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Navigating the
Big 5 Digital Divides
in Public Service Design

What We Make It™

Navigating the Big 5 Digital Divides in Public Service Design

Advanced democratic governments across the planet are becoming increasingly reliant on technological solutions to age-old problems of access, equity, and transparency in governance and the administration of public services. Many of these systems are set-up with assumptions of access to appropriate technologies, and start from a premise of ubiquitous adoption.

Although *93% of Canadians* identified themselves as internet users in 2021, and governments, businesses and other organizations are forging ahead in the full transition to digital services, digital divisions among citizens remain persistent. At What We Make It, we are continually asking ourselves, 'who could be left behind in our service design projects?' and 'what strategies can we implement to bridge those divides?'

"WHAT STRATEGIES CAN WE IMPLEMENT TO BRIDGE THOSE DIVIDES?"

The Citizen User

The intersection of technology and public services has enhanced the efficiency, accessibility, and transparency of service delivery for many citizens.

Digital public services, such as websites, online applications, and online portals can provide citizens with convenient access to information and services anytime and anywhere, providing an alternative for physical visits to government offices and expediting many routine processes. Digital platforms allow for personalized interactions, tailoring services to individual needs. Users can receive customized information, notifications, and recommendations based on their preferences, improving their user experience.

The advance of two-way communication embedded in social media platforms such as Facebook and X (formerly Twitter), means that citizens can voice their concerns as they arise, and take their inquiries directly to the source in real-time; as opposed to having to mail a letter, wonder if it was received, and then wait hopefully for a reply.

Additionally, social media has played a significant role in advocacy and can empower grassroots movements and social activism. These platforms provide spaces for marginalized groups, activists, and advocates to raise awareness, organize campaigns, and mobilize support for social justice causes. Social media has amplified the voices of underrepresented communities and facilitated collective action on a global scale.

Governments also use social media platforms to directly engage with citizens. Using these channels, they can solicit feedback and gather public opinion on various issues much more casually and readily, enhancing and in some ways streamlining public consultation processes. When used appropriately, social media can be a rapid and effective communication tool.

When products and systems are designed without citizen input, they can fail, and the results of that failure can vary. Take a moment to think about the implications of a low-income government rebate or grant application that is only accessible online, or the use of digital health

services to fill crisis-level gaps in the healthcare system, or digitally-centric Emergency or Public Health Alert system to notify citizens of risks to life.

The risks of failure may vary in terms of severity of consequence, yet there is one specific consequence they all have in common: marginalization. In order to avoid marginalizing its citizens, it is crucial for governments to never lose sight of the fact that their "users" are, in fact, citizens, with a certain level of enshrined rights to access and equality.

Digital public services, such as websites, online applications, and online portals can provide citizens with convenient access to information and services anytime and anywhere.

The 5 Big Digital Divides

The phrase "digital divide" emerged in the mid-1990's to describe the gap between individuals and communities who had access to and proficiency with digital technologies, and those who did not. It encompasses both the availability of hardware and networks, and the skills and resources necessary to effectively utilize them. The digital divide is actually multifaceted, and can manifest at various levels.

When we are talking about the digital divides, we are talking about 5 distinct dimensions of disparity.

① Access

The unequal distribution of physical access to computers, smartphones, and high-speed internet. It can occur because of a user's geography (rural or remote) and socioeconomic status (affordability).

Although digital services aim to enhance accessibility, not everyone has equal access to the necessary technology or internet connectivity. This will inevitably exclude certain segments of the population, such as the elderly, low-income individuals, or those in rural areas who lack access to digital infrastructure. The transition to digital services may lead to the reduction or elimination of traditional channels, such as in-person visits or paper-based applications. This can disadvantage individuals who are not comfortable with, or have limited access to, digital platforms; thereby limiting their ability to interact with the government.

② Usage

Differences in the types of technology used (mobile vs. desktop) and the extent to which individuals or groups use digital technologies and the internet.

