

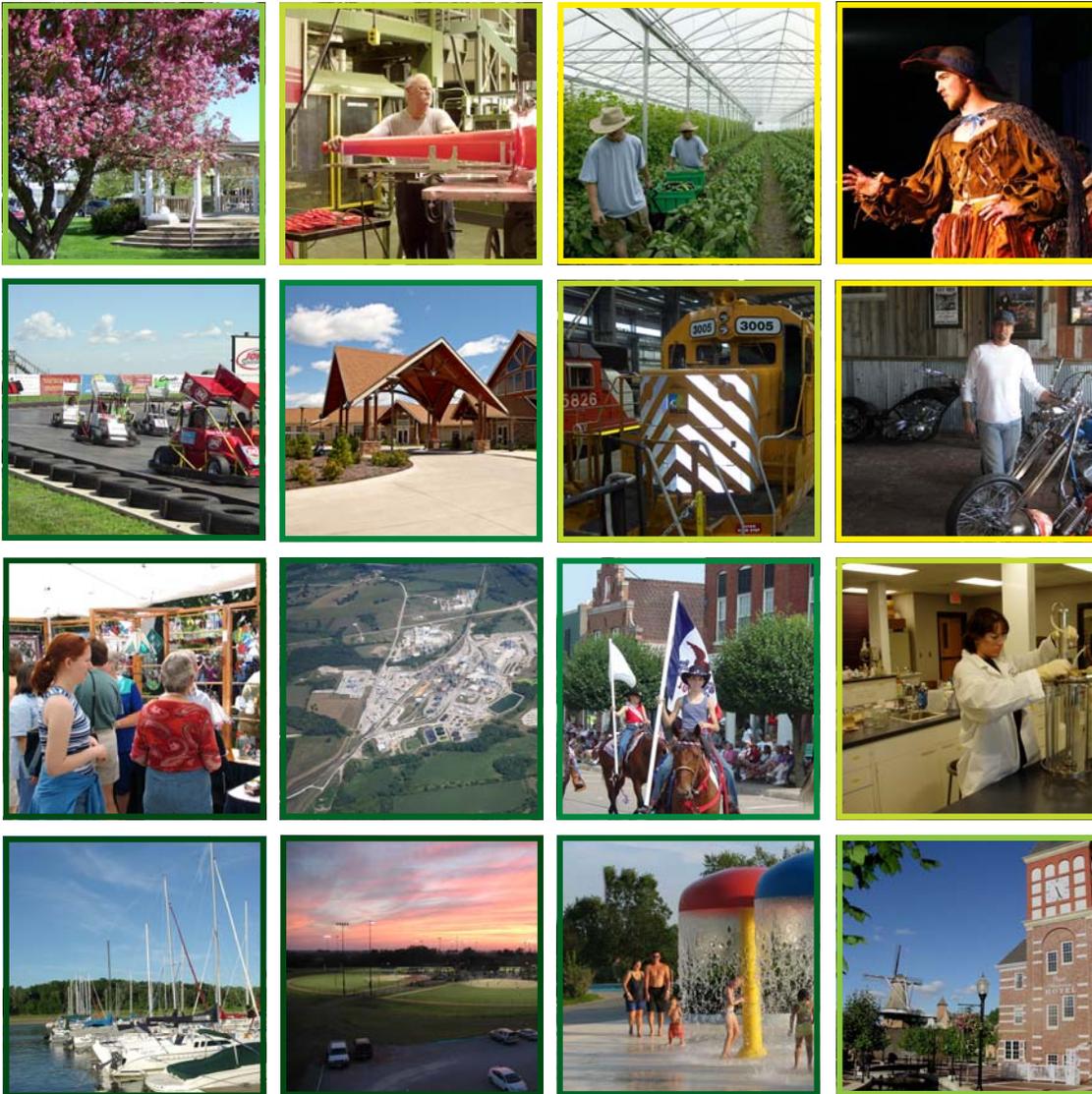
OPPORTUNITY²

Economic Development in SE Iowa

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Regional Skillshred Analysis

Appanoose, Davis, Jefferson, Keokuk, Mahaska, Marion, Monroe and Wapello Counties



Executive Summary

A Study of Occupational Clusters, Skills, & Gap Analysis
Released March 2013

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 Opportunity Squared 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 2,660 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 annual Workforce Needs Assessment was conducted in 2012. There were 353 employer responses from the Opportunity Squared Region, yielding a 24.4 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.

