



# WELCOME!

A discussion about data and metrics  
related to Internet accessibility and  
adoption in Vermont.

# Agenda

5:30 pm - Welcome & Introductions

5:45 pm - Existing Resources

6:00 pm - Group Activity

6:45 pm - Reflections and next steps

7:00 pm - Program Ends

Introductions: Name,  
where you are from, what  
brought you here today,  
and favorite hobby

## **Today's goals:**

- Review existing data and resources
- Map potential strategies/sources
- Identify next steps and plan

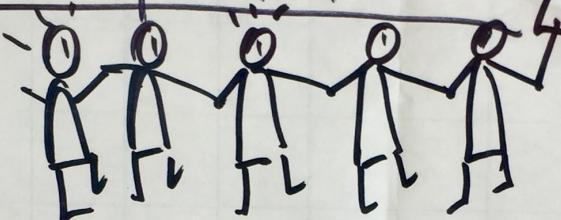
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# Digital Inclusion



framework for  
assessing comm.  
readiness

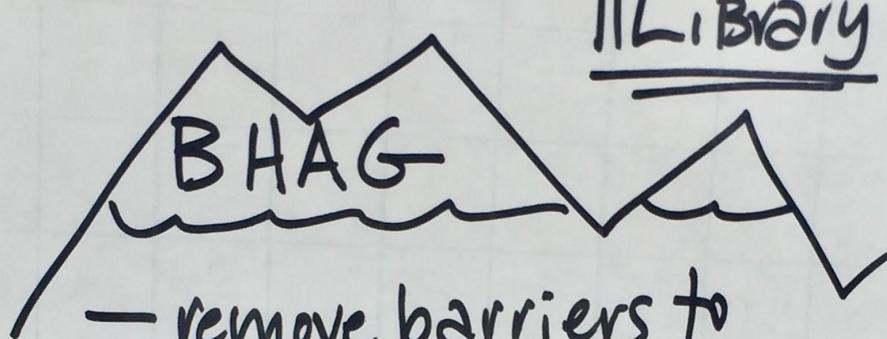


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- ID exist
- build a  
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- reach a  
populat

What story  
does it tell?  
Story  
curve?

DIT



- remove barriers to access
- connect your network to all others
- open source solutions

- bring online governance
- upto date
- data security plan for BTU

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what to do?

- more research / DATA
- ID existing resources
- build alliances w/ existing initiatives
- reach a targeted population

e.g. ||  
Library

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What data do we have  
about Internet Usage in  
VT?

## 2017 Broadband availability - Download Speed (mbps)/ Upload speed (mbps)

County	Town	Total Buildings	Served locations are affirmatively reported as served by specific providers					
			Served 100/100 or Better	Percent Served 100/100 or Better	Served 25/3 or Better	Percent Served 25/3 or Better	Served 4/1 or Better	Percent Served 4/1 or Better
CHITTENDEN	Bolton	510	164	32.2%	256	50.2%	504	98.8%
CHITTENDEN	Buels Gore	15	14	93.3%	14	93.3%	15	100.0%
CHITTENDEN	Burlington	11,528	10,596	91.9%	11499	99.7%	11,505	99.8%
CHITTENDEN	Charlotte	2,108	104	4.9%	1319	62.6%	2,061	97.8%
CHITTENDEN	Colchester	6,367	0	0.0%	6152	96.6%	6,185	97.1%
CHITTENDEN	Essex	7,249	0	0.0%	7031	97.0%	7,136	98.4%
CHITTENDEN	Hinesburg	1,871	216	11.5%	1335	71.4%	1,832	97.9%
CHITTENDEN	Huntington	894	7	0.8%	624	69.8%	885	99.0%
CHITTENDEN	Jericho	1,963	0	0.0%	1785	90.9%	1,816	92.5%
CHITTENDEN	Milton	4,269	0	0.0%	3845	90.1%	4,058	95.1%
CHITTENDEN	Richmond	1,710	425	24.9%	1573	92.0%	1,709	99.9%
CHITTENDEN	Shelburne	3,182	0	0.0%	3041	95.6%	3,075	96.6%
CHITTENDEN	South Burlington	6,885	655	9.5%	6824	99.1%	6,829	99.2%
CHITTENDEN	St. George	318	0	0.0%	296	93.1%	316	99.4%
CHITTENDEN	Underhill	1,230	0	0.0%	932	75.8%	1,153	93.7%
CHITTENDEN	Westford	822	0	0.0%	720	87.6%	777	94.5%
CHITTENDEN	Williston	4,240	0	0.0%	4044	95.4%	4,137	97.6%
CHITTENDEN	Winooski	1,757	76	4.3%	1751	99.7%	1,757	100.0%

