



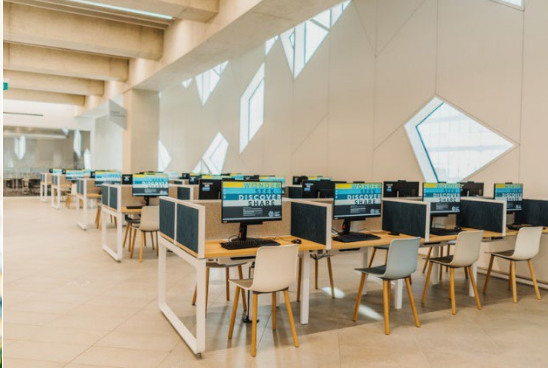
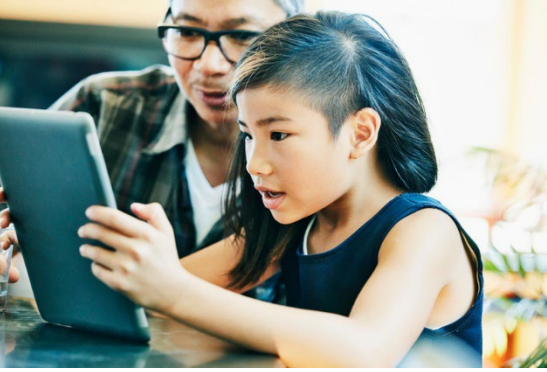
Calgary's Digital Equity Strategy

April 2023



URBAN SOCIETY FOR
ABORIGINAL YOUTH





The digital divide is anything that reduces a person’s access to internet, a device, or the knowledge they need to connect the way they want online.

Purpose

The Digital Equity Strategy is a community-built guide which supports The City of Calgary to make people-centered, future-focused decisions to help close the digital divide.

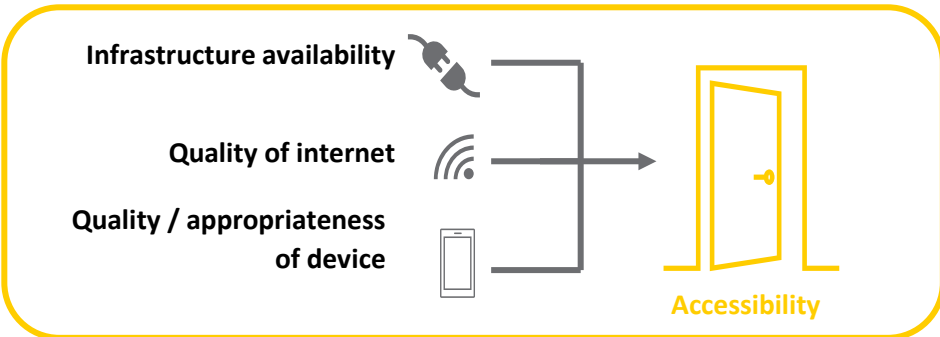
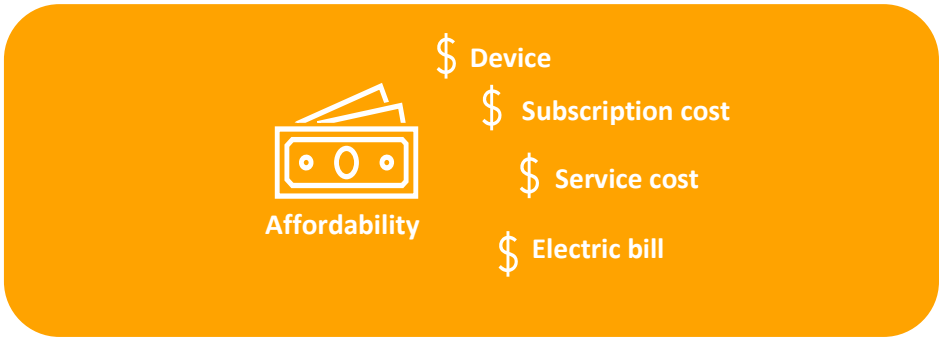
This document outlines the guiding principles and alignments our community will use as a “north star” to help Calgary prepare for the ever-evolving future of technology and data that impacts digital equity. By focusing on guiding principles and alignments rather than pre-determined solutions, we set a foundation for addressing digital equity in our city. This allows The City and organizations in Calgary to be agile and responsive to the digital connectivity needs of Calgarians. As such, it ensures future actions respond to new and existing gaps within the community as we continue to work towards digital parity.

