

# Building Apps for Accessibility and Inclusive Design

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What is the goal of this presentation?

# Agenda

- What is Accessibility and Inclusive Design?
- Why do they matter?
- What are compliance regulations?
- How do they apply to what I'm building?
- How can I build apps for Accessibility and Inclusive Design?

# What is accessibility?















# Definition Accessibility

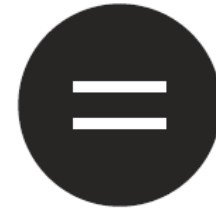
*The practice of making your products and services usable by as many people as possible.*

Disability



Personal  
Health  
Condition

Disability



Mismatched  
Human  
Interactions

# Focusing on

## People with disabilities (age-related as well)

- Visually impaired  
(Color) blindness
- Hearing impairment  
(Partially) deaf
- Mobility impairment  
Paralyzed, RSI, Wheelchair
- Cognitive impairment  
Seizures / Learning

## People facing situational barriers

- Multitasking
- Cultural / social differences
- Language differences

# The Problem with "Good Design"

# What is Inclusive Design?

*Involves designing products and services to be usable by everyone to the greatest extent possible, without the need for adaptation*



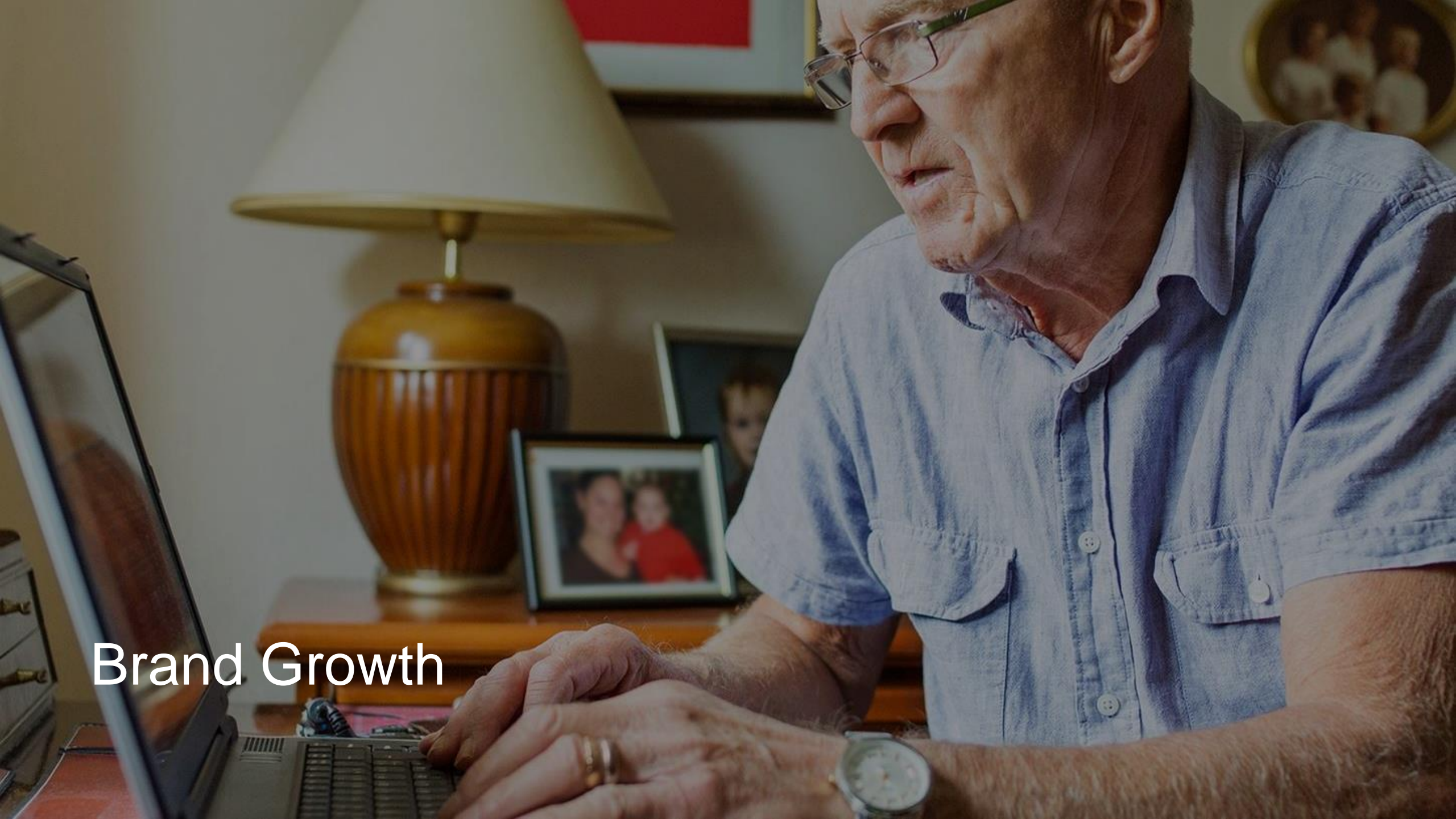
How are they related?



