What's New in WCAG 2.1

Office of the Government Chief Information Officer
Industry Development Division
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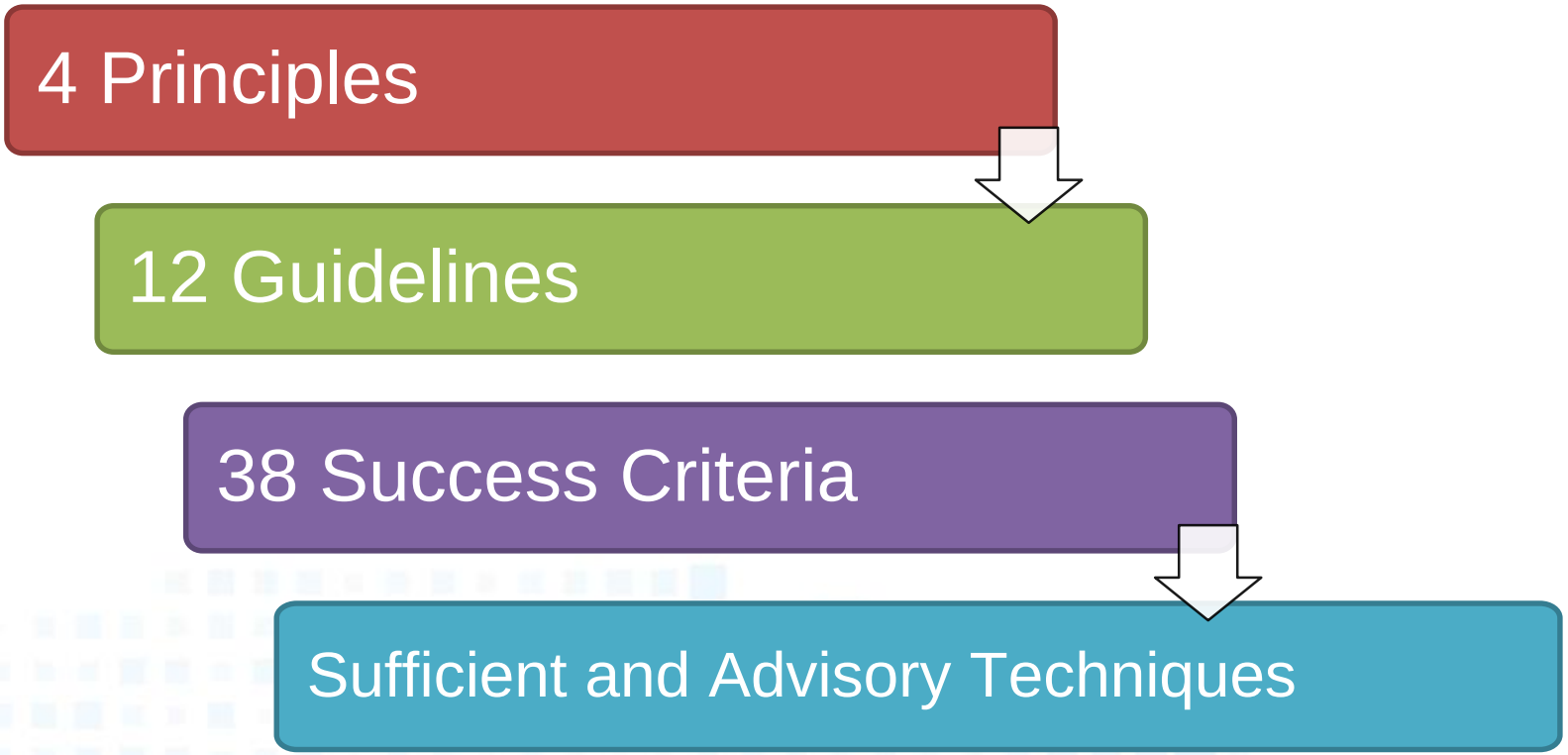
What's New in WCAG 2.1

- Released in 5 June, 2018
- The official recommendation of World Wide Web Consortium (W3C).
- Provides 17 additional success criteria to address:
  - people with disabilities on mobile devices
  - people with low vision
  - people with cognitive or learning disabilities

What's New in WCAG 2.1

WCAG 2.0 Level AA consists of four parts -



What's New in WCAG 2.1

WCAG 2.1 Level AA consists of four parts -

4 Principles

13 Guidelines

50 Success Criteria

Sufficient and Advisory Techniques

What's New in WCAG 2.1

- 1 New guideline added :

  2.5 Input Modalities

1. Perceivable	1.1 Text Alternatives
	1.2 Time-based Media
	1.3 Adaptable
	1.4 Distinguishable
2. Operable	2.1 Keyboard Accessible
	2.2 Enough Time
	2.3 Seizures
	2.4 Navigable
	2.5 Input Modalities
3. Understandable	3.1 Readable
	3.2 Predictable
	3.3 Input Assistance
4. Robust	4.1 Compatible

What's New in WCAG 2.1

- 12 new success criteria added for WCAG 2.0 Level AA :

Level A (5)

2.1.4 − Character Key Shortcuts

2.5.1 – Pointer Gestures

2.5.2 – Pointer Cancellation

2.5.3 – Label in Name

2.5.4 – Motion Actuation

Level AA (7)

1.3.4 – Orientation

1.3.5 – Identify Input Purpose

1.4.10 – Reflow

1.4.11 – Non-Text Contrast

1.4.12 – Text Spacing

1.4.13 – Content on Hover or Focus

4.1.3 – Status Messages

What's New in WCAG 2.1

New Success Criterion may benefit multiple user groups and have benefits for all users.