Digital services can lack the personal touch and human interaction that in-person services provide. Some individuals may prefer face-to-face interactions, especially when dealing with complex issues or sensitive matters that require personalized assistance. The rapid shift to digital services may unintentionally exclude certain vulnerable or marginalized groups who may rely on in-person services. This can include those with disabilities, language barriers, or limited digital literacy.

When products and systems are designed without citizen input, they can fail.
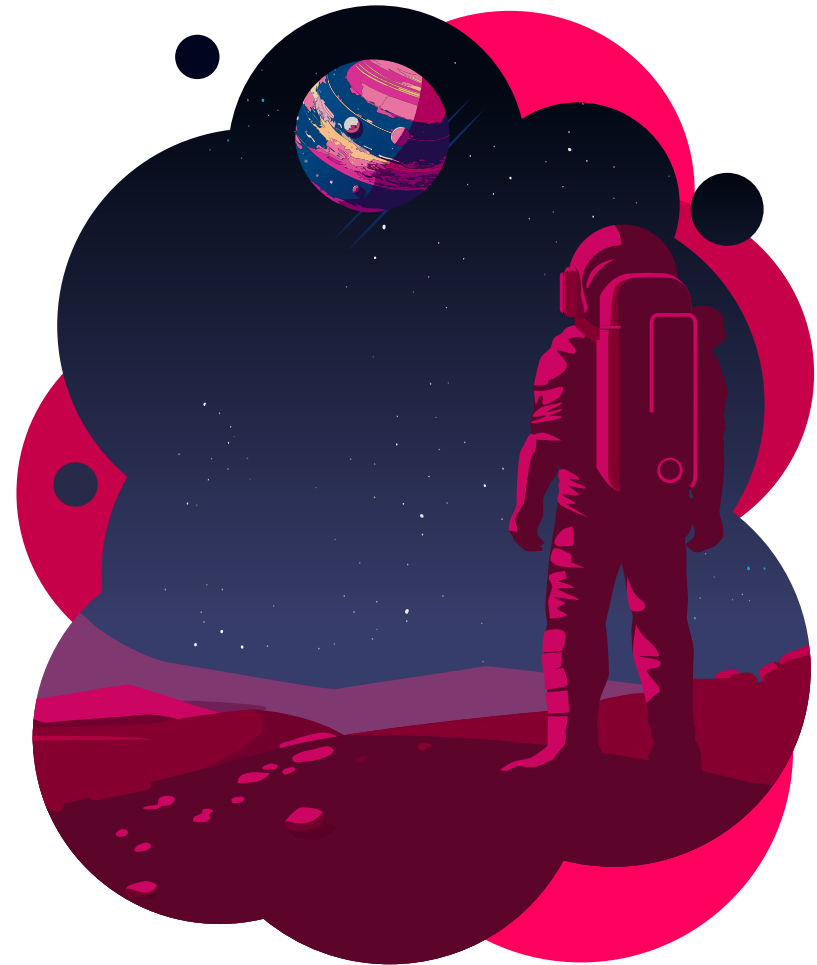
Skills

Differences in digital literacy and proficiency in using digital technologies and the internet, including the ability to navigate online platforms, use digital tools, critically evaluate information, and engage in online communication.

Digital services require users to have a certain level of literacy to navigate online platforms and use digital tools effectively. Individuals with limited digital literacy may struggle to access and utilize these services, resulting in a further marginalization of certain groups.

Digital literacy includes the ability to locate, evaluate, and effectively use information from digital sources. This involves critical thinking skills to assess the credibility, accuracy, and relevance of online information, as well as the ability to discern bias, identify reliable sources, and avoid misinformation or fake news. It also involves the ethics of online behaviour, including respect for intellectual property, protection of personal information, and awareness of online risks and strategies for online safety and security.

