Creating truly accessible forms

Ladies that UX Seattle

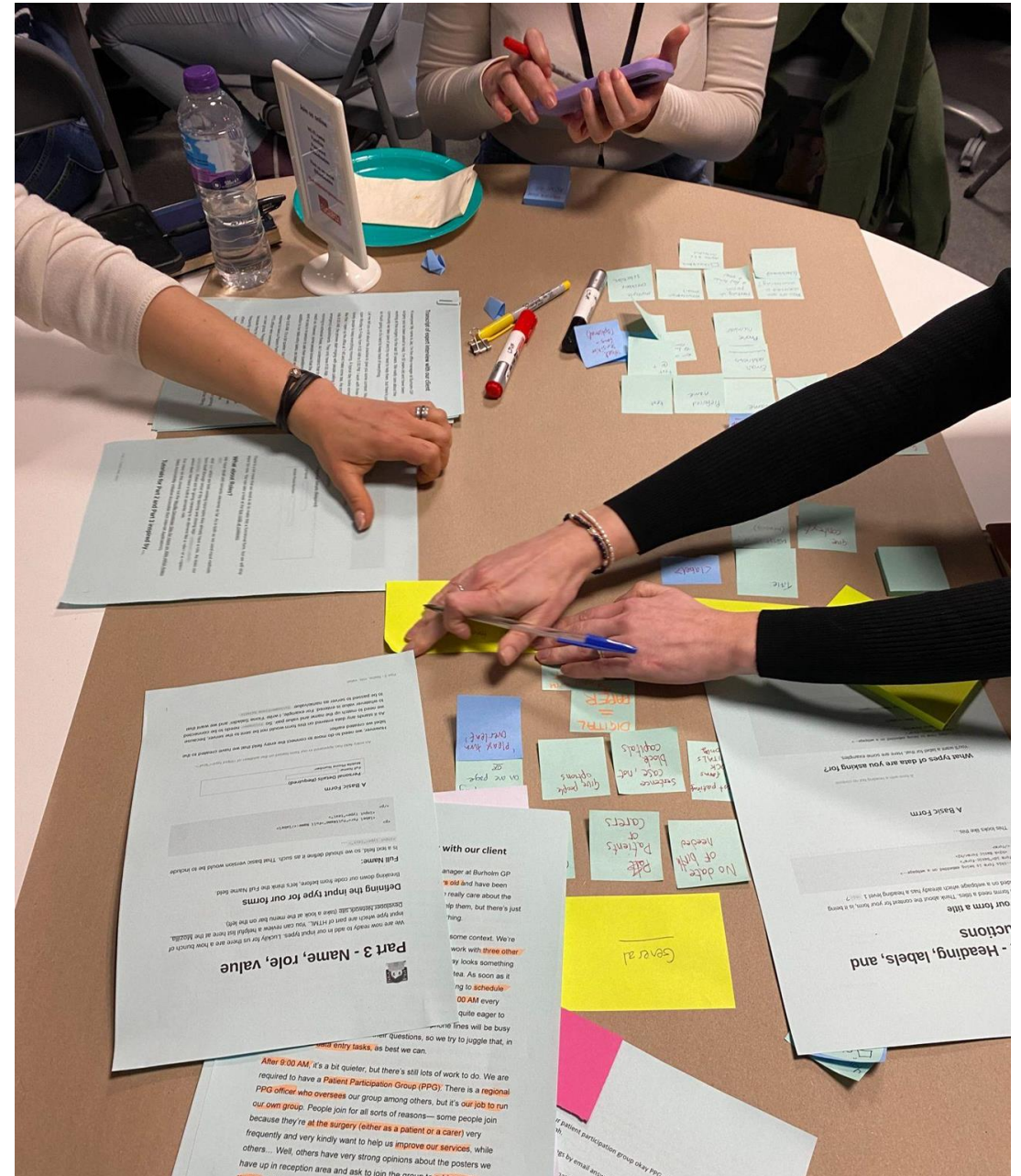Caroline Jarrett
LinkedIn
@cjforms

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
Challenge 4:   Think about why we ask for a phone number
Challenge 5:   Make a question protocol
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Wrap up

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We're going to try a Washington State task

- Think of someone who has a Washington State driver license (this could be you)

- The person realised today that they have lost their license

- We'll follow along as they apply for a new one

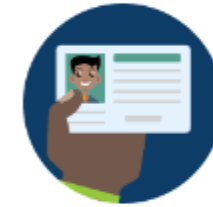- Keep a note of which page on the website is a form

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Is this a form?