WCAG 2.1 Illustrations

Level A

2.1.4 Character Key Shortcuts (字符鍵快捷鍵)

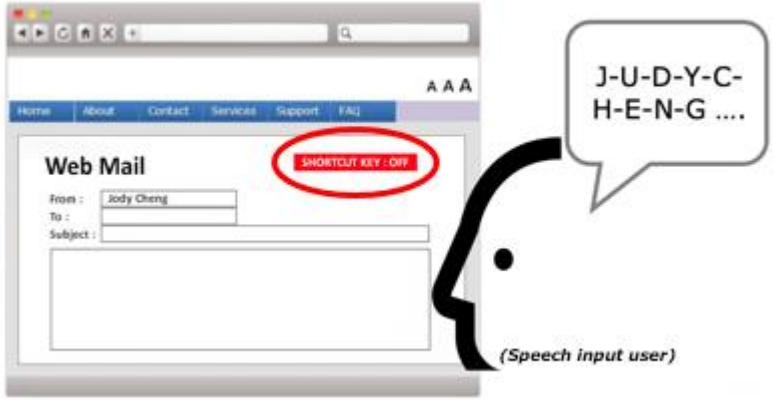
For keyboard shortcuts using letter, punctuation, number or symbol character, at least one of the following is true :

- User can **turn off** the shortcut
- User can **remap** the shortcut to include one or more non-printable keyboard characters (e.g. Ctrl, Alt)
- Shortcut is **active only on focus**

Before Rectification

When speech input users read “e” as one of the input texts, the web mail application automatically initiates the archive function.

After Rectification



The web mail application allows user to disable the shortcut key feature.

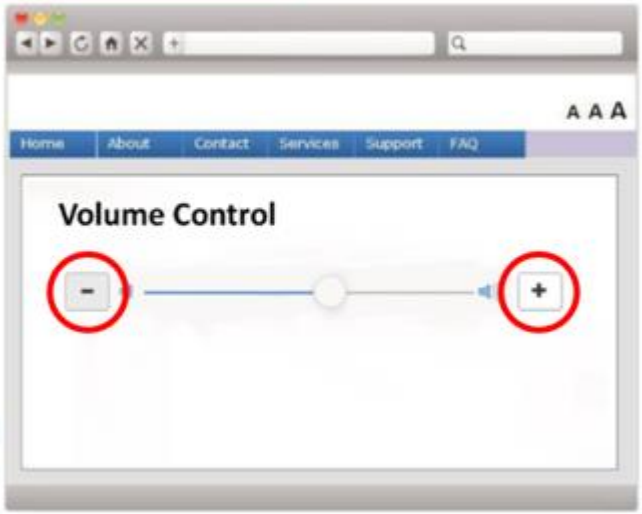
2.5.1 Pointer Gestures (指針手勢)

Complex gesture, such as swiping, two-finger pinch for zooming or dragging a slider, is able to be performed through simpler actions like taps or long presses.

Before Rectification

The dragging of a slider requires precise path of the user's pointer movement to control the volume.

After Rectification



Buttons are added as an alternative way for users to adjust the volume in simple clicks.

2.5.2 Pointer Cancellation (指針取消)

Functions are completed by up-event (e.g. release the mouse button or remove finger from touching the screen) and either one of the following mechanisms :

