# UPANUP ANAWAY


UPANUP

A Journey to the Digital Accessibility Frontier

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# Accessibility: The Inclusive Frontier

## Your mission is to ensure that people of all abilities can explore the web

Since 1514, when Copernicus discovered that the Sun—not Earth—was at the centre of the universe, the dark emptiness of space has grown increasingly brighter, as new galaxies, planets, and stars continue to be discovered by the astrologically-curious. Here at home, the growth of the web has experienced a similar trajectory: since its birth in the 1970s, the internet space which was once untapped and unknown has been filled with a virtually limitless amount of information that anybody could access with a click of a button.

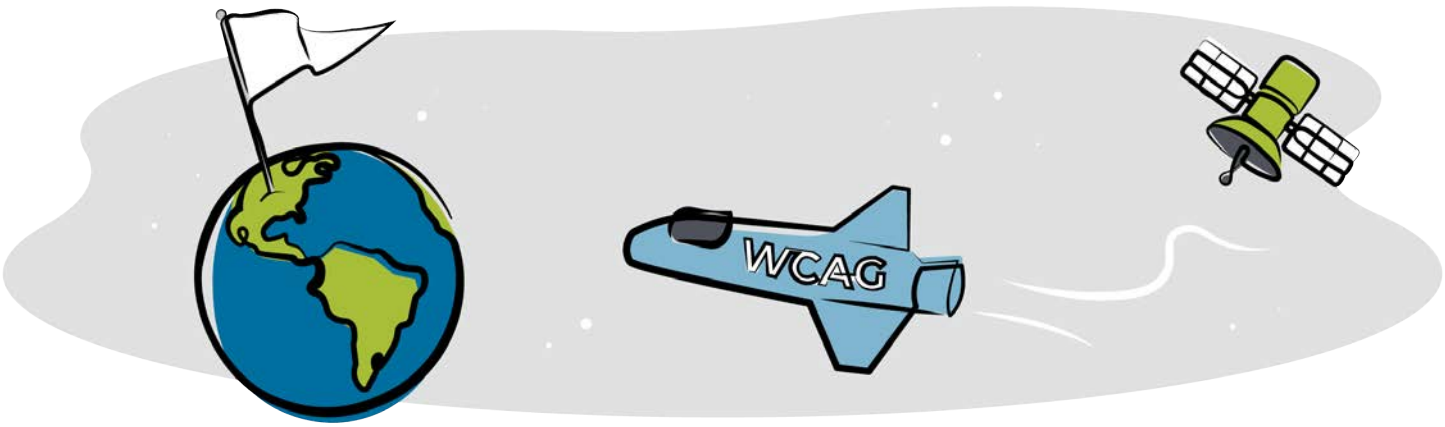
Or so it seemed.

As the internet became an increasing part of our everyday lives, it was apparent that access to it was not equal across all users. This spotlight on accessibility illuminated the need for legislation to govern websites, ensuring that they are accessible to users of all abilities—thus spawning the globally-recognized Web Content Accessibility Guidelines (WCAG) in 1999.

Here in Canada, we are still lagging behind other developed nations when it comes to website accessibility. Though the Accessible Canada Act (ACA) was enacted in 2019, we are still catching up on both a federal and provincial level when it comes to online inclusivity. However, we are starting to see change with Ontario's Accessibility for Ontarians with Disabilities Act (AODA) leading the digital charge: all public websites and web content posted in the province after 2012 must meet WCAG 2.0 Level AA standards by January 1, 2021.

**And with this change, we need a hero who is ready to make the leap to the Digital Accessibility Frontier. Are you ready?**

**The countdown is on...**



# Your Path to the Digital Accessibility Frontier

## Setting your course with principles

Planning a journey can be a daunting task, as getting from A to B can involve a multitude of different paths and obstacles. Your journey to reaching the Digital Accessibility Frontier—and building websites accessible to users of all abilities—is no different. Fortunately, there are four established principles outlined by WCAG that will help you navigate your journey: Perceivable, Operable, Understandable, and Robust (POUR). Within these principles are tools, guidelines, success criteria, and recommended techniques that enable web authors to make accessible content.

