



PROUDLY SERVING



Accessibility Persona Profiles

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Mary: screen reader user

“I couldn’t buy my sister the present she really wanted for her birthday because none of the fields were labeled on the website.”

- Mary is 24 and lives in Portland. She recently finished an arts degree and now works as an administrative assistant for a local children’s charity.
- Mary is partially sighted, having lost most of her sight in her teens due to a genetic condition. She uses a screen reader to help her read web content.
- She has a support worker at her job for 3 mornings a week to help her with paper-based work. People there use Google Drive and Google Docs but she prefers to be sent Word documents as they work better with her screen reader.

Devices and technology

Mary has been using [JAWS](#) for about 8 years - it’s a screen reader, which converts text into speech so blind and partially sighted people can read web content. Mary uses it on a notebook at work and a Windows desktop computer at home. Before JAWS she used [ZoomText](#) (a screen magnifier), but it became too difficult as her sight got worse.

She has an iPhone 6 which she set up by herself. It’s got some good features like VoiceOver and Speak Screen, which help her find her way around her phone.

She’d like to get a MacBook in the future so she can have the same kind of features on a laptop, but she would need to save up for a long time.

Goals and wishes

1. Mary wants to be able to use any website she wants.
2. She also wants to be more independent.

Frustrations:

When something on a website doesn’t work with Mary’s screen reader, she has to look for a phone number to call or ask someone to help her, which she finds annoying.

Her screen reader can’t read forms if they don’t have proper labels. Sometimes she’ll guess what she needs to enter, but she won’t do that for things like financial transactions where it’s too risky.

Sometimes when she’s shopping online, she can’t visualize the item she’s looking at because there’s no description that her screen reader can understand.

Making things work for Mary

Mary uses a keyboard instead of a mouse or trackpad, and gets annoyed when she's forced to tab through lots of things before she gets to the content she's looking for.

She finds it hard to tell quickly what's on a page if there aren't good headings.

What to do

Further reading

Follow best practice for accessible form design - for example, make sure fields are labeled and can be read by screen readers.

[Components](#) for user interfaces.

[Tutorial on forms](#) from W3C.

[Using the fieldset and legend elements.](#)

Test to make sure any new information that appears on screen is announced by screen readers - this includes error messages, and progress or confirmation messages.

[Testing with assistive technologies.](#)

[Alerts!](#), video tutorial by Google Chrome Developers.

[Hiding and updating content](#), guidance on Web Fundamentals (Google).

Make sure people can use your service with a keyboard. Try out some common [user journeys](#).

[Dump your mouse for an hour](#), on the GDS Accessibility blog.

Write headings that help users find what they're looking for quickly. Write descriptive links and page titles.

[Structuring your content.](#)

Use alt text for images that describes the image's content or conveys the same information (unless it's [decorative](#)).

[Writing alt text.](#)

[Tutorial on images](#) by W3C.

[Five golden rules for compliant alt text](#), blog post on AbilityNet.

Do user research with people who use screen readers.

[User research for government services: an introduction](#), guidance on GOV.UK.

[Research with blind users on mobile devices](#), post on the GDS Accessibility blog.

John: user with rheumatoid arthritis

“I struggle with software understanding my voice commands. In the meantime, I’ll continue using a keyboard to get around websites as it’s less painful than a mouse.”

- John is 53 and lives with his wife Helen in Stonington. They’ve just become grandparents for the first time.
- John works as management accountant for a local food manufacturing company. He’s been working there for 22 years.
- He developed rheumatoid arthritis 10 years ago. His company assesses his workspace every year and make sure he has what he needs.

Devices and technology

John uses a desktop computer at work and a keyboard with a wrist rest. He has programmed some shortcuts into his keyboard, and prefers those to his trackball mouse (which is painful to use after a while).

He has just tried out [Dragon NaturallySpeaking](#) (speech recognition software). He thinks it may work well for him, and he’s going to invest more time in ‘training’ it to understand his voice.

Goals and wishes

1. John wants more software to work properly with just the keyboard. He’s been trying to find some a way to make a calendar with baby pictures, but all the sites he’s tried only work with a mouse.
2. When he’s fully proficient in Dragon NaturallySpeaking, he wants to be able to use any website at all.

Frustrations

It’s annoying for John when he can’t use certain parts of a website with a keyboard, like video players and navigation menus.

It takes him a while to fill out forms, and he hates it when they time out without much warning.

He wastes a lot of time trying to tab through things like navigation menus. He’d love to have fewer things to tab through in general.

He sometimes has problems with pop-up boxes. This happens most when a pop-up appears but the tab control stays on the background page, meaning he can’t interact with the pop-up or close it.

Making things better for John

What to do

Make sure all parts of your service or website work for people who use a keyboard instead of a mouse or trackpad.

Further reading

[Dump your mouse for an hour](#), on the GDS Accessibility blog.

[Keyboard-only navigation for improved accessibility](#), by Nielsen Norman Group.

Test your service to make sure you avoid specific issues for keyboard users, like focus order and keyboard traps.

[Keyboard accessibility](#), guidance by WebAIM.

[Testing for keyboard accessibility](#), guidance by 18F.

Don't have time limits on forms. Let people save what they're doing or extend the time limit.

[Providing accessible time limits](#), guidance by the University of Washington.

Test that your service works with speech recognition software.

[Accessibility and testing with Dragon NaturallySpeaking](#), guidance from the BBC Accessibility team.

Include features that make it easy for users to complete forms - for example, have an 'address lookup' so users only need to enter their postcode and house number.

[Ask users for addresses](#), a pattern in the GOV.UK Design System.

More reading

You may find the following resources useful:

- [What I've learned about motor impairment](#), blog post by Simple Primate
- [Motor disabilities](#), article by WebAIM

Susan: partially sighted screen magnifier user

“My screen magnifier has made it possible for me to use the web again. I just wish more companies kept their websites simple.”