Center for Rural Studies at UVM [Household internet Connection](#) Report 2010

**Table 1. Percent of Vermont households that have a computer, an Internet connection or a broadband connection by household income, 2010**

Household Income	% with Computer	% with computer that have Internet	% of all households that have Internet	% of all households that have broadband
Less than \$25,000	56.7	81.5	47.8	37.2
More than \$25,000	90.0	96.4	88.5	75.8
\$25,000 - \$50,000	81.6	93.7	79.2	68.2
\$50,000 - \$75,000	90.6	94.7	85.6	72.1
\$75,000 - \$100,000	96.8	98.9	97.8	81.1
More than \$100,000	98.7	100.0 ( $\pm 5.0\%$ )	100.0 ( $\pm 5.0\%$ )	89.6
Total Households Reporting Income	82.9	94.2	79.9	67.7

$N_{computer} = 560$ ,  $N_{Internet1} = 451$ ,  $N_{Internet2} = 538$ ,  $N_{broadband} = 538$

Source: University of Vermont Center for Rural Studies, *Vermonter Poll, 2010*

Note: Results of 100% should be interpreted in light of a margin of error of  $\pm 5.0\%$ .

The Comprehensive Economic Development Strategy (CEDS) characterizes the state of Chittenden County's economy, its strengths, weaknesses, opportunities and threats; and identifies strategies and actions to maintain and grow it.

#### Opportunities:

- Engaging high skilled and trainable retirement age population
- Engaging and supporting growing New American population
- To promote telecommuting and remote workforce
- Increasing involvement of UVM, Champlain College, and St. Michaels in economic development
- Nurturing entrepreneurial environment and support systems
- Improving the quality of vocational and technical education programs
- Creating more dynamic economic development programs and services
- Promoting telecommuting and remote workforce based upon our regional assets

Ensure adequate infrastructure and facilities (i.e. water supply, wastewater treatment, stormwater treatment, broadband coverage and solid waste recovery and recycling) to support areas planned for growth while conserving resources. [Score](#) (nothing about broadband) The ECOS Plan adoption - [Environment. Community. Opportunity. Sustainability \(ECOS\)](#)

Indicators		Time Period	Actual Value	Target Value	Current Trend
+   ECOS Drinking Water Capacity	<a href="#">Details..</a>	—	—	—	—
+   ECOS Waste Water Average Annual Flow (million/gallons/day)	<a href="#">Details..</a>	2015	10.98 MGD	—	 1
+   ECOS Storm Water Management	<a href="#">Details..</a>	2014	3,449acres	—	 0
+   ECOS Pounds of Construction/ Debris Solid Waste Land-filled per Capita per Day	<a href="#">Details..</a>	2016	0.55	—	 3
+   ECOS Pounds of Municipal Solid Waste Land-filled per Capita per Day	<a href="#">Details..</a>	2016	3.05	—	 1

[BTV Performance Dashboard](#) and Burlington [department of Innovation and Technology](#)



