

This document is only a subset of the full review, with a focus on the Project 22 COVID portal (aka Advanced Analytics Workspace) that leverages the Virtual Lab platform.

**Statistics Canada | Centre of Expertise on Accessibility (CEA)
Web Accessibility and Usability Review**

Review for: DAAS Portal

Date received:	2020-06-02
Division:	CEA, Dissemination Division
Guideline Standard:	WCAG 2.0, Levels A and AA
Reviewer ID Code:	#3, #4, #5
Delivered:	2020-06-02
Follow-up:	
Time spent:	46 Hours
AT + validators:	NVDA + Firefox / JAWS + IE / Chrome + JAWS / WAVE / CCA

A representative sample of this series of Web pages has been assessed applying pertinent Web Content Accessibility guidelines (WCAG 2.1). The assessed page's URLs and titles are listed below. All points indicated in this assessment should be applied to all pages within this series of Web pages and in both official languages to insure accessibility compliance.

URL assessed on NET B:
<https://portal.covid.cloud.statcan.ca/>

About CEA reviews:

This detailed assessment "DET", is a Word document that is divided into the following sections.

Section A: WCAG 2.1 findings:

GOC Web pages are required to meet WCAG 2.1 Level A and AA compliance. Where applicable, this assessment will list the accessibility issue and applicable WCAG 2.1 success criterion (SC).

Listing the accessibility issues pertaining to the assessed pages, the relevant WCAG 2.1 reference, the "common failure", and, where possible, the WCAG 2.1 recommended sufficient technique. The detailed document also points to the exact URL and location of the accessibility issues or, when provided, responds directly to the applicable testing criteria.

CEA's methodology

As part of CEA's methodology, we conduct visual checks, run web accessibility validation tools and validate with the following screen reader/browser combination: JAWS16+IE11 and NVDA & Firefox.

Assessment Methodology Document (AMD)

This report is a complement to the high-level (HL) Assessment Methodology Document (AMD) and provides details for each failed success criterion.

If you have any questions or require further accessibility testing or demonstration, please contact the Centre for Expertise on Accessibility by e-mail at STATCAN.F DISS-Centre of Expertise on Accessibility / DIFF-Centre d'expertise en accessibilité F.STATCAN df-centreofexpertiseforaccessibility@a.statcan.ca.

Section A: WCAG 2.1 findings

Issue 1: [\[a\]](#) **DONE**

Survey progress: Login page

Visual check/Tools used: NVDA + Firefox

Reviewer(s): #3

Description: The French lang tag needs to be applied to the "Français" language toggle link.

WCAG 2.0 Reference:
3.1.2 Language of Parts

Recommendation: Ensure the French lang tag is applied – <lang="fr"> – so that screen readers identify the link in a French accent.

Issue 2: [\[b\]](#) **NO FIX**

Survey progress: Login page

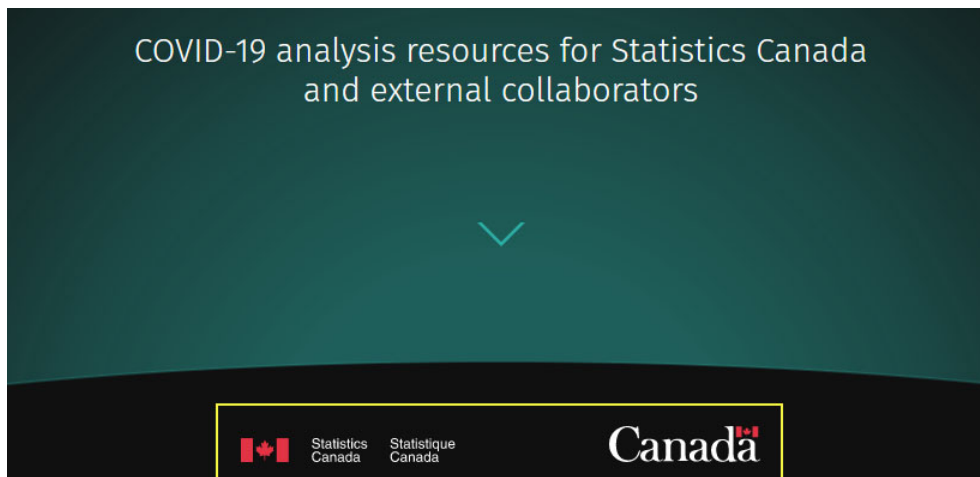
Visual check/Tools used: NVDA + Firefox / Visual check

Reviewer(s): #3,

#4

Description: The Statistics Canada logo and Government of Canada wordmark is featured/identified twice on the page, whereas they are normally displayed only once.

Users may not know to scroll down for additional content upon identifying the first instance of the GoC wordmark.



WCAG 2.0 Reference:

1.3.2 Meaningful Sequence

3.2.4 Consistent Identification

Recommendation: For consistency, and to avoid user confusion, the logo and wordmark should only appear once on each page.

