Striving for Digital Equity

A report on the challenges and opportunities the Digital Divide presents to Essex County communities
Introduction

Across Essex County, one out of every five households lacks a basic computer. A similar number — 59,000 households, with around 160,000 people — live without fixed broadband.

With the right mix of interventions, Essex County could level the playing field, ensuring digital access for all residents. Doing so would not only address the short-term needs of life under Covid-19 but would also brighten our collective future by building much-needed digital skills.

Reliable access to digital resources helps children get the most out of remote learning, just as it helps seniors access telemedicine and improves the job prospects for lower-income residents.

Cities, towns, nonprofits, businesses, school districts and others have already started mobilizing, working to distribute computers, subsidize broadband, and generally ensure that more residents can participate in digital life.

We at the Essex County Community Foundation have mapped the digital divide across our county as an essential step toward digital equity, a way to better understand where the true challenges and opportunities lie. With this information now in hand, we are eager to work with community leaders on expanded initiatives and action plans.

What follows is not a comprehensive picture of how to tackle the digital divide in Essex County. Instead, we present a series of cross-sections, showing how this issue affects people in different locales, and how it’s shaped by existing racial and economic inequities.

Throughout, we treat digital equity as a multidimensional issue, with four core elements:

- **Access**, including secure, affordable broadband
- **Equipment**, chiefly a modern desktop or laptop with a camera for video
- **Privacy**, to ensure comfortable working and learning spaces for all
- **Training**, to build skills and comfort with computers
Essex County has its share of digital deserts

The cities that struggle most with digital access tend to be the most economically disadvantaged, including Lawrence, Lynn, and Peabody.

Jessica Andors, executive director of Lawrence Community Works, makes the connection plain: "In all cases around the digital divide I think you’re ultimately going back to these underlying causes of poverty, housing instability, and employment instability that are rooted in longstanding structural biases and inequities."

Across Essex County, nearly 60,000 households lack secure broadband

Share of households with cable or fiber optic broadband

- ≥ 86%
- 83–86%
- 79–83%
- 62–79%

9 of the 10 neighborhoods with the lowest rates of broadband access and computer ownership are in Lawrence and Lynn.

SOURCE: American Community Survey, 2014-2018
Even at a more granular level, the streets and neighborhoods where people seem most cut off from digital life lie in these same lower-income communities.

Addressing these localized challenges now can help stop them from spreading across generations. Helping parents build technical know-how opens new vistas for their children, making it easier for them to flourish in the digital world.

**One of every five Essex County families lacks a basic computer**

Share of households with a desktop or laptop

- **≥ 91%**
- **88–91%**
- **84–88%**
- **61–84%**

SOURCE: American Community Survey, 2014-2018
Every town has an opportunity to improve

While the most economically disadvantaged cities may fare worse overall, the digital divide cuts across every community in Essex County.

Groveland, for instance, is a relatively wealthy area, with a median household income well above the Essex County average. But it also has its share of low-income families earning less than $35,000 per year—and only half of these lower-income families have reliable broadband access, one of the lowest levels in the entire county.

Dougan Sherwood, president of the Greater Haverhill Chamber, notes that Haverhill is also "a place with every layer of economic wealth—five country clubs and a large population of low-income families."

Bridging these economic worlds, he suggests, would help address this and many other challenges facing Haverhill residents.

"In Haverhill, a lot of people, particularly those who have been here for generations, have attained significant wealth. But it remains a disparate city where there isn't relationship-building across economic lines. I'm convinced we could address many of our problems if the city was better connected to itself."

Digital equity is a problem in affluent towns, too

Municipalities where families earning <$35K have lowest rates of broadband access

<table>
<thead>
<tr>
<th>Town</th>
<th>Broadband rate, overall</th>
<th>Broadband rate, families earning &lt;$35k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merrimac</td>
<td>81%</td>
<td>44%</td>
</tr>
<tr>
<td>Lawrence</td>
<td>62%</td>
<td>45%</td>
</tr>
<tr>
<td>Groveland</td>
<td>82%</td>
<td>46%</td>
</tr>
<tr>
<td>Swampscott</td>
<td>83%</td>
<td>47%</td>
</tr>
<tr>
<td>Lynnfield</td>
<td>86%</td>
<td>49%</td>
</tr>
<tr>
<td>Manchester-by-the-Sea</td>
<td>79%</td>
<td>51%</td>
</tr>
<tr>
<td>Wenham</td>
<td>85%</td>
<td>51%</td>
</tr>
</tbody>
</table>

$35K in household income is roughly 150% of the poverty line, a suitable cut-off for identifying lower-income families.

