

# Business Technology Assessment

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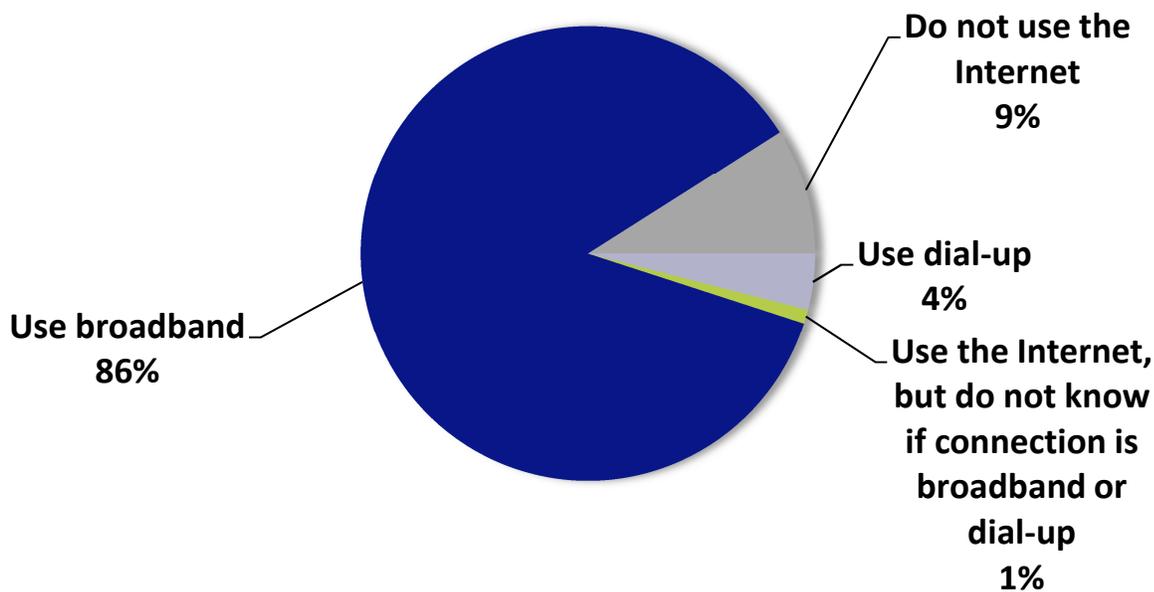
Broadband is a powerful, enabling technology and engine of economic growth in today's global marketplace. Puerto Rico's economic future depends not only on making robust broadband infrastructure available for entrepreneurs, but also ensuring that businesses and individuals fully utilize that technology.

To better understand how Puerto Rico businesses are using broadband and other technologies, Connect Puerto Rico conducted a telephone survey in 2013 to establish a benchmark against which technology usage could be measured. In 2015, the Puerto Rico Institute of Statistics partnered with Connect Puerto Rico to conduct a follow-up telephone survey to measure trends in technology adoption and usage among businesses in Puerto Rico; determine barriers to broadband adoption among businesses in Puerto Rico; and allow for trending of these figures between 2013 and 2015. This report presents the findings from that survey of 810 business establishments in Puerto Rico.

## Internet Usage Among Businesses in Puerto Rico

According to Connect Puerto Rico's 2015 Business Technology Assessment, nearly nine out of ten businesses (88%) use computers. Altogether, nearly two out of three employees in Puerto Rico (63%, representing approximately 433,000 workers) use computers for their work. In addition, 86% of businesses on the island use broadband, which is an increase of seven percentage points since 2013 when only 79% of businesses used broadband (Figure 1).