[Home | Washington State Department of Licensing](#)

An official website of the Washington state government [Here's how you know ⌄](#)

WASHINGTON STATE DEPARTMENT OF LICENSING

MENU

How can we help you today?

Renew vehicle tabs

Renew or replace driver license

Register a vehicle

Buy or sell a vehicle

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Is page 2 a form?

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Is page 3 a form?

How can we help you today?

Renew driver license

Learn what you need to renew your Washington driver's license.

Renew your license

Replace driver license or instruction permit

Find out what to do if your license or instruction permit is lost or stolen.

How to replace a lost license

Replace your driver license while out of state

If your driver license is lost or stolen while you're out of Washington state, you can replace it via mail.

Out of state license replacement

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Is page 4 a form?

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Is page 5 a form?

WASHINGTON STATE DEPARTMENT OF LICENSING

Return to dol.wa.gov

🏠 DOL Online Services

Replace your driver license/ID card

Introduction

What you'll need

What you'll need

- Visa, MasterCard, American Express (a 3% card payment fee applies).
- Bank account information (no added fees).

Get ready to print your temporary:

- Get connected to a printer.
- Know that your temporary won't include your photo. You can't use it for identification.

Have all your information ready to enter:

- Full name
- Date of birth

[Previous] [Next ›]

Is page 6 a form?

WASHINGTON STATE DEPARTMENT OF LICENSING

Return to dol.wa.gov

🏠 DOL Online Services

Replace your driver license/ID card

Introduction

What you'll need

⚠️ Please complete CAPTCHA to continue

OK

3% card payment fee

es).

porary:

- Get connected to a printer.
- Know that your temporary won't include your photo. You can't use it for identification.

Have all your information ready to enter:

- Full name
- Date of birth

Previous | Next

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Is page 7 a form?

Should I get a replacement or renew?

If your card expires within 90 days, then you should renew it. (Permits can't be renewed.)
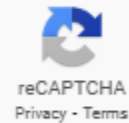
Will my card have a new photo?

We use the last photo we took. If you want a new photo, you'll need to visit a driver licensing office.

When will I get my replacement?

You should receive it in 2-4 weeks. If you don't get it within 30 days, please call us at (360) 902-3900 (TTY: call 711)

[ ] I'm not a robot   reCAPTCHA
Privacy - Terms

< Previous   Next >

Washington State Department of Licensing   Home | Privacy | Contact Us | Survey | Copyright © 2024 DOL

Is page 8 a form?

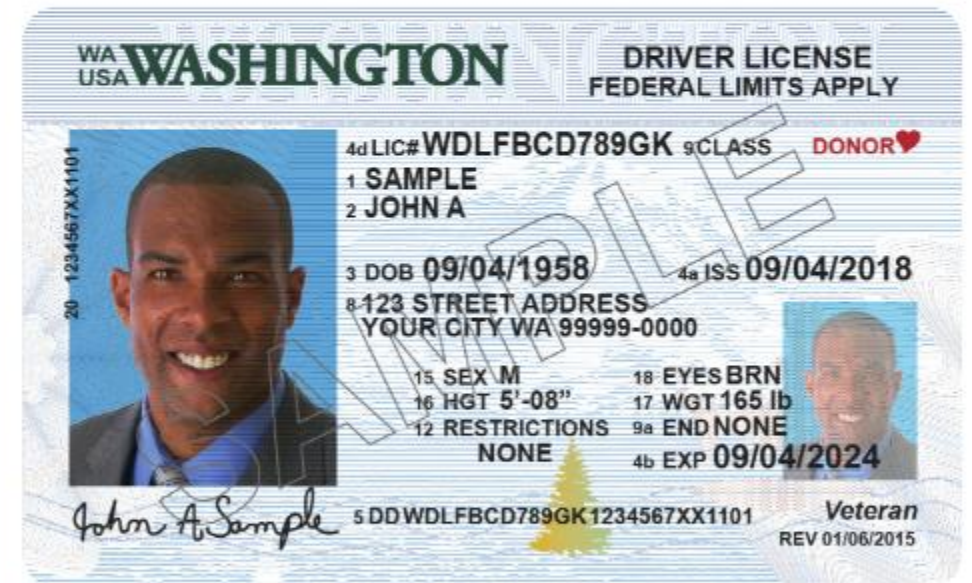## Verify your information

Introduction

What you'll need

License information

Basic information

The information you provide must match what we have on record.