Latino residents are disproportionately affected

Across Essex County, Latino residents are twice as likely to lack broadband access, compared to their white, non-Latino neighbors—a gap that shows how issues of racial inequality shape the digital divide.

In some cities and towns this gap is even larger. Latino residents in North Andover and Saugus have below-average rates of broadband access, despite living alongside non-Latino white families with high access rates.

But access isn't the only issue for Latino residents. Language barriers can complicate efforts to use digital resources. And Latino-run small businesses, which were hard hit by the Covid crisis, could benefit mightily from multilingual supports.

Entrepreneurship for All's Kevin Moforte notes that Latino businesses found it far more difficult to get emergency Paycheck Protection Program loans from the federal government: “All the webinars and tutorials were in English, at least at first. It took weeks to get Spanish instructions online. So that was a big hurdle.”

In some places, Latino families are much less likely to have secure broadband

Municipalities with the biggest gaps between Latino and white-non-latino broadband rates

<table>
<thead>
<tr>
<th>Town</th>
<th>Broadband rate, white-non-latino</th>
<th>Broadband rate, Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Andover</td>
<td>83%</td>
<td>69%</td>
</tr>
<tr>
<td>Haverhill</td>
<td>77%</td>
<td>64%</td>
</tr>
<tr>
<td>Saugus</td>
<td>81%</td>
<td>69%</td>
</tr>
<tr>
<td>Georgetown</td>
<td>84%</td>
<td>79%</td>
</tr>
<tr>
<td>Salem</td>
<td>80%</td>
<td>75%</td>
</tr>
<tr>
<td>Beverly</td>
<td>80%</td>
<td>76%</td>
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</tbody>
</table>

Only includes towns with at least 3% Latino population.

Kids can flourish with additional support

Cities and towns have worked hard to ensure that all kids have the computers and broadband necessary for remote learning.

Salem Mayor Kim Driscoll thanked the "school folks who identified the hundreds of students that lacked internet access and worked with Comcast to get a starter program set up." State Representative Christina Minicucci said the Lawrence public schools “…did the best they could with the resources they had to ensure each household received one device. Despite this proactive approach, there was, and still is, a great need and the digital divide is wide.”

In addressing these issues, however, other problems arose. Basic broadband sometimes faltered when everyone in the family needed to be online at the same time. And privacy proved challenging, too, as students with tighter living arrangements struggled to find comfortable spaces where they could focus and work.

Caleb Dolan, outgoing executive director of the KIPP Massachusetts charter school system, noted: “Privacy is a particular challenge for adolescents. Many kids feel anxious if they’re on video because they want to control the image they present of their lives. And this anxiety can be magnified for kids whose housing conditions are particularly strained.”

Seniors will benefit from online learning and telehealth

School-age children aren’t the only ones who could benefit from better equipment and expanded digital support. Many older residents would, too.

Part of the issue is generational, as older residents didn’t grow up in a world of personal computers. But there’s also a stigma that can limit efforts to help seniors get online. According to Jennifer Raymond from Elder Services of the Merrimack Valley and North Shore: “There’s a widespread bias that the older you get, the less able you are to understand technology. And so they get overlooked.”

New efforts are underway. The Lawrence Senior Center is working on a plan to loan tablets and hotspots to older residents interested in online learning. And the Lynn Community Health Center is making telehealth easier to access and use, building on its experience that small interventions can make a big difference. “We know that whenever we sign up for a new electronic project, there are going to be technical issues,” according to CEO Kiame Mahaniah. “Yet, for most people, once you’ve made the steps simpler and walk them through the process, they get it and use it!”

Peabody stands out as a city where people over 65 have especially-limited broadband access and where their internet usage is among the lowest in Essex County.
Telehealth could be one of the great benefits to expanded internet access among seniors. By making it easier to ask medical questions, check in with physicians, and get certain kinds of low-intensity medical care via video, telehealth can help alleviate the mobility challenges that come with visiting the doctor’s office.

