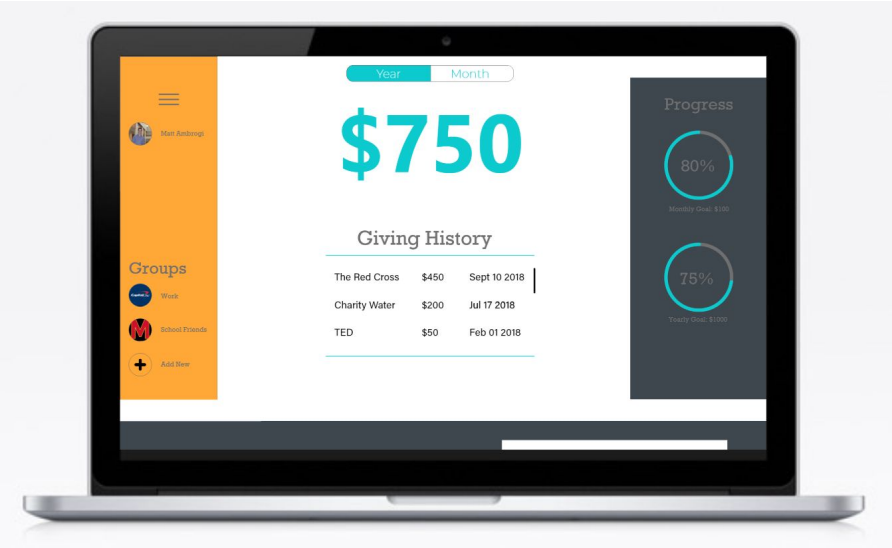
Gifd:

A product for donation management



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Introduction

For my capstone project I worked on a webapp called *Gifd*. This product allows users to give directly to charitable organizations and record past donations in a user-friendly interface. The app is designed to motivate users to go above and beyond their old habits.

For this project, I wanted to incorporate the three concentrations of my Product Management and Engineering major into one cohesive experience. The goal was to mimic what a product manager does in the workplace: analyzing business cases, working on design, and determining the development work necessary to create a product.

This report will use the process I went through with Gifd as a case study on product development, illuminating takeaways for myself as a to-be product manager. I will first cover the conception and motivation behind this idea. I will then move into design, focusing on the use of an iterative framework. Lastly, I will layout the plan I would use to go about engineering and launching this product. As a whole, this report will show how business, design, and engineering intermingle in the process of product development.

Conception

I started this project knowing that I wanted to work on a product for social good. Three years ago, I worked with a social enterprise in Nicaragua for a summer and learned a great deal about the social sector. I noticed a lot of inefficiencies during my work and have been interested in how technology might benefit the industry ever since.

This past summer I was reading an article I had found online when I came across a piece of research that I found shocking. A design firm conducting research on the sector had found that there was a $250B gap between how much Americans felt they should donate annually and actually did. The average American believed they should donate about 6% of their salary annually, but the actual figure sat closer to 3%. I was taken back by a particular insight: investing one third of that amount ($83B) annually would allow the world to feed everyone of the 9.1 billion people expected to live on earth by 2050. I began to wonder what type of solution could help close even a fraction of that gap.

I found out that the same design firm that had done the research, Ideas42, had experimented with this and developed a widget for a corporate giving system which utilized reminders and feedback. The system led to a 7% increase in donations from those already giving regularly and an 18% increase from those who did not give (Paynter, 2018). Clearly, there seemed to be an opportunity for technology to create an impact. I realized that something designed for use by the general public could generate a huge amount of money for a variety of causes. If I made a product that had 5,000 users with a 5% average increase in donations, that would mean that almost a half of a million dollars more would be given to charities every year (See Appendix D for calculation).

Personally, I was motivated by my own experiences not only in the nonprofit world, but also in tracking behavior. I have always been a compulsive note taker and have found that when I want to change or manage a behavior, recording my progress is critical for success. I frequently use technology to help me with this. I have used the app MyFitnessPal to record my diet and calories, Headspace to build a meditation habit, and Moment to track the

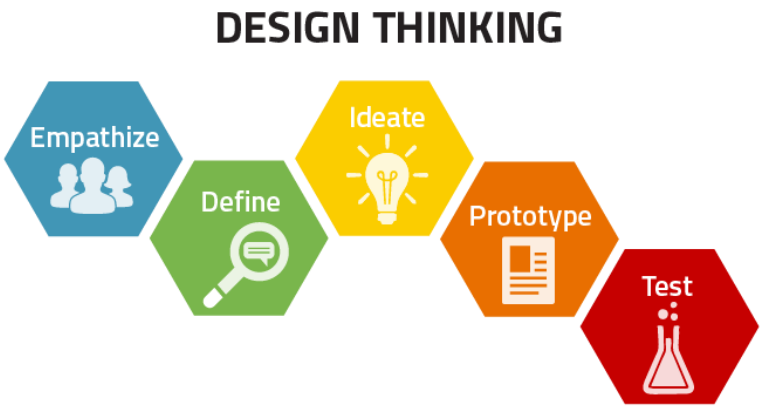
amount of time I am on my phone. I am not alone. MyFitnessPal, an app which helps users track caloric intake by manually recording what they have eaten, had over 19 million active users as of May 2017 (Most popular, 2019). A famous management adage struck me, “If you can’t measure it, you can’t improve it.” I was surprised that I couldn’t find a product that was designed specifically to help people record their charitable donations. Based on the research I found, this was clearly something people cared about. I set out to see what type of product would fill this need.

Methodologies

For this project, I pulled from a number of methodologies that I have learned throughout my engineering, business, and design coursework. Although each are different ways of tackling product design and development, I found that together, they work to form a cohesive process. I structured this project so that I first focused on design and the business case for this product and then considered development and release. The following methodologies were relied on throughout this process.

Design Thinking

Design thinking has been a staple in my curriculum from Introduction to Design and Quality, the first course in the QUEST honors program to Human Centered Design through the Information School. Design Thinking is the process of human centered design. It involves empathizing with users to create a product that meets their needs. It relies heavily on iterative prototyping and testing. In past courses I had undertaken Design Thinking based projects and I wanted to do so again in greater depth, tying the methodology into a larger product development process.



The Design Thinking Process

(Babinton, 2018)

Idealized Design

Idealized Design involves focusing on designing the ideal product to meet user needs. This means initially ignoring constraints from engineering complexity, or other factors. I learned this technique in Dr. Gerald Suarez's course on Systems Thinking and found that it encouraged creativity and the exploration of a product's full potential. For this project, I created mockups for a idealized design and then later went back to narrow down what a first version of the product might look like.

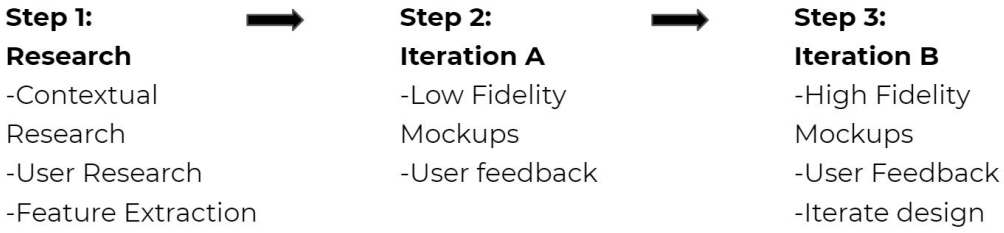
Lean Startup

This methodology is based on Eric Ries' book The Lean Startup. Applied to this project, the core idea is that when building a new product, one should focus on rapid testing and iteration. This is done through the use of a minimum viable product (MVP), a version of your product that includes only the core functionality. Ries' believes that getting an MVP in the hands of potential customers early on is the best way to learn what is needed to

actually make the product successful. This can serve as a reality check against and idealized design.