Why does it matter?

Digital Innovation





Brand Growth

A world map composed of glowing blue dots, set against a dark background with colorful bokeh light effects. The map is centered and occupies most of the frame. The bokeh lights are in various colors including yellow, orange, red, and green, creating a vibrant, digital atmosphere.

Increased Market Reach

A photograph of a Target store building at dusk. The building has a dark red upper section with the Target logo and the slogan 'TARJET TROUVEZ MIEUX. PAYEZ MOINS.' in white. Below this is a large glass window reflecting the interior lights. The ground floor has a brick facade with glass entrance doors. The sky is a deep blue.

**TARGET**  
TROUVEZ MIEUX. PAYEZ MOINS.

Minimize Legal Risk

Everyone of us is only temporary fully enabled...



# WCAG, ATAG, 508, ADA, EN 301 549

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What do they all mean?

# What are compliance regulations?

All these standards have the same goal:

*To make your products and services usable by as many people as possible.*



# What is WCAG?

WCAG 2.0 is the technical standard featuring 12 guidelines under four principles:



# What is WCAG?

## Level A

We **must** satisfy these requirements, otherwise it will be impossible for one or more groups to access the web content

## Level AA

We **should** satisfy these requirements, otherwise some groups will find it difficult to access the web content

## Level AAA

We **may** satisfy these requirements, in order to make it easier for some groups to access the web content

# How does it apply to what I'm building?



Image Source: [Mightybytes](#)

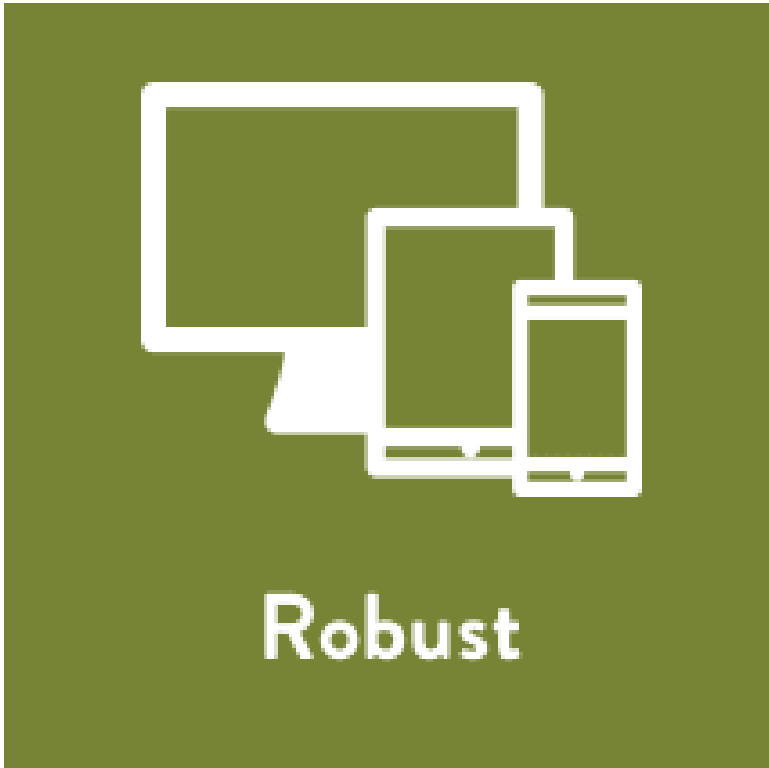
# How does it apply to what I'm building?



