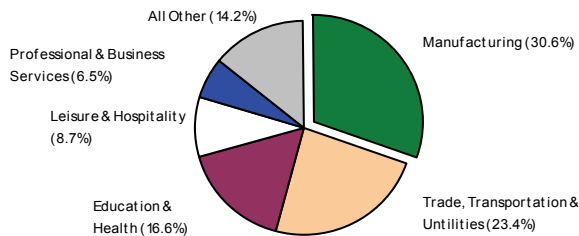


# Availability of Skilled Labor in the Opportunity<sup>2</sup> Region for Advanced Manufacturing

## Background

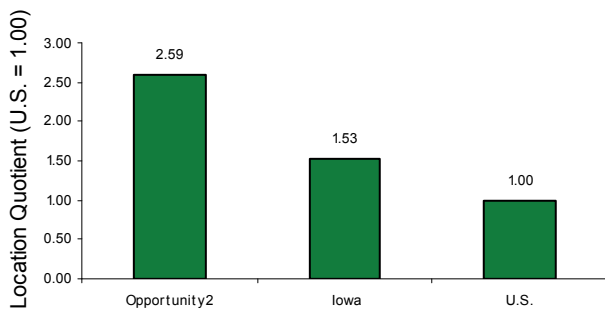
The total employment in the eight-county Opportunity<sup>2</sup> Region between 2000 and 2008 held constant at around 74,000 workers. **In 2008 the largest industry sector was Manufacturing, which accounted for 30.6% of industrial employment.** From 2000 to 2008, Manufacturing employment grew by 1.7% while nationwide manufacturing employment declined by 12.0%.

**Opportunity2 Industry Employment**



The Region's percentage of industrial employment in Manufacturing (30.6%) is significantly greater than the Manufacturing percentage in the State of Iowa (18.3%) and in the nation (11.8%). The following chart shows the Location Quotient in Manufacturing Employment (% for a State or Region divided by the % for the Nation) compared to the State and the U.S.

**Manufacturing Location Quotient**



**Opportunity<sup>2</sup> has one of the highest concentrations of employment in Manufacturing in the nation.**

The average wage for the Opportunity<sup>2</sup> Region in 2008 was \$16.08 and in the Manufacturing sector it was \$21.77. These wages are well below the averages for the state and the nation.

**Average Wage per Hour**

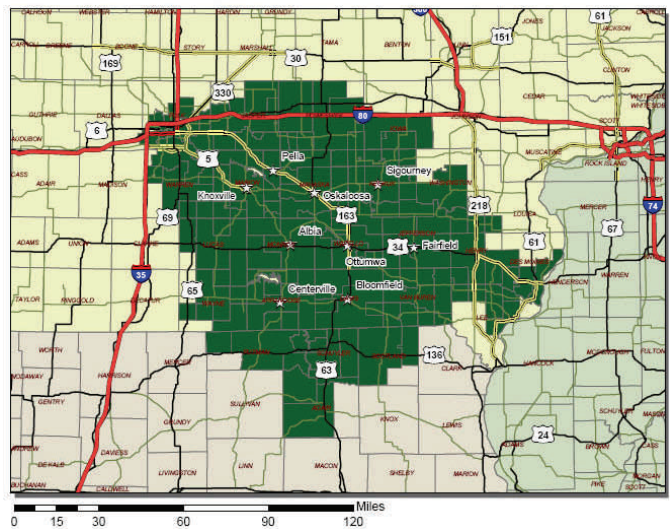
Wage	Opportunity <sup>2</sup>	Iowa	U.S.
Manufacturing	\$ 21.77	\$ 22.68	\$ 26.15
Total	\$ 16.08	\$ 17.48	\$ 21.81

## Laborshed Study

A Laborshed is defined as the area or region from which an employment center draws its commuting workers. Laborshed studies show the distribution of the workers irrespective of natural or political boundaries. Laborsheds also address the underemployment, the ability and willingness of current and perspective employees to change employment within the workforce, current and desired occupations, wages, hours worked, and distance willing to commute to work.

