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## Accessibility guidelines for HTML and CSS

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January 21, 2019	3.1	Atalan	Minor changes in text of the 6.2 guideline.
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# Table of contents

<b>INTRODUCTION .....</b>	<b>6</b>
Context and objectives.....	6
Who should read this document, and how to use it?.....	6
Contact.....	6
License agreement.....	7
<b>1. GENERAL STRUCTURE.....</b>	<b>8</b>
1.1 Add structure to the header area using <code>&lt;header role="banner"&gt;</code> .....	8
1.2 Mark up the search field with <code>role="search"</code> .....	8
1.3 Structure the main content area with <code>&lt;main role="main"&gt;</code> .....	9
1.4 Structure information about the website with <code>&lt;footer role="contentinfo"&gt;</code> .....	9
1.5 Structure primary and secondary navigation menus with <code>&lt;nav role="navigation"&gt;</code> .....	10
1.6 Structure navigation menus with lists .....	11
1.7 Create a logical and thorough hierarchy for headings, using <code>&lt;h1&gt;</code> to <code>&lt;h6&gt;</code> tags 12	
<b>2. PAGE TITLE .....</b>	<b>16</b>
2.1 Provide a descriptive <code>&lt;title&gt;</code> element on each page .....	16
<b>3. LANGUAGES .....</b>	<b>17</b>
3.1 Provide the primary language of the page with the <code>lang</code> attribute on the <code>&lt;html&gt;</code> tag .....	17
3.2 Use the <code>lang</code> attribute to indicate a change of language .....	17
<b>4. HTML GRAMMAR AND SEMANTICS.....</b>	<b>19</b>
4.1 Write a valid HTML code following the formal grammar rules of the DOCTYPE used 19	
4.2 Use HTML elements for their right semantic purpose .....	20
<b>5. LINKS AND BUTTONS .....</b>	<b>21</b>
5.1 Distinguish buttons from links .....	21

5.2	Complete non-explicit links and buttons using <code>aria-label</code> or <code>title</code> .....	21
5.3	Don't use the <code>aria-label</code> or <code>title</code> attributes on links and buttons that are already explicit .....	23
<b>6.</b>	<b>IMAGES AND ICONS .....</b>	<b>25</b>
6.1	Managing the <code>alt</code> attribute of the <code>&lt;img /&gt;</code> and <code>&lt;input type="image" /&gt;</code> tags .....	25
6.2	Managing alternative text on SVG (Scalable Vector Graphics) .....	29
6.3	Managing alternative text on icon inserted via CSS.....	33
6.4	Tag images that have captions with <code>&lt;figure role="figure"&gt;</code> and <code>&lt;figcaption&gt;</code> .....	35
<b>7.</b>	<b>FORMS .....</b>	<b>37</b>
7.1	Use the <code>&lt;label&gt;</code> tag with the <code>for</code> and <code>id</code> attributes to label form fields with a visible name .....	37
7.2	Use the <code>title</code> attribute to label form fields that don't have a visible label.....	37
7.3	Use the <code>autocomplete</code> attribute to facilitate auto-fill.....	38
7.4	Add help text directly to the <code>&lt;label&gt;</code> tags.....	39
7.5	Add <code>required</code> or <code>aria-required="true"</code> to mandatory fields .....	40
7.6	Add error messages and correction suggestions directly into the <code>&lt;label&gt;</code> tag .....	41
7.7	Group and label related fields with <code>&lt;fieldset&gt;</code> and <code>&lt;legend&gt;</code> .....	42
<b>8.</b>	<b>LISTS.....</b>	<b>44</b>
8.1	Tag unordered lists with <code>&lt;ul&gt;</code> and <code>&lt;li&gt;</code> .....	44
8.2	Tag ordered lists with <code>&lt;ol&gt;</code> and <code>&lt;li&gt;</code> .....	44
8.3	Mark up description lists with <code>&lt;dl&gt;</code> , <code>&lt;dt&gt;</code> and <code>&lt;dd&gt;</code> .....	45
<b>9.</b>	<b>TABLES.....</b>	<b>47</b>
9.1	Use <code>&lt;caption&gt;</code> to tag data table captions .....	47
9.2	Mark up the row and column header cells with <code>&lt;th&gt;</code> .....	47
9.3	In simple tables use the <code>scope</code> attribute to associate data cells with their corresponding headers.....	48

9.4	Add <code>role="presentation"</code> to each layout <code>&lt;table&gt;</code> .....	49
<b>10.</b>	<b>USING CSS</b> .....	<b>50</b>
10.1	Use CSS to lay out text.....	50
10.2	Ensure that content can be read when images are turned off.....	50
10.3	Ensure that the content is understandable with CSS turned off .....	51
<b>11.</b>	<b>ZOOM AND FONT SIZES</b> .....	<b>54</b>
11.1	Use only relative font sizes ( <code>rem</code> , <code>em</code> , <code>%</code> , etc.).....	54
11.2	Ensure content readability even when font size is doubled.....	54
<b>12.</b>	<b>KEYBOARD NAVIGATION</b> .....	<b>55</b>
12.1	Ensure that keyboard focus is visible.....	55
12.2	Ensure the proper functioning of the interface using either the mouse or keyboard.....	55
12.3	Ensure that the tab order follows the logical reading order.....	56
12.4	Provide "skip links" .....	57
<b>13.</b>	<b>IFRAMES</b> .....	<b>59</b>
13.1	Populate the <code>title</code> attribute on each <code>&lt;iframe&gt;</code> .....	59
<b>14.</b>	<b>ADDITIONAL RULES FOR COMPLIANCE</b> .....	<b>60</b>
	Do not use tags or attributes specific to data tables in layout tables .....	61
	Ensure that the HTML flow is consistent from one page to the next .....	61
	Indicate in the alternative text for visual CAPTCHA where to find the non-visual version.....	61
	In complex tables, use the <code>headers</code> and <code>id</code> attributes to associate header cells with their corresponding data cells.....	62
	Make sure layout tables follow the right reading order .....	63
	Plan alternative text for each type of multimedia content ( <code>&lt;video&gt;</code> , <code>&lt;audio&gt;</code> , <code>&lt;object&gt;</code> , <code>&lt;embed&gt;</code> , etc.).....	65
	Populate the <code>alt</code> attribute of each mapped image and its <code>&lt;area /&gt;</code> tags.....	66
	Tag block quotations using <code>&lt;blockquote&gt;</code> .....	66

Tag inline quotations using <code>&lt;q&gt;</code> .....	66
Write the HTML code in a logical reading order .....	66
<b>COMPLEMENTARY GUIDELINES</b> .....	<b>68</b>
Tag abbreviations with <code>&lt;abbr&gt;</code> .....	68
Add file format and size to all download links and buttons .....	68
Combine adjacent links pointing to the same page .....	69
Do not disable the zoom with the <code>user-scalable</code> property .....	71
Do not use CSS to display images that carry information .....	71
Identify the current position in navigation systems with <code>aria-current</code> .....	72
In forms with multiple steps, identify the current step using <code>aria-current="step"</code> .....	74
Logically organize the items of dropdown lists .....	74
Make sure that hidden content is translated .....	75
Send a notification when a new window is opened .....	75
Update the page <code>&lt;title&gt;</code> when an error or confirmation message is displayed .....	76
Use only relative sizes ( <code>rem</code> , <code>em</code> , <code>%</code> , etc.) for media query breakpoints .....	77

## Context and objectives

**This document provides guidelines for making HTML and CSS integration more accessible and ensuring WCAG 2.1 compliance.**

This manual is part of a set of four complementary manuals that can be downloaded from [www.accede-web.com](http://www.accede-web.com):

- Graphic and functional accessibility guidelines.
- **HTML and CSS accessibility guidelines (this manual).**
- Main rich interface components accessibility guidelines.
- Accessibility guidelines for editors (template).

## Who should read this document, and how to use it?

This document should be provided to stakeholders and/or contractors implementing the technical specifications, and HTML/CSS integration. It complements project specifications. The recommendations may be supplemented or removed depending on the context of use, such work can be carried out by the project owner.

These recommendations must be used when creating HTML/CSS. Some of them are used for dynamic content, for example, when templates are created for a content management system (CMS).

### Note

The online version of these guidelines comes with many examples, links to complementary resources, etc. This one is available at: <https://www.accede-web.com/en/guidelines/html-css/>.

## Contact

Please send any comments about this document to Atalan, the coordinator of the AcceDe Web project, at the following email address: [accede@atalan.ca](mailto:accede@atalan.ca).

You can also find more information on the methodological guidelines of the AcceDe Web project at [www.accede-web.com](http://www.accede-web.com).



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# 1. General structure

## 1.1 Add structure to the header area using `<header role="banner">`

Mark up the main header section (i.e. logo, search field, etc.) with `<header role="banner">`.

### Warning

While the `<header>` tag may be used several times in a web page, `role="banner"` must only be used once per web page.

### Note

It is perfectly acceptable to nest several ARIA roles:

`<div role="search">` into `<header role="banner">`, for example.

```
<header role="banner">  
    
  <div role="search" ...>[...]</div>  
  [...]  
</header>
```

## 1.2 Mark up the search field with `role="search"`

The website search field must be identified with `role="search"`.

```
<form role="search" ... >  
  <input type="search" title="Keyword Search" />  
  <input type="submit" value="Search" />  
</form>
```



### 1.3 Structure the main content area with `<main role="main">`

The main content area of the page must be marked up with `<main role="main">`.

#### Warning

A page must contain only one visible `<main role="main">` tag.

```
<header role="banner">[...]</header>
<nav role="navigation">[...]</nav>
<main role="main">[...]</main>
<footer role="contentinfo">[...]</footer>
```

### 1.4 Structure information about the website with `<footer role="contentinfo">`

Information about the website such as the copyright and the “Legal terms and conditions” and “Credits” links must be structured with `<footer role="contentinfo">`.