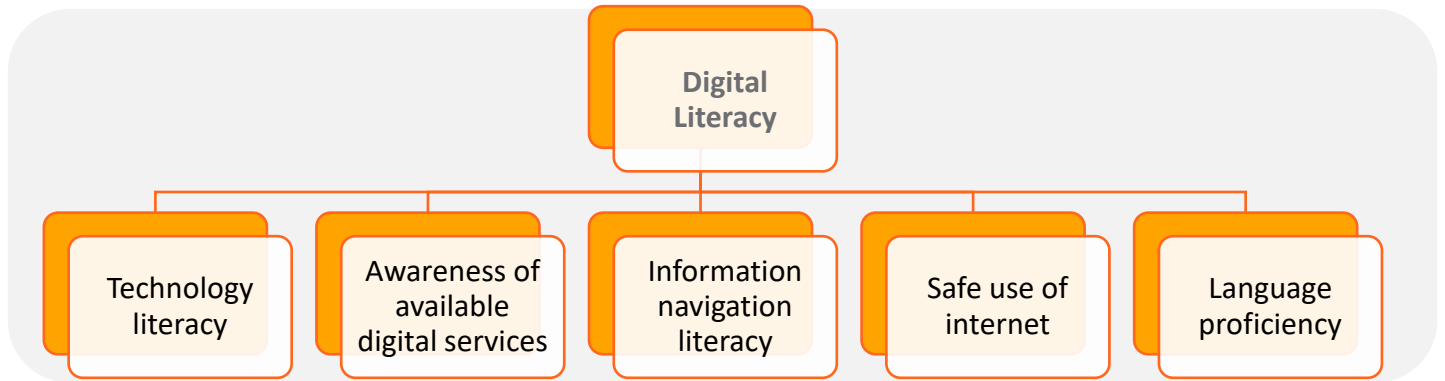
Introduction

The COVID-19 pandemic changed the way Calgarians live, work and play both individually and collectively. With this change, the disparity faced by Calgarians impacted by the digital divide has become increasingly apparent. The gap needs to be addressed to ensure members of our community do not continue to fall behind. This is not an easy task. The overarching issues of the digital divide are deeply imbedded in pre-existing structural inequalities and the dynamics of digital exclusion are highly correlated with intersectionality, socioeconomics, and geography. The cumulative effect of multiple barriers has led to the amplification of digital inequity across Calgary’s most vulnerable sectors. This creates an uneven condition for equity seeking groups attempting to access the full benefits of digitization (Chowdhury, Addressing Digital Equity and the Digital Divide).

Through engagement with our community and research conducted in partnership with The University of Calgary, we found the barriers contributing to the digital divide fall into four dimensions:

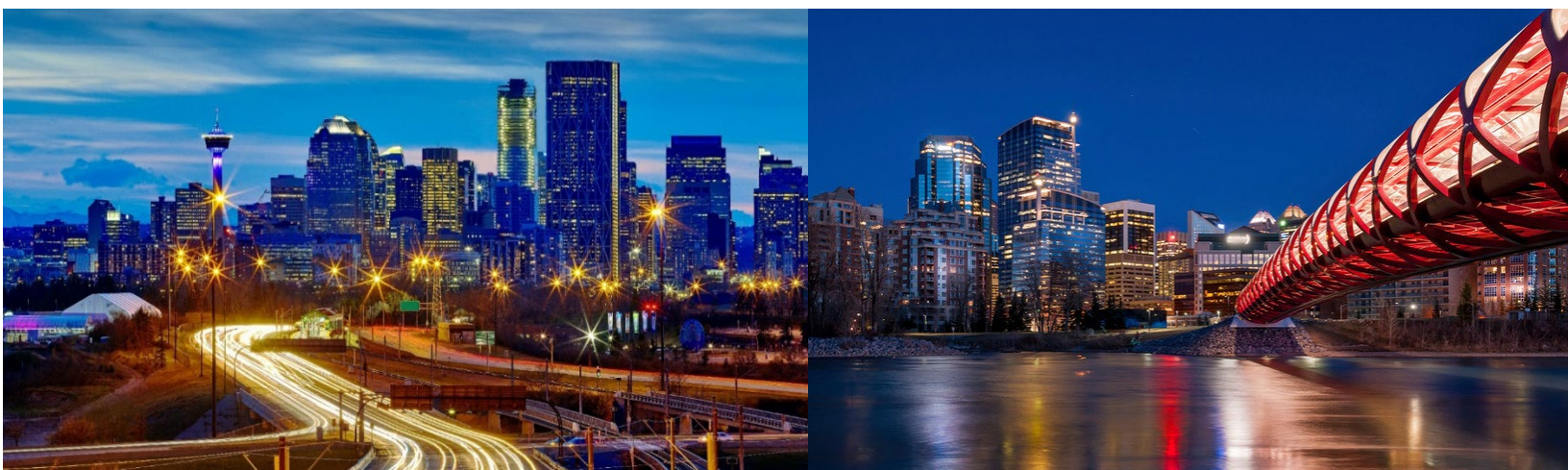
- Affordability – of devices, software, and internet
- Accessibility – of online services and information, and of internet and devices
- Digital literacy – inclusive of online safety and security
- Sustainability – of programs, services, and an individual’s ability to connect