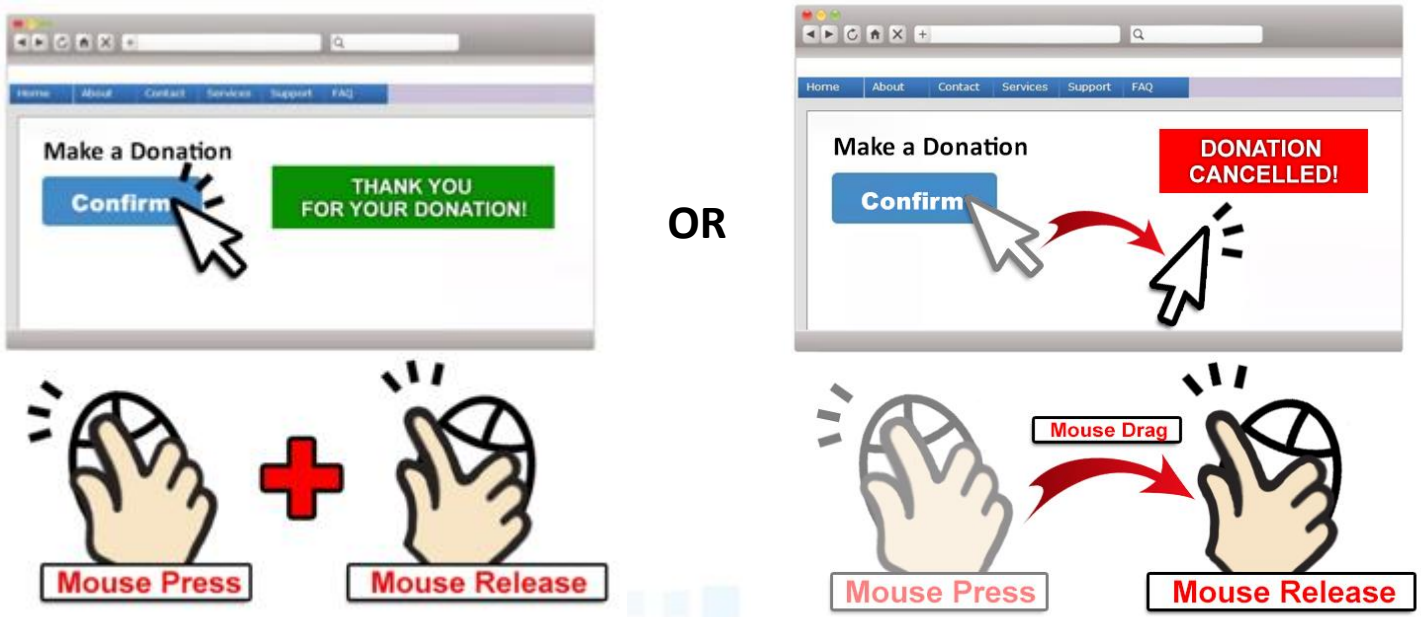
- to abort the function before completion
- to undo the function after completion

Exemption when down-event is essential such as piano keyboard emulation program.

When the user makes a donation by clicking the confirm button, the donation is confirmed before user releases the mouse button. There is no way for user to abort the function after he/she has pressed the mouse button.

2.5.2 Pointer Cancellation (指針取消)

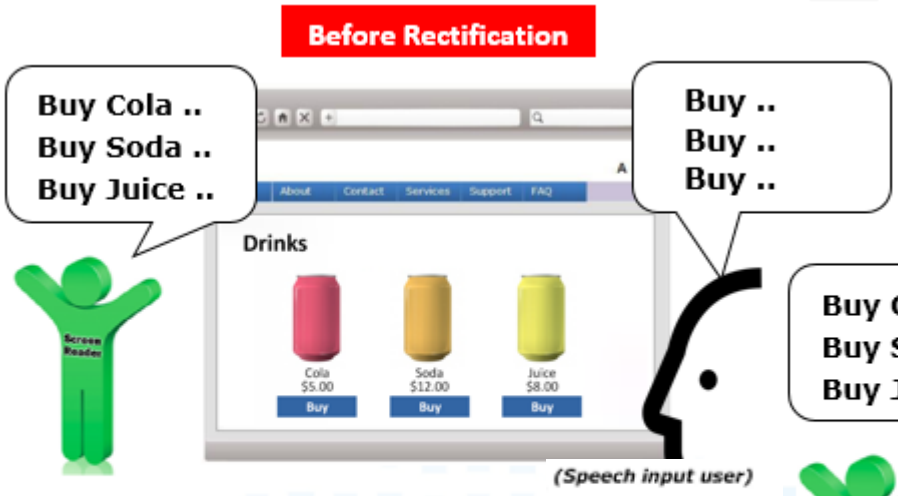
After Rectification



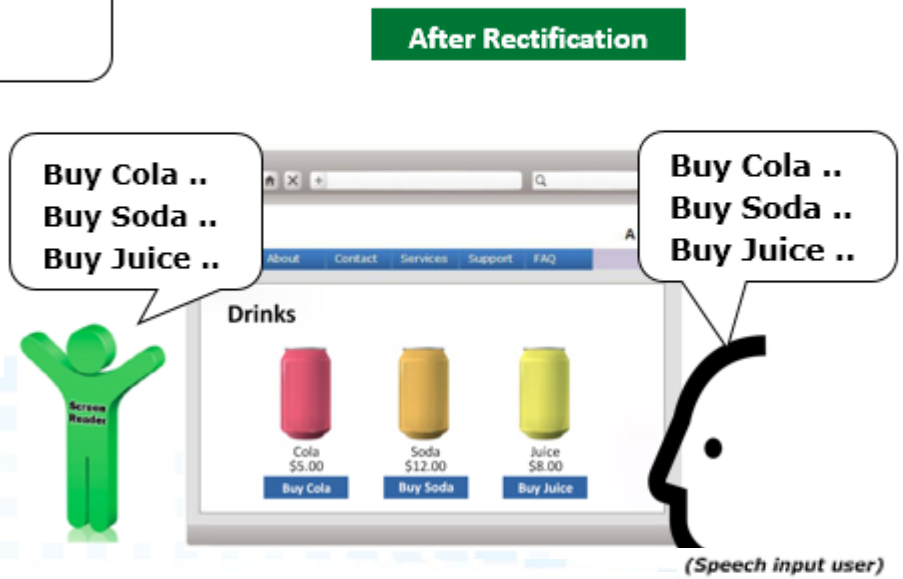
Donation will be confirmed only if the user presses and releases the mouse button at the clickable area. If the user wants to abort the function after presses the mouse button, he/she can drag the mouse pointer out of the clickable area, then release the mouse button.

