



Northeast Iowa

BUSINESS NETWORK

Regional Skillshed Analysis

Executive Summary

A Study of Supply, Demand, and Skills Gaps
Released September 2011

Introduction

A Skillshed is the geographic area from which a region pulls its workforce and the skills, education, and experience that the workforce possesses. Traditionally, labor markets have been studied in terms of the products produced by a region to understand what industries are relatively strong. A Skillshed helps to understand not only where the region's competitive strengths currently lie by detailing the current workforce mix, but also in which occupations or industries the region could grow into by understanding the difference between the current skill set and that skill set needed by emerging markets. The outcome of the Skillshed helps to analyze four key findings:

- Identification of the current skills possessed by the supply of workers.
- Projected employment growth, and median wages, skills, and knowledge needed by employers.
- The demand for workers considering the factors affecting supply and demand
- Gap analysis between the current set of skills and education and that set needed by current and prospective employers.

The Skillshed analysis integrated and analyzed information from three different sources; the Northeast Iowa Business Network Laborshed Study, the Regional Workforce Needs Assessment (Job Vacancy) Survey, and information from the Occupational Information Network (O*NET). These three sources were used to present the supply and demand for labor within the region and the examples of gap analysis from current to emerging or high growth occupations.

The Laborshed survey was conducted and analyzed using 807 telephone survey responses from a random sample of 18-64 year olds within the region. Respondents were asked a wide range of demographic and employment-related questions. Areas of interest from the Laborshed survey:

- Work experience within the region
- Population by occupational category
- Unemployment and commuting patterns

The second annual Workforce Needs Assessment was conducted from October 2009 through October 2010. There were 356 employer responses from the Northeast Iowa Business Network Region, yielding an 18.4 percent response rate. In addition to vacancy and retirement data, this year's survey included questions pertaining to average hourly starting wage. Analysis of the survey illustrates the demand for workers and skills required in the vacant positions. Areas analyzed using the Iowa Workforce Needs Assessment were:

- Vacancies by occupation
- Vacancies across industries
- Work activities, skills, and knowledge areas most needed by employers
- Starting wages offered and experience required

The Occupational Information Network (O*NET) is a joint effort between the US Department of Labor and the North Carolina Employment Security Commission. It provides a database of standardized and occupation-specific descriptions that help determine which factors are critical in the performance of an occupation. Data used for these analyses were:

- Work activities
- Knowledge
- Skills
- Job Description

Supply of Workers

Through use of the Laborshed study, the current occupations and skills of the region were identified. **Table 1** (below) shows the top occupational experience reported in the region by percentage of total and compares the regional Laborshed percent of occupations to that of the state. This comparison helps to identify those categories of occupations in which the region may have a higher concentration of workers and, therefore, may have a competitive advantage.