By working collectively as a community to address barriers across all dimensions of the digital divide, Calgary's Digital Equity Strategy will be paving the way. Our goal is to improve Calgarian's quality of life by enabling them to access what they need to participate online.

This strategy aligns with existing social and economic resilience programs to support traditionally marginalized individuals. It seeks to provide greater educational, community, and economic participation of those increasingly marginalized due to limited access to digital devices and tools, affordable internet, and literacy skills. The strategy will also support structural and policy changes within The City and the community, advocating for increased accessibility of online resources. Calgarians told us when barriers are removed, they access job boards, social services, education, housing search engines, and so much more. By increasing digital access, we help Calgarians establish the foundations for personal and economic advancement and make them more resilient.



This opportunity aligns with The City's **vision** by:

- **Strengthening relationships with Calgarians** by listening to their stories, meeting them where they are at with programs and supports, and removing barriers that have led to many Calgarians being unable to participate in their government
- **Delivering the right service.** We have heard from businesses, social impact organizations, and Calgarians experiencing digital inequity that affordability and accessibility of devices, supporting tools, internet connections, and digital skills are major barriers to digital citizenship. By building a strategy with our community we are able to tackle these issues on multiple fronts to provide the services Calgarians need, where they need it to help ensure no one is left behind.

Through alignment with The City's focus area of **Social Equity**, this strategy will identify and focus on:

- removing barriers to digital inclusion which may reduce participation
- elevating Calgarians from poverty through digital supports and solutions
- creating access for all children in a family to attend online school during a lockdown, through accessible devices, software, and applications
- increasing the accessibility of online services for Calgarians with disabilities
- education, awareness, and access to increase Calgarians' participation in their community and with their government online
- advocating across levels of government for changes in telecommunication policy and support programs
- supporting Calgarians to have the freedom to choose how they learn, work, play, and seek help

Overview

Digital equity is a situation in which all individuals and communities have the necessary access to information and communication technology to enhance participation in cultural and civic activities, employment, access to digital learning, connection to family and friends, and access to essential benefits, services, and commerce.

Since the COVID-19 pandemic started in 2020, more learning, supports and services have moved to digital delivery. This shift has increased the digital divide within communities across the nation, as many people still do not have the technology access, tools or skills they need to work, study or connect online.

Recognizing that the more Calgarians are connected, the stronger our community’s social and economic fabric becomes, The City of Calgary began work on a Digital Equity Strategy. Building on our Smart Cities and Resiliency work, in spring 2021 the Digital Equity team began to explore and map how best to reduce the digital divide. This work included:

- Engagement with social impact organizations, local businesses, and technology groups, around barriers and solutions
- Workshops on actions and priorities to close the digital divide
- Research with The University of Calgary into global policy, programs, and best practices to reduce the digital divide
- Conversations with other cities on existing programs successes and learnings
- Targeted engagement sessions with the groups identified within research findings as most at risk of experiencing the digital divide, such as:
 - Low income
 - Older adults
 - Indigenous peoples
 - Racial and ethnic minorities
 - Newcomers / new immigrants and refugees
 - Persons with disabilities
 - 2SLGBTQ+ community
 - Women
 - Single parents
- Pop-up engagement sessions with the public at parks, libraries and CTrain stations
- The formation of an advisory panel, which includes representatives from groups identified above, to develop and inform this strategy

Benefits of a Digital Equity Strategy

Though many municipalities have made efforts to address the individual barriers that make up the digital divide, research shows that none have tackled all the barriers as a whole. By creating a Digital Equity Strategy that is community designed and driven we can work together to close all the gaps making up the digital divide. With this strategy we will build a future where our community is:


- **Connected:** to each other and globally through access to affordable high-speed internet
- **Accessible:** through digital services and programs that are user friendly and considerate of assistive devices
- **Empowered:** through access to devices, internet connection, and literacy skills to connect online confidently and securely
- **Engaged:** with programs and solutions that meet Calgarians where they are at and involves them in decisions that are being made


Vision: Calgary is a **digitally equitable city** where everyone can connect and participate online the way they want to.