**Internet use among seniors varies across Essex County**

Share of 60+ population who report using the internet in the last month, a selection

<table>
<thead>
<tr>
<th>Town</th>
<th>Recent internet use among 60+ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peabody</td>
<td>62%</td>
</tr>
<tr>
<td>Haverhill</td>
<td>63%</td>
</tr>
<tr>
<td>Methuen</td>
<td>63%</td>
</tr>
<tr>
<td>Groveland</td>
<td>75%</td>
</tr>
<tr>
<td>Rowley</td>
<td>75%</td>
</tr>
<tr>
<td>North Andover</td>
<td>78%</td>
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</tbody>
</table>

SOURCE: CDC, Behavioral Risk Factor Surveillance System

**The digital divide poses some unique challenges**

To enhance digital equity in Essex County, advocates and thought-leaders need to resolve some complex issues.

- **Catch-22s.** You can’t run an online survey to see who’s struggling with digital access—or use a mass email to inform constituents about opportunities and trainings. By its very nature, the digital divide resists certain kinds of familiar, digital-first approaches and solutions.

  On this front, the telephone can be an important bridge, because it’s comfortable for a much larger universe of folks, particularly among the aging population.

- **Genuine efficiencies can also produce heightened exclusion.** Online resources can be tremendous equalizers when it comes to helping people access health, work, school, and civic life. Families who never joined in-person school events might be able to participate in virtual platforms.
However, shifting to all-virtual would create a severe exclusion for those lacking stable broadband.

Mary Sarris of the North Shore Workforce Investment Board found a similar issue with government programs. “The unemployment insurance system in the state has grown more and more reliant on online access for the services they provide, reducing resources for in-person support.” This shift may have smoothed the process for many, but it places a special burden on workers with limited digital resources.

There are real opportunities for change

Given the urgency of remote learning and growing evidence for telehealth, now may be our best opportunity to redress the digital divide in Essex County.

What’s needed is the right mix of bold, long-term initiatives and sharp, near-term interventions—all working together to improve broadband access, distribute equipment, expand training, and open up safe spaces for virtual activities.

Broadband access

• **Municipal broadband.** There are various ways for cities and towns to provide universal broadband, everything from city-owned fiber-optic lines to regulated public-private partnerships. Already, cities including Haverhill, Salem, and Lawrence are testing the feasibility of these approaches.

• **Public WI-FI.** Even without running physical lines to every home, it may be possible to provide universal access via vastly expanded public WI-FI hotspots and mesh networks.

• **Subsidized accounts.** In areas where reliable broadband is relatively expensive, subsidies could prove a major boon to lower-income families. And with a clear target in mind—for example, providing access to 30,000 Essex County families—it should be possible to set a firm funding goal and negotiate clear terms with internet providers. Cable franchise agreements could provide additional leverage for negotiating with service providers.

Equipment

• **A laptop/desktop for every family.** Giving families the hardware needed to access the internet may not be a cure-all, but it is an effective approach that can help many families.

• **Corporate partnerships.** Tech companies enjoying record growth may be eager to collaborate on high-profile equipment donations and other approaches that meet community needs while demonstrating corporate commitment to the social good.
• Digital equity fund. The city of Boston runs a digital equity fund, distributing grants that help young people, seniors, and immigrant communities gain access to digital resources. Essex County could do something similar, perhaps through a mix of public dollars and private philanthropy.

• Non-digital alternatives. Knowing that some families will continue to struggle with digital access, it’s vital to maintain alternatives, including telephone-based options and e-learning via public access television.

Privacy

• Internet access centers. Large community spaces may provide a comfortable environment for internet use. Gyms, parks, sports fields, community centers, and vacant storefronts could be turned into internet centers, where people would get a square of socially distanced space and free internet access.

• Headphones and mics. Headsets provide a sense of privacy, even in relatively crowded spaces. They are also relatively inexpensive, which makes this approach very cost-effective.

• In-person meetings to determine at-home needs. Even if schools aren’t prepared for in-person learning, some kind of direct contact (in-person, via phone) with families at the beginning of the year could help districts better understand the full range of digital needs, including any privacy constraints. This would also afford an opportunity for educators to establish stronger partnerships with families and inquire about needs that people may not feel comfortable sharing online.

Training

• Digital service corps. Recruiting young, digitally savvy people to help provide digital training for seniors could prove a great opportunity for inter-generational connection.

• Training for educators. While districts are helping educators with the technical aspects of online and hybrid learning, there’s room for additional training around effective approaches to remote teaching, including for a diverse student population with varying digital challenges.