(4) Content

Differences in the availability and variety of translated content, educational resources, and culturally relevant information. Limited access to diverse and inclusive digital content can further marginalize certain groups, hindering their ability to fully benefit from digital technologies.

Governments can also enhance accessibility by ensuring that the content of websites and digital services avoid the use of jargon and language which presumes a certain level of user literacy. Websites and social media content should feature plain language, making them easy to understand and accessible to individuals with varying literacy levels and language proficiencies.

Avoid the use of jargon and language which presumes a certain level of user literacy.
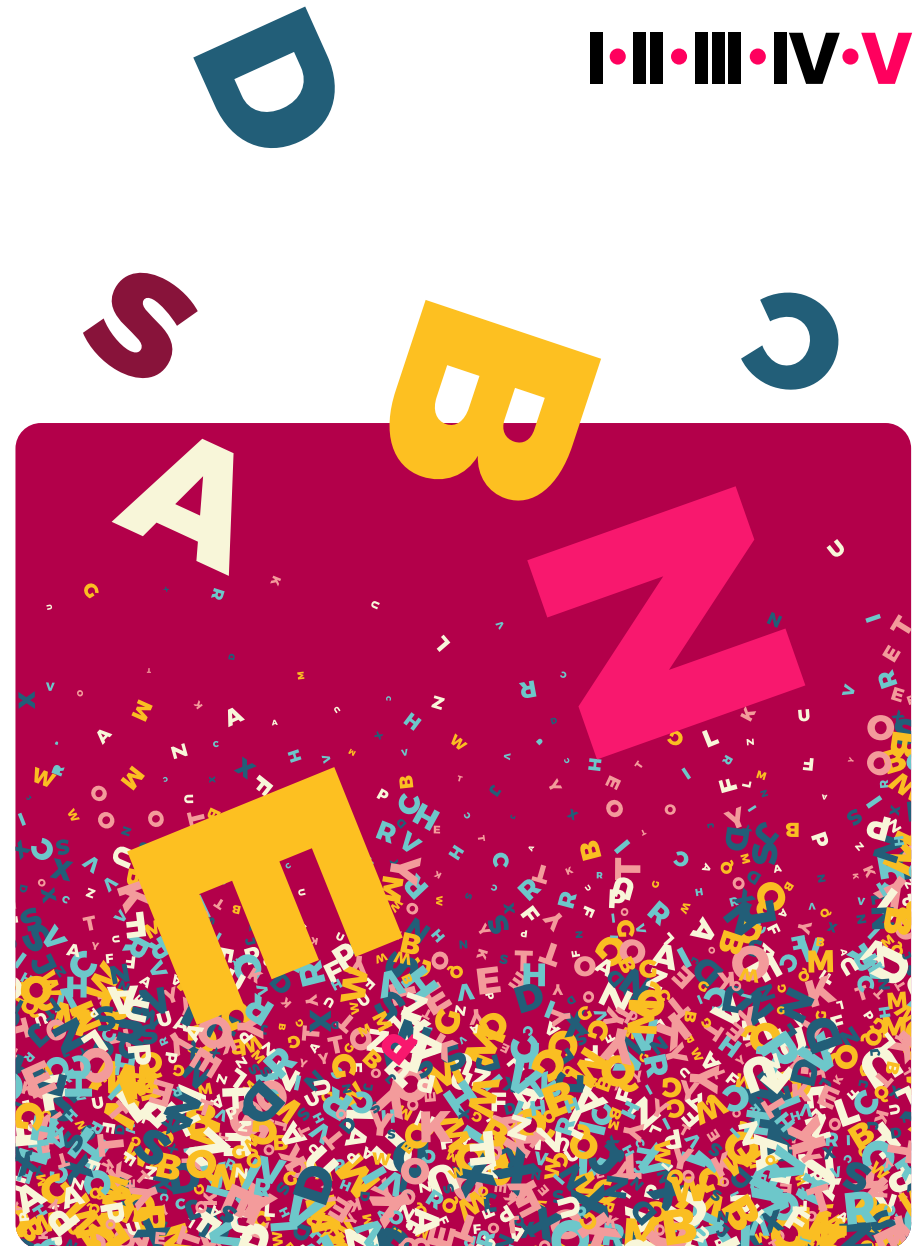
The extent to which individuals or communities trust digital technologies and/or the government. These reasons can vary based on historical, socio-political, and cultural factors such as corruption, oppression, discrimination, inequitable treatment, a lack of representation and inclusion, and data collection which rationalizes all of these factors and is applied for unethical purposes.