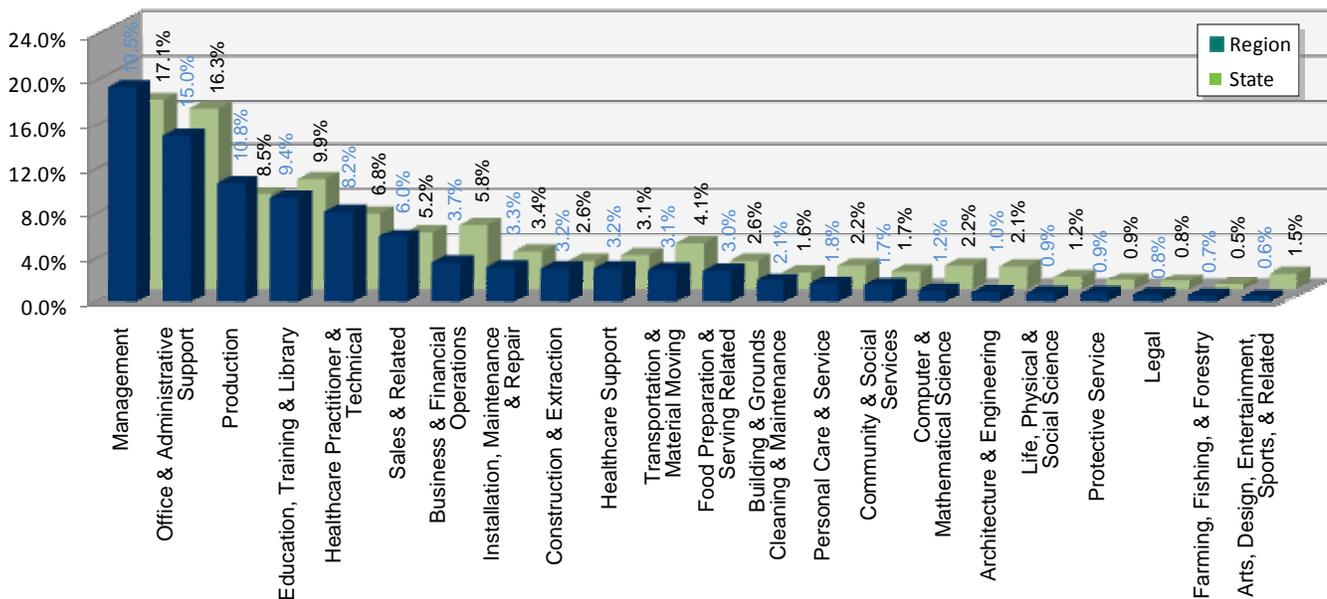
The table also includes the statewide projected annual growth rate in employment¹. The average projected growth rate for all jobs in the state is .98 percent with trucking and healthcare occupations exceeding the average.

Table 1
Occupational Experience in Region

Occupation	SOC Code	Percent of Region ²	Percent of State ³	Statewide Projected Annual Growth Rate ¹
General and Operations Managers	11-1021	6.1%	1.6%	0.0%
Teachers and Instructors, All Other	25-3099	5.0%	5.7%	1.4%
Production Workers, All Other	51-9199	4.0%	2.5%	0.6%
Registered Nurses	29-1111	3.4%	3.2%	2.2%
Managers, All Other	2666211	2.8%	4.1%	0.8%
Farmers and Ranchers	2597911	2.7%	1.9%	-0.2%
Chief Executives	11-1011	2.4%	4.3%	-0.1%
First-Line Supervisors and Managers of Office and Administrative Support Workers	43-1011	2.4%	2.6%	1.2%
Executive Secretaries and Administrative Assistants	43-6011	2.3%	3.1%	1.2%
Teacher Assistants	25-9041	1.8%	1.9%	0.9%
First-Line Supervisors/Managers of Production and Operating Workers	51-1011	1.6%	1.3%	0.2%
Bookkeeping, Accounting, and Auditing Clerks	43-3031	1.5%	1.2%	1.1%
Customer Service Representatives	43-4051	1.5%	1.7%	2.4%
Nursing Aides, Orderlies, and Attendants	31-1012	1.5%	1.2%	1.9%
Sales and Related Workers, All Other	41-9099	1.4%	0.8%	0.7%

The occupations listed above can also be analyzed by overall occupational category. **Chart 1** presents the occupational categories for the region. The region has a high relative concentration of workers in the management, office & administrative support, and production occupational categories which is similar to that of the state with office & administrative support (17.1%), management (16.3%), and production (8.5%).

Chart 1
Population by Occupational Category



¹ <http://win.iwd.state.ia.us/pubs/region01/region01occproj.pdf>

² Northeast Iowa Laborshed Survey (2011)

³ Iowa Laborshed Survey (2010)

Commuting and Willingness to Change/Accept Employment

The Laborshed Study also presents data on the commuting patterns and the willingness to change and/or accept employment. On average, workers within the region currently commute 10 miles each way to work for a median wage of \$14.50 per hour and would be willing to commute up to 14 miles for a desired median wage of \$14.00 per hour.