When web content is accessible it opens itself up to a whole new world of users. More than six million Canadians aged 15 and over (22% of the population) identify as having a disability. Creating content than can be understood and used by those with disabilities will greatly increase your audience reach.

| WCAG Principle | Meaning |
|---|---|
| **Perceivable** | **Users can see and hear your content.** |
| **Operable** | **Simple navigation and user interface.** |
| **Understandable** | **Content makes sense and is predicable.** |
| **Robust** | **Compatible across a variety of devices.** |

We also believe that the journey to the Digital Accessibility Frontier should be viewed under a holistic and transparent lens. This means the challenges on your journey should be faced with care, honesty and cooperation.

And with that, it's time to blast off.

# WCAG Principle: Perceivable

## Can all users see and hear this?

According to scientists, the biggest obstacle in space travel today is space or cosmic dust. In zero gravity, they can affect the lungs of intergalactic travellers, wreak havoc on equipment, and cause dust storms that prohibit planetary settlement. But they also block light—causing objects in space to look fainter than expected, or rendering them completely unseen. For the visually or audibly impaired, navigating the internet can be like piloting through this cosmic dust cloud.

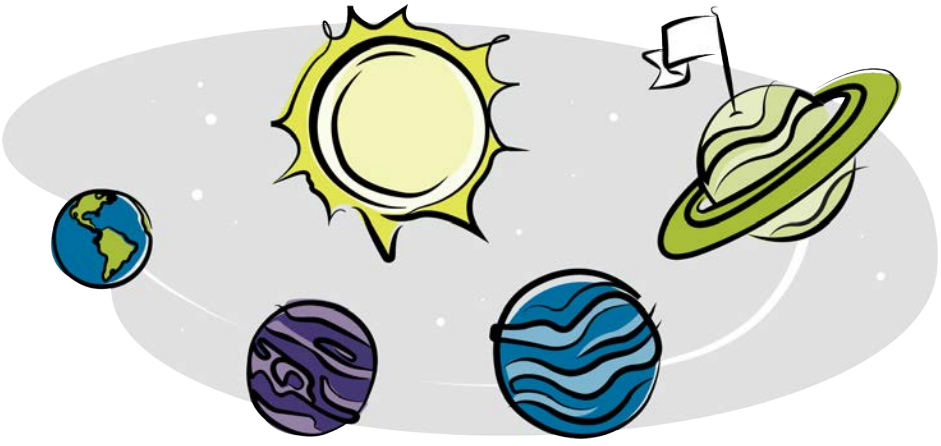
Content must have the ability to be presented in different formats so if one route is completely blocked there are others to try. Text alternatives can be used to convey the purpose of images for those who are visually impaired or using screen readers. Similarly captions, sign language interpretation and audio descriptions can be included in video content to provide full context to any user. To cut through the dust, accessibility should be at the forefront of any web design. Distinguishable content like high contrast colours, resizable images and adjustable background audio will make it easier to see and hear the important content.

We spare no detail when devising solutions to ensure online dust clouds are cleared away—paving the way for websites that can be seen and heard by users of all abilities.

### Did you know?

Colour-blindness—the inability to identify any colours—is rare. More common is colour vision deficiency which affects:

**1 in 12 men,**
**and 1 in 200 women in the world.**



### Common Failures

- Images missing alternative text
- Videos that do not provide closed captioning or text transcripts
- Insufficient colour contrasting

# WCAG Principle: Operable

## Can all users navigate this?

Sitting inside the cockpit of a rocket can be quite daunting, as you're surrounded by a mass of buttons, switches, lights, and displays. Hours of training can help make sense of it all, but what if there's a malfunction? The necessity for operable controls is just as vital when navigating the internet as it is when flying through space, and the importance of enabling users of all abilities to properly navigate the web cannot be ignored. For example, not everyone can use a mouse. Keyboard navigators help those with mobility diseases, like multiple sclerosis (MS) or Parkinson's, that impair fine motor control.

