Creating truly accessible forms

Service Design in Government 2024

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Let's introduce ourselves

- We are Caroline and Vicky
- Say hello to the people on your table

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Ladies that UX Brighton ran a great in-person event

I'd like to thank everyone involved in preparing and running that event, the inspiration for this shorter workshop.

[Blog post about the in-person event](#)

[Original workshop resources on Notion](#)
(Creative Commons licensed).

[Find our more about Ladies that UX Brighton](#)
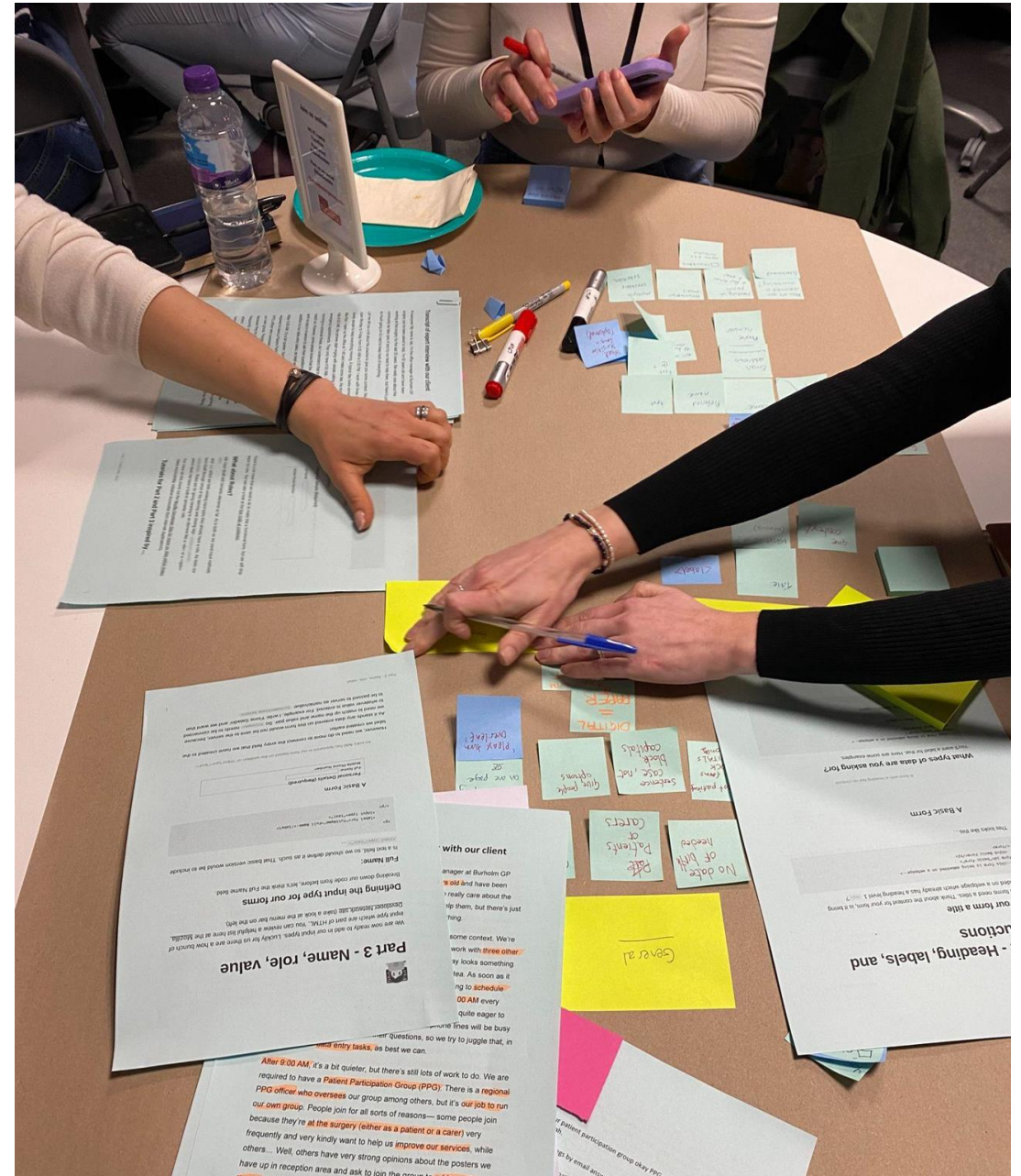
Agenda

Introduction

Challenge 1:   Think about types of disability

Challenge 2:   Use the Web Content Accessibility Guidelines

Challenge 3:   Use the US Web Design System

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Challenge 7:   Think about implementation (and code)

Wrap up

We're going to try

- We'll follow along as they apply for a new one
- Keep a note of which page on the website is a form

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Is this a form?