2.5.3 Label in Name (名稱中的標簽)

All visible text labels must match their programmatic name to facilitate users using speech-to-text technologies to interact with content based on an intuitive visual label.



Speech input user speaks a command “Click Buy”, the speech input does not work because the programmatic label that enabled as a speech input command does not match with the visible text label.



The programmatic labels are exactly the same as the visual text label of the buttons, so that speech input user can activate the control by speaking the visual label.

2.5.4 Motion Actuation (運動驅動)

Functions triggered by moving a device (e.g. shaking or tilting) or by gesturing towards the device (e.g. a camera can interpret the gesturing and activate a function) should be able to operate by more conventional user interface components.

Before Rectification

Users are required to either move the device around to change the view or tap and drag on the photo.

After Rectification

Navigation buttons are added as an alternative for navigation.

WCAG 2.1 Illustrations

Level AA

1.3.4 Orientation (定位)

Unless a specific display orientation is essential, the content should be able to be viewed or operated in either portrait or landscape orientations.

Before Rectification

Users are unable to change the orientation of the video clip.

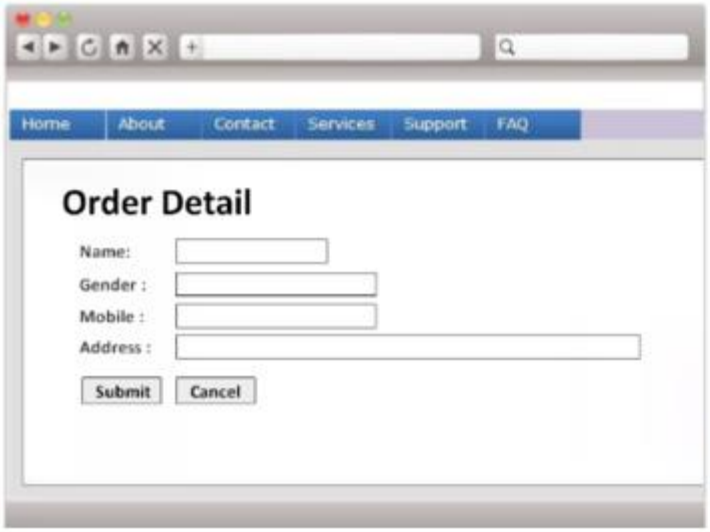
After Rectification

By not restricting the display orientation, user can view content in the orientation that best for them.

1.3.5 Identify Input Purpose (明確輸入目的)

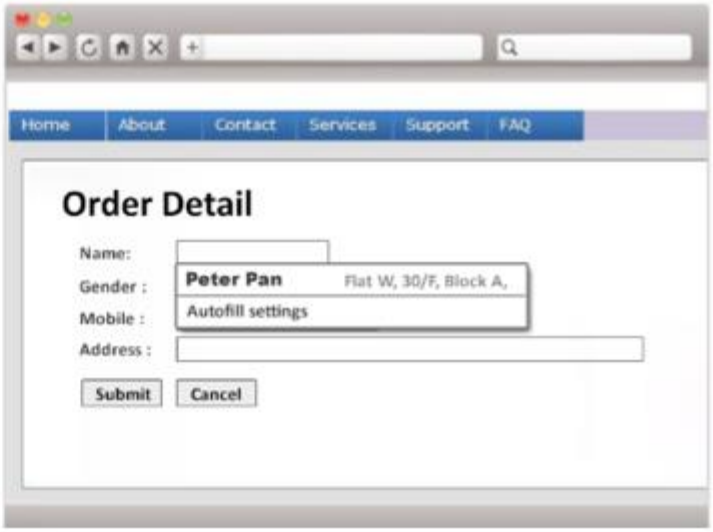
Autocomplete attribute technique should be used for each input field to make filling out forms easier, especially for persons with cognitive disabilities.

Before Rectification



User is required to input personal information from scratch.