When there is a malfunction, each person may try to find a different solution. Similarly, when searching for content or information on a web page, users may rely on different functions to help them find or understand it. Some people read content, when others prefer to listen to it. Some people use the search bar to find information, and others browse the main menu options.

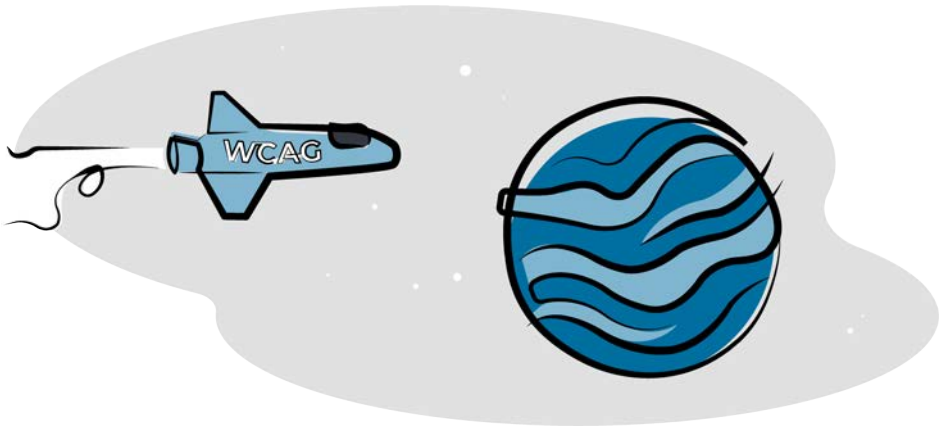
It is important to not only build online controls that work, but also to monitor accessibility trends so that the controls work for everyone. This includes improving existing interfaces to ensure nobody is left behind.

### Did you know?

Canada has one of the highest global rates of MS with an estimated


**living with the disease,**

and an average of 11 Canadians diagnosed daily. Meanwhile, Parkinson's also affects 1 in every 500 Canadians—with approximately 6,600 new cases each year.




### Common Failures

- Web pages not navigable by keyboard or controls
- Use of auto-playing media with no ability to control it
- No "skip-to" links to allow users to jump directly to a content section
- Buttons or links are too small to click/tap, or placed too tightly together

# WCAG Principle: Understandable

## Is the information understandable by all users?

Imagine this scenario: you are embarking on your intergalactic journey but with a map handed down to you by an old relative. It's got coffee stains, an age-revealing amount of wrinkles, and a dog ate the legend. Like navigating the internet, you might know exactly what you're looking for (i.e. your final destination), but with information either missing, distorted, or unclear, getting there could be challenging.

Solutions should be clear, intuitive, and friendly to users of all abilities to ensure that a user's browsing experience is not filled with anxiety and confusion—the journey to the Digital Accessibility Frontier should not require a degree in rocket science.

If the path is simple, clear and predictable then the map can still be of use. For example, by using navigation tools and prompts across multiple pages users will be able to quickly and simply know where they are going. However, if a consumer has a poor and frustrating experience 89% are likely to go to a competitor.

### Did you know?

**88%**

**of online visitors are less likely to return to a site after a bad experience.**

More than a third tell others about their disappointing experience.

### Common Failures

- Inconsistency in navigation or information placement
- Unclear or confusing status or error messages
- Missing labels and instructions for buttons and controls

# WCAG Principle: Robust

## Can content be used across all devices?

It wasn't too long ago when most users navigated the internet using only a mouse or a laptop touchpad. But like the advancement of space exploration, technologies emerged, allowing the internet to be explored on a variety of devices, including smartphones, tablets, and smart TVs. Consequently, web content must modernize alongside user habits, and be accessible across all browsable devices—including assistive technologies such as screen readers, transcription software, and trackballs that aid with visual, hearing and physical disabilities.

