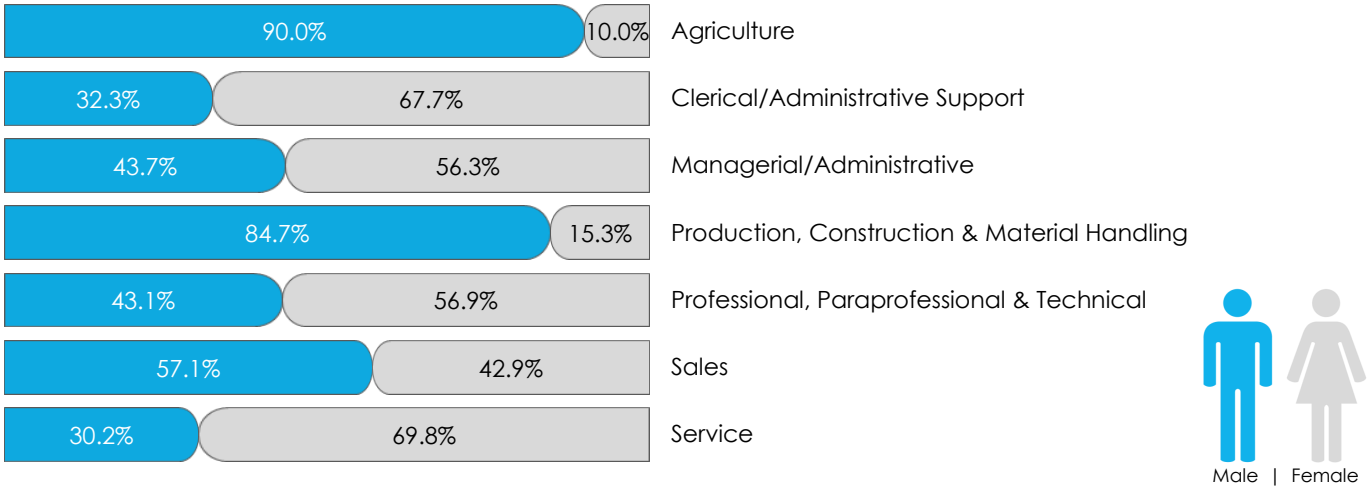
IWD recodes the respondents' actual occupations into one of the seven Occupational Employment Statistics (OES) categories. The occupational categories represent a variety of specific occupations held by the respondents (see OES Category Structure - **Appendix D**). **Figure 21** shows that the largest concentration of potential available labor is employed within the professional, paraprofessional & technical occupational category. The agricultural occupational category represents the smallest sector of workers likely to change employment.

Figure 21
Percent of Workforce by Occupational Category

	% of All Employed Likely to Change by Occupational Category	% of Employed Likely to Change within Each Occupational Category
Professional, Paraprofessional & Technical	27.0%	20.0%
Production, Construction & Material Handling	24.3%	27.9%
Clerical/Administrative Support	14.8%	26.3%
Service	14.3%	33.8%
Managerial/Administrative	10.6%	16.0%
Sales	7.3%	26.3%
Agriculture	1.7%	7.4%
Total	**100%**	**-**

Figure 22 provides a comparison of those likely to change employment by gender within each occupational category. The State of Iowa has a higher percentage of males who are employed likely to change than females (51.9% and 48.1%, respectively). Employers within the State looking to fill positions can utilize this information to more efficiently focus their recruitment efforts based on the occupational categories for which they plan to hire. The occupational categories encompass a wide variety of individual occupations in which workers throughout the State are employed.

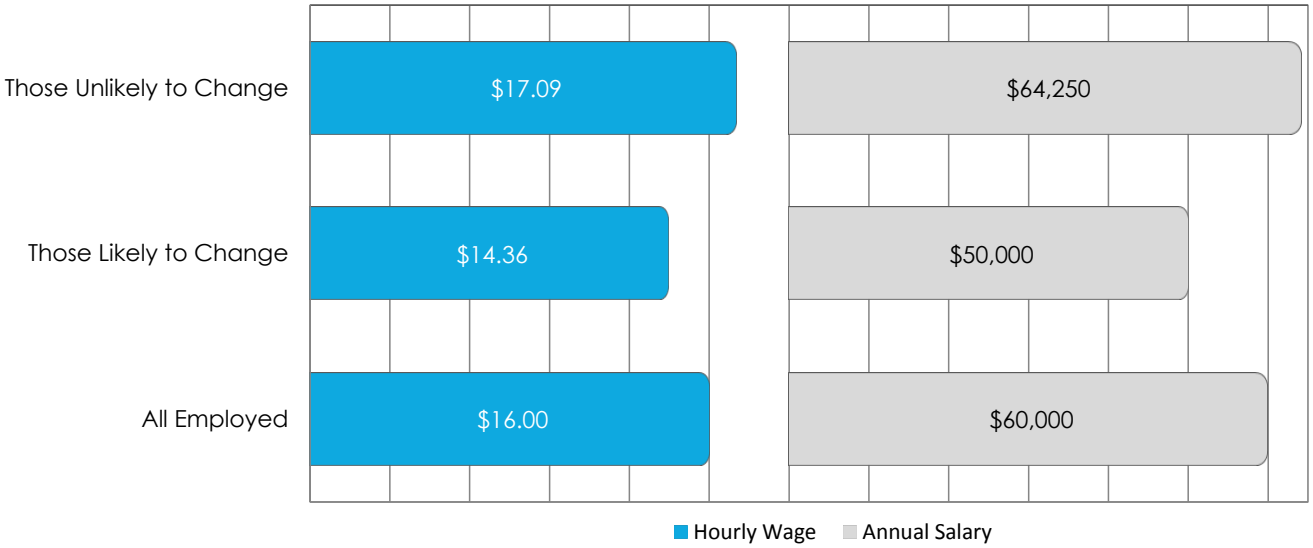
Figure 22
Occupational Categories by Gender



WAGE REQUIREMENTS

Figure 23 provides data concerning the employed respondents' current median wages and salaries, by their likeliness to change employment. Additional data from the survey can be analyzed to provide businesses a benchmark for determining wage rates in the State of Iowa. The actual wage levels required by prospective workers will vary between individuals, occupational categories, industries and economic cycles. The breakdown of respondents employed and likely to change employment, who indicated a type of compensation is as follows: 67.4 percent state they are currently receiving an hourly wage, followed by 27.9 percent that receive an annual salary, 3.9 percent that are on commission an 0.8 percent that are paid on an alternative basis.

Figure 23
Comparison of Current Wage Data



There is a disparity between the median hourly wages and median annual salaries of respondents likely to change employment and those content with their current position ($2.73/hr and $14,250/yr).

The wage threshold (wage range required to attract 66 percent to 75 percent of applicants) of employed residents who are "very likely" or "somewhat likely" to change employment is estimated to be $17.00 to $19.00 per hour regardless of industry. Salaried employees likely to change employment have a threshold of $61,560 to $75,000 per year.

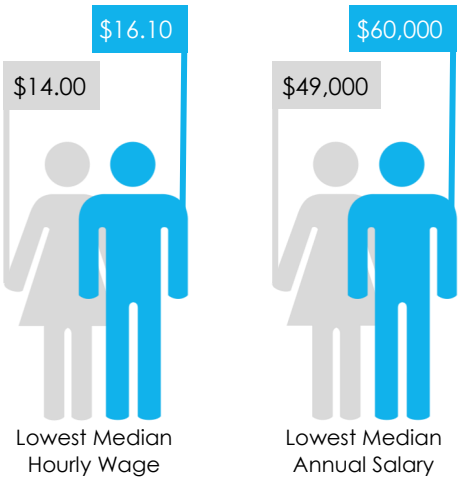
Figure 24 reflects those who are currently employed likely to change and the estimated wage threshold for hourly wage applicants by industry.

Figure 24
Wage Threshold by Industry

	Wage Threshold Hourly Wage	Wage Threshold Annual Salary
Agriculture	$ 13.77 - $ 15.75	*
Construction	$ 16.88 - $ 20.00	$ 60,000 - $ 60,000
Education	$ 15.00 - $ 16.88	$ 59,000 - $ 62,000
Finance & Professional Services	$ 16.00 - $ 18.00	$ 75,000 - $ 81,000
Government	$ 20.00 - $ 21.72	$ 78,280 - $ 80,000
Healthcare & Social Services	$ 18.46 - $ 20.00	$ 52,200 - $ 71,250
Manufacturing	$ 20.00 - $ 20.00	$ 79,200 - $ 85,000
Personal Services & Entertainment	$ 15.00 - $ 17.00	$ 50,000 - $ 57,500
Transportation, Communication & Utilities	$ 17.72 - $ 18.50	$ 75,000 - $ 77,500
Wholesale & Retail Trade	$ 14.00 - $ 15.00	$ 60,000 - $ 68,000

** Insufficient survey data/refused*

Figure 25
Lowest Wages Considered by Gender

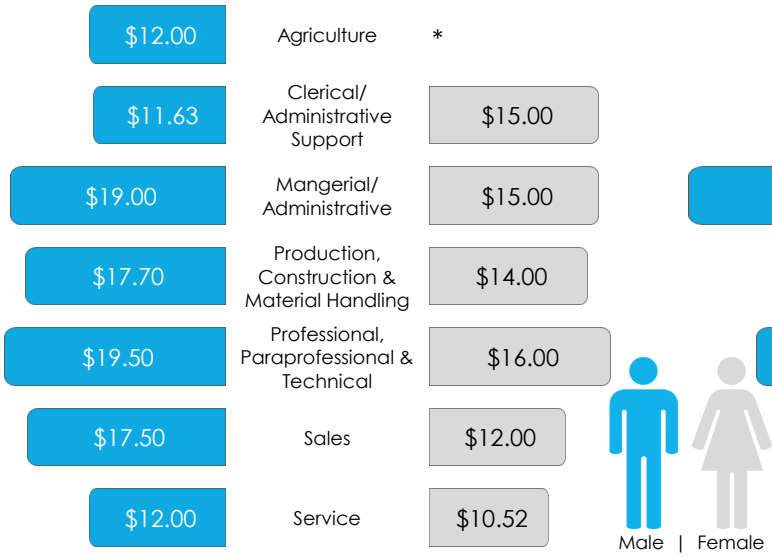


Another comparison to consider is the employed respondents' lowest wages considered based on gender (**Figure 25**).

In many Laborshed areas, there is a discrepancy between the lowest wages considered by males and females. On the whole, this is true in the State as well when looking at hourly wage rates of those who are likely to change employment without regard to specific industry or occupation. The lowest median hourly wage that females would consider is 13.0 percent less than that of males. Likewise, the median salary females would consider is 18.3 percent less than that of males. Some of the disparity may be explained by the differences in the occupational and industrial categories of the respondents, nevertheless discrepancies still exist.

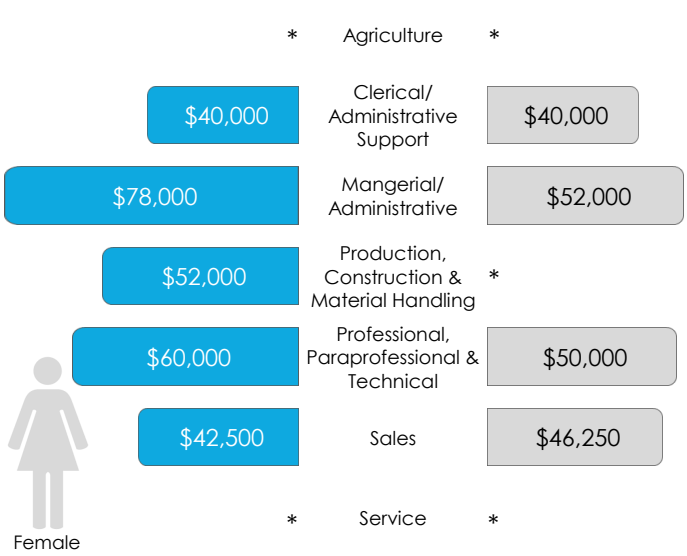
Figures 26 and **27** further explore the differences between the lowest median hourly wages and annual salaries considered by respondents that are employed likely to change employment based on gender and delineated by occupational category.

Figure 26
Lowest Median Hourly Wage by Occupational Category



**Insufficient survey data/refused.*

Figure 27
Lowest Median Annual Salary by Occupational Category



**Insufficient survey data/refused.*

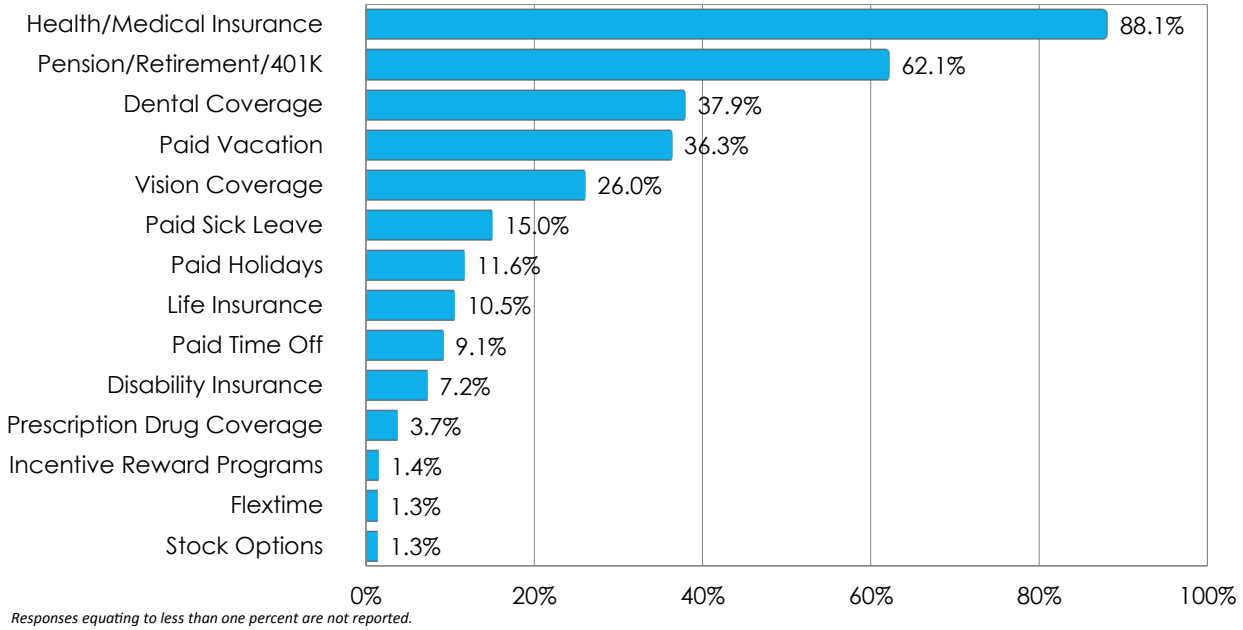
EMPLOYMENT BENEFITS

The survey provides the respondents an opportunity to identify employment benefits that would influence their decision to change employment. Desired benefits are shown in **Figure 28**, on the next page. For some respondents, benefits offered in lieu of higher wages can be the driving force to change employment. Some respondents assume that particular benefits, such as health/medical insurance, would be incorporated into most standard employment packages; therefore, they may not select health/medical as an influential benefit option.

When contemplating a change in employment, nearly two-fifths (38.1%) of those surveyed would prefer to look for offers where the employer covers all the premium costs of health/medical insurance while the majority (59.1%) would be willing to share the cost of premiums for health/medical insurance with their employer.

Nearly four-fifths (77.6%) of those who are employed likely to change state they are currently sharing the premium costs of health/medical insurance with their employer and 12.4 percent indicate their employer is covering the entire cost of health/medical insurance. In the majority of cases the data shows that the cost sharing of medical insurance premiums is an influential benefit option for those considering employment offers.

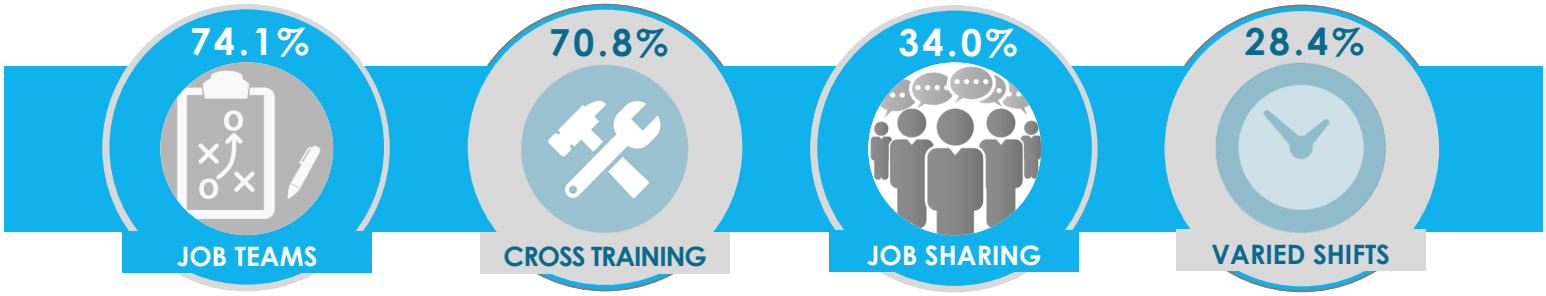
Figure 28
Desired Benefits



Responses equating to less than one percent are not reported.

FLEXIBILITY & ADAPTABILITY IN THE WORKPLACE

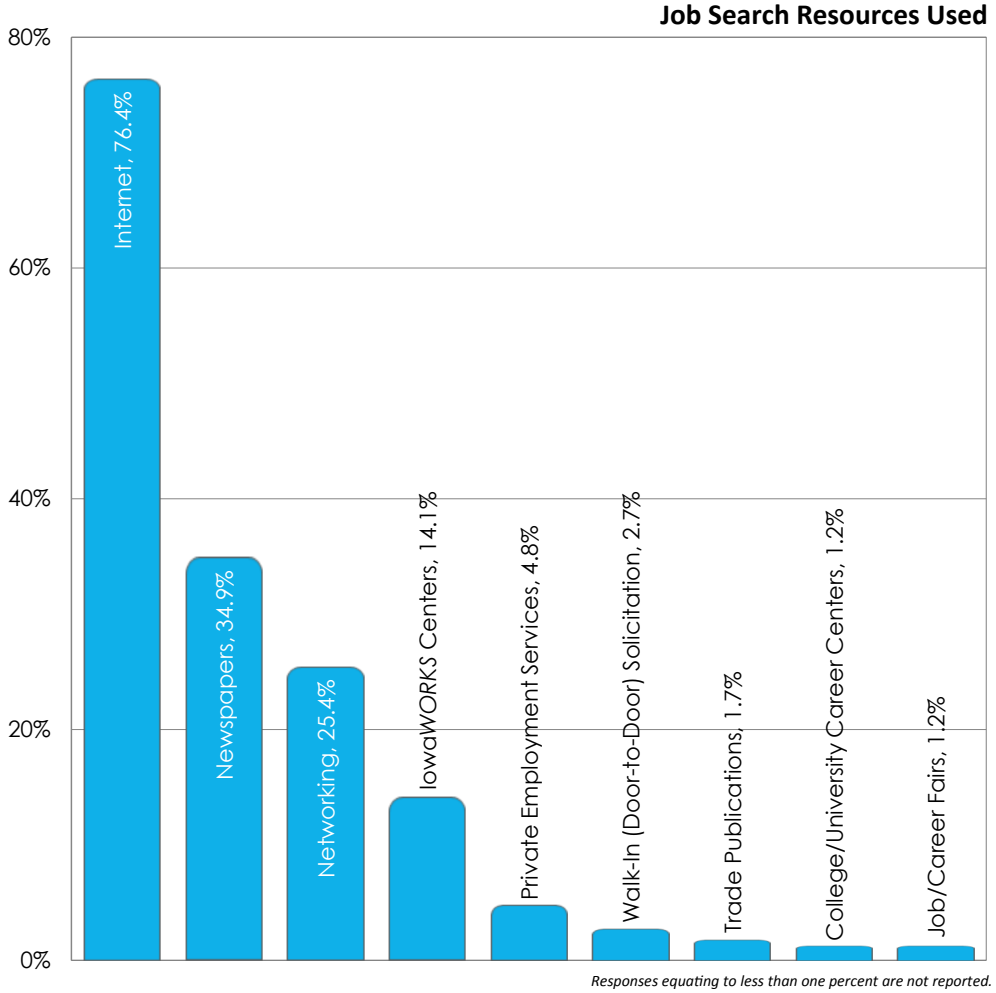
Residents in the State are receptive to various work environments. Most respondents (74.1%) would prefer to work in team environments—groups of individuals coming together to accomplish a common goal; 70.8 percent are willing to work in an environment that offers cross-training opportunities—training to do more than one job; and over one-third (34.0%) would consider job sharing work arrangements—involving two or more individuals splitting one full-time job. As such arrangements become more common in the workplace a greater number of employees are expressing interest in them. Employment opportunities that require varying work schedules (combinations of 2nd, 3rd or split shifts) would pique the interest of 28.4 percent of the employed that are likely to change employment.



JOB SEARCH RESOURCES

Employers who have a clear understanding of the job search resources used by workers will improve their ability to maximize their effectiveness and efficiency in attracting qualified applicants. Residents living in the State of Iowa are undoubtedly exposed to numerous sources by which employers communicate job openings and new hiring. Therefore, it is important to understand what sources potential workers rely on when looking for jobs. The most frequently identified job search resources of the employed are identified in **Figure 29**, on the next page.

Figure 29
Job Search Resources Used

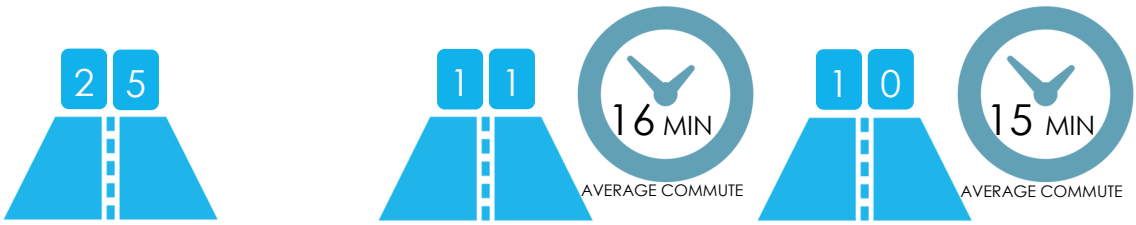


Top internet sites used for job searches include: www.monster.com, www.indeed.com, www.linkedin.com, www.iowajobs.org and www.careerbuilder.com. Top newspapers used include: *The Des Moines Register* and *The Gazette*—Cedar Rapids

COMMUTING

Overall, across the State, respondents that are employed likely to change report that they would commute an average of 25 miles one-way for employment opportunities. Currently, those employed likely to change employment are commuting 11 miles one-way for employment while those that are employed but unlikely to change are traveling 10 miles one-way to work. Respondents were also asked how much time (in minutes) they spend commuting. Currently, those employed likely to change employment spend an average of 16 minutes commuting one-way to work while those that are employed but unlikely to change are spending an average of 15 minutes commuting one-way for employment.

It is important to keep in mind that when analysis is performed for specific Laborshed nodes the average number of miles individuals are currently and/or are willing to commute can fluctuate significantly.



WILLING AVERAGE MILES: LIKELY TO CHANGE EMPLOYMENT

CURRENT AVERAGE MILES: LIKELY TO CHANGE EMPLOYMENT

CURRENT AVERAGE MILES: UNLIKELY TO CHANGE EMPLOYMENT

ESTIMATED UNDEREMPLOYED

Underemployment is a recent point of interest in popular literature, but it has actually been an issue studied and addressed by economists for nearly 20 years. While there is no one widely accepted definition of underemployment, for the purpose of this analysis, underemployment is defined in the following three ways:

1. **Inadequate hours worked** - individuals working less than 35 hours per week and desiring more hours.
2. **Mismatch of skills -** workers are denoted as "mismatched" if their completed years of education are above the number needed for their current occupational group, they have significant technical skills beyond those currently being utilized or if they have held previous jobs with a higher wage or salary.
3. **Low income** - individuals working 35 or more hours per week at wages insufficient enough to keep them above the poverty level.