Over one-fourth (26.2%) of the employed are willing to change employment and almost three-fourths (71.5%) of those reporting to be unemployed are willing/able to accept employment within the region. Commuting ranges and the willingness to change and/or accept employment could have an impact on economic development as the region covers a relatively large area and the majority are rural communities.

Demand for Workers

The Workforce Needs Assessment reveals the vacant jobs employers reported in the region. **Table 2** shows the occupations with the most reported vacancies, the average starting wage, statewide median wage, and the statewide starting wage. The relationship between the regional starting wage and statewide wages can help us analyze the demand for workers within an occupation. For the most part, starting wages for jobs within the region are between the statewide starting wage and the statewide median wage. Regional starting wages greater than the statewide median wage may indicate an occupation highly in-demand. These workers are so highly needed that a significantly higher wage is still not enough to satisfy employer demand.

Demand for workers also helps to show the current demand for skills and education within the region. By using the occupations as a proxy for skills and education need, the current vacancies can be translated to needed skill sets. These needed skill sets can then be analyzed with projected growth in occupations and wages. When analyzing employer needs and economic growth within a region, it is important to see which jobs are in high-demand currently, which jobs are projected to grow in the future, and whether any overlap occurs between currently demanded occupations and those with high projected growth rates.

Table 2
Occupations with Most Vacancies

Job Title	SOC Code	Regional Starting Wage ¹	Statewide Entry Level Wage ²	Statewide Median Wage ²
Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	33-9092	\$ 7.50	\$ 7.96	\$ 8.40
Recreation Workers	39-9032	\$ 14.17	\$ 8.27	\$ 9.67
Coaches and Scouts	27-2022	\$ 12.28	\$ 7.86	\$ 9.03
Teachers and Instructors, All Other	25-3099	\$ 19.05	\$ 10.72	\$ 13.46
Nursing Aides, Orderlies, and Attendants	31-1012	\$ 9.55	\$ 9.78	\$ 11.44
Production Workers, All Other	51-9199	\$ 11.00	\$ 9.37	\$ 13.42
Executive Secretaries and Administrative Assistants	43-6011	\$ 8.48	\$ 13.35	\$ 18.15
Registered Nurses	29-1111	\$ 20.05	\$ 19.18	\$ 24.44
Rehabilitation Counselors	21-1015	\$ 10.36	\$ 9.44	\$ 12.38
Cooks, All Other	35-2019	\$ 7.80	\$ 8.60	\$ 10.65
Managers, All Other	11-9199	\$ 17.52	\$ 19.19	\$ 34.48
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	51-4122	\$ 13.00	\$ 13.09	\$ 16.09

Table 3 (next page) shows the largest industries in the region (by employment), and the vacancies most reported by those industries. The wholesale and retail trade industries have been combined due to the similarity in occupational mix.

In some instances, employers may have difficulty filling a vacancy in one industry but can fill the same occupation in another industry quite easily. Aside from differences in starting wages, these cases can occur because work duties and educational requirements may be similar across industries, but the work environment may be different and applicants may need some industry specific knowledge. Other occupations may be equally difficult to fill across industries. By examining the occupations demanded across industries, we can begin to see a demand picture for occupational categories.

¹ Northeast Iowa Workforce Needs Assessment (2011)

² Iowa Wage Survey 2010, Iowa Workforce Development: Iowa Trends

Employers in the region reported requiring less experience and fewer years of formal education for their vacancies than those levels generally reported on O*NET or other occupational planning sources. This indicates that employers are willing to work with applicants to develop the skills and knowledge for the job rather than demanding that an applicant possess all skills at the outset.