The collection and storage of personal data in digital systems raises concerns about privacy and security. Government databases are potential targets for cyber attacks and data breaches, which could lead to unauthorized access to sensitive information and identity theft. Maintaining robust security measures and ensuring data protection becomes crucial. Further, digital systems are not error-proof, and can unpredictably experience technical glitches, downtime, or service disruptions.

digital systems are not error-proof

What We Make It views these persistent, systemic divisions **as opportunities** to **test and implement** a variety of service design tactics to minimize their impacts, while at the same time, contributing to **the equitable access of government services for all citizens.**

5 Design Tactics for Bridging Digital Divides

The following **best practices** serve as **guidelines** to **assist in bridging these divisions** in the service design process.

Using Gender-Based Analysis Plus (GBA+)

Practicing Co-Design

Content-First Approach

Develop an Ethical Data Policy

Future Proofing Digital Service Design

Using Gender-Based Analysis Plus (GBA+)

GBA+ is a mental model that investigates the impacts of sex and gender, age, racial/cultural diversity, socio-economic status, and geography on equity in legislation, policy and, in our case, digital service delivery.

What We Make It has developed our own GBA+ assessment tool that is used during the project planning phase, and that informs the data collection, analysis, and design phases of any given project.

User experience (UX) research should examine differences and similarities in user preferences, satisfaction levels, task completion rates, and any challenges or barriers encountered during the user experience across a variety of user traits and characteristics. But rigorous UX research does not stop there — researchers then use those insights to generate data-driven recommendations, such as design changes, content modifications, feature enhancements, or targeted marketing strategies that promote inclusivity.

Using a GBA+ mental model means that service design:

- Pays attention to intersectionality in user demographics
- Challenges biases and assumptions about who users are and what they want
- Identifies how user diversity impacts use and experiences with digital services
- Considers digital divisions as pain points to be solved, rather than as an inevitability for digital service delivery

"Gender equality is enshrined in the Charter of Rights and Freedoms, but as a nation, Canada still has much work to do to realize this equality."

– Senator Peter Harder

Practicing Co-Design

Co-design practices bring together design teams with users and project stakeholders in a variety of ways to enhance the development of products and services. The co-design of digital services with communities and individuals affected by divisions can ensure their needs and perspectives are adequately considered, and that they are factored into both service design and content development.

Each of these methods encourage participants to contribute their perspectives, ideas, and creativity, fostering a sense of ownership and involvement in the research process. This approach allows for additional insights and alternative interpretations that enrich the analysis process. It also enhances content creation, as it helps ensure that the look and feel of the digital content is representative and reflective of the diverse citizen user population.

Practicing co-design means the regular use of:

- Co-creation workshops to generate content ideas, explore design concepts, and find collaborative solutions to problems
- Participatory design sessions where users actively participate in designing or iterating on prototypes and interfaces
- Sensemaking sessions where users and design teams jointly review and interpret the research findings

Participation
Development
Ownership and power
Outcomes and intent

4 KEY PRINCIPLES OF CO-DESIGN

Content-First Approach

A content-first mindset encourages designers to think about the content from the user's perspective, considering how different users will access and understand it; including people with disabilities and those using different devices to access the product or service.

