Big Reuse Website
Usability Testing Report

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Executive summary

Big Reuse is a non-profit organization that runs different programs in the New York City area to "divert waste to landfills and reduce greenhouse gasses in the atmosphere." (Big Reuse, n.d.) The **Big Reuse** website was created in order to communicate the organization's story and mission, update their activities, and call for donations from the general public, donors, and the environmental community.

A group of three UX researchers and designers from Pratt Institute conducted a usability study to evaluate the content, usability and visuals of the website on mobile and desktop. Six (6) participants were recruited to participate in separated testing sessions in which they were asked to visit the Big Reuse website, and complete a set of tasks. The testing sessions were captured on audio and screen recording with participants sharing their screens while thinking aloud to share their experiences when they interacted with the website.

Based on the findings, four key recommendations were formulated to solve the problems:

- **Recommendation 1:**
  Clarify the meaning of circular economy and better embed resources.
- **Recommendation 2:**
  Optimize the Donate page by making clear how donated money is being used.
- **Recommendation 3:**
  Improve the use of images by avoiding showing text over photos, and selecting photos that are relevant to the presented content.
- **Recommendation 4:**
  Improve the content readability by enhancing visual hierarchy for text and number-heavy content.

By implementing these recommendations, the website's content comprehension, visual impression, and usability will be largely improved, and the overall user experience will be much more pleasant.

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Introduction

Big Reuse is a non-profit organization that runs different programs in the New York City area to "divert waste to landfills and reduce greenhouse gasses in the atmosphere."

The Big Reuse website was created in order to communicate the organization's story and mission, update their activities, and call for donations from the general public, donors, and the environmental community.

This following report describes the testing methodology, process, presents the analysis of the findings from the moderated user testings, and suggests solutions to improve the visual and usability of the website.

Methodology

User testing

The Big Reuse usability study was performed using the *moderated user testing* method, also referred to as a *usability study*. A moderated user test is, "a real-time interview with someone who uses your product or service." (Diallo, 2022) A moderated user test has three key attributes:

- It involves **users** as participants
- It is conducted in a **controlled** setting
- It is actively **moderated** by a researcher

This method is considered the gold-standard in usability testing as the users recruited are representative of one's target demographic and the researcher is able to collect higher volume and quality data given their active engagement in the study. Researchers can observe body language and explore the nuances of a user's behavior via follow-up questions in real-time. Interestingly, a large volume of participants is not necessary for these tests to be effective and valuable. Research conducted by Jakob Nielsen suggests that testing with 5 users often uncovers ~80% of the usability problems within an interface. (Nielsen, 2000) Beyond 5 participants, there are limited additional findings which fail to justify the cost and effort required to run additional tests.

In order to capture feedback from a wide range of participants, we conducted our moderated user tests remotely using Zoom video-conferencing software. Testing sessions lasted for ~30 minutes and users visited the website from either a mobile device or desktop computer. Below, we have outlined our research test plan.

Test plan

Testing goals

We identified three main goals for the usability testing, including:
- **Content Comprehension**: find out if the audiences could understand Big Reuse's story and mission, and the impact of their money donations.
- **Visual Impression**: discover users' impressions of the BigReuse website's visuals
- **Usability**: inspect the "make a donation via the website" workflow

Testing scope   The following pages were the focus of our evaluation:
- Home Page
- About Us
- Our Programs
- Donate Money
- Our Impact

Participants received a testing scenario to frame the study in a consistent manner.

Testing scenario   You are interested in learning about a new non-profit before choosing where to make a donation. A friend suggested you visit this website: https://bigreuse.org/

Tasks   The tasks can summarized as follows:

1   Browse the homepage for 10 - 15 seconds and share your thoughts about the design and content

2   Find out what Big Reuse does and how long they've been operating

3   Find out what impact the composting programs have had on the community

4   Learn more about 'Circular Economy' and its principles

5   Find out more about what your donation might be used for, and start the process of making a donation
   a. After reviewing the donation page, do you feel more or less compelled to donate? Why/why not?
   b. What might compel you to donate?

Following each task, post-task questions were asked to assess
- What did you think about the content on the "Our program" page?
- What was easy to understand in the information/text/content?
- Was anything difficult to understand? Why?
- If you could change anything about that content, what would you change?

At the culmination of the user tasks, four post-test questions were asked to capture summative thoughts and overall impressions from the users. These questions were both open-ended as well as fixed rating questions so that we could provide both qualitative feedback and quantitative metrics to the client.

Post-Test Questions

1. What, if anything, did you find difficult when using the website?
2. On a scale of 1-5 (5 is highest), how easy was it to understand the information on the website?
3. On a scale of 1-5 (5 is highest) would you recommend this site to others who want to learn more about the environment and sustainability?
4. Adjective Activity (Impression Adjectives)
   a. Pick three words from the list that you think are most descriptive of the site.