Mission (external): To make lives better every day by reducing barriers that contribute to the digital divide and helping Calgarians to access devices, internet connections, and the skills required for them to connect online the way they want to.


Mission (internal): To dramatically reduce barriers that make up the digital divide and increase Calgarians' access to City services, resilience, and ability to rise out of poverty and fully participate in digital citizenship.


Guiding Principles/Values:


**People first**
We meet Calgarians where they are at with programs that have a direct outcome or benefit tied to their needs.


**Co-creation**
We work with our communities and businesses to understand barriers, share learnings, and design solutions together.


**Evidence based**
We use research and engagement with those impacted by the digital divide to find the right solution.


**Accessible**
Our solutions are designed for Calgarians of all backgrounds and experiences.

**Collaboration**
We look to other cities and organizations to learn from existing programs and in turn share our learnings with them.

**Strategic alignment**
We work alongside other equity programs within The City, the community, and Alberta to find the most effective solutions.

**Privacy and security are crucial**
We build trust with Calgarians, protect their privacy and support their education in online security.

**Digital citizenship is a right**
We believe all Calgarians should be able to participate fully in digital citizenship and the online community.

**Intersectionality**
Our approach is considerate of and sheds light on the larger societal and structural inequities that amplify the digital divide.

Strategic goals

Taking a community driven approach enables us to be agile in our solutions and keep up with the rapid pace of technological change. We will create a coordinated approach to closing the digital divide with these goals in mind:

All Calgarians have digital equity

Build and support innovative programs and services that help make devices, assistive software, internet connection, and digital literacy skills accessible to all Calgarians.

All Calgarians have internet access

Ensure supports are in place across multiple levels of government and community so all Calgarians have access to internet connections that are reliable, affordable, and highspeed.

Our community's needs are met

Seek out and act on Calgarians' input with co-created solutions that are accessible and considerate.

Calgary is recognized as digitally equitable

Increase Calgary's reputation by sharing our collective digital equity success stories and learnings with the world. Provide guidance to those working towards digital equity globally and within Calgary.

Strategic priorities

To advocate across various levels of government in support of policy changes that will help reduce the digital divide.

To tell the story of why digital equity is important and share Calgary's success stories locally and globally.

To engage Calgarians, gather input and continue to understand what barriers remain. Collaborate and engage with the global community for municipal digital equity solutions.

To increase awareness of existing digital programs, subsidized plan/benefits, and services as well as their knowledge of the benefits digital technologies can have.

To support cultural change within The City of Calgary and our community.

To collaborate by building partnerships within our community and surrounding regions to leverage alignment opportunities within advocacy efforts and solutions.

Road map forward

This is the result of an integrative review and internet scan to identify challenges, practices, and policies related to the digital divide titled [Addressing digital equity and the digital divide](#). This research was conducted on behalf of The City of Calgary by Dr Turin Chowdhury and his team out of University of Calgary in 2022.

Short term steps for Calgary and the community

Stage 1: Understanding the context of the digital divide within the city landscape – complete

This stage explored the factors and barriers that shaped Calgary's digital reality/ecosystem. This exploration identified the underlying root causes that further exacerbated the pre-existing inequality. Most specifically, it allowed us to comprehend the disparities in connectivity, unequal access, and the dimension of digital skill/literacy/ability across the socio-economic and demographic groups, and geographies. During this phase The City:

- Established a Digital Equity team
- Conducted citywide engagement to gain an understanding of the current state, map the gaps, and identify the [vulnerable groups'](#) communities
- Conducted research in partnership with The University of Calgary into existing programs, policy, and best practices surrounding the digital divide
- Mapped out existing programs which support Calgarians in removing barriers to close the digital divide
- Established an advisory panel to guide direction and foster/ensure accountability. This board includes representatives from identified vulnerable groups such as: low-income, Indigenous, persons with disabilities, racial and ethnic minorities, as well as other community leaders focusing in this area