**Table 3
Top Jobs Within Region's Largest Industries**

Industry	Occupation	Average Education Requirement	Average Experience Requirement	Average Starting Wage ³
Education	Coaches and Scouts	*	1-2 years	\$ 10.85
	Teachers & Instructors, All Others	Bachelor Degree	3-5 years	\$ 21.76
	Recreation Workers	Bachelor Degree	1-2 years	\$ 17.50
Health Care & Social Services	Rehabilitation Counselors	Bachelor Degree	3-5 years	\$ 10.36
	Nursing Aides, Orderlies, and Attendants	Associate Degree	No Experience Needed	\$ 9.55
	Executive Secretaries and Administrative	Associate Degree	1-2 years	\$ 8.62
	Registered Nurses	Technical Training/Certification	3-5 years	\$ 20.05
Manufacturing	Machinists	Technical Training/Certification	1-2 years	\$ 12.00
	Production Workers, All Other	High School Diploma/GED	No Experience Needed	\$ 10.50
	Welding, Soldering, & Brazing Machine	Technical Training/Certification	1-2 years	\$ 13.00
Wholesale & Retail Trade	Food Preparation & Serving Related	High School Diploma/GED	No Experience Needed	\$ 7.25
	Retail Salespersons	High School Diploma/GED	No Experience Needed	\$ 10.00
	Truck Drivers, Heavy & Tractor-Trailer	Technical Training/Certification	1-2 years	\$ 7.75
Public Administration	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	High School Diploma/GED	No Experience Needed	\$ 7.50
	Recreation Workers	Bachelor Degree	1-2 years	\$ 7.50

Table 4 and **Table 5** show the top work activities, the top skills, and the top knowledge required by employers to fill current positions and those critical to the three occupational clusters of healthcare, information technology, and advanced manufacturing. Overwhelmingly, employers reported their need for workers that could interact and communicate with others inside and outside the organization.

**Table 4
Work Activities by Employer Needs**

Work Activities
Assisting and Caring for Others
Communication with Supervisors, Peers, or Subordinates
Documenting and Recording Information
Establishing and maintaining Interpersonal Relationships
Getting Information
Identifying Objects, Actions, or Events
Inspecting Equipment, Structures, or Material
Interacting with Computers
Making Decisions and Problem Solving
Updating and Using relevant Knowledge

**Table 5
Knowledge by Employer Needs**

Knowledge
Administration and Management
Computers & Electronics
Customer Service
Design
Engineering & Technology
English Language
Mathematics
Mechanical
Medicine & Dentistry
Psychology
Telecommunications
Therapy & Counseling

³ Iowa Workforce Needs Assessment Survey, Iowa Workforce Development: Regional Research & Analysis Bureau (2011)

Table 6 presents a sample of high growth occupations, their projected annual growth rates, and median wages. These data (projected employment 2008-2018) represent the occupations that are most likely to experience growth throughout the region based on current employment. The industry projections for the same time period show growth by percent employment change in internet service providers (50.7%); other information services (44.1%); professional, scientific, and technical services (32.6%); and ambulatory healthcare services (30.0%)².

**Table 6
Regional High Growth Occupations**

Occupation	Projected Annual Growth Rate ¹	Statewide Median Wage ¹
Network Systems and Data Communications Analysts	5.4%	\$ 31.75
Financial Examiners	4.4%	\$ 32.65
Medical Scientists, Except Epidemiologists	4.3%	\$ 32.27
Home Health Aides	4.3%	\$ 10.50
Personal and Home Care Aides	4.0%	\$ 9.60
Personal Financial Advisors	3.8%	\$ 25.08
Physician Assistants	3.5%	\$ 39.50
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	3.4%	\$ 19.46
Computer Software Engineers, Applications	3.4%	\$ 35.03
Veterinary Technologists and Technicians	3.2%	\$ 13.89
Computer Software Engineers, Systems Software	3.1%	\$ 37.02
Dental Hygienists	3.1%	\$ 31.00
Dental Assistants	3.1%	\$ 16.11
Compliance Officers, Except Agriculture, Construction, Health and Safety	3.1%	\$ 23.08

The average projected annual job growth projections for the state is .98 percent. Jobs with a negative annual projected employment growth should be studied to see which skills or training would be necessary to move workers in the occupations that show more growth and opportunities in the future.