Issue 3: [c] **NO FIX**

Survey progress: Login page

Visual check/Tools used: NVDA + Firefox / Visual check

Reviewer(s): #3,

#4

Description: The "Skip to main content" link does not anchor to the main content.

WCAG 2.0 Reference:

2.4.4 Link Purpose

Recommendation: Add anchor ID (*#content*) to the skip link to direct users to the main content.

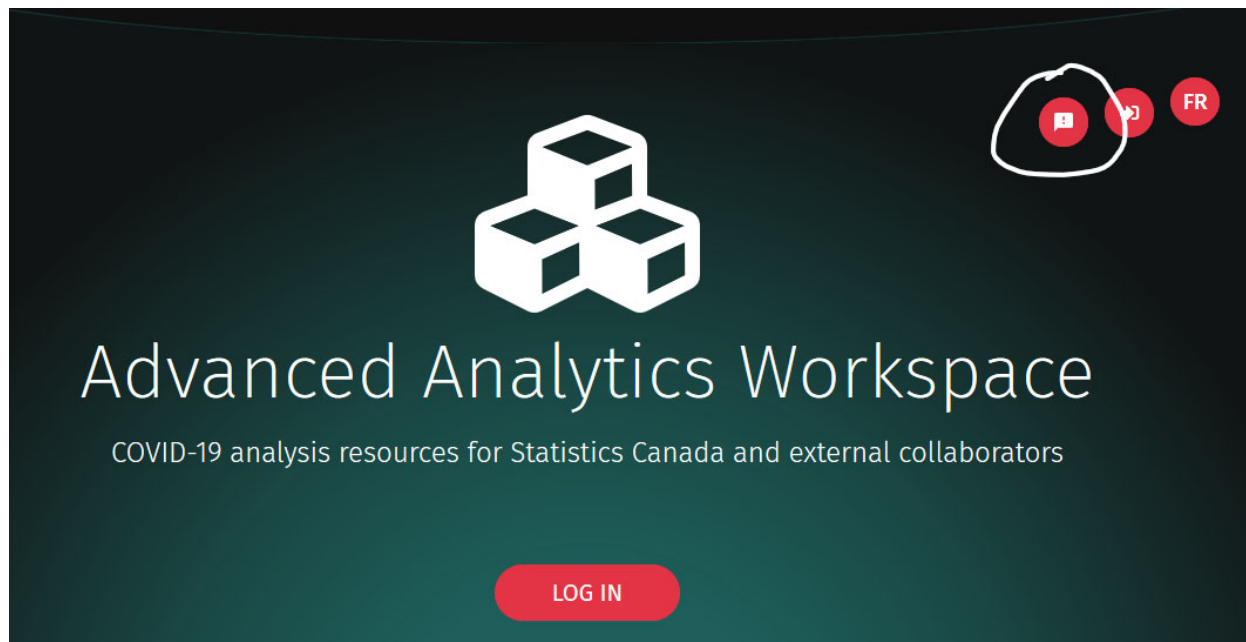
Issue 4: [\[d\]](#) **DONE**

Survey progress: Login page

Visual check/Tools used: NVDA + Firefox

Reviewer(s): #3, #4

Description: An explicit label is required for the “Send feedback” button. The label is currently identified as “portal.covid.cloud.statcan.ca”.



WCAG 2.0 Reference:

3.3.2 Labels or Instructions

Recommendation: Ensure the label for the button is “Send feedback”, or something similar related to the lightbox that appears when the button is selected.

