Cognitive Walkthrough Report

Prepared for the City of Vancouver

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Introduction

Conducting a Cognitive Walkthrough to Evaluate User Experience when Completing a Task on cityofvancouver.us

The City of Vancouver's website is used by many residents for different reasons. One important reason for users to access the site is when they need to report a problem in their neighborhood. In this cognitive walkthrough report, the key task of reporting a broken traffic light has been selected, and through demographic research, a target user persona has been identified.

The walkthrough highlights experiences through the lens of the target persona in reporting a broken traffic light in their neighborhood.

After conducting the walkthrough, the results were analyzed and recommendations have been made that can improve the user experience and ensure greater success when trying to accomplish a task on the site such as reporting a broken traffic signal.

Methods

Streamlined Cognitive Walkthrough: A User-Centered Approach

Q: What is a Cognitive Walkthrough?

A: An approach that involves identifying a target user, typically through research, and completing a goal task with that user in mind by asking two key questions at each step: 1) will the user know what to do at this step? and 2) if the user does the right thing, will they know that they did the right thing and that they are making progress towards their goal? (Spencer, R. 2000).

Why these questions?
By asking these questions, the evaluator can put themselves in the place of the target user and keeps the user's assumed abilities, skills and potential difficulties or breakdowns in mind.

Q: What does the evaluator do?

A: The evaluator goes through each step of a task with the goal of completing it, while asking the questions at each step, in an effort to determine 1) if the target user would be able to complete their goal, 2) how the user is able to move through each step of the task, 3) if the user knows they are making progress towards their goal, and 4) if the user is able to accomplish their goal and know when they have accomplished it.

What will the results show?
The evaluator examines the results and offers recommendations that can be acted on to improve the user experience and help ensure that target users can complete their goals.

Target User Persona

◌ Margaret Lanterman, Age 61, Single, Long-term Vancouver Resident, Moderately Tech Savvy

Margaret is a long-term resident of the city of Vancouver. She moved into the area from Seattle 15 years ago in search of a quieter, small town feel. Now that she is retired, she is **actively involved in her community**, often volunteering for gardening and clean-up events in local parks in the area. She lives in the Cascade Park area of Vancouver in a mature residential neighborhood. She chose the neighborhood to settle in because it is very safe, is in a quiet area, is well-maintained and offers lots of walking paths.

"Vancouver is a safe, beautiful community and I want to do everything I can to keep it that way!"

Key Area Insights:

Resident Age

38% of Residents are 45 or older

■ 45+   ■ 25-44   ■ 18-24   ■ Under 18

60% of city events are for "community improvement"

2nd Safest Neighborhood in Vancouver is Cascade Park

CITY OF Vancouver WASHINGTON

Target User Task

○ Reporting a broken Traffic Signal in the User's Neighborhood via cityofvancouver.us

What is the user scenario?

In this scenario, our target user has discovered that a traffic light is not working in her neighborhood. Concerned about the safety risk this poses, she wants to report this to the city so it can be fixed. As an involved member of her community, keeping her neighborhood safe is important to the target user.

What are the steps for the user task?

The user must:
1. Log on to cityofvancouver.us
2. Locate the section of the site where a resident can report issues
3. Locate the form to report issues with traffic signals, signs and sidewalks
4. Locate and fill out the form to report the broken traffic light
5. Complete the form fully and accurately and submit the form

Walkthrough Findings

○ Step 1: Log on to cityofvancouver.us

Main Issue: It is not immediately clear where to go to report an issue to the city. Should someone go to safety & services? Should they go to our community? Should they select I want to… from the Find it Fast sidebar menu? It would be difficult for the user, especially one who has not reported a broken light before, to know where they can find a link to report the issue.

Recommendations: Reporting an issue to the city is a common task for many residents; it may be helpful to add a "report an issue" option to the Find it Fast sidebar menu so they can easily find what they need to accomplish their goal.

Walkthrough Findings

○ Step 2: Locate the Section of the site where a resident can report issues with traffic signals, signs and sidewalks

Main Issue: After clicking around on the site, the user eventually finds the option they need under the I want to... sidebar menu, but the menu is not clearly organized, making it harder for the user to find what they need. It is not immediately clear what they need to do on the site to report the broken traffic light.

Recommendations: Organize menus in a logical order, either grouped by category, or in alphabetical order so the user knows how to navigate visually through their options and can easily see what link they should click.

Walkthrough Findings

Step 3: Locate the form to report issues with traffic signals, signs and sidewalks

Main Issue: Once the user finds the option from the menu and clicks it, it is not immediately clear that they have been taken to the page that they need. They may be expecting a reporting form, but instead first see a text-heavy page full of information.