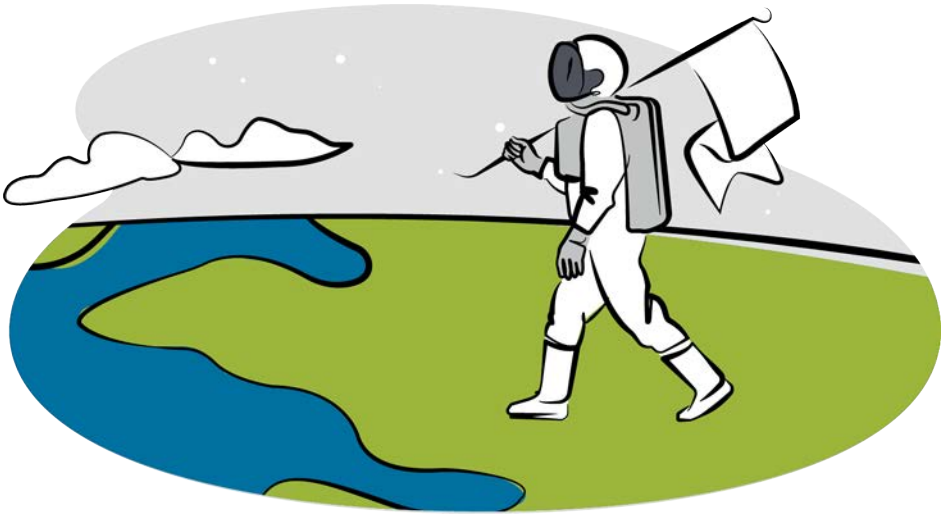
It is almost imperative to support this modernization to attract new users and retain current ones. In 2020, it was found that 74% of users are more likely to return to mobile-friendly websites. Organizations that are driven by outdated technology, methods, or ways of thinking won't last. Instead, we must ensure solutions are created by existing technology, but work across all the latest devices and reflect current user browsing habits.

### Did you know?

Mobile phones made up

**52.2%**
**of global web traffic in 2019,**

versus only 16.2% in 2013. Meanwhile, impairments affecting flexibility (10%), mobility (10%), seeing (5%), hearing (5%), and dexterity (5%) make up some of the most common disabilities that affect 22% of Canadians or 6.2 million people.



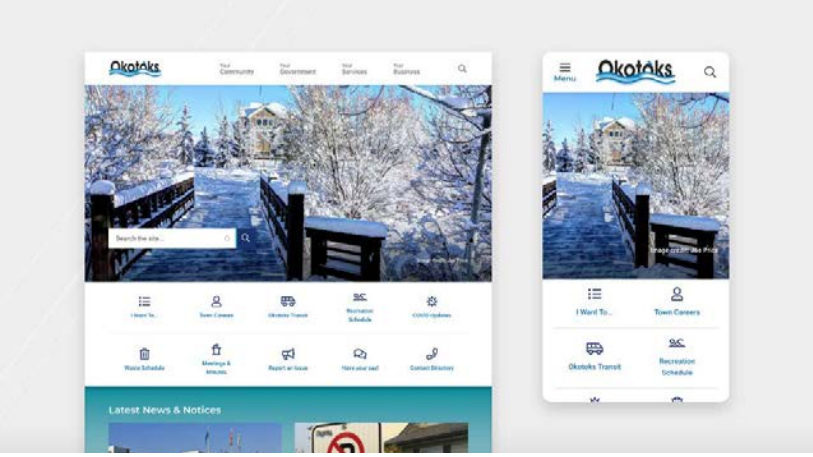
### Common Failures

- Web pages that are not compatible with assistive technologies
- Status and error messages that are not available to non-visual users
- Font sizes that are not responsive to all devices
- Images are too big, which causes slow page loading

# Upanup Case Studies

## Perceivable

Upanup designed and developed a user-focused website for the Town of Okotoks. We ensured that it met many WCAG standards by building accessibility components directly into the site. We included mandatory fields designated for alternative text and designed content that was distinguishable, such as buttons with a high colour contrast and a clean organized layout free of any dated and unnecessary content. It is important to focus on all the little details that can make a big difference to users.