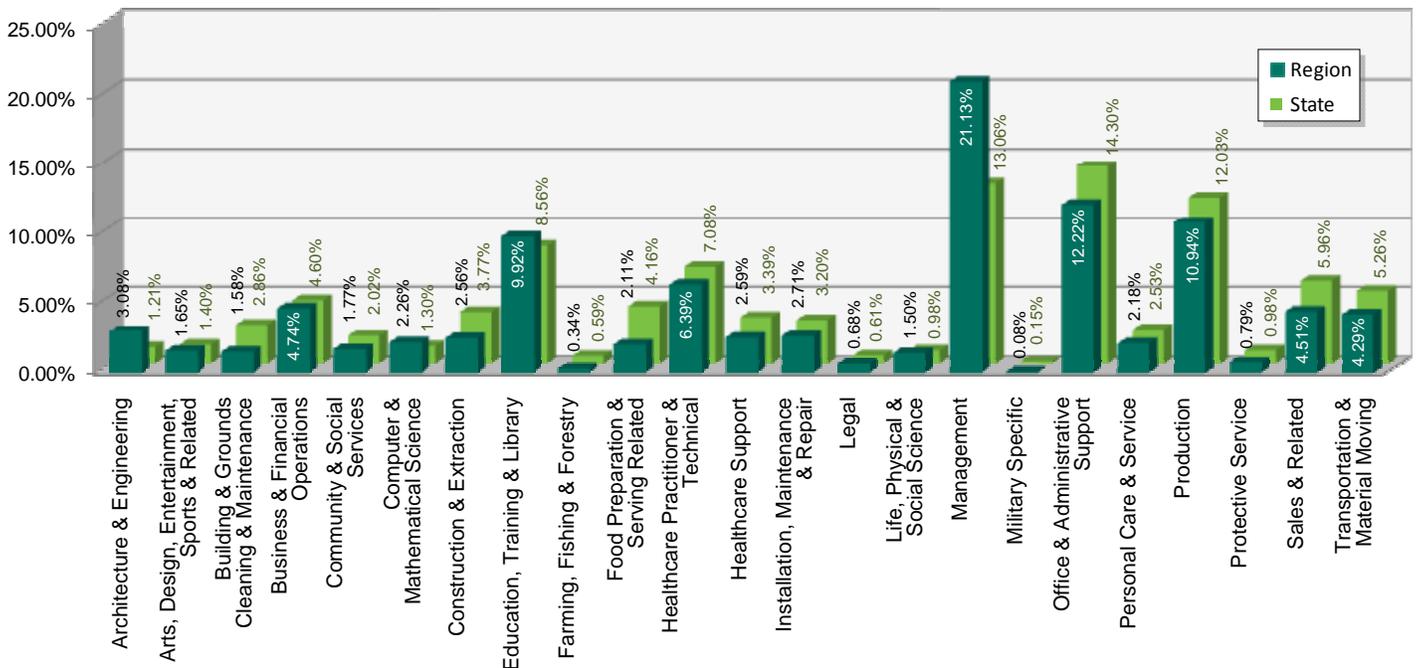
The table also includes the statewide projected annual growth rate in employment¹. The average projected growth rate for all jobs in the state is 1.35 percent. The top five occupations held in the region are: General and Operations Managers (7.70%); Teachers and Instructors (5.50%); Production Workers (4.10%); Secretaries and Administrative Assistants (2.80%); and Registered Nurses (2.70%).