Stage 2: Community consultation and needs assessment – [complete](#)

This stage focused on getting a better grasp on the needs of diverse vulnerable and equity seeking groups that may have been missed during broader engagement. The City actively engaged with vulnerable subpopulations including those without stable housing or reliable means of communication through:

- Direct involvement of representatives from identified vulnerable groups, social impact organizations, internet services providers, technology companies, public libraries, school boards, and other relevant organizations
- Focused group conversations held in safe spaces
- One-on-one conversations
- Pop-up engagements in libraries, CTrain stations, and city parks
- In-depth community conversations with relevant groups including grassroots

Stage 3: Targeted pilot projects and community-led solutions / innovation / interventions – in progress

Following surveying and community needs assessments, and stakeholder consultation, the Digital Equity team and its partners began to review case studies and intervention undertaken in other countries and cities which advance digital inclusion. This information has been used to build out pilot projects that can suit Calgary's circumstances. Initial pilot projects and community-led solutions include:

- [Public Computer and Internet Access](#) search filter – 211
- [Digital Audit Tool](#) – Calgary Learns
- [The Centre for Social Impact Technology](#)
- User Testing Pilot for Digital Services – City of Calgary with IncluCity
- AHA! Affordable Hardware Access – City of Calgary with Technology Helps

A full/current list of projects, solutions, and advocacy efforts can be found on The City of Calgary's Digital Equity webpage at calgary.ca/DigitalEquity

In addition to City pilots and community-driven interventions/innovation programs The City will also be working towards vertical and horizontal collaboration during this stage. This includes looking for active collaboration opportunities among various government agencies (both municipal and other levels of government) as well as private/corporate organizations to share resources and responsibility.

Mid-term development: Strategic planning and overcoming barriers through upscaled interventions

This phase has not yet begun. The points below are taken from the **policy recommendations road map for action** section of the integrative review and internet scan conducted in 2022.

- Develop a Digital Equity Strategic Plan
- Establish and promote/upscale best practices across the city
- Take a collaborative approach to digital transformation and encourage public-private partnerships and involvement of additional organizations
- Find the best use of the available resources and existing infrastructure
- Build capacity of other non-City contributors (across and within)
- Launch a pilot digital navigator program to assist vulnerable groups with accessing essential services, literacy training and digital skills development.
- Support equipping libraries and community hubs with necessary tools/devices/staff/training to enhance digital literacy/services
- Establish consistent benchmarking/baseline guidance and continuous data collection at a program scale to inform/adjust strategic planning

- Encourage digital equity collaboration across sectors and actors to share ideas, develop partnership opportunities, and provide input on proposed programs or policy

Long-term development: Building capacity, monitoring progress, advocacy, and sustained solutions

This phase has not yet begun. The points below are taken from the **policy recommendations road map for action** section of the integrative review and internet scan conducted in 2022.

- Build the capacity of municipal government to advance digital equity such as including a digital equity component in all aspects of City planning
- Advocate for stable federal funding
- Track provincial /federal programs and align with City goals/strategy
- Inter-provincial / inter-sectoral collaboration with long-term investments
- A mix of demand (digital literacy/skill-building, more social educational program or awareness campaigns, accessibility of digital services etc.) vs. supply-side interventions (facilitate to increase the availability of broadband internet infrastructure such as, fibre, mobile networks, investment/funding, etc.)
- Develop digital stewardship models and empower community members/organizations through community organizing
- Demonstrate effectiveness: especially whether existing/ongoing digital inclusion initiatives/projects have addressed the barriers and contributed to better socio-economic outcomes
- Create a unifying framework to align the efforts across the scale of governance and actors/sectors
- Adopt a continuous feedback loop/lessons learned, follow an adaptive model to foster resiliency/sustainability
- Develop a Digital Equity Scorecard and annual reporting for performance monitoring and benchmarking

Measuring success

The digital divide is not the result of a singular barrier but rather the cumulative effect of multiple factors that create an uneven condition for Calgarians. Due to the complexity of the digital divide, our solutions and measures of success must consider multiple levels of community, beginning with the individual and extending beyond city limits.