Each of these categories of underemployment can be very difficult to estimate; however, elements of each of these categories exist in the State of Iowa.

It is important to note that underemployment applies only to respondents that indicated they were employed likely to change employment. Respondents are not considered underemployed if they are unlikely to accept new employment opportunities that could improve their situation.

UNDEREMPLOYED DUE TO INADEQUATE HOURS WORKED

In order to determine the percentage of those affected by underemployment due to inadequate hours worked, tabulations of the employed likely to change employment and working less than 35 hours per week, desiring more hours, were analyzed. The survey data shows that underemployment due to inadequate hours is estimated to be 1.8 percent within the State.

Nearly two-thirds (65.8%) of those who are considered to be underemployed due to low hours are female. The average age of those who are underemployed due to inadequate hours is 45 years.

Figure 30 details the current occupational categories of those who are underemployed due to inadequate hours.

Figure 30
Occupational Categories of Underemployed Due to Inadequate Hours

	% of Employed
Service	32.9%
Professional, Paraprofessional & Technical	21.9%
Clerical/Administrative Support	17.8%
Production, Construction & Material Handling	11.0%
Sales	8.2%
Managerial/Administrative	6.8%
Agriculture	1.4%
Total	**100%**

These respondents are currently seeking employment opportunities within the professional, paraprofessional & technical (32.0%); service (23.2%); clerical (16.1%); production, construction & material handling (16.1%); sales (5.4%); agricultural (3.6%); or managerial (3.6%) occupational categories. This group is willing to commute an average of 23 miles one-way for the right employment opportunity. Nearly two-thirds (65.7%) of the respondents who are underemployed due to inadequate hours have an education beyond high school. Businesses may want to look inside their own organizations for potential candidates when looking to fill openings requiring full-time employment status.

UNDEREMPLOYED DUE TO MISMATCH OF SKILLS

Underemployment may also be calculated by examining individuals that are employed in positions that do not maximize their previous experience, skills and education or that do not adequately compensate them based on their qualifications. Iowa Workforce Development's survey attempts to provide the best estimate of this "mismatch" of skills by asking respondents if they believe that they are underemployed and if so, why. Respondents first answered the question, "Are you qualified for a better job?" Individuals answering "yes" are then asked to classify why they are qualified based on the following categories: previously held job required more skill and education; acquired additional job training and education at current job; current job does not

require attained level of training or education; and received greater pay at previous job. Respondents selected all descriptors that applied to their situation. The choices provided on the survey are not an exhaustive list of explanations of why the respondent is overqualified, but a collection of the most likely responses based on prior surveys and research.

Iowa Workforce Development then conducts a second method of validating whether or not underemployment by mismatch of skills actually exists. Each time a respondent lists a reason for why he or she is qualified for a better job, other survey questions are analyzed to estimate whether the person is truly underemployed or simply overstating their skills and education or underestimating the requirements of the labor market. For example, if a respondent states that they are underemployed because they previously held a job that required more skill and education, IWD evaluates the person's occupation type, skills unused at their current position, age, employment status, education, years in current position and the type of job they would consider to see if they are consistent with the person's underemployment.

In 2015, 2.6 percent of respondents were identified as underemployed due to mismatch of skills. If a respondent is determined to be underemployed due to mismatch of skills for more than one of the four previously stated reasons, that individual is only counted once.

Over half (52.8%) of those who are considered to be underemployed due to mismatch of skills in the State are female. The education level obtained compared to occupation previously held provides the greatest discrepancy when looking at mismatch of skills. Nearly four-fifths (78.3%) have some education beyond high school: 1.9 are trade certified, 4.7 percent have vocational training, 14.2 have an associate degree, 28.3 percent have an undergraduate degree and 15.1 percent have a postgraduate/professional degree. They are primarily interested in employment opportunities within the professional, paraprofessional & technical (43.1%); clerical (16.7%); production, construction & material handling (13.9%); and managerial (11.1%); and service (11.1%) occupational categories.

UNDEREMPLOYED DUE TO LOW INCOME

A total of 4.2 percent of respondents answering the household income question fall below the 2015 federal poverty thresholds based on their household income and number of members living in the household (i.e., based on a family of four, the annual household income guideline is $24,250). However, only 0.5 percent of respondents are considered underemployed due to low income within the Laborshed area. To be considered underemployed due to low income, in addition to their household income falling below the poverty level, the respondent must be employed, likely to change employment and be working 35 or more hours per week.

TOTAL ESTIMATED UNDEREMPLOYED

All three measures of underemployment result in a statewide estimated total underemployment rate of 4.3 percent (**Figure 31**). It is important to emphasize that these underemployment percentages are only estimates; however, IWD has filtered the data to eliminate double counting of respondents within and between the three categories. A person underemployed due to inadequate hours, mismatch of skills and low income is only counted once.

Figure 31
Total Estimated Underemployed

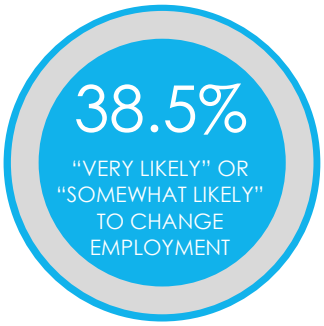
% Underemployed by Inadequate Hours	% Underemployed by Mismatched Skills	% Underemployed by Low Income	% Estimated Total Underemployment
1.8%	2.6%	0.5%	4.3%

The wage threshold (wage range required to attract 66 percent to 75 percent of applicants) for the underemployed is $13.06 to $15.00 per hour with a lowest median considered wage of $10.05 per hour. When looking for employment opportunities the underemployed primarily use the internet (80.9%); newspapers (39.3%); networking through friends, family and/or acquaintances (29.5%); Iowa*WORKS* centers (19.7%); or walk-in (door-to-door) solicitation (5.2%) as the preferred job search resources.

NOT EMPLOYED

The BLS defines unemployed persons as individuals who are currently not employed but that are actively seeking employment. Using only this definition overlooks sources of potential labor, specifically the homemakers and retirees who, though currently not employed, would consider entering or accepting the workforce if the right opportunity arose. Iowa Workforce Development uses an alternative definition of "not employed" for its Laborshed studies which includes the unemployed, homemakers and retirees as subsets of the category. The survey asks the respondents to identify whether they are unemployed, a homemaker or retired.

The inclusion of these subset groups into the analysis provides a more accurate assessment of the potential labor force in the State of Iowa. Of the respondents surveyed, 26.8 percent reported that they are "not employed". By questioning these respondents about their likeliness to accept a job offer, the survey identified 38.5 percent who stated they are "very likely" or "somewhat likely" to accept employment.



Each of the "not employed" subsets (the unemployed, homemakers and the retired) has their own unique characteristics that define their contribution to the State. Recognizing and understanding these factors will aid in efforts to target and tap into this often unrecognized and underutilized labor resource. The following sections provide a profile of the unemployed, homemakers and retired respondents.

UNEMPLOYED LIKELY TO ACCEPT EMPLOYMENT

Of those who responded as unemployed, 63.7 percent are "very likely" or "somewhat likely" to accept employment if the right opportunity arose.

DEMOGRAPHICS OF THE UNEMPLOYED

The average age of this group is 46 years old. The unemployed respondents are distributed among all of the age range groups, 18 to 24 (12.1%), 25 to 34 (8.5%), 35 to 44 (13.0%), 45 to 54 (30.0%) and 55 to 64 (36.4%). The gender breakdown of those unemployed is 60.7 percent male and 39.3 percent female.

EDUCATION & TRAINING

Nearly three-fifths (56.7%) of the unemployed respondents in the State of Iowa have some post high school education. **Figure 32** breaks down these respondents' education/training by degree level.

Nearly one-third (30.4%) of those who are unemployed and likely to accept employment feel they need additional training/education in order to make a successful transition back into the workforce.

Figure 32
Education Level

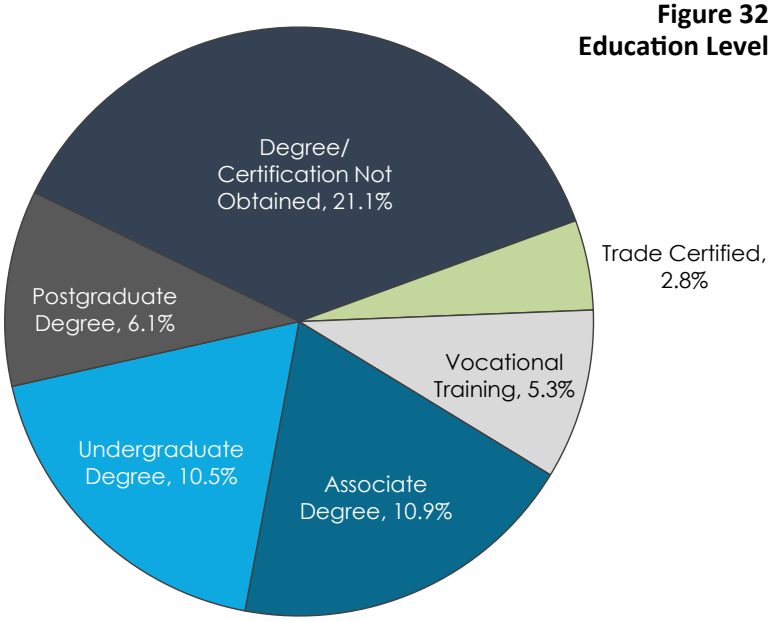


Figure 33
Desired Additional Training

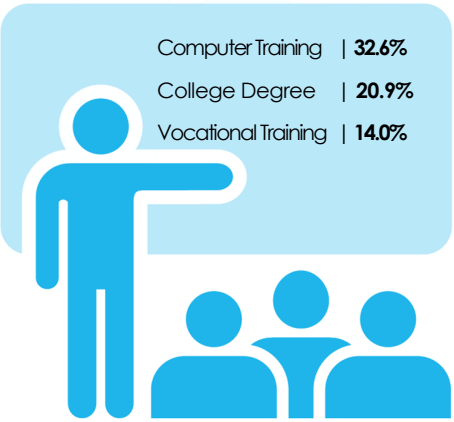


Figure 33 shows the primary types of training the unemployed would like to receive. Disability issues (44.7%), financing (29.8%), elder care issues (8.5%) and lack of time (8.5%) are the main obstacles preventing them from pursuing additional education/training.

WORK EXPERIENCE & ENVIRONMENT

Over three-fifths (61.7%) of the respondents became unemployed within the last year. Among all of the unemployed, the majority (66.4%) held full-time positions, while 15.9 percent held part-time positions in their previous employment, 14.7 percent were temporarily/seasonally employed and 3.0 percent were self-employed. These individuals have diverse work experiences. The majority held positions within the production, construction & material handling (40.2%); service (16.7%); clerical (13.2%); or professional, paraprofessional & technical (12.0%) occupational categories.

A variety of explanations were given as to why the respondents are unemployed at this time. The most frequently mentioned responses are shown in **Figure 34.**

Figure 34
Reasons for Being Unemployed

	% of Unemployed
Employer Layoff, Downsizing, Relocation or Closing	22.9%
Disability Issues	19.9%
Health Reasons	13.6%
Lack of Employment Opportunities	9.7%
Terminated by Employer	9.3%
Continue/Further Education	7.2%
Family Reasons	6.8%
Temporary/Seasonal Employment	5.1%
Moved Out of Area	3.0%
Personality Conflicts with Employer/Co-workers	3.0%
Quit Previous Employment	3.0%
Contract Concluded	2.5%
Criminal Record	0.8%
Lack of Education/Training	0.4%
Transportation Issues	0.4%

Nearly half (45.3%) of the respondents who are unemployed are seeking/have sought services to gain employment. Of those, the majority (80.2%) are utilizing Iowa*WORKS* centers to assist in seeking offers and plan to seek jobs within the production, construction & material handling (31.8%); clerical (22.5%); professional, paraprofessional & technical (20.8%); service (14.5%); sales (4.0%); managerial (3.5%); and agricultural (2.9%) occupational categories.

Unemployed respondents are willing to accommodate a variety of work environments. Nearly three-fourths (74.8%) of the respondents would prefer employment opportunities that provide job team work environments; 74.1 percent of the respondents expressed an interest in cross-training; and 53.0 percent would be interested in job sharing positions - two people sharing one full-time position. Over half (53.4%) of the unemployed expressed an interest in working varying work schedules (combinations of 2nd, 3rd or split shifts). Temporary employment opportunities would interest 70.0 percent of those who are unemployed, while seasonal employment would be a consideration for 67.2 percent of the unemployed looking to accept employment.

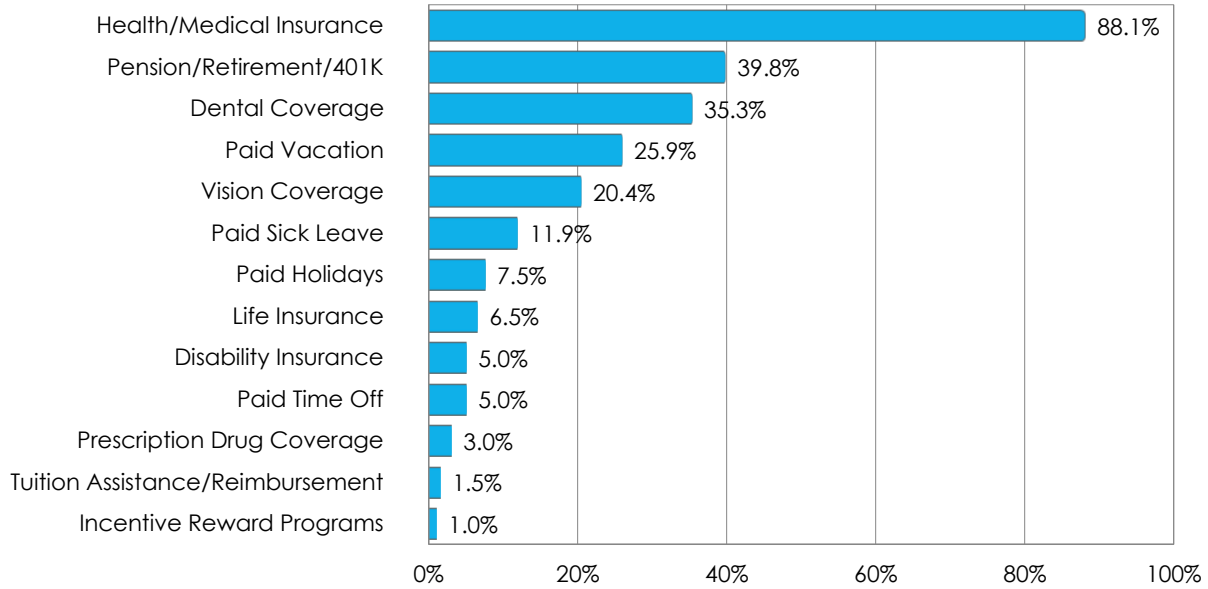
Over one-fourth (28.5%) of those who are unemployed likely to accept employment would consider starting their own business. The businesses they are primarily interested in starting include personal services (19.3%), retail (15.8%), restaurant (14.0%) and construction/handyman (12.3%). Access to start-up funds is the primary obstacle preventing them from pursuing their entrepreneurial venture. Keep in mind that not all of those who stated they had an interest will actually pursue an entrepreneurial venture. What this does show is that a certain level of entrepreneurial ambition is present within this group.

WAGES & BENEFITS

Wage levels, hours available and employee benefits are important factors for unemployed individuals. The estimated wage threshold for the unemployed likely to accept employment is $13.00 to $15.00 per hour. This threshold illustrates the wage range required to attract 66 to 75 percent of applicants. The lowest median hourly wage that unemployed respondents are willing to accept is $10.00 per hour. At their prior employment, the unemployed received a median hourly wage of $11.88 per hour.

In addition to salary/wages and hours, some of the unemployed could be influenced by certain benefits. Those benefits most frequently mentioned are identified in **Figure 35**.

Figure 35
Desired Benefits

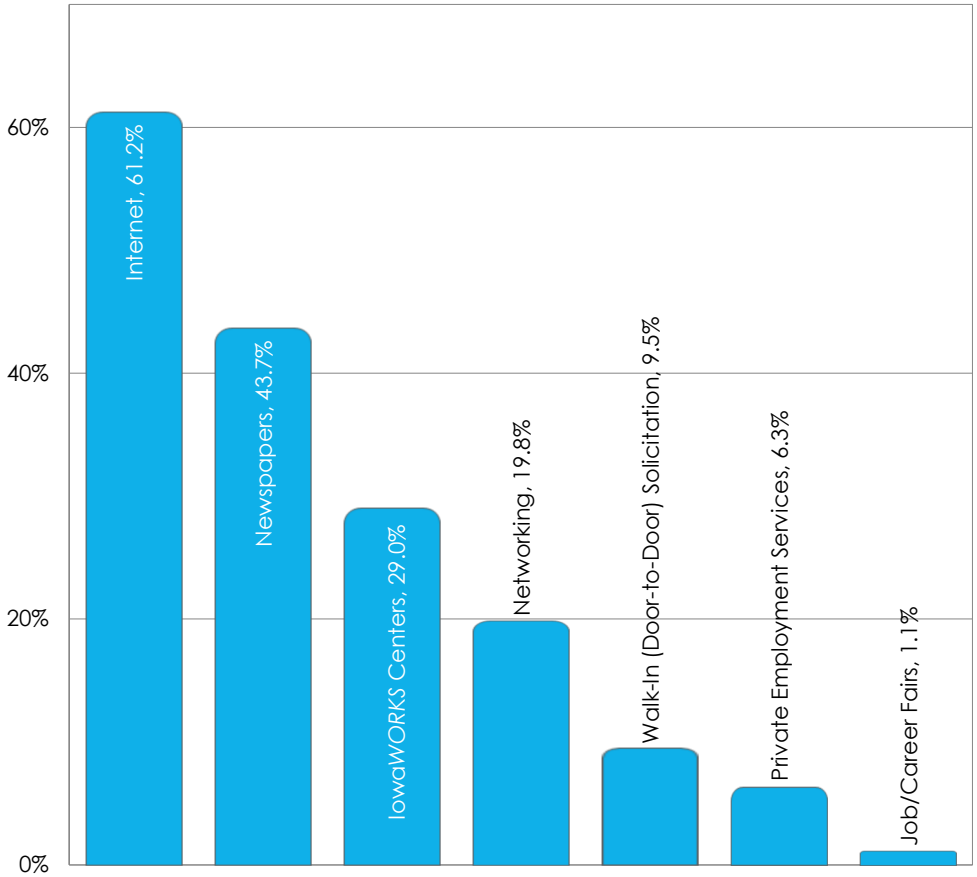


Responses equating to less than one percent are not reported.

JOB SEARCH RESOURCES

The most frequently identified job search resources used by the unemployed and likely to accept employment are shown in **Figure 36**. Top internet sites used for job searches include: www.iowajobs.org, www.indeed.com, www.careerbuilder.com, www.monster.com and www.craigslist.org. Top newspaper used is *The Des Moines Register.*

Figure 36
Job Search Resources Used



Responses equating to less than one percent are not reported.

COMMUTING

Overall, respondents across the State report they are willing to commute an average of 23 miles one-way for employment opportunities. It is important to keep in mind that when analysis is performed for specific Laborshed nodes the average number of miles individuals are currently and/or are willing to commute can fluctuate significantly.

HOMEMAKERS LIKELY TO ACCEPT EMPLOYMENT

Of those who identified themselves as a homemaker, 36.2 percent are "very or somewhat likely" to accept employment if given the right opportunity. This group may represent a quality source of potential available labor in the State for certain businesses looking to fill non-traditional work arrangements.

DEMOGRAPHICS OF HOMEMAKERS

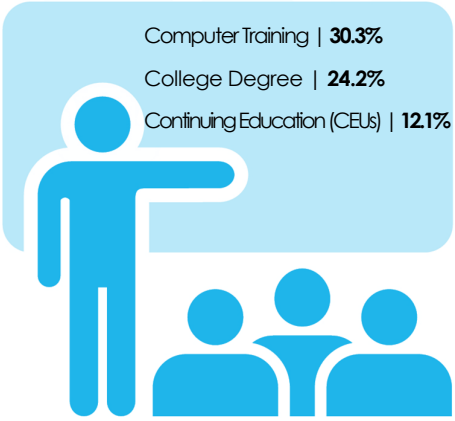
The average age of this group is 45 years old. Homemaker respondents are distributed among all of the age range groups, 18 to 24 (7.8%), 25 to 34 (9.0%), 35 to 44 (24.7%), 45 to 54 (31.5%) and 55 to 64 (27.0%). The gender breakdown of those within this group is 87.6 percent female and 12.4 percent male.

EDUCATION & TRAINING

Over two-thirds (70.8%) of homemaker respondents in the State have some post high school education: 2.2 percent are trade certified, 1.1 percent have vocational training, 18.0 percent have an associate degree, 19.1 percent have an undergraduate degree and 11.2 percent have a postgraduate/professional degree.

Nearly one-third (31.5%) of those who are homemakers and likely to accept employment feel they need additional training/education in order to make a successful transition back into the workforce. **Figure 37** shows the primary types of training they would like to receive.

Figure 37

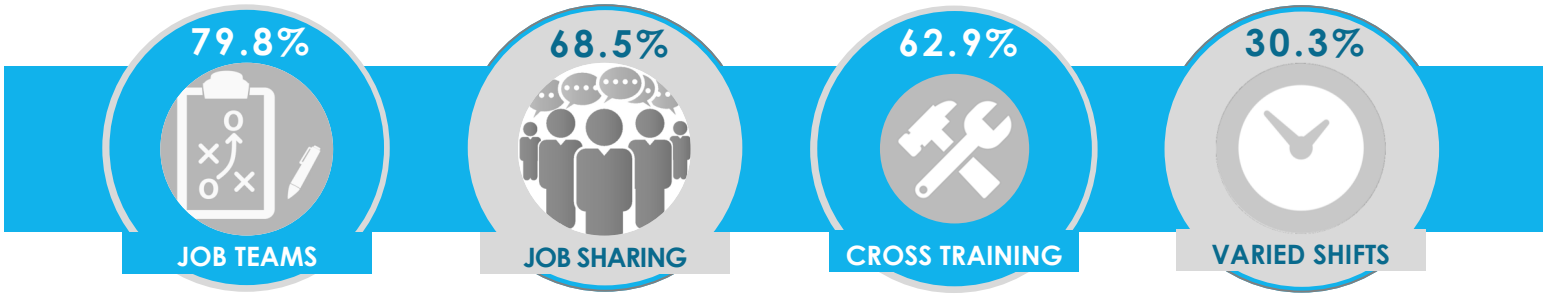


WORK EXPERIENCE & ENVIRONMENT

Over one-fourth (26.9%) of the respondents became a homemaker within the last year. Among all of the homemakers, the majority (62.8%) held full-time positions, 26.7 percent held part-time positions, 7.0 percent held temporary/seasonal positions in their previous employment and 3.5 percent were self-employed.

These individuals have diverse work experiences; the majority held positions within the clerical (29.1%); professional, paraprofessional & technical (20.9%); service (19.8%); sales (11.6%); production, construction & material handling (11.6%); managerial (5.8%) or agricultural (1.2%) occupational categories. Homemakers interested in entering/returning to the workforce plan to seek jobs primarily within the professional, paraprofessional & technical (30.6%); clerical (17.7%); service (17.7%); sales (14.5%) and production, construction & material handling (11.3%) occupational categories.

Homemakers are willing to accommodate a variety of work environments. Most (79.8%) of the respondents would prefer employment opportunities that provide job team work environments; 68.5 percent of the respondents expressed an interest in job sharing positions - two people sharing one full-time position; and 62.9 percent would be interested in cross-training. Nearly one-third (30.3%) of homemakers expressed an interest in working varying work schedules (combinations of 2nd, 3rd or split shifts). Seasonal employment opportunities would interest 71.9 percent of respondents and 69.7 percent would consider temporary employment.