Issue 5: [\[e\]](#) **DONE AND APPLIED TO ALL ITEMS AS WELL**

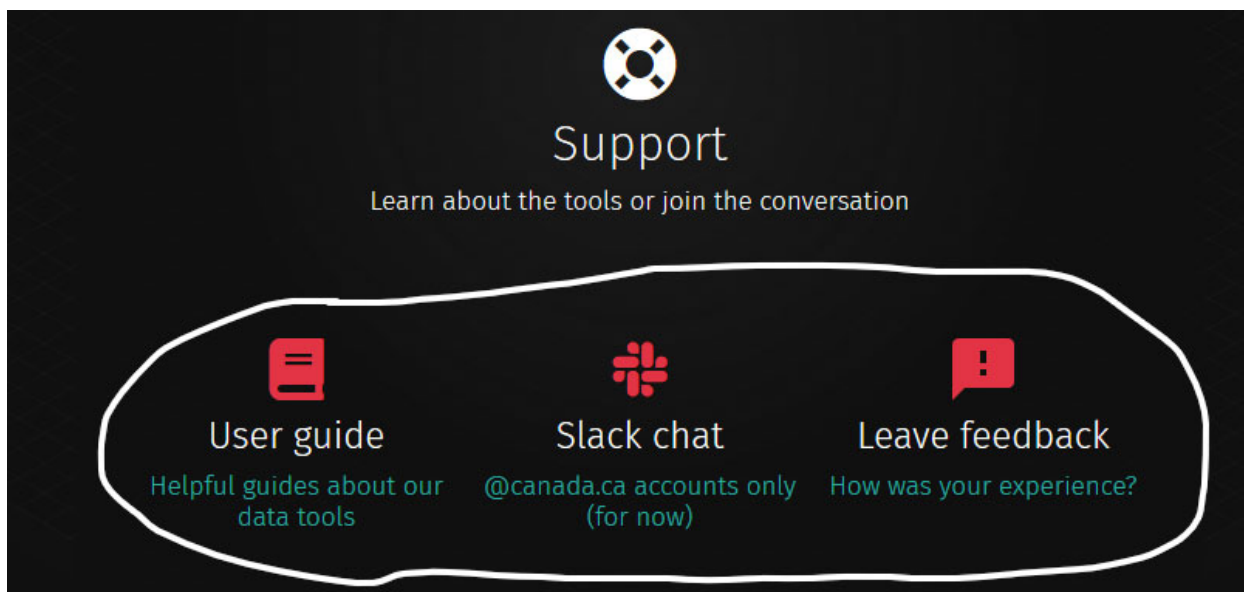
Survey progress: Module wide

Visual check/Tools used: NVDA + Firefox

Reviewer(s): #3, #4

Description: New browser windows open when links are accessed, for example the “User guide”, “Slack chat” and “Leave feedback” buttons, and the developer components, for example Kubeflow, COVID-19 map, due to the use of “target=“_blank”.

Screen reader users, however, are not informed that this action occurs.

**WCAG 2.0 Reference:**

2.4.4 Link Purpose

Recommendation: Ensure users are informed that a new browser window will open when the links are accessed – “Opens in a new window”.

```
<a id="user-guide" href="https://statcan.github.io/daaas/en/"
target="_blank" class="d-flex flex-grow-1 justify-content-center">
```

Example code:

```
<a href="/eng/1376414554482?gf" target="_blank">
    Check inspection status of U.S. meat import shipment
    <span class="glyphicon glyphicon-new-window"></span>
<span class="wb-inv">Opens in new window</span>
</a>
```