The success of this strategy will be determined by:

- Reports of improved quality of life measures from program participants such as:
 - increased sense of belonging that comes with the ability to be part of a community regardless of geographic location
 - the emotional wellbeing of not having to choose between internet/phone line or food
 - more time spent with family because the right device eliminated the need to travel to a service or reduced the time to complete a task
- Increased consideration of the digital divide from businesses offering online goods or services due to a deeper understanding of barriers
- Increased number of City services providing access to online materials required for active engagement and participation in decision making
- Increased accessibility of City online services
- Increased public participation in online services, engagement, and government due to accessible online citizenship and empowered Calgarians
- Organizations following The City's lead and holding themselves accountable for engaging in accessible processes
- Knowledge requests from organizations and municipalities looking to Calgary for digital equity standards and best practices

Conclusion

The Digital Equity Strategy serves as the “north star” to help guide our community through the complexity and shifting changes of the digital world. Together with an inclusionary lens we will continue to advocate, collaborate, story-tell, engage, and build awareness within Calgary and beyond. These actions are key to continued growth and set the stage for us to successful move to becoming a city with digital parity.

The guiding principles within this strategy remind us of how we will approach solutions to close the digital divide. By remaining people-focused, evidence-based, and accessible with a community co-creation approach we can embrace digital citizenship and keep Calgarians’ privacy secure using this strategy as a blueprint.



Appendix 1

Groups vulnerable to the digital divide

Due to the overarching issues of the digital divide being deeply embedded in pre-existing structural inequities, groups already vulnerable may experience unique forms of marginalization caused by the digital divide. These individuals may be impacted by various dimensions of exclusion based on their exposure and sensitivity to pre-existing factors. The research study conducted by Dr Turin Chowdhury through The University of Calgary, identified key groups which are more likely to experience increased digital exclusion and should be prioritized for targeted action. This list of the vulnerable population is not (entirely) inclusive as there may be significant similarity of situations /experiences, and many Calgarians may fall into more than one vulnerable group. During consultation and engagement The City's Digital Equity intentionally sought input from individuals within each of the subpopulations listed. There are also representatives from most of the subpopulations sitting on the Digital Equity Advisory Panel.

The following information is a condensed version of the "Vulnerable Groups (population subgroups)" section from the research paper [*Addressing digital equity and the digital divide*](#). Low-income households have been used as a "benchmark" to understand the context of the existing digital divide in a city landscape. This subpopulation appears first to set the stage for other socio-demographic attributes and intersectionality and the vulnerabilities specific to those attributes which can act as a threat multiplier within the digital divide.

Low-income people

The digital lives of people with lower and higher incomes remain markedly divided as socioeconomic inequalities lead to a significant lag in ICT access for low-income groups. Income is highly correlated with a subscription to high speed, quality, broadband internet access at home. The lack of equitable access to affordable broadband internet is a pressing challenge leaving 75% of low-income Canadians vulnerable to digital exclusion due to cost barriers.

Another major barrier impacting low-income groups is access to appropriate devices, such as desktop or laptop computers with studies indicating device ownership among lower-income households is comparatively less than in higher-income groups. As such low-income families rely heavily on smartphones which lack much of the functionality required for content creation necessary for professional/academic activities. This impacts their ability to actively participate and interact with many services and uses and may inhibit low-income populations from gaining more in-depth online experience and developing transferable digital skills.

Since affordability constraint creates persistent challenges in accessing appropriate devices along with reliable, high-speed, and affordable internet services, people with low income are often excluded from acquiring necessary digital skills, knowledge, or literacy. The higher proportion of household income required to access devices and reliable high-speed internet can lead to the difficult decision to make trade-offs with other basic expenses. Given the multifaceted nature of the digital divide, with a lack of reliable internet at home, low-income

people with low education, unemployment, or immigrant/refugee status, may experience additional challenges acquiring the necessary digital skills to participate in the digital world due to a lack of access to tailored digital literacy programs and services

Older adults

Older adults, particularly those with low-income, are more likely to be impacted by a lack of access to broadband internet and experience a perceived lack of relevance or usefulness or interest in digital media/ICT. A lack of digital literacy amount older adults can be attributed to increased challenges in digital skills acquisition and may lead to resistance to change. This can further exacerbate an individual's ability to cope with the rapidly changing digital sphere and can result in a lack of motivation or fear amongst older adults when it comes to internet use. The attitudes and confidence older adults have towards digital inclusion may be further shaped by misinformation and inexperience in navigating issues of online safety, security, and privacy.