# How does it apply to what I'm building?



# How does it apply to what I'm building?



# Applying it in your app

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Examples and Best Practices

# Adhering to color contrast ratios

My text color is #000000 at 18 px and regular weight

My background color is #DFDFDF

My design must be AA compliant

Passes AA

Required contrast ratio: 4.5

Your contrast ratio: 15.76

Lorem ipsum dolor sit  
amet, consectetur  
adipiscing elit, sed do...

My text color is #E1E1E1 at 18 px and regular weight

My background color is #DFDFDF

My design must be AA compliant

Fails AA

Required contrast ratio: 4.5

Your contrast ratio: 1.02

Passes AA

if you change background  
color to #646464

New contrast ratio: 4.53

Lorem ipsum dolor sit  
amet, consectetur  
adipiscing elit, sed do...

or

Passes AA

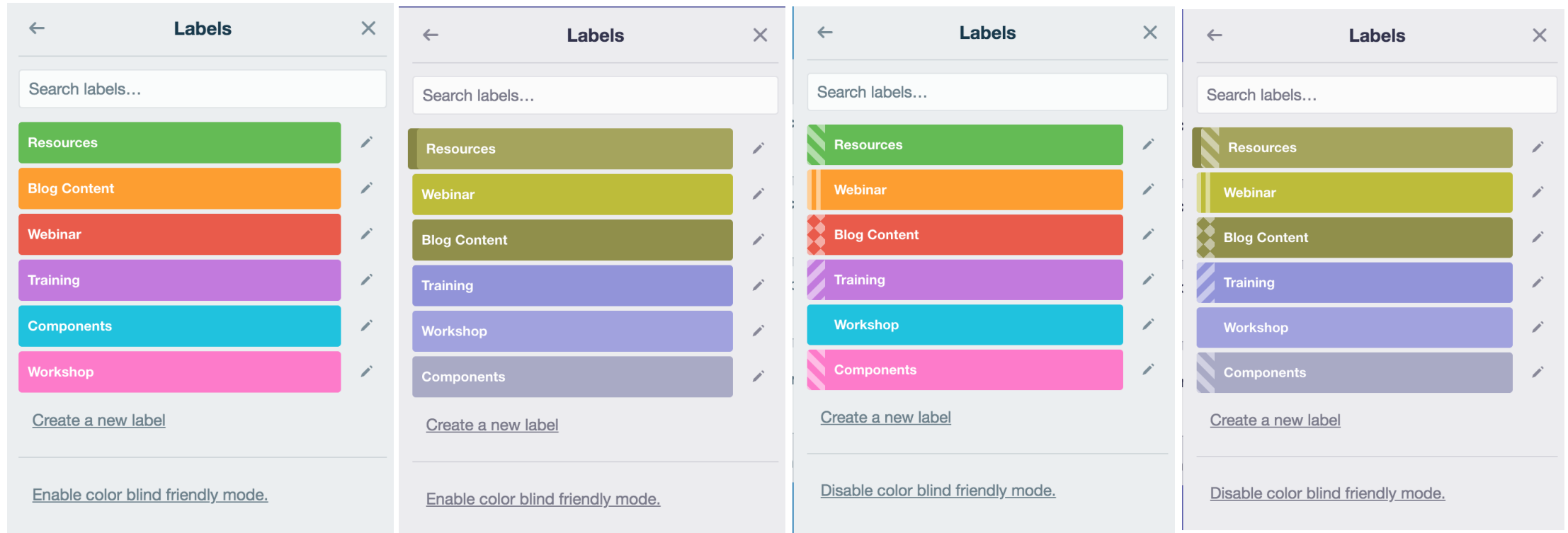
if you change text color to  
#636363

New contrast ratio: 4.51


Lorem ipsum dolor sit  
amet, consectetur  
adipiscing elit, sed do...



