

## BROADBAND ADOPTION IN IOWA

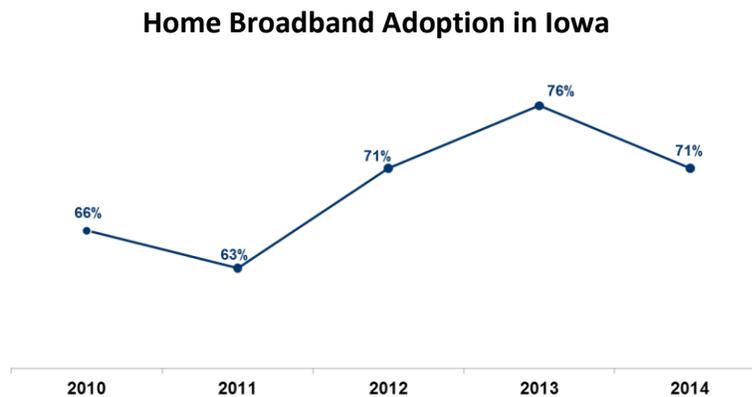
While expanded broadband access is important, without corresponding broadband adoption among Iowa consumers and businesses, further investment and build-out could be deterred. Therefore, it is in the interest of both private and public leaders statewide to collaborate to bridge the remaining broadband adoption gaps, explored below, and ensure that all Iowans are able to participate and compete in the twenty-first century interconnected global economy.

### Trends in Broadband Adoption Among Iowa Homes and Businesses

Connect Iowa's innovative research on broadband access, adoption, and use is unprecedented. Connect Iowa conducts annual statewide residential and business surveys. These surveys provide information on the people, businesses, and communities that are taking advantage – and more importantly, not yet taking advantage – of the expansive opportunities provided through broadband adoption.

#### Iowa Residential Broadband Trends

Connect Iowa's 2014 Residential Technology Assessment revealed that 29% of Iowans have not adopted broadband at home. While 71% of adults in the state subscribe to home broadband service, up from 66% in 2010, this leaves more than 694,000 adults statewide who still do not subscribe to home broadband service.



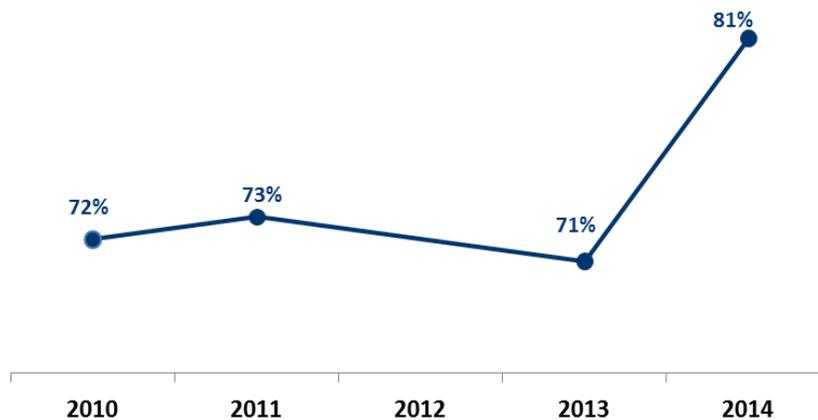
The barriers to home broadband adoption are consistently delineated into three main categories: (1) affordability of service and/or the device; (2) perceived relevance of online resources; and (3) digital skills to use the device and connectivity. Since 2012, the belief that home broadband service is not relevant or worthwhile has been the top barrier to home broadband adoption, cited by more than one-third (35%) of non-adopters in the state. The share of non-adopters who cite cost as their main barrier to home broadband adoption has dropped since 2011, from 33% of non-adopters that year to 21% of non-adopters in 2014. The lack of digital literacy skills has also declined as a barrier to home broadband adoption since 2011 from 18% to 14% of non-adopters; this represents approximately 54,000 fewer adults who said that their lack of digital literacy skills prevented them from subscribing to broadband.

## Iowa Business Broadband Trends

Broadband is the catalyst that helps Iowa businesses increase their revenues and productivity. According to Connect Iowa's Business Technology Assessments, Iowa businesses earned an estimated \$20 billion in revenue from online sales in 2013, an increase of approximately \$7 billion since 2010. Because of the huge impact that broadband has on businesses and the workforce, Connect Iowa surveyed businesses in the state about their broadband adoption and usage.