Table 7 presents a sample of occupations with negative or low growth by projected annual growth rates (projected employment 2008-2018) and median wages throughout the state based on current employment. The industry projections for the same time period, show a negative growth by percent employment change in textile product mills (-35.1%); apparel manufacturing (-28.9%); leather & applied product manufacturing (-19.4%); and support activities for mining (-14.3%). All reported manufacturing industries have an average projected decline of -1.9 percent. This is well below the average for all industries of 7.4 percent over the ten year period, further emphasizing the need for making the transition into advanced manufacturing.

**Table 7
Regional Declining and Low Growth Occupations**

Occupation	Projected Annual Growth Rate ¹	Statewide Median Wage ¹
Postal Service Mail Sorters, Processors, & Processing Machine Operators	-3.0%	\$ 24.97
Order Clerks	-2.5%	\$ 14.47
File Clerks	-2.3%	\$ 9.58
Weighers, Measurers, Checkers, and Samplers, Recordkeeping	-1.4%	\$ 14.11
Metal Workers and Plastic Workers, All Other	-1.3%	\$ 15.93
Conveyor Operators and Tenders	-1.2%	\$ 12.90
Gaming Change Persons and Booth Cashiers	-1.2%	\$ 11.34
Information and Record Clerks, All Other	-1.1%	\$ 16.36
Office and Administrative Support Workers, All Other	-1.1%	\$ 11.51
Paper Goods Machine Setters, Operators, and Tenders	-1.0%	\$ 15.87
Switchboard Operators, Including Answering Service	-0.9%	\$ 11.46
Telemarketers	-0.8%	\$ 10.34
Payroll and Timekeeping Clerks	-0.8%	\$ 16.54
Chemical Plant and System Operators	-0.8%	\$ 21.59

¹ <http://iwin.iwd.state.ia.us/iowa/ArticleReader?itemid=00003928>

² <http://iwin.iwd.state.ia.us/pubs/statewide/indprojstatewide.pdf>

Factors Affecting Supply & Demand

Starting wages that are below the required wage a worker would need to consider employment could present a problem for employers trying to fill a vacant position. Aside from increasing starting wages, possible solutions are those that decrease the cost of transportation for employees, increasing benefits, flexible hours, or providing training opportunities for employed people with income constraints.

Employee turnover has an affect on the job market in the Northeast Iowa Business Network Region just as it does everywhere else. The Workforce Needs Survey showed high levels of vacancies for jobs in the food preparation & serving, sales & related, and the personal care & services occupational categories. High turnover in these occupations does not necessarily indicate high demand for employees. There is little economic developers can do to decrease turnover within occupational categories or the job market as a whole.

Mismatch in skills between workers and job vacancies can be identified 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.

Worker/Employer connection is another factor affecting the relationship between the supply of workers in the region and the demand for those workers. The most likely cause of this imbalance in the labor market is a lack of information shared between people that have necessary skills to those seeking employees. Counseling services, consolidated region-wide job banks, and other services promoting the dissemination of information are those most likely to assist with closing this gap.

The media most used by job seekers in the region, as reported by the Laborshed Analysis, are: the internet (73.5%), local/regional newspapers (63.4%), local Iowa Workforce Development Centers (19.9%), and networking with family, friends, or acquaintances (22.5%). The most visited internet sites for worker job search are: www.monster.com, www.iowaworkforce.org, and www.accessdubuque.com. The top four media used by employers to find applicants, as reported by the Workforce Needs Assessment Survey, are local/regional newspapers (82.9%), the internet (51.9%), local Iowa Workforce Development Centers (48.6%), and college/university career centers (39.9%). The most used internet sites for employers are: company specific websites, www.iowaworkforce.org, www.iowajobs.com, and www.careerbuilder.com.

