

Charitably App

by

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Abstract

This app aims to help users with their charitable donations by giving them a platform where they can find trustworthy charities and easily allocate funds to them. Users are challenged with keeping track of their donations and ensuring that they go to reputable charities. This app will be measured against other charity platforms like donation directly to a charity and through crowdfunding.

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Chapter 1: Introduction

Philanthropy for Today

This app aims to help users with their charitable donations by giving them a platform where they can find trustworthy charities and easily allocate funds to them.

Charity is a universal act that has been a part of our society for thousands of years. It has spanned virtually every culture including numerous instances of charitable acts dating back as far as 2500 BCE (History of Philanthropy, 2016). Recently, over the past 30 years or so, donations to charitable organizations have increased consistently year over year, with the most recent increase being 4.2% from 2015 to 2016 (National Philanthropic Trust, 2017). In fact, today, charitable giving is a core value of Western culture with 92% of high-income U.S. households donating to charity in 2016 (The 2016 U.S. Trust Study of High Net Worth Philanthropy , 2016).

The Modernization of the Industry

However, the means and methodology for giving is changing. Thanks to social media and the widespread access to the Internet, people have a much larger pool of charities to give to. This brings new challenges to both traditional charities, both local and national, as well as to the individual donor.

With so many options available, charities are facing more competition than ever before, especially local charities. Several studies contend that dollar for dollar, it's worth it to spend money overseas (Abhijit Banerjee, 2014), since many people in the world live on just \$2 a day versus the cost of living in the United States (Alexander, 2012). With so many viable options available for the modern person to give, it puts smaller charities in a

tough situation. Suddenly they're forced to compete with global organizations like the Red Cross.

Aside from increased competition, the way people are donating is progressing from primarily using cash and checks to using digital donations. Most charities rely on direct mail responses to drive funding, with some reports showing that 61% of charities' advertising budgets are spent on direct mail (Wallace, 2013). While many charities have websites, they typically rely on an ordinary shopping cart system to drive the donation, which has a very large drop off rate.

From the donor's perspective, having more charities has made donating more complicated. When it comes to philanthropy, including money, food, clothes, or household, donors maintain a mental budget of how often they give, regardless of the amount given (Soll, 1996). Because there are far more charitable causes available, such as crowdfunding opportunities, donors will use up their mental budget on these instead of what they would otherwise give to local charities. (Monica C. LaBarge, July 8, 2013).

The Increased Need for Accountability

Classic charitable organizations are facing a great deal of cynicism, especially from millennials, about how they spend the money they raise. Many millennials would rather donate towards causes directly, rather than through an organization, where they see their money covering administrative costs. This preference is one of the reasons why millennials have been drawn to crowdfunding, as it allows them to give directly to people or causes rather than using charities as a proxy.

The Challenges of Charitable Tax Deductions

Also, one of the major benefits for the donor is that money given to charity is considered tax deductible. In general, keeping track of receipts is a challenge, and the more charities a donor gives to, the harder it is to keep track of everything. This makes claiming these deductions on taxes difficult, which requires “either a bank record or a written communication from the charity showing the name of the charity, the date of the contribution, and the amount of the contribution” (IRS, 2003). According to CPA Chad McKinney, “If the taxpayer gets a receipt from the organization receiving the donation, they often fail to document what they donated and what it was worth” (5 Easy Deductions to Save You \$2,500 on Taxes, 2016). These requirements are one of the major reasons taxpayers have a difficult time reporting their charitable giving.

The Layout of this Paper

This app is essential for the nonprofit sector because it fills the gap between traditional charities and modern platforms. With it, users will be able to fully keep track of everything they’ve given to, find trustworthy charities, and properly allocate a set amount of funds based on personal income.

The first section will deal with the demographics of the donors. This will explore overall factors such as age, gender, income and location and how that impacts what charities they are most likely to give their money to. This will culminate with personas representing the profiles of the most common users of the app.

The second section will discuss some of the challenges that traditional charities face regarding transparency and trust among their donors. This section will explore issues such as overhead costs, accountability towards donors, and what is being done about this.

The third section will discuss the rising alternative model of crowdfunding. This will explore the rising trends towards crowdfunding and some of the challenges that crowdfunding faces.

The fourth section will go into some of the design considerations, and will discuss the psychological reasons that people give charity as well as the practical applications of many mobile design trends.

The fifth section will go into the research methods when designing and testing the app and explain how these methods were implemented through the testing.

The sixth section will go through the testing itself and discuss the evolution of the design and how the testing played a role in its evolution.

Chapter 2: Demographics

The Universality of Charity

Charity donations are an act that is consistent across all demographic groups, no matter the age, gender, or income. However, the amount of charity donated and to what causes vary greatly among the different demographic groups. This section will outline the differences in donating habits between each of the main factors including age, personal income, and gender.

Age

Age plays a pivotal role in donation habits. Aside from the amount of disposable income, the era that the donor grew up in plays a large part in his or her attitude towards charities and organizations. The following is an outline of the differences in charitable giving between the age groups of Seniors, Baby Boomers, Gen Xers, and Millennials. This data is based on the 2015 Blackbaud Charity Report, which collected data from 5,379 nonprofit organizations (Blackbaud, 2015).

Seniors. Seniors are comprised of those born from 1945 and earlier (age 69 and older), and represent 26% of total donations. 88% of seniors report giving to charity, and those who give, give to an average of 6.2 different charities. Seniors on average give \$1,367 annually, despite the fact that many of them have low incomes. Although these donors are much more likely to respond to direct mail, with 52% giving in response to direct mail solicitation according to the Pew Research Center, 67% of people 65 or older use the internet.

Seniors give to more traditional local services, with 50% giving to places of worship, 34% giving in honor of a loved one, and 55% giving to local social services.

Baby Boomers. Boomers are comprised of those born between 1946 and 1964 (age 50 to 68) and are the largest group of donors, representing 43% of total donations. 72% of Boomers report giving to charity, and those who give, give to an average of 4.5 different charities. Boomers on average give \$1,212 annually, and while that's less than the average amount seniors give, more people in the demographic are giving — 51 million Boomers vs. 27 million seniors.

This is the group that represents, for most non-profit organizations, the largest group of donors and the group they target most often. This group was often raised with a philanthropic tradition, are still working, have money to give, and are frequently major donors. Boomers split pretty evenly between giving online and giving through direct mail with 42% giving via the former and 40% giving via the latter.

In addition, 21% of boomers reported giving monthly. Boomers typically give to more traditional local services, with 46% giving to places of worship, 30% giving in honor of a loved one, and 52% giving to local social services.

Generation X. Generation X are comprised of people are born between 1965 and 1980 (ages 37 to 52) and are the 3rd largest group of donors, representing 20% of total donations. 59% of Gen Xers report giving to charity, and those who give, give to an average of 3.9 charities. Gen Xers on average give \$732 annually due to members of this group likely having higher living expenses and less income for charitable giving.

Among Gen X, the total number who give is larger than the number of senior donors, but this represents only 59% of the total group as compared to the 88% of seniors. Gen Xers are more digital oriented, with 47% reported willing to give via mobile device. They're also much more likely to look into and share information about the charities they support, with 25% following charities on social media, 38% sharing information with friends on Facebook, and 46% viewing videos about the charities they support. Gen Xers have a bit more of a mix than older generations with giving to more traditional local services, with 40% giving to places of worship, 37% giving to local social services, and 39% giving to health charities.

Millennials. Millennials are comprised of people born between 1981 and 1995 (ages 19 to 33) and are the smallest group of donors, representing 11% of total charitable giving. 60% of Millennials report giving to charity, and those who give, give to an average of 3.3 charities. Millennials on average give \$481 annually, which is much less than the other groups. However, when it comes to the amount that give, they line up pretty closely to the Gen Xers — 60% for Millennials vs. 59% for Gen Xers — but less than Boomers – 72%. Millennials are very digital oriented, with 62% reporting willing to give via mobile device, 47% reporting donating through a website, and 8% reporting donating via social media.

Millennials are also much more likely to look into and share information about the charities they support, with 28% following charities on social media, 50% sharing information with friends on Facebook, and 56% viewing videos about the charities they support. Millennials tend to give to more secular organizations, with 38% giving to

children's charities, 33% giving to health charities, and 22% giving to places of worship.

Millennials also had a rate of 57% who wanted to see the impact of their donation.

Income

Income is a considerable factor in how much charity is donated. A 2014 study done by *The Chronicle* found that on average, Americans give about 3% of their income to charity (Justin Myers, 2014). However, that figure hides some of the big differences in giving patterns between those with higher incomes and those with lower incomes.

When measuring, there are two main factors to consider: The Average Charitable Deduction, or the average total amount given per person, regardless of how much they make, and the Average Gross Income Given, or the total percentage of income that is given to charity. Naturally, the larger the Average Gross Income, the more donated to charity.

The highest bracket of 2 million and up claimed an average charitable deduction of \$382,000 and the lowest bracket of under \$25,000 claimed an average charitable deduction of \$1,824. However, when it comes to the Average Charitable Deduction, the largest averages come from the lowest brackets. Those earning under \$25,000 gave an average of 12% of their total income, while those in the higher brackets gave a lower percentage, with the \$200,000 – \$500,000 bracket giving 2.8%, and the \$500,000 to 1 million bracket giving 2.8% of their income (Frankel, 2016).

Table 1 Average Charitable Deduction

Adjusted Gross Income (AGI)	Average charitable deduction	% of AGI
Under \$25,000	\$1,874	12.3%
\$25,000-\$50,000	\$2,594	6.8%
\$50,000-\$75,000	\$2,970	4.8%
\$75,000-\$100,000	\$3,356	3.8%
\$100,000-\$200,000	\$4,130	3%
\$200,000-\$500,000	\$7,424	2.6%
\$500,000-\$1,000,000	\$18,615	2.8%
\$1,000,000-\$2,000,000	\$43,944	3.2%
\$2,000,000 or more	\$382,953	5.6%

SOURCE: IRS STATISTICS OF INCOME 2014.

Gender

According to the 2016 Women's Give report on gender differences and charity, men and women's donor behavior has changed over the past four decades (Mesch, et al., 2016). Thanks to the many changes in education, employment, and household structure, women now have more engagement and decision-making, which has changed how they approach charity. The study found that young married couples whose giving decisions were influenced by women give higher amounts than their counterparts 40 years ago. Those whose giving decisions were made by men give lower amounts than their counterparts 40 years ago.

These findings show a trend in that, all things considered, women are more likely to donate than similarly situated men. Not only that, but they also tend to spread what they give around to more charities than men tend to do, often giving to more secular causes or giving to causes overseas, while men tend to give to fewer institutions, and usually to established ones such as universities and religious organizations.

The study also showed that men were found to prefer charitable contributions for their tax benefits, while women tended not to factor that in and would give largely because they want to help others.

Personas

Because every person who gives charity is unique, it would be impossible to create an app that was ideal for everybody. By using the data that I have gathered, I was able to build personas, or representatives of users, from each of our age groups. These personas allow us to draw not just a profile about gender and age, but to dig into the psychology of the imagined character in their interaction with our app.