Design

The focus of the project was the design process. I began by wanting to solve a simple problem: people do not have a good way to track their donations. I thought that I could design something that would help people record what they donated and would maybe even lead them to give more because of that. To check my own assumptions and make the project user focused as I had learned to do in past courses, I created my own design thinking based process shown below.



The design process I followed

Contextual Research

After conceptualizing the idea, I took a step back to make sure I could design something that was actually useful. According to the research outlet CB Insights, 42% of startups fail because they have no market need (The Top 20, 2018). Being able to determine if anyone will want what you build is a make or break skill in the product space.

Due to the time constraints of this project, I did my initial validation by conducting phone interviews with friends and family members. I asked them questions about how they gave to organizations and what they did/did not do in terms of tracking. I found a consistent sentiment that 1.) People wished they more attentive to where and how they gave their money and 2.) They currently did nothing to track their engagement, although they wished they did. This was enough for me to be confident that a product in this space could be of some utility. With more time, I would have liked to collect at least 20 responses on a survey about people's giving habits before jumping into the idea.

I then moved into conducting research to make sure I understood the general space that a product like this would exist in. My research on nonprofits, giving habits, and donation platforms produced the following takeaways:

- Most people only give sporadically to organizations
- Individuals give a massive amount to nonprofits every year
- Very few people track their donations
- There are no websites or apps designed specifically to help socially conscious individuals keep track of their giving.

Competitive Landscape

I was unable to find any existing products designed specifically to help people keep track of donations and give more. However, I did identify a handful of indirect competitors.

Facebook has made a substantial effort to make it easy for users to donate to nonprofits through their platform. This would likely be a main source of

competition due to its popularity and the simplicity of donating to numerous different causes all through a familiar platform.

Mint is an app designed to help manage money and budgeting which allows users to track and categorize their spending. Existing user's of Mint may use the categorization feature to track their donations to nonprofits.

Lastly, there are a few products designed to help individuals track their donations for tax purposes such as TurboTax's ItsDeductible mobile app. This app is made by Intuit, the same company behind Mint.

Gifd is differentiated from these competitors by it's focus. The goal of Gifd is to become the go to product for socially conscious individuals to make and track their donations to nonprofits. These individuals will be motivated by their desire to give as opposed to their desire to track finances or tax deductibles. Hence, Gifd is a product for those who want to be more engaged with giving, as opposed to those who want to track spending for economic purposes.

User Research

Having a better understanding of the space, I began to think about users. I wanted to first identify likely users and then try to figure out their individual use cases to help me deduce what features the product might need. I hypothesized that my target user would be someone with disposable income who is both interested in making charitable donations and would be inclined to use technology to do so. I established that my target user was probably 25-50 and a working professional. To dig deeper, I spoke with a handful of connections and sent out a survey to my extended network. The goal of this was to set me in the right direction to create a first round of mockups.

Here's a few things I found out: (See Appendix B for example survey results)

- People report being most motivated by either competition or incentives such as points
- Most people wish they gave more than they do.
- Almost no one tracks their donations
- People are inclined to give to organizations when they know more about how their money will be used

Features

Using what I had learned from contextual and user research, I began to brainstorm features that might be included in an ideal product. I created a table of user stories to identify needs and possible solutions. This is a technique I learned in coursework and used in my past internships. I then prioritized based on the ratio of utility to implementation complexity.

I want to do x so that y	**Possible Solutions**	**Priority** (based on utility / complexity)	**Notes**
I want to write down that I gave to this nonprofit so that I know what I've given	Donations log	P1	

I want to log what I gave to a nonprofit so that I can reference it for taxes	Donations log	P1	
I want to have a platform that engages me so that I will give more to causes that matter for me	Goals Reminders Social Incentives/Points	P1	Solutions in order of priority
I want to be able to give to multiple charities from one place to make it easier	Give directly	P2	Provides significant boost in utility
I want to be able to automate giving so that I don't have to think about it often / can give over time	Set up recurring payments	P3	Would be nice, but not critical for first release

Pulling from The Lean Startup and Idealized Design methodologies, I began to think about what I would want in a minimum viable product. I decided that the features I wanted to include in preliminary mockups were the

following. I would later revisit the features to decide what I would include when coding an MVP.

Tracking: The ability for users to quickly record donations. If a user gives $20 to their church, they should be able to record that in a user-friendly interface. They can then go back and reference that at anytime.

Goals/Reminders: The ability to set a target amount I would like to give per year/month. Although users rarely mentioned this feature, the research suggests that setting goals and being reminded of them leads people to give more than they otherwise would. Because this is a relatively low bandwidth feature on the engineering side, it should be a top priority. This combined with tracking alone would constitute a minimum viable product. Users would set goals for yearly or monthly giving during the onboarding process and receive email reminders about their progress.

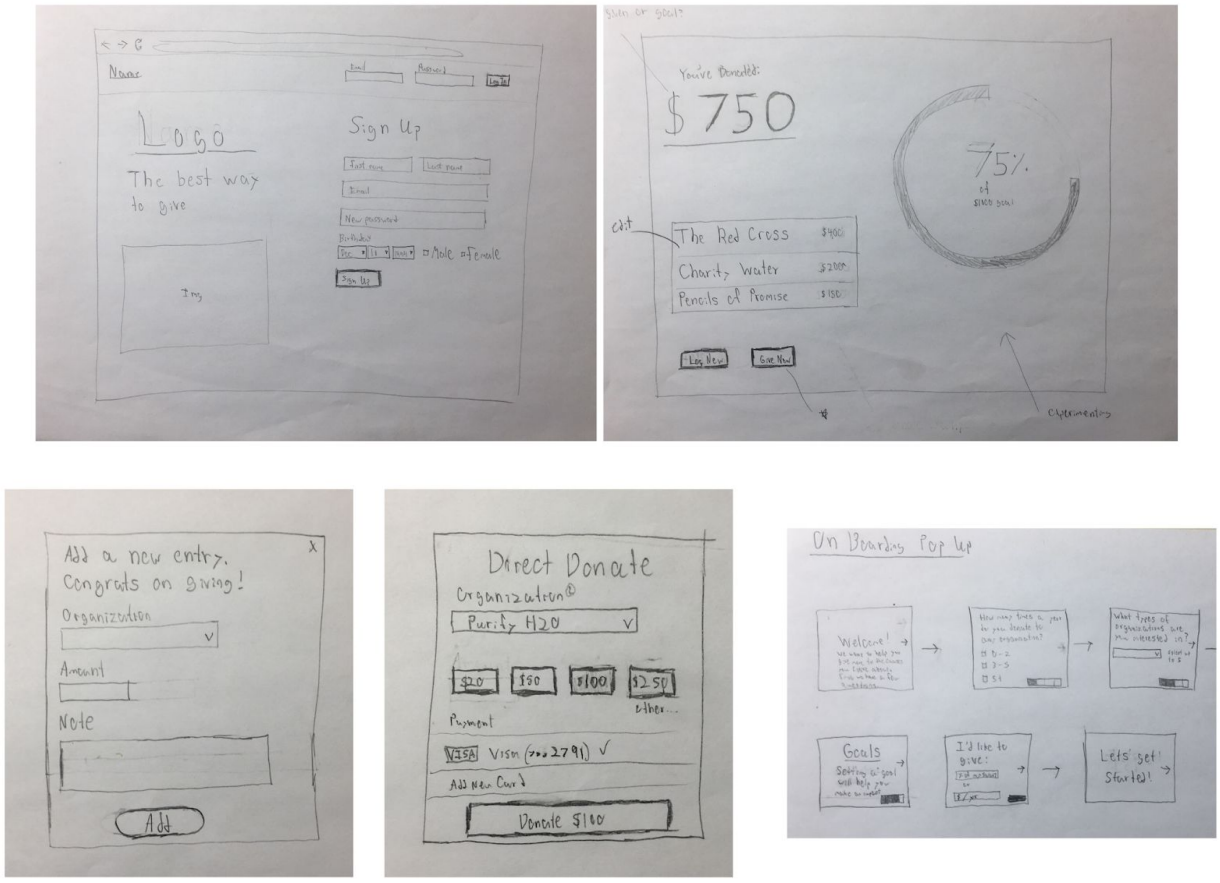
Direct Giving: The ability to not only record donations, but actually make them through the platform. Although more complex in terms of development, the more I spoke with users and considered use cases, the more apparent it became that this would be a critical feature. I wanted to test this to understand how it would fit in to the product.