Gap Analysis

Three occupational clusters have been selected for gap analysis based on strength of the workforce and targeted industries identified by the Laborshed and Workforce Needs Assessment. The clusters are advanced manufacturing, information technology, and healthcare. They were selected for their projected employment growth, high average wages, and the proximity between required skills for the occupations and the current skill set of the workforce. For these reasons, the workforce will be able to transfer into these occupations easily and with the most value added to the regional economy. **Tables 8-10** provide examples of the occupations within the workforce that are most related to the emerging occupations. The tables also include those skills shared by the occupations and those in which more training will be needed to transition from the occupation currently in great supply within the regional workforce to an emerging occupation.

Within the healthcare cluster of occupations, the regional workforce fell short with respect to education in medicine & dentistry, therapy & counseling, customer service, and psychology. On average, the occupations within the cluster demand an associate degree level of understanding in the core areas. With respect to experience, the current workforce requires training in updating & using relevant information, and documenting & recording information.

It is important to note the difference between the results of the gap analysis for the population on average and that displayed in the figures. The following tables display the shared and additional skills or education needed to transition a worker from a related occupation into one of the emerging occupations. The gap analysis for the population on average showed that there were certain areas of skills and education that were needed to transition a group of the population into the group of emerging occupations. For example, Table 8 shows that an teacher's assistant will need training in education in medicine & dentistry; customer & personal service; handling & moving objects; and inspecting equipment, Structures, or Material. The portion of the population that was well suited for careers in the healthcare group; however, needs training and education in medicine & dentistry, therapy & counseling, customer service, psychology, updating & using relevant information, and documenting & recording information. Further analysis of the skills differences between specific occupations is available through the O*NET system. The analysis of the overall skills and educational differences between the population and the groups of emerging occupations is provided in this report and in the Skillshed Technical Report.

**Table 8
Related Occupations to Healthcare**

Related Occupations		Median Wages	Overlapping Skills and Education	Required Areas for Improvement	
Healthcare	Emerging Occupation: Registered Nurse		\$ 24.44		
	Career Pathways	Nursing Aides, Orderlies, and Attendants	\$ 11.44	Customer and Personal Service; Handling and Moving Objects	Biology; Therapy and Counseling; Provide Consultation and Advice to Others; Communicating with Persons Outside Organization
		Teacher's Assistants	\$ 9.73	Clerical; Interpreting the Meaning of Information for Others	Medicine and Dentistry; Customer and Personal Service; Handling and Moving Objects; Inspecting Equipment, Structures, or Material
		Information and Records Clerks	\$ 16.36	Clerical; Processing Information	Medicine and Dentistry; Psychology; Handling and Moving Objects; Assisting and Caring for Others
	Emerging Occupation: Physical Therapist		\$ 33.58		
	Career Pathways	Occupational Health and Safety Technicians	\$ 27.32	Psychology; Communicating with Persons Outside Organization	Medicine and Dentistry; Biology; Handling and Moving Objects; Estimating the Quantifiable Characteristics of Products, Events, or Information
		Recreation Workers	\$ 9.67	Clerical; Communicating with Persons Outside Organization	Therapy and Counseling; Medicine and Dentistry; Evaluating Information to Determine Compliance with Standards; Monitor Processes, Materials, or Surroundings
Office & Administrative Support Workers, All Other		\$ 11.51	Clerical; Organizing, Planning, and Prioritizing Work	Therapy and Counseling; Psychology; Handling and Moving Objects; Performing General Physical Activities	

*Skills data available through O*Net (www.onetcenter.org)*

The information technology occupational cluster was the closely related to the set of skills and experiences held by the regional workforce. The most critical gap in education required fell within telecommunications, computers & electronics, and engineering & technology. The gap between the current knowledge of these subjects within the regional workforce and the level of knowledge required was between the high school level and the associate degree level, or less than one year of coursework.