Will Carrol



"I'd love to give, but it's hard to find room in the budget"

Practical

Creative

Empathetic

Imaginative

Age: 35

Work: Project Manager

Family: Married, 3 kids

Location: New Orleans

Yearly Donation: \$730

Bio

Will is married and has been a part of the community all his life. He's an active member of his community and attends church regularly. However, with 3 kids to raise and expenses piled up, it's difficult to find the money to give. Most of his donations are done in small amounts and only when there are specific pledges, but he also sets aside a small amount each month. He doesn't spend too much time on social media, preferring to spend time with his family

Goals

- Set up automated mounts given each month
- Keep detailed info for tax purposes
- Get notified about important drives from local charities

Elena Hoffberg



"I like to give directly to a cause, knowing that my dollar will make a difference"

Practical

Creative

Empathetic

Imaginative

Age: 23

Work: Graphic Designer

Family: Single

Location: Washington DC

Yearly Donation: \$420

Bio

Elena recently graduated college and moved from Atlanta to DC, living on her own for the first time. Being new to the community, she isn't very involved, like she was back in Atlanta. While she enjoys giving, she sees large organizations as a large bureaucracy and prefers to give to individuals who are struggling through peer to peer platforms such as GoFundMe and IndieGoGo.

Goals

- Easily find causes she can relate to
- Keep a detailed account of everything she gives
- Be able to share important causes with friends

Kipp Firestone



"I like to give directly to a cause, knowing that my dollar will make a difference"

Practical

Creative

Empathetic

Imaginative

Age: 58

Work: HR Director

Family: Married, 5 Kids

Location: San Francisco

Yearly Donation: \$1280

Bio

Kipp recently sent his youngest son off to college, and is going away for a few weeks with his wife, Marissa. He is one of the senior members of his community, having lived in his there for 25 years. He's proud of his community and takes an active role in the local events and fundraisers. He prefers to give to services that support the community and help make it a better place like parks and rec. He spends a good amount of time on social media, managing the local community online groups and getting people to come to events.

Goals

- Easily share events and causes online
- Easily be able to find local charities over national ones
- Be able to give quickly without too many distractions

Stewart Thomas



"I like to give directly to a cause, knowing that my dollar will make a difference"

Practical

Creative

Empathetic

Imaginative

Age: 78

Work: Retired

Family: Widowed, 2 kids

Location: Albany, NY

Yearly Donation: \$1410

Bio

Stewart recently retired from his job of 40 years and just downsized to a small apartment. He is very religious, attending church weekly as well as all of the social events, seeing his friends at the church as part of his family. He gives to many church related events including tributes to his late wife. He somewhat tech savvy, skypeing with his kids once a week

Goals

- Easy and intuitive UI
- Able to specify as to what he wants his donation to go towards
- Be able to share important causes with friends

Chapter 3: Transparency and Accountability

The Demand For Accountability

The demand for more transparency and accountability is a growing concern among donors. Donors want the security of knowing that an organization will put their money to good use. A 2014 BBB Wise Giving Alliance survey found that 70% of Americans said it is difficult to tell whether a charity soliciting their contribution is legitimate — in other words, the charity actually does the kind of work it says it does and operates ethically (BBB, 2012). Charities have been losing the once immutable trust that they used to have, especially as more and more information about how charities use their money is available.

In 2015, the Philanthropy Chronicle ran a survey of 1,000 people and asked them about their thoughts on charities in general (Philanthropy, 2015). They found that 68% said it is very important that the charity has evidence that its programs are effective, and 50% said that the charity gets good ratings from watchdogs. Donors are skeptical of charitable performance. In the survey, only 15% of the Americans interviewed said that they had a “great deal of confidence” in charities, and even local charities only saw 21% report “great confidence”.

Cost of Overhead

One of the largest factors that donors focus on is how much charities spend on compensation, administration, and fundraising. 84% of respondents said they make giving decisions based on that information. Overall, 40% of respondents believe charities

do not spend their money wisely, especially when it came to administrative costs, with 41% saying that the charity leaders are paid too much.

Donors aren't wrong to be skeptical about charities and what they spend money on. Charities have grown a lot bigger in the past 30 years. What used to be a small group of do-gooders has morphed into vast organizations with hundreds of staff, boards of directors, and CEOs. This gives charities the amount of overhead they need to cover costs before they can even start doing the good for which their donors are giving money.

Some charities are quite adept at keeping overhead costs down. The American Red Cross manages to keep administrative expenses at less than 5% of their total overhead, and they spend about 91 cents of every dollar donated on actual programs that benefit the community (Charity Navigator, 2016). Other charities spend a much larger amount on overhead. The American Printing House for the Blind spends approximately 35% of funds on administrative expenses (Charity Navigator, 2016).

Charities like these lead to frustrated donors who choose to give their money elsewhere, like this donor who said, "I will not donate to any charity that pays its people hundreds of thousands of dollars. I prefer giving locally to someone in need. And of course, the local food bank is a priority" (The Guardian, 2015).

Lack of Transparency

This sentiment isn't just felt in America. The Australian charity watchdog, ChangePath, put out a report showing that 28% of nearly 900 top Australian charities

have no annual or financial reporting available on their websites, 20% have no privacy policy for what they do with donors' personal information, and 8% have consistently lost money for the last three years or more for a combined loss of over \$200 million (Thorp, 2016).

A study conducted by the Millennial Impact Project says 78% of millennials are “very likely or somewhat likely to stop donating if they didn't know how the donation was making an impact” (Yu, 2016). Millennials in particular are losing trust and are demanding more transparency in organizations, especially as to where their money is going.

Keeping Tabs on Non-Profits

Due to these concerns, several organizations have started to keep tabs on charities and give the accountability that donors want to see. Organizations like Charity Navigator and Charity Watch routinely perform in-depth evaluations of complex charity financial reporting. Their reports include audited financial statements, tax forms, annual reports, state filings, and other documents to determine the percent of total expenses a charity spent on its programs.

The organizations take that data and analyze the cost of each program and how much it cost the charity to raise each \$100 of cash donations (Charity Watch , 2015). They then determine what percentage of total money collects going to the programs run and score the charities on a scale of A+ to F. Charities lose points by violating a transparency such as having too few independent board members, having a material

diversion of assets, or not having their audited financial statements prepared or reviewed by an independent accountant.

Working with Watchdog organizations seems to be having a positive effect on the perception of charities. A 2014 survey showed that 32% of donors claim that if the charity displays an approval seal on its website, that would “greatly” impact their likelihood to make a donation, while a combined 40% of donors say the display would “moderately” (20%) or “slightly” (20%) increase their likelihood to donate (Finch, 2014).

Donors are also far more likely to expect some sort of seal of approval before donating. A combined 55% of respondents say they “always” or “sometimes” look for rating seals on charity websites when deciding whether or not to make a donation.

Should a charity not have any seal of approval, many potential donors say they wouldn’t give any money to them. 66% of respondents say the absence of a seal on a charity’s website would “greatly” decrease the likelihood that they would make a donation to that organization. 27% of respondents say the lack of a ratings seal on a charity’s website would “somewhat” (18%) or “slightly” (9 percent) impact their decision not to donate, while only 7% say it would have no impact on their decision at all.

Chapter 4: Crowdfunding

A New Method of Fundraising

Like many classic industries, charity is constantly innovating. There are many startups working on ways to disrupt the industry, helping people raise and give money. One of the main disruptions of the traditional charity models is the idea of crowdfunding.

Crowdfunding is a method of raising capital through the collective effort of friends, family, customers, and individual investors (Fundable, 2014). This approach taps into the collective efforts of a large pool of individuals — primarily online via social media and crowdfunding platforms — and leverages their networks for greater reach and exposure.

Crowdfunding is a fast-growing platform for all types of fundraising and more and more people are supporting projects with it. According to the Pew Research Center, roughly 22% of Americans report that they have contributed to an online fundraising project on a website like Kickstarter or GoFundMe. Some 41% have heard of these sites but have never contributed to a project that was being funded this way, and around 36% have never heard of these sites before (SMITH, 2016).

The crowdfunding method thrives on small donations, with 13% of people saying that their largest donation has been \$10 or less, while 49% indicate that they have given between \$11 and \$50 at one time. Crowdfunding is also far more popular with Millennials, with the Pew Research Study finding that 30% of Americans aged 18 to 29 had contributed to a crowdfunding website, while only 8% of those 65 and older had.

Crowdfunding Models

There are several different crowdfunding models. There is the Rewards Based Model, where donors get incentives based on how much they give. One primary example of this is Kickstarter. With Kickstarter, the fundraiser sets their end goal, then sets rewards based on how much someone donates. For example, during the campaign for the Pebble Time smartwatch, if a donor pledged \$159 or more they were entitled to their choice of one Pebble Time watch in any of the three colors. If they pledged \$159 or more they were entitled to one Pebble Time Steel watch with a leather strap and extra metal strap (Pebble Time - Awesome Smartwatch, No Compromises, 2015).

There is the equity-based model, where donors are buying a stake in the company. A primary example of this is CrowdFunder. With Crowdfunder the fundraiser sets their end goal, and when users give money they actually become investors in the company

Finally, there is the donor-based model, where people simply donate without any promise of incentive or reward. A primary example of this is GoFundMe. With GoFundMe the fundraiser sets their end goal and users give to the cause, but in this case, there are no rewards, they are giving purely to help the cause itself. This particular website is one that concerns charities, as it directly competes with the classic charity model.

Crowdfunding Benefits

Donor-based campaigns are often the first respondents to tragedies. After the devastation in Houston from Hurricane Harvey, hundreds of GoFundMe fundraisers sprang up and ended up raising more than \$4.5 million to help the victims (Fast Company, 2017). Donor-based campaigns are often helpful in solving immediate problems, such as helping people who lost their homes find shelter, get support for their families, and rebuild their homes.

Crowdfunding Challenges

Donor-based platforms aren't without their own set of challenges as compared to those of traditional charities. The biggest challenge that crowdfunding platforms face is how open they are. Any person can sign up for an account, create a sob story, and claim that they need help. And unlike platforms such as Kickstarter and IndieGoGo, they don't have to produce results. This creates an environment that's perfect for scammers. In one case, a man posed as a godfather for a child who needed a heart transplant and then proceeded to keep the money that was collected (LUPKIN, 2015).

GoFundMe has safeguards and fraud detection in place. For example, there is a waiting period before campaign organizers can withdraw their money after they close their accounts. In addition, GoFundMe warns people not to donate to campaigns unless they fully understand and trust the cause presented. GoFundMe is also not expressly a charity platform, and many users use it as a way to raise money for personal projects. In one case, a mother raised over \$8,500 to take her children to Disneyland (Smith, 2017).

The terms and conditions don't forbid campaigns like this, they only expressly forbid very specific campaigns, such as raising funds for controlled substances, adult services, false statements, Ponzi schemes, and organized violence (GoFundMe, 2017).

There is also the fact that at its core, GoFundMe and other crowdfunding platforms are for-profit enterprises, charging a 5% fee on campaigns, which is in line with other crowdfunding sites. GoFundMe brings in as much as \$140 million a month in donations and it generated an estimated \$100 million in 2016 revenue_(HARRIS, 2017). These profits incentivize the platform to drive as much money as possible for any cause, no matter how controversial.

