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## A Makeover for the Habitat for Humanity MetroWest/Greater Worcester ReStore Website

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## A Makeover for the Habitat for Humanity MetroWest/Greater Worcester ReStore Website



An Interactive Qualifying Project Report
Submitted to the Faculty of
WORCESTER POLYTECHNIC INSTITUTE

In partial fulfillment of the requirements for the degree of Bachelor of Science.

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Date:

December 13, 2017

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### **Abstract**

Habitat for Humanity MetroWest/Greater Worcester (MW/GW) ReStore works in collaboration with the Habitat for Humanity MW/GW affiliate to fund their mission to eliminate substandard housing. The goal of our project was to help update the Habitat for Humanity MW/GW ReStore website and market it to help attract new members to shop, donate and volunteer at ReStore. By instituting multiple data collection techniques on the former ReStore website along with other successful websites, we identified the key attributes that make a website successful. We used the data to develop findings that influenced our design of the new ReStore website. By identifying the Restore's target audience, we were able to create various marketing strategies to develop a marketing plan as well as implement some of them.

## **Executive Summary**

### Introduction/Background

In 2016, 22.4% of Worcester residents were living in poverty, which is approximately one out of every five people (U.S. Census Bureau, 2016). Affordable housing is a concern in Worcester, Massachusetts and its surrounding suburbs. Low and middle class families struggle to pay their mortgage due to low wages and a decline in the economy over the past few years. In 2016, Massachusetts, the median home price was \$312,250, ranking it the fifth most expensive state to own a home in the country (U.S. Census Bureau, 2016). There is help for qualified residents, however. Habitat for Humanity (HFH) is a non-profit organization dedicated to building and maintaining affordable housing for families that are in need. Habitat for Humanity is active in every state in the United States and over 70 countries around the world. The organization has several affiliates across the United States and in other countries. Specifically, Habitat for Humanity works to eliminate substandard housing in all 14 counties in Massachusetts.

Some Habitat for Humanity affiliates own and operate ReStores, nonprofit home improvement stores that sell new and gently used furniture, appliances, home accessories, and building materials at discounted rates. All profits from a ReStore support its affiliate's home projects. The ReStore serving HFH MetroWest/Greater Worcester (MW/GW) wants to update their website to be more aesthetic, easier to use and navigate, and more interactive. The Habitat for Humanity MW/GW ReStore is also relocating to a new location Worcester with a larger area by a margin of 9,000 square feet to accommodate the growing needs of the store. We conducted studies on successful non-profit websites and web design, and have developed the new MW/GW

ReStore website based on our research. We have also researched marketing techniques to implement for ReStore in order to increase its customer base. This work will allow the ReStore to obtain new shoppers, donors and volunteers due to its growth, and assist the Habitat for Humanity in eliminating substandard housing in Worcester and its surrounding suburbs.

## Methodology

In order to tackle this project, we divided our approach into two main goals:

- I. Develop new ReStore website
  - 1. Assess former ReStore website
  - 2. Assess other NPO websites
  - 3. Comparatively analyze assessment of ReStore website and NPO websites

To come up with the final design for ReStore's new website, we carried out various data gathering methods. We surveyed 266 Worcester Polytechnic Institute (WPI) students and Habitat for Humanity (HFH) club members at other colleges on website design preferences and their opinion of the former ReStore website. We conducted two focus groups with WPI students seeking feedback on a number of successful Nonprofit Organization (NPO) websites. We also interviewed key staff at ReStore for their opinions on the specific content they wanted for the new website.

- II. Market ReStore new location and new website
  - 4. Design new website with effective search keywords
  - 5. Create new URL
  - 6. Market the new ReStore location and website

We surveyed 266 college students on what search keywords they would insert when looking up for an inexpensive and quality desk so that we can incorporate the keywords in the content of ReStore website so that the site would appear when someone searches certain phrases. To brainstorm a new URL (Universal Resource Locator), we collected the ideas from the ReStore staff and researched what makes a URL effective. Finally, to market ReStore's new location and website we developed a marketing plan to reach college students and residents of Worcester. Due to the time constraints of the project, not all of the marketing strategies could be implemented. However, we were able to contact Habitat for Humanity clubs at local colleges about raising awareness of ReStore through programs and flyers. We also contacted journalists at various newspapers in the area to write a story about ReStore's relocation and new website and received confirmation from the Telegram and Worcester Magazine that they would cover the story. Lastly, we developed a short promotional video about ReStore's new location and website for use on social media and potentially as a television commercial.

### Findings and Recommendations

#### **Website Design**

The Habitat for Humanity MW/GW ReStore wanted to update their website in order to attract more customers and have its own identity separate from the affiliate. To achieve these goals the new website needed to be more user friendly and have a new URL.

In terms of website design, we assessed the website based on criteria such as content, graphic design, navigation, and interactivity. Through 20 website evaluations done by the team, surveys and interviews with the ReStore staff, and survey responses of students from various colleges, we found that the main opportunities for improvement on the MW/GW ReStore

website were in the areas of graphic design and navigation. We also assessed websites of other successful organizations such as the American Red Cross and UNICEF and analyzed websites of similar organizations such as EcoBuilding Bargains. From the 20 websites we assessed and survey responses from the ReStore staff and college students we noticed patterns in users' preferences.

In terms of graphic design we found users prefer websites that use a simple color scheme and have limited text. In terms of navigation, 65.2% of the 266 students surveyed preferred a navigation bar on top with around five to eight options. Two of the staff members we interviewed liked navigation bars which stayed as the website moved which was present in other successful websites we assessed such as Livestrong and Goodwill. Overall, we developed a design for the ReStore site that is more simplistic by reducing the amount of text and using more media. The new website design is easier to navigate by optimizing the navigation bar and narrowing down information into different subsections.

#### **Search Strings**

One way to increase web traffic to the ReStore site was to make it more visible on search engines such as Google, Bing, and Yahoo. According to 30% of the 266 college students we surveyed, they would use the search string term "cheap" to locate an inexpensive desk. As ReStore does not want to represent its products as cheap, we wanted to find a way to make ReStore show up higher on Search Engine Results Pages without the product being represented as cheap. We also found other popular searches were for "used", "inexpensive", or some string related to "near me" such as in Worcester or a college. We used these keywords to make the new ReStore site more visible through search engines.

#### **Marketing Restore**

Our final objective was to market the new MW/GW ReStore website and location. We identified and narrowed down ReStore's target audience to encompass college students and in general Worcester residents. To market to students we contacted Habitat for Humanity clubs at various colleges in the Worcester area to promote the ReStore on their campus and used social media sites such as Facebook, Twitter, and Instagram. This strategy is effective for college students as the majority of users of these sites are between 18 and 29. To brainstorm marketing ideas we met with Purvi Shah, a professor at Worcester Polytechnic Institute who specializes in marketing. According to Shah, effective ways to reach Worcester residents included advertising using flyers in public areas such as supermarkets and bus stops, creating a commercial for local television channels, and through newspaper articles (P. Shah, personal communication, November 21, 2017). These platforms are open to most Worcester residents; therefore, it is an effective way to reach the general population. We contacted several newspapers in Worcester such as the Telegram and Gazette to cover an article about the ReStore relocation and new website. Bonnie Russell, a journalist from the Telegram, published an article about the project to redesign the ReStore website and included information about ReStore's relocation. Also, when the new store opens there will be further press coverage from the Telegram. As part of the project, we created a short promotional video for ReStore's new location and new website to be used on social media and the new website and potentially as a commercial. Finally, we developed a list of recommendations for further marketing all that ReStore has to offer.

### Conclusion

As the MetroWest/Greater Worcester Habitat for Humanity ReStore continues to expand to a larger location and a second location in Ashland, the customer base needs to expand with it. By using data that we collected through surveys, interviews and focus groups and analysis of other websites, we were able to create and market a new website for ReStore to help attract new customers. This new website design will be easier to navigate and more inviting to first time users. By creating a commercial alongside the launch of the new website and opening of the new store, as well as getting an article written in the Worcester Telegram, ReStore will be able to raise their public awareness and expand their shopping, donating and volunteering base. We were also able to develop a marketing plan for ReStore so that they may continue to raise awareness of their products and mission to sustainably fund the MetroWest/Greater Worcester Habitat for Humanity affiliate.

## Chapter 1: Introduction

As of 2017, around 1.6 billion people live in substandard housing and 100 million are homeless, according to United Nations' statistics. In the United States, there are currently 45.3 million residents living in poverty, which is roughly 14.5% of all Americans ("Data Access and Dissemination Systems", 2017). This could be your classmate, your co-worker or a family member. In Worcester, Massachusetts, poverty is a real and concerning issue among the community. Even though the poverty rate in Worcester county has only increased by about 1.2% over the past 30 years, about 11.8% of Worcester residents still live in poverty, which is one out of every nine people, and 1.4% above the rest of Massachusetts at 10.4% (U.S. Census Bureau, 2016). Often times, these families struggle with high mortgage interest rates and low income jobs, leaving them in an insecure housing situation.

Habitat for Humanity International (HFHI or Habitat) was founded with the vision of creating a world where everyone has a decent place to live. Habitat is a nonprofit organization that helps combat substandard living conditions, helping minimize the number of people living in poverty by building affordable houses. Habitat operates in approximately 70 countries around the world and nearly 1,400 communities in the United States alone ("40 facts about habitat and housing", 2017). Since its inception in 1976, Habitat for Humanity has served over 3 million people in need of improved living conditions by either constructing new homes or repairing older homes.

The organization does not just build houses for families, the families work on the construction alongside HFH to help build their homes. In addition, they sell homes below market

prices. Mortgage interest rates could be extremely high and Habitat for Humanity assists families to pay for their homes through a monthly mortgage that is interest free and usually around thirty percent of the family monthly income as opposed to the standard fifty percent. This adjusted cost makes it more manageable for families to own a home allowing them to invest more in education, career, and other essentials for the family's future ("40 facts about habitat and housing", 2017).

To keep up with all the houses that they build or renovate, HFH must generate revenue. While donations contribute to funding Habitat builds, some of the resources and revenue needed to build new homes are provided by local ReStore sale. Many Habitat for Humanity affiliates own and operate a ReStore, a nonprofit home improvement store which sells new and gently used furniture and home accessories at a discounted rate to raise money for Habitat builds. Habitat for Humanity ReStore accepts volunteers to work in the store. ReStores provide a financial and logistical contribution to Habitat for Humanity affiliates for their build projects. Our project is in collaboration with the Habitat for Humanity MetroWest/Greater Worcester ReStore (MW/GW). Similar to any other ReStore, the MW/GW ReStore funds the Habitat MW/GW build projects.

The MW/GW ReStore wanted to expand its floor space. In early 2018, they will relocate the current store to one with more space and will also open a new store in Ashland, Massachusetts. With their physical expansion, ReStore also wanted to expand their customer base. One way ReStore plans to increase its visibility is through their website. They wanted to redesign their website to improve overall user experience and reach more customers. ReStore also wanted to market their updated website and their new location. Their goal is to raise awareness of ReStore to increase foot traffic into the store.