Table 1
Occupational Experience in Region

Occupation	Percent of Region ²	Percent of State ³	Statewide Projected Annual Growth Rate ¹
General and Operations Managers	7.70%	7.20%	0.50%
Teachers and Instructors	5.50%	5.30%	0.80%
Production Workers	4.10%	2.70%	1.50%
Secretaries and Administrative Assistants	2.80%	2.50%	0.30%
Registered Nurses	2.70%	3.90%	2.40%
Chief Executives	2.40%	2.00%	0.70%
Farmers, Ranchers, and Other Agricultural Managers	2.30%	1.30%	-0.20%
First-Line Supervisors of Office and Administrative Support Workers	2.30%	2.00%	1.60%
Heavy and Tractor-Trailer Truck Drivers	2.20%	1.10%	1.90%
Teacher Assistants	1.80%	2.20%	1.00%
Managers	1.80%	3.10%	1.60%

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; Architecture & Engineering; and Education, Training, & Library occupational categories and a relatively low concentration of Office & Administrative Support and Food Preparation workers when compared to the State.

Chart 1
Population by Occupational Category



¹ <http://win.iwd.state.ia.us/pubs/statewide/stateoccproj.pdf>

² Opportunity Squared Laborshed Survey (2012)

³ Iowa Laborshed Survey (2012)

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 \$15.88 per hour although they would be willing to commute up to 14 miles for a desired median wage of \$15.50 per hour.

Over one-fifth (20.2%) of the employed are willing to change employment and almost three-fifths (59.1%) 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	Regional Starting Wage ¹	Statewide Median Wage ²	Statewide Entry Level Wage ²
Combined Food Preparation and Serving Workers	\$7.52	\$8.71	\$8.21
Demonstrators and Product Promoters	\$10.00	\$9.45	\$8.48
Registered Nurses	\$18.93	\$25.01	\$19.43
Maintenance and Repair Workers	\$18.17	\$17.29	\$11.78
Heavy and Tractor-Trailer Truck Drivers	\$12.88	\$17.54	\$12.59
Cashiers	\$7.25	\$8.88	\$8.30
Teacher Assistants	\$10.37	\$10.27	\$8.28
Occupational Therapist Aides	\$8.38	\$11.81	\$8.89
Waiters and Waitresses	\$5.80	\$8.87	\$8.23
Roofers	\$11.00	\$14.79	\$11.10
Assemblers and Fabricators	\$12.63	\$12.89	\$9.38
Production Workers	\$17.68	\$13.51	\$9.90

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 Opportunity Squared Workforce Needs Assessment (2011)

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

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
Health Care & Social Services	Registered Nurses	Technical Training/Certification	3-5 years	\$ 18.93
	Occupational Therapist Aides	High School Diploma/GED	Less than 1 year	\$ 8.38
	Nursing Aides, Orderlies and Attendants	Associate Degree	No Experience Needed	\$ 9.82
	Medical and Health Service Managers	Master's Degree	More than 5 years	\$ 36.41
Education	Teacher Assistants	Associate Degree	1-2 years	\$ 10.37
	Coaches & Scouts	Bachelor's Degree	1-2 years	*
	Occupational Therapists	Master's Degree	More than 5 years	\$ 21.86
Manufacturing	Assemblers and Fabricators	High School Diploma/GED	Less than 1 year	\$ 12.63
	Machinists	Technical Training/Certification	1-2 years	\$ 18.00
	Production Workers	High School Diploma/GED	No Experience Needed	\$ 17.68
	Maintenance & Repair Workers	High School Diploma/GED	No Experience Needed	\$ 18.51
Wholesale & Retail Trade	Combined Food Preparation and Serving Workers	High School Diploma/GED	No Experience Needed	\$ 7.25
	Cashiers	High School Diploma/GED	No Experience Needed	\$ 7.25
	Sales Representatives, Wholesale and Manufacturing	Bachelor's Degree	1-2 years	\$ 17.42
	Demonstrators and Product Promoters	High School Diploma/GED	Less than 1 year	\$ 10.00
Finance, Insurance & Real Estate	Financial Managers	Bachelor's Degree	3-5 years	\$ 24.00
	Computer User Support Specialists	Technical Training/Certification	1-2 years	*
	Tellers	High School Diploma/GED	No Experience Needed	\$ 8.75
	Financial Clerks	Associate Degree	1-2 years	*

*Insufficient Data

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 Advanced Manufacturing; Building, Landscaping & Constructive Design; and Engineering & Related Sciences. Overwhelmingly, employers reported their need for workers that could interact and communicate with others inside the organization and possessing stronger knowledge of mathematics.