Content first emphasizes a logical hierarchy of headings and information, and ensures that the user accesses information in the correct order. This involves integratingthings like calls-to-action, copy and imagery, multimedia elements, and site navigation are integrated at the right times and information is presented in ways that make sense to users. This is particularly important for users with cognitive disabilities and low digital literacy levels, who may need to have the interface simplified and the service explained. It can also benefit users with disabilities who rely on screen readers or other assistive technologies.

Content-first also ensures that the content is the main consideration of the experience, as it should be in human-centred design. The design should be adaptable and present the content in the best way possible for the user, no matter what device they're using and what their accessibility needs may be. Prioritizing content improves readability, and incorporates decisions about font choices, spacing and contrast to benefit users with visual impairments or learning disabilities.

"Content precedes design. Design in the absence of content is not design, it's decoration."

— L. Jeffrey Zeldman

Develop an Ethical Data Policy

While there are certain legislative protections for user privacy and security, such as the Personal Information and Protection of Electronic Documents Act (PIPEDA) and the Privacy Act, these only cover the bare minimum of what is required for the lawful collection and storage of data. If citizens are being invited to participate in UX activities, they not only want to know that their privacy is respected and their data is protected, but also that their perspectives are being represented and their consent for use is respected.

An Ethical Data Policy should provide users with clear information about the purpose, functionality, and data-handling practices of digital services being researched (and offered). This includes transparent communication about how user data is collected, stored, and used, as well as the overall design and decision-making processes. All of these practices help build trust and allow users to make informed choices about sharing their data and engaging with digital services.

This should also include the standardization of:

- Obtaining explicit user consent for data collection and processing
- Data collection platforms that use servers located in Canada, or notifying people if they are not
- Anonymizing data, either after it is collected, or by simply not asking participants to provide any personal information such as their names or contact information
- Honorariums for providing data, information, expertise, or engaging in user testing

"**A better world won't come about simply because we use data; data has its dark underside.**"

— Mike Loukides, Ethics and Data Science

Future-Proofing Digital Service Design

The Big 5 Divisions will present barriers and challenges to adoption and penetration with tomorrow's technology just as it has in the past, and continues to today — regardless of the type of technology being used. To future-proof digital services, it is crucial to engage in tactical planning that aims to anticipate and adapt to evolving technologies, user needs, and policy requirements.

Adopting agile development and design practices can assist in future-proofing and ensure that digital services remain responsive to changing contexts, cultures, and citizen needs. Continuously collecting user feedback, and conducting deep UX analysis should not only happen once; rather they need to be ongoing practices that are reflective of the contexts of users lives, and the technologies that are dominating them.

Future-proofing means:

- Encouraging a culture of innovation and keeping your finger on the pulse of emerging technologies and tools
- Support experimentation with emerging technologies and being open to exploring their potential use and benefits in the service design process
- Developing policies and practices that proactively address ethical concerns related to emerging technologies, and establishing clear guidelines and frameworks for responsible and ethical use

Designing for resilience

Summary

In summary, it is crucial to remember that not every citizen is equally equipped to embrace and thrive in the digital revolution. Digital divisions persist, despite the widespread use of the internet and the advancement of digital services. These divisions encompass five distinct dimensions: access, usage, skills, content, and trust.

Strategies like GBA+, co-design, mobile-first approach, and ethical data policies are tactics that can be used to minimize the impacts of these divisions and foster inclusive digital service delivery. Further, future-proofing in the present means we can quickly adapt to evolving technologies and user needs. By prioritizing inclusivity, bridging the digital divides, and embracing innovative solutions, governments, businesses and organizations can navigate the complex terrain of bureaucracy and technology to better serve their citizens.

As society continues its transition from the analog to the digital, **What We Make It** can help them find the perfect balance between efficiency and empathy.

We **specialize in creating digital services** that truly **empower and enhance** the lives of **all** citizens, including those traditionally left behind.

What We Make It ™

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