From the table below, we also see that some of the most common skills needed to transition the workforce are: mathematics, interacting with computers, telecommunications, and customer service. Many of the skills needed in emerging occupations, like documenting & recording information are already found within the labor force.

**Table 9
Related Occupations to Information Technology**

Related Occupations		Median Wages	Overlapping Skills and Education	Required Areas for Improvement	
Information Technology	Emerging Occupation: Network Systems and Data Communications Analysts		\$ 31.75		
	Career Pathways	Electrical & Electronics Repairers, Commercial & Industrial Equipment	\$ 25.39	Engineering & Technology, Documenting/Recording Information	Mathematics, Customer Service, Processing Information, Interacting with Computers, Computers & Electronics
		Computer, Automated Teller, & Office Machine Repairers	\$ 17.77	Engineering & Technology, Monitoring and Controlling Processes	Telecommunications, Customer Service, Evaluating Information to Determine Compliance, Interacting with Computers
		Computer Operators	\$ 15.88	Computers & Electronics, Controlling Machines and Processes	Engineering & Technology, Telecommunications, Interacting with Computers, Processing Information
	Emerging Occupation: Computer Software Engineers		\$ 35.03		
	Career Pathways	Inspectors, Testers, Sorters, Samplers, and Weighers	\$ 15.60	Customer Service, Processing Information	Telecommunications, Engineering & Technology, Interacting with Computers, Thinking Creatively
		Bookkeeping, Accounting, and Auditing Clerks	\$ 14.60	Communications and Media; Communicating with Supervisors, Peers, or Subordinates	Telecommunications, Computers & Electronics, Thinking Creatively, Interacting with Computers
Bus and Truck Mechanics and Diesel Engine Specialists		\$ 18.19	Customer Service, Documenting/Recording Information	Telecommunications, Computers & Electronics, Thinking Creatively, Interacting with Computers	

*Skills data available through O*Net (www.onetcenter.org)*

The requirements of the advanced manufacturing occupational cluster are the most closely related to the current skill set of the region. Skills and knowledge areas found within the current workforce like: building & construction, production & processing, and controlling machines & processes will be an asset within the advanced manufacturing group of jobs. The current workforce lacked some of the formal education required for the occupations within the cluster. The regional workforce showed a need for coursework in the areas of computers & electronics, mathematics, and mechanical design. Most of the occupations within advanced manufacturing required between a high school diploma and an associate's degree.

From the figure below, we also see that some of the most common skills needed to transition the workforce are: communication within the organization; drafting, laying out, & specifying technical devices; repairing & maintaining electronic equipment, and maintaining mechanical equipment.

**Table 10
Related Occupations to Advanced Manufacturing**

Related Occupations		Median Wages	Overlapping Skills and Education	Required Areas for Improvement
Advanced Manufacturing	Emerging Occupation: Electrical and Electronics Repairers, Commercial and	\$ 26.94		
	Career Pathways			
	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$ 10.62	Building and Construction, Controlling Machines and Processes	Computers and Electronics, Mechanical, Processing Information, Repairing and Maintaining Electronic Equipment
	Landscaping and Groundskeeping Workers	\$ 11.04	Building and Construction, Controlling Machines and Processes	Mathematics, Computers and Electronics, Repairing and Maintaining Electronic Equipment, Communicating inside the Organization
	Industrial Truck and Tractor Operators	\$ 14.33	Production and Processing, Controlling Machines and Processes	Computers and Electronics, Mechanical, Repairing and Maintaining Electronic Equipment, Communicating inside the Organization
	Emerging Occupation: Industrial Machinery Mechanics	\$ 20.22		
	Career Pathways			
	Maintenance and Repair Workers, General	\$ 16.35	Building and Construction; Monitor Processes, Materials, or Surroundings	Mathematics; Engineering and Technology; Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment; Controlling Machines and Processes
	Team Assemblers	\$ 14.62	Production and Processing, Processing Information	Engineering and Technology; Mechanical; Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment; Repairing and Maintaining Mechanical Equipment
	Roofers	\$ 15.17	Building and Construction; Evaluating Information to Determine Compliance with Standards	Engineering and Technology; Mechanical; Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment; Repairing and Maintaining Mechanical Equipment