Excluded Features: There are a handful of features which came up in ideation and user research that I decided not to include in my first mockups. These include a points/rewards system, competitions with other users, and profiles for organizations. I was confident that these features were not central to the product and, based on the Lean Startup methodology, I felt it would be more beneficial to first test those that were more fundamental.

Low Fidelity Mockups: Design and Iteration

Based on what I had learned I drafted up some mock ups, playing around with the flow of screens and placement of features.

Most generally, I wanted a quick login that led to a dashboard where the product's core functionality could exist.



Mockups

Top: Log in and Dash

Bottom: Payment and Onboarding Popups

Although the mockups were rough, they began to help me solidify the idea through preliminary user testing. I wanted to do a first round of testing on paper for a few reasons. Most importantly, users would feel more comfortable criticizing something drawn on paper and I, as the designer, would have more freedom to sketch out a new idea or scratch out an old one. Going through the mockups with users allowed me to quickly pinpoint what needed to change and where I was going in the right direction. In my testing I would briefly explain the concept and then have users go through the prototype and think aloud while interacting with it. This method, which I learned in my design coursework, is simple, but has been referred to as "the single most valuable usability engineering method" (Nielsen, 2012). I supplemented the process with some guided questions at the end of the session such as, "Is there anything else you wish the product had?" Or, "Is there anything you might change about ____?"

I learned that some users thought the product didn't feel like a website. While this may sound obvious because I was showing them paper mockups, I wanted to dig deeper. I looked around at some of my favorite websites and realized that they all shared a sense of continuity and flow. My mockups felt very static. It was also pointed out that because recording a donation was a input intensive action, it needed to be as simple as possible. I learned that users were uncomfortable being prompted for a salary in the on boarding process. I wanted to make sure I eliminated that feeling so that a user's first interaction with the product only elicited positive emotions. Another user was confused by the onboarding question *What types of organizations are you interested in?* I wanted to know general causes so that I could have data on the interests of users which could be used for features such as recommendations in the future. The user however, wanted to input specific organizations they had donated to in the past. This made a lot of sense. Not

only would that help remind the user of their relationship with giving but it would also exhibit the value of the product (not having to try to remember what you gave/when) and would help establish a sense of credibility by creating a mental association between Gifd and organizations the user already trusts.

Here's a summary of what I learned:

Takeaway: The product felt "static." The use of popups took away from a feeling of continuity
Iteration: Look for ways to build continuity.

Takeaway: Some people won't want to enter their salary
Iteration: Give user the option to input a fixed amount goal

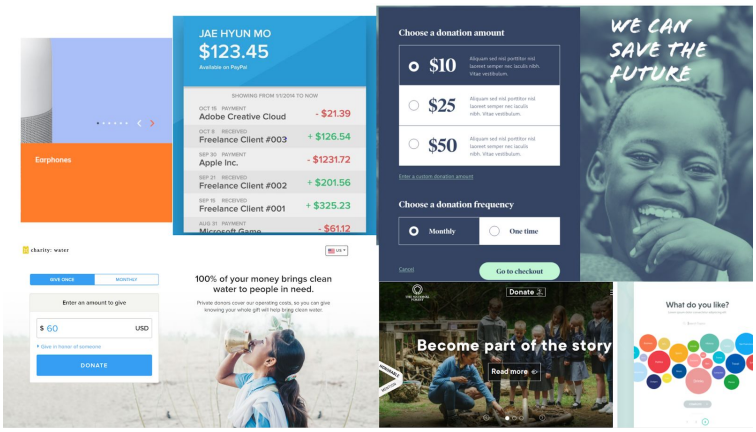
Takeaway: It would be useful to have users input some organizations they have donated to in the past.
Iteration: Allow users to select specific organizations from a drop down list

Takeaway: Adding a donation needs to be quick and easy
Iteration: Think about how to simplify this process

High Fidelity Prototype: Design and Iteration

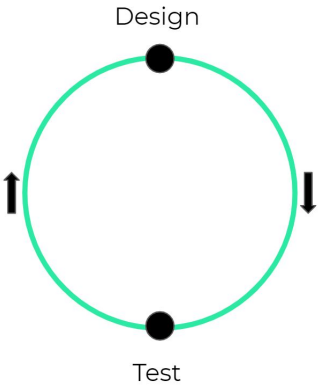
Having gained some high level insights from my first round of prototyping, I wanted to move on to exploring the details of what Gifd would actually look like. Using Adobe XD I began to design my high fidelity prototype.

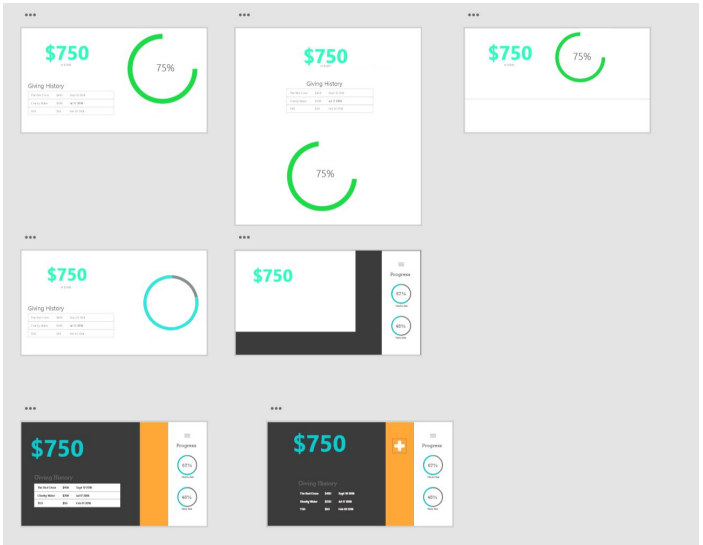
I started by looking for inspiration from design forms and a variety of well designed websites. I looked everywhere from personal finance apps, to Facebook, and the websites of several nonprofits.



Some of my inspiration

I then began an iterative design process, experimenting with different elements, colors, and layouts until I had a UI that felt right enough. Once I had mockups for the landing page, on-boarding process, and dash I began testing for usability and incorporating feedback into my design as I went along.