In the 21st century, most people obtain information through the internet. As a result, organizations use their websites and social media outlets as a marketing tool to advertise their products and services. Websites that are well-designed tend to receive more web traffic, meaning more people use the site. According to Melissa Murphy, Professor of Communication at Seton Hall University, a well-designed website is a combination of good *content*, graphic design, navigation and interactivity (Murphy, 2004). The Habitat for Humanity MW/GW ReStore contacted Worcester Polytechnic Institute, specifically the Worcester Community Project Center, to collaborate on an effort to update the current MW/GW ReStore website. Our project sponsors, Ms. Deborah Maruca Hoak, ReStore Director, and Ms. Molly Pietrantonio, Volunteer Coordinator believed that the former website was outdated and not user-friendly. Consequently, the goal of our project was to give the MW/GW ReStore website a new design that is more aesthetic, easier to navigate, and easier to use while maintaining its unique identity among other ReStore locations and their websites. Furthermore, we developed a plan to market the MW/GW ReStore's new location and new website to local Worcester residents and college students. Ideally, the updated site will attract new customers to shop thus furthering Habitat for Humanity MetroWest/Greater Worcester's mission to eliminate poverty housing.

In the next chapter, Chapter 2, Background, we discuss web development, its usage and the effects. In Chapter 3, Methodology, we state our goals and explain how we are going to achieve our goals through five objectives. In Chapter 4, Findings, we describe the information we obtained through our data collection that influenced the design of the new website along with marketing strategies. Finally, in Chapter 5, Recommendations and Conclusion, we summarize key findings, project outcomes, and offer further recommendations.

## Chapter 2: Background

#### 2.1 Introduction

With online media so easily attainable, people obtain the majority of their information through the internet. As a result, organizations use websites and social media outlets to advertise their products and services. According to Diane Falk, associate professor of social work at Stockton University, "agencies and other nonprofit organizations must become more savvy about the benefits of having a presence on the world wide web" (Falk, 2004).

Websites that are well-designed tend to receive more web traffic, meaning more people use the site (Hendricks, 2015). There are many characteristics that lend themselves to a well-designed website, but they all relate back to one idea: being user-friendly (Friedman, 2008). Therefore, although some organizations may have websites, if they are not user friendly, they risk losing potential customers. The MetroWest/Greater Worcester (MW/GW) Habitat for Humanity ReStore wants to take greater advantage of online opportunities so they can attract more donors and volunteers. The MW/GW ReStore is looking to completely redesign and redevelop their current website in order to create a more attractive and user-friendly website for potential shoppers, donors, and volunteers.

In this chapter, we explore what other scholars have done and found regarding web design and website success. In Section 2, we examine the growth of the internet as a tool for organizations. In Section 3, we examine web creation, focusing specifically on web development and web hosting, and in Section 4, we explore how websites can be assessed and measured for success. Lastly, in Section 5, we introduce the Habitat for Humanity MetroWest/Greater Worcester ReStore and discuss how our research relates to it.

### 2.2 Growth of the Web as a Marketing Tool

The internet is a medium that allows users to access a variety of information through websites and search engines. Although the internet has been around for decades, it has grown significantly since the introduction of graphical browser software such as Internet Explorer and Google Chrome (Hargittai, 2000). As of September 2014, the internet contained one billion websites and that number continues to grow. Given the functionality and ability of the internet to reach a wide audience, corporations and nonprofit organizations alike maintain websites for advertising, educating and connecting with people. For the scope of this project, the term "corporation" refers to a business existing primarily to generate profit. In section 2.1 we describe corporations' use of the web and in section 2.2 we discuss nonprofit organizations' use of the web.

#### 2.2.1 Use of the Web

Corporations use the internet to market their brand. One strategy they adopt is social media marketing. Social media applications such as Twitter and Facebook allow corporations to connect with customers and business partners (Culnan, McHugh, & Zubillaga, 2010). Furthermore, corporations maintain websites as another avenue for promoting their goods and services. Table 1 below is adapted from a study by Tuckman, Chatterjee and Muha, researchers in the field of business and communications from Rutgers University, categorizing websites of corporations into various types (2004). Websites can encompass multiple categories from the table. Table 1 indicates various ways websites can be utilized. The internet is useful for much more than just brand promotion, and can be very beneficial to promoting a cause or the work of nonprofit organizations.

TYPE OF WEBSITE	DESCRIPTION
Advocacy	Content at website tries to convince online consumers to accept the firm's position on some issue.
Brand Image	Content at website tries to create a positive portrayal of given brand(s) of consumer product(s) and / service(s).
Comparative	Content at website makes indirect or direct comparisons between brands.
Corporate	Content at website promotes the firm's mission and philosophy.
<b>Direct Response</b>	Content at website seeks an immediate response to the message from the online consumer.
Index	Content at website serves as an index or cover page to other links within the firm's Website.
Political	Content at website tries to persuade online consumers to elect a particular candidate.
Public Service	Content at website serves social needs, promotes social causes and/or educates online consumers.
Retail Sale	Content at website has a clear intent to sell the product or service of the company. The page may be linked to an order form.

Table 1: Typology of Commercial Activities at Websites (Culnan, McHugh, & Zubillaga, 2010)

A nonprofit organization is a group with no intention of generating profit to be distributed to its members (Staff 2007). While nonprofit organizations promote their brand similar to corporations, their websites include different functionalities relevant to their cause.

TYPE OF WEBSITE USAGE	PRESENCE IN NONPROFIT ORGANIZATION WEBSITES
Advocate On Behalf of Mission	16.5%
Solicit Donations	16.5%
Provide Schedule of Activities	68.4%
Offer Referrals to Other Sites	42.9%

Table 2: Percentage of Websites with Type of Usage (Culnan, McHugh, & Zubillaga, 2010)

Table 2 is adapted from the same study as Table 1 (Tuckman, Chatterjee & Muha, 2004). The study looks at websites of nonprofits separated into categories based on their missions; however Table 2 refers to all nonprofit websites that were included in the study. According to the study, the main use of non-profit websites is to provide a schedule of activities. A schedule of activities allows their audience to get more involved in the organization's affairs in ways such as donating or volunteering. Since nonprofit organizations do not exist to make a profit, they use donations and other sources of revenue to support a cause. By advocating on behalf of their cause or mission, they hope to gain support and interest through their website. Several nonprofit organizations use referrals to other sites in their websites because they are part of a larger organization and for further advertising (Kim, 2004). For example, the MW/GW ReStore website refers users to the site for the MW/GW Habitat for Humanity website and provides links to the ReStore social media pages to provide users with more information and regular updates. Understanding how nonprofit organizations use the web gives insight into optimal design for the Habitat for Humanity MW/GW ReStore website and opportunities for it to improve.

#### 2.3 Website Creation

As of 2016, in the United States, almost 90% of adults use the internet and with the prevalence of smart-phones, over 75% of users have access with the touch of a few buttons as illustrated by figure 1, below (Smith, 2017). In order for an organization to improve the popularity of its website, there has to be a web developer to create the website to its full potential.

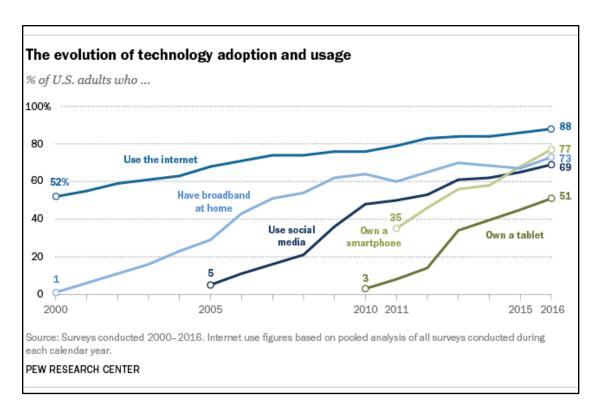


Figure 1: The evolution of technology adoption and usage (Smith, 2017)

With web usage so widespread, it is important for users to be able to see and understand an organization's information. For this to occur, first there has to be a web developer to create the website and web host to house it.

### 2.3.1 Web Developing and Hosting

Web developers can be broken down into several categories, they can either be a software engineer, creative designer, team manager, business expert or a domain expert (McDonald & Welland, 2001). These jobs can then be further separated into either frontend or backend creation.

A web developer who works on creating the frontend of website impacts the product that the user sees. This would include links, images, organization and placement of material on a website. Therefore, it is useful to have a background in design as a frontend developer (Rosson,

Sinha, Bhattacharya, & Zhao, 2008). It is important that the frontend of a website is visually appealing. Although the software may work successfully, it is pointless if it is unattractive or confuses users. A study done by Braddy, Meade and Kroustalis, North Carolina State University Psychology Department professors, illustrates that website users perceptions of an organization are greatly impacted by a website's design. Users are also impacted by the navigability of the site, that is, how easy it is for them to find the information they are looking for (2008).

The backend of a website is the side of the website that is not seen but allows the website to function. It translates the frontend input and allows for the action to be carried out. For example if you click a link on a webpage the backend processes that command and opens that link bringing you to another page. The frontend and backend need one another in order to be useful, making web development important in executing these two roles (Singhal & Jain, 2017).

When a developer creates a website, it does not simply appear on the internet. Search engines act as a vessel with which the information travels; the websites are stored on servers elsewhere. This is where web hosts come into play. The term web host refers to a web server that supplies clients with a space to house web pages ("Web host providing for," 2001). A web host does several things, including hosting and storing a client's web pages as well as providing the interface between the website and its visitors. It also processes executing programs for sending data to, and receiving data from client browsers (*Method and system for hosting an internet web site on a digital camera*, 2003).

Like every other service, there is a price tag attached to both web developing and web hosting. For web hosting, the cost is usually on a month-to-month basis like a subscription plan. This fee accounts for the initial setup and maintenance of the website. The prices vary depending on the services offered, but according to a survey from the IEEE/ACM International Conference

on Grid Computing, the price should not exceed \$200 or so for the year (Prodan & Ostermann, 2009). Next, there is the price for the developer to create the website. This is a one-time payment and the price can vary, depending on the terms of creation and use. According to a study conducted by Yale University professors Fortin, Luzzi, Galaty, Wong and Huot, if a website is more complex and needs to be developed from the ground up, it will be more expensive, closer to \$10,000, however, if you are just looking for basic functions and have a template, the cost will be closer to \$2000 (Fortin et al., 2002). Once a website is created, consistent maintenance and updates are necessary for the website to remain successful.

#### 2.3.2 Maintenance

A website's content needs to remain up to date with keywords in order to stay relevant. Having a trained internet operations developer with an understanding of SEO (search engine optimization) is a necessity because it keeps users interested in your site, allows you to stay high on Search Engine Result Page (SERP) and without it, the developing and hosting are rendered worthless. Maintenance also includes checking up on your hardware and software to make sure they are functioning correctly and that your site is up to date with its products and features. This should not impact the overall cost too much because the "costs for maintaining the website are minimal" (Fortin et al., 2002). Proper maintenance is not only important for staying up-to-date, but also important in sustaining a good user experience.

### 2.3.3 End-user Experience

When developing a website, it is important for an organization to know their target audience and how their website impacts the user's experience. This knowledge allows for the customization of the web design related to age, race, gender, culture and other user characteristics.

Michael Beasley, a Master of Science in Information in Human-Computer Interaction from the University of Michigan School of Information, divides target audiences into different groups based on *geography*, *frequency*, *recency*, *engagement*, *browser* and *operating system* (OS) (Beasley, 2013). *Geography* identifies the country, city and region that users are in, which informs organizations where the site has most popularity (Beasley, 2013). *Frequency* describes how frequently a user visits the site and *recency* notes when the user last visited the site.

Information about new and returning audience members, can help organizations identify how many web users are returning users and how many are new (Beasley, 2013). *Engagement* refers to a user's visit duration and page depth (Beasley, 2013). Lastly, web developers contemplate information such as the target audience's *browser and OS* and whether users access websites on mobile devices (Beasley, 2013). Knowing the browser and OS of potential users is important as it guides the website development in such a way so it can be accessed from different browsers and on different platforms.