While GoFundMe has policy against controversy, banning “the promotion of hate, violence, harassment, discrimination, terrorism, or intolerance of any kind,” these policies only cover extreme examples. Even then, the platform is easily exploitable by using the money to fund something related to the proscribed event like security (PAYNTER, Can GoFundMe Be The Future Of Philanthropy If The Alt-Right Uses It To Raise Funds?, 2017). For GoFundMe, it's a win-win: they get their 5% while still being able to help people raise money for their causes, regardless of what the users intend to do with the money.

Chapter 5: Design Considerations

App Overview

The goal of Charitably is to create a platform that makes giving to vetted charities easy and rewarding. I will do this by creating a solution for the biggest challenges facing traditional charities as well as newer platforms. To do this I have designed an app that takes the best parts of both traditional and modern charities while reducing the challenges they both face.

The app itself is designed like a marketplace, allowing users to find the cause that best suits them. Users are able to find local charities, global charities and even charities supporting recent disasters. Users can rest assured that all their money will be going to good use, since only vetted charities will be available on the app. Users are also able to keep track of their donations through detailed accounting for themselves, for work, and for taxes.

Designing for Engagement

The greatest challenge that every app faces is getting noticed in the app store. There are millions of apps, and only a fraction of them ever get any attention in the first place. The second greatest challenge that apps face is user engagement and retention. According to a Localytics report on 2016 data, the average mobile app retention rate was 20% after 90 days (Localytics, 2016). Keeping users engaged is a must for any app and will be a driving focus in the design. To help with this, I will be using a major principle of persuasive design known as the Hook Model.

The Hook Model

The Hook model was coined by Nir Eyal and argues that users get triggered by both their "internal and external" triggers, which gets them to take actions that make a habit of using that product (Eyal, *Hooked: How to Build Habit-Forming Products*, 2014). By creating a habit the app becomes almost self-sufficient, as the user will decide to come back on their volition. This occurs through a 4-step process of triggers, action, variable rewards, investment, followed by another trigger. This process then forms a "hook" and repeats itself.

Triggers. The hook model starts off with "Triggers," which can be accomplished through both external and internal factors. External triggers are triggers that get a user to use the product, such as an advertisement or a recommendation from a friend, but they also exist past the initial interaction with the app. One major external trigger is the idea of notifications, where an app will use an event or special deal to rope the user back into the app. An example of this is the mobile game "Clash of Clans," which uses notifications to let their users know that their base is under attack, that there is a special on in-game purchases, or that they're eligible for free in-game currency (Collaros, 2015). All of this is designed to get the user either to the app in the first place or back into the app.

Internal triggers work a bit differently than external ones. Where external triggers are all about getting to the top of the users' mind through ads and other media, internal triggers use the user himself or herself as the trigger. Or rather, the user's emotions. When users feel emotions such as boredom, loneliness, fear, or indecisiveness, they push themselves to use the product in order to alleviate those emotions (Kosner, 2014). This

typically happens once a user has already gone through a full Hook cycle and already associates the product with positive feelings.

Actions. The second step of the model is “Action,” which is the step that users take in anticipation of a reward. This can be anything from clicking on a notification to watching a video or playing a level of Candy Crush (Tollady, 2016). However, for an action to occur, there needs to be both motivation and ability. Some examples of motivation are: pleasure, avoiding pain, seeking hope, avoiding fear, seeking acceptance, and avoiding rejection. Ability is simply the capacity to do something and includes factors such as time, money, physical effort, social deviance, non-routine, and brain cycles.

Variable rewards. The third step of the model are “Variable rewards,” which is the stimulus that users get once completing an action (Eyal, Variable Rewards: Want To Hook Users? Drive Them Crazy, 2012). Classic advertising would use a stagnant reward as their stimulus, but in today’s online world they need to use a system that doesn’t give a set reward. This keeps users coming back for more. There are three different reward types: rewards of the tribe, rewards of the self, and rewards of the hunt. A reward of the tribe involves social recognition, like getting likes on a Facebook post or people upvoting a clever Reddit response. A reward of the hunt comes from our hunter-gatherer roots and uses our need for food and sustenance, which translates into stimuli such as deal sites, news feeds, and even gambling. Rewards of the self are personal accomplishments and skill acquisition. Some examples of this are video game achievements such as level ups or finishing a difficult challenge.

Investment. The fourth step of the model is “Investment” in the product itself. The more we use a product, the better we become at it and the better the product helps us out. One example of this is online games, where users spend a considerable amount of time leveling up and spending time with the team. Should they switch games, they would have to start all over again.

Practical Application of The Hook Model

One example of the hook model in effect is as follows with Pinterest. A user is on Facebook and sees that a friend posted something on Pinterest. This piques his interest and acts as the external trigger. The user then goes to Pinterest to take a look. This acts as their “action.” The user then sees the interesting post, which is their hunt-based reward. Finally, the user decides to re-pin the post on his or her own page, acting as an “investment.”

This model gives clear guidance on what factors to use to create an engaging user experience that will get users to keep coming back for more. As a charity product, our goal is to help users give to causes more easily. Our hook would be as follows:

For a new user, our external hook would be based on advertising, which would focus on the causes that we help support. This would drive the user to the action step and have them download the app and go through the onboarding to find their cause to support. The overall donation aspect would serve two of the three main drivers, the reward of the tribe and the reward of the self.

It would serve the first drive by allowing the user to share their donations to their various social networks, allowing their friends to “like” and comment on their good deed.

It would also serve the reward of the self through a detailed user page with stats containing how much the user has given and what percentage of giving they are in. This ties nicely with the investment aspect, where the user page also functions as a way to keep users using the app. On one level, the app functions as a means for them maximize their tax deduction, but users will also want to keep the app for their personal stats as well.

This all leads back to the triggers, which will let users know about new charities that they are likely to support, updates and funding drives that their supported charities are doing, and notifications that they haven't given in some time. The exploration and user stats aspect would also serve as internal triggers, especially if the user is feeling down. The user could open the app and see his or her own positive stats as a way of feeling positive about his or her good deeds.

Why Do People Give To Charity

Every year Americans donate hundreds of billions of dollars to charitable causes (USA, 2016). Aside from the tax break, the actual motivator that drives people to give is unclear. Every decision to give is often the result of many different emotions and outside factors, such as the desire to help the community paired with the desire to show off to friends. In general, most people give for a variety of reasons, often a combination of altruistic and non-altruistic reasons.

Altruism. Some of the motivators associated are typically considered “selfless” and include emotionally charged giving, such as giving for a disaster relief, to help a

homeless shelter, or giving to help change someone's life. Another example is giving to "give back" to a community or group that has helped you. The giving itself is typically entirely altruistic, with the giver giving only out of a desire to help out, and not because of external factors.

Social Pressures. One of the underlying motivators for charitable giving is social pressure. Thanks to social pressure, we give when we normally wouldn't, and we give more when we would normally give less. To test how social pressures affect charity, John List of the University of Chicago sent three groups of volunteers into various Chicago neighborhoods to solicit money for a children's hospital. The first group just knocked on a door unannounced, the second group alerted the people ahead of time that someone was going to be knocking on their door and asking for money, and the third group alerted people that a knock was coming and given a choice to opt out. The results showed that when households are alerted ahead of time, the number of people who answer that knock on the door falls by a quarter. When people are given a choice to opt out and say they don't want to be disturbed, donations fall by nearly half. (Stefano DellaVigna, 2012)

Prestige. The other major motivator for charity is the idea of the prestige effect, and how giving charity signals wealth status and rather than just providing internal satisfaction. A 2004 study in the *Journal of Public Economics* found that donations increase when donor names were publicized and that people don't usually donate anonymously, even when the option is available. This was tested by publicly announcing the names of donors and the category of the amount donated (gifts of \$500 to \$999 to

qualify as "Sponsor," \$1,000 to \$1,999 to qualify as "Patron," etc.). They found that most contributions are exactly the minimum amount required for inclusion in each category.

Chapter 6: Methods

User Testing

Designing an application is an ever-evolving process. No project is perfect upon first iteration and most need multiple redesigns until it feels right. This is why it's important to get users involved early and often through beta testing. While designers have amazing ideas that seem good on paper, often users won't act as the designers predicted and will add valuable inputs that shape the design of the app if given the opportunity. In the case of the Charitably app, it's important to get a better understanding of users in general and how they will interact with the app. Therefore, I focused on the research method of user testing through paper prototyping.

Paper Prototyping

Paper prototyping is a widely used method in the user-centered design process which involves creating low fidelity, even hand-sketched, drawings of an interface to use as prototypes of design. This provides a great deal of useful feedback of the initial designs which will result in the better design of the app. Paper prototyping is especially efficient as a user testing for several reasons: Paper prototyping is cost effective because it is very cheap to implement and test. Paper prototypes can be quickly sketched and tested, and they allow for the quick introduction of modifications and refinements needed to address any usability problems that have been identified. They also allow for a greater focus on the core issues, since users won't be distracted the design and will feel more comfortable giving their honest feedback.

The user research process is divided into 5 parts: Building, Scripting Recruiting, Interviewing and Analyzing.

Building. The process begins with putting the idea for the project onto paper. This gives clarity to the overall idea and helps the designer to start imagining the experience through the user's eyes. In this case I used index cards to simulate a mobile device and used paper cutouts to simulate buttons and notifications. I then drew a basic user interface that goes through the main user journeys of the app.

Scripting. The next process was creating a script of goals for the users to follow. This was done through the creation of scenarios, or common user stories that would come up. The user read the scenario and tried to accomplish the goal that the scenario described. The goal of this was to test how simple and intuitive the overall user experience of the app was. The user was presented with 5 or 6 scenarios, each with their own goals.

Recruiting. The next process was recruiting, and just like when interviewing, I looked for users who fell into our target demographic and requested to interview them about their own experience with the charity giving process. Users were selected from each of the 4 main generations of Millennials, Gen X, Baby Boomers, and Seniors, with the only requirement being that they gave charity within the past year.

Interviewing. Next, there was the testing process, where I went through the prototype with the user, with all testing taking place in a public and open space. For the test itself, there were 2 people present, one to moderate, and one to act as a "computer" and make the prototype function like it would as a fully functioning app. The moderator

introduced the team and what the goal of the test would be. Participants were first asked to read and sign a form of consent that stated that they understood what the testing was about, how the data from the user would be used, and gave permission to record the interview for later analysis. Respect for the user's time was of the utmost importance, so the testing was brief and did not exceed the allotted time. The moderator then presented the user with the first task, and allowed the user full freedom to read and interpret the scenario as they saw fit, without interruption. The user was encouraged to share their thoughts out loud. After the first task was completed, the moderator presented the user with the second task and so on and so forth. At the end of the test, the moderator asked for any overall thoughts and feedback. This process was repeated for each round of testing done.

Analyzing. The final step was to analyze the results of the user tests. In this step I gathered the feedback, reviewed the scenarios and read the notes that were written and made appropriate improvements to the overall design of the app. When necessary, I chose to repeat the paper prototyping process to ensure that the design is intuitive to the user.

Chapter 7: App Design

Designing the App:

With the main purpose of the app to help make donating to charity easier, the app was designed to help users easily find charities they would be interested in, donating to said charities, and finally, keeping track of their donations. The original concept was designed based on these principles and further testing was done in order to refine this concept.