Results of Connect Iowa's 2014 Business Technology Survey released in summer 2014 revealed that over four out of five businesses in the state (81%) use broadband, up from 72% of businesses in 2010. Despite this increase, approximately 16,000 Iowa businesses still do not use broadband. Additionally, nearly one in five Iowa businesses (19%) have difficulty finding employees with the necessary technological skills, suggesting that technology training can help empower Iowa's workforce.

### Broadband Adoption Among Iowa Businesses



## Topical Reports

In addition to statewide research surveys, Connect Iowa published several reports that explored broadband issues and their interactions with other industries in the state. Previous Connect Iowa publications have explored the impact of broadband on Iowa's economy, e-learning opportunities through high-speed Internet, and broadband adoption among minority populations. These reports uncover and highlight broadband successes and opportunities within the state and show how Iowa residents and businesses benefit from broadband adoption.

Among these studies:

[Broadband and Business: Leveraging Technology in Iowa to Stimulate Economic Growth](#) (2011) showed that an estimated 23,000 Iowa businesses (28% of businesses in the state) did not use broadband at

that time. Those businesses were not experiencing the benefits of using broadband, as broadband-connected businesses reported median annual revenues that were \$300,000 higher than businesses that did not use broadband.

[Broadband: Boosting Education in Iowa](#) (2012) showed 41% of Iowans with Internet access utilize e-learning; 37% of Iowa e-learners are rural, while 63% live in urban or suburban households; nearly four out of five (79%) Iowans who are e-learners are employed adults; 45% of adult e-learners are between the ages of 18 and 34, while another 45% are age 35 to 54.

[Small Businesses-Using Broadband to Spur Iowa's Economy](#) (2012) revealed that nearly three-fourths (72%) of small businesses in Iowa employing fewer than twenty employees subscribe to broadband service for their business operations. More than two out of five (41%) small businesses without broadband service reported they don't need the service or are getting by without the service. The annual median revenue among small businesses with broadband is \$200,000 higher than businesses without broadband.

[Iowa's Silent Generation: Resilient, More Experienced, but Disconnected](#) (2012) reported that only 27% of Iowa residents age 70 or older subscribe to home broadband service, compared to a statewide average of 63%. The largest share of Iowans age 70 or older (39%, representing approximately 100,000 Iowans) say they do not subscribe because they do not see the relevance of broadband to their lives. This suggests that efforts to increase awareness of the benefits of subscribing to broadband could be effective among Iowa seniors.

[Broadband: Empowering Iowa's Workforce](#) (2012) noted that 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. 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 online.

[Broadband Expanding Access to Healthcare in Iowa](#) (2012) showed that more than two out of five Iowans (44%) go online to access e-health applications, while 6% use smartphones to access e-health applications. Approximately 91,000 rural Iowans with disabilities are using e-health tools to

stay connected to their doctors and access the latest medical information. Approximately 1,000 healthcare businesses in Iowa do not use computers and an additional 1,000 healthcare businesses operate without broadband service.

[Minority Iowans: Adopting and Utilizing Broadband](#) (2013) showed that seven out of ten adult minorities (70%) in Iowa subscribe to broadband service at home. Almost one-half of minority adults without broadband service at home (44%) cite lack of digital literacy skills as their biggest barrier, compared to cost or relevance among Caucasian Iowans. Nearly one-half (45%) of minority Iowans with Internet access go online to search or apply for jobs – significantly higher than the state average.

[Technology Trends in Rural Iowa](#) (2013) examined two-thirds of adults in rural Iowa (66%, or approximately 673,000 rural adults) subscribe to broadband service at home. Home broadband adoption among rural Iowans has increased by 11 percentage points since 2011, compared to only 6 percentage points in urban and suburban portions of the state.