**Table 4
Work Activities by Employer Needs**

Work Activities
Communicating with Persons Inside the Organization
Evaluating Information to Determine Compliance with
Getting Information
Inspecting Equipment, Structures or Material
Interacting With Computers
Making Decisions and Solving Problems
Updating and Using Relevant Knowledge

**Table 5
Knowledge by Employer Needs**

Knowledge
Administration & Management
Computers & Electronics
Customer Service
Design
Education and Training
Engineering and Technology
English Language
Mathematics
Mechanical
Physics

³ Opportunity Squared Workforce Needs Assessment (2011)

Table 6 presents a sample of high growth occupations, their projected annual growth rates, and median wages for the region. These data (projected employment 2010-2020) represent the occupations that are most likely to experience growth throughout the region based on current employment. Industry projections for the state, from the Iowa Workforce Information Network, for the same time period show growth by percent employment change in management of companies and enterprises (49.4%); social assistance (40.6%); wholesale electronic markets and agents (39.2%); and warehousing and storage (39.1%)².

**Table 6
Regional High Growth Occupations**

Occupation	Projected Annual Growth Rate ¹	Regional Median Wage ¹
Personal Care Aides	4.4%	\$8.74
Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	4.3%	\$11.94
First-Line Supervisors of Helpers, Laborers, and Material Movers	4.0%	\$21.59
Brickmasons and Blockmasons	4.0%	\$21.96
Excavating and Loading Machine and Dragline Operators	3.6%	\$16.77
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	3.5%	\$15.97
Counselors, All Other	3.3%	\$17.42
Physical Therapists	3.3%	\$34.92
Pharmacy Technicians	3.3%	\$13.54
Insurance Sales Agents	2.9%	\$22.04

Jobs with a negative annual projected employment growth should be studied to see which skills or training would be necessary to move workers into the occupations that show more future job growth.

Table 7 shows a sample of occupations with negative or low growth, their projected annual growth rates (projected employment 2010-2020) throughout the region based on current employment, and median wages for the region. Industry projections for the same time period statewide, show a negative growth by percent employment change in apparel manufacturing (-52.8%); postal service (-24.4%); leather and allied product manufacturing (-23.3%); and textile product mills (-12.6%). More information for industry projections can be found at <http://iwin.iwd.state.ia.us/pubs/statewide/indprojstatewide.pdf>.

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

Occupation	Projected Annual Growth Rate ¹	Regional Median Wage ¹
Postal Service Mail Carriers	-1.2%	\$23.77
Bus Drivers, School or Special Client	-1.0%	\$11.93
Cooks, Fast Food	-0.8%	\$8.62
Electrical Power-Line Installers and Repairers	-0.4%	\$27.57
Farmers, Ranchers, and Other Agricultural Managers	-0.2%	\$36.89
Shipping, Receiving, and Traffic Clerks	-0.2%	\$13.86
Secretaries and Admin Assistants	-0.1%	\$13.15
Secondary School Teachers, Except Special & Career	-0.1%	\$21.57
Chief Executives	0.0%	\$50.73
Agricultural and Food Science Technicians	0.0%	\$15.66

¹ <http://iwin.iwd.state.ia.us/pubs/region15/region15occproj.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 Opportunity Squared 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 (82.1%), local/regional newspapers (43.7%), networking (17.2%), and local Iowa Workforce Development centers (14.0%). The most visited internet sites for worker job search are: www.iowajobs.org, www.careerbuilder.com, and www.monster.com. The top four media used by employers to find applicants, as reported by the Workforce Needs Assessment Survey, are local/regional newspapers (75.8%), the internet (63.0%), local Iowa Workforce Development Centers (43.4%), and college/university career centers (40.0%). The most used internet sites for employers are: company specific websites, www.iowaworkforce.org, www.monster.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; Building, Landscape & Construction Design; and Engineering & Related Sciences. 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 Advanced Manufacturing cluster of occupations, the regional workforce fell short with respect to education in design, engineering and technology, and mechanical. 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 inspecting equipment, structures, or material.