*Skills data available through O*Net (www.onetcenter.org)*

Conclusion

A Skillshed examines the interaction between the current supply of workers and the current demand for their skills by employers; also, it measures the difference between the current set of skills and education held by the regional workforce and that set of skills and education required for emerging occupations.

A region must develop a plan to meet the current needs of the labor market by ensuring that its workforce is prepared with the necessary skills. At the same time, the region must also help its labor market transition into a workforce with the skills and education required by emerging occupations.

An important note is that the data collected and used in this report, other than that from the Workforce Needs Assessment, was widely affected by the collapse of the financial sector and the ensuing governmental response. More data will be available in the coming year to better assess the recession's effect on employment and industrial growth.

Key Findings:

- Almost half of the supply of workers in the region (45.3%) currently work in the following occupational categories:
 - Office & Administrative Support
 - Production
 - Management
- More specifically, almost than a quarter of the workforce (24.1%) are working in the following occupations:
 - General & Operations Managers
 - Teachers & Instructors, All Other
 - Production, Helpers
 - Registered Nurses
 - Managers, All Other
 - Farmers & Ranchers

- The current education and skills of the workforce most closely resemble the education and skills of three occupational categories designated as knowledge clusters:
 - Healthcare
 - Information Technology
 - Advanced Manufacturing

- The occupational categories with the highest projected annualized employment growth (2008-2018) are as follows:
 - Healthcare Support (2.5%)
 - Computer & Mathematical (2.1%)
 - Healthcare Practitioners and Technical (2.0%)
 - Business & Financial Operations (1.8%)

- The occupations within the knowledge cluster occupational groups with the highest projected annualized employment growth (2008-2018) within the region are as follows:
 - Network Systems & Data Communications Analysts (5.4%)
 - Home Health Aides (4.3%)
 - Physician Assistants (3.5%)
 - Heating, Air Conditioning, and Refrigeration Mechanics & Installers (3.4%)
 - Computer Software Engineers, Applications (3.4%)
 - Woodworking Machine Setters, Operators, & Tenders (3.0%)

Table 11 shows the critical areas for the three target occupational groups and in which areas the population may need supplemental education or training. Programs of education or skills training in the shared areas of needed training are those in which the region would benefit most. While the table shows no areas in which training is needed across more than one group there is still need for educational and experiential programs to satisfy the needs shown.

**Table 11
Population Skills Gaps**

Critical Skill & Knowledge Needs	Advanced Manufacturing	Healthcare	Information Technology
Administration and Management	-	-	-
Assisting and Caring for Others	-	-	-
Communication with Supervisors, Peers, or Subordinates	-	-	-
Computers & Electronics	-	-	Yes
Customer Service	-	Yes	-
Design	Yes	-	-
Documenting and Recording Information	-	Yes	-
Engineering & Technology	Yes	-	Yes
English Language	-	-	-
Establishing and maintaining Interpersonal Relationships	-	-	-
Getting Information	-	-	Yes
Identifying Objects, Actions, or Events	-	-	Yes
Inspecting Equipment, Structures, or Material	-	-	-
Interacting with Computers	-	-	Yes
Making Decisions and Problem Solving	-	Yes	-
Mathematics	-	-	-
Mechanical	Yes	-	-
Medicine & Dentistry	-	-	-
Psychology	-	Yes	-
Telecommunications	-	-	Yes
Therapy & Counseling	-	Yes	-
Updating and Using relevant Knowledge	-	Yes	-

A Project of:



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