Successive Iterations of the dash page

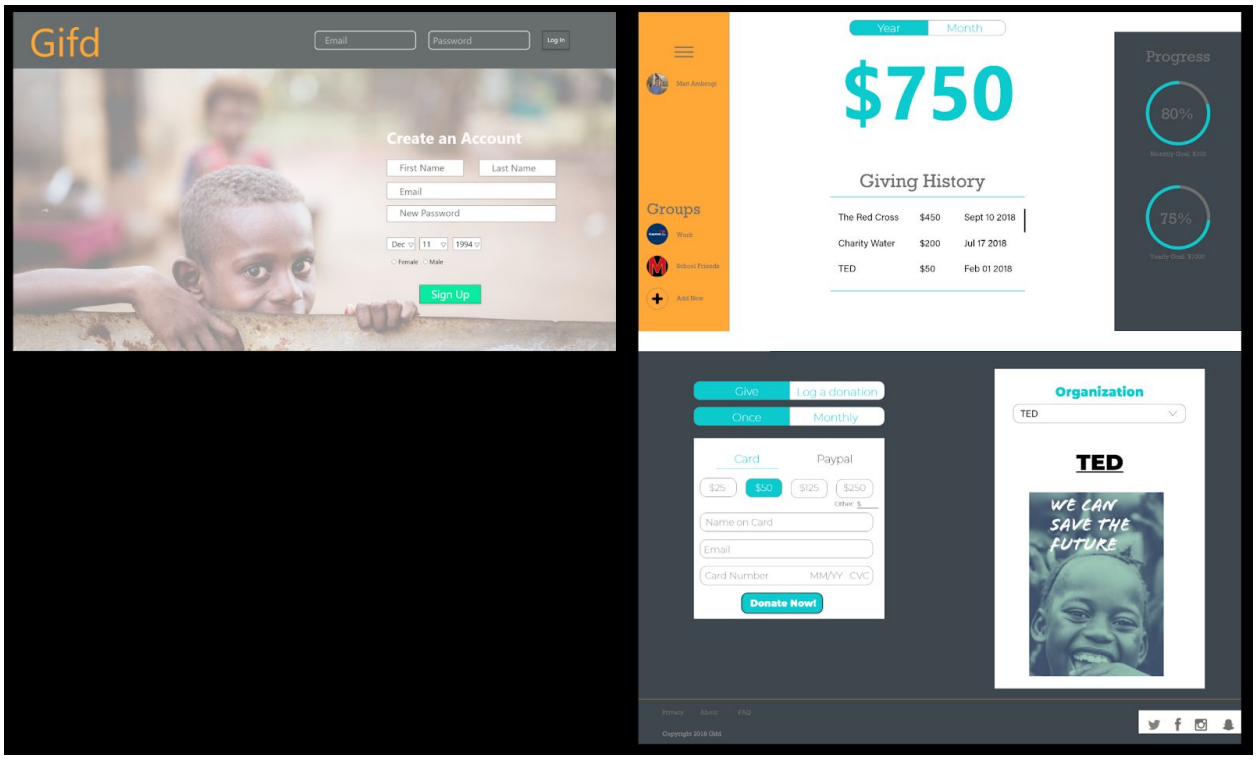
I primarily wanted to test for usability and did so by having four peers review the mockups. I stuck with four based on research by the Nielsen Norman group that suggests after five users, you are unlikely to gain any new insights (Nielsen, 2000). I've included a visual representation of this in the appendices. I focused identifying problems with the dashboard, which is the center of the product.

Showing users a clickable prototype using Adobe XD, I learned a few things. Within the dash, the plus button was confusing. Testers asked if this was for recording a donation or making one. Also, the popup that was triggered by the button felt clunky. Beyond that, I heard from each user that the page felt more like a powerpoint slide than a webpage. Having only designed for mobile in the past, this presented a new challenge. And although I was mainly testing for usability, two seperate users mentioned a feature that I had previously decided to omit: community. They wished there was some social aspect to the product. They wanted to be able to use this to fundraise as a club or with a group of friends. I took this feedback along with other findings and began brainstorming changes for a final product.

Final Design

A design is never truly finished, but a product manager has to be able to identify when something is, for lack of a better term, good enough. Having done my research, conducted two rounds of testing with users, and iterated each screen a few times, a design came together that felt right to me.

For colors, I decided to use a combination of green, white, gray, and orange. These colors communicate security and optimism (Gremillion, 2011). I used fonts including Montserrat to evoke a clean and modern feel.



Login and Dash Screens

The login screen I settled on simply allows users to make an account if they are new or to login otherwise. If a user signs up for a new account, they will go through a brief onboarding process presented by a series of popups on the home page (shown in Appendix A). This will introduce them to the product and allow Gifd to gather some useful information such as the types of organizations the user is interest in and how often they currently give. This data could potentially be used later on for advertising purposes.

The dashboard is the user's home base and represents an idealized design. Here they are able to see their giving history, view their progress, and log or make a new donation. The user also has the ability to create and view groups,

as inspired by user feedback. Groups would consist of a central page in which members could see their peer's giving progress toward the specific cause. For example, if my Fraternity is fundraising for St. Jude Children's Hospital, I would be able to see who the top fundraisers, what the average amount raised is, and where I stand in comparison.

Instead of using pop-ups, the donation functionality is only a scroll away. This was based on feedback that the previous design felt clunky. Users can select whether they would like to record a donation they made outside of Gifd or to make a new donation through the website. The user can then select an organization from the dropdown menu on the right handside. I decided to separate this so that users would be able to see a visual representation of the organization while donating. This was based of my finding that users felt more comfortable giving to an organization that they understood the identity of. They want to see where their money is going. On the payment window, the ability to select a suggested donation amount is designed to reduce the amount of time it takes a user to go through the process. I included the option to pay via card or Paypal in the design because Paypal is a trusted company that can make the user feel at ease as opposed to using a new payment platform. After completing a donation, a user will see a confirmation pop-up and receive an email receipt.

Business Case

Monetization

The primary goal of this project was to explore the process of designing a user-centric product and to translate that design into a plan for development and release. However, from a product management standpoint, I also wanted to consider how this product might make money if it was launched. Below I

outline a few ways in which Gifd could generate revenue by targeting the non-profits who ultimately benefit from donations.

Option 1: Ads

Ads are the simplest way to monetize a website. To start, I would use a service such as Google Adsense, which places content from advertisers on your website for a share of the payment. This is a great option for websites which do not yet have a large following. However, something of this nature would make a negligible amount of money (Starak). The real potential of ads would come later on when I had enough traffic to attract direct partnerships with nonprofits who wanted to market through Gifd.

Option 2: Subscriptions

The initial idea for Gifd was for a product that allowed users to track and record their donations to nonprofits. It became apparent early on that it would be even more useful if they could donate directly through the website. One monetization strategy I initially considered was allowing nonprofits to pay a monthly fee to enable customers to directly donate to them. In other words, only certain premium nonprofits would have direct donations enabled. However, I quickly stepped away from this idea for two reasons. One, it would be an annoying experience if the user could only give to certain organizations and not the one they wanted to. Second, there would be little reason for any organization to buy into this before there was substantial traffic, thus creating a chicken and the egg problem.

Option 3: Share of Donations

Another option would be to keep a small percentage of donations done through the website. If a user made a $100 donation, we would keep 2% and make $2. There is the worry that users who are donating to charity would be

put off by a share of their donation being kept by our service. One way to mitigate this is to provide a good enough user experience that users are willing to give up a very small percentage of each transaction. Platforms like GoFundMe have done this very successfully for individual campaigns. Even a very small fee could create a substantial amount of revenue over a large enough user base.