REPORT

## Signs of digital distress

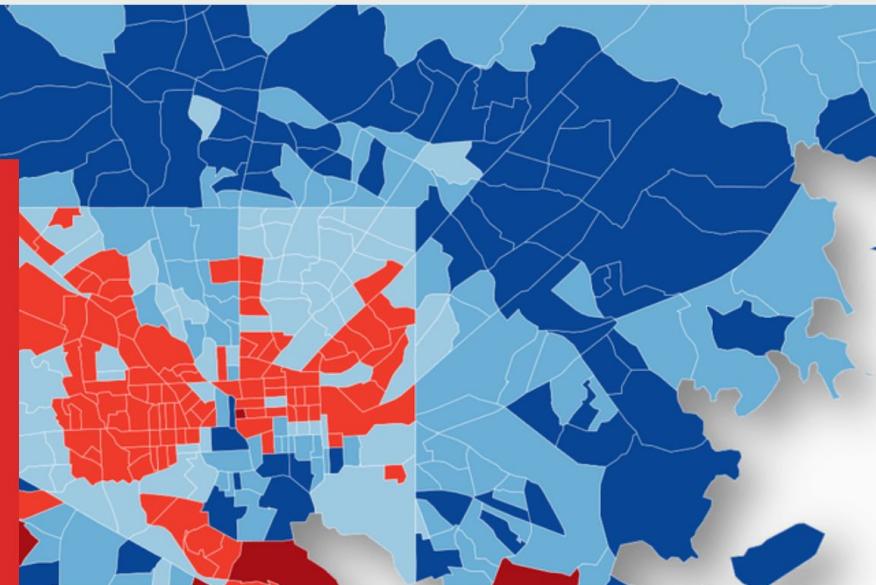
Mapping broadband availability and subscription in American neighborhoods

Adie Tomer, Elizabeth Kneebone, and Ranjitha Shivaram

Tuesday, September 12, 2017



For media inquiries,  
contact:



The internet is now a fundamental component of the American economy, creating new ways to educate, employ, bring services to, and entertain every person.



FCC - Open Data

FCC Home    Browse



Sign In



Fixed Broadband Deployment Data: June, 2016 Status V2

This data contains status reports for June 2016, with revisions accepted through May 2017.



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# Form 477 Census Tract Data on Internet Access Services

Posted below are census tract-level FCC Form 477 data on fixed Internet access service connections.

**As of 06/30/16** (CSV). Posted 07/12/17.

Includes data on residential fixed Internet access connections per 1,000 households by census tract for both service over 200 kbps in at least one direction and service at least 10 Mbps down / 1 Mbps up.  
Data used in:

- [Map of Residential Fixed Connections per 1,000 Households by Census Tract](#)

**As of 12/31/15** (CSV). Posted 12/06/16.

Includes data on residential fixed Internet access connections per 1,000 households by census tract for both service over 200 kbps in at least one direction and service at least 10 Mbps down / 1 Mbps up.  
Data used in:

- [Map of Residential Fixed Connections over 200 kbps per 1,000 Households by Census Tract](#)
- [Map of Residential Fixed Connections at least 10 Mbps / 1 Mbps per 1,000 Households by Census Tract](#)

**As of 06/30/15** (CSV). Posted 08/22/16.

## Related Links

- [Internet Access Services Reports](#)
- [Form 477 County Data](#)
- [Additional Form 477 Data](#)
- [Form 477 Resources](#)
- [IATD Data & Reports](#)



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Map of Fiber Owned by the Department of Public Service

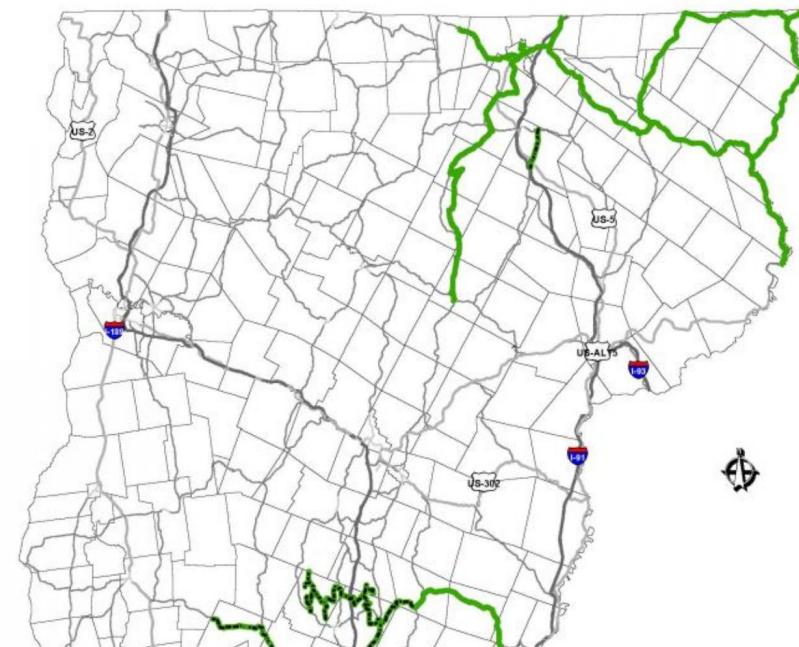
Telecommunications and Connectivity  
Advisory Board

