

PowerBI and Accessibility - Web community

Past meetings

- [Inaugural discussion meeting - March 8, 2024](#)
- [Health Infobase presentation - April 17, 2024](#)

Inaugural discussion meeting

March 8, 2024

Discussion topics:

Existing accessibility and usability issues with PowerBI

- Privacy issues flag - disaggregated data
- Program data - DND example
- Examples List:
 - [Equi'Vision: An Employment Equity Tool - Canada.ca](#) (ESDC)
 - COVID: [COVID-19 epidemiology update: Summary — Canada.ca](#)
 - GAC: [DevData dashboard: Global Affairs Canada](#)
 - [Canadian Survey on Disability, 2017: Data Visualization Tool](#)
 - [Report: 2022 - Demographic Breakdown - Graphs for PSES Analytics-Canada.ca](#)
 - Ag examples: sharepoint + powerBI

Cultural issues:

- Improve process - coordination with web teams
- Accessibility of the SAAS/Tool vs. content added by the organization
- Getting involved too late - how do we reframe?
- Accessibility Plans and legislations
- New shiny tool, pressure to use vs to keep accessible
- Delivery pressure
- Movement to use more data across GC, now more
- Education on accessibility - push back, vs a why/how; context of being more inclusion and legal context
- Traffic to the page post launch...
- Launch to Open data

Design issues:

- Has anyone done usability testing with this tool? Is this a good way to receive information? Or is it just popular?

- Does the tool fit the problem or data space?
- [Roles and responsibilities: Guidelines for health data and dashboards on Canada.ca](#)
- Update periods, automation vs. download datasets
- Context of use isn't known

Accessibility issues:

- Example statement that the technology is not accessible: [Power BI - Accessibility | Office of Information Technology](#)
- Accessibility statements MS on PowerBI: [Overview of accessibility in Power BI](#)
- Accessibility literacy (Uneven)
- Complex automatically updating data
- iFrames: [WebAIM: Creating Accessible Frames and Iframes.](#)
- Connecting data in PowerBI back to the site; not always necessary
- Specialized skill set - not staying
- Archiving...raw data, missing visualizations, replication of site, etc
 - Survey data and then collecting data back into tool
- Keyboard traps, bad labeling, not being able to know where you in the dashboard/visualization, issues with **cognitive load** (depending on amount of data), losing functionality of filtering/matrix filtering
- Complex tables, multiple names and header navigation issues
- Larger visualizations harder to navigate for unsighted users - they have to map cognitively in their mind the context
- PowerBI - number rounding, issue with large or precision numbers... static version needs to match or be annotated
- Simple things that break - table transition tool... repeated headers
- Harder to get out of visualizations or complex tools. The back direction is unclear. Exiting the table is difficult.

Potential fixes for issues

- Keep an eye on usage of and traffic, post-launch and with launch of new data
- List:
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 - HTML static version in addition to a PowerBI
 - Issue: support for user interface
 - Resource intensive space: provision of accessibility review,
- For complex tables provide summaries to help with cognitive load
- Static export... provide vs. the dashboard. Manageable live data vs. static on a schedule
- Folks have reached out to GAC, IRCC and other departments,
- YALE? [Power BI Accessibility Guidance | Usability & Web Accessibility](#)
- Training: [Fundamentals of Interacting with Power BI and Creating Reports for Headquarters](#)
- [Power BI](#)

- [Making data visualizations accessible to blind and visually impaired people](#)
- Tactic: Accessible review + sign off
- Departmental examples and links (internal vs external):
- Departmental experimentation/pilots

Action items

1. Ask PHAC data hub to come to a future meeting; Usability testing?
2. Accessibility guidance around container vs. content
3. Principal Publisher context for AEM and WET
4. Could we meet with the AAAC and develop a guide for PowerBI?
5. Heads of Comms and PowerBI - accessibility demo?

Other

PP team demoed adobe analytics connector for PowerBI at their monthly meeting 2024-03-20.

Meeting with Health Infobase team

2024-04-15

Guest speakers: Scott (manager), Jennifer (business manager), Saqib (analytics), Benoit (sr developer), Haley (comms)

The Health Infobase team is based out of PHAC, but serves whole health portfolio, including ISC

Around 2016 or so, they were delving into data visualization using things like D3 javascript framework. Steep learning curve, but quite powerful.

Covid-19 reports

- At the start, they were coded every day and data wiped every day
- data being put out in tabular format, no graphs or maps, lacking good presentation.
- For 2 weeks in March, they dropped everything and started working on the map with D3

D3 allows you to bind data to elements on the page. Creates dynamic text, gives the ability to play through the graph of numbers over time, etc.

Then there was a big push to get the data into Canada.ca. This was done using an iframe to pull in the content, but this was not ideal. Ensured the iframe was accessible, but still doesn't work for more than a single graphic. Eventually pointed users to view dashboards on health infobase.

Almost all of the page is dynamically generated based on a CSV in Google Sheets
Data is easily updated. Epidemiologists can update it themselves without involving the developers. They would enter the numbers in Google Sheets, then when approved they change the date field and it gets sent automatically to the live version.

There are many other data tools: opioids and stimulants, covid vaccination, breastfeeding (more static), monitoring water for pesticides (data from ECCC)

Now using modular code for a lot of the dashboards and fine tuning.

Questions around accessibility when slicing and dicing the data:

- The iframe on Canada.ca was made accessible, but agreed that not all are. But infobase itself doesn't use iframes. It was just a method to get it onto Canada.ca
- Ensuring colours are compliant, data table adjacent to the figure, screen reader accessibility, etc.
- Use actual screen readers to test for WCAG AA standard

Analytics

- The team uses Microsoft Clarity to get recordings of visitor interactions with the page

- Great tool to get an idea of how people interact with the page, but lots of data to watch through. Can use Copilot (Chat GPT) to create a text summary to focus in on key findings. Also has a dashboard to show things like numbers of rage clicks, dead link clicks, etc.
- Heat maps showing how far people got down the page

The site and how they work with clients:

- Try to use CSV files. Sometimes have to use APIs
- Sometimes clients already have a data story they want to convey, but in other cases it takes a brainstorm to discuss the data and deep dive to surface the story

They plan to include their modular code in Github. Would be great if we could all help work on this code and get it in **WET**

Timelines and process:

- Can usually get out a new product in about a month, depending on complexity and internal delays like approvals and translation
- Data blogs can be done in a day or two
- Accessibility checks done on each product, not the overall platform

Some products are quite creative. Working on one now with a virtual food stand.

There are about 20 people on the infobase team, including contractor and students

- Students are a huge help. Onboarding process is about 2 weeks. Lots of great students from Heritage College. Even after first year, they have the ability to make these visuals.
- The team is usually working on 30 or 40 projects simultaneously.

Meeting with **Data community**