After Rectification

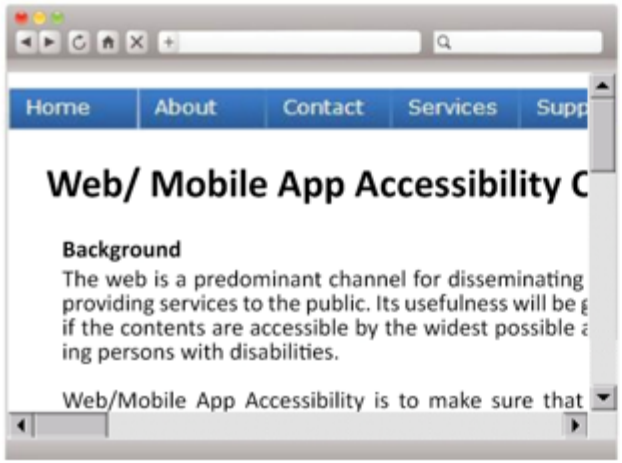


Enable the autocomplete attribute improves the browser's ability to pre-populate form fields with user-preferred values.

1.4.10 Reflow (反復滾動)

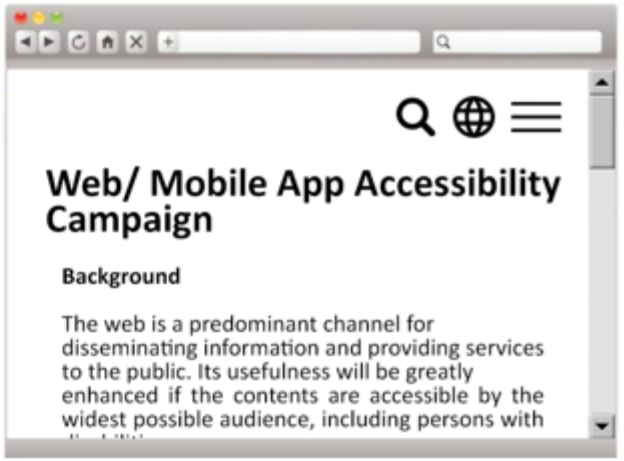
When a webpage is zoomed, content is presented without loss of information and functionality, and without requiring horizontal scrolling.

Before Rectification



When users zoom in to enlarge the size of content, users have to scroll both horizontally and vertically to view the content.

After Rectification

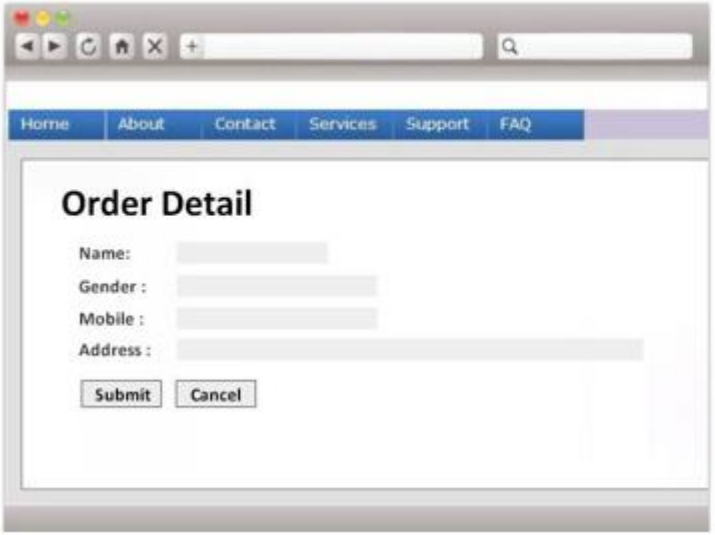


The page layout is changed automatically so that horizontal scrolling is not required.

1.4.11 Non-Text Contrast (非文本對比)

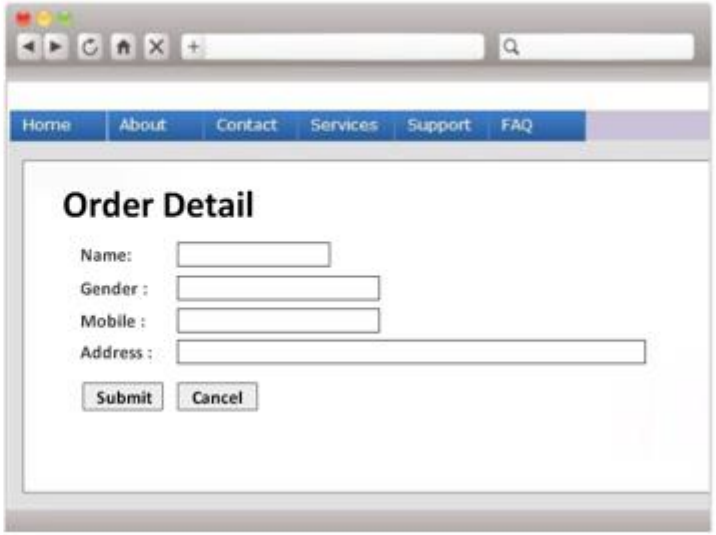
All non-text content (e.g. graphics, diagrams, buttons, checkboxes, input fields), which deliver important information, should have a minimum 3:1 colour contrast ratio.

