Internet For All

Ending the digital divide in Hamilton





April 2022

Executive Summary

In 2016, the United Nations General Assembly declared the internet a human right. In the 2019 budget, the Canadian government committed to a multi-year plan that will provide access to high speed internet for all Canadians, by 2030. However, the pandemic has clearly demonstrated that the need for the internet is greater than ever and that governments need to take urgent action to provide affordable, high-speed internet to people who are struggling to connect. During the COVID-19 crisis, many low-income people are relying on the internet for school, work, food deliveries, telemedicine, communication with family and staying connected in their community.

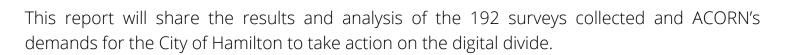
Despite the commitments at the international and national levels, tens of thousands of Canadians do not have access to the internet. A Canada wide ACORN survey conducted in 2010 showed that cost was a major barrier in accessing the internet.

2019 showed that cost was a major barrier in accessing the internet.

According to the Public Interest Advocacy Centre, Canadians pay two to three times more for internet and mobile phone data than those in other OECD countries.

The efforts made by the federal government to address the barriers to digital equity remain far too limited. ACORN won the federal Connecting Families Program in 2018 but the program falls short on several counts.

With progress stalled at the federal level and the urgency in low income Hamiltonians having access to affordable internet, ACORN Hamilton launched a survey in October 2021 to determine what problems exist in Hamilton surrounding internet affordability and accessibility and how these issues can be addressed at the municipal level.



What is ACORN?

ACORN Canada (Association of Communities for Reform Now) is a multi-issue, mass-based community and tenant union of low- to moderate-income families and individuals. The purpose of the union is to give people power so that they can have their voices heard at the highest levels of the country. With chapters across the region, province, and across the country, ACORN is able to be both a local-based union winning local campaigns, as well as a large organization combining forces to fight national corporations and governments that are at the root of most of our problems.

ACORN Hamilton started in 2017 and has grown to have four chapters across the city: Downtown, Mountain, East End and Stoney Creek.







Internet For All

Access to affordable and high-speed internet has been one of ACORN's core national campaigns for years. ACORN has been working with low- and moderate-income Canadians to win affordable internet and close the digital divide. ACORN members delivered 400 testimonials to a CRTC hearing, highlighting the issue of internet access especially to low-income people, leading to the Canadian Radio television and Telecommunications Commission's (CRTC) historical declaration in 2016 that broadband internet access as a basic service.

But ACORN members continued to fight for affordable internet as the declaration fell short of announcing any subsidy for low-income people. In 2018, the Ministry of Innovation, Science & Economic Development (ISED) launched the Connecting Families Program.

Targeting the National Child Benefit recipients, the program enables eligible Canadian families to access the internet for \$10 per month (plus tax) at 10 Mbps. However, the fact that it targets families with children and only some families (those receiving the maximum federal child benefit), the program has a very limited reach. Not only does this translate to a handful of families with children, but it also leaves out thousands of families with children and other low-income people such as seniors and people from other vulnerable communities who are equally in need of affordable internet. The program's success is contingent upon voluntary contribution of internet service providers. Hence, some internet providers such as Eastlink in Nova Scotia did not opt in.

Recently, ACORN won the expansion of the Connecting families program or Connecting Families 2.0 that will provide affordable internet with higher internet speed to some low-income seniors that receive maximum Guaranteed Income Supplement (GIS). The expansion also includes a raised cost of \$20 a month for internet speeds that will be five and ten times faster respectively than previously offered. As well, the data allotment is doubling, from 100 GB to 200 GB of usage per month. The \$10 a month program remains available.

However, despite these wins, it is at best a patchwork of internet programs that fail to meet the needs of all low-income people.



What is Hamilton Doing?

This section will highlight the current and past initiatives the City of Hamilton has or is taking on improving internet access in Hamilton.