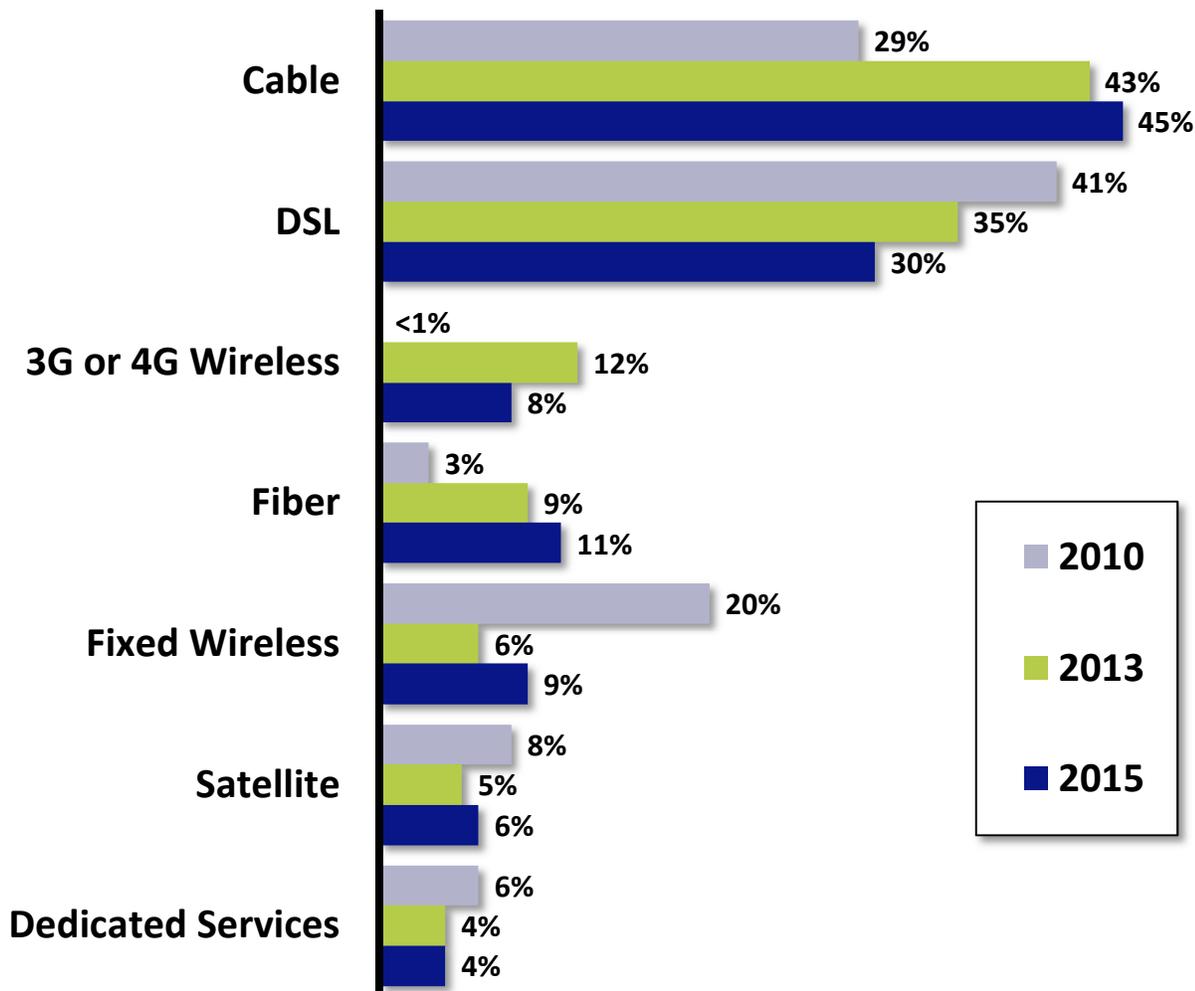
**Figure 1.**  
**Internet Use Among Businesses in Puerto Rico**



Across Puerto Rico, approximately 38,000 businesses in Puerto Rico currently use broadband, and approximately 400,000 employees in Puerto Rico (58%) rely on the Internet for their work.

The share of broadband-connected businesses that use cable or fiber broadband service has increased since 2010. On the other hand, the percentage of businesses that rely on DSL service and wireless services for their broadband needs has decreased over this same time period (Figure 2).<sup>1</sup>

**Figure 2.**  
**Platforms Used by Broadband-Connected Businesses**



<sup>1</sup> Annual figures may not total 100% because respondents could provide more than one response.