In addition, learning about the target audience can guide organizations to analyze how users get to their site and what keyword they use, improving interaction between a website and its user. (Beasley, 2013). Utilizing the analytics from different sections of Michael Beasley's book is vital for not only identifying the target audience, but also designing a website experience.

## 2.4 Assessing Websites

For many, it is easy to develop and populate a website. However, making a website attractive to users is a much harder task. A successful website must have a cohesive appearance, achieve the organization's goals and serves the visitors' purposes. In order to develop a successful website, developers must understand what constitutes good website quality as well as the measurements they may use to assess website quality.

#### 2.4.1 Website quality

The section below discusses different website qualities and which qualities have a closer correlation with user experience.

#### 2.4.1.1 Qualities for Good Web Appearance

Melissa Murphy, a professor in the Communication department at Seton Hall University, conducted a study about common characteristics of successful websites for her Master of Arts thesis. She concluded that a successful website has good *content*, *graphic design*, *navigation* and *interactivity* (Murphy, 2004).

Website *content* refers to its subject, writing style and grammar. It is important to have information that not only serves the purpose of the organization but is also up-to-date (Alsmadi, 2010; Murphy, 2004). Validated information such as the biography or unique information that readers cannot find anywhere else is useful (Murphy, 2004). Good content should contain no grammar or spelling mistakes or have too many irrelevant links per page (Murphy, 2004).

A web *graphic design* includes color, theme, background, font, etc. However, the most important point is to have a consistent look throughout the website so that visitors do not feel like they have accidentally gone astray (Murphy, 2004). A theme helps everything follow a standard. All text should be in readable font and media should not distract readers from text if the text is the main focus (Alsmadi, 2010; Murphy, 2004).

Navigation is what allows users to move around the website (Murphy, 2004). The Menu bar should be easy to find and at the same location on every page (Murphy, 2004). Links should have clear text and should not be left around without explanation of what it leads to (Murphy, 2004). For example website.navigation.com is more clear than wnc.com?zAX8s2. Also, an optional suggestion is to have sitemap links, which is the list of pages users can access, on every

page in the site so that user can get to where they want with only one click without having to go three steps back (Murphy, 2004).

Interactivity is the ability for a user to interact with the site (Murphy, 2004). More specifically, the website should not have under construction pages or disabled features (Murphy, 2004). Most common interactive activities between users and website are submitting an email address, subscribing to a newsletter and downloading files (Murphy, 2004). Finally, Large-sized files (pictures, videos and documents) should be compressed so that download time is not excessive (Alsmadi, 2010). Following the guidelines, content, graphic design, navigation and interactivity will enhance the appearance and quality of one's website and in turn, enhance customer experience.

#### 2.4.1.2 Qualities for Positive Customer Experience

A 2004 study conducted by experts in web design, Soyoung Kim of University of Georgia and Leslie Stoel from Ohio State University, considers six web qualities that influence user experience: web appearance, entertainment, informational fit-to-task, transaction capability, response time and trust. Another study conducted in 2001 about Internet Pharmacies, provides additional website qualities for positive user experience such as ease of use and security (Yang, Peterson, Huang, 2001). All of these qualities are compiled in Table 3, below.

QUALITIES	DEFINITION	
Web appearance	The look, layout, color, theme of pages	
Entertainment	How exciting and interesting the website appears to users	
Informational fit-to- task	The relevant information website gives users to support users' tasks	
Transaction capability	How well the website support its business function	
Response Time	The time website takes to load an image	
Trust	How much a customer can trust the website	
Ease of navigation	How easily customer can find and go from one page to another	
Security	How safe it is when customer puts their personal information on the site or when they do online transaction	

Table 3: Web Qualities That Impact Customer's Experience (Kim & Stoel, 2004; Yang, Peterson, & Huang, 2001)

Among the qualities, only *informational fit-to-task*, *transaction capability* and *response time* significantly impact user satisfaction (Kim & Stoel, 2004). The result from Yang, Peterson and Huang's study also supports that *relevant and accurate information*, *ease of navigation* and *responsiveness*, which are similar to the results found by Kim and Stoel, are the most influential factors on user's satisfaction, the remaining influences are website's aesthetics and security (Yang, Peterson, & Huang, 2001). The aggregated results of these two studies indicates that website content is crucial to customer satisfaction. Thus, the website should be informative and provide adequate information to fulfill the user's purpose for visiting the website (Kim & Stoel, 2004). This also implies that although web appearance can affect user experience, having a nicer web appearance does not guarantee improvement in user experience. For example, a customer is looking to buy an item and the company's website says the item is still available at the store but when the customer visits the store, (s)he is informed that the item has been sold out for two weeks and will not be restocked. This would cause the customer to have as negative an experience as a badly designed website would.

#### 2.4.1.3 Qualities for High Customer Trust

Although websites appearance is not as important a factor as content to customer experience, it is the main factor when building trust with first time users of a website (Pengnate & Sarathy, 2017). According to Supavich Pengnate, PhD in Management Information Systems, and Rathindra Sarathy, PhD in Management Science and Information Systems, appealing website appearance and ease of navigation affects the probability a website will be revisited by first-time users. Marie-Christine Roy, Professor of Information Systems; Olivier Dewit, Director of Web Applications at EXFO; and Benoit Aubert, Professor in Information Systems, agree with these findings and comment that user interface (human and computer interaction), more specifically ease of navigation, is strongly related to a user's trust (Christine Roy, Dewit, & Aubert, 2001). Once a website is designed with these qualities, developers continually assess the websites' success through a variety of quantitative measures.

### 2.4.2 Measuring Website Success

#### 2.4.2.1 Web Metrics and Preferences

Given the difficulty of assessing success, companies began developing software that could measure elements of a website's usage. These web *metrics* are quantitative measurements of events or trends on a website (Kaushik, 2010). Back in the year 2000, the most popular web metrics were "hit", "visits" and "page views". Table 4, below, describes the use and limitations of those web metrics.

METRICS	DEFINITION	LIMITATIONS	
Hit	One hit is whenever a server sends a requested page back to the user	A hit can still count as one even if the page fails to load.	
Page views	The number of views on a page	Both <i>page views</i> and <i>visits</i> do not tell: how much time users spend on a site; whether users	
Visits (on some analytics tools, it is also referred to as Visitors)	The number of people who comes to the page. If user is inactive for 30 mins of inactive, session (browsing period) will end and if browser is refreshes, the Visit increment.	just open a page and leaves immediately; or whether visitors are new or old users.	
Unique Visitors	The number of unique people (new user) who come to the page. Analytics tools attach a cookie to every unique browser to track new users.	Although this is quite an effective metric, some browsers do not accept cookies which lead to missing data.	

Table 4: Web Metrics definitions and limitations. Data from Web Analytics (Kaushik, 2010)

In 2017, one of the most recommended web metrics was *Bounce Rate*. Bounce Rate is the percentage of users on a website who leave after viewing only one page (Turner, 2010). The higher the Bounce Rate, the less successful the page is. This metric is useful since the data can help identify pages that need to be fixed, which can result in increased website success (Kaushik, 2010a). Bounce Rate can also be used to identify highest referrers, sites that refer users to your page (Kaushik, 2010).

Another metric is *Conversion Rate*, one of the more popular metrics. Conversion Rate is the percentage of Outcomes divided by Unique Visitors, which is the percentage of users who accomplish their purposes of going to that specific website (Turner, 2010). This is typically applied for an online commerce site, but can be applied to nonprofit organizations that look for volunteers to sign up for various activities. The higher the Conversion Rate, the more successful the website (Beasley, 2013).

#### 2.4.2.2 Advanced Web Metrics

There are many metrics out there, but what suits each organization depends on their individual goals. Success is a subjective term based on how each organization defines it. A group of professors of Accounting and Information Systems at Virginia Tech and other Virginia universities state that an organization's success is measured by building long-term relationships with its customers (Belanger et. al., 2006). Before choosing what metric is best for the organization, it is better to identify the organization's goals and objectives (Sterne, 2003). Avinash Kaushik, an Indian entrepreneur with experience in web analytics explains that prior to assessing the success of a website, organizations must answer two question "Why does your organization exist" and "What does your website solve for?", meaning "What is the purpose of your website" (Kaushik, 2010).

Key Performance Indicator (KPI) is a metric that shows how effectively an organization is doing compared to its goals and objectives, and thus, KPI is unique among businesses (Kaushik, 2010). A few suggested KPIs are Task Completion Rate, Share of Search, Visitor Loyalty and Recency, RSS/Feed Subscribers and Percentage of Valuable Exits (Turner, 2010).

Task Completion Rate is the percentage of website visitors that completed that intended task (Turner, 2010). To acquire this data, one simply performs a customer exit survey asking the customer whether they found what they were looking for, or not. Share of Search is the percentage of traffic the website gets from search engines compared to the organization's competitors (Kaushik, 2010). This information is important is because there needs to be a benchmark for comparison in order to determine if a website improvement is needed.

Visitor Loyalty shows how many times the same person comes to the site and Recency data shows the last time a specific person visited (Kaushik, 2010). This is a crucial information to know as organization tries to build long-term relationship with customers. Next, RSS stands

for *Really Simple Syndication* (Kaushik, 2010). When readers subscribe/sign up for RSS, they can easily get a glance at the news headlines from different websites without having to go into each website. Finally, *Percentage of Valuable Exits* is the percentage of people that leave the site by clicking on an option given by the website; these are good exits (Turner, 2010). Bad exits are when readers just leave the site. To elaborate, an example of good exit is a click on a link to another website or a click on an ad. This information will help organizations determine what content interests visitors (Turner, 2010). All of these metrics will be useful when assessing the Habitat for Humanity MW/GW ReStore website.

### 2.5 Habitat for Humanity ReStore

The HFH MW/GW is a not for profit organization that accepts donations of home improvement materials and furnishings and sells them at a low price at the ReStore. Donations are made by retailers and individuals within the community who choose to donate rather than sell or throw away their furniture or building supplies. Consequently, ReStore helps keep home supplies and furniture out of waste streams. The revenue generated from ReStore goes directly toward building more Habitat houses for families in need (HFHI, 2016).

Worcester is one of the more culturally diverse cities in all of Massachusetts and has been seen as a "gateway city" over the past century (MassInc, 2015). Unfortunately, many families in Worcester are living in substandard housing. Homelessness and substandard housing can be devastating for a family. The poverty rate in Worcester as of 2015 was 22.4%, which translates to more than one out of every five people, or 172,365 people (Worcester poverty rate data). This is very large compared to the national average of 14.7%. The Habitat for Humanity Metrowest/Greater Worcester, or HFH MW/GW, works to aid with the housing crisis in

Worcester and Middlesex Counties. So far, HFH MW/GW has built 24 homes in Worcester alone, with two home builds currently in progress. Habitat for Humanity MW/GW has also completed 22 home builds in the suburbs around Worcester. The families that qualify with a Habitat built home receive more affordable, interest-free mortgages at a price based on 30% of the family income. Habitat for Humanity is able to do this because of the amount of donations and volunteers the organization receives. They also perform critical home repairs for qualified families at a lower cost.

