Toronto Police Service

Home page Analysis

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Executive Summary

This report details an in-depth and critical analysis of the home page of Toronto Police Service's Public Safety Data Portal current website. The site features great amount of data that presently allows users to browse several crime records and be aware of trends.

The in-depth analysis was conducted as a combination of different methods (records of which can be provided at request)

- Persona creation
- Heuristic analysis
- Competitor review
- 5 user interviews in the streets of Downtown Toronto

These observations were used to distill a lot of findings about the design, interaction and website goals. This report highlights some of the bigger issues that, if addressed, can massively improve the user experience. The recommendations included here address each of the findings and issues.

In order to help with internal discussions about the learnings and recommendations, the report also includes basic UX laws and facts that are followed across the globe. These laws are merely helping tools that provide confidence and direction when implementing design changes

Scrolling Page Format



- While most users tend to scroll and explore websites, especially on their first visit, the TPS home page does not have any of the important content (like data analytics) or actionable pieces (like buttons, maps etc.) above the fold.
- Research from various organizations and usability standards show that advertisements or updates like the "What's New" section do not receive a lot of user clicks, and therefore, users always end up looking for what are they expected to do. Here, though the website's goals are to show live crime trends and create confidence in users about the policing force, this is not established by the top section and therefore its position should be rethought
- Additionally, an important piece of information like contact details to reach Toronto police officers is at the bottom of the long scrolling page, where most users might not reach

FACT: "A RECENT GOOGLE STUDY REVEALS THAT CONTENT APPEARING ABOVE THE FOLD HAD A 73% VISIBILITY, WHEREAS THOSE BELOW IT HAD A 44%."

- Note this is not a typical product website where we are looking for constant user engagement like Facebook, Amazon etc. However, it is vital that users have upfront access to what's most important
- Most important calls-to-action (like viewing a yearly summarized crime report or interact with a map) should be above the fold
- Brief information about the website's goals and its offerings should be above the fold to make the experience non-disruptive
- Provide access to TPS contact information higher up (or right at the top) where users can easily access it without searching. This will be handy and necessary when users want to reach a police officer in times of emergencies

02 Inconsistent Visual Language



FACT: "RESEARCH AT MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY STATES HOW VISITORS TAKE LESS THAN TWO TENTHS OF A SECOND TO CLICK SOMEWHERE MEANINGFUL ON A WEBSITE."

- The three highlighted sections provide links to different pages, without providing specific and clear context about next steps, leaving the design vague, open to misinterpretation and failing to communicate its goals
- Unclear information grouping in the sections make it difficult to differentiate between similar or related items. Example: Difference between "Major Crime Indicators", "Homicide" and "Traffic" among the two content sections - "Open Data" and "Data Analytics" is not clear
- It is not clear why each section has the four top options displayed and others hidden under "Explore More". Some users might not even notice the "Explore More" button, therefore, potentially preventing them access to relevant information

- Use relevant icons/ imagery to clearly inform users about the objectives to direct their expectations and also help them create an informed first impression, as most people relate faster with relevant images
- Select simple words and phrases and avoid using internal language, to enrich visual context. Example: "Homicide Report 2018-19"
- Use helping text or infographics to summarize information about following screens to improve user confidence before they click on something
- Categorize related and/ or similar content together, to remove redundancy and inform users about the potential relationship. This would also reduce the number of clicks and time spent in discovering related items. Example: Consider grouping open data and data analytics for "Homicide" together as two items under a single tab

03 Random design alignment



- Figure 1 (Left): Confusing layout of the "What's New" section would block users from using it or interacting with it. This means that users might scroll by it or spend too much time figuring out how to use the information in this section. The large block labelled "Major Crime Indicators" is not actionable and occupies important real estate on the top which might lead to what is called "banner blindness" (i.e. become a barrier between user and usable information)
- Figure 2 (Middle): Poorly positioned text block obstructs graphical images and charts in the background, that would prevent users from fully being able to see and make best use of the data. Lack of alignment and symmetry between design elements makes the section look disorganized and sloppy
- Figure 3 (Right): A large gap between section header ("Data Analysis") and its underlying elements, makes it difficult to understand how the items belong together. It might also be interpreted as the four items are standalone or belong to a different section. There isn't enough balance in the design structure. This is true for most of the sections on the home page - "What's New", "Open Data", "Maps" etc.

FACT: "STUDIES CONDUCTED BY VARIOUS ORGANIZATIONS SHOW THAT USERS WILL AVOID INTERFACE ELEMENTS WITHOUT A CLEAR MEANING."