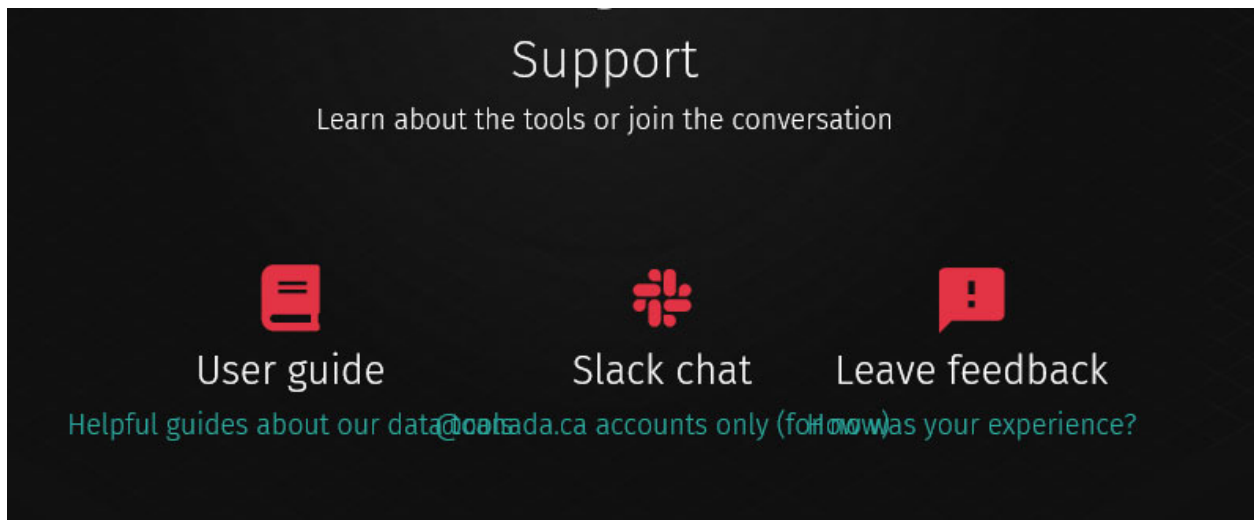
Issue 6: [f] DONE

Survey progress: Module wide

Visual check/Tools used: Internet Explorer

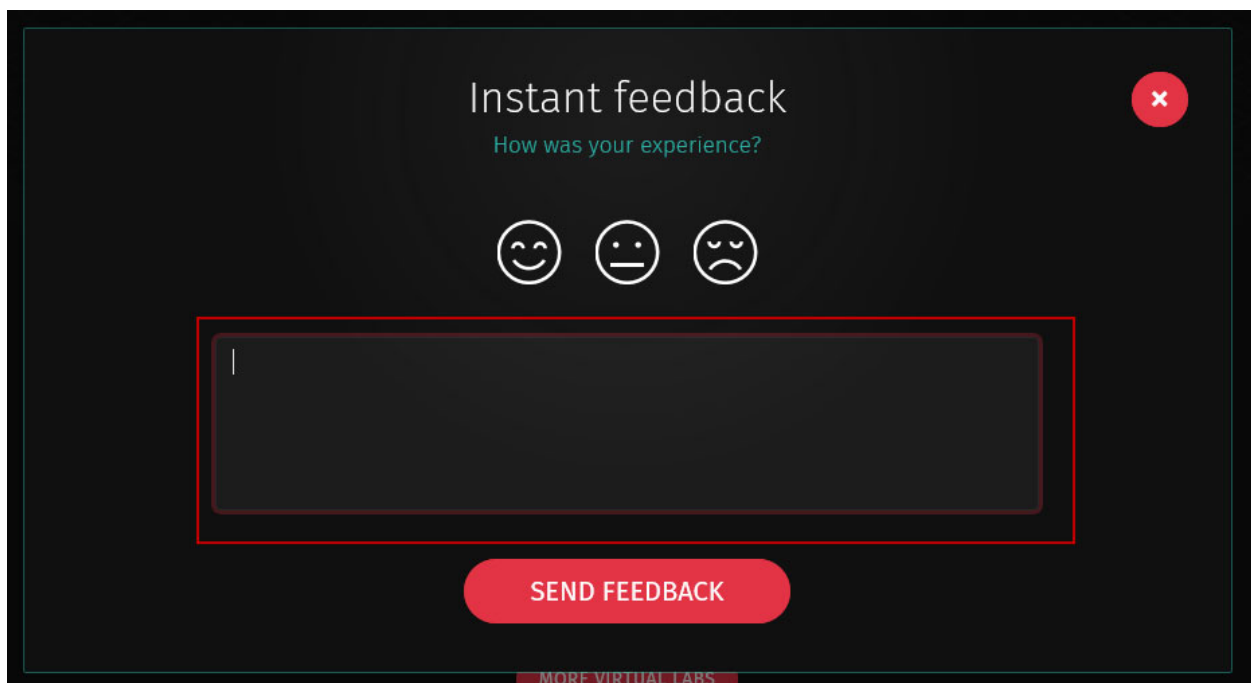
Reviewer(s): #3

Description: Text overlaps within the “Support” section when viewed in IE.

**WCAG 2.0 Reference:**

1.3.1 Info and Relationships

Recommendation: Investigate with client, may be occurring due to instability issues.**Issue 8:** [g] **DONE****Survey progress:** Instant feedback**Visual check/Tools used:** JAWS + IE**Reviewer(s):** #3**Description:** The label for the feedback message window requires context for users. It is currently identified as "Feedback message".

**WCAG 2.0 Reference:**

3.3.2 Labels or Instructions

Recommendation: Ensure context is provided for the edit field label, for example “Enter your feedback/comments, and select the Send Feedback button to submit”.

Issue 9: [\[h\]](#) **DONE with other solution**

Survey progress: Leave feedback

Tools used: NVDA + Firefox

Reviewer(s): #4

Description: On opening the Instant feedback modal, the cursor is placed within the text box to submit feedback, but skips over the option to select the user’s experience (happy, neutral or sad).

WCAG 2.0 Reference:

1.3.2 Meaningful Sequence

Recommendation: Begin the tab sequence at the start of the modal so that the screen reader can access and interact with all content from top to bottom.

Issue 10: [\[i\]](#) **NO FIX**

Survey progress: Leave feedback

Tools used: NVDA + Firefox

Reviewer(s): #4

Description: The three icons meant to convey the user’s experience (happy, neutral or sad) are only graphic representations for the sighted user, and there is no explanation as to what information each icon conveys.

Please note, emoji icons should not be used on GoC sites. It is acceptable for service industries (i.e. fast-food restaurants, etc.) because it gives an idea on, for example, how staff performed that day. But when on a page presenting

information, a frown may imply, for example, that the information is wrong, that the conclusions given by the information were not to the users liking, that the presentation was bad, and/or that it was hard to find the information.

WCAG 2.0 Reference:

- 1.3.1 Information and Relationships
- 1.3.3 Sensory Characteristics

Recommendation: Completely remove the emoji icons/visuals.

Issue 13: [i] **DONE**

Survey progress: Landing page

Visual check/Tools used: NVDA + Firefox

Reviewer(s): #4

Description: The “LOG IN” button is coded incorrectly as an unordered list item and receives an HTML validation error.

WCAG 2.0 Reference:

- 1.3.1 Information and Relationships
- 4.1.1 Parsing

Recommendation: Remove unordered list tag () that surrounds the “LOG IN” button, OR surround the link () tag with a list () tag.

Issue 14: [k] **NO FIX**

Survey progress: Landing page

Visual check/Tools used: NVDA + Firefox

Reviewer(s): #4

Description: Three (hamburger) menu list item links are missing a parent list tag and receives an HTML validation error.

