



CONNECT
IOWA®

Broadband: Empowering Iowa's Workforce

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In his statement to commend the National Broadband Plan, President Obama noted that a broadband-driven Internet would provide opportunities for economic growth and job creation.¹ Broadband has the power to help job-seekers find jobs, while at the same time helping employers find and hire qualified candidates. Over eighty percent of Fortune 500 companies post job openings online only – and require that candidates apply online.² In short, broadband helps bring candidates and employers together who otherwise would have never been able to locate each other. As such, it can be an important tool in helping Iowa businesses and workers connect.

A 2008 report released by Connected Nation estimated that better broadband access could result in more than 26,000 jobs created or saved and a total boost to the economy totaling approximately \$1.2 billion annually.³ Because of broadband's vast potential impact on Iowa's economy, Connect Iowa has studied how broadband helps Iowa job seekers find work and employers seek candidates. In particular, we explore how businesses in Iowa use the Internet to advertise jobs and accept job applications, as well the many ways that Iowa residents use broadband to search and apply for jobs.

This report is based on statewide surveys conducted by Connect Iowa in 2011 that were funded as part of the State Broadband Initiative (SBI) grant program, administered by the National Telecommunications and Information Administration (NTIA) in partnership with the Iowa Economic Development Authority. Connect Iowa surveyed 1,200 adult heads of households statewide, collecting data regarding Iowa's level of residential technology adoption and utilization. In addition, because broadband is an engine that accelerates commerce, Connect Iowa also surveyed 804 business establishments statewide to determine how those businesses are using technology.⁴

Among the findings from this survey:

- Among businesses that use the Internet, **38%** (or approximately 24,000 businesses) advertise job openings or accept job applications online.
- Approximately **1,000** Iowa businesses only accept job applications online.
- Nearly **two-fifths (39%)**, or approximately **720,000**, Iowans search or apply for jobs online.
- Rural Internet users are significantly less likely to use the Internet to search or apply for jobs. **Forty-two percent (42%)** of non-rural Iowa Internet users search or apply for jobs online, while only **35%** of rural Iowa Internet users search or apply for jobs.
- More than **one-half** of adults with annual household incomes of less than **\$25,000 (53%)** go online and search or apply for jobs.
- Approximately **57,000** Iowa businesses still do not utilize the Internet to attract and recruit new workers.
- Approximately **149,000** low-income adults in Iowa use the Internet to search or apply for jobs online.

1 White House, <http://www.whitehouse.gov/the-press-office/statement-president-national-broadband-plan>

2 FCC, <http://www.fcc.gov/encyclopedia/connecting-america#factoids>

3 The Economic Impact of Stimulating Broadband Nationally, http://connectednation.org/documents/Connected_Nation_EIS_Study_Full_Report_02212008.pdf

4 Connect Iowa, <http://www.connectiowa.org/research>

How Iowa Businesses are Harnessing the Power of the Internet

Advertising jobs and accepting job applications online offers businesses several benefits, including being faster, more cost effective, and more efficient than traditional paper-based application processes. Plus, online job postings allow businesses to be selective in their target audience while advertising jobs and conducting various activities (such as pre-employment screening and testing) to qualified job seekers around the world. As a result, many Iowa businesses are relying on broadband as a cost-effective, efficient means of targeting highly skilled workers.

According to the 2011 Connect Iowa Business Technology Assessment, 80% of Iowa businesses, or approximately 65,000 businesses in Iowa, use the Internet to handle their daily business functions. Among these businesses, 38% go online to recruit new employees, either by accepting job applications or advertising job openings online. This translates into more than 24,000 Iowa businesses that go online to find and recruit qualified candidates (Figure 1).

There is a significant difference between rural and non-rural Iowa businesses in their use of the Internet for recruiting. Less than one-third (32%) of Internet-connected rural Iowa businesses recruit candidates online, compared to 44% of Internet-connected non-rural businesses. Across the state, nearly 57,000 Iowa businesses do not post jobs online, making it more difficult to connect with qualified job seekers. However, more than one out of fifteen Iowa business establishments (7%, or approximately 1,000 Iowa businesses) report that they only accept job applications online.