Median US household income is about $60,000 and the average American taxpayer gives about 3.0% of their salary to charity every year. Based on these figures, if Gifd had 5,000 users, each of whom did 75% of their donations through the platform, it would generate over $130,000 per year. With a user base equivalent to 1/1000 of all donors in the US, this number would jump into the millions (See Appendix D for details).

Other Means

Because this idea is designed to have positive social impact, there are number of unique funding channels I could pursue. There are numerous challenges specifically created for Social Enterprises. The Do Good challenge at The University of Maryland, for example, is a competition that hands out over $20,000 in funding to the first place team. There are also numerous social enterprise accelerators which could help with the funding of a project like this.

Final Thoughts

Based on the analysis above, I would plan to use ads and the share of donations strategy for the initial product. Ads through Google Adsense provide a simple and low maintenance source of revenue. Meanwhile, share of donations is a more development intensive strategy but provides a substantial opportunity for profit in the future.

Development

One of the most important skills for a product manager is the ability to gauge the work required to build a given feature. Being able to do so helps PM's plan and prioritize. Much of what a PM does is write specifications for the engineers on their team. This does not necessarily mean sitting down and writing the actual code, but rather communicating what needs to happen technically. For this project, I wanted to make sure I understood what it would take to actually make the product I had designed. I relied heavily on lessons learned from my computer science and web development coursework to layout a plan. I then worked with a friend who majors in computer science to actually code a portion of the front-end. Although we did not develop a complete MVP, the work we did do helped to serve as a gut check on the feasibility of the proposed features. In this section, I will discuss the plan I would follow to actually develop this product.

Languages and Frameworks

To develop Gifd, I would plan to use HTML along with the frameworks Bootstrap and Angular. Bootstrap is a framework which uses HTML and CSS based templates to simplify front-end development. Bootstrap allows users to develop clean, styled websites in far less time. Angular is a framework, used by companies such as Google, which significantly decreases the amount of code required to make a functional application. In this specific case, Angular would be extremely useful in handling each individual user's data. Lastly, I would use a cloud based database, such as those offered by Amazon Web Services to store user information. Another advantage of these frameworks is their ability to make web pages size responsive. This means that a user could pull up Gifd on their phone and see an adjusted version of the product. This is

a feature I had previously experimented with in my web development course. Enabling mobile use of this product is important because users may want to log a donation away from their computer, directly after making it

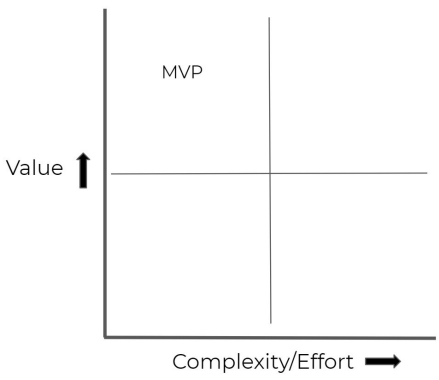
Prioritization

For this project, the first goal would be to develop a minimum viable product or a MVP. The idea of a minimum viable product is to build the core functionality and have people actually begin using it as soon as possible. Doing so will allows you to test your value proposition and study the user experience to learn what should be changed within the product.

In this case, a MVP would consist of the ability to create an account, set goals, and record donations. Specifically, users could

- Create an account
- Store data from the on boarding process
- Set a goal
- Record a donation
- See progress in the numerical and progress bar form

These features were chosen based on their relevance to the product's core functionality vs. their development complexity. They are roughly the same as those included in my original mockups although direct donations have been omitted due to their complexity. I will touch on this further in the Considerations section below.



Development Plan

To build the MVP, I would plan to take a three phase approach. The first phase is building a static, non interactive site. The next phase is using mock data to implement the interactive functionality, such as loading progress and giving history. Finally, I would link this functionality to an actual database of user information.

Phase 1

Phase 1 would start with the static front-end of the project. Using Bootstrap, even the more complex features, such as circular progress bars, become relatively trivial. While the initial product would likely not mimic the high fidelity mockups exactly, they would be used as a guide.

Phase 2

Having a static website, I would then use Angular to work on the interactive functionality of the application. Some of the functionality this would provide would be triggering button actions, linking together webpages, and populating the progress status and history of past donations. This would also enable a user to record a new entry. I could implement this functionality by using a hardcoded set of data for a fake user. For example, I might store what organizations a user has donated to and how much the user gave to each.

Phase 3

Finally, I would link the Angular functionality to an actual database. At this point, individual users would pull data from and push data to their respective accounts.

Considerations

Accounts

There are a number of ways in which I could handle accounts. One easy way to keep track of users is by including a Login with Google or Login with Facebook button. Adding one of these to my page would increase credibility because most people are familiar with these sites and, therefore, recognize them as secure.

Direct Donations

This project is a good example of the prioritization decisions a product manager has to make in the workplace. For example, the MVP omits the functionality allowing a user to donate directly to a nonprofit through the website. The user interviews I conducted early in this project convinced me that this should be a core feature. The value of a platform which allows a user to track and make donations is significantly more than just one for recording donations that have already been made. Because payments require an added level of development complexity, I decided to leave them out of a first version. See Appendix C for more information on how direct donations would be implemented using APIs.

Groups

The groups feature was also left out of the MVP. While groups could increase the probability of a user returning to the site, they are not fundamental to value proposition. They would require the implementation of new pages and interactions between users and are non-trivial.

In the following section I will elaborate on the next steps I would take to develop and launch this product.

Next Steps

> *" I explained to my 9 year old how programming works:*
>
> 1. *You have something you want to do*
> 2. *You write code to do it*
> 3. *The code doesn't work*
> 4. *You fix the mistakes*
> 5. *When the program works, you realize your idea was wrong*
> 6. *You fix the idea*
> 7. *Goto 2"*

Quote from Paul Graham, famous programmer and investor. (paulg, 2018)

While the work I completed this semester has been a great exercise in design thinking and the fundamentals of product management, the next steps of this project would focus on iterative development.

Develop an MVP

To continue this project, I would first utilize my development plan to code a functional MVP as described above. It is important to note from a product management perspective that programming is particularly subject to Hofstadter's Law: things always takes longer than anticipated. Because of this, it would be important to work with a fellow developer. Doing so would increase efficiency by allowing for work to be done on seperate parts of the project simultaneously and by allowing us to check for logical errors in each other's code. To work together, we would utilize Github, the popular code repository hosting service, to enable the sharing of code and sequential versions of the product.

Test and Iterate

After developing the MVP, I would then focus on getting around 5 preliminary users. As stated in the design section of this report, 5 users seems to be an effective number for identifying issues. I would recruit these users manually from the pool of people I have spoken with while designing this product. According to Eric Ries, these users can be targeted for their passion in the specific area or for their interest in being the first user of any new product (2011, p. 95). In this case, I would need to make sure they fit into my target demographic and actively donate to nonprofits. Testing for this product is complicated by the fact that even those who do donate only do so sporadically. Thus I would plan to allocate time to find users who could commit to making at least 3 donations in the month after signing up for the product. Alternatively, I could provide each user with $15 to spend on 3, $5 donations throughout a smaller time frame. This would help negate any spending hesitation and speed up the process. Although the quantity of each donation would be small, the fundamental use case would be the same.