Before Rectification



The grey textbox on the white background has poor colour contrast, making it hard to identify by persons with low vision.

After Rectification

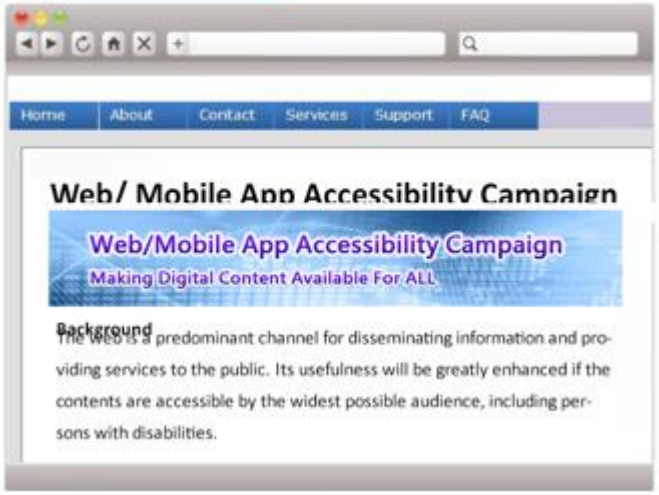


Dark border is applied to the textboxes so that the textboxes can be identified easily.

1.4.12 Text Spacing (文本間距)

Ensure the content or functionality will not be lost if user overrides the setting for spacing between paragraphs, line, words or characters.

Before Rectification



When the user enlarges the line spacing of the website, the header text is cut off and becomes unreadable.

After Rectification

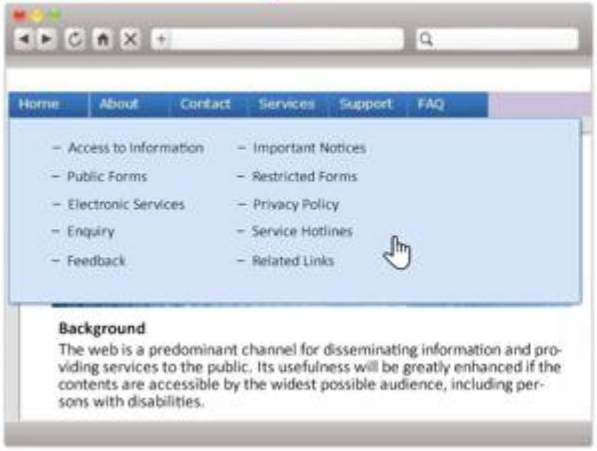
After the line spacing is enlarged, the layout is changed accordingly such that the content can be displayed clearly.

1.4.13 Content on Hover or Focus (懸停或焦點內容)

If additional content appears on focus/hover, you should ensure all of the following:

- **Dismissible:** User can dismiss the additional content with the keyboard without moving focus/hover, e.g. via the escape key.
- **Hoverable:** User can move the pointer over the additional content without making the additional content disappear.
- **Persistent:** The additional content remains visible until the hover or focus trigger is removed, the user dismisses it, or its information is no longer valid.

Before Rectification



User is unable to view the content unless he moves the mouse pointer away from the mega menu.

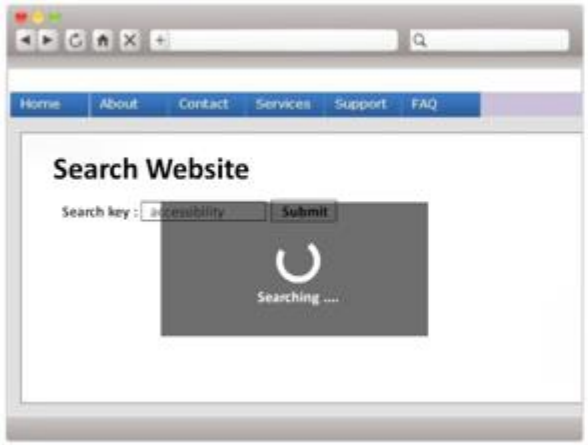
After Rectification

User can press the Escape key to clear the mega menu without moving the mouse pointer.

4.1.3 Status Messages (狀態消息)

For any visible status message (e.g. error or success messages subtly added to a page), users should be informed by assistive technology tools even though the status message is not on focus.

Before Rectification



A spinning logo with “searching” status message appears after user initiates the search function, however, screen reader cannot read out the status message because it is not in focus.

After Rectification

When the status message is shown, the screen reader is able to read out the message to inform users about the content change even though the status message is not in focus.

WCAG 2.1 Illustrations

Level AAA

1.3.6 Identify Purpose

The purpose of user interface components, icons and certain sections can be identified by user agents. For example, Accessible Rich Internet Application (ARIA) landmarks should be used to identify regions of a page, so that assistive technologies can be used to make the content more understandable.