Paper Prototype

This version was the overall vision that was first used as a way to solicit feedback from expert users. It contained 7 main areas:

- Logging on
- Onboarding sequence
- Preferences
- Home screen
- Search section
- Donation sequence
- Payment sequence
- Summary section

Onboarding. The onboarding sequence was where users learn about what they can do with the app and how it helped them and the charities they wanted to support as

well as set up their profile so they could give with ease. The onboarding sequence contained three screens and walked the user through the main functions of the app.

Preferences. Participants were then sent to a screen that asked the user to detail the causes that they cared about; this helped the app show appropriate charities to the user. Users were then sent to fill out their payment method, this would allow for easy, non-intrusive donating. Users could choose to add a credit card or even add a bank account and would be able to set up their default payment. After completing this, users were then sent to the homepage.

Homepage. The page showcased one charity from each of the main sections and included local charities, favorites, followed charities, recommended charities and trending charities. Users could easily tap on the image of the charity to go directly to that charity page, or they could click on the section and go to the entire list of charities. If the user wanted to search for a charity themselves or wanted to browse for recommended charities, they would then go to the search section.

Search. The search section was built to give users as many different options as possible to find the perfect charity. It contained 5 different ways for users to find a charity and included a Local, favorite, trending charities as well as a search section and a categorical search section. One of the main goals of this section was to give users as much information up front about a charity as possible, so each section would showcase the name and logo of the charity, where they were located, if they were running a fundraiser, and their Charity Watch score.

Donation Sequence. This sequence consisted of four pages: The charity page, the donation pop up, the confirmation page and the thank you page. The charity page was designed to showcase information about the charity itself and the fundraiser they were raising money for. The page was designed with “conversion” principles in place and focused on showcasing trust as much as possible. It did this by showing the Charity Watch score, the number of people that have funded the project so far, how much has been raised and how many people have left comments. The page also contained details about the fundraiser allowing users to scroll through additional detail about the charity. Finally at the bottom of the page users could choose to leave a comment, share the charity, save it for later, or donate. If they chose to donate there would be a popup with four suggested amounts of 5, 10, 25 and 50 and the option to input your own amount. Once a user chose the amount they wished to donate, they would be sent to a screen confirming the amount. The amount would then be paid and the user would be sent to the thank you page.

Summary. Users could keep track of their donation through the summary section. This section was a breakdown of all the charities they donated to as well as the most common charity categories in a specified timeframe. Users would be able to access specific tax receipts directly from this section and choose to export individual receipts or the data for an entire year to complete the data for their tax returns.

Expert feedback

Upon submitting the initial designs for feedback, there were several main changes that were recommended. The first was to remove the requirement to login to see the app; interested users would sign up anyway and by requiring a login I was just turning potential users away.

Paper Prototype Recommendations

Table 2 Paper Prototype Recommendations

Change	Justification	Severity
<ul style="list-style-type: none"> Remove the requirement to login to see the app 	Interested users would sign up anyway and by requiring a login I was just turning potential users away.	Medium
Change	Justification	Severity
<ul style="list-style-type: none"> Remove “search” from the category and make it a central part of the app 	The search field itself was too important to be relegated to just another tab and would serve a far better purpose being a universal icon	High

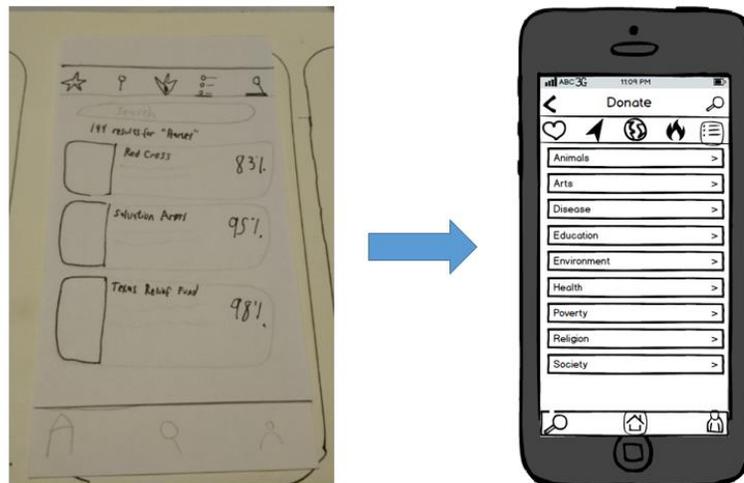


Figure 1 Paper Prototype search update

Change	Justification	Severity
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Change	Justification	Severity
<ul style="list-style-type: none"> Remove Charity Watch ratings from search results 	The charity watch rating isn't important enough to justify the limited space on the search results page.	Medium

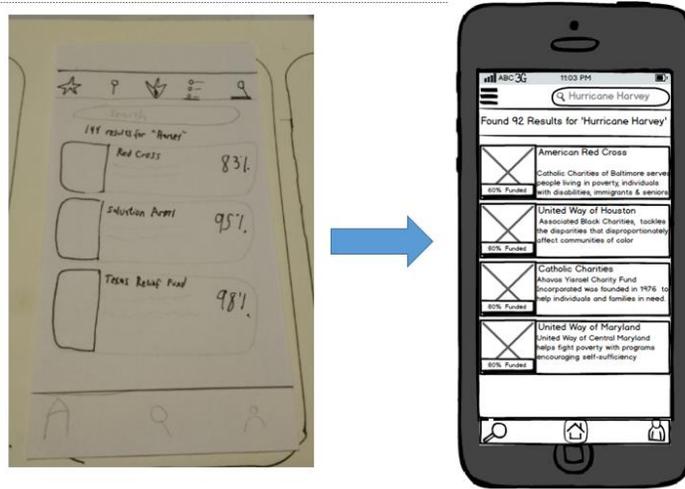


Figure 2 Paper Prototype remove charity watch ratings

Change	Justification	Severity
<ul style="list-style-type: none"> Remove comment section from charity profiles 	The comment section would just add clutter to the design.	Low

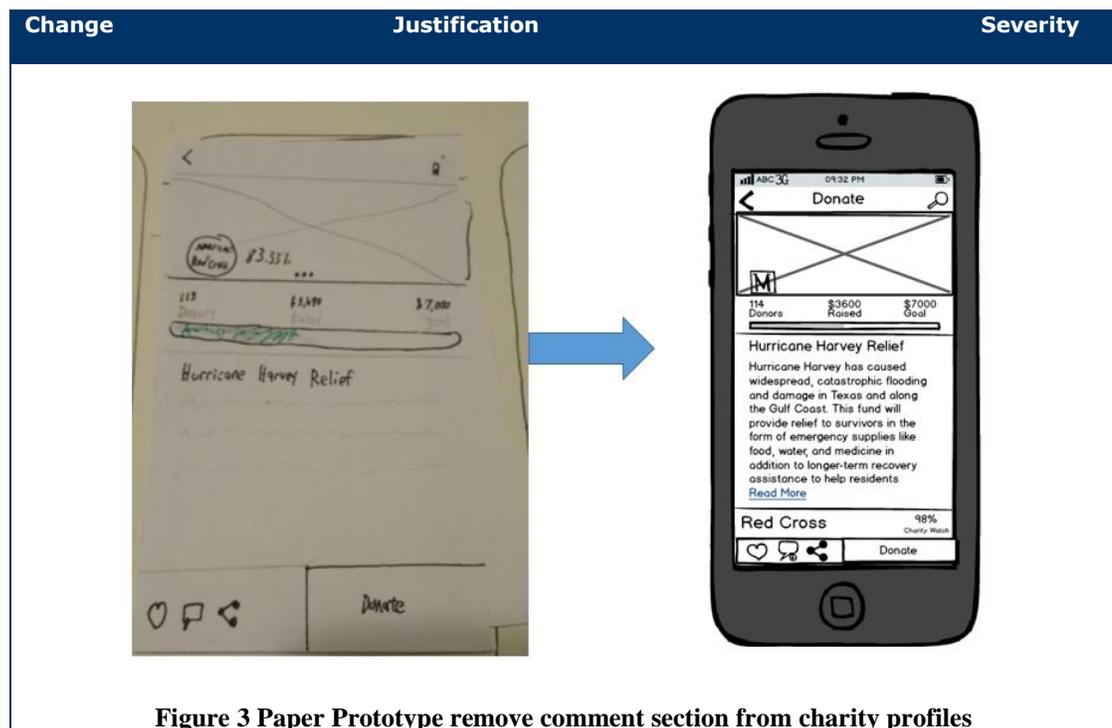


Figure 3 Paper Prototype remove comment section from charity profiles

With these findings in mind, I went out to design a digital version of the prototype using the Balsamiq mockup software. Using Balsamiq would allow us to design clean mockups that were still easy to change and wouldn't appear too polished, so users would still feel comfortable giving feedback

User Testing Round 1

Using paper prototyping, I was able to quickly sketch out a mockup of the app I wished to create. The goal of this test was to gauge how users felt about the concept, how easy it was for them to accomplish the core functions, and what their overall concerns or misgivings about the app were.

Users

In this round of testing, I recruited five users: User 1 was a 25-year-old female, User 2 was a 33-year-old male, User 3 was a 40-year-old male, user 4 was a 64-year-old

female, and User 5 was a 65-year-old male. This hit all 4 of our user groups with the extra user being from the senior group. Each user was handed a list of tasks with a typical experience that would prompt the user to use the app. The user test was divided into five separate tasks

Evaluation Tasks/Scenarios

Test participants attempted completion of the following tasks (see Appendix B for complete test scenarios/tasks)

- Find a charity supporting hurricane victims and make a donation
- Find a charity supporting local schools and make a donation
- Complete the charity check out process
- Create and export a report of charitable giving
- Take a full year to date inventory of charitable giving and export the data

Task Completion Success and Error rate

All participants were able to complete all the tasks, but ran into errors while doing so. In Task 1 (find a hurricane charity) most users made at least one error, with one user making three errors. In Task 2 (find a local charity), all users made at least 2 errors. Task 3 (Complete the checkout process) had minimal errors with only 3 out of 5 users having one error. In Task 4 (Create and export a report of charitable giving) most users ran in trouble, with most users running into 2 or more errors. Task 5 had the least amount of errors with only 2 out of 5 users running into errors.

Table 3 User Test 1 Task Completion Rates

Participant	Task 1	Task 2	Task 3	Task 4	Task 5
1	√	√	√	√	√
2	√	√	√	√	√
3	√	√	√	√	√
4	√	√	√	√	√
5	√	√	√	√	√

Table 4 User Test 1 Task Error Rates

Participant	Task 1	Task 2	Task 3	Task 4	Task 5
1	1	3	-	2	-
2	2	2	1	1	-
3	3	3	-	2	-
4	1	2	1	4	1
5	1	2	1	3	1
Errors	8	12	3	12	2

Errors

Task 1. Task 1 had the largest amount of user errors. Ideally, users would browse the trending section and find one of the hurricane support charities. However, the users took many different paths to complete the task. Users 1, 4, and 5 all chose the direct route by tapping on the search icon and searching for “Hurricane Harvey,” while User 2 looked under the “trending” section and chose a charity from there. User 3 had the most trouble and first tried to find it by category, then, being unable to find an appropriate category that would fit this, gave up on browsing and chose to search for it. This suggests

that there is no clear path towards completion. In addition users also had trouble figuring out the proper category for the charity they wanted to give to.