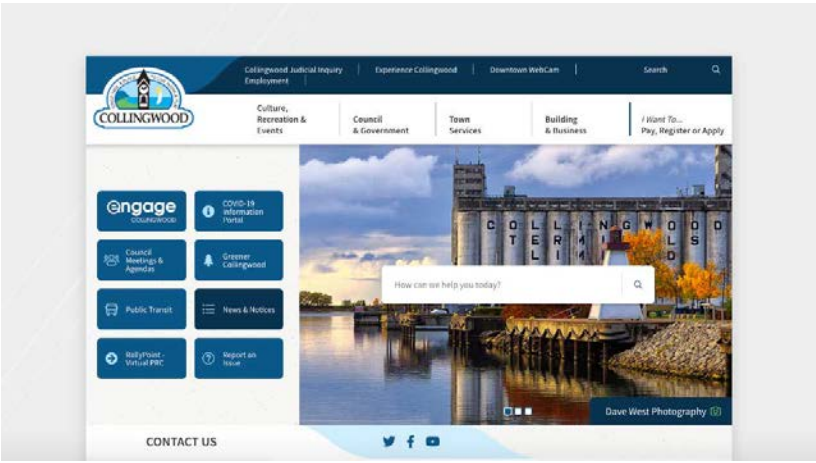



### Best Practices

- ☑ Include descriptions for audio and video files
- ☑ Describe data in charts and diagrams
- ☑ Use audio descriptions to describe video content
- ☑ Ensure text and images can be resized

## Operable

The Town of Collingwood wanted a website that enhanced the user's experience. We factored accessibility into every part of the website build to ensure people in all kinds of circumstances could access the information they were looking for. For example, the entire website can be navigated by keyboard, using the tab and arrow keys for users who can't (or prefer not to) use a mouse.



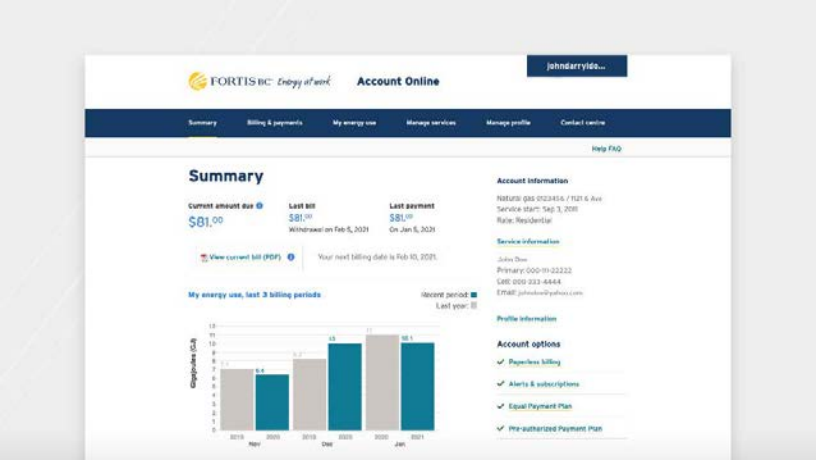

### Best Practices

- ☑ Make sure users have enough time to read content
- ☑ Allow automatic scrolling content to be paused
- ☑ Use clear headings and titles
- ☑ Allow for different input modalities

# Upanup Case Studies

## Understandable

FortisBC frequently looks for ways to meet and exceed their customers' expectations for web usability. To help with this, Upanup has facilitated many user experience testing sessions to best understand the user thought process and how they predict how the FortisBC website will operate. This allowed us to compile findings and make recommendations to improve the website's navigation and content.