Before Rectification

Without setting the ARIA landmark roles, assistive technologies cannot easily recognise the different regions of the webpage to provide customisation for the user.

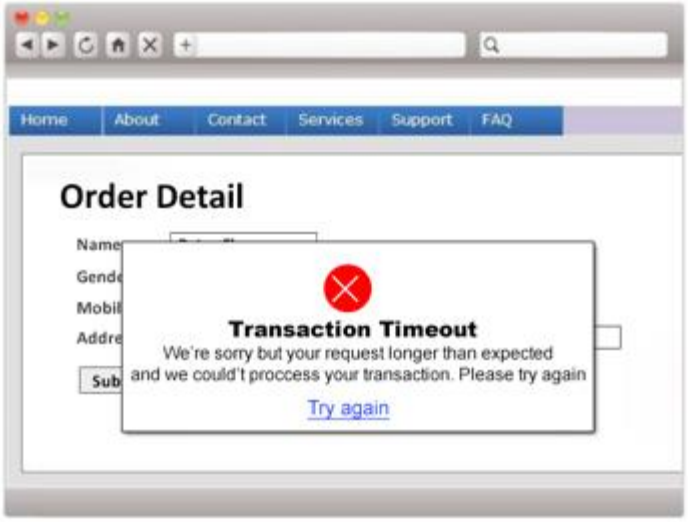
After Rectification

ARIA landmark roles are assigned to identify different regions of the page. Assistive technologies can support the user by adding icons or changing the styles of individual webpage components.

2.2.6 Timeouts

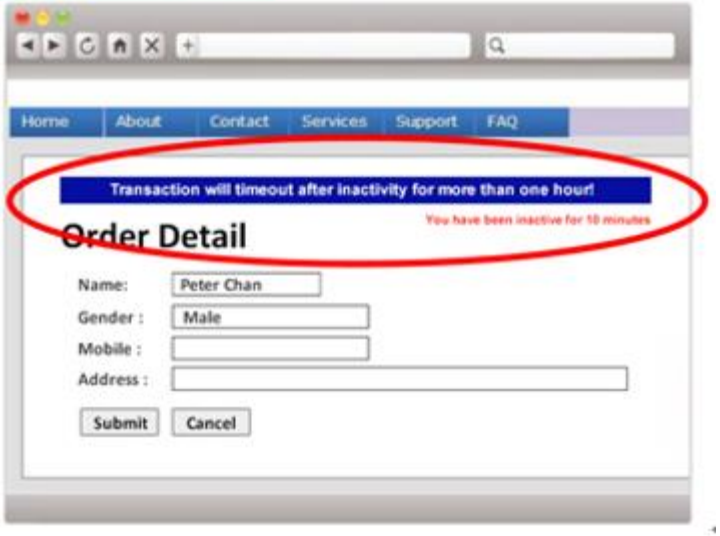
Users should be informed about the duration of inactivity which will cause the page to timeout and result in data loss, unless the data is preserved for more than 20 hours when the user does not take any actions.

Before Rectification



Users are not warned of the duration of inactivity that could cause a time-out and data loss. After the page is idled for a certain period of time, the application prompts timeout and all the input data are lost.

After Rectification



A message is clearly shown at the top of the page indicating that inactivity for more than an hour will trigger the timeout process.

2.3.3 Animation from Interactions

Users should be allowed to disable the motion animation triggered by interaction, unless the animation is essential to the functionality or the information being conveyed.

Animation on the top banner is triggered when users scroll down the webpage. However, the website does not allow users to disable the non-essential animation in the banner. Users with vestibular disorders (motion sickness) may feel

A function is provided for users to disable all non-essential animations.

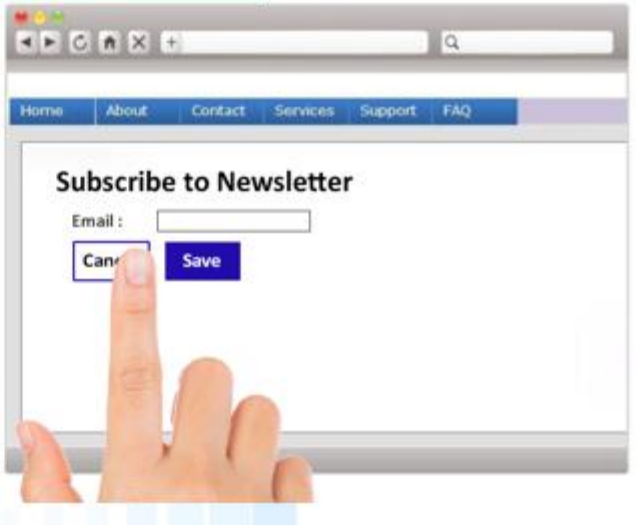
2.5.5 Target Size

The sizes of target (e.g. button) are at least 44 by 44 Cascading Style Sheets (CSS) pixels, so that they are large enough for users to activate easily.