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Is page 2 a form?

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Is page 3 a form?

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Is page 4 a form?

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Is page 5 a form?

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Is page 6 a form?

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Is page 7 a form?

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Is page 8 a form?

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Which page(s) were the form?

1

2

3

4

5

6

7

8

9

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We know a form when we see it

Looks like a form and works like a form

Asks questions and expects answers

Allows someone to achieve a goal

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A good form needs a lot of accessibility

Interaction design

Content design

Service design

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Takeaway

A good form is easy to:

- read and use

- understand and answer

- get it done and move on

Let's have a look at the accessibility statement

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Takeaway

[Something about accessibility here]

Today's focus is one specific question

Scenario
You have been asked to develop a digital version of a paper-based form. One of the form fields is 'phone number' - today we'll focus on this field in our design backlog.

We'll think about

"What's the best way to ask for a phone number?"

What could possibly go wrong?

Think about services and phone numbers

If you have designed or worked on a service that
included a question about a phone number,
please raise your hand

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Share your thoughts about phones

- Have a look at your phone
    - Is there only one or do you have several?

- Consider calls received and messages
    - What did you get and why?
    - How did you react?

- Think about someone you know, maybe in your family, who has a different experience to you.
  Any extra thoughts?

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Challenge 1:
Think about types of disability

- Feedback from thinking about phones

- Did any story from your table include a disabled person or someone with a disability?

- If so, please share

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Consider permanent, temporary, and situational disabilities

Touch

One arm | Arm injury | New parent

See

Blind | Cataract | Distracted driver

Hear

Deaf | Ear infection | Bartender

Speak

Non-verbal | Laryngitis | Heavy accent

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Inclusive101Guidebook.pdf (microsoft.design)

Keep ONE person in mind

- Please choose one person who has a permanent, temporary, or situational disability that affects how they use a phone

- Share your choice with your table
  - You may want to change your choice when you hear the others

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Challenge 2:
Use the Web Content Accessibility Guidelines

Let's try to get some help from WCAG for
"the best way to ask for a phone number"

Have a look at
[Forms Tutorial | Web Accessibility Initiative (WAI) | W3C](#)

Compare notes

5 minutes

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This tutorial is mostly about interaction design, with a bit of content design

[Forms Tutorial | Web Accessibility Initiative (WAI) | W3C](#)

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There is a bit of service design there

Forms Tutorial

in Tutorials

Forms are commonly used to provide user interaction on websites and in web applications. For example, login, registering, commenting, and purchasing. This tutorial shows you how to create accessible forms. The same concepts apply to all forms, whether they are processed client or server-side.

Aside from technical considerations, users usually prefer simple and short forms. Only ask users to enter what is required to complete the transaction or process; if irrelevant or excessive data is requested, users are more likely to abandon the form.

- **Labeling Controls:** Use the `<label>` element, and, in specific cases, other mechanisms (e.g. WAI-ARIA, `title` attribute etc.), to identify each form control.

- **Grouping Controls:** Use the `<fieldset>` and `<legend>` elements to group and associate related form controls.

- **Form Instructions:** Provide instructions to help users understand how to complete the form and individual form controls.

- **Validating Input:** Validate input provided by the user and provide options to undo changes and confirm data entry.

- **User Notifications:** Notify users about successful task completion, any errors, and provide instructions to help them correct mistakes.

- **Multi-Page Forms:** Divide long forms into multiple smaller forms that constitute a

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Challenge 3:
Use the a Web Design System

We're looking for the best way to ask for a phone number

Please choose ONE of these

- [USWDS: The United States Web Design System (digital.gov)](https://designsystem.digital.gov/)
- GOV.UK
- Scottish design system

Compare notes
5 minutes

https://designsystem.digital.gov/

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USDS has a pattern specifically about phone numbers

An official website of the United States government Here's how you know ∨

U.S. Web Design System (USWDS)   MENU

PATTERNS: CREATE A USER PROFILE

Phone number

Help users to enter their phone number or numbers to ensure effective communication.