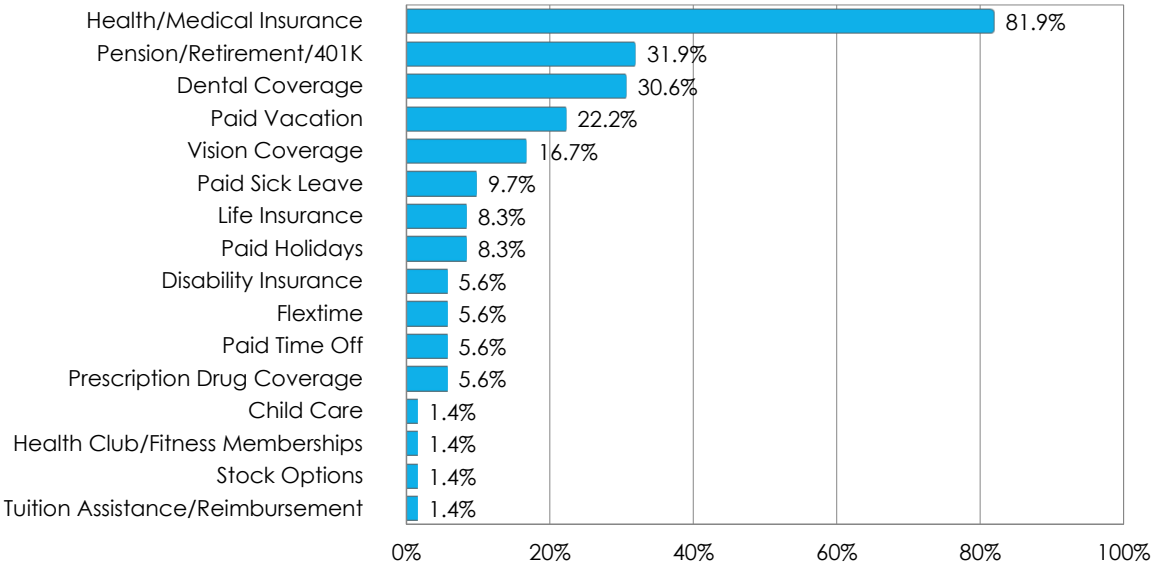


Nearly one-fifth (15.2%) of those who are homemakers, likely to accept employment, would consider starting their own business. The businesses they are primarily interested in starting include retail (24.0%), personal services (20.0%) and restaurant (16.0%). Access to start-up funds and development of a business plan are the primary obstacles preventing them from pursuing their entrepreneurial venture.

WAGES & BENEFITS

The estimated wage threshold for homemakers likely to accept employment is $11.91 to $12.00 per hour. This threshold shows the wage range required to attract 66 to 75 percent of applicants. The lowest median hourly wage that homemaker respondents are willing to accept is $10.00 per hour. At their prior employment, this group received a median hourly wage of $10.36 per hour.

Figure 38
Desired Benefits



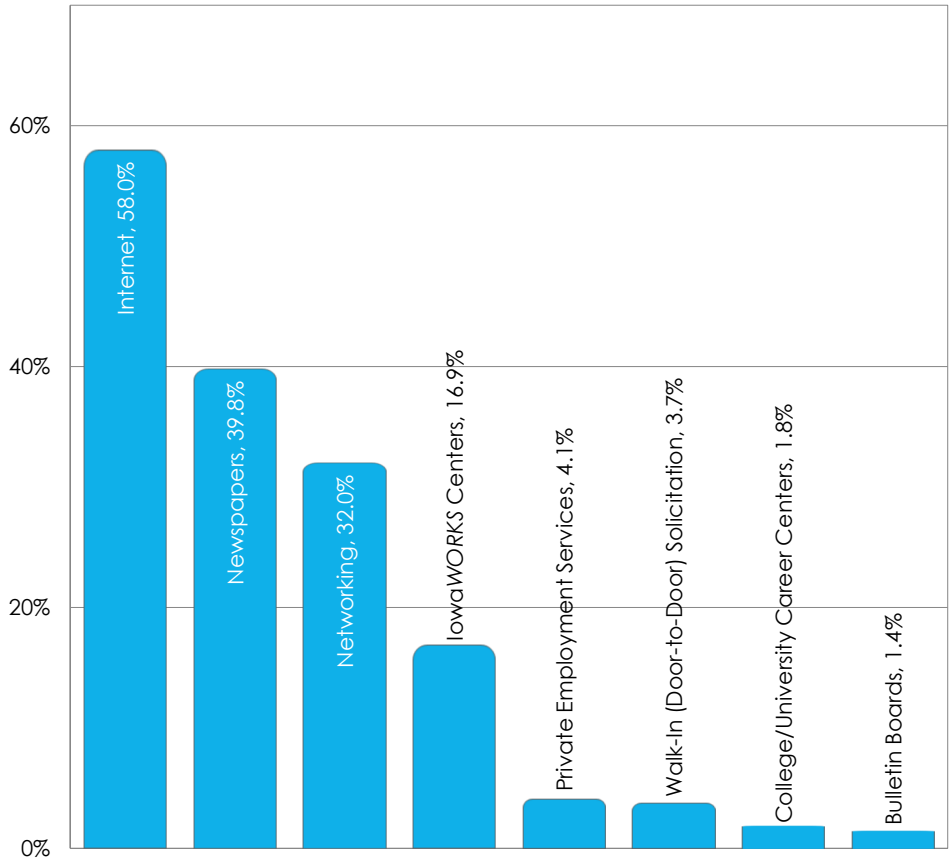
In addition to salary/wages and hours, some homemakers would be influenced by certain benefits. Those benefits most frequently mentioned are identified in **Figure 38**.

In some situations, benefits offered will play a deciding factor in whether homemakers accept a position. One such example would be companies that offer cost sharing of medical insurance benefits. Nearly three-fifths (58.9%) of those seeking to return to the workforce would prefer employment offers that include medical insurance where the employer and employee share the cost of the premiums.

JOB SEARCH RESOURCES

The most frequently identified job search resources used by homemakers that are likely to accept employment are shown in **Figure 39**.

Figure 39
Job Search Resources Used



Responses equating to less than one percent are not reported.

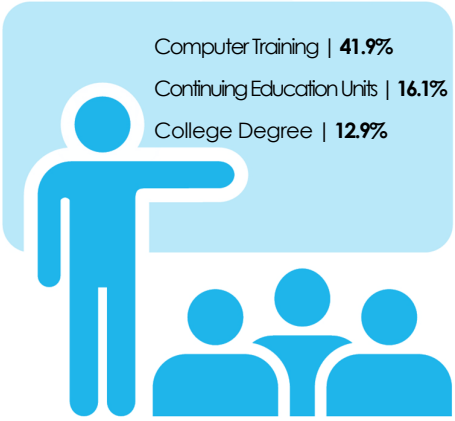
RETIRED LIKELY TO ACCEPT EMPLOYMENT

Retired individuals (18-64 years of age) represent an underutilized and knowledgeable pool of workers. In the State, 18.2 percent of respondents that stated they were retired are likely to accept employment in some capacity.

DEMOGRAPHICS OF THE RETIRED

The average age of this group is 60 years old. The retired respondents are distributed between three age range groups, 35 to 44 (1.3%), 45 to 54 (8.5%) and 55 to 64 (90.2%). The gender breakdown of retirees is 51.8 percent male and 48.2 percent female.

Figure 40
Desired Additional Training



EDUCATION & TRAINING

Nearly two-thirds (65.1%) of the retired respondents in the State have some post high school education: 1.2 percent are trade certified, 4.8 percent have vocational training, 8.4 percent have an associate degree, 21.7 percent have an undergraduate degree and 9.6 percent have a postgraduate/professional degree.

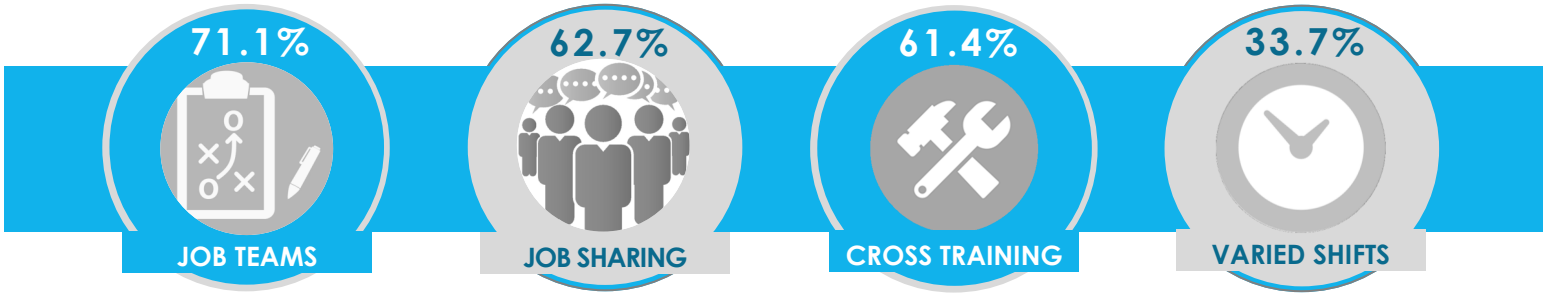
Nearly two-fifths (36.1%) of those who are retired and likely to accept employment feel they need additional training/education in order to make a successful transition back into the workforce. **Figure 40** shows the primary types of training they would like to receive.

WORK EXPERIENCE & ENVIRONMENT

Over one-fourth (27.2%) of respondents retired within the last year. Among all retirees, the majority (78.3%) held full-time positions, 15.7 percent held part-time positions in their previous employment and 3.6 percent were self-employed. These individuals have diverse work experiences; the majority held positions within the production, construction & material handling (33.3%); professional, paraprofessional & technical (23.5%); clerical (14.8%); service (12.3%); managerial (7.4%); sales(7.4%); or agricultural (1.3%) occupational categories.

Retired respondents interested in entering/returning to the workforce plan to seek jobs within the professional, paraprofessional & technical (33.3%); clerical (20.4%); production, construction & material handling (20.4%); service (9.3%); agricultural (7.4%); sales (5.6%); and managerial (3.6%) occupational categories.

Retired respondents are willing to accommodate a variety of work environments. Most (71.1%) of the respondents would prefer employment opportunities in job team work environments; 62.7 percent of the respondents expressed an interest in job sharing positions - two people sharing one full-time position; and 61.4 percent would be interested in employment opportunities that provide cross-training. Over one-third (33.7%) of the retired expressed an interest in working a varying work schedules (combinations of 2nd, 3rd or split shifts). Temporary employment opportunities would be a consideration for 77.1 percent of the retired, while seasonal employment would be a consideration for 69.9 percent of the retired looking to accept employment.

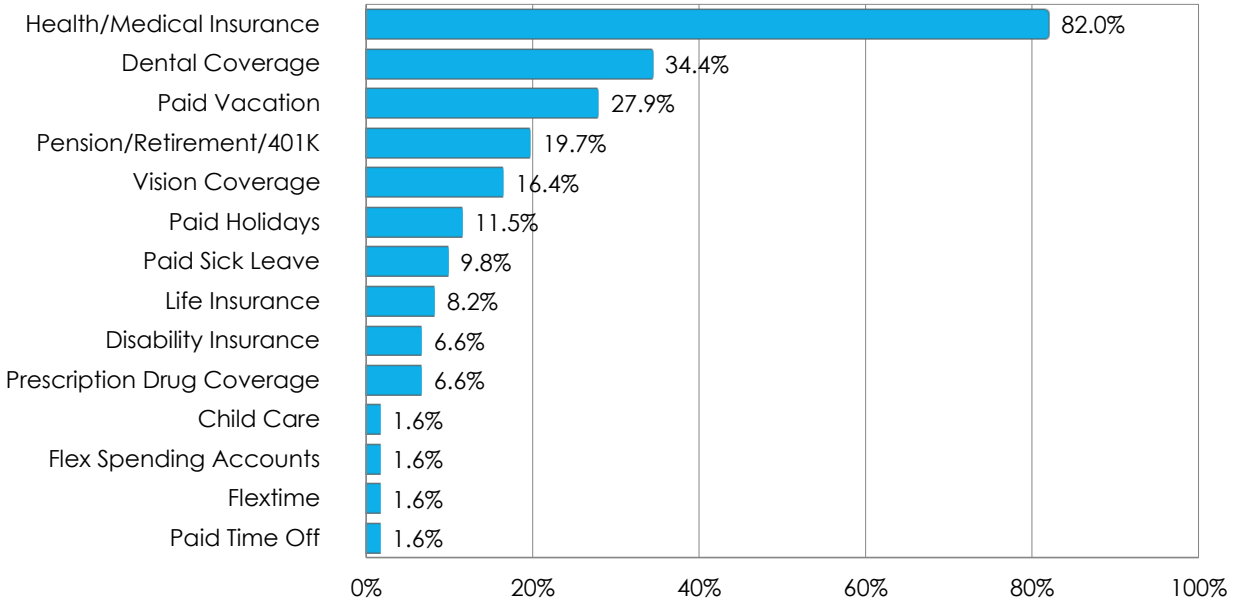


WAGES & BENEFITS

The estimated wage threshold for the retired likely to accept employment is $15.00 per hour. This threshold illustrates the wage required to attract 66 to 75 percent of applicants. The lowest median hourly wage that retired respondents are willing to accept is $12.00 per hour. At their prior employment, retirees received a median hourly wage of $14.00 per hour.

In addition to salary/wages and hours, some retirees would be influenced by benefits when considering an employment offer. Those benefits most frequently mentioned are identified in **Figure 41**. In some situations, benefits offered play a deciding factor in whether the retired accept a position. One such example would be companies that offer cost sharing of medical insurance benefits. Over two-thirds (69.4%) of those seeking to return to the workforce would prefer employment offers that include medical insurance where the employer and employee share the cost of the premiums.

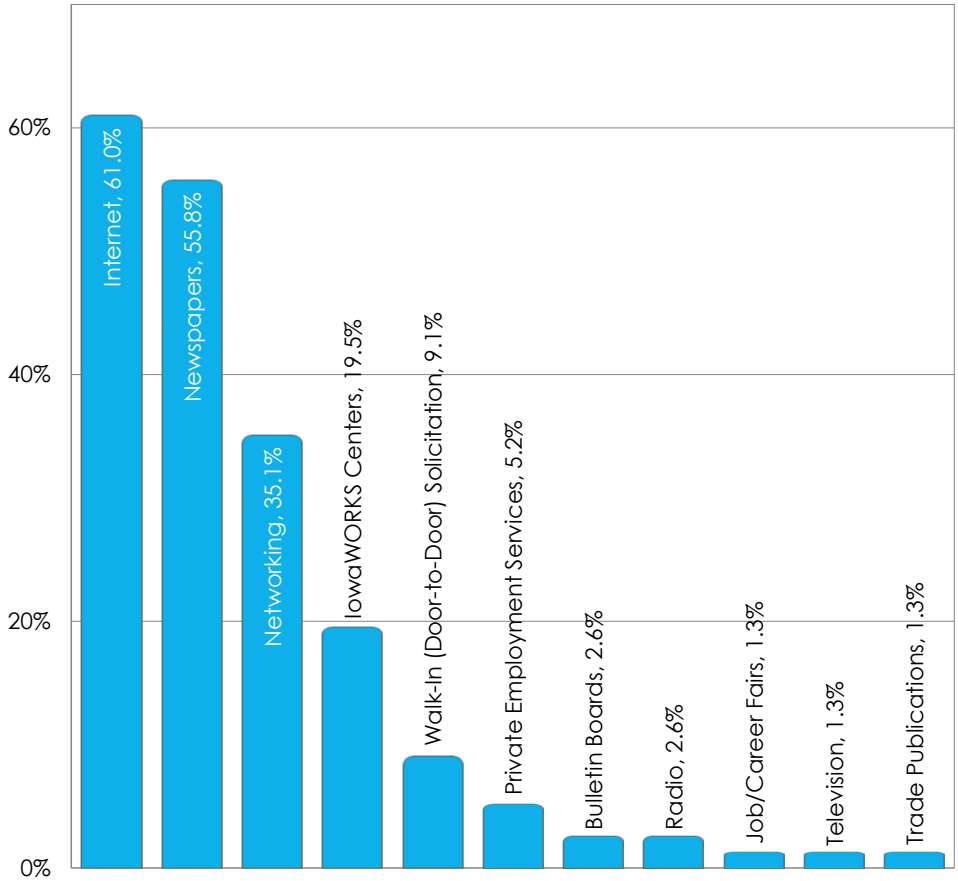
Figure 41
Desired Benefits



JOB SEARCH RESOURCES

The most frequently identified job search resources used by retiree that are likely to accept employment are shown in **Figure 42**.

Figure 42
Job Search Resources Used



TOP INDUSTRIES

WHOLESALE & RETAIL TRADE

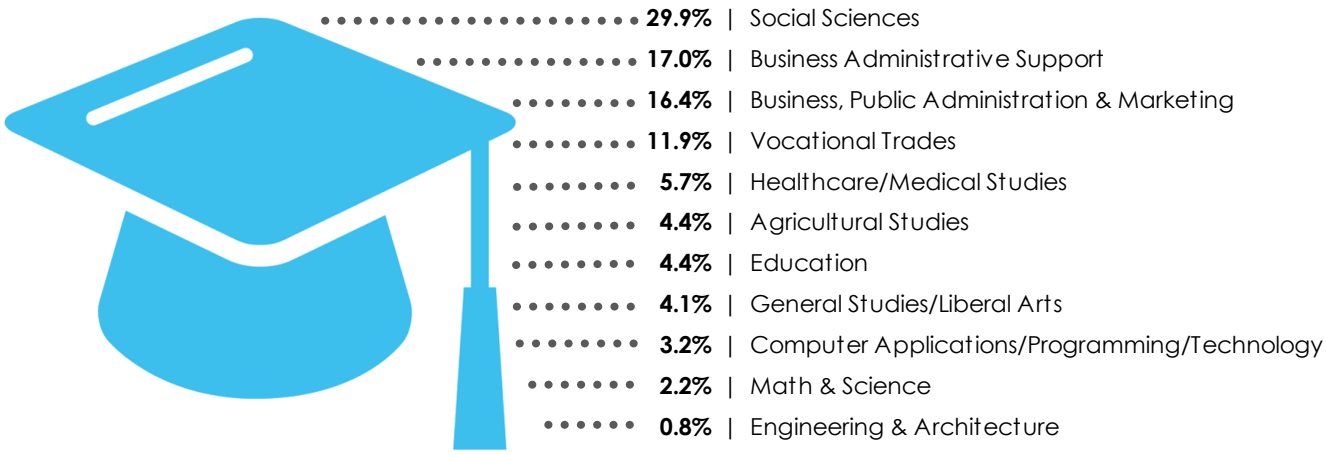
Over one-tenth (14.4%) of respondents across the State indicated that they were working in the wholesale and retail trade industry. Among all respondents that have current or previous experience within the wholesale and retail trade industry, over two-thirds (68.4%) are employed and of those nearly one-third (33.2%) are likely to change employment if presented with the right opportunity. Nearly one-fifth (15.7%) are unemployed and 54.7 percent of that group are likely to accept employment. Nearly one-tenth (7.5%) are homemakers and 36.6 percent of those indicated a likeliness to accept employment. Nearly one-tenth (8.4%) identified themselves as retirees with 15.2 percent of them expressing interest in accepting employment.

Of those currently employed in the wholesale and retail trade industry, 11.8 percent are working two or more jobs. Those working multiple jobs hold one job in the wholesale and retail trade industry and may hold another in a different industry or similar occupation to supplement income or gain experience for future career options. A multitude of reasons are given for changing/leaving jobs in the past year. Those most often cited include: employer layoff/downsizing/relocation (19.1%), better wages (13.5%), career change (12.4%), personality conflicts with previous employer/co-workers (11.2%), family reasons (9.0%) and better hours (7.9%).

EDUCATION

Over three-fifths (62.0%) of those employed or previously employed within the wholesale and retail trade industry possess some level of education/training beyond high school: 3.3 percent are trade certified, 3.8 percent received vocational training, 14.1 percent have obtained an associate degree, 18.8 percent have an undergraduate degree and 3.3 percent have a postgraduate/professional degree. **Figure 43** provides an overview of the educational fields of study of those likely to change/accept employment within the wholesale and retail trade industry.

Figure 43
Educational Fields of Study - Wholesale & Retail Trade



Over one-third (34.3%) believe they require additional training in order to prepare themselves for future positions or to be promoted, with 25.6 percent likely to pursue their educational needs in their specified areas of study within the next year. Those who plan to pursue additional training/education will do so by attending computer training (32.7%), starting/continuing college degree programs (19.6%), participating in on-the-job training programs (11.1%), obtaining continuing education/certification "CEU's" (9.0%), obtaining vocational training (7.5%), attaining trade certification (2.5%) or attending job preparedness courses (1.0%). Disability issues (32.7%), financing (22.2%), age (15.0%) and lack of time (work schedule conflicts) (14.4%) are the primary obstacles preventing them from obtaining their educational goals.

OCCUPATIONS & EXPERIENCE

Iowa Workforce Development recodes job titles into groupings based on the SOC system. **Figure 44** shows the percent within the State of each occupational classification grouping for those employed in the wholesale and retail trade industry.

Figure 44
Occupational Categories - Wholesale & Retail Trade

Occupation	% Employed	Occupation	% Employed
Sales & Related	32.5%	Life, Physical & Social Science	0.9%
Office & Administrative Support	13.1%	Computer & Mathematical Science	0.7%
Management	12.7%	Construction & Extraction	0.7%
Food Preparation & Serving Related	10.1%	Personal Care & Service	0.7%
Transportation & Material Moving	7.6%	Farming, Fishing & Forestry	0.6%
Production	5.9%	Education, Training & Library	0.4%
Installation, Maintenance & Repair	3.9%	Healthcare Support	0.4%
Business & Financial Operations	3.0%	Community & Social Services	0.2%
Building/Grounds Cleaning & Maintenance	2.0%	Legal	0.2%
Healthcare Practitioner & Technical	2.0%	Protective Service	0.2%
Architecture & Engineering	1.3%	Military Specific	0.0%
Arts, Design, Entertainment, Sports & Related	0.9%	**Total**	**100%**

Occupations Continued in Next Column

These occupational categories encompass a wide variety of individual occupations in which workers in the area are employed. Such occupations include, but are not limited to, buyer, cashier, driver, pharmacist, purchasing agent, salesperson and stock clerk.

WAGE & BENEFIT REQUIREMENTS

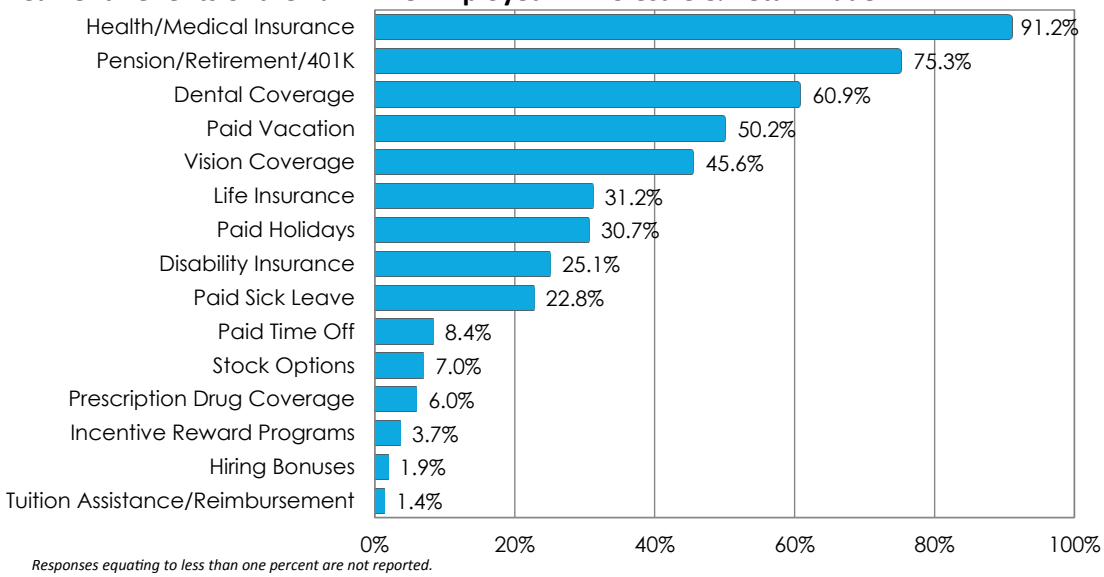
Over two-thirds (68.0%) of those employed in this industry are paid an hourly wage, while 23.5 percent earn an annual salary. **Figure 45** provides a comparison of the current hourly wages, annual salaries and the wage threshold based on all of those in the industry, those likely to change/accept employment and those who are unlikely to change. A wage threshold represents the wage level at which employers should have success attracting 66 to 75 percent of the applicants to new positions. These thresholds can be viewed as guides in assessing wage rates. The actual wage levels required by prospective workers will vary between individuals, occupational categories and economic cycles. This information can assist businesses in their retention efforts.