Participants

We partnered closely with our client to determine the ideal user profile to recruit participants for the study. Given the small sample size of a moderated user test, recruiting a representative user group is important in order to make the findings impactful and relevant. Our client was most interested in speaking with users who regularly made donations to non-profit organizations. Given the focus of our study on content comprehension and the regional-specific nature of Big Reuse, we also created parameters around participant geographic location and familiarity with the Big Reuse website.

Six participants were ultimately recruited for this study with the following profile:

100% Lives in NYC Metro Area
Not familiar with Big Reuse website

5/6 Have made at least a **$200** single-time donation to a non-profit organization.

2 men   4 women

50% Mobile device
Desktop **50%**

Analysis Process

Each evaluator conducted two usability tests. Following each test and a review of the session recordings, evaluators input their notes into a shared Google spreadsheet organized by task. The task organization enabled the team to easily aggregate findings, as well as reference task-specific observations quickly. Once all notes were captured in the Google spreadsheet, quantitative metrics were then calculated from the post-test questions to be used in our overall findings..

Qualitative findings were exported to Figma (a digital collaboration tool) in the form of sticky notes and used for an affinity diagramming exercise across the research team. Affinity diagramming is a method used by research teams to collaborative analyze research findings by clustering findings / observations (post-its) into thematic groups. (Pernice, 2018) Further discussion of these groups and analysis across research teams allows researchers to identify key focus areas and begin to brainstorm potential recommendations. The following section details our overall findings and recommendations based on the results of our analysis.
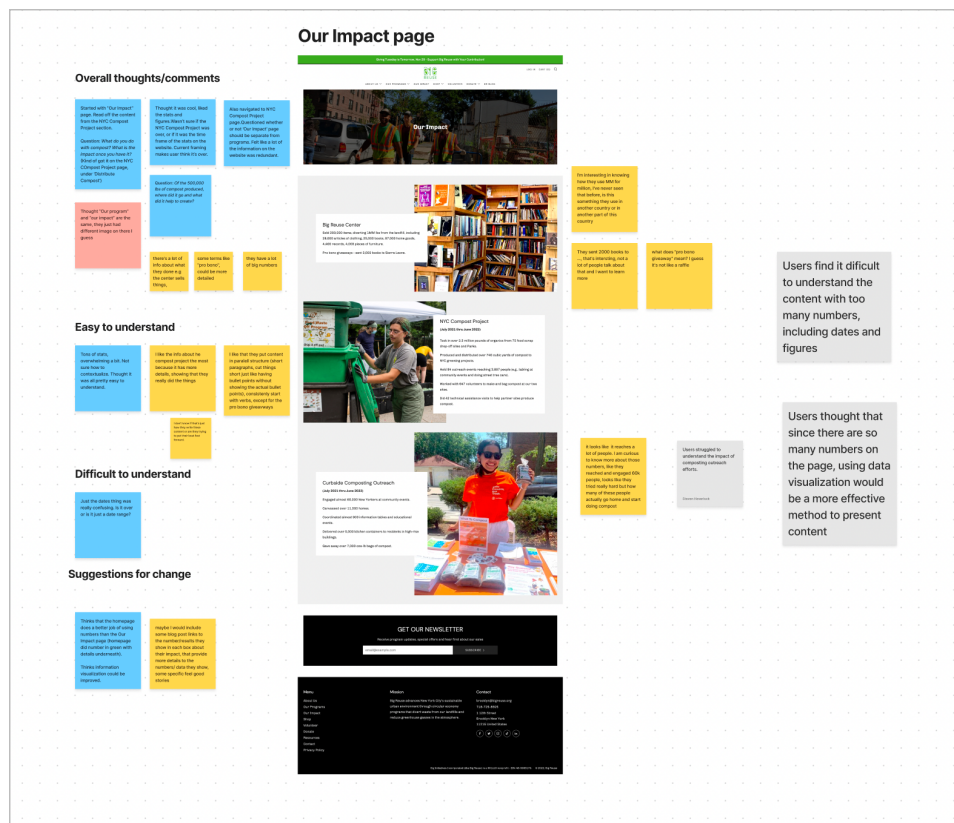
Screenshot from our affinity diagramming exercise in Figma

Results

Overall findings

After conducting 6 testing sessions and analyzing data, we received valuable feedback from users. In terms of **content comprehension**, 50% of users found the website meaningful and approachable. 67% of users shared that visual demonstrations such as statistics and images are what helped them understand the information on the website. Specifically, users enjoyed seeing photos that show Big Reuse's activities and volunteers and find it easy to understand the mission from there. The average rating for ease of understanding was 3.9/5.

For the **website's visuals**, users used similar language to describe their impression with the site. They felt that the website has a simple, modern aesthetic, and overall very visually appealing.