Current

Hamilton High Speed Internet Survey

The City of Hamilton is working with the regional and rural broadband project at the University of Guelph to study the economic benefits of broadband investments across Hamilton communities. In June of 2020, the city launched a survey to the public to collect information about how all residents, rural, homebased businesses, farms, and businesses currently use the internet. The survey is now closed and the city is currently doing data collection and ongoing data review. The main focus of the survey was to determine where there are coverage gaps in Hamilton.



Free Wi-fi in city facilities

The City of Hamilton currently offers free Wi-Fi in many city facilities such as Recreation Centres, City Hall, Municipal Service Centres, and Libraries. Access is available to all visitors at no cost, all that is required is a Wi-Fienabled laptop, tablet, or smartphone. There are currently 76 locations listed on the city's website with internet access.

Free Wi-Fi in city parks

In 2017, the City of Hamilton launched free Wi-Fi at Gage Park. Recently, this initiative has been expanded to include William Connell Park, and Waterdown Memorial Park.

<u>Hamilton Public Library</u>

During the COVID-19 pandemic, the Hamilton Public Library has expanded their programs to provide internet access to library users.

1) Library location Wi-Fi is accessible 24 hours a day, as well as boosted connectivity to allow for the signal to extend further outside of the building.





- 2) Tablet lending program:
 - The library purchased 70 iPads and data plans to go with them for library users to check out. They also have short loan in-library use devices as well.

What Is Hamilton doing?

Past

Hamilton Free Downtown Wi-Fi

The City of Hamilton had been paying \$90,000 a year to operate a downtown Wi-Fi network in the area bordered by Queen, Wellington, Main and Barton Streets. The initial phase of the project began in 2008, with a survey that indicated there is a definite interest in public Wi-Fi in the downtown core with 88% of respondents indicating that public Wi-Fi is very important. After 5 years, the free wireless internet service was scrapped. The City reported getting lots of complaints from the public that the service was not meeting their needs and that the infrastructure was old and needed to be refreshed. Instead of improving the service, the city shut it down altogether.

Hamilton Street Railway Wi-Fi

In 2018, Hamilton Street Railway launched a two-month pilot project offering free Wi-Fi on 15 of its 267 buses operating on various routes across the city. This was funded by the Public Transit Infrastructure Fund by Government of Canada. The pilot was not extended beyond the initial funded pilot.



What are other Cities Doing?



1) Toronto Public Library (TPL)

The Toronto Public Library (TPL) has a Wi-Fi Hotspot lending program that provides Wi-Fi hotspots with unlimited data to 1,000 households for 6 months. The TPL also launched a new Internet Connectivity Kits initiative which gives laptops and Wi-Fi hotspots with two years of unlimited data to families and individuals in need. There were over 600 kits distributed in 2020. Households were referred to this initiative by participating community agencies.

2) Digital Canopy Program

The City of Toronto partnered with Cisco - a multinational technology corporation that develops, manufactures, and sells high-technology services and products - to launch Digital Canopy, a program that will deploy free Wi-Fi hotspots in 25 residential buildings in low-income neighbourhoods. Cisco and Toronto brought together network providers, internet service providers and managed service providers to expand wireless internet access to some of Toronto's most vulnerable communities.

3) Free Wi-Fi on Public Transit

The City of Toronto offers free Wi-Fi access on all TTC Subway stations and all GO train stations.

4) ConnectTO

On February 5th, 2021 Toronto City Council voted to pass ConectTO, a plan to build municipal internet infrastructure to get better internet access to those left out by the Big Telecoms. This project will be a collaboration between the city and the private sector to connect underserved areas with fibre to a high-speed broadband network. The public revenue that will be generated through this process will be reinvested in communities, primarily through the reduction in internet costs for vulnerable residents.

Phase 1 of the program began in 2021 with request for proposals closing in November. Priority neighborhood areas will be identified in 2022 and report of Phase 1 findings to inform future phases will be presented to Toronto City Council in early 2022.