- Susan is 54 and lives in Saco with her husband Steve and daughter Dana who is 12. Her other two children are away at college in Orono.
- Susan is partially sighted due to glaucoma and diabetes.
- She works part time as a social worker and used to visit people in their homes, but lost her confidence as her sight got worse. Now she's based in the office, and she's hoping to start training and mentoring new social workers.

Devices and technology

Susan's setup at work includes [ZoomText](#) (software that lets you magnify what's on screen), a large monitor and a high visibility keyboard. She has a similar setup at home.

She recently got a Kindle Fire for reading - she has tried its screen reader function, but she prefers to use the magnification to read herself or use audiobooks.

Susan prefers phone calls to emails and never sends text messages. She uses the 'speech to text' feature on her smartphone, which records a message and sends it to the person she's contacting.

Goals and wishes

1. Susan wants to be able to phone any company she needs to contact - it's so much quicker and easier for her to call than to write.
2. She also wishes there was less clutter on some websites - she just wants to get on with what she's doing.

Frustrations

Susan tends to forget to scroll horizontally when she's using ZoomText. When she's filling in a form, she sometimes misses fields or help text when they're next to each other (rather than above and below each other).

She hates it when she's using ZoomText and a pop-up box appears off screen. She then needs to scroll to find and close the pop-up.

It's confusing if the layout of a form isn't consistent - for example, if she's been magnifying a certain part of the screen to complete a form, but then that part is blank on the next page.

Making things better for Susan

What to do

Follow best practice for accessible form design - for example, leave enough space between fields, and position field labels directly above the fields they relate to.

Make your layout consistent and predictable. For example, make sure the position of things like 'Next' and 'Back' buttons is consistent.

Do user research with people who use screen magnification software.

Use a color contrast ratio of at least 4.5 to 1 between text and its background.

Further reading

[Components for user interfaces](#), part of the Usability.gov Design System.

[Make web pages appear and operate in predictable ways](#), WCAG 2.0 guideline.

[User research for government services: an introduction](#), guidance on GOV.UK.

[Color contrast - why does it matter.](#)

Paul: user with Asperger's

“Websites can be so distracting. It takes me ages to do anything sometimes, as I feel like I have to read every word and click on every link.”

- Paul is 24 and lives with his mum and dad in Freeport. He has been looking for a job as a pharmacologist since finished his chemistry degree.
- He has Asperger's, a condition on the autism spectrum that affects how he sees the world and interacts with people. He was also recently diagnosed with anxiety.

Devices and technology

Paul is comfortable with technology and can usually figure out how things work himself. He prefers to use apps because they're simpler and less cluttered than websites.

Goals and wishes

1. Paul wishes he could find what he needs on websites more easily - sometimes there's so much to read through.
2. He wants to be able to talk to people using web chat instead of the phone so he has time to think about what he wants to say.

Frustrations

Paul often gets distracted and wants to read everything and click every link. He wishes there wasn't as much text or links.

Paul gets distracted by other things as well - he finds moving content like banners or video distracting, and finds bright colors distressing.

Services not designed for his needs

He doesn't like using the phone, but a lot of companies don't let you contact them by email or live chat (or they make their details hard to find).

Making things work for Paul

What to do

Further reading

Allow save and return on forms and ensure 'time outs' on forms are reasonable.

[Timeouts](#), guidance by 18F (the US government's digital agency).

Include people with autism in user research.

[User research for government services: an introduction](#), guidance on GOV.UK.

Provide captions for video content.

[Autistic spectrum, captions and audio description](#), article by Mindful Research.

Mark: user with multiple conditions

"I don't like having to call helplines – they're too noisy and people don't speak clearly enough."

- Mark is 82 and lives in Damariscotta with his wife Barbara.
- Mark's been retired since he was 72. He has arthritis and is losing his hearing. He also has cataracts (though he's had one removed) and has had both hips replaced.
- He struggles most with background noise when he's out with friends, and with the mouse when he's using the computer.

Devices and technology

Mark has a landline phone with a [built-in loop](#), amplification and larger buttons. He also uses a [Doro 6520](#) mobile phone. The buttons are big enough for him to press, but he refuses to text and doesn't read messages.

He has a tablet his children gave him as a present, mainly to use video chat and email to stay in touch with his family.

Mark wears a hearing aid in each ear. He's disappointed that they mainly make things louder (not clearer), but they're useful when he switches them to a hearing loop.

Goals and wishes

1. Mark wishes websites used clearer colors.
2. He also wishes more websites showed phone numbers he could use.

Frustrations

If Mark's having a formal appointment with someone, it's hard for him to hear if there's no hearing loop or it doesn't work well.

He finds it stressful calling a contact center - there's often a lot of background noise, and he struggles when the person he's talking to doesn't speak clearly.

Mark's poor eyesight makes it hard for him to read large blocks of text. He doesn't know how to adjust his browser settings, and often he'll just give up.

Making things work for Mark

What to do

Avoid using small text and make sure text has good color contrast.

Further reading

[The 100% easy-2-read standard](#), on iA.

[Your body text is too small](#), post on Marvel blog.

Follow best practice for accessible form design - for example, leave enough space between fields, and position field labels directly above the fields they relate to.

[Components](#) for user interfaces.

Other sources:

- <https://www.digital.govt.nz/standards-and-guidance/design-and-ux/service-design/service-design-tools/personas/>
- <https://www.usability.gov/what-and-why/user-research.html>
- https://www.mckinsey.com/~media/McKinsey/dotcom/client_service/BTO/PDF/MOBT_27_Delivering_large-scale_IT_projects_on_time_budget_and_value.ashx