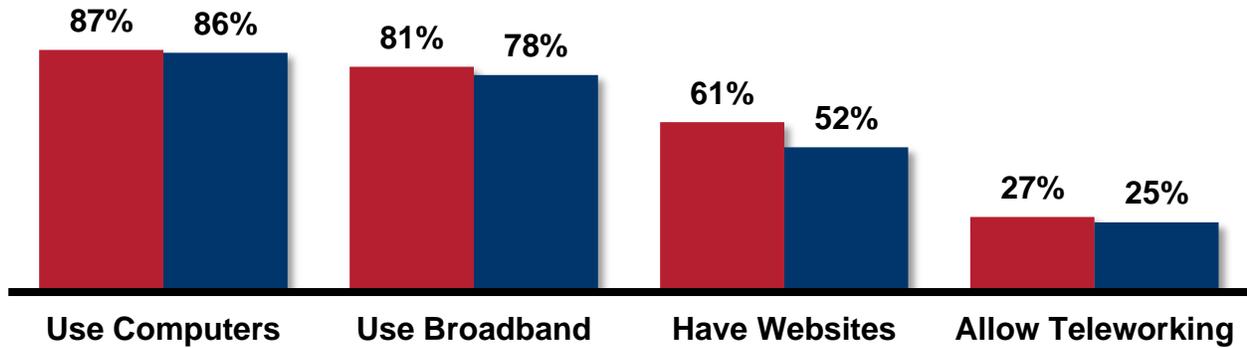
[How Women-Owned Businesses in Iowa Are Using Technology](#) (2013) estimated that nearly two-thirds (65%) of women-owned businesses in the state use broadband for business purposes. Women-owned businesses use the Internet to research ways to make their businesses more efficient seven percentage points higher than privately-held businesses that are not owned by women. Women-owned Iowa businesses that subscribe to broadband and maintain a website report median annual revenues that are \$200,000 higher than businesses that do not use broadband at all.

## Specialized Research

In addition to these reports, Connect Iowa has also conducted various analyses to track broadband adoption among key targeted sectors. For instance, Connect Iowa calculated technology adoption trends among rural businesses.

## Technology Adoption Among Rural Businesses

■ Statewide      ■ Rural Businesses



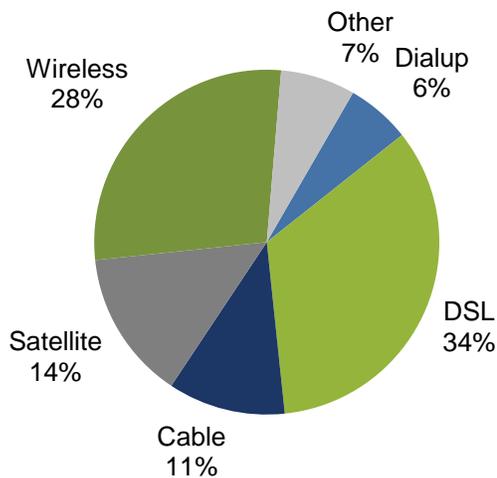
### Online Applications Used by Rural Businesses

Purchasing products or services	83%
Marketing and advertising products or services	63%
Conducting business with government offices	61%
Providing customer support	49%
Billing or bill payment	53%
Selling, or accepting orders for products or services	50%
Accepting real-time payments	33%
Advertising current job openings	22%
Accepting job applications	21%
None of the above	1%

## Revenues From Online Sales Among Rural Iowa Businesses



## How Iowa Farms Access the Internet



*Source:* United States Department of Agriculture's 2013 Farm Computer Usage and Ownership Report, August 2013, located at [http://www.nass.usda.gov/Publications/Methodology\\_and\\_Data\\_Quality/Computer\\_Usage/08\\_2013/fmpc0813.pdf](http://www.nass.usda.gov/Publications/Methodology_and_Data_Quality/Computer_Usage/08_2013/fmpc0813.pdf)

<b>Online Activities Among Internet-Connected Iowa Farms</b>		
<b>Online Application Among Farms</b>	<b>Iowa</b>	<b>U.S. Average</b>
Purchasing agricultural inputs over the Internet	19%	16%
Conducting agricultural marketing activities over the Internet	30%	14%
Accessing USDA/NASS reports over the Internet	15%	8%
Accessing other USDA reports/services over the Internet	23%	14%
Accessing other federal government websites over the Internet	15%	14%
Conducting business with any USDA website	9%	6%
Conducting business with any other federal government website	6%	5%
Conducting businesses with any non-agricultural website	46%	40%