What are other Cities Doing?

Toronto ACORN has been organizing to fight for a bold ConnectTO program that benefits low income residents:

- City to create an independent ISP
- \$10 dollar internet for low income and moderate income people (including seniors, lone parents, people with disabilities, working families, etc- people making \$60,000 per year or less)
- ConnectTO be publicly owned and publicly controlled, permanently
- Ban big telecoms like Rogers, Bell and Telus from participating in ConnetTO, from lobbiny or being on the executive board.
- Affordable devices and modems provided by the city low & moderate income people.
- Minimum threshold on speed to be set at 50mbps for downloads and 10 Mbps for uploads.
- Privacy protection- data collected through ConnectTO not sold or shared with private companies
- Citywide access not just pilot project areas
- Permanent affordable program, not just for few years



What are other Cities Doing?

Olds, Alberta

Olds, Alberta is home to the first community-owned and operated municipal broadband. The idea for this project in Olds was first conceptualized in 2004 and construction began in 2011.

While the cheapest plan starts at \$80 /month for home internet, the program has been a successful example of a publicly owned broadband and has addressed issues of rural connectivity for the community.



Canada's first communityowned and operated Fibreto-the-Premises network

Calgary



The City of Calgary has built a municipal fibre broadband network over the past two decades. The city owns and operates its own broadband network to facilitate municipal service provision. The city leases out its excess capacity on its network, which provides benefits to the local telecommunications while also bringing in revenue for the city.

What are the Big Telecoms Doing?

The following section will break down how Rogers, Bell and Cogeco participate in the federal Connecting Families program and starting price for their internet packages.



Rogers launched its Connected Success program in 2013 as the first of its kind in Canada. It was first available to Toronto Community Housing residents, then later expanded to all Ontarians in rent-geared-toincome housing. The program offers plans \$9.99/month for starting 25Mbps download 5Mbps and upload, up to \$34.99/month for 150Mbps download 15Mbps upload. The program exists in Ontario, New Brunswick and Newfoundland. There are several groups of people who are now eligible for the program. These groups are:

- Those receiving income support from Ontario Works
- Those receiving income support from Ontario Disability Support Program (ODSP)
- Those receiving income support from The Social Assistance Program in N.B Those receiving income support from Disability Support Program in N.B
- Those receiving income and disability benefits through Income Support in Newfoundland and Labrador; and
- Seniors receiving the Guaranteed Income Supplement in all three provinces

This program currently offers four low-cost Internet tiers: \$9.99 for 25U Mbps, \$14.99 for 50U Mbps, \$24.99 for 75U Mbps and \$34.99 for 150U Mbps speeds.

For customers outside of the Connected for Success program, their starting internet package is \$69.99 for unlimited internet but increases to \$94.99 after 12 months (as of March 2022 advertised on their website).



Cogeco is one of the telecoms participating in the Connecting families initiative but does not have any other programs or initiatives for low-income customers. As of March 2022, their starting package for unlimited internet is \$59.50 but increases to \$82.50 after two years.



Bell is a participating telecom in the Connecting families initiative. They don't have any other programs or initiatives for low-income customers. As of March 2022, their starting package for unlimited internet is \$84.95.

Methodology

The survey was launched November 19 2021 and closed March 23 2022. The survey was shared and filled out by ACORN members and tenants through community meetings, outreach, phone banking and social media. In total 192 individual surveys were collected. 67% of respondents reported an annual household income of \$10,000 - 40,000.

Key takeaways from the survey:

1) Home internet is a vital service for social and economic purposes.

Survey respondents reported using the Internet for a wide range of tasks.

The top 5 reasons for accessing the internet were: email, connecting with family and friends, reading the news, entertainment, and applying to government services.

2) Cost is the main reason for not having home internet

55% of respondents without home internet identified cost as the main reason.