> Overall, it's a clean and modern website.
>
> They put thought into making sure it appears correctly on a mobile screen. Visually it's pretty appealing.

For the **money donation flow**, four out of six users share positive feedback, saying that the interface is clean, which makes it easy and straightforward to donate money.

> I find it straightforward. The interface was clean and minimal
>
> I think it's easy to donate money.

Recommendation 1: Clarify the meaning of circular economy and better embed resources.

Problem: Circular economy definition and resources difficult to locate

The concept of Circular Economy is foundational in understanding the mission and purpose of Big Reuse. However, participants struggled to define and learn more about the concept of circular economy. If one does not understand this term, they fundamentally do not have a clear understanding of what Big Reuse does and how it differs from other organizations in the sustainability space.

This comprehension issue was one of findability - users could not easily locate the relevant information on Circular Economy and ultimately confused its definition with other pieces of content. In our third task, users were asked to "learn more about circular economy and its three principles." This information was located in the 'Resources' page of the website. However, multiple users were unable to successfully navigate to this page during the study. They often confused the principles of circular economy with the three programs that Big Reuse runs. For some users who ultimately made it to the page, they were unable to extract the information easily as circular economy information existed at the bottom of the resources list and required expansion to read more.

Current 'Resources' page houses information about 'Circular Economy' in the bottom module. Users have to click to expand to access the definition and linked resources.
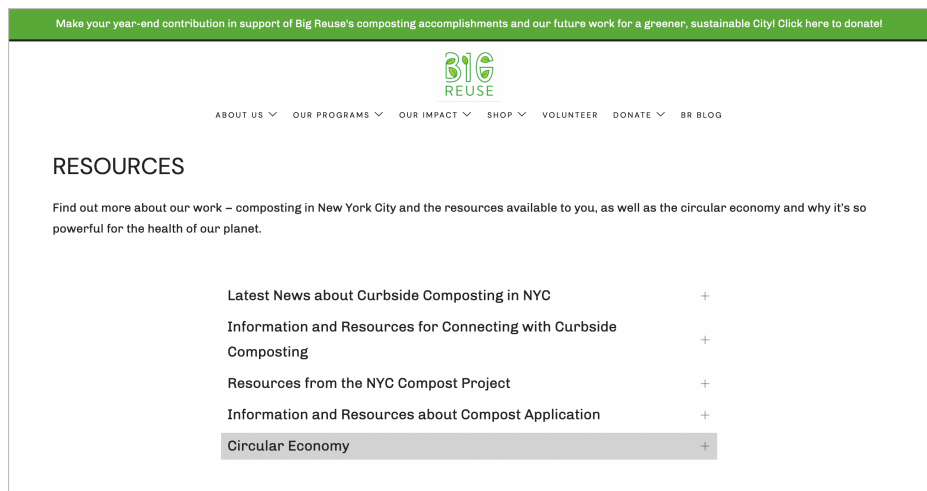
> "
> The way they treat this info now seems like it's an afterthought.
> "

Our Recommendation

We would recommend embedding key pieces of information from the 'Resources' page in other more commonly explored areas of the website.
We think 'Our Programs Overview' would be a strong candidate for placing the Circular Economy definition and resources. Users often went to this page first to seek out information on circular economy, so it would match their expectations intuitively. Furthermore, it provides an opportunity to ground the users in the principles of circular economy before exploring specific Big Reuse programs that help to enact it.

Optimized 'Our Programs Overview' page that prominently displays the definition of 'Circular Economy' and relevant resources to learn more.

Given how circular economy is fairly well-defined as a concept, this content is likely stable enough to embed directly on the most relevant page rather than in a 'Resources' section. Composting resources could continue to exist in the Resources section as that library will likely continue to expand over time. Placing key information in areas that match the users' expectations should greatly improve their understanding of Big Reuse's mission and efforts.

Recommendation 2: Optimize the Donate page by making clear how donated money is being used.

Problem: Money Donation utilization is unclear.