In 2008 Iowa Workforce Development (IWD) completed a study of the Opportunity<sup>2</sup> Region. This study found that this Region's Laborshed covers a wide geographical area.

**Opportunity<sup>2</sup> Laborshed Region**



Since Opportunity<sup>2</sup> covers a large geographical area (approximately 150 miles by 150 miles), it has several central employment centers across the Region. IWD concluded that this region actually consists of nine Laborsheds that have some overlap. The following shows the size of these Laborsheds, but because of the overlaps, these Laborsheds cannot be added together :

Laborshed Area	Total Adj. Labor Force
Albia	60,906
Bloomfield	52,590
Centerville	46,175
Fairfield	73,267
Knoxville	154,232
Oskaloosa	103,788
Ottumwa	80,738
Pella	313,650
Sigourney	41,690

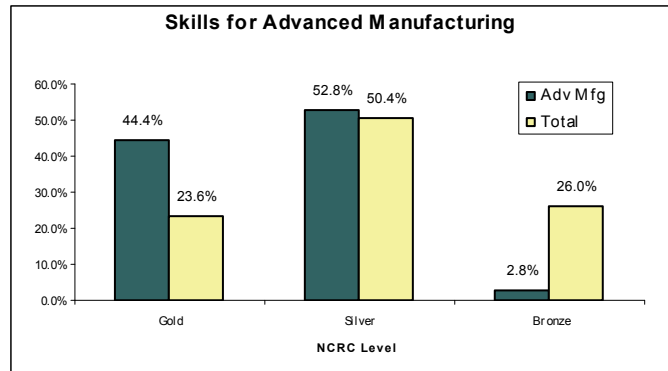
In the Laborshed Study, telephone surveys were conducted of adults in the Region. Nearly 5% of the respondents said they were underemployed due to inadequate hours, mismatch of skills, or low pay. Nearly one-fourth (24.2%) of those that are fully employed stated that they would be willing to change employment for the right opportunity. There is potential to expand the Region's workforce as 30% of the homemakers and 17% of the retirees expressed an interest in obtaining employment. The complete Laborshed Study can be found at <http://www.opportunitiesquared.com>.

### Skills for Advanced Manufacturing

The U.S. Department of Labor's O\*Net Occupational Database serves as the nation's primary source of occupational information providing comprehensive information on key attributes and characteristics on over 900 occupations. ACT, a worldwide leader in skills measurement, has developed the WorkKeys<sup>®</sup> System, which measures the skills required for occupations (Job Profiles) and the skills possessed by individuals. ACT has aligned its database of over 15,000 Job Profiles with O\*Net occupations to create Occupational Profiles for nearly all O\*Net occupations including all of the 36 occupations in Advanced Manufacturing.

In 2007 ACT launched the National Career Readiness Certificate (NCRC), which is now part of the National Association of Manufacturers-Endorsed Manufacturing Skills Certification System. The NCRC is based on the three core WorkKeys skills—Applied Mathematics, Locating Information, and Reading Information. Based on the scores on these three WorkKeys assessments, an individual may qualify for one of three levels of Certificate: Gold, Silver, and Bronze. Based on the skill requirements in the Occupational Profiles, ACT has determined the level of Certificate required for each of these occupations. ACT has determined

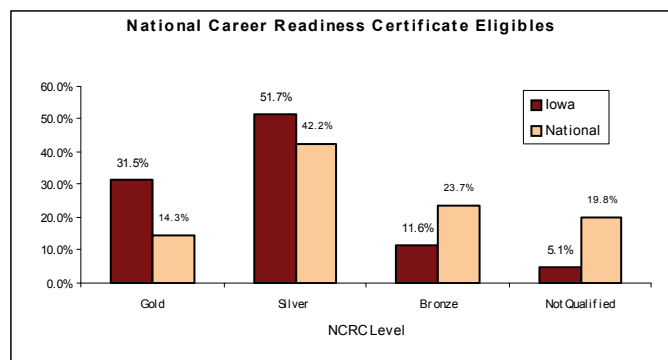
that 16 of the 36 occupations in Advanced Manufacturing (44.4%) require a Gold Certificate, which represents the highest skill level, and 19 occupations require a Silver Certificate (52.8%). As can be seen in the following graph, Advanced Manufacturing occupations require a significantly higher level of skills than is required by all the occupations in the O\*Net Occupational Database:



Therefore, to support the skills needed for occupations in this industry, a region needs a high-skilled workforce.