3) Free public Wif-Fi offers important access for households without home internet

Survey respondents without home internet reported the library (72%) and restaurants (52%) as the top places they go to when needing Internet access.

4) Access to home internet vital for households with school aged children

75% of the respondents with school aged children reported requiring the internet for online learning and homework.

5) Big telcoms dominate as Hamilton resident's internet providers

62% of respondents with home internet had their home internet provided by either Bell, Rogers or Cogeco.

6) Majority of respondents are paying over \$50 / monthly for home internet

72% of respondents with home internet reported paying \$50 a month or more for home internet. 42% reported paying \$80+/monthly.

7) Low income households are sacrificing other essentials to afford home internet

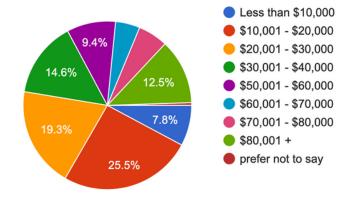
34% of respondents reported sacrificing other essentials (rent, food, medications, transit) in order to afford home internet.

8) Low income households believe home internet is too expensive

95% of respondents agreed that home internet is too expensive. 74% of respondents would like to see home internet plans \$40 / monthly or less.

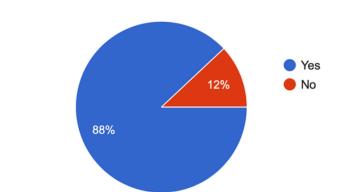
The majority of survey respondents had a yearly household income of between \$10,000 and \$40,000.

What is your household income? 192 responses

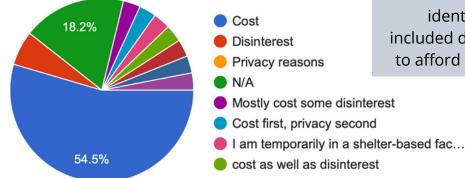


11.2% of survey respondents identified that they do not have internet at home.

Do you have home-internet? 192 responses



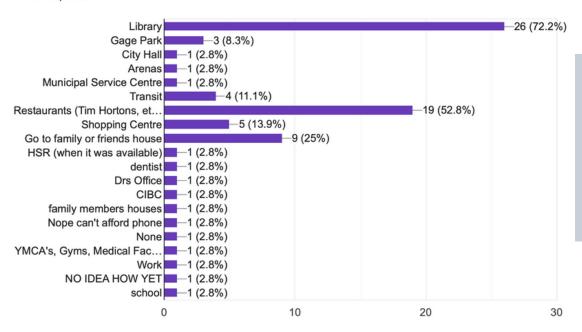
If answered no - What is the (main) reason for not having internet at home? 33 responses



Of that 11.2% who said no, over half of them identified cost as the reason. Other reasons included disinterest, privacy reasons, and unable to afford devices needed to access the internet.

If you don't have internet access at home, do you access it anywhere around Hamilton? (check all that apply)

36 responses

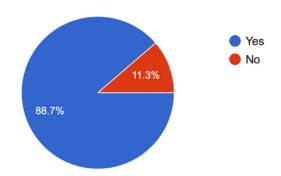


Many of the respondents who do not have internet use the free Wi-Fi options that are available around the city. The most popular being the Hamilton Public Library and restaurants such as Tim Hortons.

Of the respondents who do have internet, 87.8% of them have high speed internet.

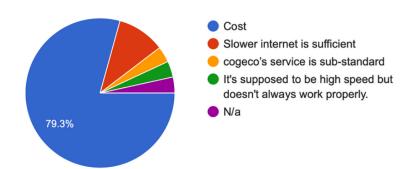
If answered yes - Is your home internet high speed?

