

**DRAFT**  
for discussion



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Sidewalk Labs

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Roundtable, December 2018

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# Draft #1 Accessibility Principles

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# Our iterative process

We started by studying **AODA standards** (primarily Design of Public Spaces, Customer Service, Information and Communications, and Transportation standards), **City of Toronto Accessibility Design Guidelines**, and other relevant accessibility standards.

With these in mind, we worked with members of the accessibility community in Toronto to co-develop **a set of draft accessibility principles**, with a special focus on co-creation with people who self-identified as having lived experience of disability.

At each of the public events and co-design sessions, attendees shared their thoughts, ideas, and feedback — all of which fed into the creation of these draft accessibility principles.

After each event, we compiled people's verbal and written feedback; added it to the principles; and then presented the latest version of the principles to the attendees at the next event for further comment and feedback.

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# This is just the first draft.

This draft has come after the first round of research and co-design with the accessibility community, but we still have much more to learn.

In the coming months, we'll be working with members of government agencies to harmonize these principles with existing legislation and codes and incorporate them into our plans at a more granular level.

We invite you to email us your ideas, thoughts, and suggestions on this first draft of the principles at [accessibility@sidewalklabs.com](mailto:accessibility@sidewalklabs.com).

# Our Perspective

1. The accessibility community has driven major contributions to **technological innovation**. We want to create structures that legitimize, give credit to, and pay the people doing this important work.
2. In some places, we're considering integrating **digital tools into city life**. That means those tools need to work for everyone.
3. We are starting from scratch, so we can build an **intentionally flexible** city.
4. Designing from **underrepresented and marginalized experiences** makes the final product better for everyone. This is often known as the [curb cut effect](#).
5. **Co-designing** with people with lived experience of disability and marginalization is the best way to create experiences that work for everyone.

# Whom do we build with?

*This is not a comprehensive list; it aims to give a sense of the variety of experiences we're considering — without reducing lived experiences to archetypes. We're focused on co-creating with people, not building for them.*

- People who are deaf, hearing impaired, and/or part of the Deaf community
- People with sight impairment, low vision, or blindness
- People with color blindness
- People with cognitive impairment
- People with developmental disabilities
- People using wheelchairs or other mobility aids
- People with walking difficulties
- People with reduced manual dexterity, arm function, or strength
- People with diversities in age (children and older adults)
- People who need to sit down or rest frequently
- People who have survived trauma
- People who experience PTSD
- People who are accompanied by service animals
- People with diversities in stature (includes people who are very tall, short, or obese)
- People who aren't paying attention or are on their phones
- People who are pregnant or nursing
- People who are accompanied by babies and/or young children
- People who are neurodiverse, have ADHD, or are on the autism spectrum
- People experiencing allergies
- People who are exceptionally sensitive to cold or heat
- People who are sensitive to loud or persistent noise
- People who are not experienced with technology
- People who experience chronic and/or acute pain
- People experiencing anxiety, depression, altered perceptions
- Newcomers, non-native English speakers
- Caregivers

[Full Terminology List](#)

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## **What is co-design for accessibility?**

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A process for brainstorming and workshopping ideas for inclusive, accessible city systems with people who identify as part of the accessibility community.

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# Accessibility Co-design Sessions

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## What we've done so far

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**3** day-long co-design sessions with the Inclusive Design Research Centre

Held at Sidewalk Labs' Toronto office + Inclusive Design Research Centre

- August 8, 2018: Inclusive Feedback
- August 24, 2018: Dynamic Streetscapes
- September 5-6, 2018: Threshold Moments

**1** hackathon at Sidewalk Labs' Toronto office

**8** shorter, embedded co-design sessions with community groups

We posted summaries of the sessions (plus the materials we used, so anyone can replicate the process) at <https://cities.inclusivedesign.ca/blog>.

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CO-DESIGN

## Co-design Session #1: Inclusive Feedback + Co-creation Processes

August 8, 2018 at 49 McCaul Street (IDRC), Toronto, 9am - 7pm

What might an incredibly accessible way of reporting a problem, suggesting solutions, and following up to help fix a problem look like?



Ideas generated included:

- Augmented reality park feedback (leave a virtual “caution cone”)
- Autonomous vehicles for sub-emergency healthcare situations
- “Tranquil refuge” pods for relaxation

Summary: <https://cities.inclusivedesign.ca/ideas/co-design-session-1/>

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CO-DESIGN

## Co-design Session #2: Dynamic Streetscapes

August 24, 2018 at 307 Lake Shore Blvd East, 9am-7pm

What would a dynamic and accessible street look like? LED lights are one way to display divisions between streets and sidewalks; what might we add to make that division universally detectable?