Task 2. Task 2 had several minor errors related to the category. Ideally, users would browse the local section and find the local charity they were looking for. While users were able to complete the task, they were only able to do so because the result they were looking for was at the top of the browsing results. There was no option for users to narrow down their browsing.

Task 4. Task 4 had a large amount of errors related to users finding the section. Ideally, users would open the menu and navigate to the finances section. While all users were able to complete the task, several of them got stuck in a few key areas. Users 4 and 5 had trouble finding the summary section and expected it to be on the homepage. In particular, User 4 tried searching for the section, but had to be redirected.

Likes, Dislikes, Participant Recommendations

Upon completion of the tasks, participants provided feedback for what they liked most and least about the website, and recommendations for improving the website.

Liked Most

The following comments capture what the participants liked most:

- “I like being able to give to local charities easily”
- “I like that there are trust indicators when choosing a charity”

Liked Least

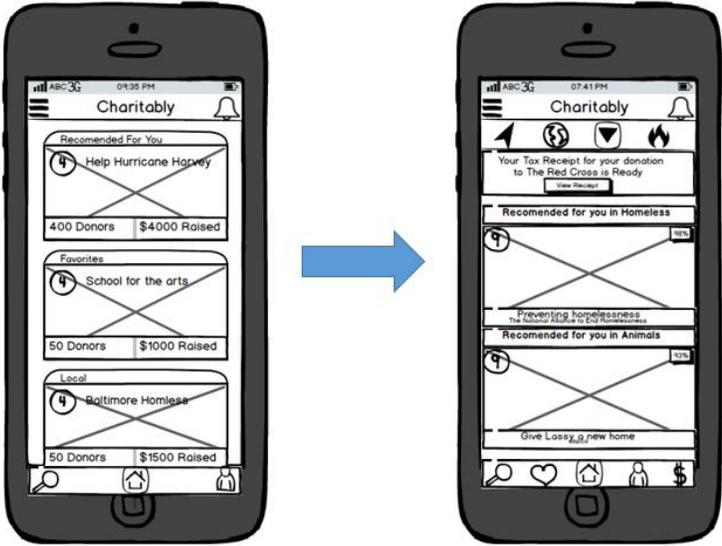
The following comments capture what the participants liked the least:

- “I don’t feel confident that I could find a charity on my own”

- “I find the checkout system to be confusing”
- “It doesn’t make sense for me to go through 3 pages just to see what I’ve donated”

Recommendations

Change	Justification	Severity
<p>Added categorical browsing to each section and removed individual category browsing section.</p>	<p>Most users chose different path when completing the task, from choosing to browse or just search directly. Several participants also found browsing for specific charities difficult since there were no ways to narrow down their choices.</p>	<p>High</p>
<p align="center">Figure 4 User Test 1: added categorical browsing</p>		

Change	Justification	Severity
<ul style="list-style-type: none"> • Added summary section to homepage • Added a notification icon to all pages 	<p>Several participants found it difficult to find the summary section if they choose to ignore the popup to view the summary</p>	<p>High</p>
 <p data-bbox="581 1192 1170 1218">Figure 5 User Test 1: added summary to home page</p>		

Takeaway

Overall, it seemed that the users liked where the app was going, but there were certainly a lot of areas that are rough around the edges. The user test showed that there were several critical issues facing the app.

First, users had trouble finding the charities that they were interested in. Second, the checkout system seemed awkward and difficult to use. Third, many secondary functions of the app were difficult to find.

User Testing Round 2

Users

In this round of testing, I recruited five users: User 1 was a 20-year-old male, User 2 was a 26-year-old female, User 3 was a 30-year-old male, User 4 was a 52-year-old female, and User 5 was a 58-year-old male. These users were given the same tasks as the previous round of testers.

Evaluation Tasks/Scenarios

Test participants attempted completion of the following tasks (see Appendix C for complete test scenarios/tasks)

- Find a charity supporting hurricane victims and make a donation
- Find a charity supporting local schools and make a donation
- Complete the charity check out process
- Create and export a report of charitable giving
- Take a full year to date inventory of charitable giving and export the data

Task Completion Success and Error rate

All participants were able to complete all the tasks, but ran into errors while doing so. In Task 1 (find a hurricane charity), users made one to three errors with 8 errors in total. In Task 2 (find a local charity), several users were able to complete the task with no errors, but other users had some difficulty with 6 errors in total. Task 3 (Complete the checkout process) had minimal errors with only 2 users having one error each for a total of 2 errors. Task 4 (Create and export a report of charitable giving) had most users make at least 1 error for a total of 6 errors. Task 5 had the least amount of errors with only 1 out of 5 users running into an error.

Task Completion Rates

Table 5 User Test 2 Task Completion Rates

Participant	Task 1	Task 2	Task 3	Task 4	Task 5
1	√	√	√	√	√
2	√	√	√	√	√
3	√	√	√	√	√
4	√	√	√	√	√
5	√	√	√	√	√

Table 6 User Test 2 Task Error Rates

Participant	Task 1	Task 2	Task 3	Task 4	Task 5
1	2	1	1	1	-
2	1	-	-	-	-
3	1	-	1	2	-
4	1	3	-	1	1
5	3	2	-	2	-
Errors	8	6	2	6	1

Errors

Task 1. While not necessarily an error, users were still taking shortcuts to complete their tasks. In this case, three out of five users still opted to use search instead of browsing for the solution. The other users had trouble identifying which category would contain “help hurricane victims,” with User 1 looking at sections such as “homelessness” and User 5 looking at “society” until finding the section on “disaster relief”.

Task 2. Users 4 and 5 first spent a bit on the first category before realizing that the section didn’t have the school fundraiser. User 4 felt that there was a lot of

information on the page and it was difficult to discern what information was important and what was not.

Task 4. There was some confusion about where the location of the summary section was. Users 3 and 5 first went to the profile section before realizing that the profile didn't contain the information they needed.

Likes, Dislikes, Participant Recommendations

Upon completion of the tasks, participants provided feedback for what they liked most and least about the website, and recommendations for improving the website.

Liked Most

The following comments capture what the participants liked most:

- “I thought the categories made browsing fun.”
- “I like being able to see all my transactions on one single page”

Liked Least

The following comments capture what the participants liked the least:

- “There is way too much information shown at me at once”
- “It's a bit of a challenge to find specific charities even with categories”
- “The checkout system doesn't give me any indicator how long it's going to last.”

Recommendations

Change	Justification	Severity
<p>Separate the app into charities and fundraisers sections.</p> <ul style="list-style-type: none"> • Search is now more intelligent and interprets the search query as either a specific charity or a fundraiser and shows results based on that. It also allows users to narrow down results to either a fundraiser or charity. • The browsing section has been cleaned up to feature more about the fundraiser itself than the charity that is running it. 	<p>User behavior has shown that when they know the specifics of what they are looking for they are much more likely to search for it and when they don't have specifics, they are more likely to browse for them.</p>	<p>High</p>

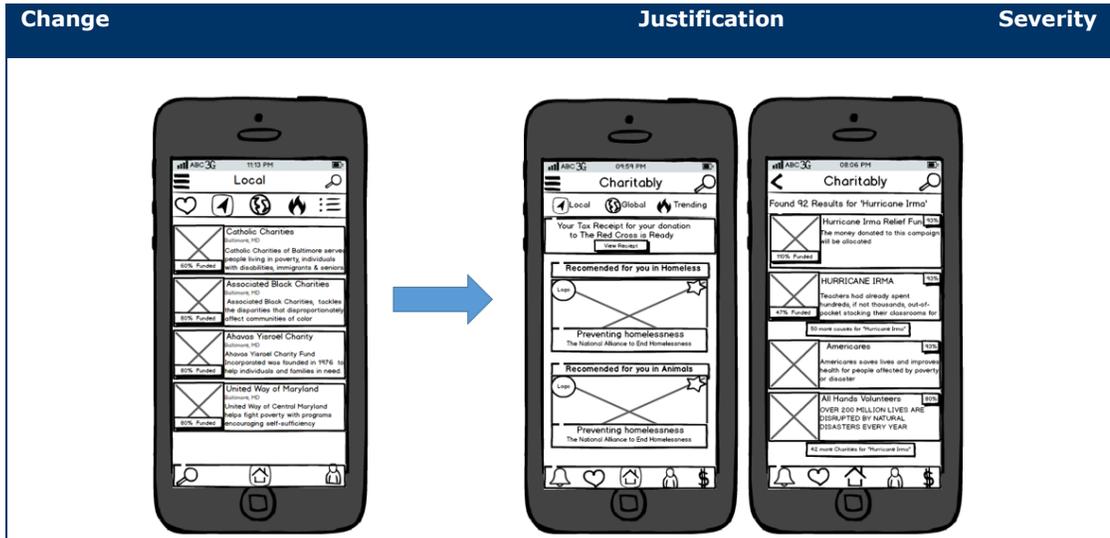


Figure 6 User Test 2: Separating the app into charities and fundraisers sections

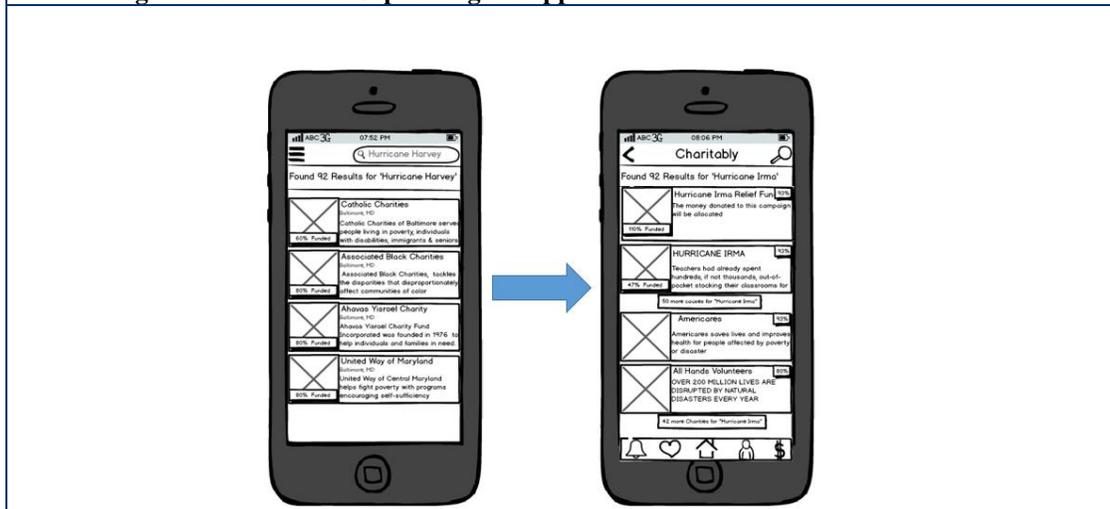


Figure 7 User Test 2: Adding causes and charities to the search section

Change	Justification	Severity
<p>Simplify the browsing section up to only show three sections, being local, global and trending and add text to the icons</p>	<p>Several participants found the icons to be confusing, especially the older users who weren't able to connect the "fire" icon with "trending".</p>	<p>High</p>