• Short-term interventions for long-term gains. Covid may provide the immediate impulse, but better digital training would have substantial long-term benefits for individuals and businesses, including cost-savings from telehealth and more marketable skills for workers. Businesses that are increasingly reliant on remote workforces may be newly eager to contribute to digital training programs.
The Digital Divide, a Town-by-Town Analysis

This dashboard shows both wired broadband access and computer ownership for each municipality. It also highlights underperforming subgroups and neighborhoods by noting where low-income residents, Latino families, children, and seniors have below-average rates of wired broadband access (i.e. lower than the countywide average for that same group). Countywide broadband rates for these subgroups are: low-income 54.7%; Latino 70.2%; children 80.5%; seniors 65.5%. We focus on subgroups comprising at least 10% of the town population. Notes about Latino underperformance sometimes involve smaller populations, particularly in Gloucester, Rockport, and Rowley.

Essex County

<table>
<thead>
<tr>
<th>County Population</th>
<th>County Median Household Income</th>
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<tr>
<td>790,638</td>
<td>$75,878</td>
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Desktop-Laptop Ownership Countywide: 79.9%
Wired Broadband (cable/fiber) Countywide: 79.9%
Amesbury

- Broadband access is below county average among children (79.9%)

Population: 17,378
Median Household Income: $80,721

- Desktop-Laptop Ownership: 85.5%
- Wired Broadband (cable/fiber): 79.8%

Andover

- 2 neighborhoods with below-average broadband penetration

Population: 35,609
Median Household Income: $148,125

- Desktop-Laptop Ownership: 94.7%
- Wired Broadband (cable/fiber): 91.6%

Beverly

- Broadband access is below county average among seniors (63.4%) and low-income (52.9%) residents

Population: 41,731
Median Household Income: $79,483

- Desktop-Laptop Ownership: 82.1%
- Wired Broadband (cable/fiber): 80.1%
**Boxford**

Boxford stands out as the one town performing above average across all measured subgroups and neighborhoods.

- Population: 8,270
- Median Household Income: $174,340
- Desktop-Laptop Ownership: 96.9%
- Wired Broadband (cable/fiber): 91%

**Danvers**

Broadband access is below county average among seniors (64.1%).

- Population: 27,631
- Median Household Income: $84,842
- Desktop-Laptop Ownership: 84.2%
- Wired Broadband (cable/fiber): 79.2%

**Essex**

1 neighborhood with below-average broadband penetration.

- Population: 3,713
- Median Household Income: $113,469
- Desktop-Laptop Ownership: 91.7%
- Wired Broadband (cable/fiber): 83.1%

[View Neighborhood Map](#)
Georgetown

1 neighborhood with below-average broadband penetration

Population: 8,649
Median Household Income: $128,885

<table>
<thead>
<tr>
<th>Desktop-Laptop Ownership</th>
<th>Wired Broadband (cable/fiber)</th>
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<tbody>
<tr>
<td>92.3%</td>
<td>87.8%</td>
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Gloucester

Broadband access is below county average among Latino (51.4%) and low-income (54.2%) residents

Population: 30,049
Median Household Income: $65,377

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<tr>
<th>Desktop-Laptop Ownership</th>
<th>Wired Broadband (cable/fiber)</th>
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<tbody>
<tr>
<td>81.3%</td>
<td>76%</td>
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Groveland

Broadband access is below county average among low-income (46.2%) residents

Population: 6,749
Median Household Income: $97,109

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<thead>
<tr>
<th>Desktop-Laptop Ownership</th>
<th>Wired Broadband (cable/fiber)</th>
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</thead>
<tbody>
<tr>
<td>89.4%</td>
<td>82.3%</td>
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</tbody>
</table>
Hamilton

- 3 neighborhoods with below-average broadband penetration

Haverhill

- Broadband access is below county average among
  - low-income residents (54.1%)
  - Latino residents (64.5%)
  - children (74.2%)
  - seniors (61.4%)

Ipswich

- Broadband access is below county average among
  - seniors (65.3%) and low-income (51.1%) residents

Population

- Hamilton: 8,020
- Haverhill: 63,280
- Ipswich: 13,901

Median Household Income

- Hamilton: $133,333
- Haverhill: $67,579
- Ipswich: $90,557
Lynnfield

- Broadband access is below county average among low-income residents (48.7%)
- Wired Broadband (cable/fiber) 89.6%

Population 12,847
Median Household Income $132,632

Lynn

- Broadband access is below county average among children (76.1%) and seniors (56.6%)
- Above-average broadband rates for low-income, Latino residents

Population 93,617
Median Household Income $54,598

Lawrence

- Broadband access is below county average among low-income residents (48.7%), Latino residents (64.9%), children (68.8%), and seniors (50.9%)