What does this mean?

Refer to your WA License/State ID, Social Security Card, or other legal documents.

First name *

Required

Required

‹ Previous

Next ›

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Is page 9 a form?

REV 01/06/2015

First name *

Required

No first name?

Middle name *

Required

No middle name?

Last name *

Required

Date of birth (DOB) *

Required 📅

WA license number (LIC#)

Social Security Number *

Required

No Social Security Number?

⌄

< **Previous**   **Next** >

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

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?

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Think about phones

- Have a look at your phone
  - Is it a landline or mobile?
  - 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, 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

- Who might have some difficulty using the phone?

- You might think about yourself, someone you know, or a story you've heard about phones

- A "phone" might be a landline or a mobile

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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

Inclusive101Guidebook.pdf (microsoft.design)

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Keep ONE person in mind

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

- I'm choosing Gwen who is bedridden and confused

- As a team, we'll focus on lots of different people so it's OK for you to focus on just one

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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

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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There is a bit of service design there

Forms Tutorial

in Tutorials

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Challenge 3:
Use the US Web Design System

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

Try
[USWDS: The United States Web Design System (digital.gov)](#)

Compare notes

5 minutes

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https://designsystem.digital.gov/

This pattern is specifically about phone numbers

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

The accessibility
guidance is OK,
but doesn't help Gwen

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)

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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

- Why might an organization 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?

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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
- … 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

👤 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.
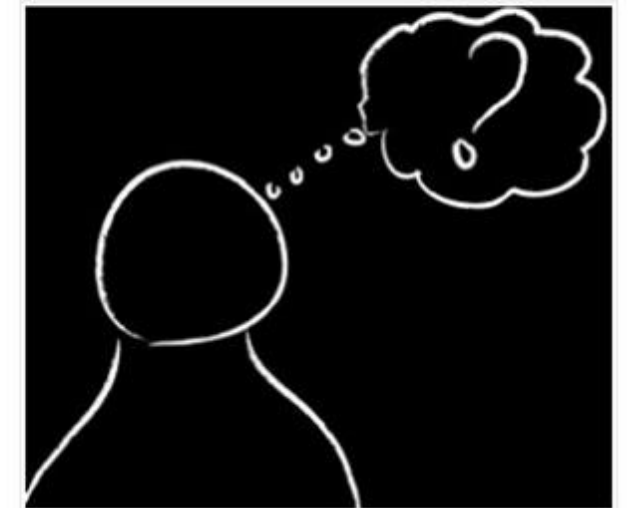
Question, by Noella, creative commons

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)](#)

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

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

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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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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?	

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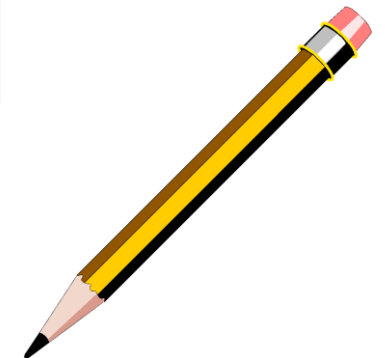
Sometimes questions linger past their usefulness

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

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Challenge 6:
Make a prototype and test it

Design a truly accessible question for getting a phone number for progress on an order

Your question must:

• Obtain a phone number

• Allow for some sort of choice

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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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Consider* a filter question to introduce the topic

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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. Let us copy the phone number into the form
3. Allow for typical characters such as + - ( ) and space
4. Be very specific in the error message
5. Give us extra time

Fill in the information you have (accessiblenumbers.com)

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

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A good form needs a lot of accessibility

Interaction design

Content design

Service design

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