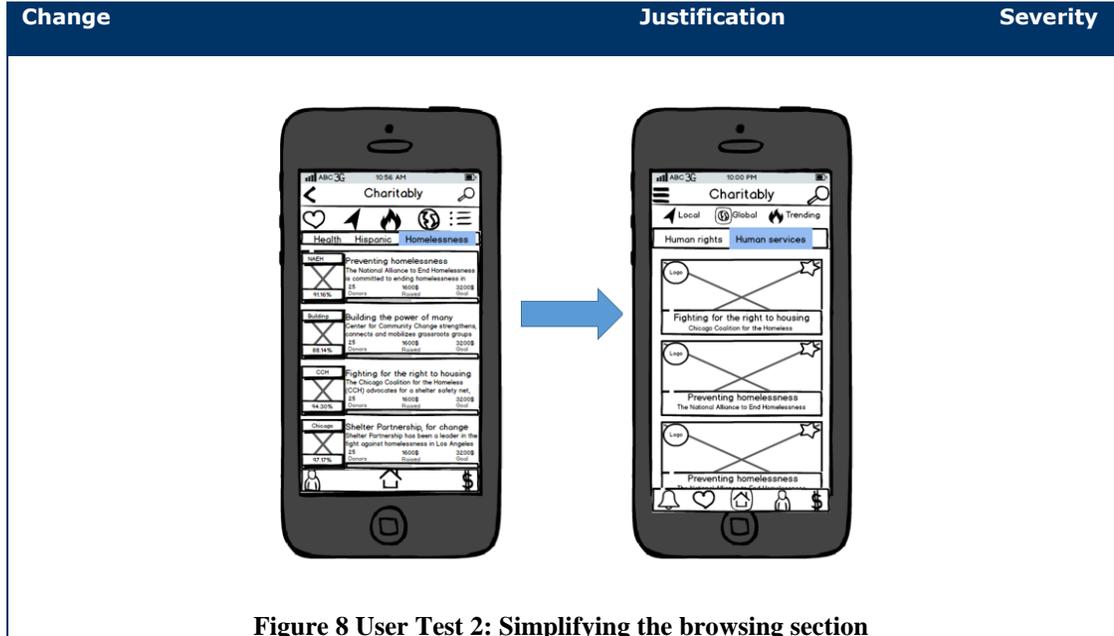


Figure 8 User Test 2: Simplifying the browsing section

Change	Justification	Severity
<p>The app now prioritizes immediate payment instead of forcing users to use the checkout system.</p>	<p>While users found the checkout system to be useful in practice it would just add more steps to the process.</p>	<p>High</p>

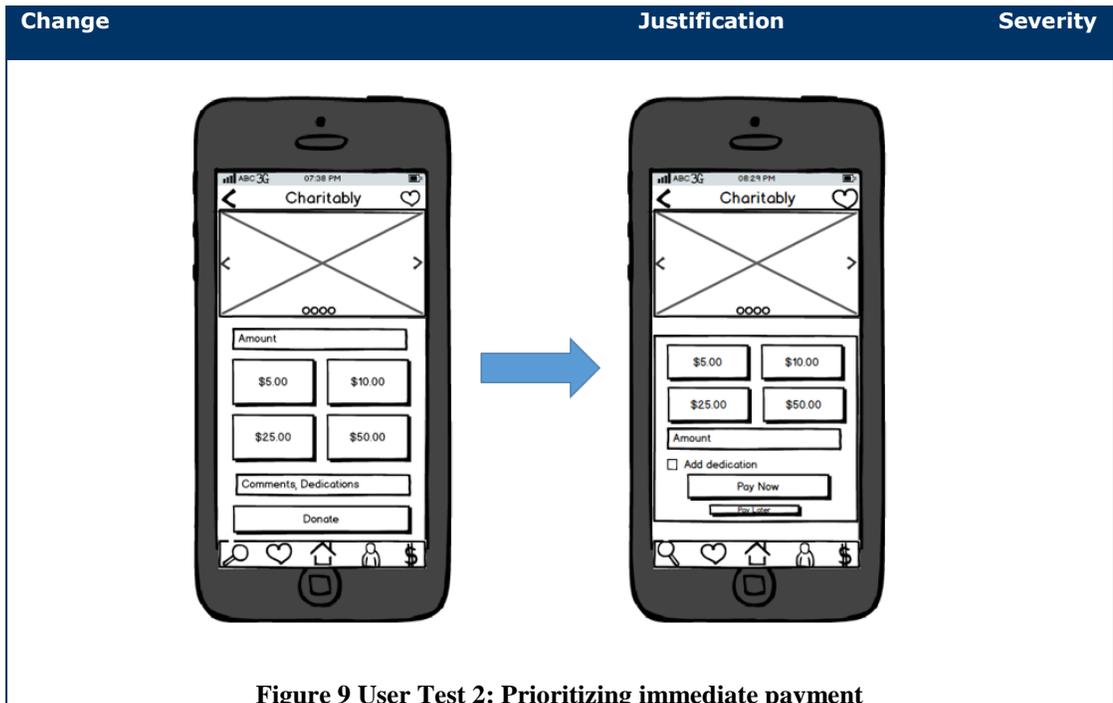


Figure 9 User Test 2: Prioritizing immediate payment

Change	Justification	Severity
<p>The checkout system now has a link to the summary section.</p>	<p>Several participants confused the checkout section with the summary section, and would go to checkout, expecting a summary.</p>	<p>High</p>
		

Figure 10 User Test 2: Added link to the summary section

Takeaway

Overall, it seemed that the users found that the app is coming along, but there are several areas that could use additional work. One area that requires further study is the browsing section and the difference between browsing and searching. This would also require separate pages for causes and charities while maintaining the balance between the two. In general users would search for charities and browse for causes. In addition, users asked to have the option to pay right away if they want, as opposed to requiring a separate payment section.

User Testing Round 3**Users**

In this round of testing, I recruited five users: User 1 was a 31-year-old female, User 2 was a 32-year-old male, User 3 was a 24-year-old male, User 4 was a 60-year-old male, and User 5 was a 58-year-old female.

Evaluation Tasks/Scenarios

Test participants attempted completion of the following tasks (see Appendix B for complete test scenarios/tasks)

1. Make a \$100 donation to a cause or charity you would like to give to.
2. Find a charity and donate \$25
3. Find the school and donate \$25
4. Save a charity for later
5. Export the receipt of your most recent donation
6. Take a year inventory and export the data.

Task Completion Success and Error rate

All participants were able to complete all the tasks, with the exception of Task 4 (Save a charity for later), which had a 60% completion rate. Aside from Task 4, users also ran into some minor errors while going through the test. In Task 1 (Make a \$100 donation to a cause or charity), there were 4 user errors in total. In Task 2 (Find a charity and donate \$25), there were 5 errors in total. Task 3 (Find the school and donate \$25) had 3 errors in total. Task 4 (Save a charity for later) didn't have any errors aside from the users who could not complete the task. Task 5 (Export the receipt) had 2 errors. Task 6 (Export a years' worth of data) had 2 errors.

Table 7 User Test 3 Task Completion Rates

Participant	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6
1	✓	✓	✓	✓	✓	✓
2	✓	✓	✓	✓	✓	✓
3	✓	✓	✓	✓	✓	✓
4	✓	✓	✓	X	✓	✓
5	✓	✓	✓	X	✓	✓

Table 8 User Test 3 Task Error Rates

Participant	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6
1	2	1	1	-	1	1
2	-	-	-	-	-	-
3	-	2	-	-	-	-
4	-	2	1	X	-	1
5	2	1	1	X	1	-

Participant	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6
Errors	4	5	3	0	2	2

Errors

Task 4. The goal of this task was to test whether or not the users noticed the “heart” icon in the top left corner of the charity page and whether or not they identified that as the favorite icon. Only Users 1, 2, and 3 were able to complete the task with User 4 thinking that the icon was a “like” button for Facebook and User 5 missing it altogether. Users 1, 2, and 3 had all noticed it and put it together that it was a “favorite” icon due to it matching the icon on the bottom. User 1 pointed out that being a heart heavily implied “liking” and used Twitter as an example.

Likes, Dislikes, Participant Recommendations

Upon completion of the tasks, participants provided feedback for what they liked most and least about the website, and recommendations for improving the website.

Liked Most

The following comments capture what the participants liked most:

- “I found the imagery on the browsing section to be very pleasant”
- “This will be real useful for tax season, I hope I can just import this into TurboTax”

Liked Least

The following comments capture what the participants liked the least:

- “I have no idea how to save this for later”

Recommendations

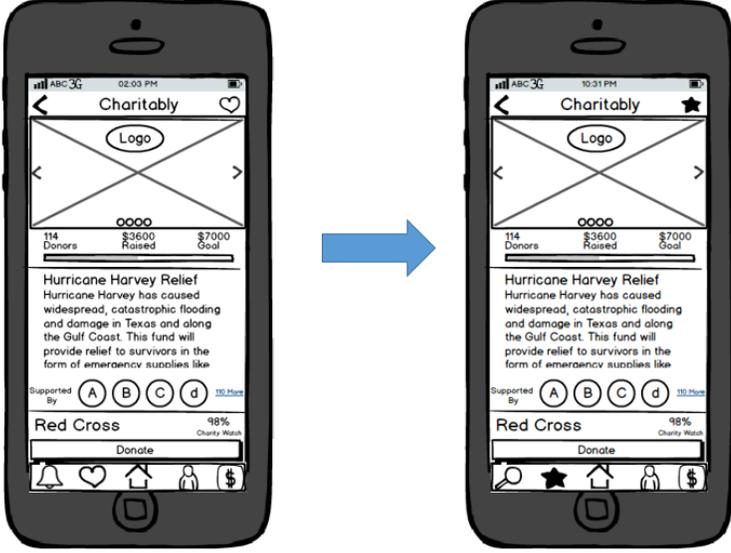
Change	Justification	Severity
<ul style="list-style-type: none"> Change favorite icon from a heart to a star 	<p>Users confused the meaning of the icon and didn't associate it with favoriting their charity</p>	<p>High</p>
 <p>The figure shows two side-by-side smartphone screens representing the Charitably app. A blue arrow points from the left screen to the right screen, indicating a design change. Both screens display a charity page for 'Hurricane Harvey Relief'. The left screen has a heart icon in the top right corner, while the right screen has a star icon. The page content includes a progress bar, statistics (114 Donors, \$3600 Raised, \$7000 Goal), a description of the relief effort, and a 'Donate' button. The bottom navigation bar also changes from a heart to a star icon.</p>		

Figure 11 Change favorite icon from a heart to a star

Takeaways

Overall it looks like many of the hypotheses about the design were confirmed.

When given full freedom, users tended to browse for a cause and when they had an specific target they were much more inclined to search for it. Users didn't care for the "pay later" option and all tended to choose to pay immediately. Also, the "favorites" icon would have to be redone to be more easily noticeable and more closely represent "favoriting" rather than "liking."