168 responses



If you answered no, what is your (main) reason for not having high speed internet? 29 responses

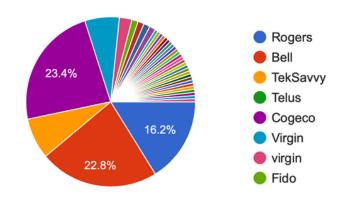
Most of the respondents who do not have high-speed internet, identified cost as the main reason. Others shared that slower speeds were sufficient for their usage.



What company provides your internet?

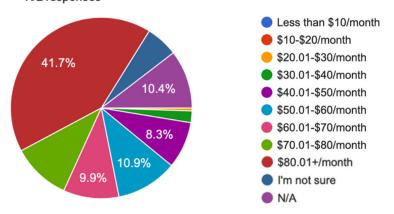
167 responses

The 3 main internet companies used by respondents were Rogers, Bell, and Cogeco.



How much do you pay monthly for internet?

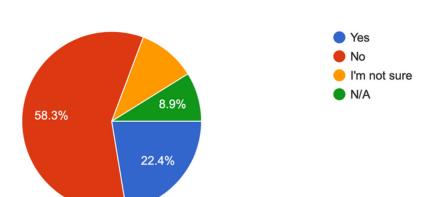
192 responses



The majority of respondents pay over \$60 per month for internet with 41% of respondents paying over \$80 per month.

Have you ever been charged extra fees for additional usage?
192 responses

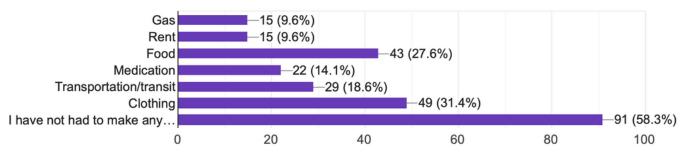
22.4% of respondents said that they have been charged extra fees on top of their monthly payment.



65 respondents identified having to sacrifice paying for other things in order to pay their internet bill. These included gas, rent, food, medication, transportation, and clothing.

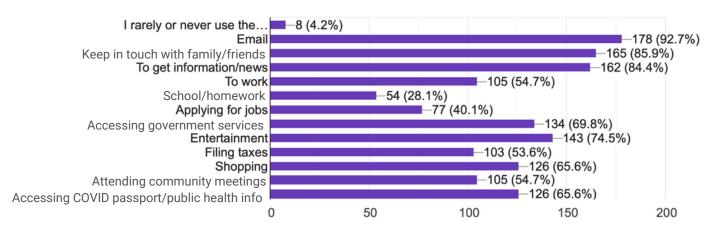
Have you ever had to sacrifice any of the following services in order to pay for internet? (check all that apply)

156 responses

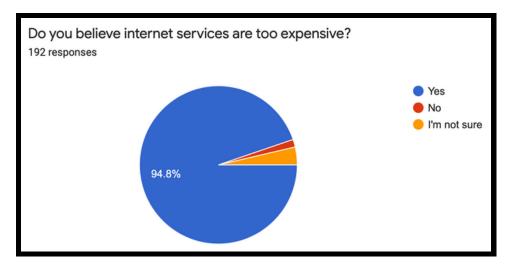


We asked respondents what they commonly use the internet for. Other than the responses that are visible below, people shared they used it for banking, music, social clubs, therapy, ordering food, weather alerts and directions.

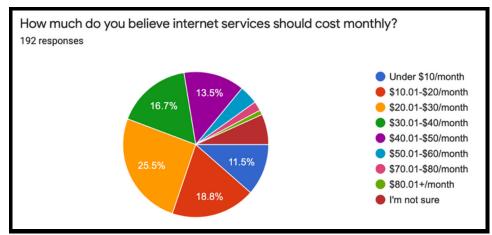
What services or tasks do you access the internet for? (check all that apply) 192 responses



Survey Analysis



With 94.8% of respondents saying yes, overwhelmingly, the consensus is that internet is too expensive.



Respondents believe that internet should cost somewhere between \$10 - \$50 per month. And many people reported that they believe there should be better programs for low-income customers.