- Occupy white space to properly show important information like charts, graphs, tables etc.
- Strictly avoid sections that overlay other content pieces (text/ image video/ chart etc) so users aren't expected to adjust their default screen settings or refine through cluttered design.
- Use size, color and font to place related items together and clearly communicate their association, breaking any barriers of understanding and usability. A clear distinction and relation should be established between section headers and components contained within it to avoid any confusion

A Navigation & Menu Hierarchy



• The number of menu items in the global website navigation bar are higher than what design principles suggest as best practices. Due to the number of items users would rarely interact with items on the farright as they move from left to right



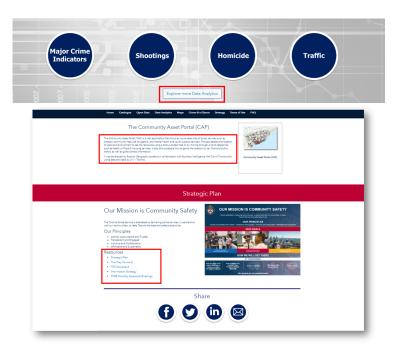
- Use of long phrases ("Crime at a Glance") and improper slang (symbol "@") deter users from navigating easily and confidently. A break in language consistency could also be perceived as an error/ missing text
- Expansion of menu items demonstrates another example of data obstruction and poor usability (figure on right). It prevents users from seeing the text/ chart/ image behind it. Display of secondary nav items also appears confusing as they partially appear under the next item on the right (i.e. "Crime @ a Glance")
- The hero image of the TPS car with their goals/ mission overlaying it, occupies a large portion in the top-most section of the screen. Design best practices show that hero images with text and/ or action items are usually ignored by users and could also be elements of distraction when in the experience

FACT: "THE TIME IT TAKES TO MAKE A DECISION INCREASES AS THE NUMBER OF OPTIONS INCREASES."

- Present only 3-5 items/ category making it easier to read, grasp and remember
- Prioritize items that are most important to users most visited and actionable pages
- Use shorter phrases for menu item headers
- Eliminate repetition of content through appropriate groupings and labeling
- · Consider using other ways to display mission/ vision/ goals and free critical area
- Horizontal orientation can be a better option to display secondary nav items, to avoid improper display and effectively maintain reference to primary nav item

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Insufficient vision accessibility awareness



FACT: "ACCESSIBILITY, USABILITY AND INCLUSION ARE CLOSELY RELATED ASPECTS IN CREATING A WEB THAT WORKS FOR EVERYONE."

- Insufficient color contrast of the button labelled "Explore More Data Analytics" on the gray color would fail for users with vision impairments (low vision, color blindness etc.). Additionally, this might not work users with good vision if they are in a bright light setting
- Text size under "Community Asset Portal" is too small, especially in comparison to other text on the screen. This would make it difficult for people to easily read. It is a known fact that most web pages load in a default size and people (especially the older generation) do not change those settings. Therefore, valuable content is deemed unusable
- Another instance of poor contrast and visibility is the group of links under "Strategic Plan" that, at first sight, do not appear as links, as the surrounding text is similarly colored. People with vision impairments could find it hard to recognize them as links

- Visual representation of images, text, buttons and any other design and content element should have sufficient and appropriate contrast to make readability easy for users of varying vision capabilities. Google developer offers an "Accessibility" tag to run an accessibility audit for a given web page
- Avoid small font sizes by using the default font size (16 px) so that there is basic readability. At the same time, if users wish to further enlarge, they can do so without losing readability, functionality and clarity
- Distinguish clickable items from other content using color, typeface and formatting guidelines. Example: The given set of links can be underlined and/ or be in a different shade of blue to indicate they are clickable

Outdated website design



- Use of lots of outdated design components like circular buttons, disparate background images, large hero image, module tabs, outmoded colors etc. makes the website look like it hasn't kept up with the fast growing digital world. This is not just an aesthetic issue, but it could also lead to users losing trust in the website's credibility and recentness of the data
- Use of outdated web design has also led to reduced speed in loading larger components of the data, as shown in the far-right figure. Given most websites and complex data reports load almost instantaneously today, reduced speed can heavily impact the way users interact with specific parts of the experience. If this pertains, users might decide not to visit the site at all
- Having briefly reviewed the iOS mobile web experience, it is seen that the design and content on the website is very different from that on the mobile. The experience is not responsive, leading to difficulty in reading and viewing all content organically

FACT: "WEBSITE DESIGN IS AN IMPORTANT FACTOR FOR DETERMINING CREDIBILITY FOR 48% OF VISITORS."

RECOMMENDATIONS

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- Adapt to newer and modern design standards of design by conducting research on industry standards for web design for public service
- Do not nest multiple elements together like tabs, charts, text etc. inside a table. This reduces maintenance efforts and improves loading speed
- Specifically, avoid loading charts inside an outer design element to improving speed
- Use design frameworks (example: Bootstrap) to create responsive website easily and quickly, without additional effort or resources