#### Warning

A page can contain only one `role="contentinfo"`.

```
<header role="banner">[...]</header>
<nav role="navigation">[...]</nav>
<main role="main">[...]</main>
<footer role="contentinfo">
  <ul>
    <li><a href="#">Sitemap</a></li>
    <li><a href="#">Credits</a></li>
    <li><a href="#">Terms and Conditions</a></li>
  </ul>
  <p>© Company name</p>
</footer>
```

## 1.5 Structure primary and secondary navigation menus with `<nav role="navigation">`

Primary and secondary navigation menus must be marked up with `<nav role="navigation">`.

### Note

The `<nav role="navigation">` element is reserved for website's internal links.

For example:

- The main menu.
- The sub-menu.
- The breadcrumb.
- The search results page number.

In other words, it must not be used to mark up a list of external links, such as a list of social media links.

### Tip

Good practice is to add an `aria-label` attribute to the `<nav role="navigation">` tag to specify the type of navigation system.

```
<header role="banner">[...]</header>
<nav role="navigation" aria-label="Primary menu">[...]</nav>
<nav role="navigation" aria-label="Secondary menu">[...]</nav>
<main role="main">
  <nav role="navigation" aria-label="You are here">[...]</nav>
  [...]
</main>
<footer role="contentinfo">[...]</footer>
```

## 1.6 Structure navigation menus with lists

Use unordered list elements `<ul>` and `<li>` to mark up navigation menus.

For primary menus with several levels, be sure to nest the links appropriately:

```
<nav role="navigation" aria-label="Main menu">
  <ul>
    <li><a href="#">First menu item</a></li>
    <li>
      <a href="#">Second menu item</a>
      <ul>
        <li><a href="#">First sub-menu item</a></li>
        <li><a href="#">Second sub-menu item</a></li>
      </ul>
    </li>
    <li><a href="#">Third menu item</a></li>
  </ul>
</nav>
```

### Why should I structure lists?

Structuring lists is important for **people who use screen readers (blind and visually-impaired people)**. When readers come across a list, structuring enables them to:

- Navigate from list to list on a page.
- Know, from the start, the number of items on the page.
- Navigate more easily through the list:
  - Go directly to the end of the list if the content does not interest them.
  - Easily go back to the beginning of the list.

## 1.7 Create a logical and thorough hierarchy for headings, using `<h1>` to `<h6>` tags

On each page, headings must be tagged from `<h1>` to `<h6>`. The structure of the headings must be both logical and thorough.

In other words:

- All elements that function as headings must be marked up using heading tags.
- There must not be any inconsistencies in the heading structure.
- Ideally, there should not be any "jumps" in the heading structure (i.e. from `<h1>` to `<h3>` without `<h2>` in between).

### Notes

- Several `<h1>` elements can be used on a page if there are primary headings.
- Good accessibility practice is to avoid using hidden headings.

### Tip

To create a logical and understandable heading hierarchy, imagine the headings of the page as a "Table of Contents". Is it logical? thorough?

### Note

The ARIA heading role with the `aria-level` attribute (with a value of 1 to 6) allows to assign a heading value to any HTML tag.

For example:

- `<p role="heading" aria-level="1">Heading Level 1</p>` is semantically equivalent to `<h1>Heading Level 1</h1>`.
- `<div role="heading" aria-level="3">Heading Level 3</div>` is semantically equivalent to `<h3>Heading Level 3</h3>`.

However, this technique is not optimal for accessibility, it should only be used as a last resort.

# Examples

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## In The Spotlight

### The Canadian government should not be writing blank cheques for a Texas oil-giant

Right now, Prime Minister Justin Trudeau is thinking about using our tax dollars to bail out a Texas oil company's failing pipeline and tanker project. But, on-the-ground opposition is growing from Land and Water Protectors who are willing to face arrest to stop this project.

[Read more >](#)

---

## The latest updates

### Plastic pollution reaches the Antarctic

Blog entry by Sarah King, Head of Oceans & Plastics Campaign | June 7, 2018

The Greenpeace ship Arctic Sunrise was in the Antarctic at the beginning of 2018. It's not what we wanted to find. When Greenpeace set sail to the Antarctic earlier this year, we were going to look for the incredible wildlife -...

### Captain Crudeau's Colossal Mistake

Blog entry by Mike Hudema | May 30, 2018

It's unbelievable and it's reckless. Yesterday the federal government poured \$4.5 billion dollars of public money to buy Kinder Morgan's failing pipeline and tanker project. \$4.5 billion dollars for a project that violates the...

### The Canadian government should not be writing blank cheques for a Texas oil-giant


Blog entry by Mike Hudema, Climate & Energy Campaigner | May 16, 2018

Right now, Prime Minister Justin Trudeau is thinking about using our tax dollars to bail out a Texas oil company's failing pipeline and tanker project. The federal government announced today that it's prepared to "indemnify" ...


[more](#)

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## Multimedia



**Great Bear Rainforest Celebration**  
Video



**Audrey Siegl on board Inflatable Launched towards Shell - Pacific...**  
Image



**Ep. 30: Medecins Sans Frontieres, Greenpeace & Refugee Rescue...**  
Podcast

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## BECOME A VOLUNTEER

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August 20, 2024

Accessibility guidelines for HTML and CSS

Page 13/77

Three examples of heading structures for this page are provided below. The first two are correct, but the last one is not.

### Example 1 (correct)

```
<h1><a href="/"></a></h1>
[...]
<h2>In the spotlight</h2>
[...]
<h3>The Canadian government should not be writing blank cheques
for Texas oil-giant</h3>
[...]
<h2>The latest updates</h2>
[...]
<h3>Plastic pollution reaches the Antarctic</h3>
[...]
<h3>Captain Crudeau's Colossal Mistake</h3>
[...]
<h3>The Canadian government should not be writing blank cheques
for Texas oil-giant</h3>
[...]
<h2>Multimedia</h2>
[...]
<h2>Join the movement</h2>
[...]
<h2>Become volunteer</h2>
[...]
```

In this example of HTML code, the heading structure is logical and thorough.

### Example 2 (correct)

```
<a href="/"></a>
[...]
<h1>In the spotlight</h1>
[...]
<h2>The Canadian government should not be writing blank cheques
for Texas oil-giant</h2>
[...]
<h1>The latest updates</h1>
[...]
<h2>Plastic pollution reaches the Antarctic</h2>
[...]
<h2>Captain Crudeau's Colossal Mistake</h2>
[...]
```

```
<h2>The Canadian government should not be writing blank cheques
for Texas oil-giant</h2>
[...]
<h1>Multimedia</h1>
[...]
<h1>Join the movement</h1>
[...]
<h1>Become volunteer</h1>
[...]
```

In this example of HTML code, the heading structure is also logical and thorough.

Note that other heading structures are possible.

### Example 3 (incorrect)

```
<a href="/"></a>
[...]
<h1>In the spotlight</h1>
[...]
<h2>The Canadian government should not be writing blank cheques
for Texas oil-giant</h2>
[...]
<h1>The latest updates</h1>
[...]
<h1>Plastic pollution reaches the Antarctic</h1>
[...]
<h1>Captain Crudeau's Colossal Mistake</h1>
[...]
<h1>The Canadian government should not be writing blank cheques
for Texas oil-giant</h1>
[...]
<h1>Multimedia</h1>
[...]
<p>Join the movement</p>
[...]
<p>Become volunteer</p>
[...]
```

In this example of HTML code, the heading structure is incorrect because it includes inconsistencies (The latest updates titles are at the same level as the "The latest updates" section title).

Also, "Join the movement" and "Become a volunteer" are not tagged as a heading.

## 2. Page title

### 2.1 Provide a descriptive `<title>` element on each page

On each page, the `<title>` element must include a descriptive title.

It must, at least, provide both the name of the page and the name of the website.

#### Tip

- The name of the current page should come first in the `<title>` element before other information. For example, `<title>[Current page name] | [Website name]</title>`.
- Good practice is to ensure that the content in the `<title>` element is consistent throughout the entire website.

#### Note

In certain circumstances, the title content is modified when the page is reloaded. This may be the case, for example:

- When pagination is used.
- When a search term is entered into a search field.

The title of the affected page must be modified. For example:

```
<title>Search results for [Search term] (page 3/7) | [Site name]</title>
```



## 3. Languages

### 3.1 Provide the primary language of the page with the lang attribute on the <html> tag

In order to ensure good rendering of text content, the primary language must be declared on each page.

Use the `lang` attribute on the `<html>` tag.

For example, for an English page use:

```
<html lang="en">
```

#### Tip

To populate the `lang` attribute, a two-letter language code (or, if it is not available, three-letter code) must be used.

Some common codes are:

- `en` for English.
- `fr` for French.
- `es` for Spanish.
- `de` for German.
- `it` for Italian.

The others are available here: [exhaustive list of authorized language codes](#).

### 3.2 Use the lang attribute to indicate a change of language

If some of the content is in a language other than the primary language of the page, it must be identified using the `lang` attribute.

For example, on an English page:

```
<a href="..." lang="fr" hreflang="fr">Version française</a>
```



### Tip

If the foreign language content is not tagged directly, use a `<span>` or `<div>` tag and populate the `lang` attribute.

### Note

It is not necessary to announce a change of language for:

- Proper names.
- Foreign words that have been incorporated into the dictionary of the primary language.
- Foreign words that are pronounced and understood with the accent of the main language (i.e. "RSVP", if the primary language is English).

## 4. HTML Grammar and Semantics

### 4.1 Write a valid HTML code following the formal grammar rules of the DOCTYPE used

Use a valid DOCTYPE for each page and make sure the **generated** HTML code complies with the formal grammar rules of that DOCTYPE (the choice of DOCTYPE is open).

#### Note

This DOCTYPE must be placed before the `<html>` tag.