Our sponsors, Ms. Molly Pietrantonio volunteer coordinator at the HFH MW/GW ReStore, and Ms. Deborah Maruca Hoak, MW/GW ReStore director, believe that the ReStore website is outdated and difficult to navigate, making it harder for potential donors and volunteers to benefit families that are in need of assistance. The MW/GW HFH ReStore would like an updated website that is user friendly and attractive to potential donors and volunteers. This will benefit Habitat for Humanity MW/GW as a whole, helping those that are living in poverty in our community. Consequently, the goal of this project was to collaborate with our sponsors and other Habitat MWGW ReStore workers and compile information on how to create and establish a successful and high-quality website for the ReStore in order to attract more donors and volunteers into the ReStore.

In the next chapter we describe the methodology we used to tackle this project goal.

## Chapter 3: Methodology

The primary goals of our project were to give Habitat for Humanity MetroWest/Greater Worcester (HFH MW/GW) ReStore's website a new look while maintaining its unique identity from its affiliate and promote ReStore's new location as well as its brand. In order to accomplish our project goals, we completed the following six objectives: 1. Identify Characteristics of a Good Website; 2. Assessing the former ReStore website; 3. Assessing other successful organizations' websites; 4. Design web content with effective search keywords; 5. Implement and launch the new website with a new URL; 6. Market new ReStore website and location. We discuss each objective in greater detail below.

## Objective 1: Identify Characteristics of a Good Website

Before we were able to make any assessments, we identified the characteristics of a good website, or what website characteristics that the majority of people prefer to see. From our analysis on web development and research on effective websites, we determined that the website assessment should be broken down into four main categories: content, graphic design, navigation and interactivity. According to the author of "Common Characteristics of Successful Websites", Melissa Murphy, a professor in the Communication department at Seton Hall University, a good website has up-to-date and relevant content, aesthetic and pleasant graphic design, easy navigation and ease of interactivity (Murphy, 2004).

We first create a simple survey for students based on the above characteristics (Appendix B). To distribute this, we table sat at the WPI Campus Center and sent the survey to 31 Habitat for Humanity clubs at 31 universities in and out of state.

Simultaneously, we constructed a more detailed rubric (see Table 5) with criteria relating to website performance. The rubric facilitated this assessment by categorizing the data we collected.

Quality	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Content					
Information is relevant					
Information is up-to-date					
Information provides the answers for what users are looking for					
Graphic design					
All pages follow one theme (users don't think they exit the website going from one page to another)					
Texts are readable (words are not too small, font isn't in a weird shape)					
Media (photos and videos) don't distract users from reading					
Navigation					
Menu bar is easy to find on every page					
Any link that leads to another page has clear instruction					
Users can get to desired location within 3 clicks					
Interactivity					
Pages take less than 1 minute to load					

All desired files (images and documents) take less than 15 minutes to download			
No under construction page (pages that don't work)			
No disabled features (i.e: broken button, map doesn't locate, email doesn't send, etc.)			

Table 5: Rubric for website characteristics

#### Objective 2: Assess The Former ReStore Website

The first step in renew the ReStore website was to identify potential strengths as well as opportunities for growth. Participant observation is a quantitative data collecting method where observers take part in participant activities and record observations and learn about participants behaviors. Participant observation can be carried out through casual interviews, direct observations, focus groups, self-analysis, etc. For this objective, we applied participant observation by assessing the current ReStore website ourselves, then gathered opinions from college students and ReStore web users such as staff members, volunteers and donors by surveys, one-on-one interviews and focus groups.

In order to obtain qualitative feedback we developed a survey customized for ReStore staff (Appendix C) based on the web rubric we described in objective 1 and another survey customized for college students (Appendix B) concerning web site content, graphic design, interactivity, and navigability. Surveys are useful because they are, "a relatively non intrusive and inexpensive approach relative to other methods of data collection" (Church, 2001) and can help narrow down a specific answer that the researcher is looking for. Since surveys are also effective in gathering large amounts of information in a relatively small timeframe, they will prove to be especially useful considering the scope and time constraints of our project.

Originally, we planned to conduct focus groups with ReStore employees, whose jobs work in conjunction with the website, donors, volunteers and people shopping in the store. However, due to the limited availability of the staff, we decided to contact the ReStore staff via email and follow up with one-on-one informal interviews. Our sponsor Ms. Maruca Hoak sent out an email with a link to our online survey on our behalf (see Appendix C for Survey Questions). This method allowed flexibility for the staff and increased our response rate. The survey questions were created to gather the staff's opinions on the ReStore website and other successful websites.

In conjunction with surveying 6 staffs, we distributed surveys for WPI and other colleges (Appendix B) and conducted two focus groups with WPI students (Appendix D) on their opinions of former ReStore website.

We received responses from 266 college students and six ReStore employees. With the collected data, we had a strong view on what components of the former ReStore website needed to be replaced.

#### Objective 3: Assess other Successful Organizations' Websites

The next step was to look at other successful Nonprofit Organizations' (NPO) websites to find potential features to implement in the Worcester ReStore website. In order to finalize the list of sample websites, we consulted with our sponsors on what websites they like and whether they knew of any websites that have similar functionality as ReStore. Ms. Pietrantonio suggested Eco Building Bargains (<a href="https://ecobuildingbargains.org/">https://ecobuildingbargains.org/</a>) and Crompton Collective (<a href="http://www.cromptoncollective.com/">https://ecobuildingbargains.org/</a>) and referred us to other ReStore affiliates: Greater Des Moines HFH (<a href="https://www.gdmhabitat.org">https://www.gdmhabitat.org</a>), Atlanta HFH (<a href="https://www.atlantahabitat.org">https://www.atlantahabitat.org</a>), South Shore HFH (<a href="https://sshabitat.org/">https://sshabitat.org/</a>).

In addition, we assessed larger and more well-known websites of NPOs such as UNICEF (<a href="https://www.unicef.org/">https://www.unicef.org/</a>), the American Lung Association (<a href="https://www.lung.org/">https://www.lung.org/</a>), Feeding America (<a href="http://www.feedingamerica.org/">https://www.lung.org/</a>), Eve Strong (<a href="https://www.livestrong.com/">https://www.livestrong.com/</a>), Goodwill (<a href="https://www.brw.org/">https://www.livestrong.com/</a>), And Human Rights Watch (<a href="https://www.hrw.org/">https://www.hrw.org/</a>). Michael Fielding, a professional journalist, editor and specialist in media and marketing, gives some examples of effective websites include NPO's like the Make-A-Wish foundation (<a href="https://wish.org/">https://www.redcross.org/</a>) (Michael Fielding, 2007). Therefore, we included these websites in our assessment so we would have a broad sample of not for profit websites to analyze the pros and cons of each using the rubric mentioned in Objective 1.

To gather more objective opinions, we once again conducted focus groups with 266 WPI students and surveyed 6 ReStore staff members. We picked three sample NPO websites (Indy ReStore, Eco Building Bargains, and UNICEF) based on similar brand (Indy ReStore), similar purpose (Indy ReStore) and popularity of similar type of organization - NPO (UNICEF). We used the same group of people so as to compile comparative feedback.

The reason why we evaluated other NPO websites is to compare the assessments to that of former ReStore website and bring the most modern and appealing design for new ReStore website.

### Objective 4: Design Web Content with Effective Keywords

Whenever a keyword or string is entered into a search engine, the ReStore goal is to have the new website appear on the first page of the search results. In order to promote the new Habitat MW/GW ReStore website and obtain more customers, we conducted a study of the most common search keywords associated with ReStore's goods. This will allow for the website to

grow in popularity, ultimately expanding the amount of potential shoppers, donors, or volunteers with the Habitat MW/GW. This objective was achieved by identifying and embedding the most common words associated with the ReStore's goods in the new ReStore website.

To get an understanding of the most common keywords used in reference to 'discounted' or 'slightly used' goods, we conducted surveys on different groups, such as college students as well as active ReStore employees and volunteers. The survey we created, which can be seen in Appendix B, was given out to students and asked the students to pretend they were looking for an inexpensive home furnishing, such as a desk, and what actions they would follow to obtain one. We distributed this survey to students of Worcester Polytechnic Institute (WPI) by table sitting and via email to help the Habitat for Humanity, and we received 134 respondents. The survey distributed to these WPI students was created to get a general understanding of how an optimal website functions in its content, graphic design, navigability, and interactivity. We then got the students' assessments of the current ReStore website based on these four traits. Questions from this survey include "What characteristics about a website's appearance will draw you into it", which included several answer options which allowed students to sort through what they believed were the highlights of a successful website. We then introduced the same students to the current ReStore website, and asked the same questions. This allowed us to get a general understanding of what search keywords to embed in the new ReStore website to allow it to be on the first page of search engines, and also how to redesign the new website to attract more shoppers, donors, and volunteers.

We also had plans of creating a focus group comprised of ReStore employees to get more direct feedback from those closest to ReStore. Even though we could not hold that focus group, ReStore staff and volunteers were emailed interview questions in order for us to get further

insight on the comparison between the former ReStore website and successful websites. This survey asked ReStore staff to evaluate the former ReStore website based on its content, graphic design, navigability, and interactivity, as well as four other websites that we considered to be successful. With the information gathered from both surveys, we got a general understanding of what search keywords to embed in the new ReStore website to allow it to be on the first page of search engines, and also how to redesign the new website to attract more shoppers, donors, and volunteers.

#### Objective 5: New URL and Launch

Along with the website design, ReStore wanted a new URL for the website so that it is easier to remember and easier to locate through different search engines. In order to decide the new URL, we came up with a list of over ten available domains by combining "restore" with the region within which it is house, like "mass" "worcester" or adjective words like "good", "fun" or action words like "join" "let's" (for example cmassrestore.org, goodrestore.org, supportrestore.org). We first asked for opinion from the ReStore Director, Ms. Maruca Hoak. After eliminating some domains, she asked the ReStore staffs to choose which one they like the most. The domain that had the most voted was chosen as a new domain. The website was then launched with new content and effective keywords developed through the previous objectives.

#### Objective 6: Market The New ReStore Website & Location

Our last objective was to market the new ReStore location and new website. ReStore moved to another location with an expansion of 10,000 square feet. Our team wanted to target both older demographics and younger demographics since Worcester is a college town with 14 colleges in or nearby. By consulting with Purvi Shah, a Marketing Professor at WPI, we were

able to come up with various marketing approaches such as articles in local newspapers, handing out brochures at supermarkets, paying for advertisements on public transportation, paying for advertisements on TV, and using college digital boards. Due to the time limit of our project span, we chose to contact local newspapers to reach the older and younger generations and come up with a marketing plan to pass on to HFH club at colleges to reach college students.

We contacted newspapers and magazines in the central Massachusetts area about ReStore's relocation. Specifically, we contacted the Telegram & Gazette (Worcester), Worcester Magazine (Worcester), The Villager (Northborough), Shrewsbury Chronicle (Shrewsbury), The Landmark (Holden, Paxton, Rutland), and Ashland Tab (Ashland) (refer to Appendix E for Contact Spreadsheet). A journalist from the Telegram & Gazette responded and proceeded to develop an article about the ReStore's new location, and website. The Director of ReStore, Ms. Maruca Hoak, followed up with the process in order to provide appropriate information for the article.

For colleges, we proposed a plan for HFH clubs at colleges to carry out. We figured that college students like freebies, that is free giveaways. Thus, when table-sitting, instead of having only flyers/brochures loaded with information and text of what ReStore does and its benefits, having something students can take and use in their daily life would remind them of the ReStore. Some freebie examples are ReStore bookmarks, ReStore lanyards, pens/pencils, water bottles, and rubber bracelets. A second approach is sharing about ReStore on college social media's pages. Social media is the best way to meet and convey information to millennials these days.

In Chapter 4, we discuss our findings from all of the data we collected, and how we utilized our findings to create the new HFH MW/GW ReStore website.