# Not relying on color alone for critical information



# Clear & Consistent Layouts

 **GOV.UK** Online Account Registration

**BETA** Online account registration – your feedback will help us to improve it.

[◀ Back](#)

## What is your full name?


Enter all your names in full - don't use initials

**First name**

Middle name

**Last name**

[Continue](#)

 **GOV.UK** Online Account Registration

**BETA** Online account registration – your feedback will help us to improve it.


[◀ Back](#)

## What is your email address?

Email address  
We'll use this for your username

Confirm your email address

[Continue](#)

 **GOV.UK** Online Account Registration

**BETA** Online account registration – your feedback will help us to improve it.

[◀ Back](#)

## Please create a password for your account

Your password has to be at least 8 characters long and must contain at least 1 lower-case letter, 1 capital letter and 1 number. Never share your password with anyone.

Password

Re-enter the password

[Continue](#)

# Consistent Navigation

## Simple services

Use the GOV.UK standard header if your service is just a few pages long:

EXAMPLE

The logo consists of a white crown icon followed by the text "GOV.UK" in a bold, white, sans-serif font, all set against a black background.

## Header with service name

Add the standard header with service title if your service is more than 5 pages long - this can help users understand where they are:

EXAMPLE

The logo consists of a white crown icon followed by the text "GOV.UK" in a bold, white, sans-serif font, all set against a black background.

Service Name

## Header with navigation

Use the standard header with propositional navigation if you need to include basic navigation, contact or account management links:

EXAMPLE

The logo consists of a white crown icon followed by the text "GOV.UK" in a bold, white, sans-serif font, all set against a black background.

Service Name

Elements Patterns

Use the standard header with a propositional link if you only need to add one link:

EXAMPLE

The logo consists of a white crown icon followed by the text "GOV.UK" in a bold, white, sans-serif font, all set against a black background.

Service Name

Navigation item

# Consistent use of icons & imagery

## Start now button

Launch your service with a Start now button.

EXAMPLE

Start now >

## Button alignment

Align the primary action button to the left edge of your form, in the user's line of sight.

EXAMPLE

Email address

Save and continue

# Create a typography hierarchy

## Heading 1

This is an intro paragraph at 24px. Maecenas faucibus mollis interdum. Vivamus sagittis lacus vel augue laoreet rutrum faucibus dolor auctor. Integer posuere erat a ante venenatis dapibus posuere velit aliquet. Curabitur blandit tempus porttitor. Vestibulum id ligula porta felis euismod semper.

## Heading 2

This is a body copy paragraph at 19px. Donec id elit non mi porta gravida at eget metus. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Duis mollis, est non commodo luctus, nisi erat porttitor ligula, eget lacinia odio sem nec elit. Donec sed odio dui. Aenean lacinia bibendum nulla sed consectetur. Aenean lacinia bibendum nulla sed consectetur. Sed posuere consectetur est at lobortis.

## Heading 3

Etiam porta sem malesuada magna mollis euismod. Praesent commodo cursus magna, vel scelerisque nisl consectetur et. Sed posuere consectetur est at lobortis. Maecenas faucibus mollis interdum. Vestibulum id ligula porta felis euismod semper. Donec id elit non mi porta gravida at eget metus.

## Heading 3

Fusce dapibus, tellus ac cursus commodo, tortor mauris condimentum nibh, ut fermentum massa justo sit amet risus. Donec sed odio dui. Donec id elit non mi porta gravida at eget metus. Nullam id dolor id nibh ultricies vehicula ut id elit. Nullam quis risus eget urna mollis ornare vel eu leo.

# Labels, captions, & transcriptions

## What is your full name?

Enter all your names in full - don't use initials

**First name**

Middle name

**Last name**

Continue

# Designing usable focus states

Email address

Password

Sign in

# Helping users recover from errors

There are errors on the page.