WCAG 2.0 Reference:

- 1.3.1 Info and Relationships
- 4.1.1 Parsing

Recommendation: Surround the three list items with the appropriate ordered or unordered list tag.

Issue 15: [i] **DONE, but left order as-is**

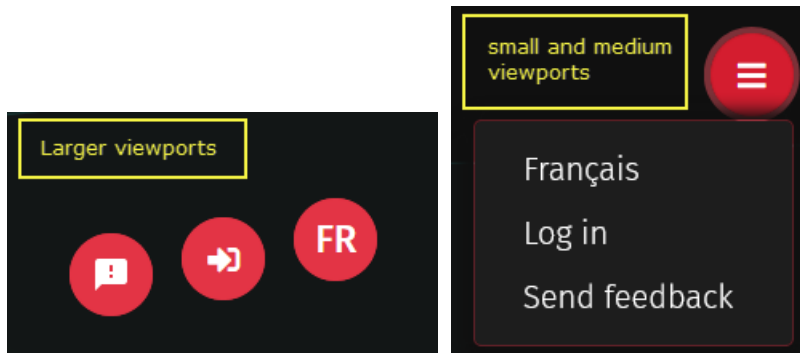
Survey progress: Landing page

Visual check/Tools used: NVDA + Firefox

Reviewer(s): #4

Description: Navigation menu items appear as graphic icons at larger viewports, but without the descriptive text labels that appear on the collapsed menu at smaller viewports. The “Send Feedback” icon is not labelled as such, but instead the URL “portal.cloud.statcan.ca link” is read by the screen reader. The link order

is reversed, where the collapsed menu links are top to bottom, but the expanded icons are right to left.



WCAG 2.0 Reference:

- 1.3.1 Information and Relationships
- 1.4.13 Content on Hover or Focus
- 2.4.4 Link Purpose (In Context)
- 3.2.4 Consistent Identification

Recommendation: Ensure menu links are labelled and identified consistently and in the same order, regardless of viewport. Consider adding text description on hover for icon links.

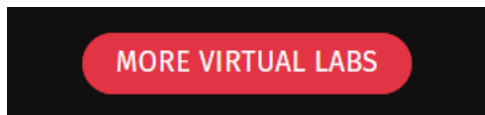
Issue 16: [\[m\]](#) **DONE**

Survey progress: Landing page

Visual check/Tools used: NVDA + Firefox /WAVE

Reviewer(s): #4

Description: “MORE VIRTUAL LABS” button text fails colour contrast as normal size text, with a contrast ratio of 4.33:1.



WCAG 2.0 Reference:

- 1.4.3 Contrast (Minimum)

Recommendation: Increase colour contrast between foreground text and background button, in order to ensure a contrast ratio of at least 4.5:1.

Issue 17: [\[n\]](#) **NO FIX**

Survey progress: Landing page

Tools used: NVDA + Firefox

Reviewer(s): #4

Description: When Cascading Style Sheets (CSS) are turned off, they SVG-based icons and logos display full-screen width, which noticeably degrades the readability of the page.



Compute



WCAG 2.0 Reference:

1.3.1 Information and Relationships

Recommendation: Known issue with SVG based images. Consider using jpeg or png based images.

Issue 18: [\[o\]](#)

Survey progress: Landing page

Tools used: NVDA + Firefox

Reviewer(s): #4

Description: Heading levels one and two do not receive visible focus when tabbing. Headings that are level three, however, do receive visible focus.

WCAG 2.0 Reference:

2.4.7 Focus Visible

3.2.4 Consistent Identification

Recommendation: Remove the focus visible as most often headings are not tabbable elements, but if focus has to remain, ensure that all heading levels receive visible focus uniformly.

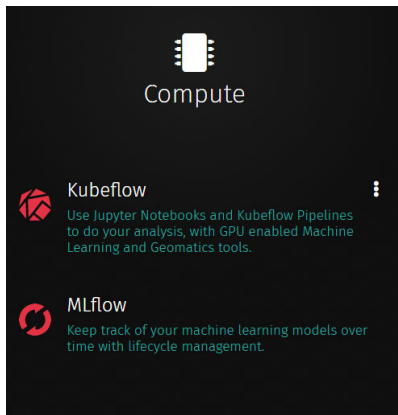
Issue 19: [\[p\]](#) **NO FIX**

Survey progress: Login and Landing pages

Visual check/Tools used: Colour contrast analyzer

Reviewer(s): #5

Description: The green text on the dark black background does not meet contrast minimum standards. The body font size of the paragraph text is also too small and may not be legible for persons with visual impairments.

**WCAG 2.0 Reference:**

1.4.3 Contrast (Minimum)

Recommendation: Select a foreground text colour that meets minimum contrast standards against the black background.

To enhance the readability of the image and text, increase the body font size to at least 16px to be legible.