Before Rectification

Buttons are too small and difficult to tap.

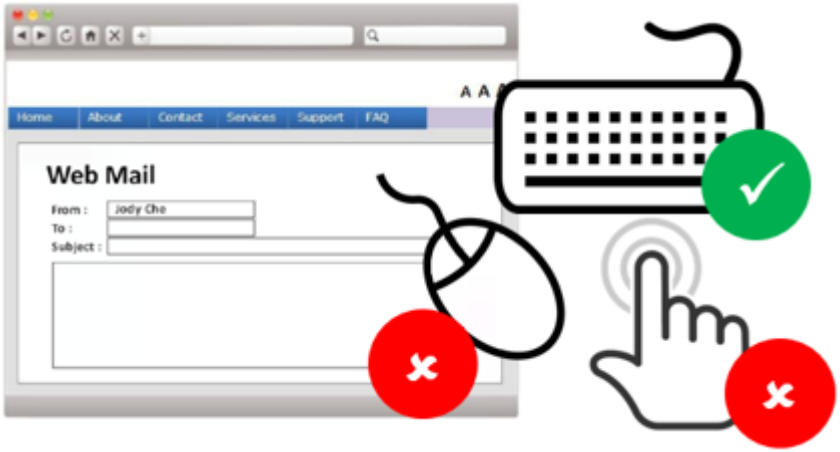
After Rectification



Size of buttons are larger than 44 by 44 CSS pixels, so that users can tap the buttons easily.

2.5.6 Concurrent Input Mechanisms

Website should not restrict use of input modalities (e.g. keyboard, mouse, touchscreen, voice input) available on a platform.

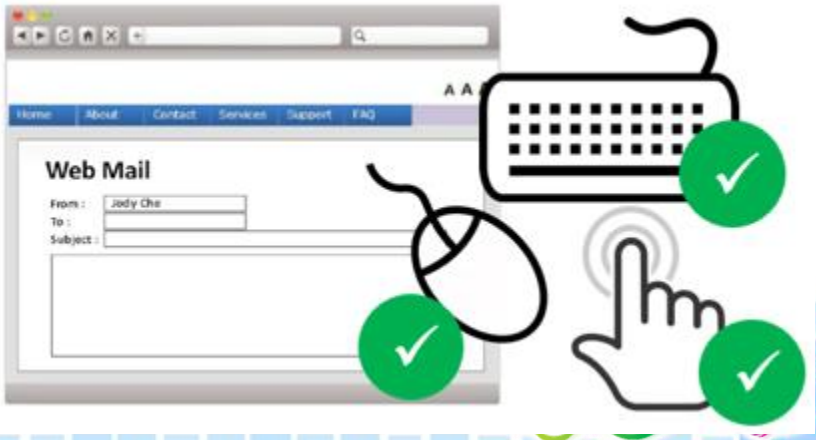


Before Rectification

The webpage only accepts input by keyboard.

After Rectification

The webpage accepts more than one kind of input mechanism, including keyboard, mouse and touchscreen. Users are allowed to switch between input mechanisms when necessary.



Impact of WCAG 2.1 on Websites

Impact of WCAG 2.1 AA on Websites

Mobile friendly design can meet 3 new success criteria in WCAG 2.1.

Level	WCAG 2.1 AA Success Criterion	Fulfilled by Mobile Friendly Design	Impact
Level A (5)	2.1.4 – Character Key Shortcuts		Keyboard shortcuts
	2.5.1 – Pointer Gestures		Functions required complex gesture
	2.5.2 – Pointer Cancellation		Functions triggered by down-event
	2.5.3 – Label in Name		All visible text labels
	2.5.4 – Motion Actuation		Functions triggered by moving device
Level AA (7)	1.3.4 – Orientation	Yes	
	1.3.5 – Identify Input Purpose		Online forms
	1.4.10 – Reflow	Yes	
	1.4.11 – Non-Text Contrast		All non-text contents (e.g. graphics)
	1.4.12 – Text Spacing	Yes	
	1.4.13 – Content on Hover or Focus		Mega/pull-down menu
	4.1.3 – Status Message		All visible status messages

Mobile Friendly Design vs WCAG 2.1 AA

1.3.4 Orientation (AA)

1.4.1 Reflow (AA)

1.4.12 Text Spacing (AA)

Frequently Asked Questions

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1. **Is WCAG 2.1 backward compatible with WCAG 2.0?**
    - All WCAG 2.0 principles, success criteria are still valid and in WCAG 2.1 with same numbers.
    - Content that conforms to WCAG 2.1 also conforms to WCAG 2.0.

Frequently Asked Questions

2. Does WCAG 2.1 continue to use WCAG 2.0 A, AA and AAA conformance levels?

- Yes! WCAG 2.1 uses the same A, AA, AAA conformance level.

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Web/ Mobile App Accessibility Campaign

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