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 industrial truck and tractor operator will need training and education in computers and electronics; mechanical; repairing and maintaining electronic equipment; and communicating inside the organization. The portion of the population that was well suited for careers in the Advanced Manufacturing group; however, needs training and design; engineering and technology; mechanical; and inspecting equipment, structures, or material. 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.

From the table on the following page, we also see that some of the most common skills needed to transition the workforce are: computers and electronics; engineering and technology; mathematics; mechanical; drafting, laying out, and specifying technical devices; and controlling machines and processes.

**Table 8
Related Occupations to Advanced Manufacturing**

Related Occupations		Median Wages	Overlapping Skills and Education	Required Areas for Improvement	
Advanced Manufacturing	Emerging Occupation: Electrical & Electronic Engineering Technicians		\$ 23.18		
	Career Pathways	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$ 10.77	Building and Construction, Controlling Machines and Processes	Computers and Electronics, Mechanical, Processing Information, Repairing and Maintaining Electronic Equipment
		Landscaping and Groundskeeping Workers	\$ 11.25	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	\$ 14.82	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		\$ 20.68		
	Career Pathways	Maintenance and Repair Workers, General	\$ 17.29	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	\$ 15.01	Production and Processing, Processing Information	Engineering and Technology; Mechanical; Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment; Repairing and Maintaining Mechanical
		Roofers	\$ 14.79	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)*

The Building, Landscape and Construction Design occupational cluster was closely related to the set of skills and experiences held by the regional workforce. The most critical gap in education required fell within design, engineering and technology, and mathematics. The gap between the current knowledge of these subjects within the regional workforce and the level of knowledge required was between a high school and associate's 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: computers and electronics; engineering and technology; analyzing data or information; and evaluating information to determine compliance with standards. Many of the skills needed in emerging occupations, like mechanical and controlling machines and processes are already found within the labor force.

**Table 9
Related Occupations to Building, Landscape & Construction Design**

Related Occupations		Median Wages	Overlapping Skills and Education	Required Areas for Improvement	
Building, Landscaping & Construction Design	Emerging Occupation: Civil Engineering Technicians		\$ 23.80		
	Career Pathways	Computer, Automated Teller and Office Machine Repairers	\$ 17.81	Interacting with Computers, Documenting and Recording Information	Mechanical, Mathematics, Building & Construction; Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment
		Telecommunications Line Installers	\$ 19.05	Mechanical; Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment	Engineering & Technology, Analyzing Data or Information, Documenting and Recording Information
		Outdoor Power Equipment & Small Engine Mechanics	\$ 14.10	Mechanical, Controlling Machines and Processes	Engineering & Technology, Mathematics, Computers & Electronics, Evaluating Information to Determine Compliance with Standards
	Emerging Occupation: Mechanical Drafters		\$ 20.94		
	Career Pathways	Insulation Workers, Mechanical	\$ 16.45	Mechanical; Drafting, Laying Out, and Specifying Technical Devices,	Computers & Electronics; Evaluating Information to Determine Compliance with Standards
		Construction Equipment Operators	\$ 19.14	Production & Processing, Controlling Machines and Processes	Engineering & Technology; Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment
		Carpenters	\$ 17.56	Building & Construction; Inspecting Equipment, Structures, or Material	Mechanical, Engineering & Technology, Analyzing Data or Information, Evaluating Information to Determine Compliance with Standards

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

The requirements of the Engineering and Technology occupational cluster are close to the current skill set of the region. There is a wide overlap of skills between the current labor force and those needed by the emerging occupations of the group. Skills and knowledge areas found within the current workforce like: production & processing; mechanical; inspecting equipment, structures, or material; and repairing and maintaining mechanical equipment will be an asset within the engineering and technology 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, design, engineering & technology, mathematics, and physics. Most of the occupations within engineering and technology required between an associate's degree and a bachelor's degree.