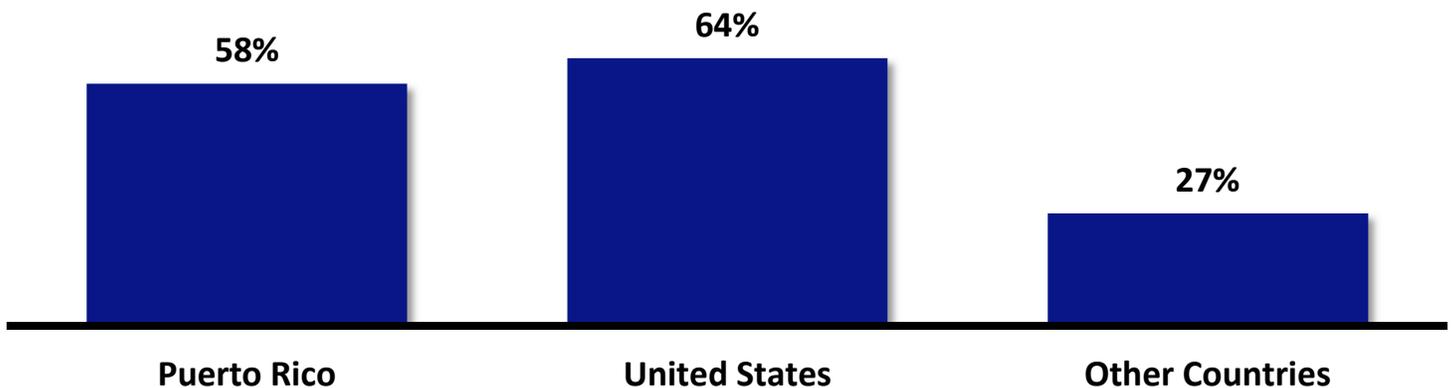
Businesses use the Internet in a variety of ways (Table 1).

**Table 1.**  
**Online Activities Conducted by Internet-Connected Businesses**

|  | 2013 | 2015 |
|--|------|------|
| Communicating with current customers                                 | 63%  | 71%  |
| Billing or bill payment  | 67%  | 69%  |
| Purchasing or placing orders for products or services                | 65%  | 60%  |
| Conducting business with local, state, or federal government offices | 54%  | 55%  |
| Marketing and advertising products and services                      | 50%  | 53%  |
| Providing customer support for products or services                  | 52%  | 51%  |
| Researching ways to make the business more efficient                 | 49%  | 50%  |
| Selling or accepting orders for products or services                 | 58%  | 48%  |
| Accepting real-time payments such as credit card and debit payments  | 38%  | 42%  |
| Bidding on contracts   | 35%  | 33%  |
| Conferencing or other online meeting applications                    | 29%  | 31%  |
| Accepting job applications   | 21%  | 22%  |
| Advertising current job openings                                     | 21%  | 20%  |

In 2015, fewer businesses reported buying, placing orders, and selling goods or services online. On average, businesses that sell goods and services online reported that a little more than one-third of their sales revenues (37%) come from online sales. Among those that purchase goods or services online, more than one-half (58%) made purchases from other businesses within Puerto Rico; a slightly larger percentage (64%) bought goods and services online from businesses in the United States, while 27% made purchases from businesses in other countries (Figure 3).<sup>2</sup>

**Figure 3.**  
**Where Puerto Rico Businesses Place Online Orders**



<sup>2</sup> Among those businesses that report ordering goods or services online.

Among businesses that do not subscribe to broadband service, the belief that their business would not benefit from broadband service is the top barrier, cited by nearly one in four businesses that do not use broadband (Table 2).

