# Web Accessibility

is actually a well-forgotten old

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## What we will be discussing today

- Introduction
- Web Accessibility in real world
- Testing types
- AI & Web Accessibility
- Summary
- Q&A

## Introduction

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## Web Accessibility in real world

"It is better to arrive late than to not arrive at all"

#### What do people generally know about A11Y?

- "It's only meant for people with permanent physical disabilities"
  - In reality, everyone uses at least one of accessibility features.
- "Only corporations should worry about this"
  - All businesses should evaluate their web accessibility to provide equal access to all users and avoid potential legal issues.
- "Users with disabilities don't use my website"
  - How can we be sure? Most of assistive technologies are not detectable in any way.

These are just some of the statistics

45%

24%

Dutch iOS users use at least one accessibility feature

Android users in the Netherlands use dark theme on their phone

These are just some of the statistics

95,9%

websites in the world identified WCAG 2 compliance issues

81%

websites failed to apply low contrast text

 $60^{\circ}/_{0}$ 

of images on websites do not have alt text

# Testing types

### A11Y testing without WCAG? That's like cappuccino after 12:00

WCAG (Web Content Accessibility Guidelines) - international standards that ensure digital content is accessible to people with disabilities, promoting inclusivity and compliance.

# The World Wide Web Consortium (W3C) has the following list of requirements for accessibility testing:

- Perceivable: e.g. alt texts in images.
- Operable: e.g. keyboard navigation
- Understandable: The user interface's content must be readable using a meaningful statement instead of color-coded instructions.
- Robust: e.g. URL access from different viewports (desktops, mobile phones and tablets).

### **Types of Accessibility Testing**

- **Automated Testing:** Uses tools to identify common issues like missing alt text or insufficient color contrast.
- Manual Testing: Conducted by humans, this testing uncovers usability problems that automated tools may miss.
- User Testing: Involves real users with disabilities to provide feedback on their experiences.
- **Assistive Technology Testing:** Ensures compatibility with tools like screen readers and voice recognition software.

# AI & Web Accessibility

#### How AI simplifies life

Certainly, AI can simplify life with features like automatic speech recognition, adaptive interfaces, and screen reading tools.

#### Here are some examples:

- Basic Built-in Accessibility Features
- Text-to-Speech (TTS) Technologies
- Voice Assistants
- Many companies are developing additional applications to make using the phone easier

#### **Basic Built-in Accessibility Features**

Easy Access mode in IOS allows elders to use the phone without grandson and granddaughter.





#### **Text-to-Speech (TTS) Technologies**

Many platforms, including Amazon Polly and Google Text-to-Speech, convert text into speech, helping individuals with dyslexia and other reading difficulties.



#### **Voice Assistants**

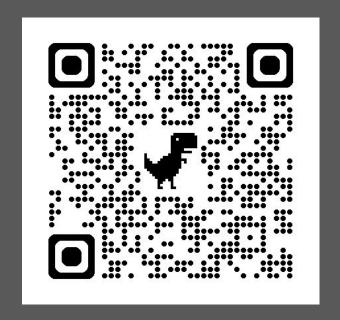
Yandex has trained its Alice voice assistant to recognize speech from people who have had a stroke



Voice assistant Alexa is often installed to help people with disabilities do household chores: open the door, turn off the lights

#### Additional applications

Whispp App helps convert impaired speech or whispers into the user's natural voice during a call



#### AI limitations

As of today, AI cannot fully replace manual testing and human expertise in digital accessibility. This insight comes from a tester with a visual impairment.

# Summary

#### Simple Commandments for Web Accessibility

- 1. Disability cannot be hidden. If we ignore it, we won't create universally accessible applications
- 2. Never rely on just one opinion. Invite experts with disabilities to share their insights
- 3. There will always be people who simply aren't interested. Don't waste your time trying to convince them
- 4. Be prepared for the fact that implementing digital accessibility can be costly

Q&A

Thank you for your attention

and we wish for all your projects to shine as bright as the highest WCAG AAA standard