2016 Connectivity Initiative Round 2 RFP

2016 Connectivity Initiative RFP

Broadband Availability

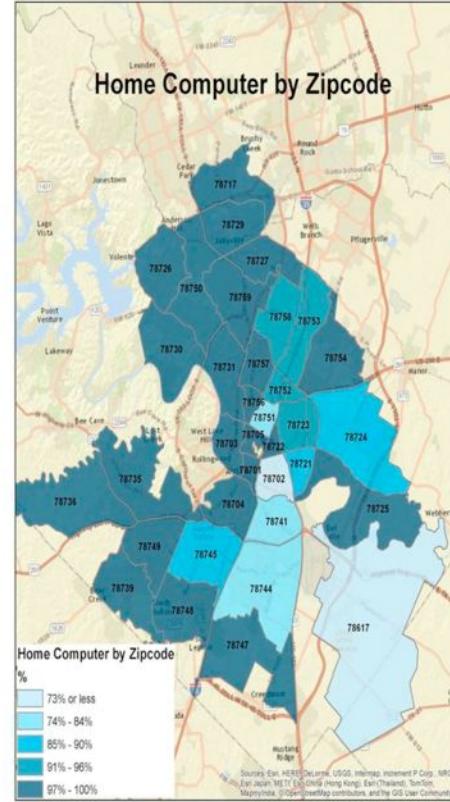
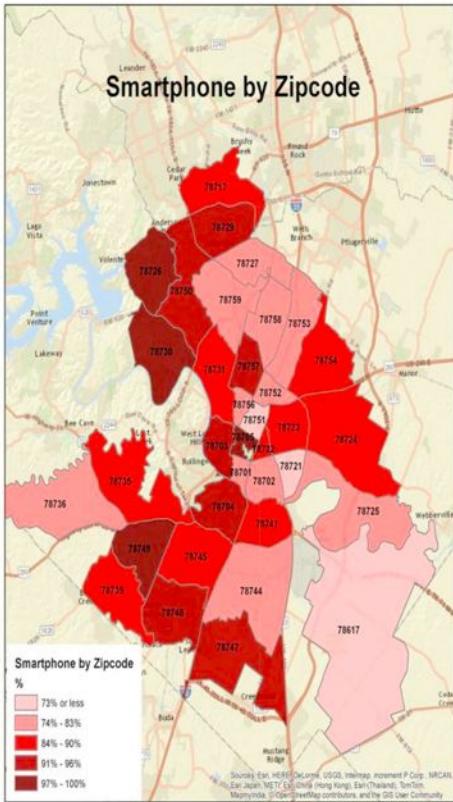
## MAP OF FIBER OWNED BY THE DEPARTMENT OF PUBLIC SERVICE



# Digital Inclusion in Austin, TX

[Report](#)

# Digital Inclusion in Austin



# Digital Inclusion In Austin



## Who are the nonusers?



84%  
High School Degree or Less

## Why do they not use the internet?



#1 Reason  
Expensive



1/2 had  
Privacy Concerns



42% had  
No One to Teach Them



2 in 5  
Not Interested



- [Department Home](#)
- [Digital Inclusion](#)
- [Digital Inclusion Strategic Plan](#)
- [Austin Digital Assessment](#)
- [Community Connections](#)
- [Grant for Technology Opportunities](#)
- [Digital Empowerment Community of Austin](#)



**DIGITAL  
EMPOWERMENT  
COMMUNITY  
OF AUSTIN**



## AUSTIN DIGITAL ASSESSMENT

The Austin Digital Assessment was a residential technology survey conducted in 2014 to evaluate and assess residents' access to technology resources and literacy and training programs and to identify unmet needs and barriers.

### View data and materials from the Austin Digital Assessment:

- Digital Inclusion in Austin: Results from a Citywide Survey
- Survey Highlights

### Open Data

- Weighted Topline Report: Aggregated responses to all survey questions
- Who are the Internet Non-Users? A visualization of Austin Digital Assessment findings
- Austin Digital Assessment Weighted Averages.