Figure 45
Comparison of Wages & Salaries - Wholesale & Retail Trade

	Entire Industry	Those Likely to Change	Those Unlikey to Change
Current Median Wage (per hour)	$12.00	$11.27	$13.85
Current Median Salary (per year)	$53,000	$40,000	$60,000

	Entire Industry	Those Likely to Change	Those Unlikely to Change
Wage Threshold	$15.00 - $16.25	$14.00 - $15.00	$15.82 - $17.48
Salary Threshold	$75,000 - $92,000	$60,000 - $68,000	$81,200 - $100,000

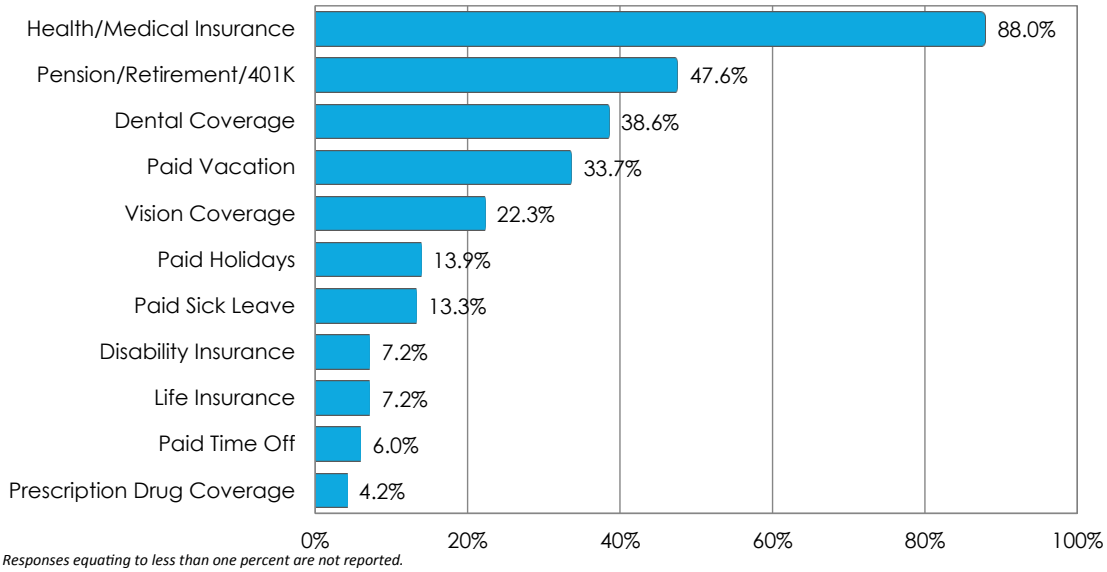
Figure 46
Current Benefits of the Full-Time Employed - Wholesale & Retail Trade



Responses equating to less than one percent are not reported.

The employers in the wholesale and retail trade industry offer a variety of benefit packages in addition to wages. Current benefits of those employed full-time are shown in **Figure 46**. Over four-fifths (81.7%) of respondents state they are currently sharing the cost of premiums with their employer. However, 10.5 percent indicate their employer pays the entire cost of insurance premiums.

Figure 47
Desired Benefits - Wholesale & Retail Trade



Responses equating to less than one percent are not reported.

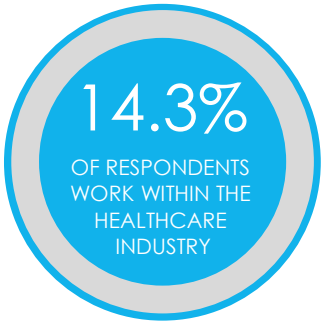
Those looking to change/accept employment in the industry could be influenced by certain benefits. Those benefits most frequently mentioned are identified in **Figure 47**. Over three-fifths (63.9%) would take cost sharing of health/ medical premiums into consideration when contemplating a new employment opportunity and one-third (33.3%) would prefer an employment offer where the employer pays all the costs associated with health/medical insurance premiums.

JOB SEARCH RESOURCES

Employers who have a clear understanding of the job search resources used by workers in the wholesale and retail trade industry will improve their ability to maximize their effectiveness and efficiency in attracting qualified applicants. Understanding and utilizing traditional and non-traditional advertising outlets will provide employers a more focused and effective recruitment tool. Residents living in the State are undoubtedly exposed to numerous sources by which employers communicate job openings. Therefore, it is important to understand what sources potential workers rely on when looking for jobs in the education industry.

The most frequently identified job search resources are the internet (67.3%); newspapers (37.5%); networking through friends, family & acquaintances (25.1%); and Iowa*WORKS* centers (21.0%). Walk-in (door-to-door) solicitation (5.7%); private employment services (4.9%); radio/television (1.8%); job/career fairs (1.6%); trade publications (1.2%); college/university career centers (0.8%); bulletin boards (0.2%); and vocational rehabilitation services (0.2%) were also cited, but less frequently.

Nearly one-fifth (14.3%) of respondents stated that they were working in the healthcare and social services industry, which represents the second largest reported industry in the State. Among all respondents that have current or previous experience within the healthcare and social services industry, over three-fourths (76.5%) are employed and of those over one-fourth (27.8%) of them are likely to change employment if presented with the right opportunity. Nearly one-tenth (7.8%) are unemployed and of that group 55.3 percent are likely to accept employment. Less than one-tenth (5.9%) are classified as homemakers and 27.6 percent of those would have an interest in accepting employment. Retirees account for 9.8 percent with 20.8 percent of them likely to accept employment provided the right opportunity presented itself.

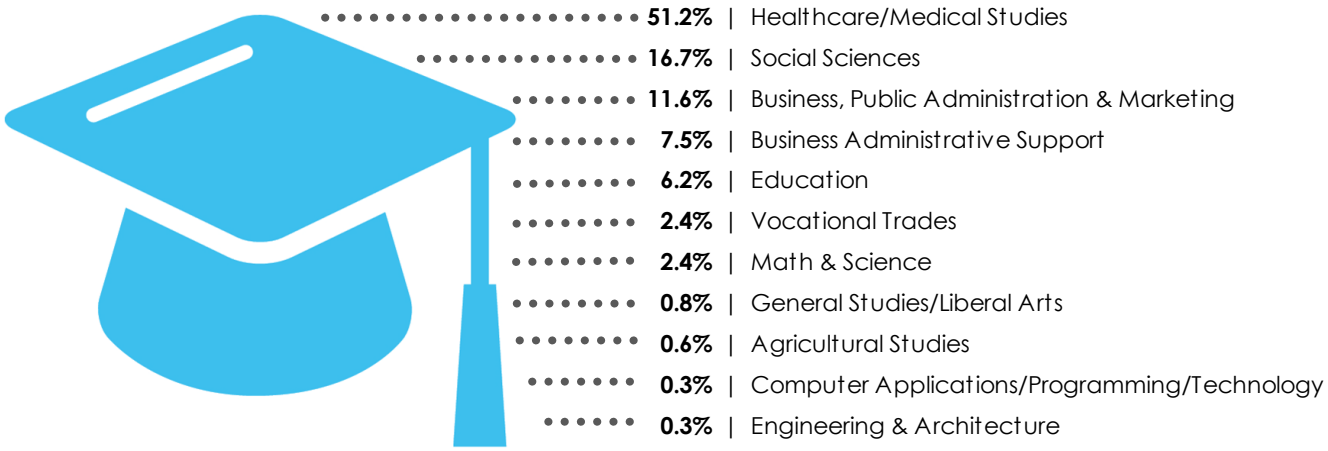


Of those currently employed in the healthcare and social services industry, 16.7 percent are employed in two or more jobs. Those working multiple jobs currently hold one job in the healthcare and social services industry and may hold another in a different industry or similar occupation to supplement income or gain experience for future career options. A multitude of reasons are given for changing/leaving jobs in the past year, but the primary reasons are better hours (18.5%), better wages (17.4%), employer layoff/downsizing/relocation (15.2%), career change (10.9%) and working conditions (10.9%).

EDUCATION

Slightly over four-fifths (80.3%) of those employed or previously employed within the healthcare and social services industry possess some level of education/training beyond high school: 3.3 percent are trade certified, 4.1 percent have completed vocational training, 19.9 percent have an associate degree, 24.2 percent have an undergraduate degree and 15.2 percent have a postgraduate/professional degree. **Figure 48** provides an overview of the educational fields of study of those within the industry.

Figure 48
Educational Fields of Study - Healthcare & Social Services



Nearly two-fifths (38.5%) believe they require additional training in order to prepare themselves for future positions or to be promoted, with 17.6 percent likely to pursue their educational needs in their specified areas of study within the next year. Those who plan to pursue additional training/education will do so by starting/continuing a college degree program (55.1%), attending computer training courses (14.3%), obtaining continuing education/certification "CEU's" (10.2%), participating in on-the-job training (6.6%), attending vocational courses (3.6%), attaining trade certification (2.0%), or attending job preparedness courses (1.0%). Age (25.0%), financing (25.0%), disability issues (20.7%) and lack of time (scheduling conflicts) (17.1%) are the primary obstacles preventing them from obtaining their educational goals.

OCCUPATIONS & EXPERIENCE

Iowa Workforce Development recodes job titles into groupings based on the SOC system. **Figure 49** shows the percent within the State of each occupational classification grouping for those employed in the healthcare and social services industry.

Figure 49
Occupational Categories - Healthcare & Social Services

Occupation	% Employed	Occupation	% Employed
Healthcare Practitioner & Technical	37.4%	Arts, Design, Entertainment, Sports & Related	0.8%
Healthcare Support	13.0%	Education, Training & Library	0.8%
Office & Administrative Support	10.9%	Life, Physical & Social Science	0.8%
Management	10.7%	Sales & Related	0.8%
Personal Care & Service	7.8%	Legal	0.4%
Community & Social Services	4.3%	Architecture & Engineering	0.2%
Building/Grounds Cleaning & Maintenance	3.1%	Computer & Mathematical Science	0.2%
Installation, Maintenance & Repair	2.3%	Protective Service	0.2%
Business & Financial Operations	1.9%	Construction & Extraction	0.0%
Food Preparation & Serving Related	1.4%	Farming, Fishing & Forestry	0.0%
Production	1.4%	Military Specific	0.0%
Transportation & Material Moving	1.4%	**Total**	**100%**

Occupations Continued in Next Column

These occupational categories encompass a wide variety of individual occupations in which workers in the area are employed. Such occupations include, but are not limited to, dental hygienist, dietician, housekeeper, human resources coordinator, nurse's aide/assistant, pharmacist, physical therapist, registered nurse, secretary, social worker, supervisor and veterinarian.

WAGE & BENEFIT REQUIREMENTS

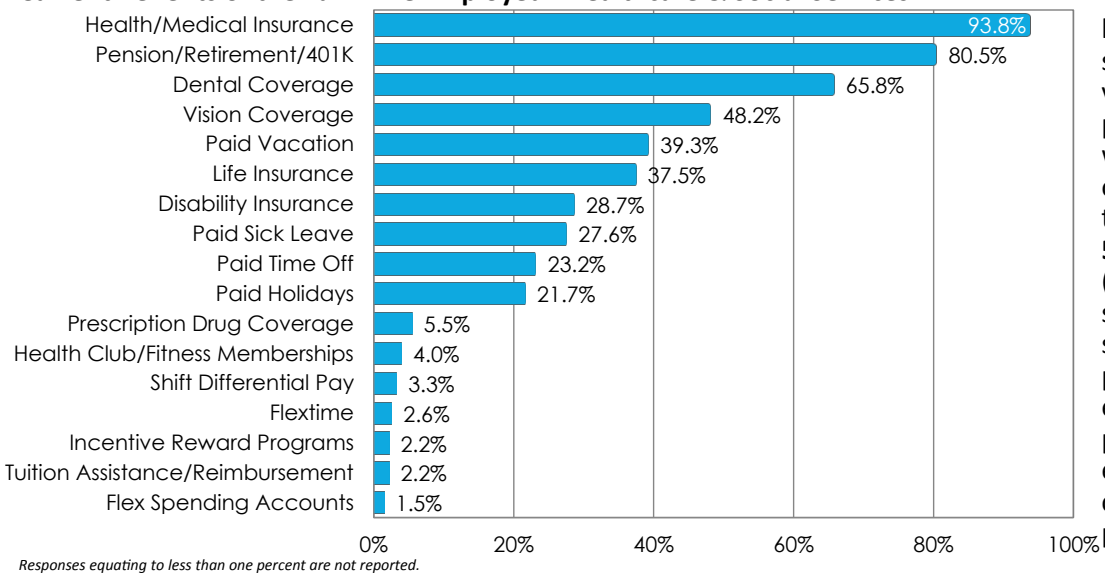
Nearly three-fourths (71.4%) of those who are experienced in the healthcare and social services industry are/were paid an hourly wage whereas 25.1 percent are/were salaried wage earners. **Figure 50** provides the current hourly wage, annual salary and the wage threshold based on all of those in the industry, those likely to change/accept employment and those who are unlikely to change within the industry. A wage threshold represents the wage level at which employers should have success attracting 66 to 75 percent of the applicants to new positions. These thresholds can be viewed as guides in assessing wage rates. The actual wage levels required by prospective workers will vary between individuals, occupational categories and economic cycles. This information can assist businesses in their retention efforts.

Figure 50
Comparison of Wages & Salaries - Healthcare & Social Services

	Entire Industry	Those Likely to Change	Those Unlikey to Change
Current Median Wage (per hour)	$17.00	$15.00	$18.00
Current Median Salary (per year)	$66,500	$45,000	$70,000

	Entire Industry	Those Likely to Change	Those Unlikely to Change
Wage Threshold	$21.13 - $25.00	$18.46 - $20.00	$24.00 - $26.52
Salary Threshold	$78,400 - $96,000	$52,200 - $71,250	$84,640 - $105,000

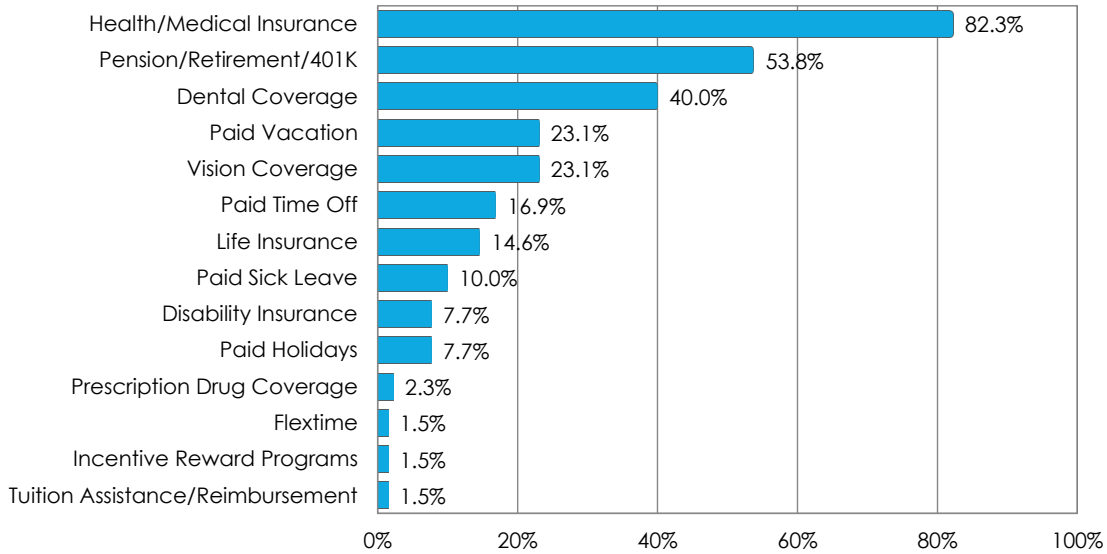
Figure 51
Current Benefits of the Full-Time Employed - Healthcare & Social Services



Responses equating to less than one percent are not reported.

The employers in the healthcare and social services industry offer a variety of benefit packages in addition to wages. Current benefits of those employed full-time are shown in **Figure 51**. Over four-fifths (82.2%) of respondents state they are currently sharing the cost of premiums with their employer. However, 9.3 percent indicate their employer pays the entire cost of insurance premiums.

Figure 52
Desired Benefits - Healthcare & Social Services



Responses equating to less than one percent are not reported.

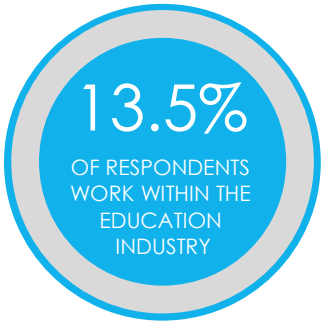
Those looking to change/accept employment in the industry could be influenced by certain benefits. Those benefits most frequently mentioned are identified in **Figure 52**. Nearly three-fifths (58.3%) would take cost sharing of health/ medical premiums into consideration when contemplating a new employment opportunity and nearly two-fifths (38.8%) would prefer an employment offer where the employer pays all the costs associated with health/medical insurance premiums.

JOB SEARCH RESOURCES

Employers who have a clear understanding of the job search resources used by workers in the healthcare and social services industry will improve their ability to maximize their effectiveness and efficiency in attracting qualified applicants. Understanding and utilizing traditional and non-traditional advertising outlets will provide employers a more focused and effective recruitment tool. Residents living in the State are undoubtedly exposed to numerous sources by which employers communicate job openings. Therefore, it is important to understand what sources potential workers rely on when looking for jobs in the education industry.

The most frequently identified job search resources are the internet (76.1%); newspapers (38.8%); networking through friends, family & acquaintances (22.6%); and Iowa*WORKS* centers (11.5%). Walk-in (door-to-door) solicitation (3.5%); private employment services (3.3%); job/career fairs (1.3%); trade publications (1.3%); vocational rehabilitation services (1.3%); bulletin boards (0.4%); college/university career centers (0.4%); and radio/television (0.4%) were also cited, but less frequently.

Overall, 13.5 percent of respondents stated that they currently work within the education industry, which represents the top reported industry in the State. Among all respondents that have current or previous experience within the education industry, over three-fourths (76.9%) are employed and of those nearly one-fifth (19.0%) are likely to change employment if presented with the right opportunity. A small segment (3.7%) are unemployed and nearly half (47.1%) of that group are likely to accept employment. Nearly one-fifth (15.1%) are classified as retired and 17.4 percent of those have an interest in accepting employment. Homemakers account for 4.4 percent with 45.0 percent of them likely to accept employment provided the right opportunity presented itself.

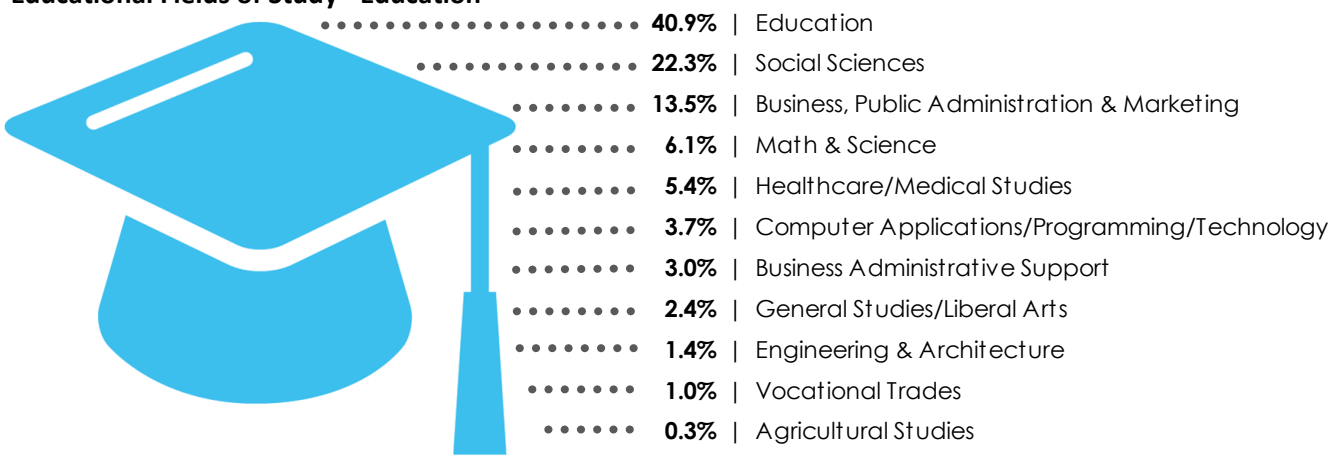


Of those currently employed in the education industry, 17.6 percent are employed in two or more jobs. Those working multiple jobs hold one job in education and may hold another in a different industry or similar occupation to supplement income or gain experience for future career options. A multitude of reasons are given for changing/leaving jobs in the past year, but the primary reasons are better wages (20.3%), employer layoff/downsizing/relocation (20.3%), career change (13.6%), family reasons (8.5%), retirement (8.5%) and temporary/seasonal employment (8.5%).

EDUCATION

Looking at the educational levels of those employed or previously employed within the education industry, 87.2 percent have some level of education beyond high school: 1.1 percent are trade certified, 6.3 percent have an associate degree, 31.8 percent have an undergraduate degree and 38.4 percent have a postgraduate/professional degree. **Figure 53** provides an overview of the educational fields of study of those likely to change/accept employment within the education industry.

Figure 53
Educational Fields of Study - Education



Over two-fifths (42.6%) believe they require additional training in order to prepare themselves for future positions or to be promoted, with 24.7 percent likely to pursue their educational needs within the next year. The primary types of desired training include: starting/continuing college degree program (50.6%), attending computer training courses (17.7%), continuing education/certification "CEU's" (12.0%), attaining trade certification (3.2%) and attending vocational training (3.2%). Age (33.0%) Financing (30.8%) and lack of time (scheduling conflicts) (25.3%) are the primary obstacles preventing them from obtaining their educational goals.

OCCUPATIONS & EXPERIENCE

Iowa Workforce Development recodes job titles into groupings based on the SOC system. **Figure 54** shows the percent within the State of each occupational classification grouping for those employed in the education industry.