The following aspects of formal grammar are particularly important:

- Elements are nested according to their specifications.
- Elements have complete start and end tags.
- There are no duplicate attributes on an element.
- Each id attribute has a unique value on the page.

#### Warning

- Obsolete HTML elements and attributes and/or those intended for formatting purposes only must not be used.
- In order to validate grammar rules, it is necessary to check the **generated** HTML code, by copying it for example into the code inspector (using the F12 shortcut for example) and by pasting it onto the site <https://validator.w3.org/nu/#textarea>. Retrieving the source code of the page (by using the CTRL + U shortcut for example) or copying and pasting the page URL into the validator **does not allow** to thoroughly test this point.

## 4.2 Use HTML elements for their right semantic purpose

HTML elements must be used for their semantic purpose and not solely for the visual aspect of content.

Tags	Use it to	Don't use it to
<code>&lt;a&gt;</code>	Mark up a hypertext link	Create an action button with no background or border
<code>&lt;hr /&gt;</code>	Create a semantic division between distinct groups of content in a text box	Create a visual separator line
<code>&lt;fieldset&gt;</code>	Group form elements which are related to one another	Create a visual border
<code>&lt;q&gt;</code>	Mark up a short quote	Place quotation marks around non-quoted text



## 5. Links and Buttons

### 5.1 Distinguish buttons from links

Limit the use of buttons for actions and links for navigation.

#### Buttons

Button elements `<button>` / `<input />` are for triggering an action.

They are to be used in cases such as submitting information, displaying the next or previous image in a carousel, closing a modal dialogue box, etc.

#### Links

Links `<a>` are for navigation.

They are used to move to another page or to a specific area of the current page, by means of an anchor system.

### 5.2 Complete non-explicit links and buttons using `aria-label` or `title`

A link or button is non-explicit when the label alone does not suffice to describe its destination or function.

- Link labels such as "Read More", "Learn More", "More Information", "Click Here" are considered as non-explicit by nature.
- So is the "OK" button.

In these cases, the `aria-label` attribute or the `title` attribute can be used to specify the destination of the link or the function of the button.

As an introduction to these two techniques, let us consider the example below of a "Read more" link pointing to a page of the AcceDe Web project.



## The `aria-label` attribute

A link or button can be made more explicit using the `aria-label`:

1. Add the `aria-label` attribute to the `<a>`, `<button>` or `<input />` tag.
2. Populate this attribute by entering the exact label of the link or button followed by the information to make the link or button explicit.

```
<a href="#" aria-label="Read more: the AcceDe Web project">  
  Read more  
</a>
```

## The `title` attribute

### Note

The `title` attribute is only partly supported by browsers and assistive technologies.

Although it is an accepted technique, it is preferable to use the `aria-label` attribute. By the way, it is possible to use these two attributes together for better support.

A link or button can be made more explicit using the `title` attribute:

1. Add the `title` attribute to the `<a>`, `<button>` or `<input />` tag.
2. Populate this attribute by entering the exact label of the link or button followed by the information to make the link or button explicit.

```
<a href="#" title="Read more: the AcceDe Web project">  
  Read more  
</a>
```

### Tip

Good practice is to populate these attributes by first entering the label then providing the necessary information to make the link or button more explicit.

### Note



One of these two techniques must also be used to distinguish links or buttons whose labels might be considered as explicit but which lead to different pages or trigger different actions.

If there are two "Search" buttons on the same page, for example, they need to be distinguished:

```
<input type="submit" value="Search" aria-label="Search a news" />
[...]  
<input type="submit" value="Search" aria-label="Search a person  
in the directory" />
```

### Note

Note that [a link can be considered as explicit though its context](#) when the surrounding elements can help understand its meaning.

## 5.3 Don't use the `aria-label` or `title` attributes on links and buttons that are already explicit


A link or button is explicit when the label alone and/or the context suffice to describe its destination or function.


For example:

- The link "AcceDe Web Project" is explicit by nature.
- So is a button labelled "Confirm Order".


The `aria-label` and `title` attributes (which can be used to [make non-explicit links accessible](#)) must not be used for this type of link.

Here are some examples of **incorrect** use of the `aria-label` attribute on an `<input />` tag:

 `<input type="submit" value="Confirm Order" aria-label="" />`

 `<input type="submit" value="Validate Order" aria-label="Confirm Order" />`

And here are some examples of **incorrect** use of the `title` attribute on an `<a>` tag:

 `<a href="..." title="">AcceDe Web project</a>`





```
<a href="..." title="AcceDe Web">AcceDe Web project</a>
```





## 6. Images and Icons

### 6.1 Managing the alt attribute of the <img /> and <input type="image" /> tags

5 different cases:

- [Decorative/ambient <img />](#).
- ["Simple" informative <img />](#).
- ["Complex" informative <img />](#).
- [<img /> links or buttons](#).
- [<input type="image" />](#).

#### 6.1.1 Decorative/ambient <img />

When a decorative or ambient <img /> tag is included in the HTML code, the alt attribute must remain empty (without any space between the quotation marks of alt="").



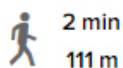
In the HTML example below, the <img /> element simply enhances "Error messages" (which is explicit by nature):

```
<h2>  
    
  Error messages  
</h2>
```

#### 6.1.2 "Simple" informative <img />

A "simple" informative image is one that can be described by **concise** alternative text.

When a "simple" informative <img /> tag is used in the HTML code, populate its alt attribute with the information conveyed by the image.



In the example of HTML code below, the `<img />` tag refers to a walking time and distance:

```
<p>
  
  <span>2 min</span>
  <span>111 m</span>
</p>
```

### Warning

Do not start alternative text with `alt="Image of [...]"`.

This information is already provided by the assistive technology when it reads the `<img />` tag.

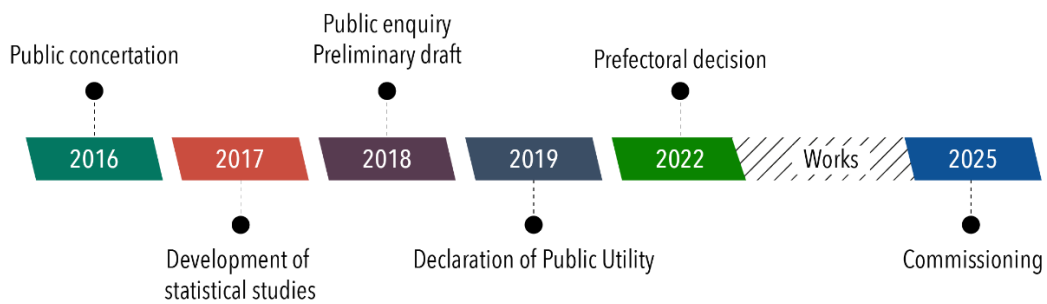
### 6.1.3 “Complex” informative `<img />`

A “complex” informative image is one that requires a **detailed** description.

When a complex informative `<img />` tag is included in the HTML code:

1. Populate its `alt` attribute with information to make the image explicit.
2. Propose a detailed description of the image directly below it.
3. Lastly, indicate in the `alt` attribute where the detailed description can be found.

## Project manager calendar



### Calendar text transcript ▲

- **2016:** Public concertation
- **2017:** Development of statistical studies
- **2018:** Public enquiry, Preliminary draft
- **2019:** Declaration of Public Utility
- **2022:** Prefectoral decision
- **2022-2025:** Works
- **2025:** Commissioning

In this example, a [show/hide button](#) displays a detailed description of the complex image.

In the following example of HTML code, the `<img />` tag indicates both the function of the image and where to find its detailed description:

```
<h2>Project Manager calendar</h2>

<button aria-expanded="true">Calendar text transcript</button>
<div>
  <ol>
    <li><strong>2016:</strong> Public concertation.</li>
    [...]
  </ol>
</div>
```

### Warning

Do not start alternative text with `alt="Image of [...]"`.

This information is already provided by the assistive technology when it reads the `<img />` tag.

## 6.1.4 <img /> links or buttons

When an `<img />` tag acting as link or button is included alone (without a label) in the HTML code, add the information needed to make it explicit into the `alt` attribute.



In the HTML code example below, the `<img />` element points to the home page:

```
<a href="/">
  
</a>
```

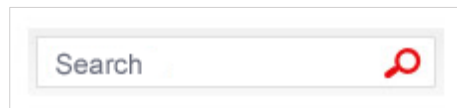
### Warning

Do not start the `alt` text with `alt="Link to [...]"` or `alt="Button [...]"` when the `<img />` tag acts like a link or button.

This information is already provided to assistive technology by the `<a>` or `<button>` tag.

## 6.1.5 <input type="image" />

When `<input type="image" />` is included in the HTML code, add the information needed to make the button explicit into its `alt` attribute.



In the HTML code example below, the `<input type="image" ... />` launches a search within the website:

```
<input type="image" src="magnifier.png" alt="Search site" />
```

### Warning

Do not start the `alt` attribute with `alt="Button [...]"` when the `<input type="image" />` element is acting as a link or button.

This information is already provided to the assistive technology by the `<input type="image" />` tag.

## 6.2 Managing alternative text on SVG (Scalable Vector Graphics)

4 different cases:

- [Decorative/ambient <svg>](#).
- ["Simple" informative <svg>](#).
- ["Complex" informative <svg>](#).
- [<svg> links or buttons](#).

### Warning

In Internet Explorer, `<svg>` tags receive keyboard focus by default.

To optimize keyboard navigation in that browser, the `focusable="false"` attribute must be added to each `<svg>` tag used to display an image.

### 6.2.1 Decorative/ambient <svg>

When an `<svg>` is simply decorative or ambient, add `aria-hidden="true"`.

A rectangular box with a thin border containing a red warning triangle icon followed by the text "Error messages".