Larger Iowa businesses are more likely to use the Internet to recruit candidates than their smaller competitors. Connect Iowa found that only 29% of Internet-connected small businesses with fewer than five employees recruit workers online, compared to 78% of the largest Internet-connected Iowa businesses with 50 or more employees (Figure 2). In fact, businesses with 50 or more employees are significantly more likely to recruit candidates via the Internet than smaller Iowa businesses.

Figure 1.

Internet-connected Iowa businesses that recruit workers online

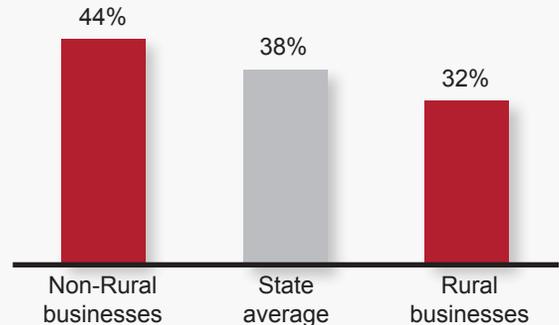
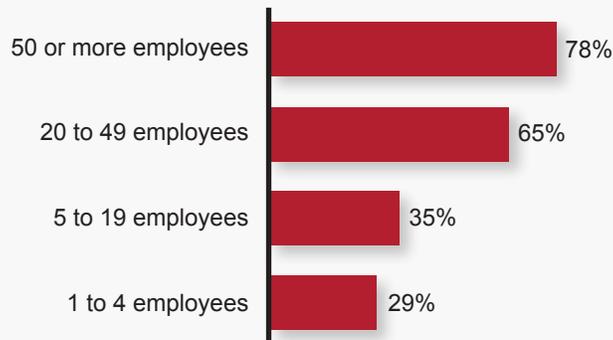


Figure 2.

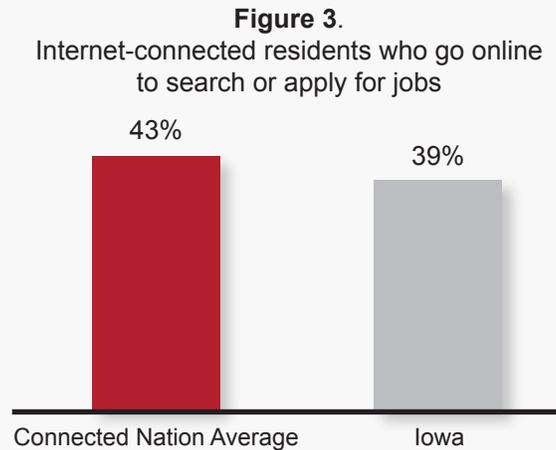
Internet-connected Iowa businesses that recruit workers online (by business size)



How Iowa Uses the Internet to Strengthen its Workforce

Traditionally, a job seeker looked for employment by poring through newspaper ads or working with a job agency to find employment. Today, online job-search websites and businesses that advertise their jobs on their own websites have made finding and applying for jobs much easier for those with the needed computing skills. More importantly, the ability to search for jobs via broadband provides an opportunity for an individual to find their ideal job anywhere in the world.

Across the states surveyed by Connected Nation, 43% of adult Internet users go online to search or apply for jobs (Figure 3). This is significantly higher than the 39% of adult Internet users in Iowa who do so. This translates into approximately 720,000 adult Iowans who access the Internet to search or apply for jobs online.



Yet not all Iowans are equally likely to use the Internet to find jobs. More than two-fifths of non-rural Internet users in Iowa (42%) go online to search and apply for jobs, compared to only 35% of Internet-using rural Iowans (Table 1). College-educated Iowans are significantly more likely to search online for jobs than Iowans with no college education.

Internet-connected Iowa households with children are significantly more likely to research or apply for jobs online than those without children. More than four out of ten Internet-connected Iowan adults with children at home (44%) search or apply for jobs online, compared to 36% of Iowans without children.