Figure 54
Occupational Categories - Education

Occupation	% Employed	Occupation	% Employed
Education, Training & Library	55.6%	Personal Care & Service	1.1%
Management	10.0%	Arts, Design, Entertainment, Sports & Related	0.8%
Office & Administrative Support	9.7%	Architecture & Engineering	0.6%
Food Preparation & Serving Related	4.8%	Construction & Extraction	0.6%
Computer & Mathematical Science	3.4%	Healthcare Support	0.3%
Business & Financial Operations	2.6%	Legal	0.3%
Building/Grounds Cleaning & Maintenance	2.3%	Production	0.3%
Life, Physical & Social Science	1.7%	Protective Service	0.3%
Transportation & Material Moving	1.7%	Sales & Related	0.3%
Healthcare Practitioner & Technical	1.4%	Farming, Fishing & Forestry	0.0%
Community & Social Services	1.1%	Military Specific	0.0%
Installation, Maintenance & Repair	1.1%	**Total**	**100%**

Occupations Continued in Next Column

WAGE & BENEFIT REQUIREMENTS

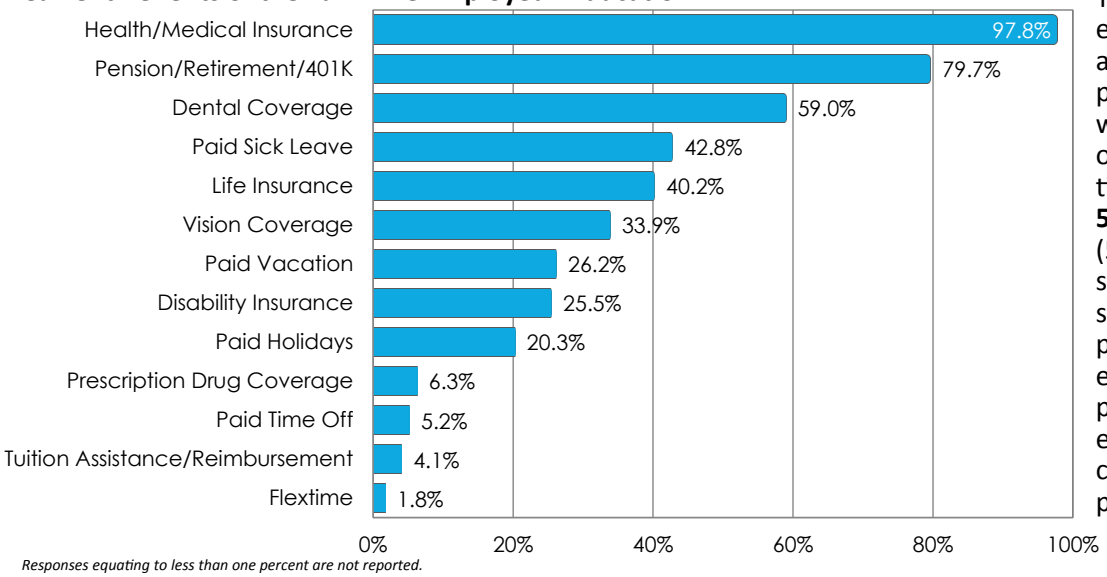
Nearly two-thirds (65.3%) of those employed in the education industry are paid an annual salary whereas 33.0 percent are hourly wage earners. **Figure 55** provides a comparison of the current hourly wages, annual salaries and the wage thresholds of those who have experience/skills in K through 12 and post-secondary education. A wage threshold represents the wage level at which employers should have success attracting 66 to 75 percent of the applicants to new positions. These thresholds can be viewed as guides in assessing wage rates. The actual wage levels required by prospective workers will vary between individuals, occupational categories and economic cycles.

Figure 55
Comparison of Wages & Salaries - Education

	Entire Industry	K thru 12	Post-Secondary
Current Median Wage (per hour)	$14.00	$13.00	$17.51
Current Median Salary (per year)	$56,000	$55,000	$63,000

	Entire Industry	K thru 12	Post-Secondary
Wage Threshold	$15.51 - $17.01	$14.12 - $15.00	$23.20 - $25.00
Salary Threshold	$65,000 - $70,000	$63,280 - $67,000	$71,920 - $85,000

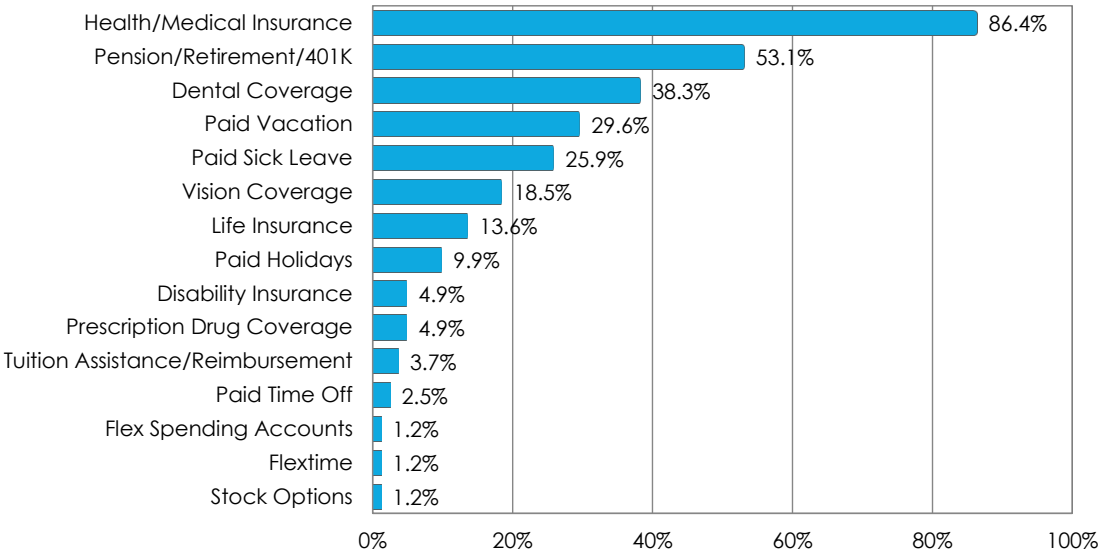
Figure 56
Current Benefits of the Full-Time Employed - Education



Responses equating to less than one percent are not reported.

The employers in the education industry offer a variety of benefit packages in addition to wages. Current benefits of those employed full-time are shown in **Figure 56**. Nearly three-fifths (57.1%) of respondents state they are currently sharing the cost of premiums with their employer. However, 37.2 percent indicate their employer pays the entire cost of insurance premiums.

Figure 57
Desired Benefits - Education



Those looking to change/accept employment in the industry could be influenced by certain benefits. Those benefits most frequently mentioned are identified in **Figure 57**. Over half (51.4%) would take cost sharing of health/medical premiums into consideration when contemplating a new employment opportunity and over two-fifths (44.3%) would prefer an employment offer where the employer pays all the costs associated with health/medical insurance premiums.

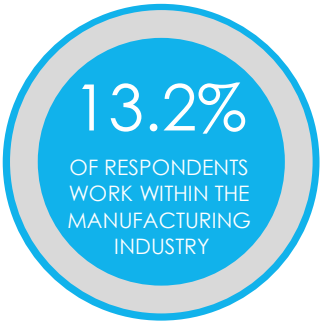
JOB SEARCH RESOURCES

Employers who have a clear understanding of the job search resources used by workers in the education industry will improve their ability to maximize their effectiveness and efficiency in attracting qualified applicants. Understanding and utilizing traditional and non-traditional advertising outlets will provide employers a more focused and effective recruitment tool. Residents living in the State are undoubtedly exposed to numerous sources by which employers communicate job openings. Therefore, it is important to understand what sources potential workers rely on when looking for jobs in the education industry.

The most frequently identified job search resources are the internet (79.9%); newspapers (40.2%); networking through friends, family & acquaintances (26.9%); and Iowa*WORKS* centers (10.0%). College/university career centers (3.7%); trade publications (3.3%); private employment services (2.3%); walk-in (door-to-door) solicitation (1.9%); bulletin boards (1.2%); radio/television (1.2%); and job/career fairs (0.5%) were also cited, but less frequently.

MANUFACTURING

The manufacturing industry makes up 13.2 percent of the State's overall industry composition. Among all respondents that have current or previous experience within the manufacturing industry, over two-thirds (69.8%) are employed and of those over one-fourth (28.0%) are likely to change employment if presented the right opportunity. Over one-tenth (12.0%) are unemployed and 72.9 percent of that group are likely to accept employment. Over one-tenth (14.0%) are retired and 17.4 percent of those would accept employment if the right opportunity became available. Homemakers account for the smallest group within this industry (4.2%) though 42.9 percent are likely to accept employment if given the right opportunity .



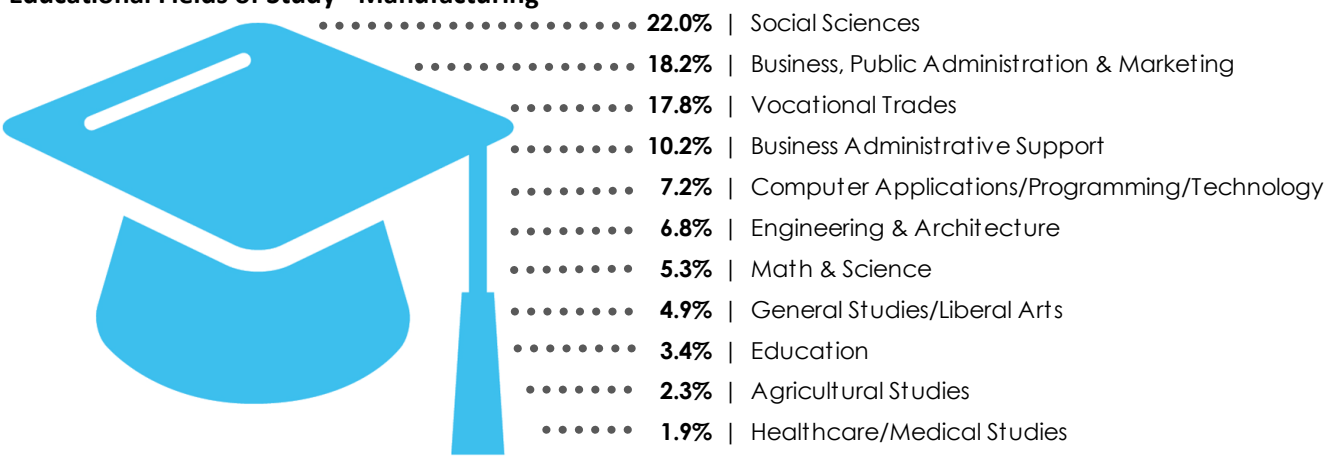
Of those currently employed in the manufacturing industry, 11.1 percent are working two or more jobs. Those working multiple jobs, currently hold one job in the manufacturing industry and may hold another in a different industry or similar occupation to supplement income or gain experience for future career options. A multitude of reasons are given for changing/leaving jobs in the past year. The most often stated include: better wages (27.7%), employer layoff/downsizing/relocation (19.1%), career change (12.8%), working conditions (12.8%) and terminated by employer (10.6%).

The manufacturing industry is divided into several manufacturing classifications. Respondents were asked to define the type of manufacturing for their current or most recent employment. The distribution of those who have experience in manufacturing fall into the following subcategories: machinery (20.1%), processing (such as food, milling, hygiene, etc.) (19.9%), metal fabrication (12.8%), computer/electronics (11.6%), chemicals (7.1%), transportation equipment (6.9%), plastics (5.7%), printing/paper (5.5%), non-metallic minerals (3.4%), other (2.8%), wood (2.8%) and furniture/related products (1.4%).

EDUCATION

Nearly three-fifths (57.8%) of those employed or previously employed within the manufacturing industry possess some level of education/training beyond high school: 2.8 percent are trade certified, 2.4 percent have vocational training, 14.0 percent have an associate degree, 17.4 percent have an undergraduate degree and 6.1 percent have a postgraduate/professional degree. **Figure 58** provides an overview of the educational fields of study of those within the industry.

Figure 58
Educational Fields of Study - Manufacturing



Nearly two-fifths (37.9%) believe they require additional training in order to prepare themselves for future positions or to be promoted, with 16.4 percent of those likely to pursue their educational needs in their specified areas of study within the next year.

Those who plan to pursue additional training/education will do so by starting/continuing a college degree program (33.2%), attending computer training courses (28.1%), attending vocational training (9.7%), participating in on-the-job training (8.7%), attaining trade certification (5.1%), obtaining continuing education/ certification "CEU's" (3.1%), attending job preparedness courses (0.5%) and earning a high school diploma/ equivalent (0.5%). Lack of time (work schedule conflicts) (27.2%), age (19.9%), disability issues (18.4%) and financing (16.2%) are the primary obstacles preventing them from obtaining their educational goals.

OCCUPATIONS & EXPERIENCE

Iowa Workforce Development recodes job titles into groupings based on the SOC system. **Figure 59** shows the percent within the State of each occupational classification grouping for those employed in the manufacturing industry.

These occupational categories encompass a wide variety of individual occupations in which workers in manufacturing are employed. Such occupations include, but are not limited to, engineer, forklift operator, machinist, marketing analyst, packager, production manager, production worker, sales representative and welder.

Figure 59
Occupational Categories - Manufacturing

Occupation	% Employed	Occupation	% Employed
Production	43.1%	Building/Grounds Cleaning & Maintenance	1.0%
Management	8.6%	Healthcare Practitioner & Technical	0.8%
Office & Administrative Support	8.2%	Education, Training & Library	0.5%
Transportation & Material Moving	8.0%	Food Preparation & Serving Related	0.5%
Installation, Maintenance & Repair	7.4%	Community & Social Services	0.0%
Architecture & Engineering	7.2%	Farming, Fishing & Forestry	0.0%
Business & Financial Operations	5.3%	Healthcare Support	0.0%
Computer & Mathematical Science	2.3%	Legal	0.0%
Sales & Related	2.1%	Military Specific	0.0%
Construction & Extraction	1.8%	Personal Care & Service	0.0%
Arts, Design, Entertainment, Sports & Related	1.6%	Protective Service	0.0%
Life, Physical & Social Science	1.6%	**Total**	**100%**

Occupations Continued in Next Column

WAGE & BENEFIT REQUIREMENTS

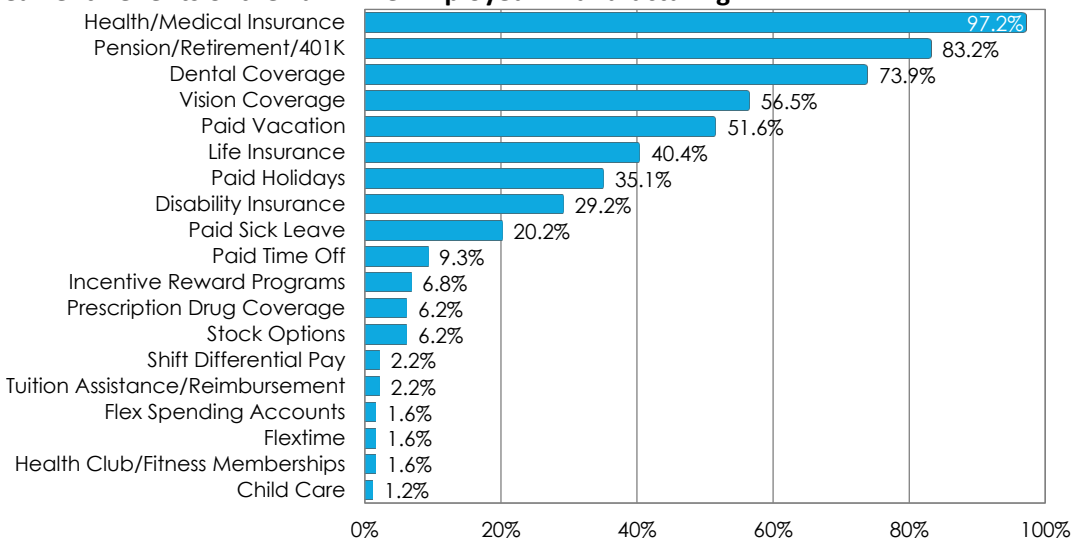
Over two-thirds (71.1%) of those employed in the manufacturing industry are paid an hourly wage whereas 27.4 percent earn an annual salary. **Figure 60** provides the current hourly wage, annual salary and the wage threshold based on all of those in the industry, those likely to change/accept employment and those who are unlikely to change. A wage threshold represents the wage level at which employers should have success attracting 66 to 75 percent of the applicants to new positions. These thresholds can be viewed as guides in assessing wage rates. The actual wage levels required by prospective workers will vary between individuals, occupational categories and economic cycles. This information can assist businesses in their retention efforts.

Figure 60
Comparison of Wages & Salaries - Manufacturing

	Entire Industry	Those Likely to Change	Those Unlikey to Change
Current Median Wage (per hour)	$18.10	$18.00	$18.46
Current Median Salary (per year)	$77,000	$68,500	$80,000

	Entire Industry	Those Likely to Change	Those Unlikely to Change
Wage Threshold	$20.00 - $21.00	$20.00 - $20.00	$20.28 - $21.38
Salary Threshold	$85,600 - $100,000	$79,200 - $85,000	$90,940 - $100,000

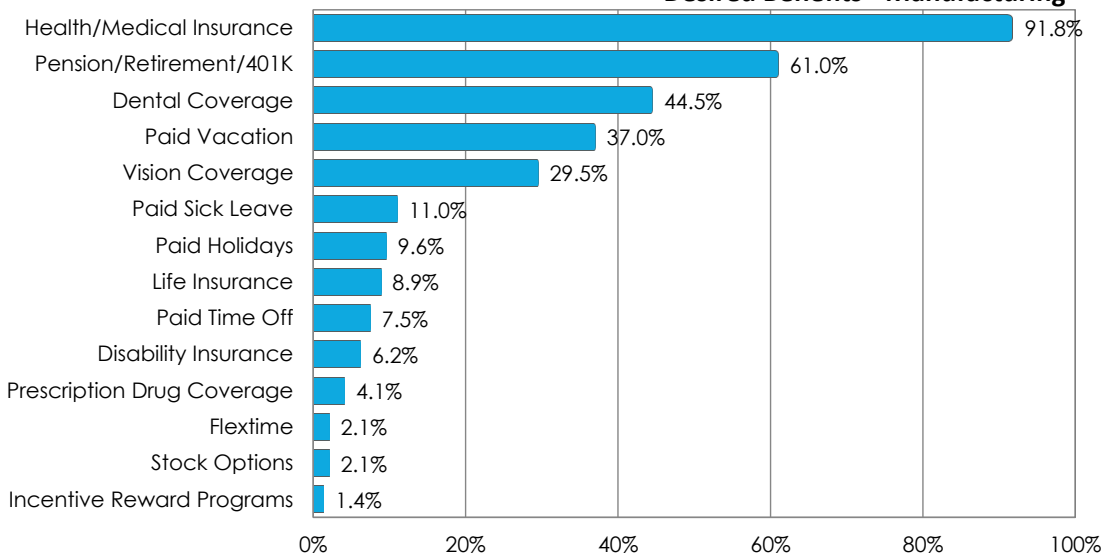
Figure 61
Current Benefits of the Full-Time Employed - Manufacturing



Responses equating to less than one percent are not reported.

The employers in the manufacturing industry offer a variety of benefit packages in addition to wages. Current benefits of those employed full-time are shown in **Figure 61**. Over four-fifths (88.9%) of respondents state they are currently sharing the cost of premiums with their employer. However, 7.2 percent indicate their employer pays the entire cost of insurance premiums.

Figure 62
Desired Benefits - Manufacturing



Responses equating to less than one percent are not reported.

Those looking to change/accept employment in the industry could be influenced by certain benefits. Those benefits most frequently mentioned are identified in **Figure 62**. Over three-fifths (62.7%) would take cost sharing of health/ medical premiums into consideration when contemplating a new employment opportunity and over one-third (33.6%) would prefer an employment offer where the employer pays all the costs associated with health/medical insurance premiums.

JOB SEARCH RESOURCES

Employers who have a clear understanding of the job search resources used by workers in the manufacturing industry will improve their ability to maximize their effectiveness and efficiency in attracting qualified applicants. Understanding and utilizing traditional and non-traditional advertising outlets will provide employers with a more focused and effective recruitment tool. Residents living in the State are undoubtedly exposed to numerous sources by which employers communicate job openings. Therefore, it is important to understand what sources potential workers rely on when looking for jobs in the manufacturing industry.

The most frequently identified job search resources are the internet (70.1%); newspapers (37.4%); Iowa *WORKS* centers (23.9%); and networking through friends, family & acquaintances (21.5%). Private employment services (7.7%); walk-in (door-to-door) solicitation (3.8%); radio/television (1.7%); college/university career centers (1.1%); job/career fairs (0.9%); bulletin boards (0.4%); and trade publications (0.4%) were also cited, but less frequently.

OCCUPATIONAL CLUSTER ANALYSIS

The clusters in this report are defined by occupational groupings rather than industries. In contrast to industry clusters which focus more on the demand-side and business production occupational clusters focus on the supply-side and characteristics of the labor that work within those industries. These clusters encompass a variety of occupational categories from managerial and administrative to production, construction and material handling.

This information provides a resource for identifying the features of labor within occupational clusters for various industries. The clusters analyzed in the following pages are advanced manufacturing, biotechnology/bioscience and information solutions due to their prevalence within the State. Information technology is also analyzed due to its growing importance on the State's economy. Additional analyses can be conducted upon request.

ADVANCED MANUFACTURING

The advanced manufacturing industry cluster is comprised of an array of manufacturing and production industries that manufacture products utilizing technological advances and requiring higher levels of skill and education. Nearly one-fourth (23.9%) of the State consists of individuals who have transferable skills or experience in advanced manufacturing cluster occupations.

BIOTECHNOLOGY/BIOSCIENCE

Biotechnology/bioscience encompasses three major industrial sectors (agriculture, medical and plant-life sciences).

The agriculture sector is comprised of four industrial sub-sectors: agriculture services, agriculture machinery, agriculture processing and organic/agriculture chemicals. Such industrial sub-sectors are involved in the development and manufacturing of new food production technologies.

The medical sector consists of the medical equipment/supplies and the hospitals/labs industrial sub-sectors which are both involved in the manufacturing processes and development of techniques to advance human healthcare products and services.

The plant-life science sector consists of research/testing and pharmaceutical industrial sub-sectors which are both involved in the science of research, testing, developing and manufacturing products to improve the functions of all organisms.

Nearly one-fifth (18.2%) of the State consists of individuals who have transferable skills or experience in biotechnology/biosciences cluster occupations.

INFORMATION SOLUTIONS

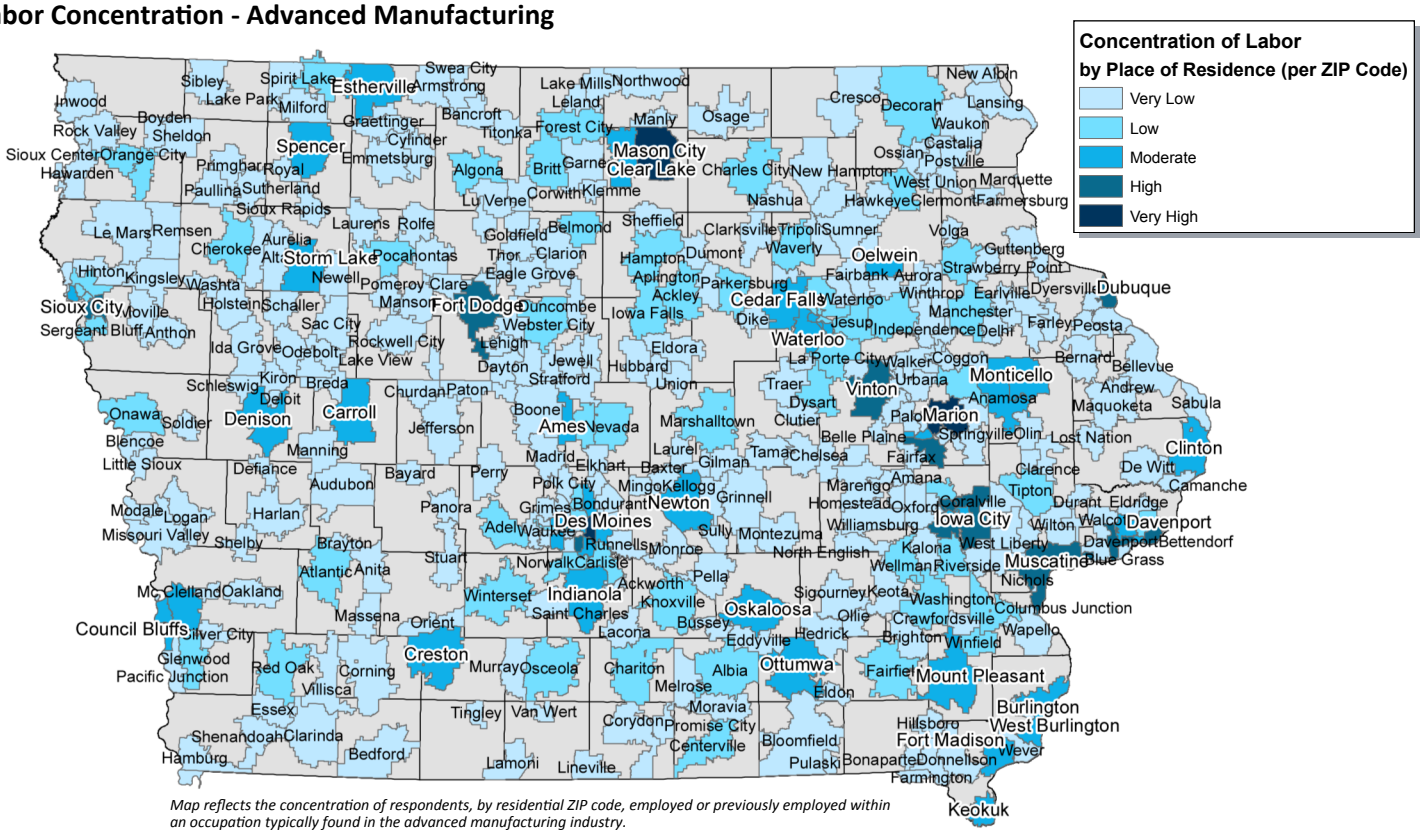
The information solutions industry cluster is defined as industries involved in interstate financial services (other than banking), insurance and information technology. The core organizations within this cluster include credit agencies; mortgage bankers; securities brokers; insurance brokers; pension, health and welfare funds; database management; software development; and web site design. Additional organizations that support the financial services core as buyers/suppliers include: personal credit institutions, investment counselors, holding companies and trusts. Infrastructure organizations that support the core include: management consulting and management investment; real estate investment; reserve banks; interstate banks; and credit counseling.