In the following HTML code, the `<svg>` simply enhances the label "Error Messages" (explicit by nature):

```
<h2>  
  <svg aria-hidden="true" focusable="false">[...]</svg>  
  Error Messages  
</h2>
```

### Warning

A purely decorative or ambient `<svg>` tag must not have any `title`, `aria-label`, `aria-labelledby` and/or `aria-describedby` attributes.

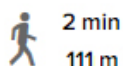
Likewise, it must not have a `<title>` and/or `<desc>` elements.

### 6.2.2 "Simple" informative <svg>

A "simple" informative `<svg>` is an informative image that can be described by **concise** alternative text.

When an informative `<svg>` image is included in the HTML code:

1. Add a `role="img"` attribute to the `<svg>` tag.
2. Add an `aria-label` attribute to the `<svg>` tag and populate the attribute with information to make the image explicit.



In the example of HTML code below, the `<svg>` indicates that the text applies to a walking time and distance:

```
<p>
  <svg role="img" aria-label="By walking: " focusable="false">
    [...]
  </svg>
  <span>2 min</span>
  <span>111 m</span>
</p>
```

### Warning

Do not start the `<svg>` alternative text with "Image of [...]".

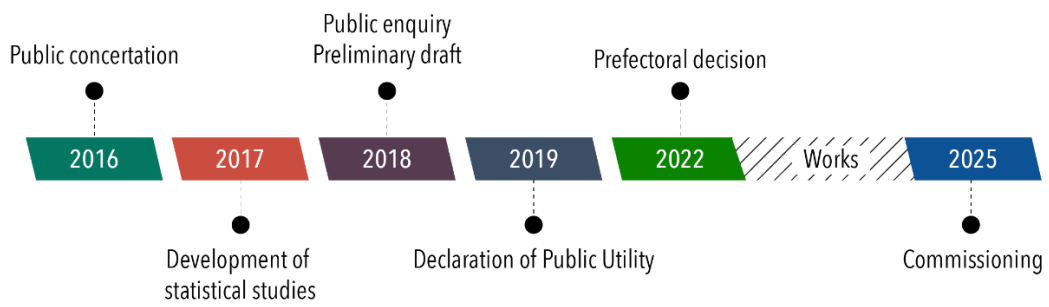
## 6.2.3 "Complex" informative `<svg>`

A "complex" informative `<svg>` is an informative image that requires a detailed description.

When a "complex" informative `<svg>` is added to the HTML code:

1. Add a `role="img"` attribute to the `<svg>` tag.
2. Add an `aria-label` attribute to the `<svg>` tag and populate this attribute with information to make the image explicit.
3. Propose a detailed description for the image directly below it.
4. Finally, indicate in the `aria-label` attribute where this detailed description can be found.

## Project manager calendar



### Calendar text transcript ▲

- **2016:** Public concertation
- **2017:** Development of statistical studies
- **2018:** Public enquiry, Preliminary draft
- **2019:** Declaration of Public Utility
- **2022:** Prefectoral decision
- **2022-2025:** Works
- **2025:** Commissioning

*In this example, a [show/hide button](#) displays a detailed description of the complex image.*

In the example of HTML code below, `<svg>` indicates the function of the image and where to find its detailed description:

```
<h2>Project Manager calendar</h2>
<svg role="img" aria-label="Projet Manager calendar (detailed
description below)" focusable="false">
  [...]
</svg>
<button aria-expanded="true">Calendar text transcript</button>
<div>
  <ol>
    <li><strong>2016:</strong> Public concertation.</li>
    [...]
  </ol>
</div>
```

### Warning

Do not start the `<svg>` alternative text with "Image of [...]".

## 6.2.4 `<svg>` links and buttons

When a `<svg>` image alone (without a label), acting as a link or a button, is included in the HTML code:

1. Add a `role="img"` attribute to the `<svg>` tag.
2. Add an `aria-label` attribute to the `<svg>` tag and populate this attribute with information to make the link or button explicit.



In the following example of HTML code, the `<svg>` points to the homepage of a site:

```
<a href="/">
  <svg role="img" aria-label="Homepage" focusable="false">
    [...]
  </svg>
</a>
```



## Warning

Do not start the `<svg>` alternative text of a link or a button with "Link to [...]" or "Button to [...]".

## 6.3 Managing alternative text on icon inserted via CSS

### Note

Whether the icon is decorative, informative, or acts as a link/button, the container tag should be given `aria-hidden="true"` to ensure that screen readers do not present this information to the user as they encounter it.

If possible, the tag serving the icon should be a `<span>` because it has no semantic value.

3 different cases:

- [Decorative/ambient icons.](#)
- [Informative icons.](#)
- [Link or button icons.](#)

### 6.3.1 Decorative/ambient icons

When a decorative or ambient icon is included in the HTML code there is no need for an alternative.



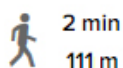
In the following HTML code, the icon is simply a visual embellishment of the text "Error messages" (which is explicit by nature):

```
<h2>
  <span class="icon error" aria-hidden="true"></span>
  Error messages
</h2>
```

### 6.3.2 Informative icons

When an informative icon is included in the HTML code:

1. Add a tag (i.e. `<span>`) immediately after the tag which contains the icon.
2. Add information to this tag to make the icon explicit.
3. Hide the content of the tag with CSS by placing it off-screen (outside the viewport) using the CSS `"position: absolute;"` property.



In the example of HTML code below, the icon refers to the time and distance to reach a destination by walking:

```
<p>
  <span class="icon walking" aria-hidden="true"></span>
  <span class="off-screen">By walking: </span>
  <span>2 min</span>
  <span>111 m</span>
</p>
```

```
.off-screen {
  position: absolute;
  left: -99999rem;
}
```

### 6.3.3 Link or button icons

When an unlabelled icon acting as a link or button is added to the HTML code:

1. Add a `<span>` tag inside the `<a>` or `<button>` tag.
2. Add text to the `<span>` tag to make the link or button explicit.
3. Hide the content of the tag with CSS by placing it off-screen using the CSS `"position: absolute;"` property.



In the example of HTML code below, the icon is a link that points to the homepage:

```
<a href="/">
  <span class="icon home" aria-hidden="true"></span>
  <span class="off-screen">Home</span>
</a>
```

```
.off-screen {
  position: absolute;
  left: -99999rem;
}
```

## 6.4 Tag images that have captions with `<figure role="figure">` and `<figcaption>`

Images that have captions must be tagged with `<figure role="figure">` and `<figcaption>`.

The `<figure role="figure">` tag must:

- Include the image and the legend, and the legend must be tagged with `<figcaption>`.
- Have an `aria-label` attribute that must have the same content as the `<figcaption>` tag.

### **i** Note

Ideally, the alternative text for the image (i.e. `alt` attribute for the `<img />` tag) must contain a reference to the adjacent caption.

### 6.4.1 Example 1



*Desert in Bolivia, photo by Audesou.*

```
<figure role="figure" aria-label="Desert in Bolivia, photo by Audesou.">  
    
  <figcaption>  
    Desert in Bolivia, photo by Audesou.  
  </figcaption>  
</figure>
```

## 6.4.2 Example 2



*Photo 1: shot by Audesou in Bolivia.*

```
<figure role="figure" aria-label="Photo 1 : shot by Audesou in Bolivia.">  
    
  <figcaption>  
    Photo 1: shot by Audesou in Bolivia.  
  </figcaption>  
</figure>
```

## 7. Forms

### 7.1 Use the `<label>` tag with the `for` and `id` attributes to label form fields with a visible name

To label fields with a visible name:

1. Use the `<label>` tag for each form name.
2. Add the `for` attribute to each `<label>` tag and an `id` attribute on each form field.
3. Populate the `for` and `id` attributes of each name/field pair with the same, unique value.

```
<label for="name">Your last name</label>  
<input type="text" id="name" name="name" autocomplete="family-name" />
```

```
<label for="country">Your country</label>  
<select id="country" name="country" autocomplete="country-name">  
  <option value="belgium">Belgium</option>  
  <option value="france">France</option>  
  [...]  
</select>
```

#### Note

It is important to [provide identical names for fields that have the same function](#).

For example, if there are several identification forms on the website, do not use "ID" on one, and "Login" on the other.

### 7.2 Use the `title` attribute to label form fields that don't have a visible label

To label form fields that don't have a visible label:

1. Add `title` to the field.
2. Populate the attribute by specifying the field's function.



```
<input type="search" title="Your search" name="search" />
<input type="submit" value="Search" />
```

```
<select title="Filter news" name="filter">
  <option>By Date</option>
  <option>By Topic</option>
  [...]
</select>
```

### Warning

The `placeholder` attribute cannot be used as a label because it disappears during text entry.

It can be used for secondary text entry aids that are not essential for understanding the field. If the `title` attribute is present, the `placeholder` attribute must have the same value.

## 7.3 Use the `autocomplete` attribute to facilitate auto-fill

To facilitate auto-fill on fields referring to personal information:

1. Add an `autocomplete` attribute to the field.
2. Populate the `autocomplete` attribute according to the type of information expected.

```
<label for="first-name">Your firstname</label>
<input type="text" id="first-name" name="first-name"
  autocomplete="given-name" />
```

### Note

The [possible values for the `autocomplete` attribute](#) are standardized.

## 7.4 Add help text directly to the <label> tags

Help text must be included in the <label> tags.

This particularly applies to:

- [Indications such as "Required field"](#).
- Instructions on how to format the input such as MM/DD/YYYY.
- Information about the type and maximum size of files that can be sent.
- Etc.

```
<label for="date">
  Date of Birth
  <span>(MM/DD/YYYY)</span>
</label>
<input type="date" id="date" name="date" autocomplete="bday" />
```

```
<label for="number">
  Your client number
  <input type="text" id="number" name="number" aria-
required="true" />
  <span>i.e., BT-VZ</span>
</label>
```

### Note

In some cases, because of a specific design layout for example, the help text cannot be included in the <label>.