This round of study led to changes in how the fundraisers are displayed. Instead of displaying the Charity Watch rating directly on each listing, each listing now has a “favorite” icon in the top right corner, giving users easy access and visibility to the feature. The Charity Watch rating is still displayed prominently on each listing and users can be confident that every charity they give to has been highly vetted.

Chapter 8: Conclusion

No design is perfect, and users will always poke holes at even the most solid of designs. As designers, it's our job to continue to improve our work as I move my designs closer and closer to perfection. The design of the Charitably app certainly falls into this category. The user testing and feedback showcased three important lessons when it comes to design: recognizing our design biases and the blind spots it creates for us, designing for the least common denominator, and how to properly translate user feedback versus their actions.

As designers, we are naturally biased towards our own work. One classic example of this is blaming the user for not seeing the so-called "obvious" next step that they should know to take. This played a major part during the design when I started noticing the differences between how users browsed versus how they searched. After noticing the issue, I then designed and tested it and I was initially surprised by the results.

What was most surprising was that when I looked back at some of the previous tests, the signs of this issue were there all along. Already back in the first test I saw that users tended to search for charities they already knew and they browsed when they didn't have the exact specifications. This can be seen in how I approached the search function. In the original prototype, search was just another section that users could use to find what they needed. Every section had the same goal and nothing was tailored for different goals. This slowly changed as I realized the growing importance of search, with experimenting to give it its own app-wide placement in version 2. It was only when I

realized what users were trying to do when they actually searched for a charity, that I was able to use search to its fullest.



Figure 12 Evolution the search functionality

The signs were right there in front of me, I just came up with different reasons why the users would choose to act the way they did instead of realizing the truth: my design wasn't sufficient, and the user tests revealed that.

The second major takeaway was understanding that design conventions that may be obvious for us or even for people in our age group might not be so obvious to others. This played itself out when it came to understanding what the icons meant. Icons in general are a handy design shortcut. They allow designers to give a short visual of what they mean without having to spell it out directly. To us, many icons are easily identifiable and understandable. To us, a map icon is likely to bring up a map, and a location icon is going to bring up local information. However, this wasn't the case when it came to older users, who found that the icons were just random images and didn't help them find the content they were looking for.

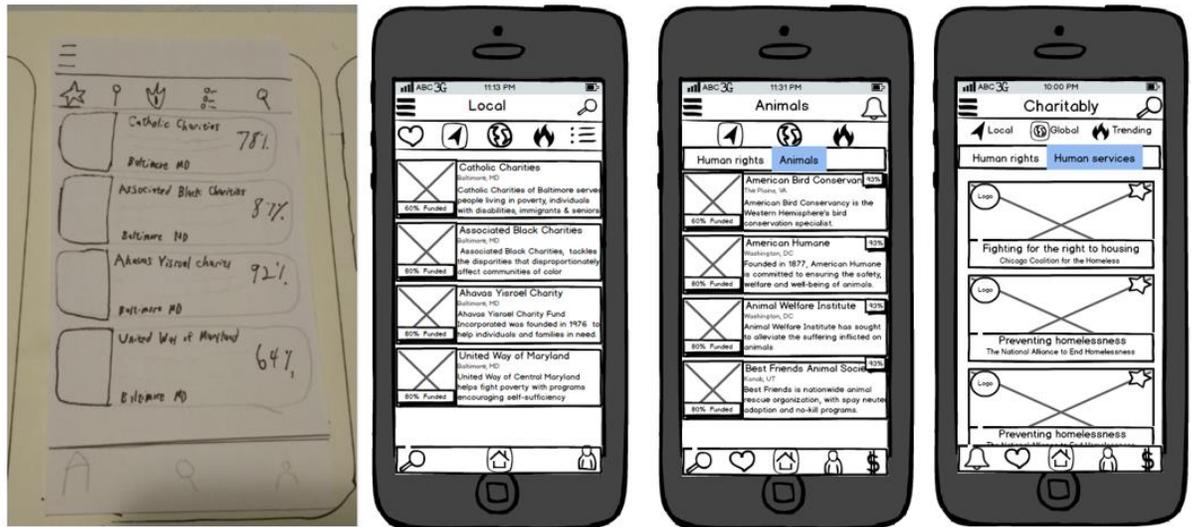


Figure 13 Evolution the browsing functionality

Our testing showed us this understanding gap and allowed us to come up with a solution that still allowed us to use icons and still convey the information that users needed.

The third major takeaway is balancing what users say versus how they act. Users are a great source of feedback — they can let you know if a design is usable or functional — but often the feedback they give is not the real core issue. This is true throughout the history of modern design, as Henry Ford famously said, “If I had asked people what they wanted, they would have said faster horses.” This came to mind during testing when working out how payments would work.

Initially, the idea was that users would add a credit card to file and pay with, but there was the issue of it being too much of a barrier to entry for guest users. That’s when I started testing out the checkout system that would solve this problem. When I tested it out on users, they seemed to like it, with some users going as far as to say that they thought it was an ideal system.



Figure 14 Evolution the payment functionality

In reality, the testing itself showed that users didn't really like it any better than a direct checkout, which is a far simpler solution and at the very least should be prioritized.

Through the many rounds of testing, the design has undergone some radical changes from small improvements such as adding text next to icons, to large changes such as dividing the app to accommodate browsing and searching. The one thing that has remained consistent has been the goal of the app.

I set out to build an app that would make giving charity easier, an app that would solve the biggest barriers users had when deciding where to give their money. Users needed trust. I created a platform where only trusted and vetted causes are shown so that users could know that when they gave \$100, they could be confident that the maximum amount of that \$100 would go to the cause they wanted. Users wanted a quick and easy way to give to charities they cared about and I built a robust system that would help them

give in as few taps as possible. They wanted to be able to keep strict records of their donations and I've designed a platform that keeps everything in one place, ready for taxes or just to check on their budget. They wanted to be able to help both their local communities and the world at large and I designed a system that caters to both of those needs. Users can help support local homeless shelters or help build schools in Africa. This app is not just going to help users have an easier time giving charity, and is not just going to be helpful for the charities that use it, it's going to be helpful to the most vulnerable people who need us the most.

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Appendix A: Paper Prototype Walkthrough

When a user would open the app, they would be greeted with the prompt to log in or create a new account. In addition to regular username and password, they would also be able to log in through Facebook and Google. A returning user would be sent directly to the home page, and a new user would be sent to the onboarding sequence.

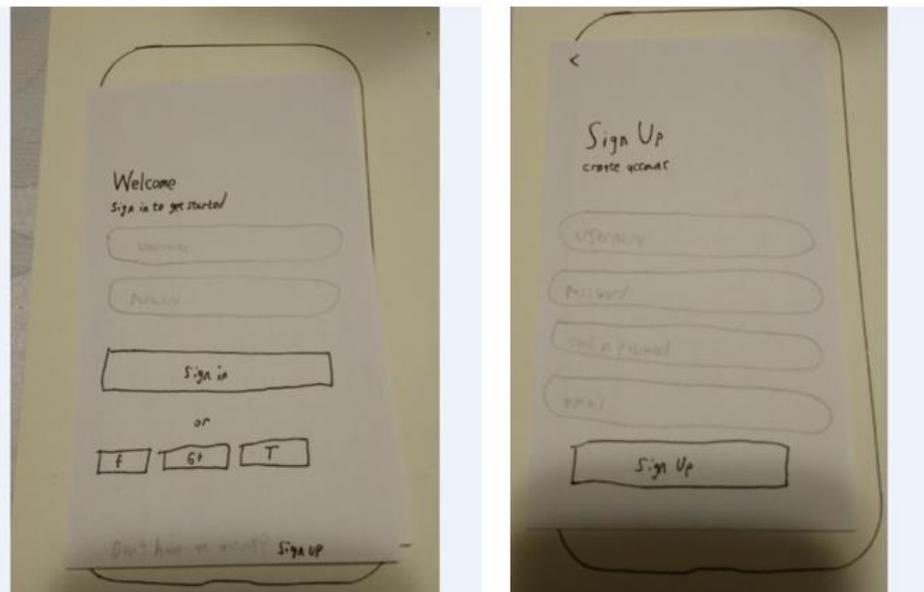


Figure 15 Log in Section

The onboarding sequence was where users would learn about what they can do with the app and how it helped them and the charities they wanted to support as well as set up their profile so they could give with ease. The onboarding sequence contained three screens and walked the user through the main functions of the app.

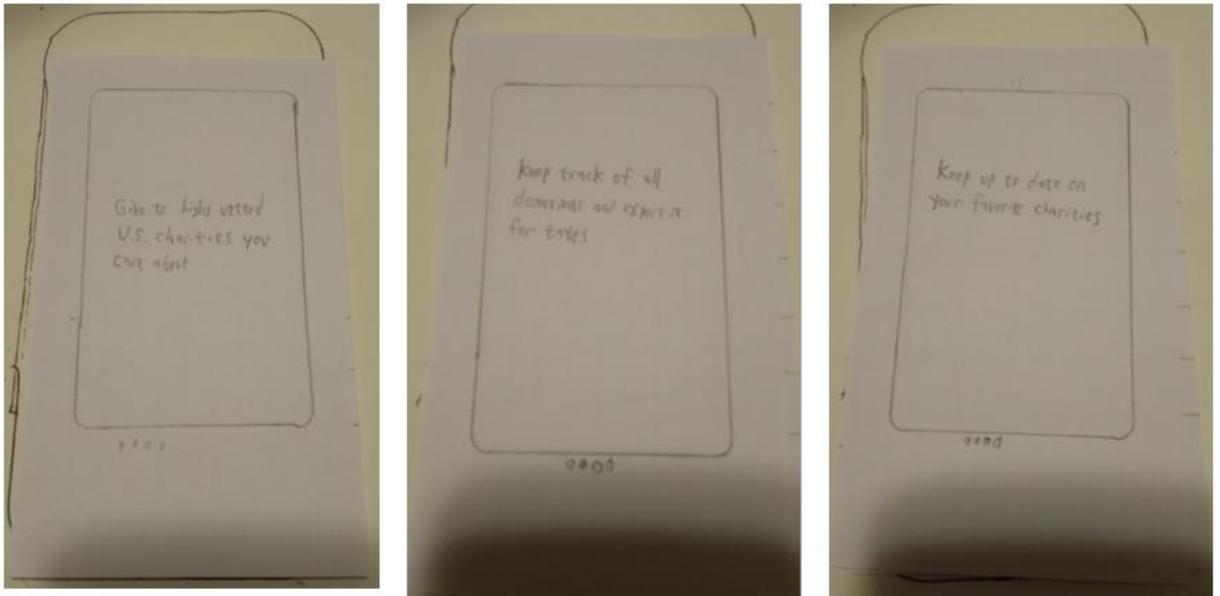


Figure 16 Onboarding section 1

They would then be sent to a screen that asked the user to detail the causes that they cared about; this would help the app show appropriate charities to the user. Users were then sent to fill out their payment method, this would allow for easy, non-intrusive donating. Users could choose to add a credit card or even add a bank account and would be able to set up their default payment. After completing this, users were then sent to the homepage.