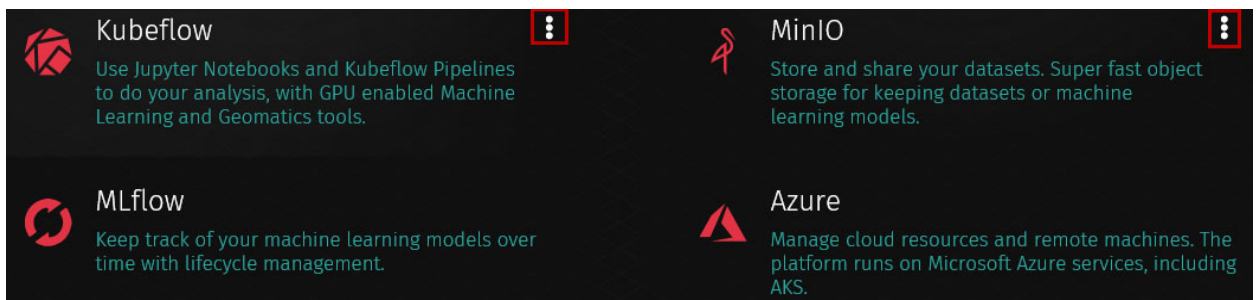
Issue 20: [\[9\]](#)

Survey progress: Landing page – Kubeflow, MinIO and R-Shiny options (3 dots)

Visual check/Tools used: JAWS + IE

Reviewer(s): #3, #4

Description: All pop-up options (the three dots) require explicit labels associated with the product they are related.

**WCAG 2.0 Reference:**

3.3.2 Labels or Instructions

Recommendation: Ensure explicit labels are provided for the pop-up options.

- Kubeflow – “Request a Kubeflow workspace”
- MinIO – “Pachyderm or Premium options”
- R-Shiny – “Add a dashboard”

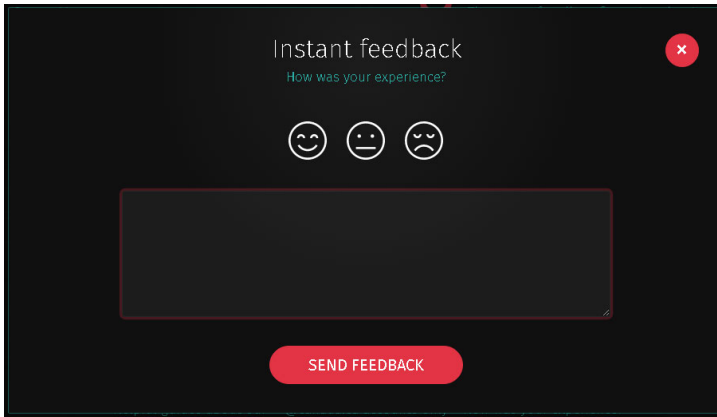
Issue 21: [\[1\]](#) **DONE as per #9 above**

Survey progress: Landing page – Support section (Leave feedback window), Account window (top right button of the portal), Request a Kubeflow namespace

Visual check/Tools used: JAWS + Chrome

Reviewer(s): #5

Description: When the windows are displayed/accessed, focus is not placed at the top of the windows, which impedes the natural flow of user navigation (top to bottom, left to right).



WCAG 2.0 Reference:

2.4.3 Focus Order

Recommendation: Ensure focus is placed at the top of the window when displayed/accessed, or on the first heading level within the window, for example “Instant feedback”.

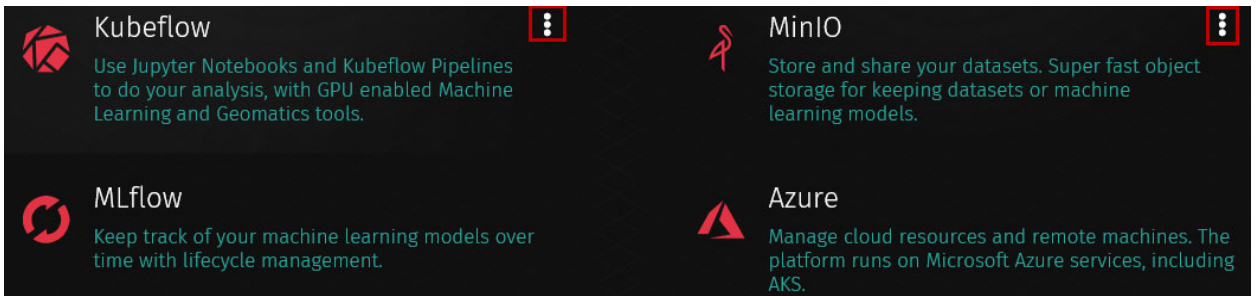
Issue 22: [\[s\]](#) **NO FIX**

Survey progress: Landing page – Kubeflow and R-Shiny options (3 dots)

Visual check/Tools used: JAWS + IE

Reviewer(s): #3

Description: The pop-up options (the three dots) for Kubeflow and R-Shiny only contain one item. If only one item is to remain, then the window is not necessary, and a link action should instead be provided that directs users to the proper location.



WCAG 2.0 Reference:

2.4.4. Link Purpose

3.3.2 Labels or Instructions

Recommendation: To discuss with client as to how many options will be provided for the pop-up options.