### Skills of the Opportunity<sup>2</sup> Workforce

Over 800,000 individuals nationwide have taken the three WorkKeys for the NCRC and approximately 5,000 individuals in the Iowa have taken these same WorkKeys. The following graph compares the certificate results for the State of Iowa and the nation.



As can be seen from this graph, **31.5% of the individuals in the Iowa qualified for a Gold Certificate, which is more than double the percentage nationwide.** In addition, Iowa has a greater percentage of Silver Certificates compared to the U.S. total. Nationwide nearly 1 out of 5 individuals do not qualified for any Certificate while only 1 out of 20 in the Iowa did not qualify for a Certificate. Therefore, it can be concluded that **the workforce skills in the Iowa are significantly greater than those in the nationwide workforce.**

Currently, a study is underway to measure the skills of the workforce in the Opportunity<sup>2</sup> Region. Given that the level of Educational Attainment in the Region is similar to that for the State and given the high concentration of employment in Manufacturing, it is anticipated that the skills levels in Opportunity<sup>2</sup> are very similar to those in Iowa.

## Job Training

Iowa's Industrial New Jobs Training Program (260E) provides businesses, which are expanding their existing Iowa workforce or are locating a new operation in Iowa, with employee training. This training is available via Iowa's community colleges and is financed by the community college through a bond issue. Depending on wages paid, the business then diverts 1.5 or 3 percent of the Iowa state withholding taxes generated by the new positions to the community college to retire the bonds. Because of this structure, the training is available at what is essentially no cost since the bonds are retired with dollars that otherwise have been paid to the state as withholding taxes. In addition to increasing worker productivity and company profitability, businesses participating in the Iowa New Jobs Training Program may also be eligible for reimbursement up to 50% of the annual gross payroll costs expended for on-the-job training, as well as a corporate tax credit if Iowa employment is increased by at least 10%.

## Education

Education is a key strength of the Region. Annually, the State of Iowa is one of the nation's leaders in scores on ACT and SAT college entrance examinations. Opportunity<sup>2</sup>'s strong primary and secondary school systems provide an excellent background for the Region's workforce.

Indian Hills Community College (IHCC), located in Ottumwa, serves the Opportunity<sup>2</sup> Region. IHCC has three campus locations in the Region and an enrollment of over 5,100 students. In 2007, Indian Hills awarded 711 Associate Degrees and 378 Certificates.



IHCC offers the following Associate degree programs to prepare students for careers in Advanced Manufacturing:

- Bioprocess Technology
- Chemistry
- Diesel Power Systems Technology
- Drafting/Virtual Reality Technology
- Electronic Engineering Technology
- Ethanol Plant Technician
- Laser/Electro-Optical Technology
- Machine Technology
- Robotics/Automation Technology

Diploma programs offered by IHCC for Advanced Manufacturing include Electronic Technician, Industrial Maintenance, and Welding Technology

Due to proximity, some of the Region's residents in western and northern Opportunity<sup>2</sup> attend Des Moines Area Community College (DMACC) and some residents in the eastern area attend Southeastern Community College (SCC). The following shows the Associate degree programs to prepare students for careers in Advanced Manufacturing that are offered by these three community colleges:

Degree Programs	IHCC	DMACC	SCC
Bioprocess Technology	•		
Biotechnology		•	
CAD Design Technology		•	
Chemistry	•		
Diesel Power Systems	•		
Diesel Technology		•	
Drafting/Virtual Reality Technology	•		•
Electromechanical Systems Technology		•	
Electronic Systems Technology	•	•	•
Electronics/ Telecommunications Technology	•		
Ethanol Plant Technician	•		
Fluid Power Technology		•	
Industrial Electro-Mechanical Technology		•	
Laser/ Electro-Optical Technology	•		
Machine Technology	•		•
Renewable Energy Technology	•		
Robotics/ Automation Technology		•	
Tool & Die Making Technology		•	
Welding Technology			•

DMACC offers diploma or certificate programs in Computer Aided Design Technology, Diesel Technology, Machinist Technology, Maintenance, Tool & Die Making Technology, and Welding. SCC offers diploma or certificate programs in Electronic Systems Technology, Industrial Maintenance, and Machine Technology.

The four-year post-secondary institutions located in the Region include:

- Buena Vista University, Ottumwa, IA
- Central College; Pella, IA
- Maharishi University of Management; Fairfield, IA
- William Penn University; Oskaloosa, IA

Iowa State University has an Outreach Center in Ottumwa, IA, which is centrally located in the Region.

### Leading Employers

Opportunity<sup>2</sup> has a cluster of companies in Manufacturing and a well-established supply chain that provides products and services needed by this cluster. The following are the largest Manufacturing companies in the Region:

#### 500 or More Employees

Cargill Meat Solutions Inc.  
Excel Livestock Market  
Pella Corp.  
Vermeer Corp.

#### 250 to 499 Employees

3M Company  
Cargill Corn Milling Inc.  
Clow Valve  
Curwood  
John Deere Ottumwa Works  
Musco

#### 100 to 249 Employees

AVM, Inc.  
Barker Co.  
Fairfield Aluminum Castings Co.  
Harper Brush Works Inc.  
Iowa Steel & Wire Co.  
Pella Products Inc.  
Performance Pipe  
Precision Inc.  
Quiktron Inc.  
Wells Manufacturing Corp  
Winbco Tank Co.

#### 50 to 99 Employees

Agri-Industrial Plastics Co.  
Ajinomoto Food Ingredients  
Al-Jon Inc.  
Bender Foundry Service Inc.  
Bloomfield Foundry  
Bovard Studio Inc.  
C & C Machining  
De Jong Manufacturing Inc.  
Elite Home Cabinet & Design  
En-Con Inc.  
Hawkeye Molding  
Interpower Manufacturing  
Iowa Aluminum  
Kelderman Manufacturing  
Kness Manufacturing  
Lee Container  
Nelson Co.

Oskaloosa Food Products  
Performance Pipe  
Relco Locomotive  
Superior Machine  
Van Gorp Corp.  
Winger Electric Co.

### Recruitment of Workers

Several studies have shown that students and adults have the perception that manufacturing facilities are old, dirty, and unsafe. Plus, they believe almost all manufacturing jobs will be shipped offshore. To change these misperceptions and create awareness of employment opportunities in the Region's Advanced Manufacturing companies, Opportunity<sup>2</sup> has a digital video, which is nearly 10 minutes in length, that shows some of the Region's manufacturing operations and has testimonies from some of the younger workers at these facilities. This video can be seen on the Opportunity<sup>2</sup> website.

In addition, we have place information on Career Pathways in Advanced Manufacturing on the website. For occupations in each Pathway, we have provided a short job description, educational and skill requirements, and wage information. In addition, we have provided links to our post-secondary institutions, leading employers, and O\*Net.

Plus, Opportunity<sup>2</sup> has implemented a program to measure and improve the skills of the regional workforce.

### Summary

From the perspective of skilled labor, Opportunity<sup>2</sup> offers an employer in Advanced Manufacturing several significant advantages:

- A highly skilled laborforce
- Wages that are below the national average
- A regional workforce development program that measures the skills of its workers and is structured to improve the skills of the region's workforce
- Excellent educational programs
- A high quality job training program that provides job and industry training
- A proactive program to interest both students and adults in careers in Advanced Manufacturing
- A quality-of-life that is attractive to Iowans and other located in the central U.S.

### Contact Information

For further information, contact:

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