Population 79,841
Median Household Income $41,583
Manchester-by-the-Sea

Broadband access is below county average among low-income (50.6%) residents

Population: 5,370
Median Household Income: $124,025

Wired Broadband (cable/fiber): 78.5%
Desktop-Laptop Ownership: 88.6%

Merrimac

2 neighborhoods with below-average broadband penetration

Population: 6,839
Median Household Income: $83,508

Wired Broadband (cable/fiber): 80.7%
Desktop-Laptop Ownership: 89.3%

Marblehead

Broadband access is below county average among children (72.9%) and low-income (44.1%) residents

Population: 20,488
Median Household Income: $115,511

Wired Broadband (cable/fiber): 89%
Desktop-Laptop Ownership: 91.7%
Methuen

Several neighborhoods are far below-average on broadband penetration and computer ownership

Population 50,019
Median Household Income $74,912

<table>
<thead>
<tr>
<th>Desktop-Laptop Ownership</th>
<th>Wired Broadband (cable/fiber)</th>
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</thead>
<tbody>
<tr>
<td>83.5%</td>
<td>84.2%</td>
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</tbody>
</table>

Middleton

1 neighborhood with below-average broadband penetration

Population 9,779
Median Household Income $102,604

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<thead>
<tr>
<th>Desktop-Laptop Ownership</th>
<th>Wired Broadband (cable/fiber)</th>
</tr>
</thead>
<tbody>
<tr>
<td>89%</td>
<td>82.9%</td>
</tr>
</tbody>
</table>

Nahant

1 neighborhood with below-average broadband penetration

Population 3,495
Median Household Income $90,741

<table>
<thead>
<tr>
<th>Desktop-Laptop Ownership</th>
<th>Wired Broadband (cable/fiber)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.9%</td>
<td>83.3%</td>
</tr>
</tbody>
</table>
North Andover

- Broadband access is below county average among Latino residents (69.0%)
- Population: 30,589
- Median Household Income: $109,371

Newbury

- 1 neighborhood with below-average broadband penetration
- Population: 7,031
- Median Household Income: $93,000

Newburyport

- Several neighborhoods are far below-average on broadband penetration and computer ownership
- Population: 17,990
- Median Household Income: $103,220

View Neighborhood Map
Peabody

Broadband access is below county average among seniors (58.2%) and low-income (50.9%) residents

Population
52,865
Median Household Income
$68,387

Rockport

Broadband access is below county average among Latino (38.2%) and low-income (51.7%) residents

Population
7,212
Median Household Income
$81,681

Rowley

Broadband access is below county average among Latino residents (58.2%)

Population
6,298
Median Household Income
$114,063
Salem

Broadband access is below county average among children (80.2%) and seniors (65.0%)

Population: 43,302
Median Household Income: $65,565

Desktop-Laptop Ownership: 79%
Wired Broadband (cable/fiber): 76.7%

Salisbury

2 neighborhoods with below-average broadband penetration

Population: 9,209
Median Household Income: $78,112

Desktop-Laptop Ownership: 86.1%
Wired Broadband (cable/fiber): 80.8%

Saugus

Broadband access is below county average among Latino residents (69.2%)

Population: 28,158
Median Household Income: $80,341

Desktop-Laptop Ownership: 84.4%
Wired Broadband (cable/fiber): 79.2%
Swampscott

Broadband access is below county average among seniors (62.6%) and low-income (46.8%) residents

Population: 14,755
Median Household Income: $113,442

Wired Broadband (cable/fiber): 83.4%
Desktop-Laptop Ownership: 84.6%

Topsfield

1 neighborhood with below-average broadband penetration

Population: 6,551
Median Household Income: $136,812

Wired Broadband (cable/fiber): 83.4%
Desktop-Laptop Ownership: 87.7%

View Neighborhood Map

Wenham

Broadband access is below county average among seniors (59.8%) and low-income (50.6%) residents

Population: 5,208
Median Household Income: $109,712

Wired Broadband (cable/fiber): 85.1%
Desktop-Laptop Ownership: 89.2%
West Newbury

While West Newbury performs well on most measures, low-income residents have broadband access that is barely average.

Population
4,581
Median Household Income
$138,403

Desktop-Laptop Ownership
94%

Wired Broadband (cable/fiber)
89.7%

NOTE ON DATA  Data for this analysis comes from the Census Bureau’s American Community Survey, using 5-year estimates covering 2014–2018. Broadband access numbers for low-income families, children, seniors, and Latino residents are adjusted to exclude cell-phone data plans.