One of the key features of the Big Reuse website is the ability to make a monetary donation to support the organization's efforts and further the mission of Big Reuse. We had users test the donation workflow to see if they would experience any usability challenges when attempting to make a donation. Fortunately, there were no usability challenges that the users encountered - the Shopify donation workflow worked very effectively. However, users struggled to complete the task, "find out what your money donation might be used for." They consistently shared a sentiment that while they did not believe that Big Reuse would use their money for nefarious or irresponsible purposes, it was strange that there was not more clarity around utilization of funds. Detailed information on how donated money would be used did not exist, causing users to question the value and meaning of a donation.
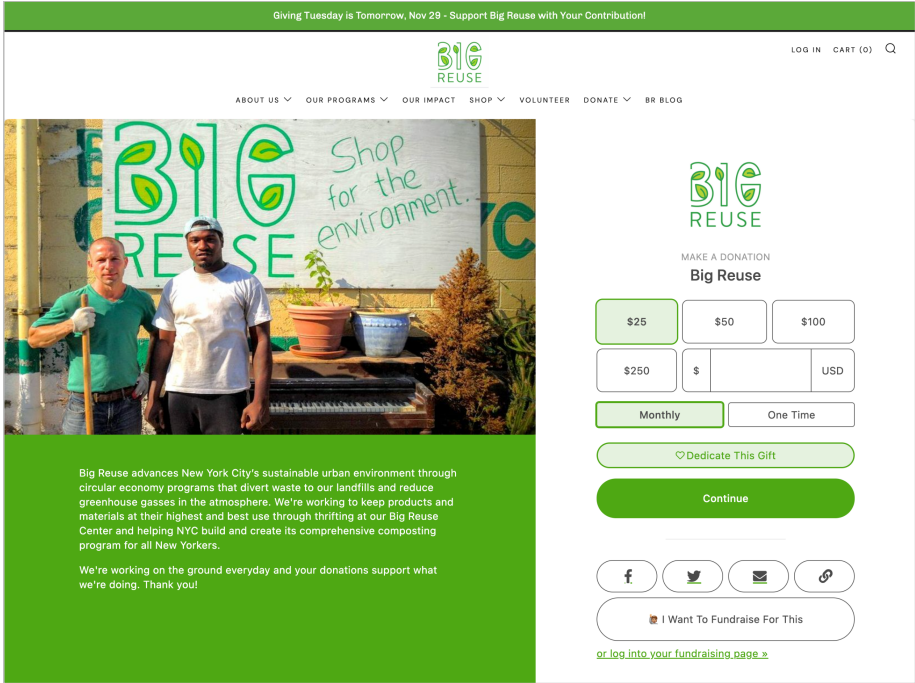
Current 'Donate Now' page features general information about the Big Reuse mission but does not describe how donations may be used in detail.

> I would assume it would go to Big Reuse, but I have no clue how they're gonna use it.
>
> It's a little funny not knowing exactly what your money is going to. I want to see something like, "right now we're focused on x or y"

Our Recommendation

An opportunity exists to clarify either key organizational priorities or describe the value of a donation in more tangible terms. Users shared that transparency compels them to donate, that is - they want to know what their money will support with more detail than the high-level mission statement. We think a $ → X approach would be effective here.

Providing examples of what Big Reuse could accomplish with certain donation amounts would improve transparency around donation purpose. Helping users to visualize and see the value of their donation would likely compel them to donate more and reduce drop-off rates due to absence of information.
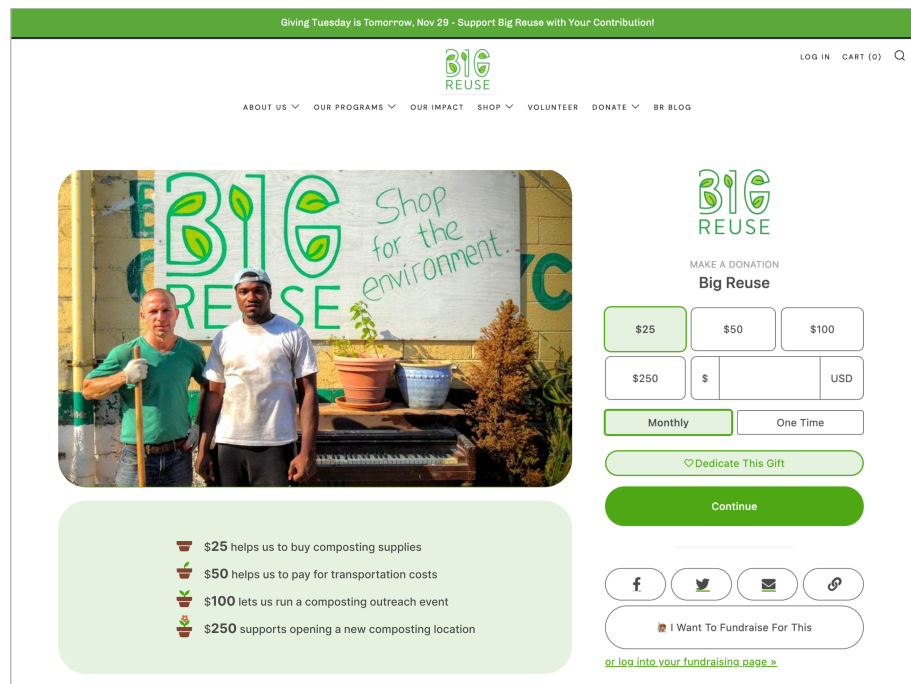
The Optimized 'Donate Now' page features detailed information around how donations of various sizes may be used by Big Reuse.