In the survey, we asked if participants had any suggestions for the City of Hamilton regarding making high speed internet more accessible and affordable. Here are some of the suggestions and concerns:



"ODSP recipients need high speed internet but can't afford it. WE need the services we can't access physically because of disability, and these require something affordable on \$900/mo income or less!"

"There should be access to all internet providers throughout the city, this requires infrastructure upgrades. Without competition the rates will remain high."

"I pay for high speed internet but do not get it as well as I should due to rural the area I live in. It is always slow and circling/buffering."

"Internet has become the new mandatory thing in place of cable and snail mail, even food shopping for delivery needs internet access for people who may not be able do shopping otherwise. We have become a tech dependant world and it's leaving our most vulnerable, most in need behind"

"We need better programs for low income people!"

"Everyone should have access to phone and internet. There needs to be a cap enforced on what can be charged for internet. Also adding it as an essential bill for those on Ontario works or ODSP. It's necessary for life now. I shouldn't have to be hungry so my kids can use the internet for homework"



ACORN Member Testimonial: Claudette Gadoury



"If you ask me if I would choose the internet over Cable TV, I would say, YES because I can get access to much more information using the internet. But I just can't afford it"

I was working as a Chef until I got to know that I had a disability. My work required standing for prolonged hours, but then people started telling me that I appeared angry because of my pain. I later found out that I had a chronic illness. Since then I have been on disability, it's been three years now.

I can barely make ends meet. I get an ODSP payment of around \$1,255 dollars per month, out of which \$900 dollars goes to paying rent. The little that's left is paid for food, cell phone bill and several other necessities. Mostly, I have to juggle which payments can be possibly met in a month. But I always prefer paying for food and paying late fees for other expenses.

I have a cable TV which charges me \$32 per month. But if you ask me if I would choose the internet over Cable TV, I would say, YES because I can get access to much more information using the internet. But I just can't afford it. I was given a hand-me-down laptop and computer by my family because they bought updated technology, but I can't use them because I can't afford internet. I also have a cell phone for which I pay a hefty amount of \$67 dollars per month. I had purchased a cell phone from them because of which I had to take a package and enter into a contract for 2 years.

I am not good with electronics. Once, I forgot to switch off my data on my phone and the company charged me a huge amount. I called them and they treated this as an exception. There was no way I could have paid that amount. I also remember using the data for an extra hour and the company asked me to pay an extra service charge plus fees! It's ridiculous. Now I have to keep reminding myself to use it very carefully.

For me, affordable internet means 1 dollar a day with no overage charges. I am neither asking for any privileges nor am I asking for any free service. Why can't these multi-million dollar companies give us affordable internet? Even if they charge \$40 dollars for a month, I will pay for it because I need some entertainment. If they can have programs for low-income people with kids, why can't they have it for single low-income people.

ACORN Member Testimonial: Elizabeth Scott

"I wish all companies would offer programs for lowincome people."



I am on ODSP, I get around \$1,900 monthly to support me and my partner. I used to have internet with Comwave where I paid \$163 per month. Initially, they offered a promotion for \$89.95 which was supposed to be a steady rate but they add on service fees and then increased the cost until it was up to \$163. I was locked in for 3 years until I could eventually switch to Primus which has some more affordable options, the first 6 months were \$73 and then it went up to \$90 for high-speed unlimited internet. I am eligible for Rogers' connected for success program, but I am not in Rogers territory so I'm not able to access it. I wish all companies would offer programs for low-income people.

I often find myself having to sacrifice some money that is supposed to go towards groceries in order to pay my necessary bills, including internet. I have had months where I would have to buy much less food than normal because I simply did not have enough money for sufficient groceries. I would be forced to eat less, one meal that I would cook would have to last for multiple meals. This has also gotten worse recently because of COVID and the price of food going up.