Enter your first name

Enter your last name

## What is your full name?

Enter all your names in full - don't use initials

**First name**

**Enter your first name**

Middle name

**Last name**

**Enter your last name**

Continue



# Present content in a meaningful order

EXAMPLE

- ## Register to the Online portal
- Use this service to apply to register or to:

  - update your name, address or other details on the council register
  - sign up to receive bills electronically
  - view account payments

You may need the following, if you have them:

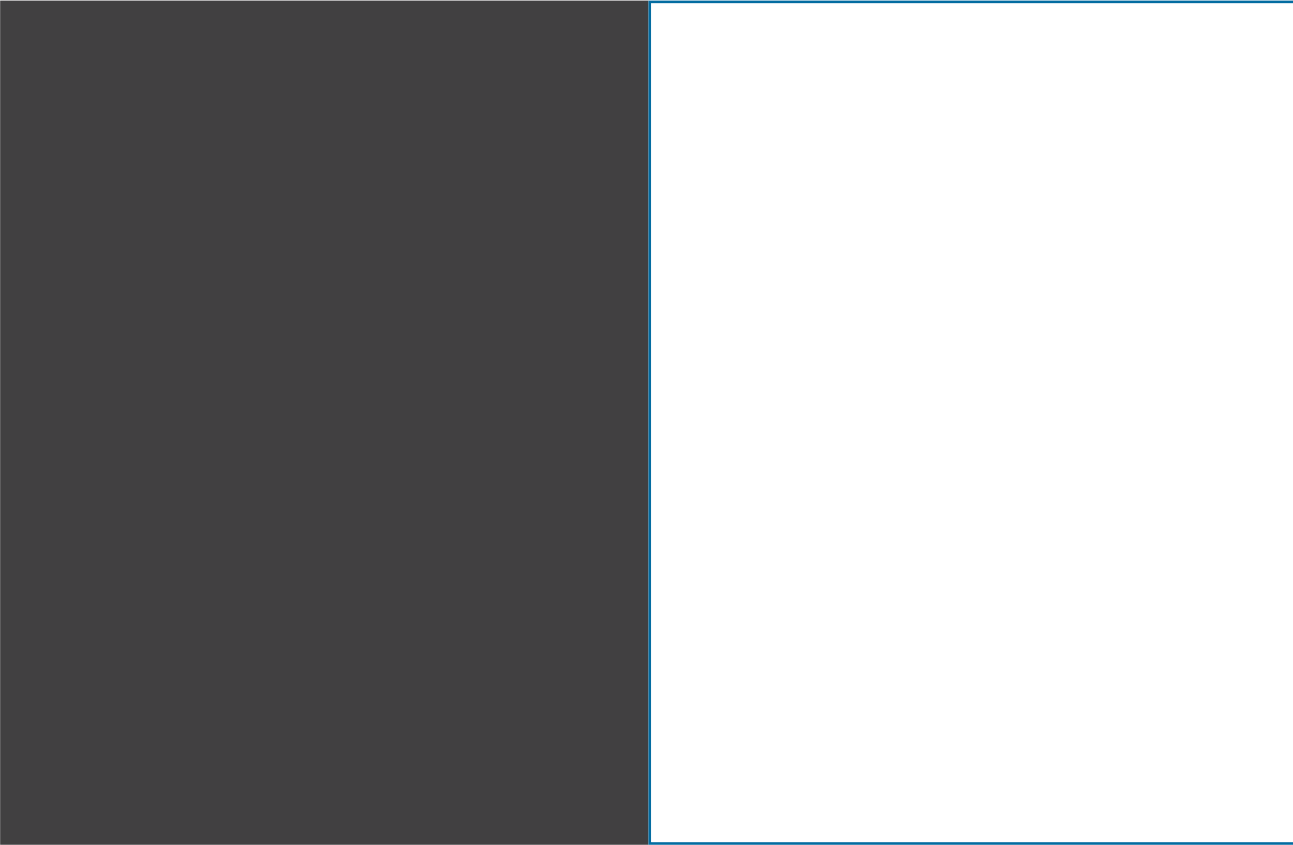
  - your Council Tax Account number
  - your National Insurance number