Issue 23: [\[t\]](#) **DONE**

Survey progress:

Landing page – Compute section – Kubeflow (Request a Kubeflow namespace)

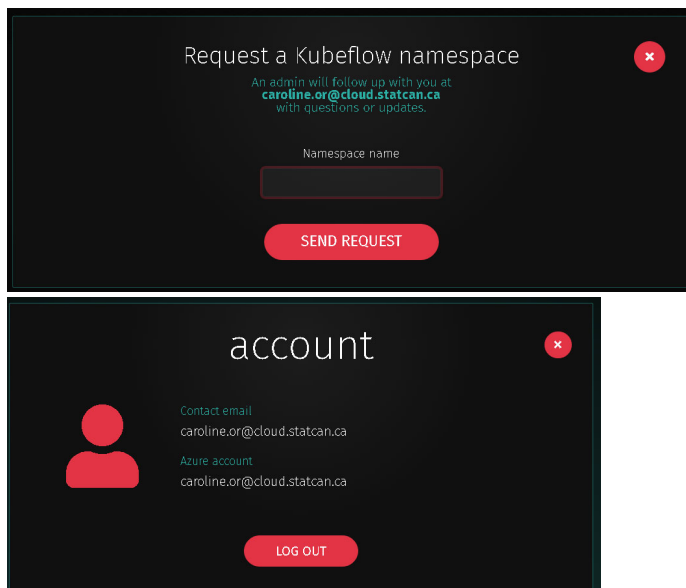
Landing page – Account link (Top right button of the portal)

Visual check/Tools used: JAWS + Chrome

Reviewer(s): #5

Description: When navigating the pop-up windows with the arrow keys, a clickable element is identified at the end of the window, which has no role/action.

Also, when the request window is closed, users are directed to the top of the landing page, whereas focus should remain on the button topic selected.



WCAG 2.0 Reference:

3.2.1 On Focus

Recommendation: Please remove the clickable function within the windows, or ensure a role/action is provided to the element.

CEA to recommend the WET4 lightbox design, and code to be provided to resolve the clickable element (from MP).

Issue 24: [u] DONE

Survey progress: Portal wide

Visual check/Tools used: JAWS + IE

Reviewer(s): #3, #4, #5

Description: The majority of portal content do not follow a proper hierarchy structure – heading levels are skipped, H1's are duplicated, headings do not exist, or pages do not begin with a heading level one (H1), for example:

- More Virtual Labs (<https://digital.statcan.gc.ca/hub-and-labs>), User Guide - Getting Started (<https://statcan.github.io/daaas/en/>) and R-Shiny (<https://statcan.github.io/daaas/en/2-Publishing/R-Shiny/>) - All headings are identified as H2's.
- Login and Landing page – “Advanced Analytics Workspace” should be identified as H1. Under H2 “Support”, “User guide”, “Slack chat” and “Leave feedback” should be identified as H3.

WCAG 2.0 Reference:

1.3.1 Info and Relationships

Recommendation: All pages must follow a proper, logical hierarchy structure. Please review all web page content to ensure headings are available and follow a proper hierarchy structure.

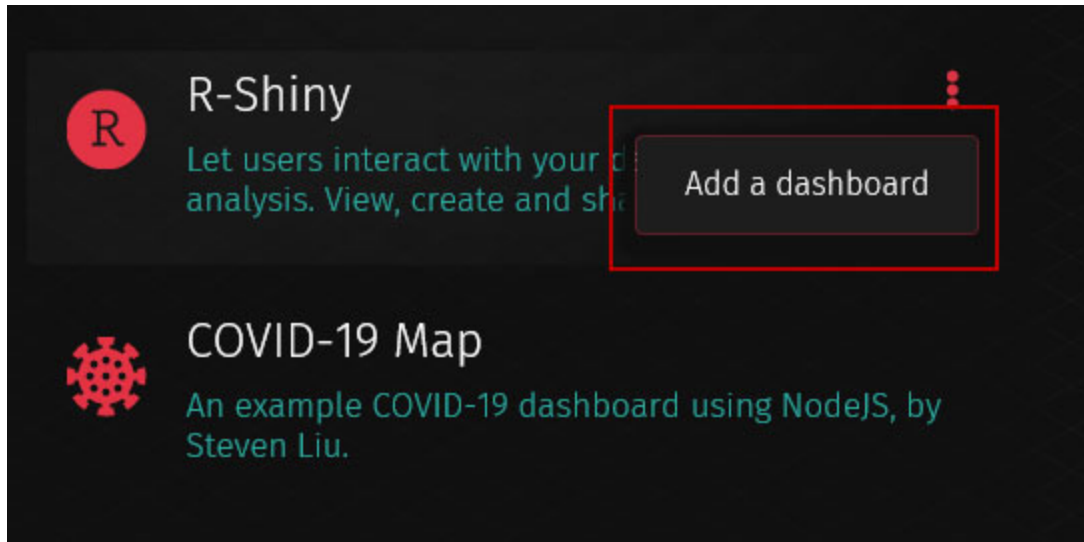
Issue 27: [v] DONE

Survey progress: R-Shiny “Add a dashboard” link

Visual check/Tools used: JAWS + IE

Reviewer(s): #3

Description: The link leads users to a R-Shiny user guide, so the link text should be improved to reflect the location the user will be directed to.