Nearly one-tenth (9.5%) of the State consists of individuals who have transferable skills or experience in information solutions cluster occupations.

INFORMATION TECHNOLOGY

The information technology industry cluster is comprised of an array of computer and telecommunications occupations that utilize technological advances and high levels of skill and education. A total of 2.2 percent of the State consists of individuals who have transferable skills or experience in information technology cluster occupations.

Figure 63
Labor Concentration - Advanced Manufacturing



Map reflects the concentration of respondents, by residential ZIP code, employed or previously employed within an occupation typically found in the advanced manufacturing industry.

Workers who have transferable experience/skills in the industry are currently commuting an average of 12 miles one-way for work. Those who are likely to change/accept employment are willing to commute an average of 24 miles one-way for the right employment opportunity.

Employment Status:

71.4% Employed
- 23.4% are likely to change employment

11.0% Unemployed
- 65.7% are likely to accept employment

5.3% Homemakers
- 41.2% are likely to accept employment

12.3% Retired
- 20.2% are likely to accept employment

Employment Stats:

- 70.3% paid an hourly wage
- 82.1% are/were employed full-time
- 9.1% are/were employed part-time
- 6.1% are/were self-employed
- 9.4% hold more than one job
- Currently working an average of 43 hrs/ week

Education Levels:

- 60.1% Education beyond high school
- 4.3% Trade certified
- 2.9% Vocational training
- 12.6% Associate degree
- 19.0% Undergraduate degree
- 5.4% Postgraduate degree

Current Benefits:

(Top 10 reported)
- Health/medical insurance - 94.7%
- Pension/retirement/401K - 74.9%
- Dental coverage - 63.9%
- Paid vacation - 48.3%
- Vision coverage - 43.5%
- Life insurance - 34.9%
- Paid holidays - 29.6%
- Paid sick leave - 24.2%
- Disability insurance - 24.0%
- Paid time off - 8.3%

Desired Benefits:

(Top 10 reported)
- Health/medical insurance - 84.4%
- Pension/retirement/401K - 55.1%
- Dental coverage - 39.1%
- Paid vacation - 34.8%
- Vision coverage - 27.3%
- Paid sick leave - 12.5%
- Paid holidays - 10.2%
- Life insurance - 9.8%
- Paid time off - 9.4%
- Disability insurance - 7.4%

Underemployment:

Total Underemployment - 3.5%
- Low hours - 0.7%
- Mismatch of skills - 2.1%
- Low income - 1.2%

(Individuals counted only once when estimating Total Underemployment.)

Occupational Categories:

- Production, Construction & Material Handling - 48.7%
- Clerical & Administrative Support Services - 25.1%
- Professional, Paraprofessional & Technical - 13.6%
- Management & Administrative - 12.5%
- Sales & Related - 0.1%

Top Job Search Resources:

(For those seeking employment opportunities.)
- Internet - 69.3%
  - www.monster.com
  - www.indeed.com
  - www.iowajob.org
- Newspapers - 39.4%
- Networking through family, friends & acquaintances - 21.3%
- Iowa*WORKS* Centers - 20.8%

Flexibility in the Workplace:

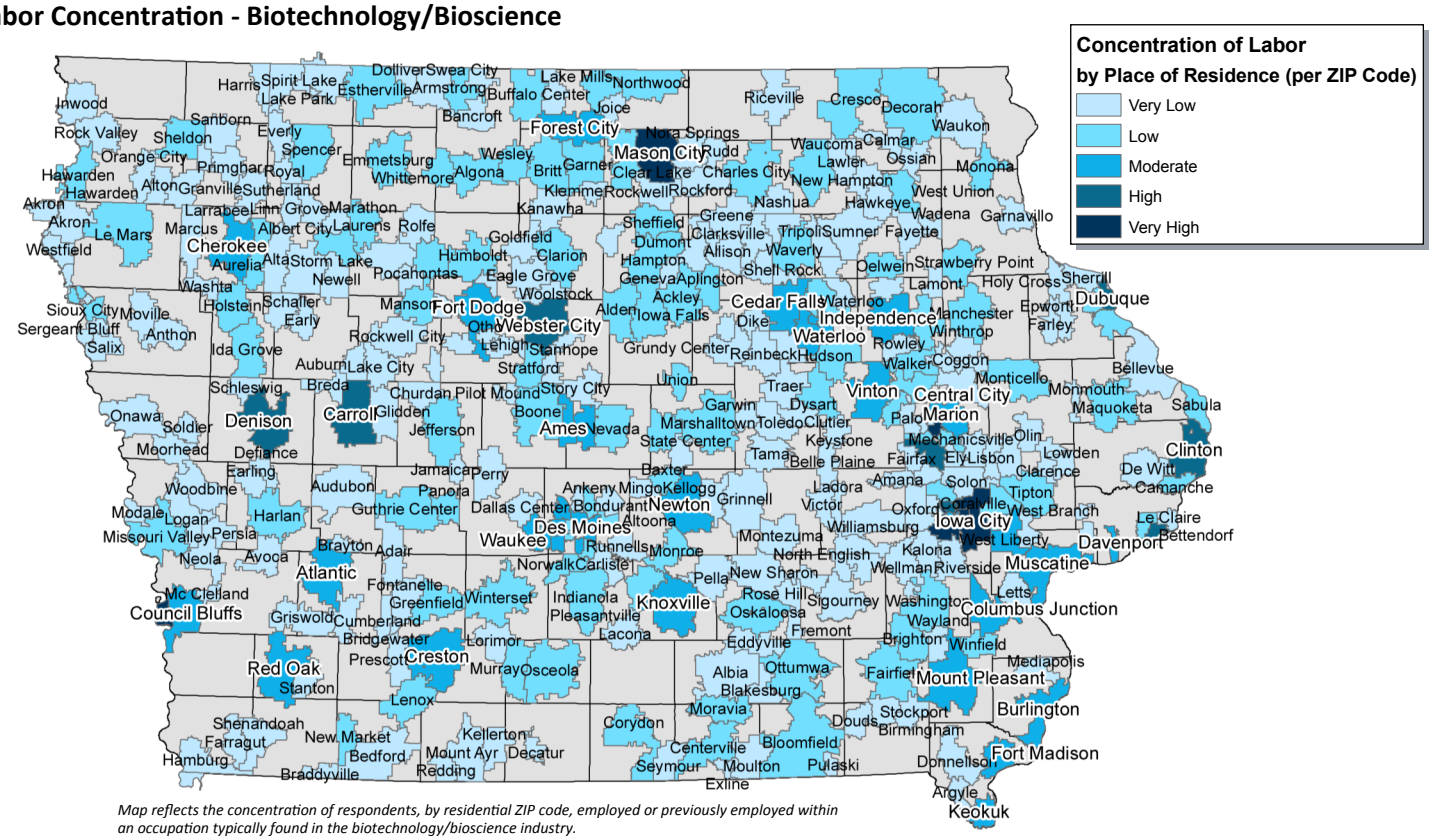
(by percent of interest)
- Cross-training - 73.7%
- Job teams - 73.4%
- Job sharing - 45.3%
- Varied shifts - 34.2%
- Seasonal work - 49.6%
- Temporary work - 47.3%

Figure 64
Wage Survey - Advanced Manufacturing

Occupation	Occupational Code	Mean Wage	Entry Wage	Experienced Wage	Median Wage	Mean Annual Salary
Assemblers and Fabricators, All Other	51-2099	$ 14.76	$ 9.90	$ 17.18	$ 13.69	$ 30,701
Computer-Controlled Machine Tool Operators, Metal and Plastic	51-4011	$ 17.86	$ 14.59	$ 19.49	$ 17.79	$ 37,149
Crushing, Grinding, and Polishing Machine Setters, Operators & Tenders	51-9021	$ 17.22	$ 12.26	$ 19.70	$ 16.51	$ 35,818
Cutting, Punching, and Press Machine Setters, Operators & Tenders	51-4031	$ 16.53	$ 13.27	$ 18.16	$ 16.67	$ 34,382
Drilling and Boring Machine Tool Setters, Operator	51-4032	$ 17.35	$ 14.61	$ 18.73	$ 17.26	$ 36,088
Electrical and Electronic Engineering Technicians	17-3023	$ 27.09	$ 18.95	$ 31.16	$ 28.03	$ 56,347
Electrical and Electronic Equipment Assemblers	51-2022	$ 17.24	$ 11.79	$ 19.97	$ 17.56	$ 35,859
Electrical and Electronics Drafters	17-3012	$ 26.22	$ 15.70	$ 31.48	$ 24.57	$ 54,538
Electrical Engineers	17-2071	$ 37.08	$ 27.37	$ 41.94	$ 36.21	$ 77,126
Electricians	47-2111	$ 24.77	$ 16.32	$ 28.99	$ 24.02	$ 51,522
Electromechanical Equipment Assemblers	51-2023	$ 16.21	$ 11.88	$ 18.38	$ 14.87	$ 33,717
Electro-Mechanical Technicians	17-3024	$ 26.20	$ 18.23	$ 30.19	$ 22.06	$ 54,496
Electronics Engineers, Except Computer	17-2072	$ 37.74	$ 28.22	$ 42.51	$ 38.17	$ 78,499
Engine and Other Machine Assemblers	51-2031	$ 17.99	$ 14.33	$ 19.82	$ 17.50	$ 37,419
Engineering Technicians, Exc. Drafters, All Other	17-3029	$ 25.01	$ 17.98	$ 28.53	$ 24.89	$ 52,021
Engineers, All Other	17-2199	$ 34.73	$ 22.95	$ 40.62	$ 34.19	$ 72,238
Extruding, Forming, Pressing, and Compacting Machine Operators, Setters & Tenders	51-9041	$ 16.64	$ 12.14	$ 18.89	$ 16.93	$ 34,611
Fiberglass Laminators and Fabricators	51-2091	$ 15.12	$ 12.75	$ 16.31	$ 14.63	$ 31,450
First-Line Supervisors/Managers of Production and Operating Workers	51-1011	$ 25.49	$ 17.28	$ 29.59	$ 24.00	$ 53,019
Forging Machine Setters, Operators, and Tenders, Metal & Plastic	51-4022	$ 16.77	$ 13.72	$ 18.29	$ 16.71	$ 34,882
Foundry Mold and Coremakers	51-4071	$ 17.78	$ 13.79	$ 19.78	$ 17.85	$ 36,982
General and Operations Managers	11-1021	$ 43.55	$ 19.40	$ 55.62	$ 35.65	$ 90,584
Grinding, Lapping, Polishing, and Buffing Machine Tool Operators, & Tenders, Metal & Plastic	51-4033	$ 15.02	$ 10.79	$ 17.13	$ 14.46	$ 31,242
Helpers--Production Workers	51-9198	$ 12.92	$ 9.67	$ 14.55	$ 12.15	$ 26,874
Industrial Engineering Technicians	17-3026	$ 22.88	$ 16.50	$ 26.07	$ 22.93	$ 47,590
Industrial Engineers	17-2112	$ 35.13	$ 26.41	$ 39.49	$ 34.74	$ 73,070
Industrial Machinery Mechanics	49-9041	$ 21.54	$ 15.47	$ 24.57	$ 21.02	$ 44,803
Industrial Production Managers	11-3051	$ 40.33	$ 26.28	$ 47.36	$ 38.03	$ 83,886
Industrial Truck and Tractor Operators	53-7051	$ 15.63	$ 11.66	$ 17.62	$ 15.19	$ 32,510
Inspectors, Testers, Sorters, Samplers & Weighers	51-9061	$ 17.40	$ 11.53	$ 20.33	$ 16.59	$ 36,192
Laborers & Freight, Stock & Material Movers, Hand	53-7062	$ 13.38	$ 9.38	$ 15.38	$ 12.70	$ 27,830
Lathe and Turning Machine Tool Setters, Operators, and Tenders	51-4034	$ 18.24	$ 14.45	$ 20.13	$ 17.94	$ 37,939
Lay-Out Workers, Metal and Plastic	51-4192	$ 21.10	$ 16.30	$ 23.50	$ 21.05	$ 43,888
Machinists	51-4041	$ 18.41	$ 14.08	$ 20.58	$ 17.68	$ 38,293
Maintenance and Repair Workers, General	49-9071	$ 17.94	$ 11.57	$ 21.13	$ 17.49	$ 37,315
Maintenance Workers, Machinery	49-9043	$ 21.17	$ 14.67	$ 24.42	$ 21.22	$ 44,034
Materials Engineers	17-2131	$ 37.60	$ 27.51	$ 42.64	$ 36.78	$ 78,208
Mechanical Engineering Technicians	17-3027	$ 23.07	$ 17.11	$ 26.06	$ 22.34	$ 47,986
Mechanical Engineers	17-2141	$ 35.43	$ 24.69	$ 40.80	$ 34.89	$ 73,694
Metal Workers and Plastic Workers, All Other	51-4199	$ 17.44	$ 11.96	$ 20.18	$ 16.41	$ 36,275
Metal-Refining Furnace Operators and Tenders	51-4051	$ 17.71	$ 13.60	$ 19.76	$ 16.97	$ 36,837
Milling and Planing Machine Setters, Operators, and Tenders	51-4035	$ 17.83	$ 13.06	$ 20.22	$ 18.64	$ 37,086
Mixing and Blending Machine Setters, Operators, and Tenders	51-9023	$ 17.65	$ 12.65	$ 20.15	$ 17.09	$ 36,712
Model Makers, Metal and Plastic	51-4061	$ 23.81	$ 16.11	$ 27.67	$ 23.97	$ 49,525
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders	51-4072	$ 14.35	$ 9.59	$ 16.73	$ 13.74	$ 29,848
Multiple Machine Tool Setters, Operators, and Tenders	51-4081	$ 15.60	$ 11.77	$ 17.51	$ 15.40	$ 32,448
Numerical Tool and Process Control Programmers	51-4012	$ 21.74	$ 16.16	$ 24.53	$ 21.06	$ 45,219
Patternmakers, Metal and Plastic	51-4062	$ 21.88	$ 15.36	$ 25.14	$ 21.80	$ 45,510
Plating and Coating Machine Setters, Operators, and Tenders	51-4193	$ 13.44	$ 9.37	$ 15.48	$ 13.17	$ 27,955
Prepress Technicians and Workers	51-5111	$ 15.39	$ 9.75	$ 18.21	$ 15.31	$ 32,011
Production Workers, All Other	51-9199	$ 14.40	$ 9.53	$ 16.83	$ 14.04	$ 29,952
Rolling Machine Setters, Operators, and Tenders, Metal & Plastic	51-4023	$ 18.10	$ 14.24	$ 20.03	$ 17.58	$ 37,648
Structural Metal Fabricators and Fitters	51-2041	$ 16.49	$ 12.61	$ 18.42	$ 16.31	$ 34,299
Team Assemblers	51-2092	$ 15.19	$ 11.19	$ 17.18	$ 15.13	$ 31,595
Tool and Die Makers	51-4111	$ 22.79	$ 17.97	$ 25.20	$ 23.00	$ 47,403
Transportation, Storage & Distribution Managers	11-3071	$ 35.54	$ 22.64	$ 41.98	$ 32.04	$ 73,923
Truck Drivers, Heavy and Tractor-Trailer	53-3032	$ 19.93	$ 13.73	$ 23.03	$ 19.63	$ 41,454
Truck Drivers, Light or Delivery Services	53-3033	$ 15.07	$ 9.14	$ 18.04	$ 13.47	$ 31,346
Welders, Cutters, Solderers, and Brazers	51-4121	$ 17.36	$ 13.37	$ 19.35	$ 17.00	$ 36,109
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	51-4122	$ 17.87	$ 14.23	$ 19.70	$ 17.95	$ 37,170

The 2015 Iowa Wage Survey was produced by the Labor Force & Occupational Analysis Bureau to provide state, metropolitan statistical areas (MSA), regions and individual counties information on wages by occupation. This publication was developed specifically for the State of Iowa. The source of the wage and employment data is based on the May 2014 OES estimates. Additional occupational wage and employment data can be found at https://www.iowaworkforcedevelopment.gov/iowa-wage-report.

Figure 65
Labor Concentration - Biotechnology/Bioscience



Map reflects the concentration of respondents, by residential ZIP code, employed or previously employed within an occupation typically found in the biotechnology/bioscience industry.

Workers who have transferable experience/skills in the industry are currently commuting an average of 11 miles one-way for work. Those who are likely to change/accept employment are willing to commute an average of 25 miles one-way for the right employment opportunity.

Employment Status:

77.2% Employed
- 19.5% are likely to change employment

8.3% Unemployed
- 68.9% are likely to accept employment

3.8% Homemakers
- 28.6% are likely to accept employment

10.7% Retired
- 17.7% are likely to accept employment

Employment Stats:

- 61.1% paid an hourly wage
- 71.3% are/were employed full-time
- 16.9% are/were self-employed
- 9.1% are/were employed part-time
- 12.5% hold more than one job
- Currently working an average of 44 hrs/ week

Education Levels:

- 66.1% Education beyond high school
- 3.8% Trade certified
- 2.2% Vocational training
- 17.8% Associate degree
- 23.2% Undergraduate degree
- 6.2% Postgraduate degree

Current Benefits:

(Top 10 reported)
- Health/medical insurance - 92.7%
- Pension/retirement/401K - 75.2%
- Dental coverage - 61.3%
- Paid vacation - 44.8%
- Vision coverage - 44.4%
- Life insurance - 34.6%
- Paid holidays - 25.5%
- Paid sick leave - 25.5%
- Disability insurance - 24.6%
- Paid time off - 10.0%

Desired Benefits:

(Top 10 reported)
- Health/medical insurance - 89.0%
- Pension/retirement/401K - 50.3%
- Dental coverage - 34.4%
- Paid vacation - 27.0%
- Vision coverage - 24.5%
- Paid sick leave - 12.9%
- Life insurance - 10.4%
- Paid holidays - 10.4%
- Paid time off - 9.2%
- Disability insurance - 6.7%

Underemployment:

Total Underemployment - 3.4%
- Low hours - 0.5%
- Mismatch of skills - 1.5%
- Low income - 1.8%

(Individuals counted only once when estimating Total Underemployment.)

Occupational Categories:

- Professional, Paraprofessional & Technical - 39.0%
- Production, Construction & Material Handling - 38.2%
- Agricultural - 21.0%
- Management & Administrative - 1.0%
- Sales & Related - 0.4%
- Service - 0.4%

Top Job Search Resources:

(For those seeking employment opportunities.)
- Internet - 68.3%
  - www.monster.com
  - www.iowajob.org
  - www.linkedin.com
  - www.indeed.com
- Newspapers - 38.7%
- Networking through family, friends & acquaintances - 23.8%
- Iowa*WORKS* Centers - 18.3%

Flexibility in the Workplace:

(by percent of interest)
- Job teams - 76.4%
- Cross-training - 74.1%
- Job sharing - 45.4%
- Varied shifts - 40.2%
- Seasonal work - 52.6%
- Temporary work - 49.4%

Figure 66
Wage Survey - Biotechnology/Bioscience

Occupation	Occupational Code	Mean Wage	Entry Wage	Experienced Wage	Median Wage	Mean Annual Salary
Agricultural and Food Science Technicians	19-4011	$ 16.18	$ 11.10	$ 18.72	$ 15.55	$ 33,654
Agricultural Engineers	17-2021	$ 37.80	$ 28.42	$ 42.48	$ 36.51	$ 78,624
Agricultural Equipment Operators	45-2091	$ 16.91	$ 12.59	$ 19.08	$ 16.00	$ 35,173
Agricultural Inspectors	45-2011	$ 22.95	$ 18.07	$ 25.39	$ 22.61	$ 47,736
Agricultural Workers, All Other	45-2099	$ 12.48	$ 9.76	$ 13.84	$ 11.26	$ 25,958
Animal Scientists	19-1011	$ 33.26	$ 21.02	$ 39.38	$ 28.53	$ 69,181
Biochemists and Biophysicists	19-1021	$ 35.03	$ 22.80	$ 41.15	$ 32.12	$ 72,862
Biological Scientists, All Other	19-1029	$ 28.34	$ 13.81	$ 35.60	$ 29.95	$ 58,947
Biological Technicians	19-4021	$ 18.99	$ 13.89	$ 21.54	$ 18.17	$ 39,499
Biomedical Engineers	17-2031	$ 43.38	$ 29.65	$ 50.24	$ 44.91	$ 90,230
Chemical Engineers	17-2041	$ 57.32	$ 31.72	$ 70.12	$ 44.44	$ 119,226
Chemical Equipment Operators and Tenders	51-9011	$ 21.09	$ 15.01	$ 24.14	$ 20.68	$ 43,867
Chemical Plant and System Operators	51-8091	$ 21.97	$ 15.92	$ 24.99	$ 19.48	$ 45,698
Chemical Technicians	19-4031	$ 21.58	$ 15.64	$ 24.55	$ 20.71	$ 44,886
Chemists	19-2031	$ 33.96	$ 22.53	$ 39.68	$ 32.22	$ 70,637
Conservation Scientists	19-1031	$ 26.91	$ 17.54	$ 31.59	$ 25.34	$ 55,973
Environmental Science and Protection Technicians, Including Health	19-4091	$ 20.33	$ 15.23	$ 22.88	$ 18.95	$ 42,286
Environmental Scientists and Specialists, Including Health	19-2041	$ 31.14	$ 21.37	$ 36.03	$ 31.50	$ 64,771
Farmworkers & Laborers, Crop, Nursery & Greenhouse	45-2092	$ 12.58	$ 8.16	$ 14.79	$ 12.41	$ 26,166
Farmworkers, Farm and Ranch Animals	45-2093	$ 12.95	$ 9.69	$ 14.58	$ 12.11	$ 26,936
First-Line Supervisors/Managers of Farming, Fishing, & Forestry Workers	45-1011	$ 26.38	$ 18.59	$ 30.27	$ 26.70	$ 54,870
First-Line Supervisors/Managers of Production and Operating Workers	51-1011	$ 25.49	$ 17.28	$ 29.59	$ 24.00	$ 53,019
Food Scientists and Technologists	19-1012	$ 30.58	$ 18.41	$ 36.67	$ 30.90	$ 63,606
Gas Plant Operators	51-8092	$ 27.30	$ 19.96	$ 30.98	$ 27.25	$ 56,784
Geoscientists, Except Hydrologists & Geographers	19-2042	$ 37.54	$ 26.53	$ 43.05	$ 38.68	$ 78,083
Graders and Sorters, Agricultural Products	45-2041	$ 13.58	$ 10.43	$ 15.15	$ 13.20	$ 28,246
Health and Safety Engineers, Except Mining Safety	17-2111	$ 36.82	$ 27.80	$ 41.34	$ 35.10	$ 76,586
Helpers--Production Workers	51-9198	$ 12.92	$ 9.67	$ 14.55	$ 12.15	$ 26,874
Hydrologists	19-2043	$ 38.38	$ 29.50	$ 42.82	$ 40.09	$ 79,830
Industrial Production Managers	11-3051	$ 40.33	$ 26.28	$ 47.36	$ 38.03	$ 83,886
Inspectors, Testers, Sorters, Samplers & Weighers	51-9061	$ 17.40	$ 11.53	$ 20.33	$ 16.59	$ 36,192
Life, Physical & Social Science Technicians, Other	19-4099	$ 21.40	$ 13.10	$ 25.55	$ 20.31	$ 44,512
Materials Engineers	17-2131	$ 37.60	$ 27.51	$ 42.64	$ 36.78	$ 78,208
Medical and Clinical Laboratory Technicians	29-2012	$ 19.43	$ 14.28	$ 22.01	$ 19.20	$ 40,414
Medical and Clinical Laboratory Technologists	29-2011	$ 25.73	$ 19.53	$ 28.84	$ 25.72	$ 53,518
Microbiologists	19-1022	$ 37.70	$ 24.30	$ 44.40	$ 35.75	$ 78,416
Mixing and Blending Machine Setters, Operators, annd Tenders	51-9023	$ 17.65	$ 12.65	$ 20.15	$ 17.09	$ 36,712
Petroleum Pump System Operators, Refinery Operators and Gaugers	51-8093	$ 30.17	$ 21.49	$ 34.51	$ 30.64	$ 62,754
Pharmacists	29-1051	$ 48.44	$ 32.30	$ 56.51	$ 52.57	$ 100,755
Physical Scientists, All Other	19-2099	$ 29.75	$ 17.23	$ 36.01	$ 28.73	$ 61,880
Plant and System Operators, All Other	51-8099	$ 24.19	$ 19.56	$ 26.51	$ 24.99	$ 50,315
Production Workers, All Other	51-9199	$ 14.40	$ 9.53	$ 16.83	$ 14.04	$ 29,952
Registered Nurses	29-1141	$ 25.97	$ 19.96	$ 28.98	$ 25.58	$ 54,018
Sales Representatives, Wholesale & Manufacturing, Technical & Scientific Products	41-4011	$ 36.70	$ 17.71	$ 46.19	$ 31.73	$ 76,336
Separating, Filtering, Clarifying, Precipitating, & Still Machine Setters,	51-9012	$ 19.13	$ 12.76	$ 22.31	$ 17.22	$ 39,790
Soil and Plant Scientists	19-1013	$ 33.86	$ 22.29	$ 39.65	$ 31.49	$ 70,429
Truck Drivers, Heavy and Tractor-Trailer	53-3032	$ 19.93	$ 13.73	$ 23.03	$ 19.63	$ 41,454
Truck Drivers, Light or Delivery Services	53-3033	$ 15.07	$ 9.14	$ 18.04	$ 13.47	$ 31,346
Veterinarians	29-1131	$ 45.85	$ 26.30	$ 55.62	$ 37.10	$ 95,368
Water & Liquid Waste Treatment Plant & System Operators	51-8031	$ 20.76	$ 14.04	$ 24.12	$ 20.75	$ 43,181
Zoologists and Wildlife Biologists	19-1023	$ 31.41	$ 25.57	$ 34.34	$ 33.60	$ 65,333