# Chapter 4: Findings and Elements of the New ReStore Website

#### 4.1 Introduction

Over the course of our several weeks working alongside Habitat for Humanity

MetroWest/Greater Worcester ReStore our team has made huge strides in updating the ReStore

website as well as helping to market the new website and new location. Through the use of

interviews, surveys, focus groups individual assessments and background research we were able

to determine the best way to make a website easier to use, informational but efficient, navigable

and attractive to new users.

In section 4.2 we discuss what a successful website needs to be visually attractive to users. After that, in section 4.3 we focus on how to increase the visibility of the new ReStore website. Finally, in section 4.4 we share our findings regarding methods to market the new website and the new ReStore location.

### 4.2 Simple Designs on Websites are the Most Effective

After several rounds of surveying, conducting focus groups, analyzing successful websites and interviewing ReStore employees we were able to identify the key attributes that go into creating a successful website. The first key attribute was to have a simple color scheme to attract users. The second was to have a navigation bar on the top of the page and remained when scrolling through the page. The other main finding We also found that it is crucial to have limited text compacted in the site to not overwhelm the user. Pictured below is the current MetroWest/Greater Worcester ReStore website.

# Finding 1: Most website users prefer a simple color scheme utilizing a maximum of three different colors because the site appears less overwhelming or busy.

According to Melissa Murphy, a professor in the communications department at Seton Hall University, graphic design is one of the four main components of what makes a website successful. A key difference between the former ReStore website and current site is the color scheme, one main distinction being the number of colors used. One of the first things users notice when visiting a website is its appearance, whether it is appealing and welcoming, or overwhelming. Of the 266 college students surveyed, 235 of them (88.6%), preferred a simple color scheme using a maximum of only three colors. This was also the case in our team assessment of the ReStore website as well as other sites such as UNICEF, Indy ReStore, and EcoBuilding Bargains websites.

The ReStore employees rated the UNICEF and EcoBuilding Bargains websites higher than the former ReStore site; and some employees commented that they liked the "color palette" and "bright colors" of those sites. These opinions were also verified by the focus groups with multiple members, who preferred to remain anonymous, saying, "the color scheme was a little distracting with the use of too many different colors as well as having too much white space." The new ReStore website's theme uses only 3 colors (blue, green, and white), following the Habitat for Humanity brand user guide. The colors on the new website are also vibrant and limit the use of white or empty space.

Finding 2: Website users prefer a navigation bar on top of the website page that stays on screen whenever the user scrolls through the site.

Also according to Murphy, another main component of a successful website is navigability. A navigation bar is a fundamental component of a website, it allows the user to find what they are looking for with little effort. According to 216 (81.2%) of the 266 students we surveyed, it is easier to navigate a website when the navigation bar is on top of the website page, rather than on the side, and is favored to remain on the screen while scrolling through the page. Of the 11 websites we assessed, all of them included a navigation bar on top of the site, and five have the menu bar stay fixed on the screen when users scrolled, meaning it scrolls with the user. This included websites of organizations such as Feeding America, Livestrong, and UNICEF. From the focus groups with college students 13 out of 15 reiterated that having access to the search bar at all times was convenient and made moving from page to page much easier. Murphy also backs this finding by suggesting that the menu bar is easy to locate and remains in the same location regardless of the webpage.



Figure 2: Front page of the former HFH MW/GW ReStore website

Figure 2 above displays the front page of the former ReStore website. As you can see there is a lot of content on the page in terms of text and buttons including a navigation bar across

the top and going down the right side for a total of 26 navigation options. Users would have to go through options at different locations to find the information they were looking. Also, if one were to scroll through the website the options would not remain available to them. According to the data we collected, these changes will make the website easier to navigate.

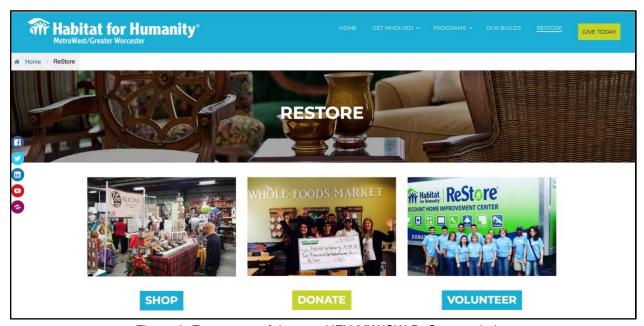


Figure 3: Front page of the new HFH MW/GW ReStore website

# Finding 3: Limited text and more photos is ideal in a website because it allows the user to navigate through the site easily and find the information they are looking for.

The final two components of successful websites are its interactivity with the user and its content. According to our survey of college students, 213 of them, or approximately 80%, like limited text and photos when necessary when visiting a website. In addition, Ms. Maruca Hoak (ReStore Director), Molly Pietrantonio (Volunteer Development/AmeriCorps Host Site Manager), Nick Vieno (Donations Procurement Manager), and Quin Lapolito (ReStore Associate) commented that they like the EcoBuilding Bargains site because it is "easy to navigate" and that all of the information can be found in a "couple of clicks." Another ReStore employee commented on a survey saying that the website was "informative but not

overwhelming." Limited text and more photos on a website welcomes the user and attracts them to continue further into the site.

Overall, the evaluations of the former HFH MW/GW ReStore website from college students, the ReStore staff, and our team shows that those users prefer less because they found it less distracting. The new ReStore website's design balances the text with media such as photos to help users find the right information without having to scan through the page.

In assessments of successful websites, the easier to navigate sites contained limited text and many photos. Examples of websites with media that replaces a great amount of text are the American Red Cross and Make-A-Wish websites.



Figure 4. Make-A-Wish Website to Display Balance of Media and Text

The screenshot in Figure 4 of the Make-A-Wish website displays how there is only text when describing a picture or video, which is a great tactic to reduce the amount on a website while still maintaining a good balance of media (see Appendix E for full assessments of nonprofit websites).

Finding 4: A website navigation bar should contain between five and eight tabs.

The new ReStore website aims to be more simplistic than the former site. The design of the navigation bar contains fewer options than that that of the old site while still providing information. Based on the assessments of other websites, eight of them had approximately five to eight options on their navigation bar, including the American Red Cross and the Make-A-Wish Foundation. Some organization websites such as the Goodwill site had only four options on the menu bar making it harder to navigate. Based on our survey of college students, 65.2% of them prefer a navigation menu with five to eight options. With the amount of material a website had to offer, this range of options allows quicker navigation. The navigation bar on the new website contains six options (Home, Get Involved, Programs, ReStore, and Support Us). This design allows users to quickly find what they are looking for in a shorter amount of time and less clicks.

Finding 5: Buttons and links should transform in some way to illustrate that they are live.

In one of our focus group on website assessments with WPI students, two people

mentioned how the former ReStore website appeared to be unresponsive because the buttons did

not change appearance when the cursor hovered them (Table 6). They prefer color change or

italicized font to keep track of their place on the website especially with multiple options. Based

on participant observation and assessment of thirteen other NPO websites, all have responsive

buttons and links.

Websites	Likes	Dislikes	Comments	Things to bring to new restore website
www.habitatmwgw.	Grid banner	Super old, not efficient (not easy to	Needs Fewer tabs	
org/restore/	Easy to navigate bc	use)	Pictures of	

	top and side menu bar , but def not prefer on the new website  Light weight  Informative	Clutter( a lot of text)  Don't know where to find things  Ugly (the way colors are put together, no transition, no necessary for colors)  Buttons: unresponsive, when you hover they dont change color Too much text, better organization of text  Search bar is too tiny,hidden, doesn't look like working	volunteers and restore (items)  Fonts are not consistent  Menu bar: Prioritize the main topics  Contact at bottom	
www.indyrestore.co	First impression: pretty  Little text  Design is so much better. Clear, easy to parse through  Futuristic  Has a video right on the homepage when u first pull up  Search bar - big  Menu bar on homepage and on top	Words are small, little  The video is large, makes page lags  Shop page needs more pics  Only focus on donate, what about other functionalities?  Main page: "make a donation" is so hard to see, why would "find a location" "indy restore" stand out	Maps doesn't really matter since ppl are gonna google "near me"  Doesn't need more info since if they need more info they can call cuz contact is there  Online signup form is nice	Everything
www.ecobuildingba rgains.org	Drop down menu bar  Definitely looks like a shop  Go by categories	Interaction with the pictures/buttons are not noticeable → color change  2 menu bars → confused. Ppl missed out the main	When they first come in they don't know what the website does, mistook the hot item was "ads"	Shop items.  This templates is best fit for new restore web

		ones  Not interactive enough  Too much text		
www.unicef.org	Fixed menu bar  When u hover on button it changes color  Nice color scheme  Words a lot but even out w pictures  DONATE stands out.  The pic of the girl in the background makes u wanna donate  Giant buttons w the icon  Looks nice, consistent  Light weight	Everything so big on main page, width large, u have to scroll a lot, u can only see one row at a time	Would be nicer if the articles aren't on home page  Icon > pictures  A little too much going on but then again the org is big	Donate button stands out, brighter color

Table 6: Student focus group on website opinion

In the following findings, we will discuss how we created the ReStore website to appear on the front pages of search engines, allowing it to be easier to be found when searching the internet. Better known as "search engine optimization", this increases the new ReStore website's visibility, or its ability to be found on various search engines.

#### 4.3 Visibility and Search Engine Optimization

Search engine optimization is the backend part of a website (see Chapters 2.5-2.6 for additional information), while the front end contains the visible designs. Search engine

optimization, and creating the backend of a website, deal with embedding the most common search terms into a website in order to have it appear earliest on search engine result pages.

These next few findings involve analyzing our data in order to increase the visibility of the new ReStore website via the most common interfaces, such as the internet and search engines, such as Google.

# Finding 6: The internet is an important interface for ReStore when attracting new store customers.

The internet acts as a vehicle of information for millions of users daily. Aaron Smith, associate director of research on internet at PEW Research Center, states that 90% of adults regularly use the internet and over 75% have access at all times through smartphones (Smith, 2017). The use of internet has been continuously rising over the years. When searching for an inexpensive home furnishing, 94.7% (252) of the college students surveyed would use the internet to find the item.

# Finding 7: Students entered a variety of keywords to search the internet for an inexpensive desk, and the repeated keywords are search strings for which ReStore should appear on Search Engine Results Pages.

Search engines websites such as Google are useful because they allow users to find websites for specific tasks they want to accomplish. Since many people use the search engines as a tool for finding other websites, the ReStore site has an opportunity to be more visible to users that do not know about it. For a website to be displayed on a search engine, the phrases that users enter have to be on the website in some fashion. The survey administered to college students asked to enter search strings when searching for an inexpensive desk as ReStore's inventory consists of discounted furnishings.

Search String	Frequency (Out of 266 respondents)
Cheap	27.8% (74)
Inexpensive	14.7% (39)
Quality	10.2% (27)
Used	8.6% (23)
Worcester/Near Me	5.3% (14)

Table 7: Search strings and their frequency when looking up inexpensive, quality desk

Of the 266 students surveyed, 27.8%, or 74 of them, used the term "cheap" in their search. Since this term has a negative connotation relating to quality of the items, it was embedded into the new ReStore website due to popularity of the search string instead of in the text in the website, as opposed to "inexpensive". Other top search terms that were identified included "used", "quality", and terms based on location such as "Near Me" or "Worcester". This allows the new ReStore website to remain higher and more visible on Search Engine Results Pages and to bring in more potential customers to the website.