Recommendations: Let the user know they have come to the right place. Either a) put a clear message that the form they need is below the text, or b) put the form first with the informational text below it at the bottom of the page. This way, it is clear to them that they chose the correct link.

Walkthrough Findings

◌ Step 4: Locate and fill out the form to report issues with traffic signals, signs and sidewalks

Main Issue: Once the user scrolls down and finds the form, they are presented with a set list of options. There is an option relating to traffic signals (lights), but the option is followed by "timing issues, damaged signs"– this may leave the user wondering if they have chosen the right option. They can fill in the "details of problem" box, but it may still make the user feel uncertain if they have chosen correctly or not.

Recommendations: Since there is already a list of options, break down the traffic signals, signs and street lights into separate options and eliminate the "timing issues…" text. This will allow the user to feel more certain in their choice and make describing the details of the problem easier for them to do with certainty.

Walkthrough Findings

○ Step 5: Complete the form fully and accurately and submit the form

Main Issue: Correct email contact information is an important aspect of the form. If the user makes formatting errors in their email address, the form offers helpful suggestions on what the user did wrong as seen in images 1,2 &3. However, the form does not verify if a valid email address is used. Successful submission was achieved with using an erroneous email.

Recommendations: It is important that the form verifies if an email address is valid since it is the only required contact information. It is easy to accidentally mistype part of an email address and not notice without verification from the site. By allowing a user to submit without a valid email, the city will have no way to contact the person submitting the issue report.

Recommendations Summary

◌ Consider the following recommendations for ensuring a positive user experience:

1. Make sure that commonly needed links are clear and easy to find

2. Make sure menus are logically organized

3. Make sure that necessary forms are easy for users to find

4. Make sure that form options are simple and straightforward

5. Make sure that forms automatically verify whether important information is valid and typed correctly

Next Steps

Take action on these steps to improve user experience with **navigating** the site:

1. Add a link to report issues directly on the main page, or as a main option on the Find it Fast Menu.

Report an Issue

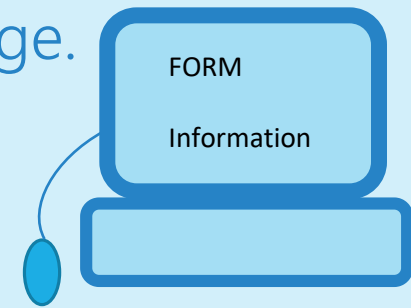2. Organize menu items logically, either by category or in alphabetical order.

menu

A

Z

3. Place forms at the top of the page rather than under a lengthy block of text so that users immediately know they're on the right page.

FORM

Information

Next Steps

◌ Take action on these steps to **prevent user confusion or error** when completing important forms:

1. Break down the list of options in the reporting form further to eliminate confusion; create a separate option for traffic signals, signs and street lights, and eliminate the text suggestion afterwards so users are not deterred if their issue does not fall into that suggestion category.

2. Create a verification system on the form for important contact information. Either have the form verify if an email is valid, or have the user enter their email twice, with the second box for verification that their email was not accidentally typed incorrectly.

Conclusion

○ Through small changes to the site, large improvements can be made for users

The website needs to be more easily learnable, especially for first-time, or infrequent users. There are many options presented to the user, but important and frequent pages/links are not easy to find.
One of the main functions of a city website is to allow users to report city issues, so a clearer and more obvious way to do this is needed.

Our target user, Margaret, would be able to complete the goal task, but not without some frustration, confusion and struggle to find the correct links, pages and options on forms to report the broken traffic signal.
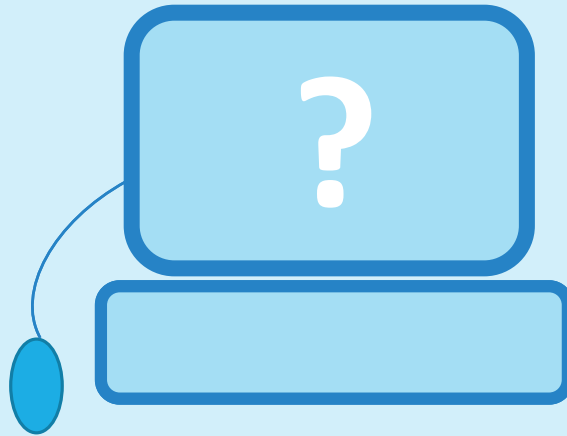
The city services work better when community reporting systems work better; making sure that information on forms is valid is an important way to ensure success for city services and community residents.