In these cases:

1. Add the `id` attribute to the tag containing the help text.
2. Populate the `id` with a unique value.
3. Add the `aria-describedby` attribute to the corresponding field.
4. Populate `aria-describedby` with the `id` value included in the help text.

```
<label for="document">
  Add a document to your case
</label>
<input type="file" id="document" name="document" aria-
describedby="formats" />
<h2> Documents currently in your case</h2>
<ul>
  <li>CV</li>
  <li>Cover Letter</li>
</ul>
<p id="formats">Accepted formats: pdf or doc.</p>
```

Note that the `aria-describedby` attribute can reference several `id` values.

### Warning

The `placeholder` attribute must not be used for entry aids that are essential for understanding the type of data to be entered.

It must be used only for secondary entry aids, that are not essential for understanding the field.

## 7.5 Add `required` or `aria-required="true"` to mandatory fields

Required fields must have a `required` or `aria-required="true"` attribute.

### Note

In addition to this attribute, [a distinctive sign must be included in the `<label>` tag.](#)

```
<label for="email">Your email *</label>
<input type="email" id="email" name="email" autocomplete="email"
required />
```

```
<input type="checkbox" id="conditions" aria-required="true" />
<label for="conditions">I accept the conditions of sale
(required)</label>
```



## 7.6 Add error messages and correction suggestions directly into the `<label>` tag

When [error messages and suggested corrections](#) are placed next to the relevant form fields, they need to be added directly into the `<label>` tags.

### Tip

In addition to the error message, good practice is to add `aria-invalid="true"` to the field.

```
<label for="name">
  Your name *
  <span>Please fill in your name</span>
</label>
<input type="text" id="name" name="name" autocomplete="family-
name" aria-required="true" aria-invalid="true" />
```

```
<label for="email">
  Your email *
  <input type="email" id="email" name="email"
autocomplete="email" aria-required="true" aria-invalid="true" />
  <span>Please provide a valid email format
(example@domain.com)</span>
</label>
```

In some cases, because of a specific design layout for example, the error message cannot be directly included in the `<label>` tag.

In that case:

1. Add an `id` attribute to the element that contains the error message.
2. Give this `id` a unique value.
3. Add `aria-describedby` to the corresponding input field.
4. Add the `id` value of the error message to this `aria-describedby` attribute.

```
<label for="document">
  Add a document to your file
</label>
<input type="file" id="document" name="document" aria-
invalid="true" aria-describedby="formats error" />
<h2>Documents currently in your file</h2>
```

```
<ul>
  <li>CV</li>
  <li>Cover letter</li>
</ul>
<p id="error">File format incorrect.</p>
<p id="formats">Valid formats: pdf or doc.</p>
```

Note that `aria-describedby` can reference several `id` values.

### Note

If error detection is dynamic (i.e. the page is not reloaded when the form is submitted), the following recommendations should be added:

- When submitting the form, move the focus to the first field in error on the page.
- Error messages should be considered during development as [alert messages](#).

## 7.7 Group and label related fields with `<fieldset>` and `<legend>`

When a form has multiple fields and some of them have the same label, use `<fieldset>` and `<legend>` to group them.

```
<fieldset>
  <legend>Participant 1</legend>
  <label for="firstName-1">First Name</label>
  <input type="text" id="firstName-1" name="firstName-1" />
  <label for="name-1">Last Name</label>
  <input type="text" id="name-1" name="name-1" />
  [...]
</fieldset>
<fieldset>
  <legend>Participant 2</legend>
  <label for="firstName-2">First Name</label>
  <input type="text" id="firstName-2" name="firstName-2" />
  <label for="name-2">Last Name</label>
  <input type="text" id="name-2" name="name-2" />
  [...]
</fieldset>
```

### Warning

The `<fieldset>` and `<legend>` tags must systematically be used when several groups of fields have identical labels.

For example:

- A series of different questions on the same page which can all be answered “yes” or “no”.
- A list of participants at an event, featuring the First Names and Last Names of each participant.

If the form is too long, but none of the field groups have the same label, [use the tags <h1> to <h6>](#) to sort the fields groups.

### Note

The use of `<fieldset>` and `<legend>` tags is particularly necessary when integrating radio button or checkbox lists.

For example:

```
<fieldset>  
  <legend>Sports played</legend>  
  <ul>  
    <li>  
      <input type="checkbox" id="basketball" />  
      <label for="basketball">Basketball</label>  
    </li>  
    <li>  
      <input type="checkbox" id="tennis" />  
      <label for="tennis">Tennis</label>  
    </li>  
    [...]  
  </ul>  
</fieldset>
```

## 8. Lists

### 8.1 Tag unordered lists with `<ul>` and `<li>`

Use the `<ul>` and `<li>` tags to mark up lists of items which can appear in any order (menus, tabs, sharing buttons, site map, etc.).

If required, make sure that lists are properly nested:

```
<ul>
  <li>Health</li>
  <li>
    Rights and procedures
    <ul>
      <li>Disability</li>
      <li>Family</li>
    </ul>
  </li>
  <li>News</li>
</ul>
```

#### 8.1.1 What are the advantages?

Structuring lists is essential for **people using a screen reader (blind or visually impaired)**. When they come across a structured list, they are able to:

- Navigate from list to list within a page.
- Know from the start the number of elements in the list.
- Navigate more easily through the list:
  - Go directly to the end of the list if they are not interested in the content.
  - Easily return to the top of the list.

### 8.2 Tag ordered lists with `<ol>` and `<li>`

Use the `<ol>` and `<li>` tags to mark up lists of items that must appear in a specific order (list of steps in a procedure, ranking, etc.). In other words, when the information would not be understood if the items were presented in a different order.

If required, make sure that lists are properly nested:



```
<ol>
  <li>Step 1: Connection</li>
  <li>
    Step 2: Fill in the application form
    <ul>
      <li>Personal information</li>
      <li>Professional information</li>
    </ul>
  </li>
  <li>Step 3: Application summary</li>
</ol>
```

### 8.2.1 What are the advantages?

Structuring lists is essential for **people using a screen reader (blind or visually impaired)**. When they come across a structured list, they are able to:

- Navigate from list to list within a page.
- Know from the start the number of elements in the list.
- Navigate more easily through the list:
  - Go directly to the end of the list if they are not interested in the content.
  - Easily return to the top of the list.

### 8.3 Mark up description lists with <dl>, <dt> and <dd>

Use <dl>, <dt> and <dd> tags to mark up description lists.

A description list is a series of key/value pairs that might be found, for example, in a product description, or in a glossary of terms.

#### Note

One keyword (<dt> tag) might have several values (<dd> tags).

Example with the description of an event:

```
<h2>Web Accessibility Conference</h2>
<dl>
  <dt>Location</dt>
  <dd>Paris</dd>
  <dt>Dates</dt>
  <dd>Saturday, September 7</dd>
  <dd>Wednesday, October 14</dd>
  <dt>Time</dt>
  <dd>Starts at 10 a.m.</dd>
</dl>
```

Example with a glossary:

```
<dl>
  <dt><dfn>ARIA</dfn></dt>
  <dd>Accessible Rich Internet Application</dd>
  [...]
  <dt><dfn>WCAG</dfn></dt>
  <dd>Web Content Accessibility Guidelines</dd>
  [...]
</dl>
```

### 8.3.1 What are the advantages?

Structuring lists is essential for **people using a screen reader (blind or visually impaired)**. When they come across a structured list, they are able to:

- Navigate from list to list within a page.
- Know from the start the number of elements in the list.
- Navigate more easily through the list:
  - Go directly to the end of the list if they are not interested in the content.
  - Easily return to the top of the list.

## 9. Tables

### 9.1 Use `<caption>` to tag data table captions

When a data table is introduced by a caption, it must be tagged using the `<caption>` tag.

#### Note

The caption must be precise and concise.

```
<table>
  <caption>Average monthly temperatures of the 3 largest cities
  in Canada.</caption>
  [...]
</table>
```

### 9.2 Mark up the row and column header cells with `<th>`

In all data tables, mark up each column and row header cell with the `<th>` tag.

When a cell is essential to understand the data provided in the table, it must be marked up with `<th>`.

```
<table>
  <caption>Average monthly temperatures of the 3 largest cities
  in Canada.</caption>
  <tr>
    <td>&nbsp;</td>
    <th>Toronto</th>
    <th>Montreal</th>
    <th>Vancouver</th>
  </tr>
  <tr>
    <th>June</th>
    <td>22°C</td>
    <td>28°C</td>
    <td>26°C</td>
  </tr>
  <tr>
    <th>July</th>
    <td>24°C</td>
    <td>30°C</td>
    <td>28°C</td>
  </tr>
</table>
```

*Average monthly temperatures of the 3 largest cities in Canada.*

	Toronto	Montreal	Vancouver
June	22°C	28°C	26°C
July	24°C	30°C	28°C

### 9.3 In simple tables use the `scope` attribute to associate data cells with their corresponding headers

A data table is simple when each header cell applies to all the cells in the row or column.

To associate headers with their corresponding data in this type of table, add the `scope` attribute to the `<th>` tags. The value of the attribute depends on whether the header cell concerns:

- An entire column: `scope="col"`.
- An entire row: `scope="row"`.

```
<table>
  <caption>Average monthly temperatures of the 3 largest cities
in Canada.</caption>
  <tr>
    <td>&nbsp;</td>
    <th scope="col">Toronto</th>
    <th scope="col">Montreal</th>
    <th scope="col">Vancouver</th>
  </tr>
  <tr>
    <th scope="row">June</th>
    <td>22°C</td>
    <td>28°C</td>
    <td>26°C</td>
  </tr>
  <tr>
    <th scope="row">July</th>
    <td>24°C</td>
    <td>30°C</td>
    <td>28°C</td>
  </tr>
</table>
```



*Average monthly temperatures of the 3 largest cities in Canada.*

	Toronto	Montreal	Vancouver
June	22°C	28°C	26°C
July	24°C	30°C	28°C

## 9.4 Add `role="presentation"` to each layout `<table>`

Mark up layout tables by including `role="presentation"` in the `<table>` tag.