In the event that it's impossible to quantify the impact of donations at the $ level, an alternate approach could be to regularly update organizational priorities on the donation page. One user suggested that Big Reuse share their latest projects/priorities on the donation page, almost like a call to action. This could be areas in which they are looking to grow, double down efforts, or start new programming. Again, users want to see how their donation will make a tangible impact, beyond the broad mission of the organization.

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Recommendation 3: Improve the use of images by avoiding showing text over photos, and selecting photos that are relevant to the presented content

Images play an important part in communicating a message. They are what users look at before reading the content. On the website, the best uses of images are on pages in which the images reflect the content and support its message. On pages that feature Big Reuse volunteers and activities, users tend to better understand Big Reuse's mission. One user even noted that, "The images help me understand what they're doing."

Problem: Improper image use throughout website

Problems appear on the site where images are displayed as a background of the text, and where images show little relevance to the linked content.

3.1. Users find it difficult to read texts that are displayed over an image.

Three out of six participants (50%) shared the struggle of reading the content on an image. An image background with a lot of details and uneven color caused low color contrast between the text color and the image, making it hard to read. Moreover, users stated that the image in the background created distraction because while they were reading, they were also trying to see the image in the back.
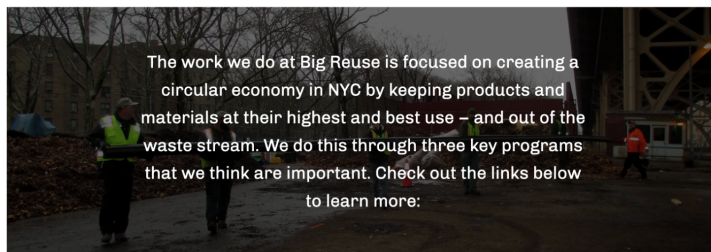

> " It's more difficult to read the text even if the photo is dark enough to see the white text, and also you can't see the image clearly if it's a good image. "
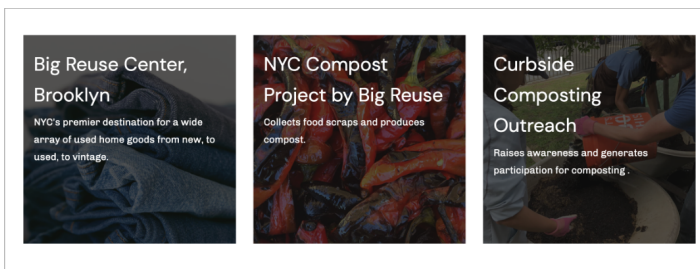
> " With a black overlay, you have to look hard to see the pictures in the background "

3.2. Irrelevance between images and associated content causes confusions for users.

Users commented that some images look general and contain little relevance to the linked content that they think the images were generated from stock photos websites. In addition, there are images on the website that send the wrong message to the audience.
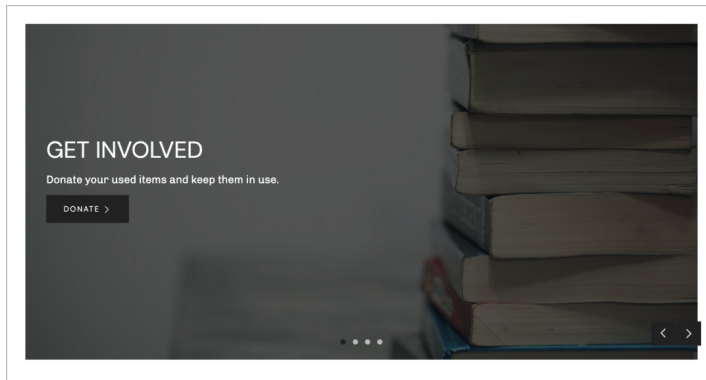
This image demonstrates an instance where users had trouble connecting the images with the text that they see.

> The books make no sense to me for GET INVOLVED.
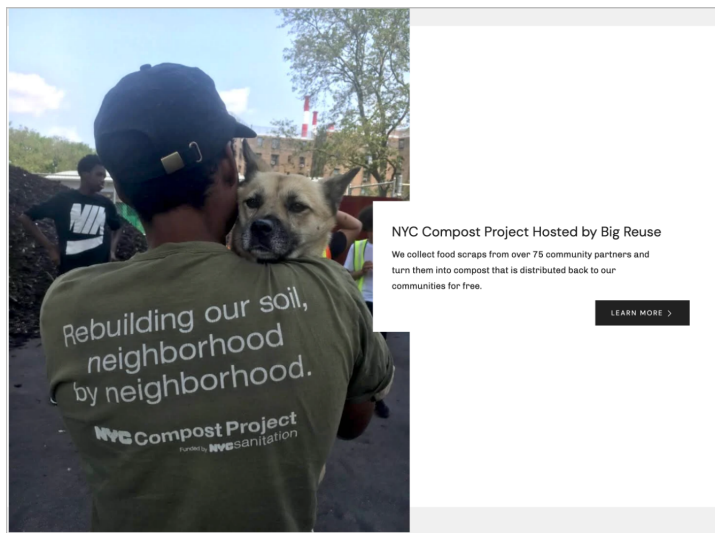
> The photo looks nothing relating to the text next to it, why is there a dog there? I first thought they were doing things with dogs, but they're really not.