Although my main use of the internet is often entertainment such as social media or online gaming, it is essential for me to have access to it for necessary resources that are not everyday. For example, doctors' appointments, although they can be done over the phone, they preferred if you could meet online, same with all health care appointments.

I need to have internet access because it just is not feasible to have to go to the library every time I need to get online. The library also only allows you on the computer for an hour at a time so that can be a problem. Life would be really frustrating without internet because almost everything is asked to do over the internet... life would just not be easy.

I would like to see connected for success programs being offered by all internet companies, not just Rogers. I also think that the Connecting Families program should be expanded to all low-income people. Just because I don't have kids doesn't mean that I shouldn't be able to get access to these programs. My question for Mayor Eisenberg is what can you do for the city for affordable internet?

ACORN Member Testimonial: Terry-Lynn Kirkwood

"Even with
a job I
can't
afford an
internet
package...
it's too
expensive"

I was unemployed all throughout COVID, but I was recently able to start at a new job. With this new job, however, I am still a low-income citizen and I am still struggling to make ends meet. I currently do not have internet, but that doesn't mean that I don't need it. I pay \$1,562 in rent which doesn't leave much money at the end of the month for anything else.

I have a daughter who is in school and she needs to use the internet to do her schoolwork and homework. This was especially true over the last few years when school was being delivered online. Since it was so essential, my sister offered to buy us an internet package. I didn't want it to be a handout so I paid my sister whatever I could afford each month. She bought us an internet package from Cogeco which cost \$110/month. Some months I would give her \$20, some months it was \$30. The problem was that even paying that small amount became too much. I would have to take money that should've been going towards groceries and other bills in order to reimburse my sister some of her money. Eventually, it became too much and I told her to cancel it.

During covid, since I didn't have a job I was falling behind on rent payments and my landlord tried to evict me. We were able to work out an agreement and I am now paying off the money I owe plus interest. Even with a job now, I can't afford an internet package because of how expensive they are and there are no affordable internet programs available to me.

Luckily, I have a close friend whose house me and my daughter can go to use her internet whenever we need it. As well as this we often visit places such as Tim Hortons, Burger King, Wendy's, and the library to use internet.

The main purpose I needed the internet was to search for jobs throughout the pandemic. There are other essential services that I need the internet for too, though such as doctor's appointments, certain COVID screening forms and accessing COVID public health information.

I would like to see more programs for low-income people such as myself because we deserve internet access too!

ACORN's Demands

ACORN Hamilton is calling on the City of Hamilton to take action on the digital divide!

1) The City of Hamilton needs to create a city owned and controlled municipal broadband program.

• Following the lead of other municipal jurisdictions (especially the ConnectTO program out of Toronto) and it's own history of having a local network, the City of Hamilton has the power to address the digital divide by ensuring low and moderate income residents have access to affordable home internet through a city run and publicly owned service.

2) Expand free public WiFi to more of Hamilton's parks.

- ACORN supports the expansion of Wi-FI to Hamilton parks. Since the program started in Gage Park in 2017, the expansion has been limited to adding two parks in 2022.
- Any expansion should be focused on bringing free Wi-Fi access to public parks in low income tenant communities

3) Free Wi-Fi access on HSR buses, bus terminals and the LRT.

• The pilot program for free Wi-Fi on select HSR buses was not continued or expanded.

Offering internet access on public transit is an important step to expanding internet access to low income Hamilton residents.



Conclusion

As essential services become increasingly digitized, it is vital that low and moderate citizens are not left behind. A clear digital divide exists along income lines.

While ACORN Canada has secured important victories in the fight for Internet for All, the federal government has failed to bring forward legislation that builds on the Connecting Families program introduced in 2018.

Our survey to low and moderate Hamilton residents demonstrates that the internet is essential but too expensive!

In light of the federal government failing to regulate internet affordability, ACORN Hamilton is calling on the City of Hamilton to take action.

ACORN looks forward to discussing this issue and solutions with our allies and Hamilton city staff and elected officials.