The phone number pattern allows users to easily enter their phone number and ensures the phone number is properly formatted.

About this pattern

On this page

About this pattern

What problem does this solve?

When to use this pattern

What's the solution?

Guidance

What to do

What not to do

Pattern preview

Pattern code

Considerations

Usability guidance

Accessibility

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The accessibility guidance is OK,
but doesn't help someone who can't use a phone at all

What about the person you're thinking about?

Accessibility

Follow input guidance. These text fields should follow the accessibility guidelines for all text inputs.

Use "text" instead of "number" inputs. Research indicates that numeric inputs still carry many usability problems ☒. The way the user enters the data may differ from what the browser expects. Use `<input type="text" inputmode="numeric" pattern="[0-9]*">` to better support mobile users.

Use fieldset and legend. Group related radio buttons together with `<fieldset>` and describe the group with `<legend>`.

Use proper labels and attributes. Each radio button should have a `<label>`. Associate the two by matching the label's `for` attribute to the input's `id` attribute.

Customization. As you customize, make sure you follow accessibility guidelines for form templates and the accessibility guidelines for form controls.

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Phone number | U.S. Web Design System (USWDS) (digital.gov)

What about the other design systems?

Did the design system you chose have guidance that helped?

https://designsystem.digital.gov/

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We've been told to think about service design

Aside from technical considerations, users usually prefer simple and short forms. Only ask users to enter what is required to complete the transaction or process; if irrelevant or excessive data is requested, users are more likely to abandon the form.

✅ What to do

- Tell users why you need their phone number, why you might contact them, and when.

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Challenge 4:
Think about why we ask for a phone number

- Any stories to share about:
  - Why organisations ask for a phone number?
  - How will they use the number?
  - When might they use it?

- Does that use of the number cause any difficulties for the person that you are thinking about?

- Choose a story from your table to share with the room

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Phone numbers are for more than conversation

- Calling someone to talk to them
- Text (SMS) messages about the progress of an order or task
- Two factor authentication
- Helping to identify someone, maybe as a recovery mechanism
- … maybe some other things too

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A question protocol is a list of all the questions

[The question protocol: how to make sure every form field is necessary - Effortmark](#)

The question protocol: how to make sure every form field is necessary

👤 Caroline Jarrett 🗓 7 June 2010

What is a question protocol?

A *question protocol* is a tool for finding out which form fields are required. It lists:

- every question you ask

- who within your organisation uses the answers to each question

- what they use them for

- whether an answer is required or optional

- if an answer is required, what happens if a user enters any old thing just to get through the form.

Question, by Noella, creative commons

The question protocol is different from the form itself, because it's about *how* you use the answers.

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Question protocols are in the GOV.UK Service Manual

[Structuring forms - Service Manual - GOV.UK (www.gov.uk)](www.gov.uk)

Know why you're asking every question

Before you start, make a list of all the information you need from your users.

Only add a question if you know:

- that you need the information to deliver the service
- why you need the information
- what you'll do with it
- which users need to give you the information
- how you'll check the information is accurate
- how to keep the information up to date and secure

This list is called a 'question protocol' - it's different from the form itself because it's about how you'll use the answers.

A question protocol forces you (and your organisation) to question why you're asking users for each item of information. It gives you a way of challenging and pushing back against unnecessary questions if you need to.

Once you've worked out what you need to ask, you can start thinking about how to ask the questions

The Irish government also has question protocols

gov.ie

Publication

A question protocol for government forms

From gov.ie team
Published on 24 February 2023
Last updated on 24 February 2023

Government forms should have as few questions as possible. Every additional question you ask puts a burden on the user.

If you don't absolutely need the question – get rid of it. If you are asking the question because you might need the information later, then add the question later.

Start with questions that will let users know if they are not eligible for the service, so that you don't waste people's time.