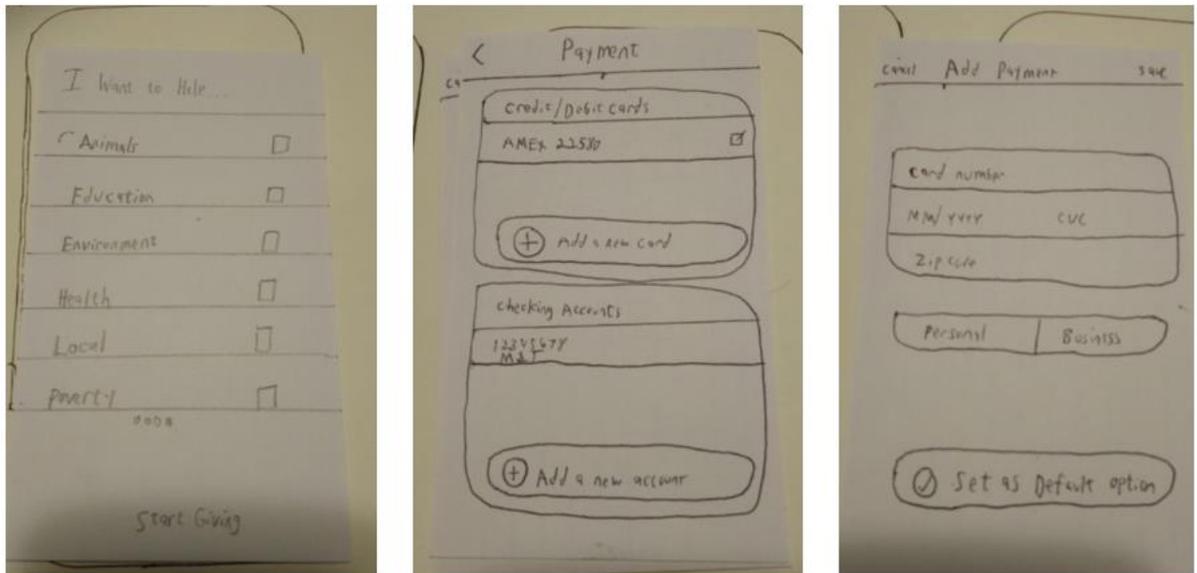
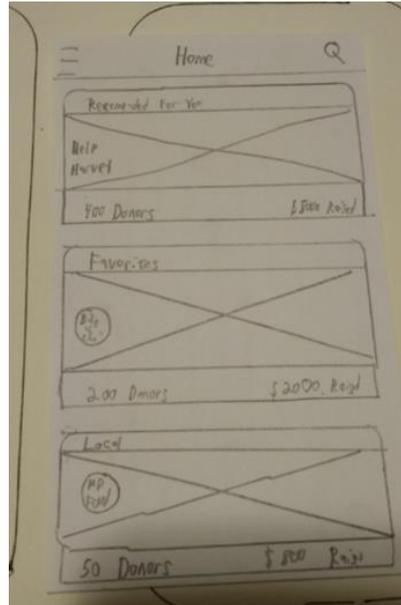
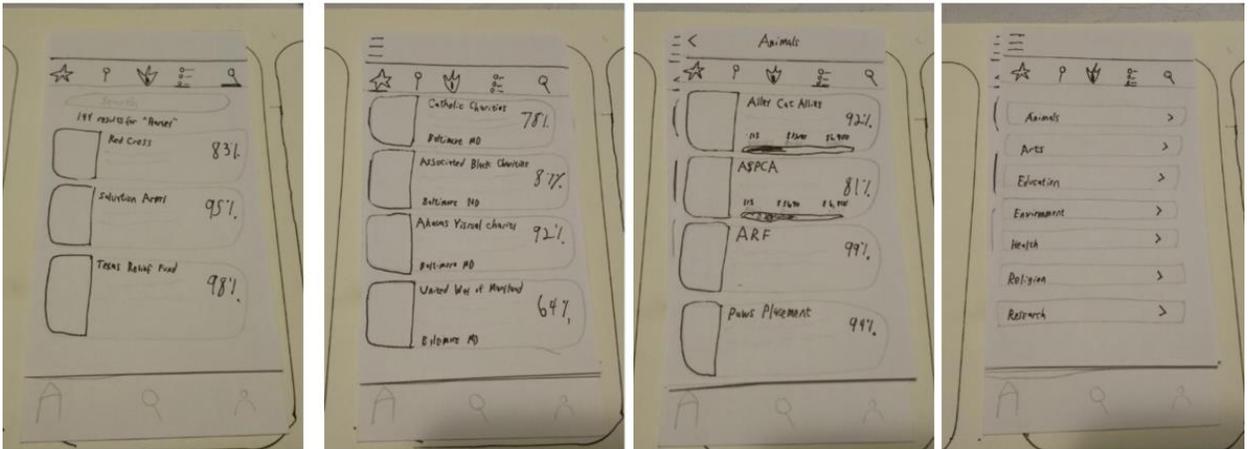


Figure 17 onboarding section 2

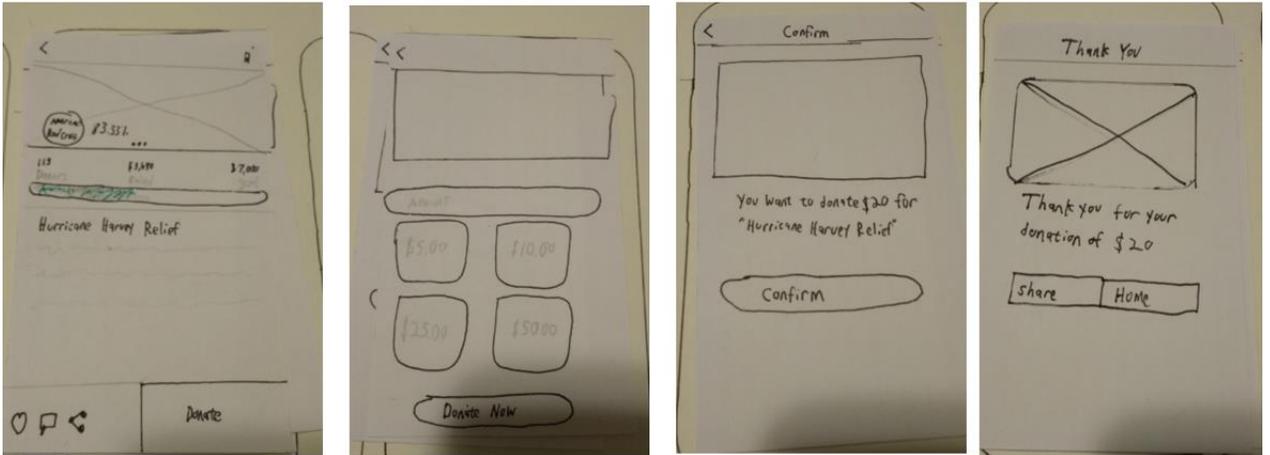
The homepage was where users could get a quick summary of their favorite charities. The page showcased one charity from each of the main sections and included Local, favorite, followed, recommended and trending charities. Users could easily tap on the image of the charity to go directly to that charity page, or they could click on the section and go to the entire list of charities. If the user wanted to search for a charity themselves or wanted to browse for recommended charities they would then go to the search section.



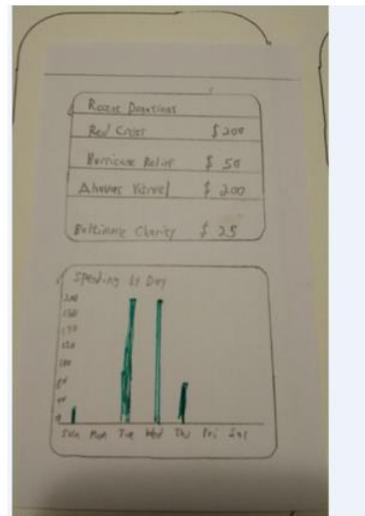
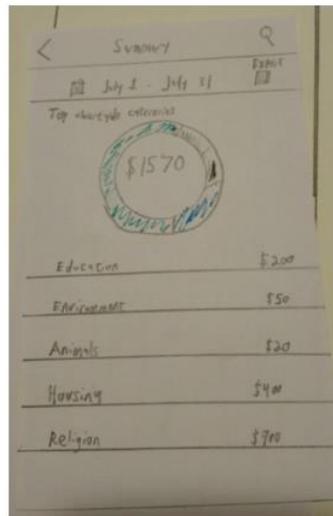
The search section was built to give users as many different options as possible to find the perfect charity. It contained 5 different ways for users to find a charity and included a Local, favorite, trending charities as well as a search section and a categorical search section. One of the main goals of this section was to give users as much information up front about a charity as possible, so each section would showcase users the name and logo of the charity, where they were located, if they were running a fundraiser and their Charity Watch score. Upon finding the charity, they were looking for they would then go to the charity page.



The charity page was designed to showcase information about the charity itself and the fundraiser they were raising money for. The page was designed with “conversion” principles in place and focused on showcasing trust as much as possible. It did this by showing the Charity Watch score, the number of people that have funded the project so far, how much has been raised and how many people have left comments. The page also contained details about the fundraiser allowing users to scroll through in detail what they were donating money. Finally at the bottom of the page users could choose to leave a comment, share the charity, save it for later or donate. If they chose to donate there would be a popup with 4 suggested amounts of 5, 10, 25 and 50 and the option to input your own amount. Once a user chose the amount they wished to donate, they would be sent to a screen confirming the amount. The amount would then be paid and the user would be sent back to the home screen.



Finally, users could keep track of their donation through the summary section. This section was a breakdown of all the charities they donated to as well as the most common charity categories in a specified timeframe. Users would be able to access specific tax receipts directly from this section and choose to export individual receipts or the data for an entire year to complete the data for their tax returns.



Appendix B: Detailed Tasks for the first user test

Task 1: After hearing about the devastation of the recent hurricanes, you would like to donate money to help out with the recovery. Your goal is to find a charity and donate 25\$

Task 2: You've heard that one of the local schools is throwing a funding drive and you would like to donate to help the cause. Find the school and donate \$25

Task 3: You've made several donations and now need to check out. Complete the checkout

Task 4: Your company announced that they would be matching any donation made for hurricane relief. You've made a donation, but your company needs a receipt to match the donation. Export the receipt

Task 5: You've been giving charity using the app for 6 months, and now it's tax season, and you would like to record all of your donations. Take a year inventory and export the data.

Appendix C: Detailed Tasks for the third user test

Task 1: It's the end of the fiscal year and after looking at the books, you realize that you haven't given any money to charity on the last quarter, as a community member you like to help out local causes. Make a \$100 donation to a cause or charity you would like to give to.

Task 2: After hearing about the devastation of the recent hurricanes, you would like to donate money to help out with the recovery. Your goal is to find a charity and donate 25\$

Task 3: You've heard that one of the local schools is throwing a funding drive and you would like to make a donation to help the cause. Find the school and donate \$25

Task 4: You would like to save the charity and cause you just gave to for easy access for future donations. Your goal is to find out how to save the charity for later.

Task 5: Your company announced that they will be matching any donation made for hurricane relief. You made a donation, but your company needs a receipt in order to match the donation. Export the receipt

Task 6: You've been giving charity using the app for 6 months and now it's tax season and you would like to record all of your donations. Take a year inventory and export the data.