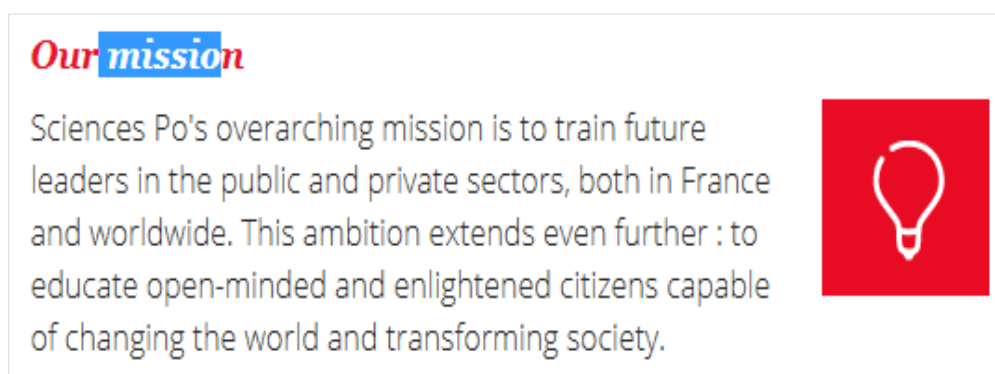
```
<table role="presentation">[...]</table>
```

## 10. Using CSS

### 10.1 Use CSS to lay out text

Texts must not be integrated as images but as texts in HTML format stylized with CSS.

The aim is to enable visually impaired users to customize all text for reading, by modifying font, size, or color, for example.



*Example of a specific font added in text format rather than as an image.*

### 10.2 Ensure that content can be read when images are turned off

When images are turned off, the page content should remain visible and readable. No information must be lost and there must be [sufficient contrast between the foreground and background](#).

In other words, all the content must be visible and readable:

- Even when CSS images are turned off for the page.
- Even when HTML images are replaced with their `alt` attributes.

#### Note

Whenever text is placed over a background image, make sure to provide an alternative background color that will ensure text readability in the absence of the background image.

```
background: black url(../images/dark-background.png) repeat-x;
```

This replacement color can be inherited from a parent.

#### Warning

Special attention must be paid to the readability of text alternatives for images embedded in the HTML when images are turned off.

## 10.3 Ensure that the content is understandable with CSS turned off

Ensure that the information remains available and understandable even when CSS is disabled, especially when colors, sizes, shapes or positions are information carriers.

Also, make sure not to generate informative content using only CSS.

### 10.3.1 Examples

#### 10.3.1.1 Link or button icons (example 1)



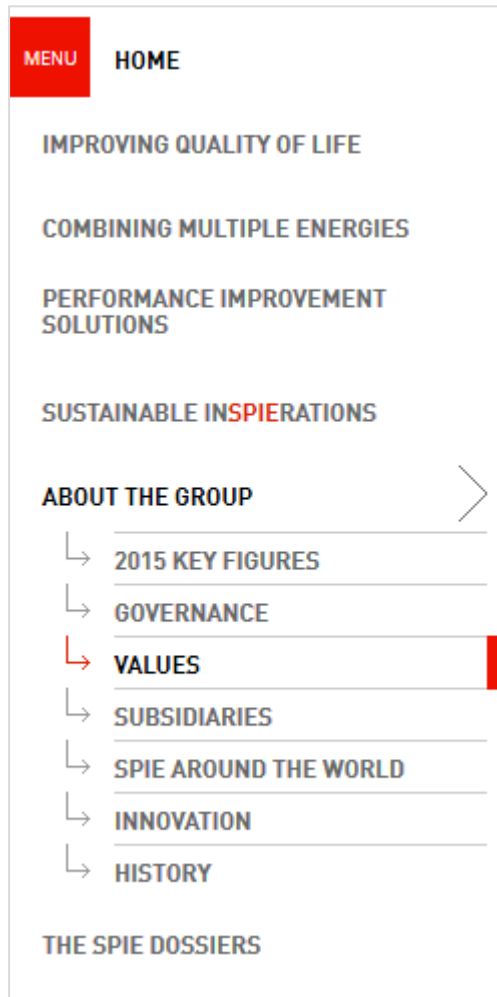
When an icon used as a link or button (without a title) is integrated via CSS, a substitution text must be integrated into the HTML content of the link or button tag.

An example of implementation is available in the chapter on [managing the alternative text of icons inserted via CSS](#).

#### Warning

Adding an `aria-label` or `title` attribute as a text alternative will not be valid here, as the link or button will have no HTML content and will therefore no longer be available when CSS is deactivated.

#### 10.3.1.2 Position of the current selection in the menu (Example 2)



In this example, a different colored arrow and an additional border indicate that the link "Values" is the current page.

In this case, an efficient way of conveying that it is the current page without CSS is to remove the surrounding `<a>` tag.

```
<ul>
  <li><a href="#">2015 key figures</a></li>
  <li><a href="#">Governance</a></li>
  <li aria-current="page">Values</li>
  <li><a href="#">Subsidiaries</a></li>
  <li><a href="#">SPIE around the world</a></li>
  <li><a href="#">Innovation</a></li>
  <li><a href="#">History</a></li>
</ul>
```

### 10.3.1.3 CSS Generated Content (example 3)

When informative content is necessary to understand the content, it must not be generated by CSS.



```
a[href*=".pdf"]::after {  
  content: ' (PDF)';  
}
```

In this example, information about the PDF format of the downloadable files is added with CSS. This is incorrect.



```
label.required::after {  
  content: ' *';  
}
```



```
input[aria-required=true]::before {  
  content: '* ';
```

In these examples, the asterisk flagging up the mandatory fields of a form is added using CSS, which is also incorrect.

## 11. Zoom and font sizes

### 11.1 Use only relative font sizes (`rem`, `em`, `%`, etc.)

To set the font size, use only relative units in CSS `font-size` such as `rem`, `em`, `%` or keywords (`x-small`, `small`, etc.).

Do not use absolute units such as `pt`, `cm`, etc.

#### Warning

Although the pixel (`px`) can be used to define font size, it can prevent font size increase in some cases.

We strongly advise against using it.

#### Note

This recommendation does not apply to CSS print (media type `print`).

### 11.2 Ensure content readability even when font size is doubled

Guarantee content readability even when font is twice the default size.

Across the entire font size increase range, content and functionalities must not overlap or disappear.

To ensure this rule is respected:

- Use only relative units (`rem`, `em`, `%`, etc.) to manage spaces (CSS properties `margin` and `padding`).
- It is not recommended to use units (`px`, `pt`, `em`, `%`, etc.) with the `line-height` CSS property.
- It is not recommended to define a fixed height (CSS `height` property) on elements likely to contain text, particularly form fields.
- Be careful when using absolute positioning (CSS declaration: `position: absolute;`). Although this type of positioning is compatible with accessibility, it can cause content overlap in some cases.



## 12. Keyboard Navigation

### 12.1 Ensure that keyboard focus is visible

Keyboard focus visibility is defined by the CSS `outline` property. It must not be degraded in relation to the browser's native focus style.

In particular, all properties that suppress or reduce focus visibility (e.g. `outline: none;` and `outline: 0;` applied in CSS to all interactive elements) should be removed.

Each interactive element (links, buttons, form fields, etc.) must stand out visually when it receives focus, in order to ensure that users navigating using the keyboard know where they are on the page.

#### Note

Ensure that this focus indicator has [sufficient contrast](#).

We strongly recommend that you don't customize the keyboard focus visibility, in order to keep the default browser style, which is sufficiently contrasted and visible except in special cases. Moreover, this style is implemented with the `:focus-visible` CSS class, limiting focus display to keyboard users only.

The use of the `box-shadow` CSS property to customize keyboard focus visibility is strongly discouraged, as it is not visible in high-contrast mode, unlike the `outline` property.

#### Tip

Good accessibility practice is to systematically back up each `:hover` rule with a `:focus` rule in CSS.

For example:

```
main a:hover,  
main a:focus {  
  text-decoration: none;  
}
```

### 12.2 Ensure the proper functioning of the interface using either the mouse or keyboard

All interactions must be possible using either the mouse or the keyboard.



In other words, whenever the mouse can be used to interact with a component, the same must also be true for the keyboard.

This is the case for example when displaying/hiding:

- A sub-menu.
- A modal window.
- A customized tooltip.

### **Warning**

Whether keyboard navigation is forwards or backwards, the page must not contain any keyboard traps.

I.e. the keyboard focus must never:

- Remain blocked on an element without any way out.
- Loop in zone on the page without any way out.

### **Note**

Make sure that mouse and keyboard interactions also work on touch screens (and vice versa).

## 12.3 Ensure that the tab order follows the logical reading order

The tab order must logically follow the visual order of the page.

In other words, if an interactive element follows another interactive element in the visual presentation of the page, the focus should also move from the first to the second element in the same order.


### **Warning**

Do not use positive values (value above 0) on the `tabindex` attribute because it can disrupt the natural tab order of the page.

### **Note**





In some rich interface components such as [tab panels](#), the arrow keys rather than the  key are used to navigate from one interactive element to another.

## 12.4 Provide "skip links"

A "Skip to content" link must be placed on each page to help keyboard users navigate the page.

This should be the first interactive element in the HTML code.

This internal link will take the user directly to the main content.

```
<body>
  <a class="skiplink" href="#content">Skip to content</a>
  [...]
  <main role="main" id="content">
    [...]
  </main>
  [...]
</body>
```

### Note

The skip link may be hidden by default. However, it must become visible when it receives keyboard focus.

Therefore, the "skip to content" link should never be hidden using CSS properties `display: none;` and/or `visibility: hidden;` which would make it completely unusable with keyboard navigation.