In the next section of this findings chapter, we describe the main target audience that we found would best suit the ReStore, and our recommendations for the best marketing techniques to increase awareness and action of this target audience with the ReStore.

# 4.4 Marketing to the Habitat for Humanity MW/GW ReStore Target Audience

The following findings discuss our marketing techniques we recommend the ReStore employees utilize for the its target audience. We broke the main target audience of the ReStore into two different groups: college students and local residents. Due to the differences between these three groups different marketing techniques were implemented on them, and their results are discussed below.

# Finding 8: The main target audience of ReStore is college students, landlords as well as apartment renters as well as homeowners.

Through interviews with our sponsors Ms. Hoak and Ms. Pietrantonio, and other ReStore staff, we were able to identify the main target audience of the HFH MW/GW ReStore as college students as well as all the residents living in the 42 towns and cities that the MW/GW ReStore services.

#### **College Students**

The ReStore would like to increase its connection with college students for several reasons. Due to there being 15 colleges and universities in Worcester county alone, the ReStore is seeking to improve sales and volunteers by reaching out to college students. Most college students are on the move year after year and don't have time and funding to purchase expensive home furnishings. The ReStore is a great option for college students to purchase inexpensive furniture and receive community service hours for volunteering. We found that the most effective way to reach college students would be on their campus or through social media according to the PEW Research Center. Furthermore, the majority of social media users such as Facebook, Twitter, and Instagram are between the ages 18 and 29, a demographic that encompasses most college students. On the other hand, college students spend a lot of time on campus; therefore, we contacted Habitat for Humanity clubs and organizations at various colleges to increase awareness on their campuses.

#### Residents

According to the U.S Census, the homeownership rate in Worcester, Massachusetts between 2011 and 2015 is 43%. While this number is lower than the national average of 63.9%

in 2015, homeowners are ideal customers at ReStore as they sell furniture and home improvement items. This is even more ideal for new homeowners. ReStore also hopes to reach homeowners in surrounding cities such as Shrewsbury, Leicester, Northborough, Holden, Paxton, and Rutland. As the average first time homeowner is around the age of 33, the long-time homeowners are even older. Due to this, homeowners consist of older generations less able to be reached through technology. An effective approach to reach this demographic would be through newspapers and television commercials since each city has its own local newspaper and television channels. We contacted local newspapers in Worcester specifically and received confirmation from a journalist from the Telegram that an article will be published about ReStore's relocation and new website.

Since the MW/GW ReStore is located in Worcester, a large part of their customer base is currently from Worcester. While Worcester residents can be reached through local newspapers and local cable TV advertisements, they can also be reached out in common areas or points of interest such as bus stops, supermarkets, and busy streets. This can be done through flyers and brochures, and for busy streets even billboards. Supermarket advertising has the potential to reach more targeted demographics as well because there are different demographics that shop at different supermarkets. For example, the Price Chopper on Park Ave is close to WPI and many college students shop there. This applies to other supermarkets as different demographics shop at different stores such as Walmart, Wegmans, Shaw's, and Trader Joe's.

Through our interview with Purvi Shah, a marketing professor at Worcester Polytechnic Institute, we were able to develop a marketing strategy for ReStore to reach college students and local residents. Through the interview, we were able to determine that the best way for a nonprofit organization to expand its brand is through free advertising, such as having an activity

on campus, or through local newspapers. To reach college students, we contacted Habitat for Humanity clubs at colleges in Worcester to market ReStore on their campus and through social media. Effective ways to reach Worcester residents are in public areas through flyers and billboards and through local media such as newspapers and commercials. We reached out to several newspapers in Worcester and surrounding cities and had an article published in the Worcester Telegram & Gazette and confirmation of another one from Worcester Magazine.

These local newspapers were eager to spread knowledge of the ReStore because of its current unique situation, its move of location and change of website. We were also able to develop a short promotional video for ReStore's relocation and new website to be used on social media and potentially as a local television commercial, which is also free.

## Chapter 5: Recommendations and Conclusion

#### **Project Outcomes**

In designing the new Habitat for Humanity MetroWest/Greater Worcester (MW/GW) ReStore website, we collected data from several sources. Through research of website development, we identified the characteristics of successful websites and utilized to assess various websites. Through assessments of successful websites, surveys and interviews conducted the ReStore staff, and surveys and focus groups done on college students, we developed a design for the new ReStore website. They key pattern we noticed is that users prefer a simple design. From the data we collected we noted that users prefer simple color schemes of three or less colors, navigation bars on top with a range of five to eight options, and pages with less text and more media such as pictures and videos. We observed that this design made the website more appealing and easier to navigate while maintaining its unique identity. While surveys mainly influenced the overall design, interviews with ReStore employees and focus groups with college students helped to develop the website content and additional features to improve user experience. The MetroWest/Greater Worcester ReStore reaches a variety of audiences with their products. In marketing ReStore's relocation and new website we focused on the college students and residents of Worcester.

#### Recommendations

The goal or the project was two-fold. The first part was to redesign the ReStore website to make it more aesthetic, easier to use, while maintaining its unique identity. The second part was to market ReStore's new website and relocation. These efforts are intended to increase

ReStore's customer base as well as potentially increase the amount of donors and volunteers. We believe this project will have long term effects on ReStore.

From our research we developed the following five recommendations. First, we recommend that the MW/GW ReStore staff to create an e-commerce web page on the new ReStore website so users can easily purchase items from a computer or mobile device. This will expand the ReStore's sales, and allow for more space on the floor of the store because items will be moving in and out of the store at a quicker pace.

We also recommend that the ReStore staff to utilize the user-guide for the new ReStore website. This will increase the ease with which the Information Technology ReStore employees make changes to the website. In the user manual, we have described specifically how to update headers, themes, content, and styling of the new ReStore website on Wordpress.

Therefore, if the Habitat for Humanity were to change their color scheme, for example, a ReStore worker would be able to search the manual, and locate how to change color scheme on the website in a timely manner.

We also recommend that ReStore remains in contact with Habitat for Humanity clubs on college campuses to implement the marketing techniques that we have shared with them. These marketing techniques are specifically designed to raise awareness of the Habitat for Humanity ReStore to college students, which is a main target audience of ReStore. One of the strategies we shared is for members of a HFH club to conduct an activity in a high traffic area on campus. We asked the club members to ask students build a house from a building material, such as Legos. The members can then introduce the Habitat for Humanity and their mission to eliminate substandard housing and create acceptable living conditions those in need.

Unfortunately, we were not able to apply these marketing techniques due to the time constraint

of our project, therefore we felt that sharing them to other Habitat groups on campuses was obligatory.

#### Website Updates

The new website will improve user experience by being easier to navigate and use. Included with the website is a guide for ReStore to update key features of the website and its content. For the website to be more effective, we recommend that the website should be updated regularly so that users can find relevant and correct information. The shop feed links to the ReStore Facebook page and automatically updates based on their posts of items. However, some pages require regular updates such as the volunteer page to show updated orientation and volunteering dates. Another way would be to optimize the website for the second location of ReStore opening in Ashland. According to Nick Vieno, the ReStore Donations Procurements Manager, the Ashland store may accept upholstered furniture which the current ReStore location will not accept. Therefore, the donations guidelines should be updated to accommodate those changes. For the ReStore website to stay relevant, it must be updated regularly.

#### **Future Marketing Plans**

A marketing plan is the other deliverable of the project. It is a guide that gives ideas of how ReStore can reach college students and residents in the Worcester area. We recommend that ReStore effectively use online tools in marketing their store and website. While ReStore will have a new website, there are a lot more online marketing tools. They currently use social media which has the ability to reach a wide variety of users; however there are more options they should explore. For example, Facebook allows free promoted posts for nonprofits. While this is

an option to reach more people, social media pages can also be used to interact more with followers. For example, ReStore can interact with relevant pages and profiles, they can ask questions in posts to encourage discussion, and also respond to people directly. A final option is to look into Google's tools for nonprofits. For example, Google Ad Grants are given to organizations that are looking to advertise on google. In addition to the value of the grant, it has the potential to drive thousands of visitors to an organization's website. Overall, there are many potential options for ReStore to market themselves online in addition to the website.

#### Conclusion

The ReStore has the potential to increase its customer, volunteer, and donor base greatly through the new website and various marketing strategies. As ReStore's mission is to sustainably fund their Habitat for Humanity affiliate, new customers will aid them by generating more revenue. The steps taken in this project and the efforts of the ReStore moving forward will further the MetroWest/Greater Worcester Habitat for Humanity affiliate's mission to eliminate poverty housing in Massachusetts.

#### List of References

About Us. (n.d.). Retrieved August 30, 2017, from <a href="http://www.habitatmwgw.org/about/">http://www.habitatmwgw.org/about/</a>

Alsmadi, I. (2010). The automatic evaluation of website metrics and state. *International Journal of Web-Based Learning and Teaching Technologies (IJWLTT)*, *5*(4), 1-17. doi:10.4018/jwltt.2010100101

Alston, P., Walsh, D., & Westhead, G. (2015). Uncovering "Threshold concepts" in web development: An instructor perspective. *Trans. Comput. Educ.*, 15(1), 2:1–2:18. doi:10.1145/2700513

Beasley, M. (2013). Practical web analytics for user experience. Amsterdam [u.a.]: Morgan Kaufman.

Best web hosting services in 2017 (reviews & performance tests). Retrieved from https://hostingfacts.com/

Braddy, P. W., Meade, A. W., & Kroustalis, C. M. (2008). Online recruiting: The effects of organizational familiarity, website usability, and website attractiveness on viewers' impressions of organizations. *Computers in Human Behavior*, 24(6), 2992-3001. doi:10.1016/j.chb.2008.05.005

Choe, P., Kim, C., Lehto, M. R., Lehto, X., & Allebach, J. (2006). Evaluating and improving a self-help technical support web site: Use of focus group interviews. *International Journal of Human–Computer Interaction*, 21(3), 333-354. doi:10.1207/s15327590ijhc2103\_4

Christine Roy, M., Dewit, O., & Aubert, B. A. (2001). The impact of interface usability on trust in web retailers. *Internet Research*, 11(5), 388-398. doi:10.1108/10662240110410165

Church, A. H. (2001). Is there a method to our madness? the impact of data collection methodology on organizational survey results. *Personnel Psychology*, *54*(4), 937-969. doi:10.1111/j.1744-6570.2001.tb00238.x

Data Access and Dissemination Systems (DADS). (2010, October 05). American FactFinder - Community Facts. Retrieved August 30, 2017, from <a href="https://factfinder.census.gov/faces/nav/jsf/pages/community\_facts.xhtml?src=bkmk">https://factfinder.census.gov/faces/nav/jsf/pages/community\_facts.xhtml?src=bkmk</a>

Falk, D. (2004). Selected websites for high-to-low end NPO website development. *Journal of Technology in Human Services*, 22(3), 81-88. doi:10.1300/J017v22n03\_06

Fortin, Luzzi, Galaty, Wong, Huot. (2002). *Developing an internet-based communication system for residency training programs*<*br*> Blackwell Science Inc. doi:10.1046/j.1525-1497.2002.10737.x

https://www.habitat.org/about/faq

Hargittai, E. (2000). Standing before the portals: Non-profit websites in an age of commercial gatekeepers. *Info*, 2(6), 543-550. doi:10.1108/14636690010801717

Henner, T. A., & Charles, P. (2002). Using focus groups to guide development of a public health web site. *Medical Reference Services Quarterly*, 21(4), 15-22. doi:10.1300/J115v21n04\_02

Kaushik, A. (2010). Web analytics 2.0 the art of online accountability and science of customer centricity (1st ed.). US: Sybex Inc.