Internet-connected adults whose annual household income is less than \$25,000 are significantly more likely to use the Internet for job searches than adults who use the Internet and have annual household incomes of \$25,000 or more. Approximately 149,000 low-income adults in Iowa use the Internet to search or apply for jobs online.

Table 1.
Iowans with Internet access who go online to search or apply for jobs

Non-rural	Rural
42%	35%
College Education	No College Education
41%	32%
Household Income \$25,000 or more	Household Income Less than \$25,000
38%	53%
Household with Children	Household without Children
44%	36%

DuPont Pioneer – An Iowa Success Story Using Broadband to Recruit Employees

Among the most successful businesses in Iowa, DuPont Pioneer stands out. As one of the world's largest commercial producers of hybrid seeds, it is truly an American success story headquartered in Johnston, Iowa.⁵ Starting as a small family-run business that incorporated in 1926, DuPont Pioneer now operates in more than 90 countries and employs over 12,000 workers worldwide. According to Alan Roberts, Talent Acquisition Consultant for Pioneer in Iowa, broadband has streamlined the process for finding and recruiting talented workers.



According to Roberts, DuPont Pioneer has been accepting online applications for both full-time and part-time workers for over six years. In 2011, Roberts said they received well over 73,000 applications in the U.S, and about one-fourth of those were for positions in Iowa.

Having the information available electronically allows DuPont Pioneer to not only control external employment branding, but also helps it stay compliant with governmental reporting and affirmative action planning. Advertising jobs online also benefits prospective employees, as Roberts outlines: "The advantage to an applicant is they can review different job descriptions and apply for multiple positions with just a few additional clicks rather than several paper applications." Roberts also notes that advertising on job boards and other sites allows applicants to find a position on a public site and directly connect to Pioneer's website to review the job description and apply for the position.

Conclusion

The Internet can create tremendous opportunities for employers to find the best candidates, while at the same time empowering workers to find their perfect job. Yet nearly 57,000 Iowa businesses are not using this valuable tool to find and retain new employees, while approximately 1.1 million adults in Iowa do not look for jobs online.

To stay competitive, Iowa companies need to engage a diverse range of workers using social media, online recruitment services, brand building, and other online tools. In addition, Iowa's residents need access to high-speed Internet and they need the digital literacy skills necessary to adopt and utilize broadband to the fullest in order to get connected to potential employers. As more companies move their job recruitment online, Internet access and adoption will be necessary to stay competitive in tomorrow's job market.

Encouraging Iowa businesses to increase their use of online hiring tools will help them to become more competitive in seeking out new employees. Encouraging Iowa residents to use these tools to search and apply for jobs will assist in providing Iowans with the best jobs possible. Combined, the Internet has the potential to grow the state's workforce today and into the future.



⁵ Pioneer Hi-Bred, <https://www.pioneer.com/home/site/us>

Methodology and Definitions

Residential Methodology

Between June 27 and August 19, 2011, Connect Iowa conducted a random digit dial telephone survey of 1,200 adults across the state. Of the 1,200 respondents randomly contacted statewide, 200 were called on their cellular phones, and 1,000 were contacted via landline telephone. The results of this survey have been compared to similar surveys that Connected Nation conducted across ten states in 2011 (Alaska, Florida, Iowa, Michigan, Minnesota, Nevada, Ohio, South Carolina, Tennessee, and Texas).

Internet users are defined as respondents who answered “yes” when asked “Do you subscribe to the Internet at home?” and answered “every day, several times per week, or once per week or less” when asked “How often, if ever, do you go online from home?” Or who answered “yes” when asked “Do you use the Internet from any locations outside of your own home?”

Multiple attempts were made to each working telephone number on different days of the week and at different times of the day to increase the likelihood of contacting a potential respondent. To ensure a representative sample, quotas were set by age, gender, and census area of residence (rural or non-rural), and the results were weighted to coincide with 2010 United States Census population figures. For the purpose of setting quotas and weighting, “rural” respondents are defined as living in a census area that is not a part of a Metropolitan Statistical Area (MSA), as designated by the United States Office of Management and Budget. Weighting and design consultation were provided by Lucidity Research, and the survey results were reviewed by Dr. Mingjie Sun of The Institute of Design Research and Outreach at Iowa State University.