You need to be registered to pay your bills online.
- [Start now >](#)
- ### Before you start

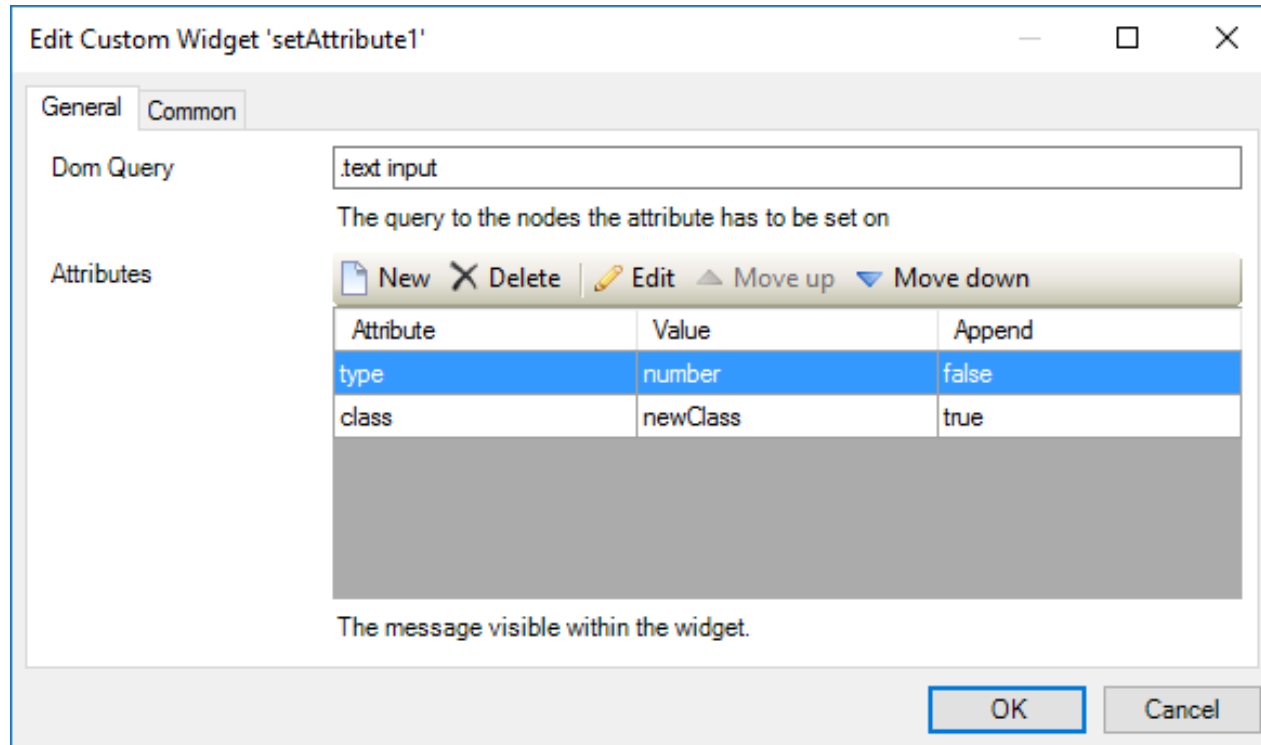
You can also register by post  
You can't register to online payments if you are in rented accommodation

[I already have an account - back to sign in](#)

# Avoid high rates of blinking/flushing



# Set Attribute Widget



The screenshot shows a dialog box titled "Edit Custom Widget 'setAttribute1'". It has two tabs: "General" and "Common". The "Common" tab is active. Under "Dom Query", there is a text input field containing ".text input". Below this is the text "The query to the nodes the attribute has to be set on". Under "Attributes", there is a toolbar with buttons for "New", "Delete", "Edit", "Move up", and "Move down". Below the toolbar is a table with three columns: "Attribute", "Value", and "Append".

Attribute	Value	Append
type	number	false
class	newClass	true

Below the table is a large greyed-out text area with the text "The message visible within the widget." At the bottom right of the dialog are "OK" and "Cancel" buttons.



# Thank you

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Any questions?