Sources

- 1. <a href="https://www.openglobalrights.org/covid-19-exposes-why-access-to-internet-is-human-right/#:~:text=ln%202016%20the%20UN%20General,to%20provide%20access%20to%20all-provide%20access%20all-provide%20access%20all-provide%20access%20all-provide%20access%20all-provide%20all-provide%20access%20all-provide%20all-provide%20access%20all-provide%20access%20all-provide%20access%20all-provide%20access%
- 2. https://www.toronto.ca/city-government/accountability-operations-customer-service/long-term-vision-plans-and-strategies/smart-cityto/internet-connectivity-connectto/
- 3. https://www.toronto.ca/news/city-of-toronto-and-toronto-public-library-offering-free-public-wi-fi-in-select-parks-from-august-4-to-8/
- 4. https://www.newswire.ca/news-releases/cisco-and-the-city-of-toronto-launch-digital-canopy-to-expand-internet-access-for-underserved-communities-841483491.html
- 5. https://www.toronto.ca/community-people/health-wellness-care/covid-19-wellness-during-the-pandemic/covid-19-seniors-vulnerable-people/covid-19-free-wi-fi-pilot-project/
- 6. http://app.toronto.ca/tmmis/viewAgendaltemHistory.do?item=2019.EC2.11
- 7. https://acorncanada.org/resource/mapping-torontos-digital-divide
- 8. http://app.toronto.ca/tmmis/viewAgendaltemHistory.do?item=2018.PE29.6
- 9. https://documents.ottawa.ca/sites/documents/files/smart_city_strategy_en.pdf
- 10. https://crtc.gc.ca/eng/acrtc/prx/2021anderson.htm
- 11. https://capitalcurrent.ca/acorn-campaign-pushes-for-free-internet-for-low-income-canadians-during-pandemic/
- 12. https://www.telus.com/en/social-impact/connecting-canada/mobility-for-good?
 INTCMP=tcom-social-connect-ban-m4g-discover
- 13. https://www.alberta.ca/supernet.aspx
- 14. https://www.safelinkwireless.com/Enrollment/Safelink/en/Web/www/default/index.html#!/newHome
- 15. https://www.fcc.gov/general/lifeline-program-low-income-consumers
- 16. https://www.thestar.com/business/2021/03/16/we-need-the-internet-now-advocates-call-on-government-to-make-internet-accessible-and-affordable-to-everyone.html
- 17. https://www.cnn.com/2021/02/26/tech/fcc-internet-subsidies-pandemic/index.html
- 18. https://www.aarp.org/home-family/personal-technology/info-2021/fcc-subsidy-helps-broadband-internet-access.html
- 19. http://www.ic.gc.ca/eic/site/102.nsf/eng/h 00000.html
- 20. https://www.ourcommons.ca/DocumentViewer/en/43-2/INDU/report-7/page-66?
 fbclid=lwAR0LnFF3yk8PWXr8lrv7eikc4WOloefLPXGEE4Y7rx4YNi4EtXOA59KSMoA#13
- 21. https://www.ontario.ca/page/speed-ontarios-broadband-and-cellular-action-plan
- 22. https://www.ontario.ca/page/ontario-onwards-action-plan
- 23. https://www.whistleout.ca/Internet/Guides/what-is-good-internet-speed
- 24. https://netspectrum.ca/en/blog/independent-isps-great-internet-better-services-less-money/
- 25. https://www.hamilton.ca/government-information/site-policies/wireless-network
- 26. https://engage.hamilton.ca/hamilton-broadband-study
- 27. https://www.thestar.com/business/2021/03/16/we-need-the-internet-now-advocates-call-on-government-to-make-internet-accessible-and-affordable-to-everyone.html
- 28. https://www.thespec.com/news/hamilton-region/2012/12/10/hamilton-looks-to-scrap-its-free-downtown-wifi.html