From the figure below, we also see that some of the most common skills needed to transition the workforce are: monitoring and controlling processes; analyzing data or information; and documenting or recording information.

**Table 10
Related Occupations to Engineering and Technology**

Related Occupations		Median Wages	Overlapping Skills and Education	Required Areas for Improvement	
Engineering & Related Sciences	Emerging Occupation: Mechanical Engineering Technicians		\$ 21.30		
	Career Pathways	Helpers- Installation, Maintenance and Repair Workers	\$ 10.16	Mechanical; Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment	Engineering & Technology, Physics, Monitoring and Controlling Processes, Analyzing Data or Information
		Janitors and Cleaners, Except Maids and Housekeeping	\$ 10.77	Production & Processing, Controlling Machines and Processes	Physics, Engineering & Technology, Processing Information, Analyzing Data or Information
		Interior Designers	\$ 18.32	Mechanical; Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment	Engineering & Technology, Physics, Processing Information, Analyzing Data or Information
	Emerging Occupation: Electrical and Electronic Engineering Technician		\$ 23.18		
	Career Pathways	Electrical and Electronic Equipment Assemblers	\$ 16.55	Building & Construction, Inspecting Equipment, Structures, or Material	Telecommunications, Computers & Electronics, Interacting with Computers, Repairing and Maintaining Electronic Equipment
		Automotive Service Technicians	\$ 16.21	Building & Construction, Inspecting Equipment, Structures, or Material	Production & Processing, Engineering & Technology, Interacting with Computers, Documenting/Recording Information
		Electronic Home Entertainment Equipment Installers	\$ 17.48	Mechanical, Repairing and Maintaining Mechanical Equipment	Computers & Electronics, Engineering & Technology, Interacting with Computers, Repairing and Maintaining Electronic Equipment

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

Conclusion

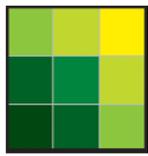
A Skillshed examines the interaction between the current supply of workers and the current demand for their skills by employers; also, it measures the difference between the current set of skills and education held by the regional workforce and that set of skills and education required for emerging occupations.

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.

Key Findings:

- Almost half of the supply of workers in the region (44.3%) currently work in the following occupational categories:
 - Management
 - Office & Administrative Support
 - Personal Care & Service
 - More specifically, more than a quarter of the workforce (25.2%) are working in the following occupations:
 - General and Operations Managers
 - Teachers & Instructors
 - Production Workers
 - Secretaries and Administrative Assistants
 - Registered Nurses
 - Chief Executives & Self-Employed
 - The current education and skills of the workforce most closely resemble the education and skills of three occupational categories designated as knowledge clusters:
 - Advanced Manufacturing
 - Building, Landscape & Construction Design
 - Engineering & Related Sciences
 - The occupational categories with the highest projected annualized employment growth (2010-2020) are as follows:
 - Community and Social Services (2.3%)
 - Healthcare Practitioners and Technical (1.8%)
 - Computer & Mathematical (1.8%)
 - Construction and Extraction (1.6%)
 - The occupations within the knowledge cluster occupational groups with the highest projected annualized employment growth (2010-2020) within the region are as follows:
 - Helpers - Pipelayers, Plumbers, Pipefitters, and Steamfitters (4.3%)
 - Brickmasons and Blockmasons (4.0%)
 - Excavating and Loading Machine and Dragline Operators (3.6%)
 - Heating, Air Conditioning, and Refrigeration Mechanics (3.5%)
 - Industrial Machinery Mechanics (2.4%)
 - Mechanical Engineers (1.4%)
-

For more information regarding the Opportunity Squared Region Skillshed contact:



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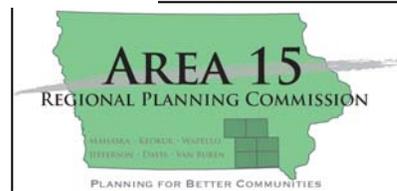
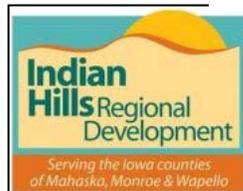
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