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gov - A question protocol for government forms (www.gov.ie)

A question protocol keeps track of each question

Only add a question if you know:

- that you need the information to deliver the service

- why you need the information

- what you'll do with it

- which users need to give you the information

- how you'll check the information is accurate

- how to keep the information up to date and secure

Caroline Jarrett Effortmark.co.uk @cjforms (CC) BY SA-4.0   Structuring forms - Service Manual - GOV.UK (www.gov.uk)

An example of an entry in my question protocol

Column in the question protocol	Example for a newsletter sign-up form
Answer we need to get (data)	Name
Why is it needed?	To be able to address the user To identify the individual user
How will it be used?	Hi, Caroline!
Level of importance (must have, nice to have)	Nice to have
What happens if you get the wrong answer or no answer to this question?	May have a strange interaction with the user
(optional: extra questions that you think will be helpful for your designs and organisation)	

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Sometimes questions linger past their usefulness

Cardholder details

*Indicates a required field

* Address 1	16 Heath Road
Address 2	Leighton Buzzard
Address 3	
* Town/City	Leighton Buzzard
Region	UK Mainland
Postcode/ZIP code	LU7 3AB
* Country/Territory	United Kingdom
Telephone	01525370379
Fax	
* Email address	caroline.jarrett@effortmark.co.uk

We have some more information on the scenario

Scenario
You have been asked to develop a digital version of a paper-based form. One of the form fields is 'phone number' - today we'll focus on this field in our design backlog.

The form is to sign up for a patient advisory group at a GP practice. They want the phone number so that they can call
the volunteer patient to chat about the duties of the advisory group

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Challenge 5:
Let's make an entry for phone number

Column in the question protocol	Phone number
Answer we need to get (data)	Mobile phone number
Why is it needed?	
How will it be used?	
Level of importance (must have, nice to have)	
What happens if you get the wrong answer or no answer to this question?	
Anything else you want to discuss with this client?	

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Challenge 6:
Make a prototype – in pairs or threes

Design a truly accessible question for asking for a phone number for the scenario

Your question must:

• Obtain a phone number

• Allow for some sort of choice

• Be ready for testing in 5 minutes!

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Challenge 6:
Test your prototypes

Decide which person in your pair/three will be the participant for another team

Swap participants and test

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Consider* a filter question to introduce the topic

Hear from our partners

We partner with Domestic & General who are a provider of Protection & Insurance plans. They would like to keep you up to date with the latest news and offers. Would you be happy for them to contact you:

▪ by post.

▪ by telephone.

▪ by email.

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We partner with Domestic & General who are a provider of Protection & Insurance plans. They would like to keep you up to date with the latest news and offers. Would you be happy for them to contact you:

▪ by post.

▪ by telephone.

▪ by email.

* Try doing a filter question, then actually test it with some real people to make sure that the question itself is not repellent

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It's worth putting extra effort into 'easy' questions

Question	Mean abandon rate
Name	6%
Email	6%
Password	11%
Phone	6%
Postcode	5%
Address	5%

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https://www.zuko.io/blog/which-form-fields-cause-the-biggest-ux-problems

Users want to know why you want to know

"Users hate giving you their phone number - It's a sad truth but users are very suspicious of you asking for their number. They fear being spammed by sales calls so would rather drop out of the process than hand it over …

If you really must ask then explain why you need it. A simple line saying that you need their number in case there are any issues with delivery will do wonders for the completion rate on your phone field."

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https://www.zuko.io/blog/which-form-fields-cause-the-biggest-ux-problems

Forgiving interaction design really matters, too

"Format confusion - More than any field, phone numbers have a cornucopia of ways you can potentially enter the information. Do you add a '+'? The country code? How about spaces or dashes? <HEAD EXPLODES EMOJI>"

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https://www.zuko.io/blog/which-form-fields-cause-the-biggest-ux-problems

Please help us: people with dyscalculia

1. If you already have a phone number for us, don't ask again
2. Allow for typical characters such as + - ( ) and space
3. Be very specific in the error message
4. Give us extra time
5. Let us copy/autocomplete the phone number into the form

Fill in the information you have (accessiblenumbers.com)

Improve Validation Errors with Adaptive Messages (98% Don't) – Articles – Baymard Institute

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Example of code not working

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Shoutout to Adam's pattern checker

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