Lower literacy among older adults can also be correlated with education and ethnicity making usability of digital devices and the availability of device support becoming essential in influencing older adults' willingness to use digital technologies. Finally, physical and mental health limitations may also present a barriers to digital inclusion and lead to low motivation, confidence, and adoption of online technology.

Indigenous peoples

During COVID-19 Indigenous Peoples were more likely to be impacted by a lack of internet access. Although this may seem like a minor issue when compared to other infrastructure challenges within remote Indigenous communities, the barriers to broadband internet access have made it more difficult for many remote Indigenous communities to achieve essential inclusion in critical services, education, health, and social interaction. Limited digital resources means Indigenous Peoples are more likely to lack digital literacy skills which can result in low motivation to gain skills or lack of social acceptance of online tools due to negative or limited digital experiences. This motivation may be further diminished due to limited culturally appropriate/relevant content and services along with the dominance of English language and history content within online spaces.

Racial and Ethnic minorities

Many studies reported that access to the internet for ethnic minorities is much lower than the national average. Besides a lack of access to devices and subscription vulnerability, members in this group may also experience digital exclusion due to a lack of culturally sensitive and language-appropriate content, that caters to the specific community needs. This exclusion may limit the capacity / ability of those in racial/ethnic minority to navigate the digital space and may limit their ability to engage in a range of complex online activities

Newcomers / new immigrants and refugees

Newcomers (immigrants) are comprised of heterogeneous groups with diverse abilities and economic situations. In the case of this group, language and literacy are the prominent barriers to accessing online services. Inability to translate web content can create poor access leading to digital exclusion, negative attitudes, and demotivation towards online services.

Persons with disabilities

People who report a disability are disproportionately impacted by affordability as they often have fewer options for devices and may require assistive technologies. This leads to several challenges accessing digital services including specific requirements of enabling software/technology, the need for more developed digital skills to use said software, and a lack of easy-to-understand accessible digital content. The degree of an individual's experiences or exposure to technology may be associated with the impacts of their disability (such as learning, cognitive, hearing, vision, hand-related or physical movement, and health-related issues) and corresponding lack of accessible options to overcome these impacts. This can result in low internet use and low self-esteem/confidence. The intersecting nature of these specific barriers sometimes makes it difficult for persons with disabilities to navigate online and access critical (government) services and information.

2SLGBTQ+ community

The 2SLGBTQ+ community is more likely to be excluded from a safe and inclusive online experience which can impact mental health and overall wellbeing. This is largely due to abusive comments, social exclusion on digital platforms, and a lack of tailored information, content, and services. Digital media representations sometimes promote forms of prejudice which can further diminish an individual's motivation to engage with online content and creates a critical barrier to accessing social support.

Women

This gender-based exclusion is a dimension of the digital divide that is systematically embedded across cultural groups. The barriers outlined within jeopardize women's ability to access digital services, learn relevant technical skills, gain digital literacy, and create constrain for education, employment, and freedom of career choice.

Compared to men, women and those who identify as women experience socio-cultural marginalization factors causing a lack of access to ICT, even when there is a connected device(s) within the home. These factors include having a caretaker/caregiver role and/or unpaid domestic work resulting in less time to grow career/learn new skills, household decision-making culture such as mothers prioritizing their children's needs and/or male members occupying the device. These factors are magnified by limited ownership of the device and a lack of affordable options, leading to a disproportionate number of women with low digital literacy and technology skills, and low motivation for online engagement.

Further, women are disproportionately impacted by a lack of gender-sensitive digital platforms and services, and report higher concerns about (sexual) harassment, online safety, and identity theft when compared to men. This lack of digitally safe environments creates further barriers to digital adoption for women and can lead to reduced motivations and limited awareness of the potential benefits of online engagement.

Single parents

The cost of a broadband internet plan is a significant barrier leading to lack of in-home broadband internet services among single parent households which can lead to additional

barriers in accessing critical digital services and information. Single parents may be disproportionately affected by digital inequity due to time constraints when in the role of primary caregivers. Therefore, it is crucial to move beyond access of internet and devices, into a careful understanding of their (specific) context when facilitating equitable access to essential services such as government, health care, online education, and online banking.

Appendix 2

Additional Resources

Community engagement: [July 2021 - June 2022](#)

Research paper: [Addressing digital equity and the digital divide](#)

[Current pilots](#)

[Calgary Learns, Digital Divide](#)