Based on qualitative feedback from users, I would add to the product as needed. I predict that traction on a platform that only offered the ability to record past donations would be low. This is because once I make a donation, I am prone to forget to record it. Because of this, I would prioritize adding the direct donation functionality to a second version of the product. This will help provide a trigger, or motivation, to use to application. Releasing the improved version and seeing how use patterns changed (number of users, growth rate) would serve as a way to test whether direct donations have the user value that I predict.

Launch and Measure

To take this product to market I would leverage small to mid-range technology startups. I would begin by reaching out to twenty companies through personal connections in the workforce. I would introduce them to the product, and ask them to forward information along to their colleagues. I think these companies are a strategic jumping off point because they likely do not have any sort of corporate giving program and their employees are likely open to trying new products. I would also utilize the alumni network of The QUEST Honors Program. This is a large network of professionals who are likely willing to try a new product, especially one developed by a student they are connected with through the program. Lastly, I would reach out to one or two mid-range nonprofits to gauge interest in piloting the direct donation feature. Food Recovery Network is a nonprofit based out of College Park who I have worked with previously on another project and would be my first target for this effort.

Tracking metrics on the product would help quantify progress, growth and experience. To start, I would track the quantity of users signed up and how frequently they visited the website. Because user acquisition is typically a slow and laborious process for new products, I would also track the weekly growth rate, a practice encouraged by the startup incubator Y-Combinator (Graham, 2013). Seeing that a product has 15 users tells far less than seeing 50% growth from 10-15 users in the past month.

Impact

Gifd's mission is to become the number one tool socially conscious individuals use to keep track of and make their charitable donations. By

empowering individuals to manage their donations through goals, reminders, and social networks, Gifd has the potential to increase the amount users give each year. This means that Gifd is not only a personal accounting tool, but a way to bring funding to organizations that are changing the world for better. Ultimately, it is a way for people to feel better about themselves and their contributions to a larger cause.

Lessons Learned

Going through the process of designing Gifd has taught me a great deal. I learned about design thinking, prioritization, and balancing feasibility vs. desirability. I also learned about what I would do differently to make the process move more efficiently if I was to tackle it all again. Here are a few of my biggest takeaways.

Talk to people right away:
After coming up with the idea, I spent a few weeks doing research and playing around with mockups on my own. It wasn't until I began speaking with people that I started getting my most valuable insights. Many of these insights came while casually presenting the idea or asking a few questions in passing. There's no need to wait for official user testing with prototypes. Starting to talk to people right away is a great catalyst for solidifying an idea. If nothing else, it forces you to be able to explain your idea concisely.

Put mockups in front of peers early on:
In Adam Grant's best seller *Originals*, he proposes that the best feedback comes from other creatives in your space (2016, p. 42). Showing even the most rudimentary mockups to designers and peers in my honors program was one of the most valuable things I did throughout the process. Doing so

helped me refine my design, explore solutions to problems, and exposed me to new ideas for the product. Had I done this right away, I estimate I could have finalized my concept and low fidelity mockups at least a week or two earlier.

Know your goals and remember Hofstadter's Law:

When I proposed this project, I planned to conceptualize an idea, design a product, and develop an MVP in one semester. I now know that, along with a full academic schedule, doing so would only have been possible if I had done the absolute barebones of each. Hofstadter's Law that everything takes more time than anticipated is applicable here. The consequences of that law magnify when you work by yourself. It was not until I started that project that I realized I wanted to prioritize designing a user-focused product and then doing the analysis of what would be required to build and make it successful.

Final Thoughts

This project was a tool for me to explore product design and management in greater detail. Drawing heavily from my design, engineering, and business coursework to understand the various facets of the project served as a way to synthesize what I have learned in my major in one cumulative experience. I enjoyed working closely with my mentor Dr. Pamela Armstrong who helped guide my work. It was rewarding for me to work on a product that tied into my personal passion for social change. This validated my belief that eventually, I would like to work as a product manager for technology that serves the causes I believe in. I look forward to experimenting with the code I began to write for this project and to build out a prototype in the following months.

I would like to thank Dr. Pamela Armstrong , Lori Praniewicz and Dr. Joan Burton for their upport throughout the project, and Chris Rehkamp, Danny Laurence, and Dr. Tamara Clegg for their assistance as readers.

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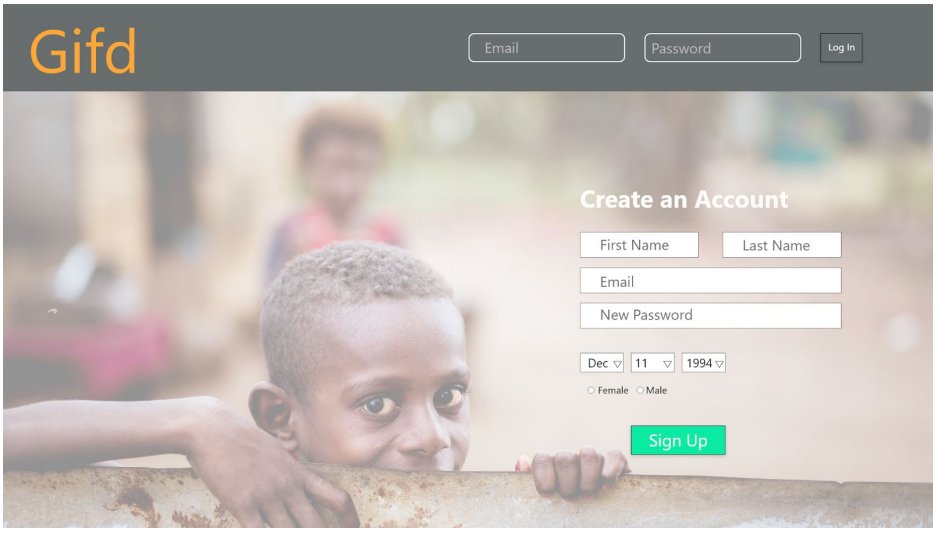
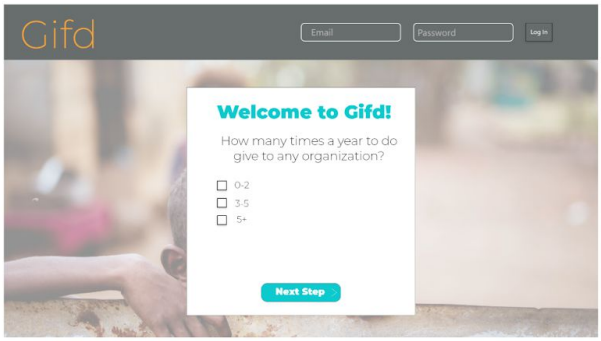
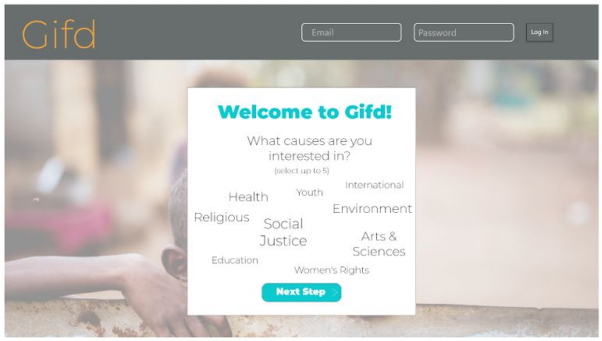
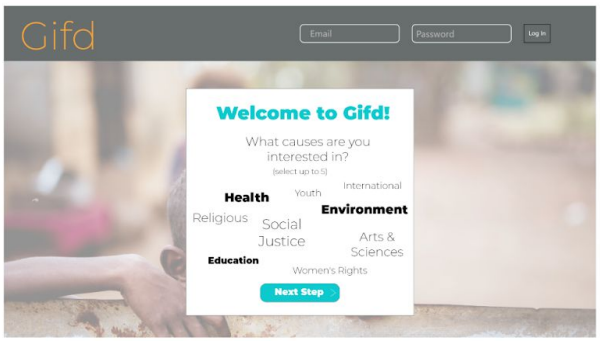
Appendix A: Final Mockups