Ideas generated included:

- Rumble pavement
- Tactile sidewalk wayfinding strips
- Audible approaching-vehicle signals

Summary: <https://cities.inclusivedesign.ca/ideas/co-design-session-2/>

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# 3

CO-DESIGN

## Co-design Session #3: Threshold Moments

Sept 5-6, 2018, at **49 McCaul Street**, two nights, 5pm-9pm

How can we make going through doors, calling elevators, entering and exiting buildings and access controls seamless, especially for people with accessibility needs?



Ideas generated included:

- Flat access from transit platform to building lobbies
- Mini robots to guide you from the vehicle you arrived in to your destination within a building
- Revolving doors = bad

Summary: <https://cities.inclusivedesign.ca/ideas/co-design-session-3/>

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## Accessibility Hackathon (open to the community)

Sept 21, 2018, at 307 Lake Shore Blvd East, 9am-7pm

*All hackathon project ideas were developed from ideas and insights that emerged from the co-design sessions.*

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CO-DESIGN

1. Audible or haptic incoming traffic warnings at intersections
2. Tranquil refuge
3. Construction advisory beacon messages
4. Self-driving cars for sub-emergency medical visits
5. Augmented reality park feedback experience
6. Rumble pavement
7. Tactile sidewalk wayfinding strips
8. Artificial Intelligence (AI) floor describer

More at <https://cities.inclusivedesign.ca/ideas/hackathon/>

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# Public Events

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## EVENTS

September 2018 was [Accessibility Month at 307](#)

### **Open Sidewalk: The Accessible City**

*Sept 22, 12pm-6pm at 307 Lake Shore Blvd East*

Tecla, Key2Access, AccessNow, Hyperlight Systems demoed assistive city technologies; Tangled Arts did an art installation and hosted artist talks; and attendees had the opportunity to contribute to the accessibility principles & Eliza Chandler keynoted.

<https://sidewalktoronto.ca/event/307-open-sidewalk-3/>

### **Sidewalk Talk: The Future of More Accessible Cities**

*Sept 26, 6pm-9pm at 307 Lake Shore Blvd East*

Maayan Ziv of AccessNow, Luke Anderson of StopGap Foundation, and Darren Bates of Smart Cities Library spoke on a panel, moderated by Jane Farrow, about the future of accessible cities.

<https://sidewalktoronto.ca/event/public-talk-3/>



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So far, we've spent

**76+** hours co-designing with 220+ people from the accessibility community

We've iterated on early drafts of the principles with

**65+** Torontonians with lived experience of disability and who work in accessibility

We've incorporated

**100+** written recommendations for additions and changes to

**22** accessibility principles

# 8

# General Accessibility Principles

## DRAFT #1

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1. Enable experiences that were not possible before.
2. Do “nothing about us without us.”
3. Make infrastructure simple, durable, reliable and easily maintainable.
4. Design predictable, intuitive experiences.
5. Futureproof by default.
6. Make the accessible path the most convenient, delightful path.
7. Prioritize end-to-end accessibility.
8. Prioritize autonomy first.

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# 7

# Physical Accessibility Principles

## DRAFT #1

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1. Build for wheels.
2. Enable wayfinding in multiple formats.
3. Eliminate barriers and friction.
4. Promote relaxation and recovery.
5. Enable personal assistive technology, with a focus on easy to access, low-cost technologies.
6. Go beyond legal requirements.
7. Enable flexibility and customization.

# 7

# Digital Accessibility Principles

## DRAFT #1

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1. Provide information in multiple, easily accessible formats and languages.
2. Support multiple input modalities to all digital experiences.
3. Preserve privacy and support fairness in machine learning.
4. Allow an easy way to give feedback on digital tools.
5. Use common standards for messages in audio wayfinding features.
6. Provide a recommended, free option that is also open to third-party alternatives wherever technology is necessary to interact with a key service.
7. Use the best digital accessibility standards available and set new, higher standards wherever possible.

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## What's next?

We'll continue to listen, engage, and connect with organizations, advocacy groups, and individuals focused on accessibility and inclusive design in Toronto.

We'll include Torontonians with lived experience of disability and expertise in inclusive design from the very earliest stages of our prototyping and product work, throughout development and testing, and after implementation.

And we'll continue to be open to new great ideas for creating an accessible, flexible, and empowering neighborhood.