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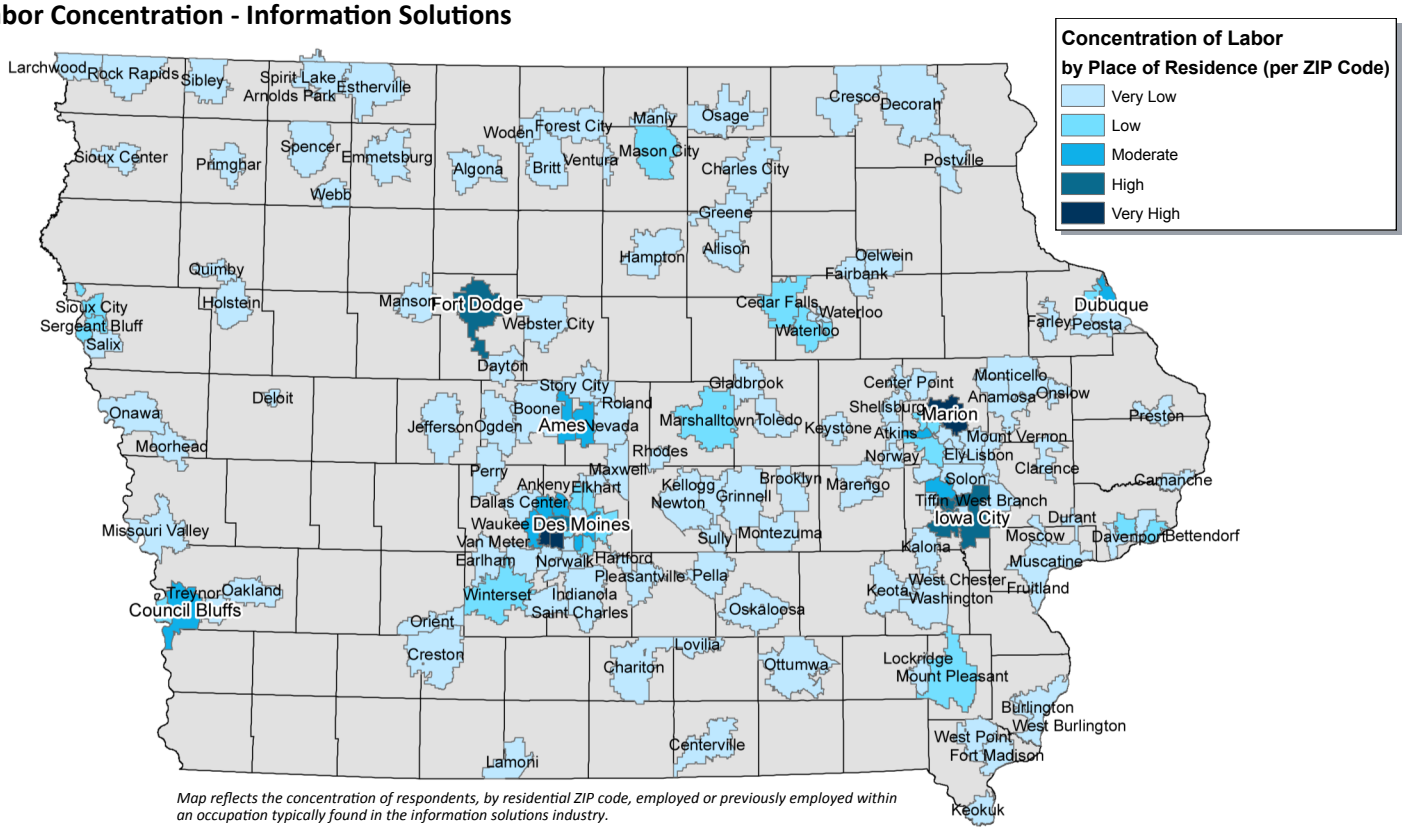
Figure 67
Labor Concentration - Information Solutions



Map reflects the concentration of respondents, by residential ZIP code, employed or previously employed within an occupation typically found in the information solutions industry.

Workers who have transferable experience/skills in the industry are currently commuting an average of 11 miles one-way for work. Those who are likely to change/accept employment are willing to commute an average of 23 miles one-way for the right employment opportunity.

Employment Status:

83.4% Employed
- 22.1% are likely to change employment

4.4% Unemployed
- 76.5% are likely to accept employment

4.2% Homemakers
- 37.5% are likely to accept employment

8.0% Retired
- 22.6% are likely to accept employment

Employment Stats:

- 63.7% paid an annual salary
- 85.7% are/were employed full-time
- 7.0% are/were self-employed
- 6.5% are/were employed part-time
- 7.2% hold more than one job
- Currently working an average of 42 hrs/ week

Education Levels:

- 86.4% Education beyond high school
- 1.6% Trade certified
- 0.8% Vocational training
- 11.8% Associate degree
- 44.2% Undergraduate degree
- 16.2% Postgraduate degree

Current Benefits:

(Top 10 reported)
- Health/medical insurance - 93.7%
- Pension/retirement/401K - 79.0%
- Dental coverage - 68.0%
- Paid vacation - 52.3%
- Vision coverage - 48.0%
- Life insurance - 38.3%
- Paid sick leave - 30.7%
- Disability insurance - 28.3%
- Paid holidays - 28.3%
- Paid time off - 13.7%

Desired Benefits:

(Top 10 reported)
- Health/medical insurance - 87.1%
- Pension/retirement/401K - 61.2%
- Paid vacation - 41.2%
- Dental coverage - 38.8%
- Vision coverage - 25.9%
- Paid sick leave - 15.3%
- Paid time off - 11.8%
- Disability insurance - 10.6%
- Paid holidays - 10.6%
- Life insurance - 8.2%

Underemployment:

Total Underemployment - 4.9%
- Low hours - 1.0%
- Mismatch of skills - 2.1%
- Low income - 2.1%

(Individuals counted only once when estimating Total Underemployment.)

Occupational Categories:

- Professional, Paraprofessional & Technical - 77.9%
- Management & Administrative - 12.7%
- Sales & Related - 4.9%
- Clerical & Administrative Support Services - 4.5%

Top Job Search Resources:

(For those seeking employment opportunities.)
- Internet - 85.6%
  - www.monster.com
  - www.linkedin.com
  - www.indeed.com
- Networking through family, friends & acquaintances - 30.6%
- Newspapers - 26.1%
- Iowa*WORKS* Centers - 11.4%

Flexibility in the Workplace:

(by percent of interest)
- Job teams - 76.3%
- Cross-training - 69.1%
- Job sharing - 38.1%
- Varied shifts - 15.5%
- Temporary work - 43.8%
- Seasonal work - 33.3%

Figure 68
Wage Survey - Information Solutions

Occupation	Occupational Code	Mean Wage	Entry Wage	Experienced Wage	Median Wage	Mean Annual Salary
Accountants and Auditors	13-2011	$ 30.01	$ 19.24	$ 35.39	$ 26.81	$ 62,421
Bookkeeping, Accounting, and Auditing Clerks	43-3031	$ 15.76	$ 10.50	$ 18.39	$ 15.36	$ 32,781
Brokerage Clerks	43-4011	$ 18.36	$ 12.78	$ 21.16	$ 18.73	$ 38,189
Budget Analysts	13-2031	$ 32.78	$ 24.67	$ 36.83	$ 32.62	$ 68,182
Business Operations Specialists, All Other	13-1199	$ 28.81	$ 17.00	$ 34.71	$ 27.47	$ 59,925
Chief Executives	11-1011	$ 79.20	$ 33.56	$ 102.02	$ 72.54	$ 164,736
Claims Adjusters, Examiners, and Investigators	13-1031	$ 26.34	$ 17.80	$ 30.60	$ 24.57	$ 54,787
Computer Network Architects	15-1143	$ 42.94	$ 29.58	$ 49.63	$ 43.21	$ 89,315
Computer Network Support Specialists	15-1152	$ 25.78	$ 18.33	$ 29.51	$ 23.95	$ 53,622
Computer Occupations, All Other	15-1199	$ 31.07	$ 19.27	$ 36.96	$ 30.73	$ 64,626
Computer Operators	43-9011	$ 19.40	$ 11.45	$ 23.38	$ 18.61	$ 40,352
Computer Programmers	15-1131	$ 32.67	$ 22.12	$ 37.95	$ 32.75	$ 67,954
Computer Systems Analysts	15-1121	$ 37.27	$ 25.50	$ 43.16	$ 36.30	$ 77,522
Computer User Support Specialists	15-1151	$ 20.73	$ 13.33	$ 24.43	$ 20.59	$ 43,118
Correspondence Clerks	43-4021	$ 13.96	$ 9.39	$ 16.24	$ 14.09	$ 29,037
Credit Analysts	13-2041	$ 33.49	$ 19.77	$ 40.34	$ 29.53	$ 69,659
Credit Authorizers, Checkers, and Clerks	43-4041	$ 15.72	$ 10.19	$ 18.48	$ 13.75	$ 32,698
Customer Service Representatives	43-4051	$ 15.27	$ 10.15	$ 17.83	$ 14.50	$ 31,762
Data Entry Keyers	43-9021	$ 13.32	$ 9.41	$ 15.28	$ 13.12	$ 27,706
Database Administrators	15-1141	$ 37.38	$ 23.15	$ 44.49	$ 38.34	$ 77,750
Desktop Publishers	43-9031	$ 21.58	$ 13.38	$ 25.68	$ 19.59	$ 44,886
Eligibility Interviewers, Government Programs	43-4061	$ 22.33	$ 13.24	$ 26.88	$ 24.67	$ 46,446
Executive Secretaries & Administrative Assistants	43-6011	$ 20.47	$ 14.64	$ 23.38	$ 19.84	$ 42,578
File Clerks	43-4071	$ 14.54	$ 9.93	$ 16.84	$ 13.57	$ 30,243
Financial Analysts	13-2051	$ 36.85	$ 23.13	$ 43.71	$ 34.06	$ 76,648
Financial Clerks, All Other	43-3099	$ 16.72	$ 12.14	$ 19.01	$ 16.51	$ 34,778
Financial Examiners	13-2061	$ 32.44	$ 20.29	$ 38.52	$ 28.91	$ 67,475
Financial Specialists, All Other	13-2099	$ 29.93	$ 16.77	$ 36.50	$ 26.93	$ 62,254
First-Line Supervisors/Managers of Office and Administrative Support Workers	43-1011	$ 22.73	$ 14.49	$ 26.85	$ 21.41	$ 47,278
Human Resources Assistants, Except Payroll and Timekeeping	43-4161	$ 17.67	$ 12.68	$ 20.17	$ 17.37	$ 36,754
Human Resources Managers	11-3121	$ 44.18	$ 28.34	$ 52.09	$ 40.56	$ 91,894
Information and Record Clerks, All Other	43-4199	$ 17.88	$ 12.64	$ 20.50	$ 18.25	$ 37,190
Information Security Analysts	15-1122	$ 35.33	$ 23.82	$ 41.08	$ 34.03	$ 73,486
Insurance Claims and Policy Processing Clerks	43-9041	$ 18.01	$ 14.13	$ 19.95	$ 17.19	$ 37,461
Insurance Underwriters	13-2053	$ 29.01	$ 20.08	$ 33.47	$ 27.81	$ 60,341
Management Analysts	13-1111	$ 38.75	$ 23.23	$ 46.50	$ 34.59	$ 80,600
Market Research Analysts and Marketing Specialists	13-1161	$ 26.98	$ 16.35	$ 32.29	$ 24.76	$ 56,118
Marketing Managers	11-2021	$ 52.22	$ 29.96	$ 63.34	$ 48.56	$ 108,618
Network and Computer Systems Administrators	15-1142	$ 32.01	$ 22.62	$ 36.70	$ 30.83	$ 66,581
New Accounts Clerks	43-4141	$ 16.03	$ 12.85	$ 17.62	$ 15.75	$ 33,342
Office and Administrative Support Workers, Other	43-9199	$ 15.75	$ 9.93	$ 18.65	$ 15.07	$ 32,760
Office Clerks, General	43-9061	$ 15.02	$ 10.19	$ 17.44	$ 14.34	$ 31,242
Order Clerks	43-4151	$ 17.27	$ 10.01	$ 20.89	$ 17.07	$ 35,922
Personal Financial Advisors	13-2052	$ 39.34	$ 19.87	$ 49.08	$ 32.60	$ 81,827
Receptionists and Information Clerks	43-4171	$ 12.88	$ 9.45	$ 14.60	$ 12.56	$ 26,790
Secretaries, Except Legal, Medical, and Executive	43-6014	$ 15.00	$ 10.49	$ 17.26	$ 14.40	$ 31,200
Software Developers, Applications	15-1132	$ 38.39	$ 27.19	$ 43.99	$ 36.98	$ 79,851
Software Developers, Systems Software	15-1133	$ 43.78	$ 32.09	$ 49.63	$ 43.05	$ 91,062
Tellers	43-3071	$ 12.25	$ 9.91	$ 13.43	$ 11.93	$ 25,480
Training and Development Specialists	13-1151	$ 25.61	$ 16.06	$ 30.38	$ 24.21	$ 53,269
Web Developers	15-1134	$ 29.43	$ 16.18	$ 36.05	$ 27.48	$ 61,214
Word Processors and Typists	43-9022	$ 16.11	$ 11.65	$ 18.34	$ 16.81	$ 33,509

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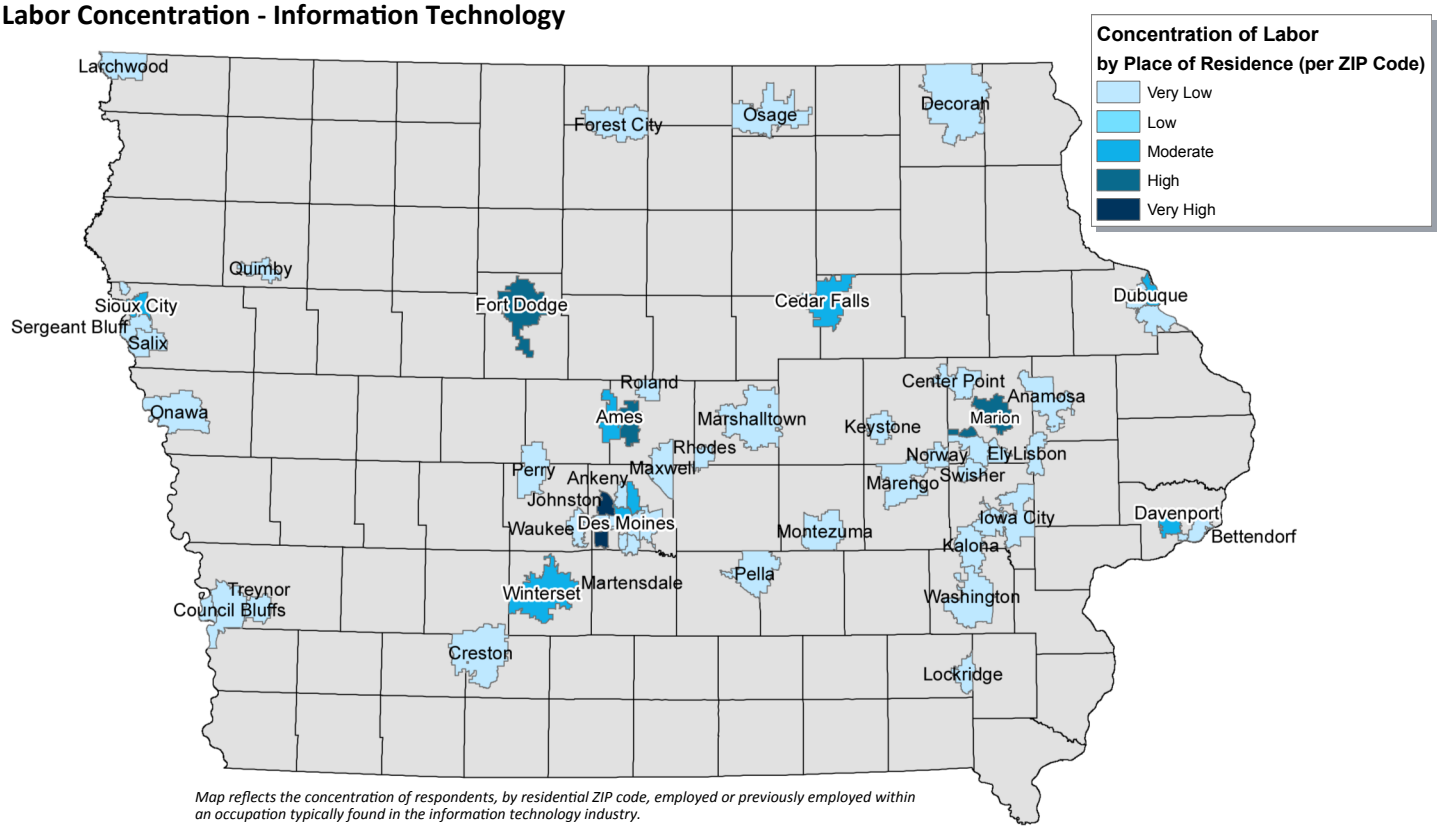
Figure 69
Labor Concentration - Information Technology



Map reflects the concentration of respondents, by residential ZIP code, employed or previously employed within an occupation typically found in the information technology industry.

Workers who have transferable experience/skills in the industry are currently commuting an average of 12 miles one-way for work. Those who are likely to change/accept employment are willing to commute an average of 25 miles one-way for the right employment opportunity.

Employment Status:

80.0% Employed
- 22.2% are likely to change employment

11.1% Unemployed
- 70.0% are likely to accept employment

2.2% Homemakers

6.7% Retired
- 33.3% are likely to accept employment

Employment Stats:

- 76.1% paid an annual salary
- 94.4% are/were employed full-time
- 2.2% are/were self-employed
- 2.2% are/were employed part-time
- 11.1% hold more than one job
- Currently working an average of 44 hrs/ week

Education Levels:

- 87.5% Education beyond high school
- 1.1% Trade certified
- 15.9% Associate degree
- 44.3% Undergraduate degree
- 12.5% Postgraduate degree

Current Benefits:

(Top 10 reported)
- Health/medical insurance - 97.3%
- Pension/retirement/401K - 77.3%
- Dental coverage - 73.3%
- Vision coverage - 53.3%
- Paid vacation - 52.0%
- Life insurance - 38.7%
- Paid sick leave - 37.3%
- Paid holidays - 32.0%
- Disability insurance - 28.0%
- Paid time off - 13.3%

Desired Benefits:

(Top 10 reported)
- Health/medical insurance - 94.7%
- Pension/retirement/401K - 52.6%
- Dental coverage - 42.1%
- Paid vacation - 36.8%
- Paid sick leave - 21.1%
- Paid time off - 21.1%
- Vision coverage - 21.1%
- Paid holidays - 15.8%
- Prescription drug coverage - 10.5%

Underemployment:

Total Underemployment - 4.4%
- Low hours - 0.0%
- Mismatch of skills - 3.3%
- Low income - 1.1%

(Individuals counted only once when estimating Total Underemployment.)

Occupational Categories:

- Professional, Paraprofessional & Technical - 91.1%
- Management & Administrative - 8.9%

Top Job Search Resources:

(For those seeking employment opportunities.)
- Internet - 91.8%
  - www.monster.com
  - www.linkedin.com
  - www.careerbuilder.com
  - www.indeed.com
  - www.dice.com
- Networking through family, friends & acquaintances - 27.1%
- Newspapers - 12.9%
- Iowa*WORKS* Centers - 11.8%

Flexibility in the Workplace:

(by percent of interest)
- Job teams - 80.0%
- Cross-training - 64.0%
- Job sharing - 28.0%
- Varied shifts - 20.0%
- Temporary work - 52.0%
- Seasonal work - 40.0%

Figure 70
Wage Survey - Information Technology

Occupation	Occupational Code	Mean Wage	Entry Wage	Experienced Wage	Median Wage	Mean Annual Salary
Computer and Information Systems Managers	11-3021	$ 54.91	$ 38.37	$ 63.18	$ 54.71	$ 114,213
Computer Network Architects	15-1143	$ 42.94	$ 29.58	$ 49.63	$ 43.21	$ 89,315
Computer Network Support Specialists	15-1152	$ 25.78	$ 18.33	$ 29.51	$ 23.95	$ 53,622
Computer Occupations, All Other	15-1199	$ 31.07	$ 19.27	$ 36.96	$ 30.73	$ 64,626
Computer Operators	43-9011	$ 19.40	$ 11.45	$ 23.38	$ 18.61	$ 40,352
Computer Programmers	15-1131	$ 32.67	$ 22.12	$ 37.95	$ 32.75	$ 67,954
Computer Systems Analysts	15-1121	$ 37.27	$ 25.50	$ 43.16	$ 36.30	$ 77,522
Computer User Support Specialists	15-1151	$ 20.73	$ 13.33	$ 24.43	$ 20.59	$ 43,118
Database Administrators	15-1141	$ 37.38	$ 23.15	$ 44.49	$ 38.34	$ 77,750
Information Security Analysts	15-1122	$ 35.33	$ 23.82	$ 41.08	$ 34.03	$ 73,486
Network and Computer Systems Administrators	15-1142	$ 32.01	$ 22.62	$ 36.70	$ 30.83	$ 66,581
Operations Research Analysts	15-2031	$ 36.10	$ 24.59	$ 41.86	$ 35.61	$ 75,088
Software Developers, Applications	15-1132	$ 38.39	$ 27.19	$ 43.99	$ 36.98	$ 79,851
Software Developers, Systems Software	15-1133	$ 43.78	$ 32.09	$ 49.63	$ 43.05	$ 91,062
Web Developers	15-1134	$ 29.43	$ 16.18	$ 36.05	$ 27.48	$ 61,214

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APPENDICES

SURVEY BACKGROUND AND METHODOLOGY

In early 1998, the Institute for Decision Making (IDM) at the University of Northern Iowa (UNI) completed the first pilot Laborshed study. The Laborshed approach and methodology was developed to meet the specific needs of economic development groups trying to understand and detail the unique characteristics of their area labor force. From 1998 to June, 2001, IDM completed 24 Laborshed studies for Iowa communities and gained national attention for its innovative approach. Beginning in 1999, Laborshed studies were completed in partnership with the Iowa Economic Development Authority (IEDA) and Iowa Workforce Development (IWD) for communities that met specific criteria and for "immediate opportunities" (expansion projects or prospects).