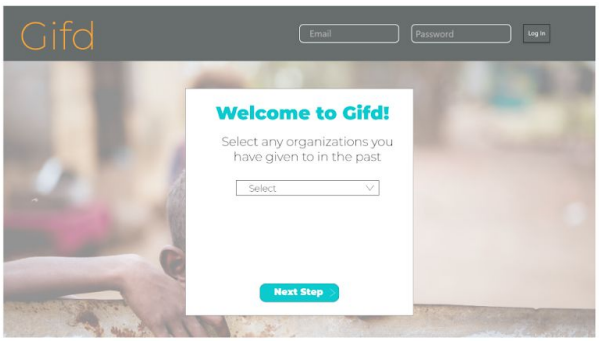


Landing Page

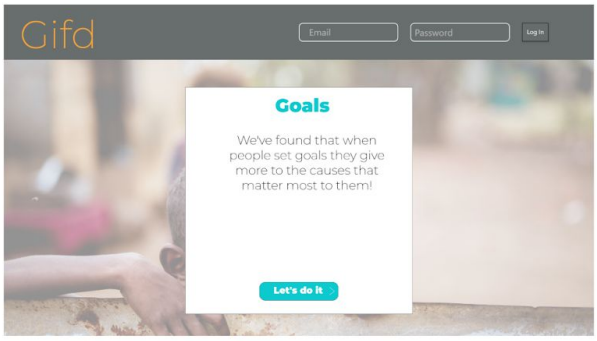


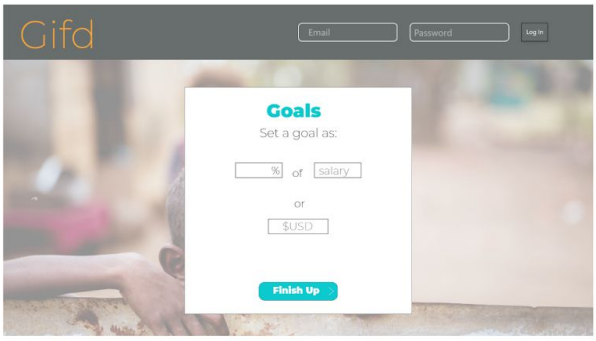






On Boarding





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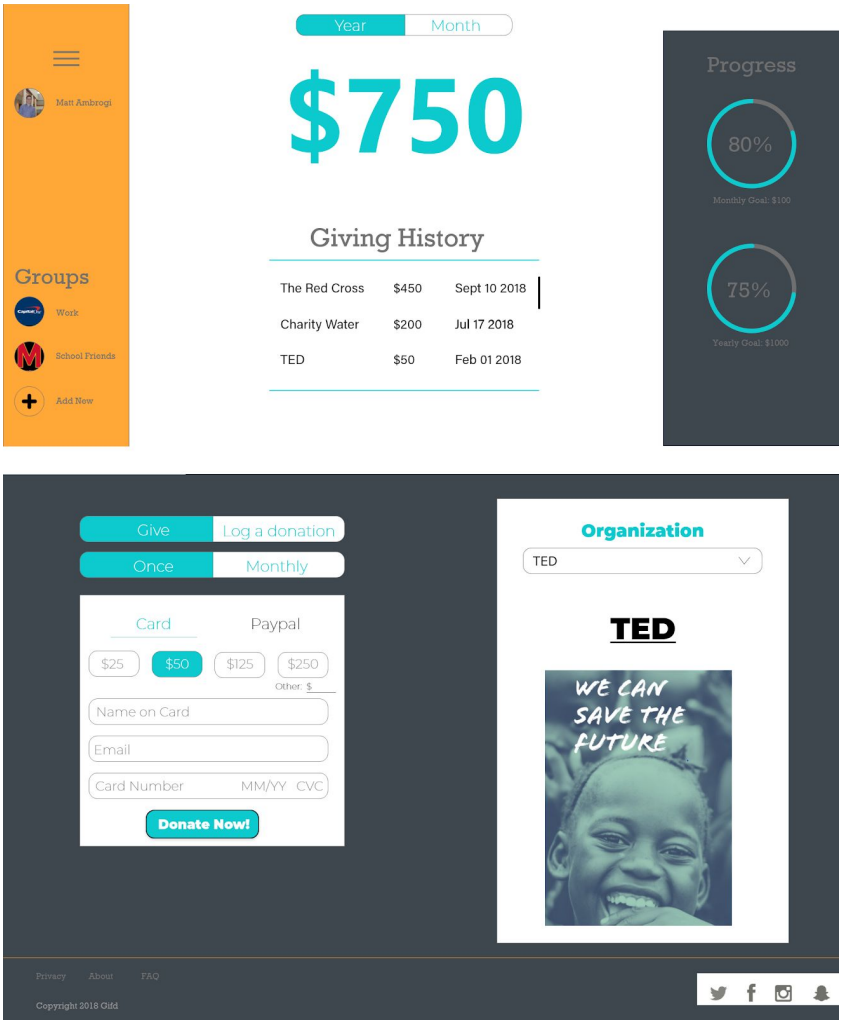


Dashboard

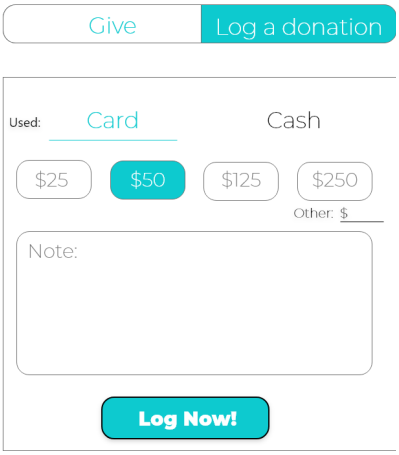
Primary Colors:

#FFFFFF: plain white

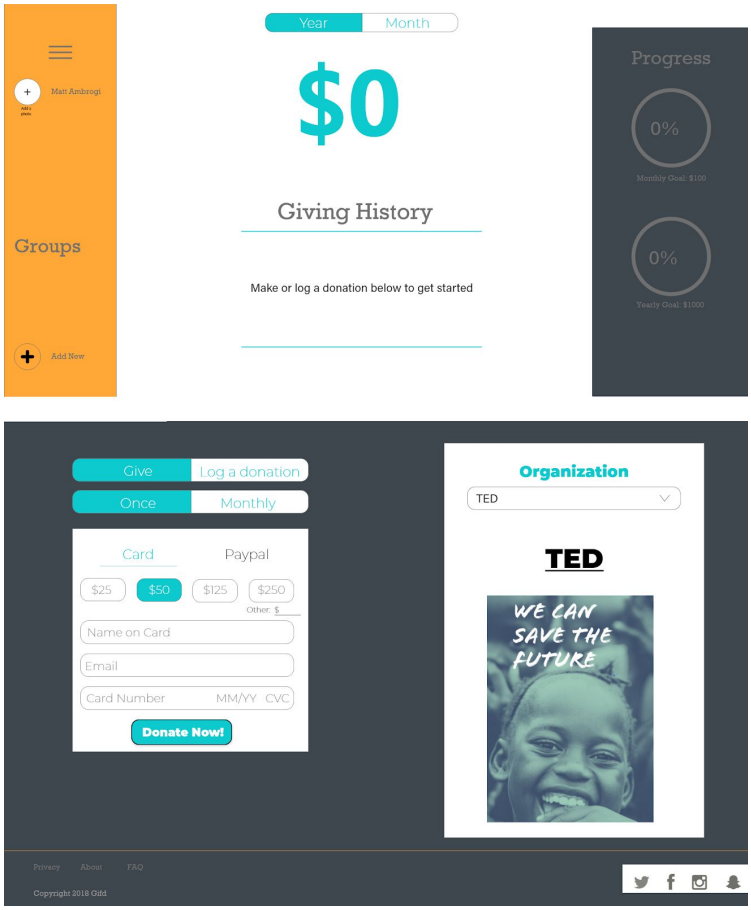
#0DCACF: turquoise

#FFA737: orange

#3E464E: grey



Log a donation option

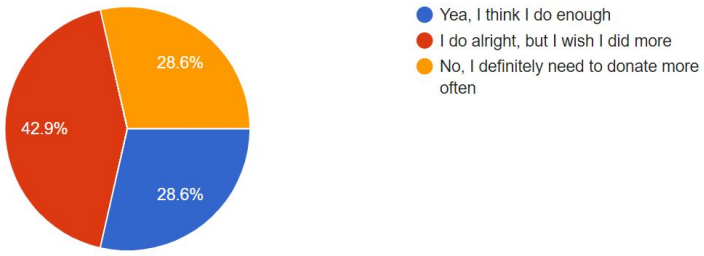


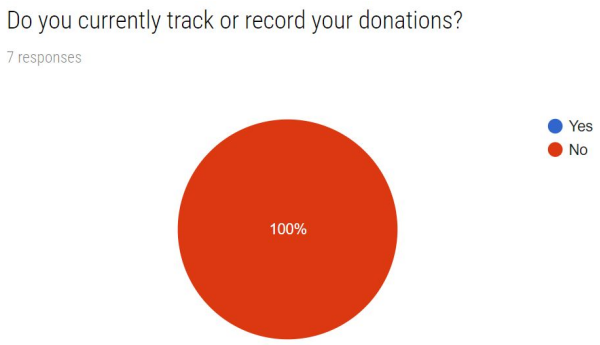
Empty Dash for new user

Appendix B: Relevant Survey Results

Are you satisfied with how often you donate?

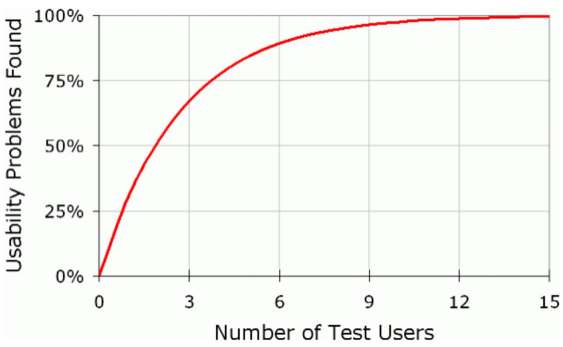
7 responses



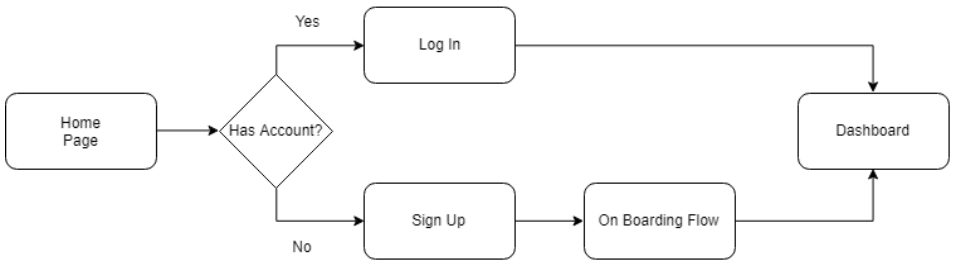


Appendix C: Other Materials

Relationship between number of test users and quantity of problems found



Sign In Flow for Gifd



Example Information Architecture for Accounts

Information

- Accounts
  - Personal Info
    - First name
    - Last name
    - Email
    - Password
  - Donations
    - Charity
    - Quantity
    - Date
    - Was donated through Gifd (true/false)

Resources for Payments

Ideally, this feature would allow users to select a nonprofit of their choice and make a donation directly through Gifd. I was originally not sure how to tackle this technically because every non-profit handles payments differently. There is no one size fits all solution. However, upon further research I was able to find API's that would enable me to take and send donations to a huge number of registered charities in the United States. Furthermore, these API's could even be used to keep a share of donations for Gifd as planned in the product business model.

There are a number of API's which would assist me in implementing the direct donation functionality. The best fit I was able to find for Gifd is Panda Pay.

Panda Pay API (docs.pandapay.io)

- "PandaPay lets you embed charitable experiences into your platform without creating any additional layers or requirements for your visitors."
- Functionality provided
    - Donate to charities directly though Gifd
    - Allow Gifd to keep share of donation
    - Store credit cards for recurring donations
    - Users customer and donation objects
    - Send detailed receipts

Other options considered:

- PayPal API
- PayPal GivingFund
- Direct Linking to nonprofit website

Appendix D: Calculations

Estimated Donations Increase

$59,039: median household income (Loudenback, 2017)
3%: average amount of salary given to charity (Paynet, 2018)
5,000: theorized quantity of users
5%: average increase in donations per user (theorized)

59,039 (avg income) * .03 * 5,000 (users) * .05 (average increase) =
$442,792.5 more given to charity in a year.

Potential Revenue

$59,039: median household income (Loudenback, 2017)

3%: average amount of salary given to charity (Paynet, 2018)

5,000: theorized quantity of users

2%: percentage of donations retained by Gifd

75%: (total donations made directly through Gifd) / (total donations made in a year by Gifd users)

$258B: Individual Giving in 2014 (Charitable Giving in)

.01%: Amount of donors in US who use Gifd in future (rough estimate)

5000 users: $132,000 revenue

59,039(income) * .03 (percent salary to donations) * .75 (portion of donations through Gifd) * 5000(users) = Amount of donations made through Gifd = 6,641,887.5

Amount made through Gifd * .02 (portion retained) = revenue = 132,837.75

Potential Users

The question is, could I reasonably expect 5,000 users? Using the total amount given to charities in 2014, and the average amount given per household, I reverse engineered an estimated $145 million donors in the US. As a thought experiment, if I was to imagine that in the future one of every one thousand donors in the US used Gifd, annual revenue would jump to over $3M.

Of course, there are a variety of reasons these figures should be inaccurate. For example, the average donation amount is drastically inflated by the fact that the one percent of wealthy individuals likely compromise and overwhelming amount of the money given to charity every year. These numbers are not meant to be an accurate prediction, but rather to show that

this product does has a significant potential for revenue generation and profitability.

258,000,000,000 (individual giving) / 59039*.03(amount given per household) = 145666423.889 = roughly 145M
If Gifd caught on and we assume 1/1000 households use Gifd for donations, the user base would be 145M/1000 = 145,000

Plugging 145,00 into the profit equation above, revenue = $3,852,294.75