Image above was associated with the 'NYC Compost Project.' However, the user got a wrong message from this photo, thinking that Big Reuse' mission is related to animals.

Our Recommendation

Not only do these image usage problems negatively affect the audiences' content comprehension and visual impression with the website, they also decrease the user's engagement with the Big Reuse's website. Therefore, in order to convey a more coherent story, we have two recommendations for using images.

3.1. Avoid displaying text over photos on the website.
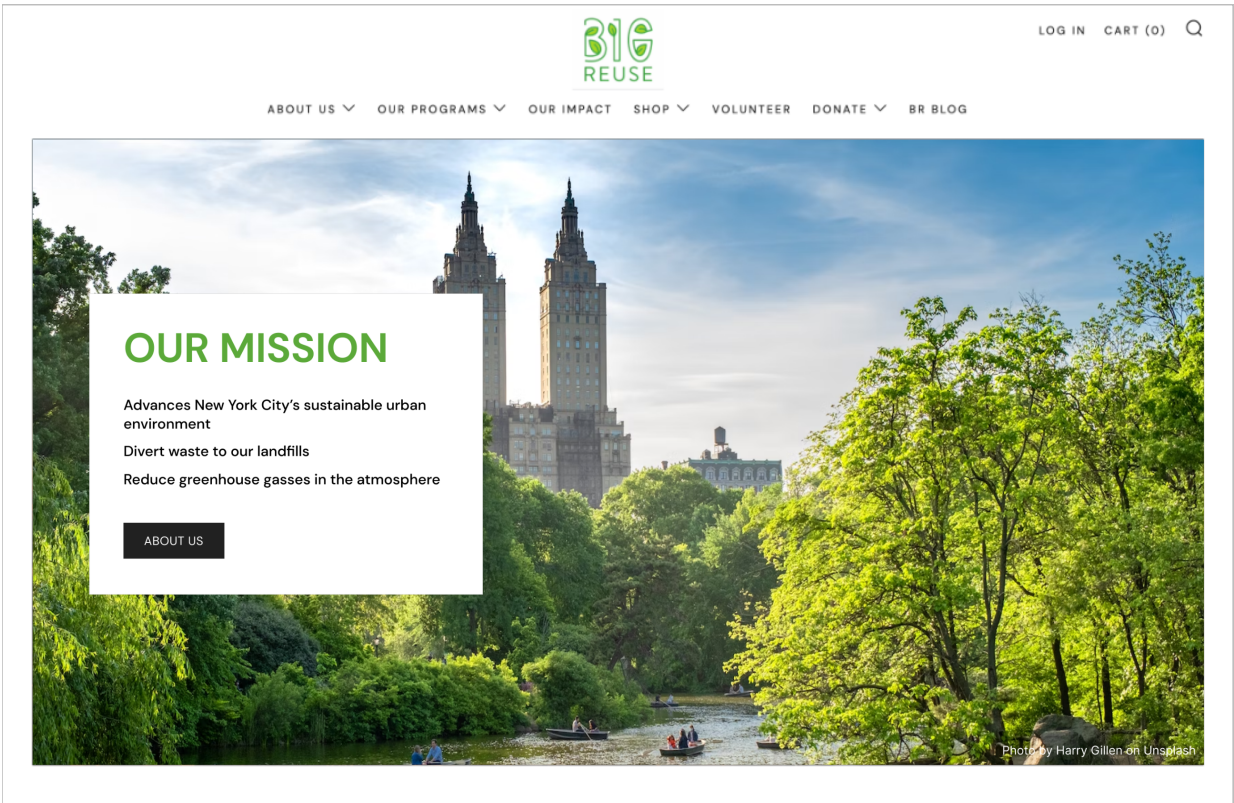
This mockup shows an example of showing text and image together. The legibility of the text is higher by using a solid color for the background. In addition, by not putting an overlay, or text on top of the photo, it is much clearer for users to look at and enjoy it.
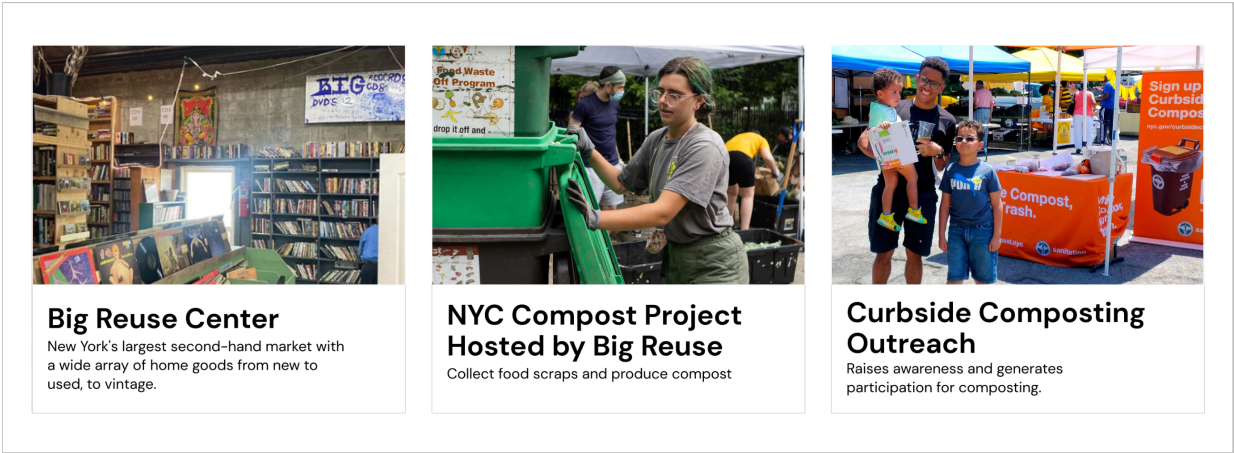
In this example, with picture and text clearly displayed, it is easier for users to read the title of the link to different programs run by Big Reuse.