A better approach would be to use the code below:

```
a.skiplink {
  display: inline-block;
  color: #555;
  background: #fff;
  padding: .5em;
  position: absolute;
  left: -99999rem;
  z-index: 100;
}

a.skiplink:focus {
  left: 0;
}
```

 **Tip**

In some situations, it takes a lot of tabbing to reach the main and secondary menus and/or search engine from the top of the page.

In these cases, add skip links, as in the following example:

```
<ul id="skiplink">
  <li>
    <a href="#content">Skip to content</a>
  </li>
  <li>
    <a href="#nav">Skip to navigation</a>
  </li>
  <li>
    <a href="#search">Skip to search</a>
  </li>
</ul>
```

## 13. Iframes

### 13.1 Populate the `title` attribute on each `<iframe>`

Whenever an `<iframe>` tag is included in the page, it is also necessary to add a `title` attribute.

The attribute value must introduce the content of the `<iframe>` tag clearly and concisely.

For example, in the case of an `<iframe>` loading a video player on the page:

```
<iframe src="https://www.youtube.com/embed/y525BrxyvhA"
title="Youtube video: Introducing digital accessibility">
  [...]
</iframe>
```

## 14. Additional rules for compliance

Some guidelines found in accessibility reference documents were not included in this manual as they are considered as rarely applicable.

It is however necessary to respect these additional rules to ensure compliance with RGAA 4.1.2 and WCAG 2.1.

They are listed below:

- Make sure the information is understandable, even without color
- Ensure content readability even when text spacing properties are customized
- Incorporate the summary of each complex data table in the `<caption>` tag
- Provide alternative text for each informative `<canvas>`, `<embed>` and `<object>` tag
- Provide alternative text for each `<canvas>`, `<embed>` and `<object>` tag used as a link or button
- Hide each decorative or ambient `<canvas>`, `<embed>` and `<object>` tag from assistive technologies
- Do not initiate an action while the trigger is in the "pressed" state
- Anticipate the interface behavior
- Group related options in `<select>` boxes with `<optgroup>`
- Add the `title` attribute to describe each `<frame>`
- Use the `dir` attribute to indicate a change in reading direction
- Ensure proper use of content masking techniques



## Do not use tags or attributes specific to data tables in layout tables

A layout table must not have any tags or attributes specific to data tables.

This means that:

- The tags `<caption>`, `<colgroup>`, `<tfoot>`, `<th>` and `<thead>` must not be used in layout tables.
- The attributes `axis`, `headers` and `scope` must not be used in layout tables.

## Ensure that the HTML flow is consistent from one page to the next

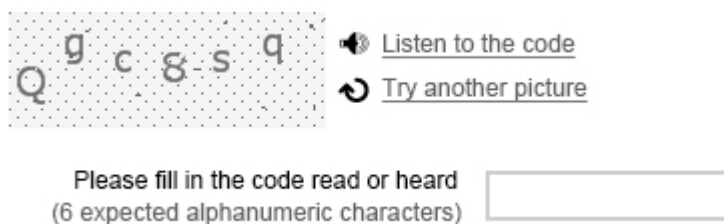
The order of the main content blocks in the HTML flow must remain consistent from one page to the next.

For example, if the secondary menu is placed after the main content, it is important to keep this order on all pages of the website.

## Indicate in the alternative text for visual CAPTCHA where to find the non-visual version

Whenever a visual CAPTCHA is used, indicate in the alternative text the information needed to:

- Identify it as a security system.
- Find the non-visual version of the CAPTCHA.



It is often an audio version, so in this case opt for:

```

```

## Note

To correctly enter the alternative text in compliance with the CAPTCHA integration technique, refer to sheets on the topic [Images and icons](#).

## In complex tables, use the `headers` and `id` attributes to associate header cells with their corresponding data cells

A data table is complex when the header cells do not apply to all the cells in the row or column.

To associate headers with their corresponding data cells in this type of table, add the `id` attribute to all `<th>` cells and the `headers` attribute to all the `<td>` cells.

The next step is to populate the `headers` attributes with the values found in the corresponding header cells. If several headers are associated with a data cell, they are separated by a space (space delimited) in the corresponding `headers` attribute.

```
<table>
  <caption>Comparison of sales revenue between the Davis and
  Davison companies in the UK and the rest of the world.</caption>
  <tr>
    <th id="head-1">In millions of pounds sterling</th>
    <th id="head-2">In the UK</th>
    <th id="head-3">Rest of the World</th>
  </tr>
  <tr>
    <th id="head-4">Davis</th>
    <td headers="head-4 head-2 head-1">
      50.7
    </td>
    <td headers="head-4 head-3 head-1">
      139.3
    </td>
  </tr>
  <tr>
    <th id="head-5">Davison</th>
    <td headers="head-5 head-2 head-1">
      27.1
    </td>
    <td headers="head-5 head-3 head-1">
      476.0
    </td>
  </tr>
</table>
```

*Comparison of sales revenue between the Davis and Davison companies  
in the UK and the rest of the world.*

In millions of pounds sterling	In the UK	Rest of the World
Davis	50.7	139.3
Davison	27.1	476.0

 **Warning**

The `headers` attribute must not be used in combination with the `scope` attribute.

 **Note**

Good practice is to organize the `id` values of the header cells according to the logical visual order of the table.

A screen reader (using voice or braille) will announce the headers in this order.

## Make sure layout tables follow the right reading order

When a screen reader (voice or braille) translates a layout table, the content is read in a linear way i.e. cell by cell, from left to right, row after row.

So the reading order must remain consistent on each layout table.

For instance, if the source code below is used, the reading order will be:

1. First name.
2. Last name.
3. Age.
4. "First name" field.
5. "Last name" field.
6. "Age" field.

```

<table role="presentation">
  <tr>
    <td><label for="firstname">First name</label></td>
    <td><label for="lastname">Last name</label></td>
    <td><label for="age">Age</label></td>
  </tr>
  <tr>
    <td><input type="text" name="firstname" id="firstname" /></td>
    <td><input type="text" name="lastname" id="lastname" /></td>
    <td><input type="text" name="age" id="age" /></td>
  </tr>
</table>

```

To follow a coherent reading order while keeping the layout table, try this instead:

```

<table role="presentation">
  <tr>
    <td>
      <label for="firstname">First name</label>
      <input type="text" name="firstname" id="firstname" />
    </td>
    <td>
      <label for="lastname">Last name</label>
      <input type="text" name="lastname" id="lastname" />
    </td>
    <td>
      <label for="age">Age</label>
      <input type="text" name="age" id="age" />
    </td>
  </tr>
</table>

```



## Warning

To ensure optimal screen reader compatibility and guarantee that the right reading order is followed, it is strongly recommended to limit the use of nested layout tables.

## Plan alternative text for each type of multimedia content (<video>, <audio>, <object>, <embed>, etc.)

Plan alternative text for each type of multimedia content embedded in the page using the tags <video>, <audio>, <object>, <embed>, for example.

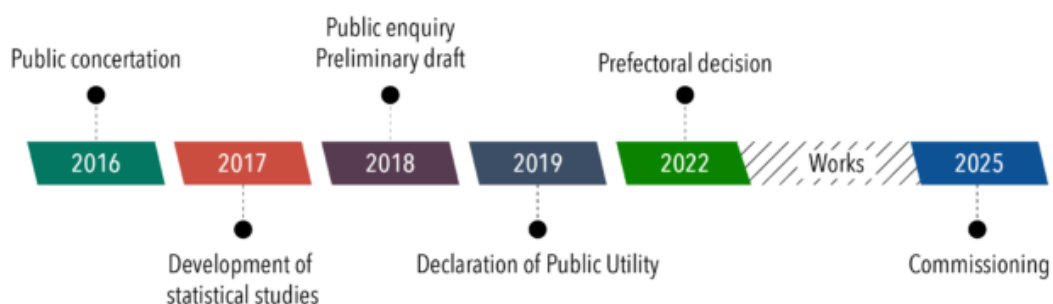
This alternative text will provide the same level of information to people who cannot access the multimedia content (no plugin, old browser, etc.).

It can take the form of HTML content for example.

## Tip

When a video is displayed on a page, its transcription can be considered as an alternative.

### Project manager calendar



### Calendar text transcript ▲

- 2016: Public concertation
- 2017: Development of statistical studies
- 2018: Public enquiry, Preliminary draft
- 2019: Declaration of Public Utility
- 2022: Prefectoral decision
- 2022-2025: Works
- 2025: Commissioning

*In this example, the calendar is carrying information, and a button "Calendar text transcript" leads to alternative text in HTML format.*

## Populate the alt attribute of each mapped image and its <area /> tags

When a mapped image is integrated in the HTML code:

- An alt attribute must be added to the <img /> tag and to each <area /> tag.
- The alt attribute of the <img /> tag must announce the function of the mapped image.
- The alt attribute of each <area /> tag must express the destination of the link.

For example, in the case of a map of France where each department is clickable and leads to an information sheet about the department:

```


<map name="map-france">
  <area shape="poly" coords="..." href="..." alt="Ain" />
  <area shape="poly" coords="..." href="..." alt="Aisne" />
  <area shape="poly" coords="..." href="..." alt="Allier" />
  [...]
</map>
```

## Tag block quotations using <blockquote>

Whenever, a block quotation is to be included in the HTML page, enclose it in a <blockquote> tag.

### Note

Any isolated quote that is not directly incorporated in the surrounding text flow, is considered as a block quotation.

## Tag inline quotations using <q>

Whenever a quotation is integrated in a text, enclose it in the <q> tag.

## Write the HTML code in a logical reading order

The writing order of the tags in the flow of the HTML code must follow the reading order of the page.

In other words, when one tag precedes another in the visual flow of the page, it must also immediately precede that element in the HTML code.