### Residential Technology Usage Maps:

- Maps by Zipcode
- Maps Geospatially Weighted by Council District

### TOP CONTENT

- ★ [Grant for Technology Opportunities Program](#)
- ★ [Digital Inclusion](#)
- ★ [Utility Complaint Service](#)
- ★ [Financial Advocacy Resources](#)
- ★ [Public Access Television](#)

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# Digital Inclusion in Boston, MA



[HOME](#) > [DEPARTMENTS](#) > [BROADBAND AND CABLE](#) > [BROADBAND AND DIGITAL EQUITY](#)

Last updated: 1/2/18

# BROADBAND AND DIGITAL EQUITY

*We're working to improve access to  
affordable and reliable high speed Internet  
in Boston.*

Have questions? Contact us:



[DIGITAL.EQUITY@BOSTON.GOV](mailto:DIGITAL.EQUITY@BOSTON.GOV)

[DIGITAL EQUITY FUND](#)   [OUR WORK](#)   [FREE PUBLIC INTERNET](#)   [LOW-COST INTERNET](#)

[TOOLS](#)   [PRESS](#)



# WHAT WE'RE WORKING ON

## HOUSEHOLDS AND BUSINESSES

We're looking to create a more competitive broadband market in the City. You should be able to choose from many high-quality, affordable options.

### CURRENT PROJECTS

- ▶ Working with City departments to streamline efforts related to broadband infrastructure.

## IN THE COMMUNITY

We're making high-speed Internet more available in the places where you work, learn, play, and engage in civic life.

### CURRENT PROJECTS

- ▶ Adding free, open-to-the-public computing areas and Wi-Fi in each branch of the Boston Public Library.
- ▶ Extending the Boston Fiber Optic Network (BoNET) to

## DIGITAL SKILLS

We work to make sure community members and local businesses are equipped with digital tools and skills. We want everyone to get the chance to innovate and create the future for their communities and Boston.

### CURRENT PROJECTS

- ▶ Working with groups who offer one-time and ongoing digital skills training. This

# Digital Inclusion in Detroit, MI

[Report](#)

# Group Activity

Design a study that maps out the state of the digital ecosystem and, more specifically, the divides in connectivity among the local neighborhoods.

- Background
- Framework
- Approach
- Variables

# Background:

- population statistics
- # of community centers
- # of universities
- local history
- Location of high-speed Internet availability in public places
- benefit of digital equality
- goals (ex: Understand and Increase Usage of Digital and Communications Technology, Address Potential Barriers, Understand the Need for Digital Literacy Training, Understand the Need for Language & Disability Accommodations, Develop Relevancy & Advocacy Campaigns Within Specific Communities & Populations)

# Framework:

- Demographics
- Neighborhood attributes and characteristics
- Participant attitudes and beliefs about the Internet
- Access and use of social networks
- Broadband and access issues (such as perceived affordability)
- Patterns of Internet use (or non-use)

# Approach:

- Postcards
- Opt-in surveys
- Focus groups (Use - Barriers - Motivations - Plans/Services)
- Connecting to Households that represent varying socioeconomic make-up of our area
- Phone interviews
- Incentives (gift card, raffle, etc.)
- School survey
- Stories by neighborhood

# Variables:

- Demographics (age, sex, race, languages spoken, income, etc.)
- Patterns of Internet Use and Non-Use
- % of Internet use at home, school, work, library, etc.
- Reasons for not having Internet access at home
- Comfort and ability to use the Internet (adoption and application)
- % who go online to shop, get news, check email, etc.
- Household Media and Information Ecosystem (Cable, landline, etc.)
- Preference for data plan, home Internet service, or both
- Regional ISP's
- % households who qualify for internet at reduced cost
- Attitudes and beliefs about internet use at home and on mobile
- Skills needed to find success in the 21st century

Can we pull information like this into a report? What would it look like and where will it live?

Can we share it publicly so it may be referenced, shared and used in future efforts?

What would a one stop shop look like for DI in BTV? (Laptops to refurbish, partnerships, trainings, events, etc.)

# Group Share

What should the plan be moving forward? what are next steps?

Thanks!

Julia Vallera

[Twitter](#) | [Linkedin](#)