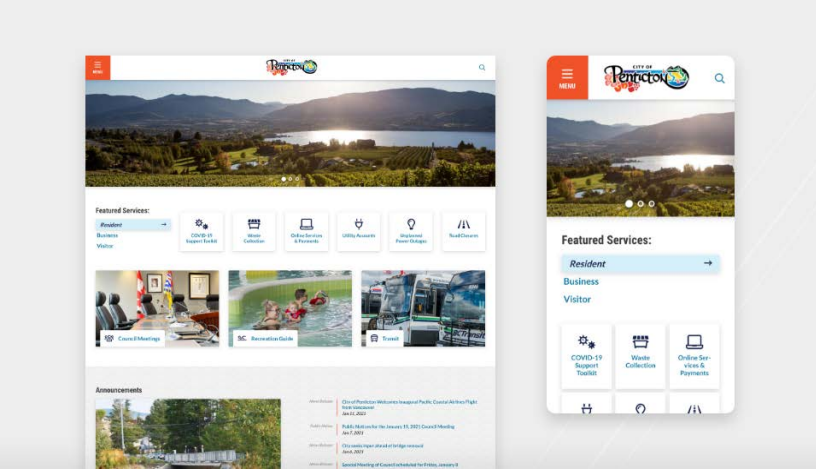



### Best Practices

- ☑ Use simplified language and terminology
- ☑ Ensure user interface (UI) components that are on multiple web pages have the same labels
- ☑ Use audio descriptions to describe video content

## Robust

The City of Penticton was looking for a leading-edge website solution as well as a cohesive mobile-first design. To help the City achieve their goals, we launched a new website and mobile app making it easy for users to locate information on the go. The vertical, mobile menu design makes it easy to use on every screen size.




### Best Practices

- ☑ Test your content to ensure it is compatible with a wide range of browsers
- ☑ Make sure different assistive technologies can be properly used on your website
- ☑ Make your website mobile friendly

# The Web Can Be Dark and Full of Errors

## How Drupal can help you overcome obstacles

The journey to the Digital Accessibility Frontier can be filled with obstacles and failure points that can prevent websites from being adequately experienced by users of all abilities. As a hero, you may be armed with a keen design eye, technical knowledge, and an understanding of accessibility law, but when it comes time to conquering these barriers, what will you draw from your belt?

Drupal is a Content Management System (CMS) created and run by an inclusive community that is committed to being "an accessible tool for building websites that can also be accessed by people with disabilities." As a community-based, open-source tool, Drupal provides a flexibility that might not be found when relying solely on a proprietary CMS.

### Accessible Features in Drupal include:

- Built-in support of semantic markups to aid with screen readers and other assistive technology
- Added WAI-ARIA support for Rich Internet Applications
- Search engine form and presentation
- Drag and drop functionality
- Colour contrast and intensity
- Added skip navigation to core themes
- Image handling
- Form labeling
- Duplicate or null tag removal
- A suite of open source modules that support the development of accessible, responsive sites
- An extensive library of Drupal accessibility resources including handbooks, checklists, community forums, and links to presentations by subject matter experts

## The digital accessibility frontier awaits...

### But you're never alone on your journey

Where would Luke Skywalker be without his loyal and trustworthy droid sidekick R2-D2? When it comes to navigating your way to the Digital Accessibility Frontier, having this level of reliability by your side can make it easier to achieve that "mission accomplished". We are armed with a toolbox that combines an expertise in online accessibility with lauded capabilities in web and application design, user experience, and digital marketing so you can be assured that when you need help on your journey, Upanup will be there.

**Together, we can reach the Digital Accessibility Frontier, and ensure that online worlds are truly accessible to people of all abilities.**

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UPANUP


**British Columbia**

+1 (250) 590-1821

304, 733 Johnson Street
Victoria BC, V8W 3C7

**Alberta**

+1 (403) 453-0053

101, 620 – 12th Avenue SW
Calgary, Alberta T2R 0H5

**Ontario**

+1 (519) 574-8005

Unit G, 55 Victoria Street N
Kitchener ON, N2H 5B7

**Connect with us online:**

Upanup.com /upanup @Upanup @UpanupStudios @Upanup