Kim, S., & Stoel, L. (2004). Apparel retailers: Website quality dimensions and satisfaction. *Journal of Retailing and Consumer Services*, 11(2), 109-117. doi:10.1016/S0969-6989(03)00010-9Retailing and Consumer Services, 11(2), 109-117. doi:10.1016/S0969-6989(03)00010-9

McDonald, A., & Welland, R. (2001). Web engineering in practice. Proceedings of the Fourth WWW10

Workshop on Web Engineering, 21-30.

*Method and system for hosting an internet web site on a digital camera* (2003). In Ipac Acquisition Subsidiary I. (Ed.), . United States: Retrieved from <a href="http://www.google.com/patents/US6567122">http://www.google.com/patents/US6567122</a>

Michael Fielding. (2007). Nonprofit web sites can be affordable, effective. *Marketing News*, 41(11), 9.

Murphy, M. A. (2004). Common characteristics of successful websites

. Retrieved from <a href="http://scholarship.shu.edu/dissertations/985/">http://scholarship.shu.edu/dissertations/985/</a>

Pengnate, S. (., & Sarathy, R. (2017). An experimental investigation of the influence of website emotional design features on trust in unfamiliar online vendors. *Computers in Human Behavior*, 67, 49-60. doi:10.1016/j.chb.2016.10.018

Prodan, R., & Ostermann, S. (2009). A survey and taxonomy of infrastructure as a service and web hosting cloud providers. Paper presented at the 17-25. doi:10.1109/GRID.2009.5353074

. Retrieved from <a href="http://scholarship.shu.edu/dissertations/985/">http://scholarship.shu.edu/dissertations/985/</a>

Rosson, M. B., Sinha, H., Bhattacharya, M., & Zhao, D. (2008). Design planning by end-user web developers. *Journal of Visual Languages & Computing*, 19(4), 468-484. doi:10.1016/j.jvlc.2008.03.001

Singhal, N., & Jain, H. (2017). Automock automated mock backend generation for JavaScript based applications. *Global Journal of Computer Science and Technology*, Retrieved from <a href="https://computerresearch.org/index.php/computer/article/view/1484">https://computerresearch.org/index.php/computer/article/view/1484</a>

Smith, A. (2017, -01-12T10:01:43+00:00). Record shares of americans now own smartphones, have home broadband. Retrieved from <a href="http://www.pewresearch.org/fact-tank/2017/01/12/evolution-of-technology/">http://www.pewresearch.org/fact-tank/2017/01/12/evolution-of-technology/</a>

The Housing Crisis. (n.d.). Retrieved August 30, 2017, from <a href="http://www.habitatmidohio.org/about-habitat/the-housing-crisis/">http://www.habitatmidohio.org/about-habitat/the-housing-crisis/</a>

Theoharis, L., Rev. Dr. (2017, March 04). The State of Poverty in the U.S. -- Rev. Dr. Liz Theoharis' Remarks at One Love in Jamaica. Retrieved August 30, 2017, from <a href="https://kairoscenter.org/the-state-of-poverty/">https://kairoscenter.org/the-state-of-poverty/</a>

Tuckman, H. P., Chatterjee, P., & Muha, D. (2004). Nonprofit websites: Prevalence, usage and commercial activity. *Journal of Nonprofit & Public Sector Marketing*, 12(1), 49-67.

Turner, S. J. (2010). Website statistics 2.0: Using google analytics to measure library website effectiveness. *Technical Services Quarterly*, 27(3), 261-278. doi:10.1080/07317131003765910

U.S. census bureau QuickFacts selected: Massachusetts. Retrieved from https://www.census.gov/quickfacts/MA

Yang, Z., Peterson, R. T., & Huang, L. (2001). Taking the pulse of internet pharmacies. *Marketing Health Services*, 21(2), 4. Retrieved from <a href="http://www.ncbi.nlm.nih.gov/pubmed/11406905">http://www.ncbi.nlm.nih.gov/pubmed/11406905</a>

## **Appendices**

#### Appendix A: Data Collection Preamble

We are a group of students from Worcester Polytechnic Institute in Massachusetts. We are conducting a survey to gather opinions on the current website for the Habitat for Humanity MetroWest/Greater Worcester (MWGW) ReStore. We believe this research will be valuable for evaluating the website's current state and in implementing a new design for the ReStore website. This survey is completely voluntary and you may withdraw at any time. Your answers will remain anonymous. No names or identifying information will appear on the project report or other publications. This project is a collaboration between Habitat for Humanity MW/GW ReStore and WPI, and your participation would be greatly appreciated. If interested, a copy of our results may be provided at the conclusion of this study.

#### Appendix B: Survey for College Students

12/7/2017 Website Survey

## Website Survey

We are a group of students from Worcester Polytechnic Institute in Massachusetts. We are conducting a survey to gather opinions on the current website for the Habitat for Humanity MetroWest/Greater Worcester (MWGW) ReStore. We believe this research will be valuable for evaluating the website's current state and in implementing a new design for the ReStore website. This survey is completely voluntary and you may withdraw at any time. Your answers will remain anonymous. No names or identifying information will appear on the project report or other publications. This project is a collaboration between Habitat for Humanity MWGW and WPI, and your participation would be greatly appreciated. If interested, a copy of our results may be provided at the conclusion of this study.

\* Required

1) If you want to buy an inexpensive and quality desk but don't	
know where to find one, how would you try to obtain one? (Sele all that apply) *	ct
Search the internet	

Borrow

Forget about it

Ask a friend

Other:

2) If you were to search the internet for an inexpensive and quality desk, what search string(s) would you enter into the search engine?



Your answer

https://docs.google.com/forms/d/e/1FAlpQLSfZeQ54G1f9Qo3SbjbE5FCZnqJPzlPrrS-9Hu1ae-gX8na5RA/viewform

12/7/2017 Website Survey

3a) What characteristics about a website's appearance will draw you into it? CONTENT *
Only important text, add some photos when necessary
☐ All photos
☐ All text
☐ More photos than text
☐ I don't know
3b) What characteristics about a website's appearance will draw you into it? NAVIGATION *
Menu bar on top
Menu bar on the side
A mini map of the website layout
☐ I don't know
3c) What characteristics about a website's appearance will draw you into it? NAVIGATION *
Only 3-5 options on menu bar, no dropdown menu
A drop down menu More options on menu bar
I don't know
3d) What characteristics about a website's appearance will draw you into it? GRAPHIC DESIGN *
Entire website follows one theme and color scheme (colors look appealing together)

12/7/2017	Website Survey  Website should have different colors, especially vibrant color when info needs to be highlighted
	4a) Based on your first impressions of this website <a href="http://www.habitatmwgw.org/restore/">http://www.habitatmwgw.org/restore/</a> , please rate the following characteristics CONTENT (relevant, up-to-date information) *
	4b) Based on your first impressions of this website <a href="http://www.habitatmwgw.org/restore/">http://www.habitatmwgw.org/restore/</a> , please rate the following characteristics GRAPHIC DESIGN (color scheme, text font, picture size) *  Choose
	4c) Based on your first impressions of this website <a href="http://www.habitatmwgw.org/restore/">http://www.habitatmwgw.org/restore/</a> , please rate the following characteristics NAVIGATION (easy to find where to go for what information) *  Choose
	4d) Based on your first impressions of this website <a href="http://www.habitatmwgw.org/restore/">http://www.habitatmwgw.org/restore/</a> , please rate the following characteristics EASE OF USE (in general, is this website easy to use) *

https://docs.google.com/forms/d/e/1FAlpQLSfZeQ54G1f9Qo3SbjbE5FCZnqJPzlPrrS-9Hu1ae-gX8na5RA/viewform

12/7/2017 Website Survey

5) Do you know about Habitat for Humanity ReStore? *
O Yes
O No
O I don't know
6) If no, MetroWest/Greater Worcester ReStore is a place where you can SHOP for inexpensive and quality house materials, DONATE your used materials and VOLUNTEER  Thank you for your participation. If you have any questions, please feel free to email us at our email alias habitatwebsite2017@wpi.edu, you may also contact our faculty advisor, Corey
Dehner, at <u>cdehner@wpi.edu</u> .
7) What college are you from *
Worcester Polytechnic Institute
O UMass Amherst
Other:
SUBMIT
Never submit passwords through Google Forms.

## Appendix C: Survey for ReStore Employees

We are a group of students from gather opinions on the current was action. We believe this research was design for the ReStore websurs will remain anonymous publications. This project is a constrict pation is greatly appreciant tudy.	website for the H ch will be valual osite. This survey s. No names or i ollaboration bety	abitat for Human ole for evaluating y is completely vo dentifying inform ween Habitat for I	ity MetroWest/C the website's co cluntary and you ation will appea dumanity MW/C	Greater Worcester ( urrent state and in it umay withdraw at ar on the project rep GW ReStore and W	MWGW) mplementing a any time. Your port or other VPI, and your
This survey is going to before starting the sur		nd 20-30 mi	nutes. Plea	se reload you	ır browser
Have you ever visited the curren	nt Habitat for Hi	ımanity MW/GW	ReStore websi	te?	
• Yes	ni Haonat IOI III	amanity IVI W/O W	Redicte websi		
O No					
f yes, what have you used the	website for?		***************************************		
Please visit this website (http://	/www.habitatı		ore/) and fill ou	t the rubric below l	pased on your
Please visit this website (http://		mwgw.org/resto Slightly disagree	ore/) and fill ou Neutral	t the rubric below b	pased on your  Highly agree
f yes, what have you used the very selection of the site.  Content	/www.habitatr Highly	Slightly			
Please visit this website (http://ppinion of the site.	/www.habitatr Highly	Slightly			
Please visit this website (http://opinion of the site.	/www.habitatr Highly	Slightly			
Please visit this website (http://opinion of the site.  Content Information is relevant	/www.habitatr Highly	Slightly			