During the 2000 legislative session, the General Assembly mandated that as of July 1, 2001, IWD would assume the responsibilities for conducting Laborshed studies for Iowa communities. The IDM staff worked with members of IWD to train them in IDM's Laborshed process and methodology. Beginning in July, 2001, IWD assumed all responsibilities for scheduling and conducting all future Laborshed projects in Iowa.

Previously faced with historically low unemployment rates—and the incorrect assumption that economic growth cannot occur within the state because the communities in Iowa had reached full employment—local economic development officials throughout Iowa needed access to obtain timely and tailored data to help define their available labor force and its characteristics. In today's economy, employers desire a higher skilled, educated worker. Often employers do not have the excess resources to blanket an area for employment opportunity recruitment. The Laborshed study addresses both of these issues and more to assist employers and communities with expansion efforts.

The discrepancy between the assumptions and the reality of employment measures indicates that a problem exists in the way unemployment data is defined, measured, reported and used. When unemployment statistics are utilized as the sole method for determining labor availability, they appear to lead to inaccurate conclusions regarding the potential available labor supply within a "Laborshed" or sub-labor market area (sub-LMA). A Laborshed area is defined as the actual geographical area from which a city, county or region draws its commuting workers. This Laborshed area has been found to extend beyond the confines of county and state boundaries typically used to delineate labor information.

Individual Laborshed analyses are conducted on demand for specific communities. Typically, three employment zones surrounding the target community are determined based on upon current commuting patterns. A total of 405 interviews are usually commissioned for the community study (this sample size varies based on the size of the node community; however, 405 is the smallest sample size used). The resulting data are used to analyze the potential labor force for existing and prospective businesses. While satisfying local needs, this program has some important limitations.

Even after more than 80 community studies and several thousand interviews, data is often not collected for all parts of the State. This left holes in IWD's statewide dataset. In addition, some of the data becomes too old to be useful for contemporary analysis.

A statewide rolling survey with over-sampling for community studies has had several advantages over the community-only strategy:

1. Data were continuously available for constructing a snapshot of the entire state's Laborshed characteristics, including the size of the actual workforce by occupational category and estimates of the number and percent underemployed, likely to change employment, willing to commute, their skills and experience, wage and salary requirements and flexibility and adaptability in the workplace. This information is used to promote the state as a whole at any one time.

2. Data for specific community studies is available more quickly. The statewide survey is continuously producing data that is current and available for use in specific community studies. This would reduce the time needed to collect data for that study, thus reducing the time needed to complete a community study.
3. Costs for Laborsheds are more predictable. Since the statewide survey has a constant cost, part of the Laborshed enterprise is known in advance of any community oversample effort.

According to the most recent US census data, 935 zip codes are assigned to Iowa, containing 1,236,209 households with a total population of 3,090,416. In the following table the proportion of Iowa households within each zip code area has been calculated and used to estimate the number of completed interviews that fall proportionately into each zip code area under various sampling assumptions. This can be summarized for the state as follows:

Time/Sample	500/month	S.E.	250/month	S.E.
6 months	3000	+/-1.8%	1500	+/-2.6%
12 months	6000	+/-1.3%	3000	+/-1.8%
18 months	9000	+/-1.1%	4500	+/-1.5%
24 months	12000	+/-0.9%	6000	+/-1.3%

The more ambitious scenario shown assumes 500 interviews are completed statewide each month. This would result in the state having a valid, self-representing sample of 3,000 cases within six months of the beginning of data collection. Such a sample would have a sampling error of +/- 1.8%. Within 12 months, statewide data would be available for 6,000 cases with a sampling error of +/-1.3% and so forth into the future. This scenario is normally used for the statewide analysis. However, during the 2015 data collection year an average of 340 interviews were completed statewide each month. Therefore, this analysis is based upon a representative sample of 4,071 cases.

Survey administrators posed questions to people between the ages of 18 to 64 to determine the respondents' gender, age, education level, place of residence and current employment status. Employed respondents also identified the location of their employer, employer type, occupation, years of employment in their occupation, employment status, current salary or wage, additional education/skills possessed, number of jobs currently held, distance traveled to work and the hours worked per week. Employed respondents were then asked how likely they were to change employers or employment, how far they would be willing to travel for employment, the wage required for them to change employment and the benefits desired for new employment. Underemployment was estimated by examining those employees that work less than 35 hours per week desiring more hours than offered in their current position; those who stated they possess additional education/ skills that they do not utilize in their current position and/or earned more at their previous job; and those that earn wages insufficient enough to keep them above the poverty level but are working 35 or more hours per week.

Respondents identifying themselves as unemployed, a homemaker or retired were asked a series of questions to determine what job characteristics and benefits were most important to them when considering employment, the reasons for unemployment, obstacles to employment and how far they would be willing to travel to accept employment. Information on previous employers and skills was also gathered for these sectors. Once completed, the results of the survey were compiled and cross-tabulated to determine the relationship between the variables.

Documenting and analyzing Laborshed survey results by occupation and industry, as well as overall, provides new insight into the labor force that is currently unavailable in any other form.

CURRENT METHODS OF ESTIMATING EMPLOYMENT AND UNEMPLOYMENT

The federal government and the State of Iowa estimate an area's labor force by drawing from the portion of the civilian population that is non-institutionalized, 16 years of age or older and currently employed or unemployed (*BLS Handbook of Methods*, Chapter 1, p. 5). The Bureau of Labor Statistics (BLS) defines employed persons in the following two ways:

1. Did any work at all as paid employees, for their own business or profession or on their own farm, or worked 15 hours or more as unpaid workers in a family-operated enterprise (*BLS Handbook of Methods,* Chapter 1, p. 5).
2. Did not work but had jobs or businesses from which they were temporarily absent due to illness, bad weather, vacation, childcare problems, labor dispute, maternity or paternity leave, or other family or personal obligations -- whether or not they were paid by their employers for the time off and whether or not they are seeking other jobs (*BLS Handbook of Methods,* Chapter 1, p. 5).

Each employed person is counted only once, even if he or she holds more than one job. Included in the total are employed citizens of foreign countries who are residing in the United States, but who are not living on the premises of an embassy. Excluded are persons whose only activity consisted of work around their own home (such as housework, painting, repairing, and so forth) or volunteer work for religious, charitable, and similar organizations (*BLS Handbook of Methods*, Chapter 1, p.5).

Unemployed persons are defined as those individuals that were not employed on a given reference week prior to questioning and who made an effort to find work by contacting prospective employers. These individuals identified that they are ready to work with the exception of inability due to a temporary illness. Individuals are also classified as unemployed if they have been laid off and are awaiting recall back to their positions (*BLS Handbook of Methods,* Chapter 1, p. 5). The unemployed are grouped into four classifications: 1) *job losers*, (both temporarily and permanently laid off); 2) *job leavers*, quit/terminated and looking for work; 3) *reentrants* to the job market after an extended absence; and 4) *new entrants* that have never worked (*BLS Handbook of Methods,* Chapter 1, p. 5).

Those individuals that are not classified as employed or unemployed are not considered to be part of the labor force by BLS. The non-working designation may be due to a variety of reasons; however, the underlying factor is that the individuals have not sought employment within the past four weeks (*BLS Handbook of Methods,* Chapter 1, p. 6).

Because the BLS utilizes a multiple step process to estimate employment and underemployment statistics on a monthly basis, this process cannot be described in only a few paragraphs. A complete summary of the process used to generate national estimates and an outline of the process used to generate state and sub-state projections is available through Iowa Workforce Development.

METHODS FOR ESTIMATING EMPLOYMENT

The BLS uses the employed and unemployed persons to calculate the civilian labor force, the unemployment rate and labor force participation rate.

The labor force is:

employed + unemployed = labor force

The labor force participation rate is:

labor force / non-institutionalized citizens 16+ years of age = LFPR

The unemployment rate is the percentage of the civilian labor force that is unemployed:

unemployed / total labor force = unemployment rate (*BLS Handbook of Methods,* Chapter 1, p. 5)

A proper interpretation of the unemployment **rate** requires an understanding of the processes used to generate the data on which the calculations are based. The BLS uses the monthly Current Population Survey (CPS) to collect data from a sample of about 72,000 households, taken from 754 sample areas located throughout the country. The purpose of the survey is to collect information on earnings, employment, hours of work, occupation, demographics, industry and socio-economic class. The data is obtained through personal and telephone interviews. Of the 72,000 households, only about 60,000 are generally available for testing. The 60,000 households generate information on approximately 110,000 individuals (*BLS Handbook of Methods*, Chapter 1, p. 8). Each household is interviewed for two, four-month periods, with an eight-month break between the periods. The pool of respondents is divided into 8 panels, with a new panel rotated in each month *(BLS Handbook of Methods*, Chapter 1, p. 10).

The 754 sample areas from which the households are selected represent 3,141 counties and cities broken into 2,007 population sample units (PSU's). A PSU can consist of a combination of counties, urban and rural areas or entire metropolitan areas that are contained within a single state. The PSU's for each state are categorized into the 754 sample groups of similar population, households, average wages and industry. The 754 sample areas consist of 428 PSU's that are large and diverse enough to be considered an independent PSU and 326 groupings of PSU's (*BLS Handbook of Methods*, Chapter 1, p. 9).

The sample calculates an unemployment estimate with a 1.9 percent coefficient of co-variation. This is the standard error of the estimate divided by the estimate, expressed as a percentage. This translates into a 0.2 percent change in unemployment being significant at the 90 percent confidence level. The respondent's information is weighted to represent the group's population, age, race, sex and the state from which it originates. Using a composite estimation procedure minimizes the standard of error for the estimate. This estimate is based on the two-stage rotation estimate on data obtained from the entire sample for the current month and the composite estimate for the previous month, adjusted by an estimate of the month-to-month change based on the six rotation groups common to both months (*BLS Handbook of Methods*, Chapter 1, p. 8). The estimates are also seasonally adjusted to minimize the influence of trends in seasonal employment.

IOWA & SUB-STATE UNEMPLOYMENT RATES

The Current Population Survey (CPS) produces reliable national unemployment estimates; however due to the small sample size of the CPS survey, BLS applies a Time Series Model to increase reliability. The regression techniques used in the model are based on historical and current relationships found within each state's economy. The primary components of the state estimation models are the results from state residents' responses to the household survey (CPS), the current estimate of nonfarm jobs in the state via Current Employment Statistics (CES) and the number of individuals filing claims for Unemployment Insurance (UI). Iowa's Labor Market Area consists of nine metropolitan areas, 15 micropolitan areas and 62 small labor market areas. For further definition of counties included in micropolitan statistical areas, visit: https://iwd-lmi.maps.arcgis.com/apps/webappviewer/index.html?id=d3b0f39e8bcb4300820372314c31b551
and for counties included in metropolitan statistical areas (MSA), visit: https://iwd-lmi.maps.arcgis.com/apps/webappviewer/index.html?id=2b2c3d336ad941438d18685a780b5147.

A time series model is used to estimate state labor force statistics and a Handbook method is used for sub-state projections. The state unemployment estimates are based on a time series to reduce the high variability found in the CPS estimates caused by small sample size. The time series combines historical relationships in the monthly CPS estimates along with UI and CES data. Each State has two models designed for it that measure the employment to work ratio and the unemployment rate (*BLS Handbook of Methods*, Chapter 4, p. 37).

The CES is a monthly survey of employers conducted by the BLS and state employment agencies. Employment, hours/overtime and earning information for 400,000 workers are obtained from employer payroll records. Annually, the monthly unemployment estimates are benchmarked to the CPS estimate so that the annual average of the final benchmarked series equals the annual average and to preserve the pattern of the model series (*BLS Handbook of Methods*, Chapter 4, p. 38).

The sub-state unemployment estimates are calculated by using the *BLS Handbook of Methods* method. The *Handbook* method accounts for the previous status of the unemployed worker and divides the workers into two categories: those who were last employed in industries covered by State Unemployment Insurance (UI) laws and workers who either entered the labor force for the first time or reentered after a period of separation (*BLS Handbook of Methods*, Chapter 4, p. 38).

Individuals considered covered by UI are those currently collecting UI benefits and those that have exhausted their benefits. The data for those that are insured is collected from State UI, Federal and Railroad programs. The estimate for those who have exhausted their funds is based on the number who stopped receiving benefits at that time and an estimate of the individuals who remain unemployed (*BLS Handbook of Methods,* Chapter 4, p. 39).

New entrants and reentrants into the labor force are estimated based on the national historical relationship of entrants to the experienced unemployed and the experienced labor force. The Department of Labor states that the Handbook estimate of entrants into the labor force is a function of (1) the month of the year, (2) the level of the experienced unemployed, (3) the level of the experienced labor force and (4) the proportion of the working age population *(BLS Handbook,* Chapter 4, p. 39). The total entrants are estimated by:

$$ENT = A(X+E)+BX$$

where:

ENT = total entrant unemployment

E = total employment

X = total experienced unemployment

A,B = synthetic factors incorporating both seasonal variations and the assumed relationship between the proportion of youth in the working-age population and the historical relationship of entrants, either the experienced unemployed or the experienced labor force (*BLS Handbook*, Chapter 4, p. 39).

Total employment (E) estimates represent the total number of paid employees in non-farm industries. The estimates are based on various sources, including the CES survey and state designed surveys of establishments. These figures are combined with a weighted factor accounting for historic employment relationships found in the Census. The resulting estimate is combined with standard estimates for agricultural workers, non-farm self -employed and unpaid family workers and private household workers to compute the total Handbook employment (*BLS Handbook*, Chapter 4, p. 39). Total unemployment for the sub-state/LMA is estimated by the formula:

$$Ua(t) = Us(t) * UHBa(t)$$

Where:

U = total unemployment

UHB = Handbook unemployment

a = area

s = state

t = time

Unemployment estimates for portions of the LMAs are calculated by one of two methods, (1) the population-claims method or (2) the Census-share method. The population-claims method is the preferred method according to the BLS. Where available, resident based UI claims data for the sub-LMA area are used to find the ratio of the claims to the total number of UI claims within the LMA. This figure is used to analyze the estimate of experienced unemployed in the area. The number of unemployed entrants is based on the Census distribution of adult and teenage population groups. The employment is estimated using current population distributions prepared by the Census Bureau and weighted by each area's Census relative share of employment to population. The Census-share method is used if UI claims data for the sub-LMA area is unavailable. Instead, the decennial Census data from the county in which the area is located is divided into a portion consistent with the size of the area. The Census-share method is less accurate than the population-claims method (*BLS Handbook*, Chapter 4, p. 40).

LIMITATIONS

Since the State, LMA & sub-LMA data are not directly obtained from a survey; the estimates calculated are subject to a level of error. These errors can occur due to improper estimations and insufficient data sources. Unfortunately, a universal level of error cannot be easily computed because of the wide variety of sources and methods used. The CPS information used to calculate the national estimates and to benchmark the state figures is subject to sampling and non-sampling error. Non-sampling errors in the CPS, such as those due to respondent bias and question interpretation, are minimized through re-interviewing respondents and rotating the panels of respondents. Sampling errors in the CPS over time show that 68 percent of the intervals are within 1 standard deviation, 90 percent are within 1.6 standard deviations and 95 percent of the intervals are within 2 standard deviations of the mean (*BLS Handbook*, Chapter 1, p. 14).

STANDARD OCCUPATIONAL CODES (SOC)

11-0000 – 11-9199 **MANAGEMENT OCCUPATIONS**
- General and Operations Managers
- Industrial Production Managers
- Education Administrators

13-0000 – 13-2099 **BUSINESS AND FINANCIAL OPERATIONS OCCUPATIONS**
- Employment, Recruitment and Placement Specialists
- Management Analysts
- Financial Specialists

15-0000 – 15-2041 **COMPUTER AND MATHEMATICAL OCCUPATIONS**
- Computer Programmers
- Actuaries
- Statisticians

17-0000 – 17-3031 **ARCHITECTURE AND ENGINEERING OCCUPATIONS**
- Surveyors
- Engineers
- Mechanical Drafters

19-0000 – 19-4099 **LIFE, PHYSICAL AND SOCIAL SCIENCE OCCUPATIONS**
- Soil and Plant Scientists
- Market Research Analysts
- Clinical, Counseling and School Psychologists

21-0000 – 21-2099 **COMMUNITY AND SOCIAL SERVICES OCCUPATIONS**
- Child, Family and School Social Workers
- Social and Human Service Assistants
- Clergy

23-0000 – 23-2099 **LEGAL OCCUPATIONS**
- Lawyers
- Paralegals and Legal Assistants
- Title Examiners, Abstractors and Searchers

25-0000 – 25-9099 **EDUCATION, TRAINING AND LIBRARY OCCUPATIONS**
- Elementary School Teachers
- Secondary School Teachers
- Librarians

27-0000 – 27-4099 **ARTS, DESIGN, ENTERTAINMENT, SPORTS AND MEDIA OCCUPATIONS**
- Graphic Designers
- Public Relations Specialists
- Photographers

29-0000 – 29-9099 **HEALTHCARE PRACTITIONERS AND TECHNICAL OCCUPATIONS**
- Pharmacists
- Family and General Practitioners
- Registered Nurses

31-0000 – 31-9099 **HEALTHCARE SUPPORT OCCUPATIONS**
- Nursing Aides, Orderlies and Attendants
- Dental Assistants
- Veterinary Assistants and Laboratory Animal Caretakers

33-0000 – 33-9099 **PROTECTIVE SERVICE OCCUPATIONS**
- Fire Fighters
- Police and Sheriff's Patrol Officers
- Security Guards

35-0000 – 35-9099 **FOOD PREPARATION AND SERVING-RELATED OCCUPATIONS**
- Cooks
- Waiters and Waitresses
- Dishwashers

37-0000 – 37-3019 **BUILDING AND GROUNDS CLEANING AND MAINTENANCE OCCUPATIONS**
- Janitors and Cleaners
- Maids and Housekeeping Cleaners
- Landscaping and Groundskeeping Workers

39-0000 – 39-9099 **PERSONAL CARE AND SERVICE OCCUPATIONS**
- Hairdressers, Hairstylists and Cosmetologists
- Child Care Workers
- Recreation Workers

41-0000 – 41-9099 **SALES AND RELATED OCCUPATIONS**
- Cashiers
- Retail Salespersons
- Telemarketers

43-0000 – 43-9199 **OFFICE AND ADMINISTRATIVE SUPPORT OCCUPATIONS**
- Customer Service Representatives
- Secretaries
- Office Clerks

45-0000 – 45-4023 **FARMING, FISHING AND FORESTRY OCCUPATIONS**
- Agricultural Equipment Operators
- Farmworkers, Farm and Ranch Animals
- Forest and Conservation Workers

47-0000 – 47-5099 **CONSTRUCTION AND EXTRACTION OCCUPATIONS**
- Carpenters
- Construction Laborers
- Highway Maintenance Workers

49-0000 – 49-9099 **INSTALLATION, MAINTENANCE AND REPAIR OCCUPATIONS**
- Telecommunications Equipment Installers and Repairers
- Automotive Service Technicians and Mechanics
- Millwrights

51-0000 – 51-9199 PRODUCTION OCCUPATIONS

Team Assemblers
Slaughterers and Meat Packers
Welders, Cutters, Solderers and Brazers

53-0000 – 53-7199 TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS

Truck Drivers
Industrial Truck and Tractor Operators
Packers and Packagers, Hand

OCCUPATIONAL EMPLOYMENT STATISTICS (OES) CATEGORY STRUCTURE

Managerial/Administrative Occupations

Administrative Services
General Operations Managers
Human Resources Occupations
Training & Development Occupations

Professional, Paraprofessional & Technical Occupations

Business Support
Computer, Mathematical and Operations Research
Engineers
Health Practitioners
Natural Scientists
Social Scientists
Teachers
Writers, Artists, Entertainers and Athletes

Sales Occupations

Market Research Analysts
Purchasing Agents
Sales Agents
Sales Representatives
Salespersons
Wholesale & Retail Buyers

Clerical/Administrative Support Occupations

Electronic Data Processing
Office Clerks
Office Support Workers
Secretarial

Service Occupations

Cleaning and Building Service
Food and Beverage
Health Service
Personal Service
Protective Service

Agricultural Occupations

Agricultural Equipment Operators
Agricultural Workers
Farmers & Ranchers
Farmworkers & Laborers

Production, Construction, Operating, Maintenance & Material Handling Occupations

Construction Trades and Extraction
Hand Working Occupations
Helpers, Laborers and Material Movers, Hand
Machine Setters, Set-Up Operators, Operators and Tenders
Plant and System
Precision Production
Transportation and Material Moving

LABOR MARKET INFORMATION WEB RESOURCES

Labor Market Information Division:

Labor Market Information Division (IWD): *Iowa's premier source for labor market information.*
- https://www.iowalmi.gov

Laborshed Studies: *Current local, regional and statewide Laborshed executive summaries.*
- https://www.iowaworkforcedevelopment.gov/laborshed-studies

Workforce Needs Assessment: *Data regarding level of employment and job vacancies as reported by employers.*
- https://www.iowaworkforcedevelopment.gov/iowa-workforce-needs-assessment

Current Employment Statistics (CES): *Detailed industry data on employment, hours and earnings of nonfarm workers.*
- https://www.iowaworkforcedevelopment.gov/current-employment-statistics (Iowa)
- http://www.bls.gov/ces/home.htm (National)

Iowa Industry Projections: *Expected job growth and decline by industry, both long-term and short-term.*
- https://www.iowaworkforcedevelopment.gov/industry-projections

Iowa Licensed Occupations: *Occupations in Iowa that require license, certificate or commission issued at the state level.*
- https://www.iowaworkforcedevelopment.gov/iowa-licensed-occupations

Iowa Occupational Projections: *Expected job growth or decline by major occupational categories.*
- https://www.iowaworkforcedevelopment.gov/occupational-projections

Labor Force, Employment & Unemployment Summaries: *Current and historical data by city, county and statewide.*
- https://www.iowaworkforcedevelopment.gov/local-area-unemployment-statistics

Occupational Employment Statistics (OES) Wage Survey and Iowa Wage Survey: *Employment and wage estimates.*
- https://www.iowaworkforcedevelopment.gov/occupational-employment-and-wages (Iowa)
- http://www.bls.gov/oes/home.htm (National)

Quarterly Census of Employment and Wages (QCEW): *Data on industry employment, wages and number of establishments.*
- https://www.iowaworkforcedevelopment.gov/quarterly-census-employment-and-wages (Iowa)
- http://www.bls.gov/cew/home.htm (National)

Additional Information:

Iowa*WORKS*: *IWD's one-stop resource for Iowa businesses to find workforce information and solutions.*
- https://www.iowaworkforcedevelopment.gov/iowaworks-centers

Local Employment Dynamics (LED): *Data on employment and earnings by industry and for various demographic groups.*
- http://lehd.did.census.gov

O*NET On-line (Occupational Information Network): *An interactive application for exploring and searching occupations.*
- http://www.onetonline.org

OnTheMap: *An online interface for creating workforce related maps, demographic profiles and reports.*
- http://onthemap.ces.census.gov

Skilled Iowa: *An initiative aimed at certifying Iowa residents in foundational workplace skills by earning an NCRC credential.*
- http://www.skillediowa.org

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