WCAG 2.0 Reference:

2.4.4. Link Purpose

Recommendation: Change the link text to something that reflects the page the user will be directed to, for example, “How to deploy your R-Shiny dashboard”.

[a] Sounds good, thanks!

[b] Since the overall design and experience is quite different than typical GoC websites/tools, the FIP is featured as part of the hero for branding and as a proud symbol of STC.

I don't believe the risk is high (or even moderate) that users will be stuck once the page loads for a few reasons:

- 1) The red buttons (LOG IN or the top 3 apps when authenticated) function as a call-to-action buttons which promote action and progression through the experience.
- 2) Scrolling/swiping is a common behaviour that can be reasonably expected to happen once the page loads, or even if there is confusion.
- 3) There is a small graphic design arrow to help guide visual users.

We do not yet have evidence to show that this is a problem, but if sufficient user feedback and usage statistics demonstrates this we are happy to revisit it.

[c] This functionality is already implemented, and re-uses the Bootstrap code.

[d] Sounds good, thanks!

[e] Sounds good, thanks!

We will identify external links for screen readers.

UPDATE: This has been fixed, and we have also applied the fix to all links on the portal.

[f] Sounds good, thanks!

IE11 is a real piece of work, good catch.

[g] Sounds good, thanks!

We will update the messaging to make it more clear.

[h] Sounds good, thanks!

We will move the focus backwards.

UPDATE: The text area has focus so users can start typing without having to manually focus on the field.

Since >90% users are not using screen readers, we want to maintain a positive experience.

Instead of moving the focus, we moved the mood icons below the text area. This addresses the issue and keeps the original intent.

[i] The "mood" options are intended to provide personal feelings and/or additional context to the feedback that is entered. On its own, I agree the "mood" does not provide actionable feedback.

We are experimenting with new ways of facilitating user feedback with as few barriers-to-entry as possible.

It's possible that the "mood" metric might be removed in the future, or changed, but it requires significantly more testing.

For the time being we will leave this in here, but ensure to address Issue #9.

[j] Thanks, we will add the missing tag.

[k] Thanks, we will add the missing tags.

UPDATE: After investigating, the hamburger menu items already have the appropriate tags.

[l] This was mentioned in issue #4 above, and will be fixed along with it.

UPDATE: title attributes have been added to the icon buttons.

We will keep the hamburger menu order as-is because our goal is to have the language toggle first in the list, while also keeping the icon button in the top-right corner.

[m] Sounds good, thanks!

The colour will be adjusted to hit 4.5:1, and re-tested in other areas where the colour is used.

UPDATE: The new red is #e22c3e

[n] SVGs are being used to deliver a more efficient and consistent display for images across all viewports.

We will ensure that the DOM flow is correct and that the content is semantically natural.

(The issue being described effects our Statcan website as well since it uses SVGs for the FIP)

[o] Sounds good, thanks!

We will revisit the heads and ensure they are consistent.

[p]The colour contrast is currently 6.98:1 for the issue being described.

<https://webaim.org/resources/contrastchecker/?fcolor=2CAEA5&bcolor=101010>

The default font size renders at 17pt.

[q]Sounds good, thanks!

We will add the appropriate labels.

[r]This was identified in issue #9 above and will be fixed with it.

[s]Although the menus only contain one item, these menus could contain many items.

The purpose of this menu is to append any additional links that refer to resources for the specified item.

In this example, Kubeflow is the main item and it has an additional action. The menu could also have additional links down the road.

The idea is to not clutter the list of items (so they are prominent) and if there are additional actions/resources that they would be appended in a menu.

(All content on this portal is driven by a content management platform and can be managed at any time)

[t]Sounds good, thanks!

We will investigate and fix this up. Not necessary to send code, but thank you anyways!

UPDATE: We were not able to find or reproduce the clickable element at the end of the window.

We have fixed the focus so when the modal closes, the focus remains where it was.

[u]Sounds good, thanks!

We will investigate the issue with the headings and ensure they flow properly.

UPDATE: After investigating the headings, this is the current structure:

H1

H1: Advanced Analytics Workspace

H2

H2: Content

H2: Support

H2: account

H2: Instant feedback

H3

H3: User guide

H3: Slack chat

H3: Leave feedback

H1 seems ok, H2s need to be tweaked and the individual links should be H3s. We'll fix them up.

[v]Sounds good, thanks!

We'll update the text to be more appropriate.

UPDATE: Text has been updated to:

- Comment déployer un tableau de bord R-Shiny
- Comment déployer un tableau de bord R-Shiny