12/7/2017 Qualtrics Survey Software

7/2017		Qualtrics Surve	y Software		
	Highly disagree	Slightly disagree	Neutral	Slightly agree	Highly agree
All pages follow one theme (users don't think they exit the website going from one page to another)	0	0	0	0	0
Text is readable (words are not too small, font isn't in a weird shape)	0	0	0	0	0
The amount of text is moderate	0	0	0	0	0
Media (photos and videos) distracts users from reading	0	0	0	0	0
More media (photos and videos is needed	0	0	0	0	0
Navigation					
Menu bar is easy to find on every page	0	0	0	0	0
Any link that leads to another page has clear instruction	0	0	0	0	0
Users can get to desired location within 3 clicks	0	0	0	0	0
Interactivity					
Pages take less than 1 minute to load	0	0	0	0	0
All desired files (images and documents) take less than 15 minutes to download	0	0	0	0	0
No pages under construction (pages that don't work)	0	0	0	0	0
No disabled features (i.e: broken button, map doesn't locate, email doesn't send, etc.)	0	0	0	0	0

https://wpi.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview

			outand this continue of the co		
Is there anything you would lik	e to see improve	d on this website	?		
					6
Do you like the ReStore URL (deep)	currently <u>www.l</u>	abitatmwgw.org/	restore/)? If no,	what would you p	refer the URL to
Please visit this website (https://thesite.	//ecobuilding	bargains.org/) a	nd fill out the ru	ıbric below based (	on your opinion of
	Highly	Slightly		au	***
Content	disagree	disagree	Neutral	Slightly agree	Highly agree
Information is relevant	0	0	0	0	0
Information is up-to-date	0	0	0	0	0
Information provides the answers for what users are looking for	0	0	0	0	0
Graphic Design					
All pages follow one theme (users don't think they exit the website going from one page to another)	0	0	0	0	0
Text is readable (words are not too small, font isn't in a weird shape)	0	0	0	0	0
The amount of text is moderate	0	0	0	0	0
Media (photos and videos) distracts users from reading	0	0	0	0	0
More media (photos and videos is needed	0	0	0	0	0
Navigation					
Menu bar is easy to find on every page	0	0	0	0	0

https://wpi.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview

2/7/2017		Qualtrics Surve	y Software		
	Highly disagree	Slightly disagree	Neutral	Slightly agree	Highly agree
Any link that leads to another page has clear instruction	0	0	0	0	0
Users can get to desired location within 3 clicks	0	0	0	0	0
Interactivity					
Pages take less than 1 minute to load	0	0	0	0	0
All desired files (images and documents) take less than 15 minutes to download	0	0	0	0	0
No pages under construction (pages that don't work)	0	0	0	0	0
No disabled features (i.e: broken button, map doesn't locate, email doesn't send, etc.)	0	0	0	0	0
What do you like about this we					li de
What features from this websit	te could be used i	n the new ReSton	e website?		
					li di
Please visit this website (http://	/www.indyrestor	e.com/) and fill ou	it the rubric bel	ow based on your o	opinion of the site
	Highly disagree	Slightly disagree	Neutral	Slightly agree	Highly agree
Content					
Information is relevant	0	0	0	0	0
Information is up-to-date	0	0	0	0	0

https://wpi.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview

277,2011		Qualities cui ve	, commune		
	Highly disagree	Slightly disagree	Neutral	Slightly agree	Highly agree
Information provides the answers for what users are looking for	0	0	0	0	0
Graphic Design					
All pages follow one theme (users don't think they exit the website going from one page to another)	0	0	0	0	0
Text is readable (words are not too small, font isn't in a weird shape)	0	0	0	0	0
The amount of text is moderate	0	0	0	0	0
Media (photos and videos) distracts users from reading	0	0	0	0	0
More media (photos and videos is needed	0	0	0	0	0
Navigation					
Menu bar is easy to find on every page	0	0	0	0	0
Any link that leads to another page has clear instruction	0	0	0	0	0
Users can get to desired location within 3 clicks	0	0	0	0	0
Interactivity					
Pages take less than 1 minute to load	0	0	0	0	0
All desired files (images and documents) take less than 15 minutes to download	0	0	0	0	0
No pages under construction (pages that don't work)	0	0	0	0	0
No disabled features (i.e: broken button, map doesn't locate, email doesn't send, etc.)	0	0	0	0	0

What do you like about this website?

https://wpi.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview

<i>(7/2</i> 017		Qualtrics Surve	ey Software		
					le
What features from this website	e could be used i	n the new ReStor	e website?		
					10
Please visit this website (https://www.nts.com/	//www.unicef	org/) and fill out	the rubric belo	w based on your op	oinion of the sit
	Highly disagree	Slightly disagree	Neutral	Slightly agree	Highly agree
Content	and agree	www.gr.vv	110001111	angini, ngi	1118111) 118111
Information is relevant	0	0	0	0	0
Information is up-to-date	0	0	0	0	0
Information provides the answers for what users are looking for	0	0	0	0	0
Graphic Design					
All pages follow one theme (users don't think they exit the website going from one page to another)	0	0	0	0	0
Text is readable (words are not too small, font isn't in a weird shape)	0	0	0	0	0
The amount of text is moderate	0	0	0	0	0
Media (photos and videos) distracts users from reading	0	0	0	0	0
More media (photos and videos is needed	0	0	0	0	0
Navigation					
Menu bar is easy to find on every page	0	0	0	0	0
Any link that leads to another page has clear instruction	0	0	0	0	0

https://wpi.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview

2/7/2017		Qualtrics Surve	y Software		
	Highly disagree	Slightly disagree	Neutral	Slightly agree	Highly agree
Users can get to desired location within 3 clicks	0	0	0	0	0
Interactivity					
Pages take less than 1 minute to load	0	0	0	0	0
All desired files (images and documents) take less than 15 minutes to download	0	0	0	0	0
No pages under construction (pages that don't work)	0	0	0	0	0
No disabled features (i.e: broken button, map doesn't locate, email doesn't send, etc.)	0	0	0	0	0
What do you like about this we	bsite?				
					- le
What features from this websit	e could be used i	n the new ReStor	e website?		

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#### Appendix D: Questions for WPI Students Focus Groups

- 1) What do you like/dislike about the MW/GW ReStore website (content, graphic design, navigability, interactivity)?
- 2) What do you like/dislike about the Indy ReStore website (content, graphic design, navigability, interactivity)?
- 3) What do you like/dislike about the Eco Building Bargains website (content, graphic design, navigability, interactivity)?
- 4) What do you like/dislike about the UNICEF website (content, graphic design, navigability, interactivity)?

## Appendix E: Assessment on other NPO Websites

#### Assessment of websites

(+) for a pro (-) for a con

Website	Content (text/media, info up-to-date, relevant, meaningful, serves the org's purpose)	Graphic Design (color scheme, pictures, styles, layout)	Navigability (is it easy to find pages/options where you want)	Interactivity (clickable links, downloadable media, working sounds/motion s)	URL (title of web page)
Current ReStore http://www.habitatm wgw.org/restore/ Pro:Con (1:6)	(+) information relevant (-) too much text on page	(-) no uniform theme (-) cluttered	(-) duplicate menu bar/buttons		(-) still a little long (-) a subdomain of MW/GW HFH
ReStore Template http://www.machad ocloud.net/habitat/r estore/ Pro:Con (3:1)	(+) donate, shop, volunteer with "learn more" tabs directly under	(+) simple layout (-) does not match with current ReStore identity color scheme	N/A	(+) clicking the map gives directions through google maps	N/A
Indy ReStore http://www.indyrest ore.com/ Pro:Con (6:1)	(+) video of ReStore right on top of home page (-) shop page with NO pics	(+) follow a theme, one color scheme (+) 3 sections, straightforward, laid out on homepage: Donate section -	(+) clean, a few main menu options	(+) clickable map attached to each location	(+) short and catchy, separate from habitat

		Main purposes of ReStore - Locations with map			
EcoBuilding Bargains https://ecobuildingb argains.org/ Pro:Con (7:2)	(+)relevant/up to date pictures of products (-) on donate bar, the donation form is hidden in a jungle of text	(+) menu bar only have 3 options - neat (+) carousel (+) show case their hot items right on home page (+) follows one color scheme (+) signup page is a simple form	(+) small number of menu options helps to find sections quickly		(+) name of the store (-) still a little long
Unicef https://www.unicef. org/ Pro:Con (5:1)	(+) Up to date (+) Easy to find donate and volunteer tabs (+) Different languages (-) not organized well	(+) fixed menu bar (+) follows one color scheme	(+) Desired content is a couple clicks away		(+) short, name of the organization
Crompton Collective http://www.crompto ncollective.com/ Pro:Con (4:3)	(+) funky text makes the site seem alive (-) finding what you are looking for may be difficult at times	(+) design makes the page/org looks friendly, warm (-) color scheme is bland (-) text may be hard to see or overwhelming	(+) clean with a functional menu bar	(+) load times are fast with plenty of photos and videos	

American Red Cross http://www.redcro ss.org/ Pro:Con (7:0)	(+) Up to date information with current and future blood drive dates (+) Limited text	(+) Multiple pictures and simple color scheme (+) Simple layout allows user to locate what they are looking for	(+) Navigation bar on top allows for easy access to forms	(+) Fast load times (+) Finding a blood drive is simple because of zip code option	
Feeding America http://www.feedin gamerica.org/?ref errer=https://www .google.com/ Pro:Con (3:1)	(+) Information is up to date and portrays the organization's mission (-) Front page may contain too much text	(+) Multiple pictures including a picture slideshow (+) Simple color scheme	(+) Navigation bar with only six options (+) Less than 3 clicks to get to where you want	(+) Loading times are fast	(-) URL is very long and difficult to memorize
Make-A-Wish http://wish.org/#s m.00001tyrrtiz03e 5gz6bfkz371i56 Pro:Con (8:3)	(+) Information is up to date (-) Too much text and news stories on front page	(+) Front page includes recent stories and blogs of children being assisted (+) Multiple pictures helps portray organization's mission (+) Simple color scheme	(+) Navigation bar on top of the website (+) Option to make the website be in Spanish (-) Users may be overwhelmed with the amount of stories and newsreels	(+) Referring a child and getting information on who qualifies is very simple (+) Load times are very fast	(-) URL may be a little lengthy
Livestrong https://www.livest rong.com/ Pro:Con (7:0)	(+) Information is up to date and includes lifestyle tips	(+) Simple color scheme with multiple pictures and articles	(+) Easy to find lifestyle tips and fitness articles (+) Includes	(+) Fast load times	

	(+) Calorie goal calculator on front page makes it simple for users be aware of fitness (+) Front page includes popular and trending articles		navigation bar on top and search bar		
Goodwill http://www.goodw ill.org/ Pro:Con (2:1)	(+) Information is up to date (-) Front page may contain too much content	(+) Front page contains many picture and options to serve for the organization (-) Color scheme includes multiple colors and is overwhelming	(+) Navigation bar on top of website (-) Because of the amount of text, finding what you are looking for may be difficult	(+) Fast load times (+) Front page contains everything user is looking for	(+) URL is simple
Kiva https://www.kiva.o rg/ Pro:Con (9:0)	(+) Website convinces users to lend a hand with specific categories on where they can help (+) Information is up to date and includes a "how it works" chart for users to be more informed	(+) Simple color scheme (+) Includes simple pictures and articles on how people were affected by the organization	(+) Navigation bar on top of website and capabilities of creating an account and signing in (+) User can reach their destination in less than 3 clicks	(+) Load times are fast (+) "Learn more" option allows users to explore Kiva and their mission	(+) Short URL, easy to memorize
Human Rights	(+) "Latest News"	(+) Website follows	(+) Navigation bar	(+) Great	(+) Short URL

Watch https://www.hrw.o rg/ Pro:Con (8:1)	section informs users on modern articles (+) Organization Twitter account is embedded on the front page (+) Multiple options to turn make website be in different languages	one simple color scheme (+) Website includes videos and pictures that pop to the user	on top of site allows users to easily find out more information on the organization (-) Information can seem cluttered at times because of the amount of videos and pictures	interaction with users with many links to reports and topics	
--	---	---	--	---	--

#### Detailed assessment of new template:

Pros	Cons
<ul> <li>Overall really good setup, simple but detailed, good amount of media to words, words aren't overwhelming</li> <li>I really like the Picture behind RESTORE but it's kinda dim</li> <li>Show Donate - Shop - Volunteer</li> <li>Show pictures of people → friendly site</li> <li>Social media buttons stay on the side as you scroll</li> <li>Really like the consistent top and bottom of the screens with the contact info and location.</li> <li>I really like the picture used for volunteering</li> </ul>	Link for ReStore is not as noticeable on the site (no color or logo) Doesn't follow HFH/ReStore color scheme Pictures are irrelevant or not up-to-date (at the top and for each section) RESTORE title not the logo, should be ReStore not RESTORE Donate picture is too dim Buttons for each section are not lined up SHOP, DONATE and VOLUNTEER buttons should be linked not just the learn more section below The learn more sections shouldn't be orange red and green