Surveys were conducted by Thoroughbred Research Group. On average, the survey took approximately 12 minutes to complete after the respondent agreed to participate. Based on the effective sample size, the margin of error = $\pm 3.21\%$ at a 95% level of confidence for the statewide survey of 2011. As with any survey, question wording and the practical challenges of data collection may introduce an element of error or bias that is not reflected in this margin of error.

Business Methodology

Between October 4 and November 2, 2011, Connect Iowa conducted a telephone survey of 804 Iowa business establishments. Data were collected by Thoroughbred Research Group, located in Louisville, KY. The purpose of this survey was to measure trends in technology adoption; measure barriers to technology adoption; determine how Iowa businesses are using broadband as an engine of economic growth; and measure the average price and speed of broadband service among business establishments across the state. On average, these surveys took approximately eight minutes to complete. The results of this survey have been compared to similar surveys that Connected Nation conducted across nine states in 2011 (Alaska, Florida, Iowa, Michigan, Minnesota, Nevada, South Carolina, Tennessee, and Texas).

Sample quotas were established by company size (5 brackets) and industry sector (8 sectors). Within these 40 cells, a randomly-drawn sample of businesses listed with Dun & Bradstreet was contacted for the survey. Altogether, this sample included 163 businesses with 50+ employees, 234 businesses with 20-49 employees, 207 businesses with 5-19 employees, and 200 businesses with 1-4 employees. In cases where the respondent's information regarding the number of employees at the establishment differed from the information provided by Dun & Bradstreet, the respondent's answer was used in determining business size quotas. Connect Iowa intentionally over-sampled large businesses to ensure a sample that was large enough to analyze and compare to smaller businesses.

In addition to the size and sector quotas, the data was subsequently weighted to ensure that the sample was representative of all employer business establishments statewide, with targets determined according to the 2009 United States Census Bureau's County Business Pattern report, the most recent data that was available at the time the survey was conducted. Weighting of the survey data and research consultation were provided by Lucidity Research LLC, located in Westminster, MD, and the survey results were reviewed by Dr. Mingjie Sun of The Institute of Design Research and Outreach at Iowa State University.

This sample provides a margin of error of $\pm 4.94\%$ at the 95% confidence level for the total sample of 804 businesses. This sample error accounts for sample weighting, using the effective sample size. As with any survey, question wording and the practical challenges of data collection may introduce an element of error or bias that is not reflected in this margin of error.

These surveys were conducted as part of the State Broadband Initiative (SBI) grant program, funded by the National Telecommunications and Information Administration (NTIA). The SBI grant program was created by the Broadband Data Improvement Act (BDIA), unanimously passed by Congress in 2008 and funded by the American Recovery and Reinvestment Act (ARRA) in 2009. To learn more about Connect Iowa and its programs please visit www.connectiowa.org or e-mail us at info@connectiowa.org.

APPENDIX A: Select sample sizes

2011 Residential Assessment

	<i>n</i> Connected Nation Average	<i>n</i> 2011 Iowa
Total	12,004	1,200
Internet Use at home or someplace else	9,555	952

Demographic Categories

	<i>n</i> 2011 Iowa
Rural	400
Non-Rural	800
Household with children	399
Household without children	779
Household with annual incomes below \$25,000	198
Household with annual incomes of \$25,000 or more	764
College education	775
No college education	394

2011 Business Assessment

	<i>n</i> Connected Nation Average	<i>n</i> 2011 Iowa
Total	7,004	804
Businesses use Internet	5,972	689

Businesses by Size and Sector

	<i>n</i> 2011 Iowa
1-4 employees	200
5-19 employees	207
20-49 employees	234
50 or more employees	163
Non-Rural businesses	403
Rural businesses	401