3.2. Choose photos that are more focused, and relevant to the presented content.

This above photo is a good example of both using and displaying an image on the website. First of all, there is a strong connection between the text and the image that makes them parts of a coherent message. Secondly, by not having the picture as the background, viewers can now see clearly the title, the button, and the pagination.

Recommendation 4: Improve the content readability by enhancing visual hierarchy for text and number-heavy content

In the test, participants were asked to find out what Big Reuse does, how long they've been operating, and find out what impact the composting programs have had on the community. These tasks were created to test user's comprehension with two pages on the site, including the "About us" and the "Our impact" page. Overall, participants found the history part on the "About us" page compelling, and shared their interest in knowing how Big Reuse was formed, and other people's paths to the organization. On the "Our impact" page, participants felt that it was convincing to show the numbers.

Problem: Pages are often too text or number-heavy

All six participants (100%) agreed that both the 'About Us' and 'Our Impact' pages were either text-heavy or number-heavy.

4.1. Text-Heavy Content

During the user tests, while most of the users in our study understood what Big Reuse does, all of them expressed their confusion about the date in the history part on the About us page. It was difficult for users to find important information about Big Reuse in a block of text. Users across the board agreed that there would be a better understandability if the history of Big Reuse was presented in a timeline rather than a full text paragraph.

Audiences thought that this content was hard to read,
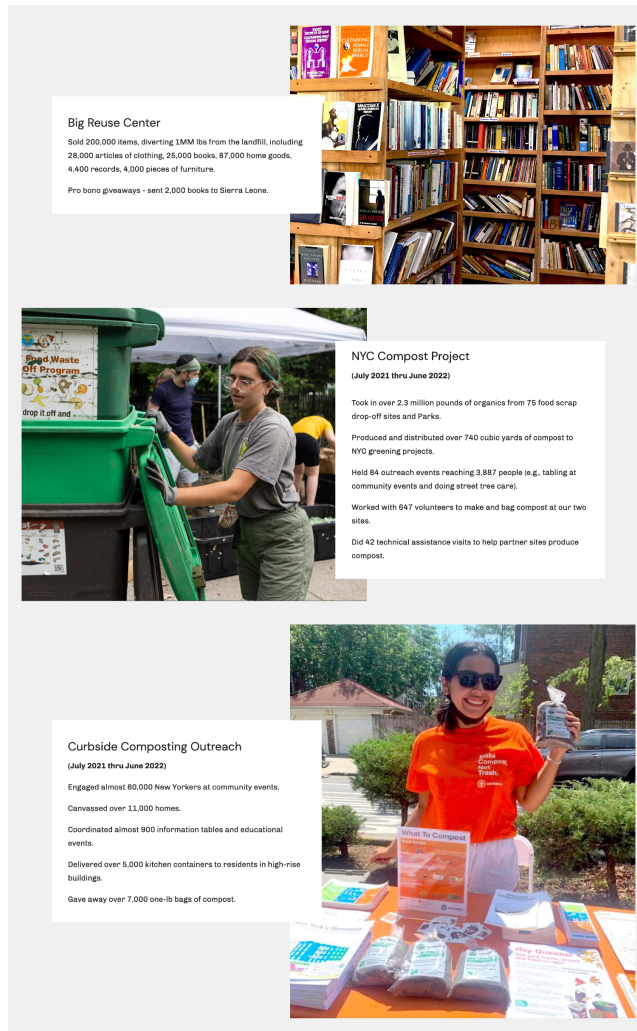*and the history timeline of the Big Reuse is difficult to understand.*

> It seems like the years are a little confusing about if they have started since 2015 or 2010.