 **Tip**

To test this rule, turn off the CSS and check that the resulting page order matches the page when CSS is active.

 **Warning**

If some content is hidden by default, make sure that it is properly positioned in the HTML flow when styles are disabled.

## Complementary guidelines

In addition to the mandatory rules detailed in the previous chapters of this manual, taking into account the additional recommendations below is beneficial for people with disabilities.

**We therefore strongly recommend that you apply them.**

### Tag abbreviations with `<abbr>`

### Add file format and size to all download links and buttons

Whenever a link or button points to a download file, the following information should be added to the label:

- Document name.
- Document format.
- Document size.

```
<a href="Toronto bus service.pdf">  
Download the map of Toronto bus routes (PDF - 2Mb)  
</a>
```

#### Note

If an icon is used to indicate the file format, refer to Section "[6. Images and Icons](#)", to implement it in an accessible way.

#### Tip

In situations where the size of the downloadable file can not be known in advance (i.e. generation on the fly), good accessibility practice is to give an approximate or maximum size.

For example:

```
<a href="invoice.pdf">  
Download your March invoice (PDF - Approx. 1.5Mb)  
</a>
```

## Combine adjacent links pointing to the same page

When several links pointing to the same page are grouped together, they should be combined in a single tag `<a>`.



Here is an example of coding for an image, a title, a date and an introduction serving as a link to the details of a news item **that we do not recommend**:



```
<a href="#">
  
</a>
<h2><a href="#">Winter weather just getting started across
Canada</a></h2>
<p class="date">
  <a href="#">12/12/2016</a>
</p>
<p class="intro">
  <a href="#"> Winter has arrived in Canada and won't be leaving
  anytime soon. Southern Ontario is expected to see its first big
  snowfall of the year while British Columbia continues to see snow
  and falling temperatures.</a>
</p>
```

And here is a **more accessible** coding:



```
<a href="#">
  
  <h2>Winter weather just getting started across Canada</h2>
  <p class="date">12/12/2016</p>
  <p class="intro">Winter has arrived in Canada and won't be
  leaving anytime soon. Southern Ontario is expected to see its
  first big snowfall of the year while British Columbia continues
  to see snow and falling temperatures.</p>
</a>
```

## Note

This recommendation also applies to `<button>` tags.



Here is an example of coding of a grouped icon and text serving as an Add bookmark button **that we do not recommend**:



```
<button>
  
</button>
<button>Add to my bookmarks</button>
```

And here is a **more accessible** coding:



```
<button>
  
  Add to my bookmarks
</button>
```

## Tip

It's also possible to put the link on a single element, then extend the click zone via CSS to allow the mouse to activate the link by clicking anywhere on the news card.

Example:

```
<div class="block">
  
  <h2><a href="#">Winter weather just getting started across
Canada</a></h2>
  <p class="date">12/12/2016</p>
  <p class="intro">Winter has arrived in Canada and won't be
leaving anytime soon. Southern Ontario is expected to see its
first big snowfall of the year while British Columbia continues
to see snow and falling temperatures.</p>
</div>
```

Related CSS code:

```
.block a[href]::after {
  content: "";
  display: block;
  position: absolute;
  top: 0;
```

```
bottom: 0;
left: 0;
right: 0;
}
```

When using this technique, make sure that the element carrying the link is sufficiently explicit, otherwise [complete it by using the aria-label or title attribute](#).

## Do not disable the zoom with the `user-scalable` property

It is important to be able to zoom in or out of a page. For this purpose, the following declarations must not be used:

```
<meta content="width=device-width; initial-scale=1.0; maximum-scale=1.0; user-scalable=1;" name="viewport" />
```

```
<meta name="viewport" content="user-scalable=no" />
```

## Do not use CSS to display images that carry information

CSS should not be used to display images that carry information.

In other words, images with information should be included in the HTML code (i.e. via the [<img />](#) tag or [<svg>](#) tag).

### Note

Image sprites (images loaded in the background via CSS) are not appropriate for images that carry information.

### Tip

Images are considered as information carriers if some of the page content or functions were missing without them. These images include:

- Logos.
- Text images.
- Images links and buttons.
- Etc.

## Warning

In particular, we strongly advise against the technique of placing text off-screen and replacing it with a background image.

When images are not uploaded, the information may be lost.

✘ `<a href="/" id="logo">[My logo text]</a>`

✘ 

```
#logo {
  display: block;
  width: 300px;
  height: 100px;
  text-indent: -99999rem;
  background: url('images/logo.png');
}
```

Pure HTML should be used instead.

## Identify the current position in navigation systems with `aria-current`

In all navigation systems (menus, breadcrumb trails, pagination systems, etc.), the current position is to be identified by `aria-current="page"`.

Likewise, any parent sections and sub-sections are to be identified in menus (and not in breadcrumb trails) by `aria-current="true"`.



## Example in a menu

In the example below of code for a navigation menu, the parent section “Upcoming events” is identified by `aria-current="true"` included in the `<a>` element and the current page “Education” is identified by `aria-current="page"` included in the `<li>` tag.

```
<nav role="navigation" aria-label="Main menu">
  <ul>
    <li><a href="#">Home</a></li>
    <li><a href="#" aria-current="true">Upcoming events</a>
      <ul>
        <li><a href="#">Culture</a></li>
        <li aria-current="page">Education</li>
        <li><a href="#">Sports</a></li>
      </ul>
    </li>
    <li><a href="#">News</a></li>
    <li><a href="#">Contact</a></li>
  </ul>
</nav>
```

## Example in a pagination system

In the code example below for a pagination system, the current page “2” is identified by `aria-current="page"` included in the `<li>` tag.

```
<nav role="navigation" aria-label="Pagination">
  <ul>
    [...]
    <li><a href="#" aria-label="Page 1">1</a></li>
    <li aria-current="page">2</li>
    <li><a href="#" aria-label="Page 3">3</a></li>
    [...]
  </ul>
</nav>
```

## Example in a breadcrumb trail

In the example below of code for a breadcrumb trail, the current page "Editorial manual" is identified by `aria-current="page"` included in the `<li>` tag.

```
<nav role="navigation" aria-labelledby="intro-pagination">
  <p id="intro-pagination">You are here:</p>
  <ul>
    <li><a href="#">Home</a></li>
    <li><a href="#">AcceDe Web guidelines</a></li>
    <li aria-current="page">Editorial manual</li>
  </ul>
</nav>
```

## In forms with multiple steps, identify the current step using `aria-current="step"`

In the navigation menu of a form with multiple steps, the current step should be identified by means of `aria-current="step"`.

```
<nav aria-label="Steps of your order">
  <ol>
    <li><a href="#">Personal information</a></li>
    <li aria-current="step"><em>Payment</em></li>
    <li>Preview</li>
  </ol>
</nav>
```

### Note

When forms have multiple steps, [it should also be possible for the user to return to a previous step](#) by means of a link, for example.

## Logically organize the items of dropdown lists

When dropdown lists are used, the items listed should be organized logically.

The logical order depends on the context. Examples include:

- Alphabetical order (e.g. a list of languages).
- Numbered order (e.g. a list of French departments).
- Practical order ("France" first in form to sign up for a French government agency).



## Tip

Another good accessibility practice is to avoid prefixing the content of the `<option>` tag with decorative characters (dashes, stars, spaces, etc.).

This will give the user direct access to a desired value or group of values by simply pressing a key on the keyboard (pressing the `S` key to reach the country "Spain", for example).

```
<select>
  <option>--Belgium</option>
  <option>--France</option>
  <option>--Germany</option>
  <option>--Italy</option>
  <option>--Spain</option>
</select>
```

Should be replaced by:

```
<select>
  <option>Belgium</option>
  <option>France</option>
  <option>Germany</option>
  <option>Italy</option>
  <option>Spain</option>
</select>
```

## Make sure that hidden content is translated

For websites in multiple languages or when using scripts developed in a foreign language, make sure to translate into the website's current language all the hidden content in:

- `alt` attributes of images.
- `aria-label` attributes.
- `title` attributes.
- Tags for content not visible on screen (via a `.sr-only` CSS class, for example).

## Send a notification when a new window is opened

When a link or button opens a new window in the browser, it is advisable to add information such as "new tab".



Either in the `aria-label` attribute:

```
<a href="gtc.html" target="_blank" aria-label="General Terms and
Conditions (new tab)">
  General Terms and Conditions
</a>
```

Or in the alternative text of an icon/image as follows:

- [Icon inserted via CSS.](#)
- [SVG.](#)
- [<img /> tag.](#)

### Note

Use of the `title` attribute also complies with accessibility requirements:

```
<a href="gtc.html" target="_blank" title="General Terms and
Conditions (new tab)">
  General Terms and Conditions
</a>
```

## Update the page `<title>` when an error or confirmation message is displayed

Whenever a form returns an error or confirmation message, it is advisable to update the `<title>`.

In the case of a confirmation message:

```
<title>Confirmation - Contact | [Site name]</title>
```

If there is an error:

```
<title>Error - Contact | [Site name]</title>
```

### Tip

It is also recommended to have this information appear first in the `<title>` tag.



## Note

In some situations, the title does not need to be updated because the title displayed after submission is already obvious.

For example:

- A login form which goes directly to a profile page.
- A button which says "Next step" as part of a multi-page form.
- A contact page that sends a preview page.

## Use only relative sizes (*rem*, *em*, *%*, etc.) for media query breakpoints

To define media query breakpoints, it is advisable to use relative units only (such as *rem*, *em* or *%*) for the CSS `@media` rule.

```
@media (max-width: 25rem) {  
  nav li.tile {  
    width: 33%;  
  }  
}
```

Rather than absolute units such as *px*, *pt*, *cm*, etc.

## Note

This recommendation also applies for media queries directly integrated in the `<link />` tag:

```
<link rel="stylesheet" href="/css/extra-small.css" media="all and  
(max-width: 25rem)" />
```