**Table 2.**  
**Main Barriers to Broadband Adoption**

|  |               |
|--|---------------|
| Our business can do everything we need without the Internet              | <b>24%</b>    |
| Our business does not use computers                                      | <b>14%</b>    |
| The monthly cost of broadband service is too expensive                   | <b>9%</b>     |
| Dial-up service is sufficient for our current needs                      | <b>5%</b>     |
| The installation cost of broadband service is too expensive              | <b>3%</b>     |
| The Internet would be too much of a distraction for our employees        | <b>3%</b>     |
| Broadband service poses a security risk                                  | <b>2%</b>     |
| Broadband service is not available in our area                           | <b>2%</b>     |
| It would take too long to train our employees on how to use the Internet | <b>1%</b>     |
| Broadband service is too complicated                                     | <b>&lt;1%</b> |
| Other reasons  | <b>9%</b>     |
| Don't know/Refused   | <b>26%</b>    |

In addition, many business establishments in Puerto Rico do not use computers, making broadband even more out of reach for them.

## Mobile Internet Usage Among Businesses in Puerto Rico

More than one in three businesses in Puerto Rico (36%) uses mobile Internet service via a cell phone or mobile device for at least some of its business functions, and 16% of employees in Puerto Rico rely on mobile Internet service. That represents approximately 110,000 employees working at 16,000 business establishments across the Island. They use that mobile Internet service for a variety of purposes (Table 2).<sup>3</sup>

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<sup>3</sup> Among businesses that use mobile Internet service for work functions

**Table 2.**  
**Activities Conducted Using Mobile Internet Service**

|  | <b>2013</b> | <b>2015</b> |
|--|-------------|-------------|
| Communicating with current customers                                 | 68%         | 79%         |
| Providing customer support for products or services                  | 51%         | 58%         |
| Purchasing or placing orders for products or services                | 48%         | 55%         |
| Conducting business with local, state, or federal government offices | 36%         | 50%         |
| Marketing and advertising products and services                      | 44%         | 49%         |
| Selling or accepting orders for products or services                 | 40%         | 48%         |
| Conferencing or other online meeting applications                    | 32%         | 35%         |
| Accepting real-time payments such as credit card and debit payments  | 26%         | 25%         |
| Travel and expense tracking applications                             | 26%         | 25%         |

Although the share of businesses that reports using mobile Internet service has dropped slightly since 2013 (36% reported doing so in 2015, compared to 42% in 2013), those that do use mobile service are doing so for a growing number of activities that once required a desktop computer in an office.

## Conclusions

Broadband usage is growing among businesses in Puerto Rico. This growth will continue to be important as Puerto Rico businesses grow and promote themselves not only to customers on the island, but to the rest of the world as well. Increasing access to broadband service for businesses, as well as homes to allow for greater employee mobility and more opportunities for entrepreneurs to start their businesses from home, can only help this effort. Any such increase will have long-term benefits for Puerto Rico, its businesses, and its population.

## Methodology

Connect Puerto Rico conducted a phone survey of 810 Puerto Rico business establishments between June 25, 2015, and August 12, 2015, on behalf of the Puerto Rico Institute of Statistics. This sample included 55 businesses with 50+ employees, 107 businesses with 20-49 employees, 245 businesses with 5-19 employees, and 403 businesses with 1-4 employees. This sample provides a margin of error of  $\pm 4.39\%$  at the 95% confidence level for the total sample group. Connect Puerto Rico and the Puerto Rico Institute of Statistics designed the survey to measure trends in technology adoption and the awareness of available broadband service among Puerto Rico businesses.

For this survey, a business establishment is defined as “a single physical location at which business is conducted or services or industrial operations are performed.” Sample quotas were established by company size (5 brackets) and industry sector (8 sectors). Within these 40 cells, a randomly drawn sample of businesses from the Puerto Rico Corporate Registry was interviewed. Connect Puerto Rico weighted the results to coincide with the most recent data available from the United States Census Bureau’s County Business Patterns report, using a rim weighting process.

Lucidity Research of Westminster, Maryland, provided weighting and research consultation. Estudios Tecnicos of San Juan, Puerto Rico, conducted the surveys on behalf of Connect Puerto Rico and the Puerto Rico Institute of Statistics.