4.2. Number-Heavy Content

On the "Our impact" page, while users agreed that using numbers was a good method of showing Big Reuse's impact to the community, they were overloaded with too many numbers.

> " Hard to keep straight what number applies to what, and can't determine whether or not it's impressive or the scale. "

> " Sometimes you get a little lost in all the numbers. "

Our Recommendation

Too many texts and numbers lead to information overload and reduce the audience's overall content comprehension. In order to improve readability throughout the website, we recommend enhancing visual hierarchy for text and number-heavy content. Specifically, we suggest implementing whitespace to categorize information and make important information bold to make text scannable, hence improving legibility for both About us page and Our Impact page.

4.1. Two-Column Timeline Implementation

On the About us page, we recommend using a two column layout to show the history information. By separating the important dates and the events, and keeping them in a vertical timeline, it is clearer for viewers to see the dates directly and know what happened to Big Reuse during that period.

4.2. Reduce number of statistics and increase visual prominence

On the "our impact" page, we recommend using larger and bold text for key numbers to increase visual hierarchy. In addition, implementing whitespace around blocks of text and color contrast will help audiences capture the important information easier.

Conclusion

In general, users shared positive feedback on the Big Reuse website, praising its meaningful, approachable content and simple, modern aesthetic. However, the testing sessions revealed problems with content comprehension and usability on the website, regarding its text-heavy content, misuse of images, and low discoverability of important information. Based on the findings, we prepared four key recommendations to address the problems:

- **Recommendation 1:**
  Clarify the meaning of circular economy and better embed resources.
- **Recommendation 2:**
  Optimize the Donate page by making clear how donated money is being used.
- **Recommendation 3:**
  Improve the use of images by avoiding showing text over photos, and selecting photos that are relevant to the presented content.
- **Recommendation 4:**
  Improve the content readability by enhancing visual hierarchy for text and number-heavy content.

We believe that by implementing these recommendations, the website's content comprehension, visual impression, and usability will be largely improved, and the overall user experience will be much more pleasant.

References

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Appendix

Appendix A: Screening Form

Non-Profit Usability Study Screening Form

We are graduate students at the Pratt Institute School of Information researching user perceptions of a non-profit website and looking for participants for our study. The goal of this study is to evaluate the usability and visual impressions of our client's website.

Participants of this study will be asked to complete a 20-minute usability test with one of our researchers. Upon successful completion of the task, participants will receive a **$10 Amazon gift card**. If you have any questions, please reach out at xliu62@pratt.edu.

* Required

Appendix B: Consent Form

CONFIDENTIALITY

If for any reason you are uncomfortable during the session and do not want to complete a task, you may say so and we will move on to the next task. In addition, if you do not want to continue, you may end the session and leave at any time.
Approximately six people will participate in this study. Results from all sessions will be included in a usability report to be presented to Big Reuse, and Craig MacDonald, Ph.D, Director of the Center for Digital Experiences at Pratt Institute. **Neither your name or image will be included in the report nor will your name or likeness be associated with any session data collected.**

CONTACTS

If you wish to speak with someone about your participation in this study, or if you feel you were not treated as described above, please contact our group member at **xliu62@pratt.edu**.

STATEMENT OF CONSENT

I have read and fully understand the extent of the study and any risks involved. All of my questions, if any, have been answered to my satisfaction. My signature below acknowledges my understanding of the information provided in this form and indicates my willingness to participate in this user testing session. I have been given a blank copy of this consent form for my records.

Appendix C: User Testing Script

Intro

Self-intro	Hello, thank you for taking the time to join our usability study. Let me briefly introduce myself and then I'll explain how the study will work. I am [Name], a graduate student at the Pratt Institute School of Information. I am working with 2 other students in a research team to conduct an evaluation of our client's website.
Introduce the study	The purpose of the study is to evaluate the content, usability and visuals of the Big Reuse website (https://bigreuse.org) on mobile and desktop. We are interested in understanding how users find information and accomplish common tasks on this site. Please remember, the session will not 'test' you or your ability, rather the site's ability to provide information for its audiences.
Explain how the test will be carried out	During this session, you will be asked to complete some tasks and "think aloud" while doing the task. I will observe, ask questions, and take note. At the end of the test, I interview you by asking several questions about your overall impression with the website.