

Overview and Competitive Analysis

Project Description & User Group

Our team, Guys Who Hate Bad Design, is designing an app or website that will help people sort through all of their waste. So anything from everyday garbage, recycling, and compost to bigger items such as couches and computers. Our project goal is to create one easy place where people living in temporary housing can figure out how to dispose of any waste they might have. We have found that people living in apartment complexes, sororities, and fraternities don't often know what to do with all of their waste or they don't stop to really think about where everything is going. Our product's goal is to minimize improper waste disposal.

Competitive Analysis Product: RecycleNation

So to find a product that was similar to what my team wanted to create, I looked up "waste sorting" and "recycling" in the app store and I came across an application called RecycleNation. It was first released June 2015 but its last update was January 2017. So the app is fairly up-to-date. Before I even open the app, I really like how the app logo looks for Recycle Nation. It's a location symbol with the recycling symbol inside it. This represents the app's major feature and it's minimal. The name Recycle Nation is pretty cool as well as it gives me visions of our country coming together to be environmentally conscious. The app has a couple different features but its main focus is to help users dispose of their waste properly. Figure 1 shows the home page when you enter the app. It has a nice clean and green layout with a simple multi-layered city and neighborhood background. Upon first glance you can see there are three different categories where one's waste could potentially fall into with two dots indicating there's a second page. At the bottom there's icons that say news, tips and log.

When you swipe to the right, Figure 2 shows that a complete list of the categories shows up. According to the RecycleNation website, they have "13 material categories, with more than 2,500 items" in their database [1]. Looking at the current app, there are now 16 categories, but having more categories isn't necessarily a bad thing, their website just needs to update their information. When swiping, I expected just three more categories to slide over, not for the app to take me to a whole different page. Because it's a bit empty on the home page, I think it would've been better for all the categories to be together on the home page and to just have the option to scroll through. Or to have six categories on display. At the very least, an option to customize your top three categories would've been nice. I wouldn't say clothing is a common item I would choose to look into for recycling. Besides that I like how simple the drawings are for each category. It makes it very quick and easy to scan over and look for your category.

Figure 3 shows the map that pops up when you click a category, in this case, electronics. Using your location, the app will tell you what places recycle electronics near you. According to

their FAQ, their information comes from their multiple agreements with large retailers, recycling location aggregators and private entities that specialize in green technologies and reuse [2]. After you select a store, the app conveniently lays out address, phone and hours (as shown in figure 4), and the list of items the store does and does not take. One drawback here is you have to search through the lists of every store to see if your item can be taken in. On the app you can't just search up your specific item. On their website you can though, it even gives you the option of selecting different ways of recycling either drop off, mail back, curbside, or pick up and gives you more subcategories [3].

Figure 5 shows what appears after you click tips in figure 1. It's a nice slideshow of quick facts that you can swipe through and most likely remember. The "Did you know?" portion in figure 1 is a good way to grab someone's attention so they might consider looking through these facts. Figure 6 is a list of news and other resources where you can read about things such as recent waste news, upcycling tips, and more. Figure 7 is a nice extra feature you can keep track of everything you recycled. It maintains a log for you and tells you how many miles of driving and gallons of oil and water you saved. It can probably make a user feel like they're saving the environment and feel more motivated to recycle.



Figure 1: Home screen of RecycleNation App



Figure 2: All the categories your waste could fall into

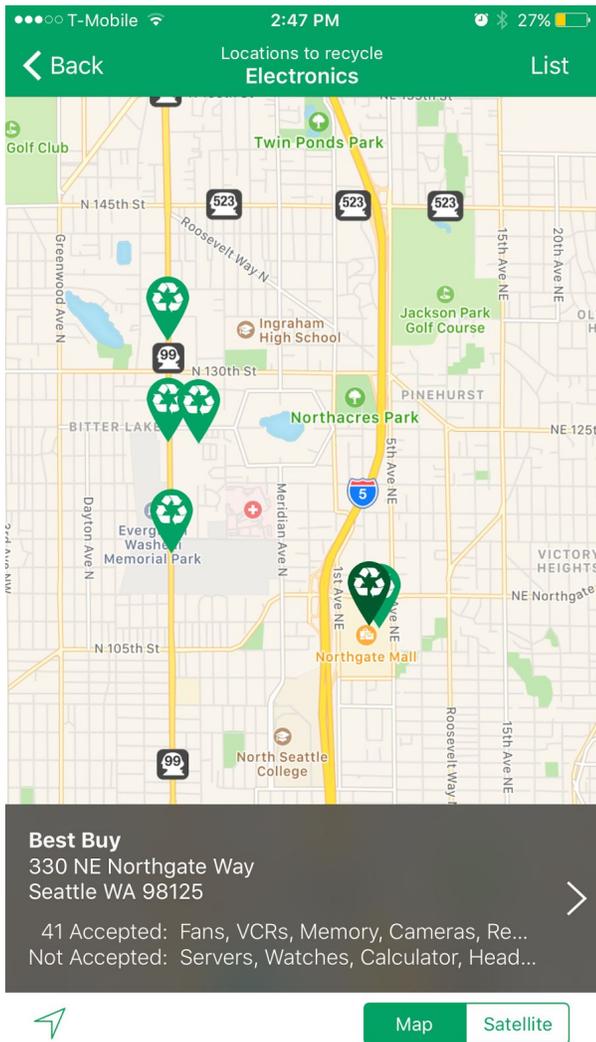


Figure 3: Page with locations to recycle electronics

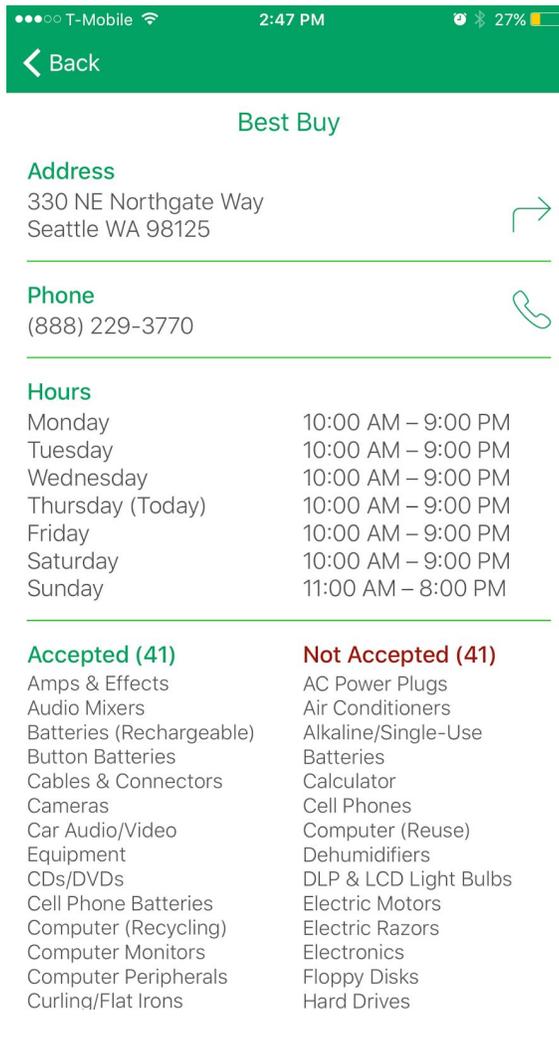


Figure 4: After selecting best buy in figure 3., this page shows their hours, phone number, address and list of things they do and do not take in as recycling



Figure 5: Tips page where facts about waste can be found



Figure 6: List of different articles relating to waste management and recycling

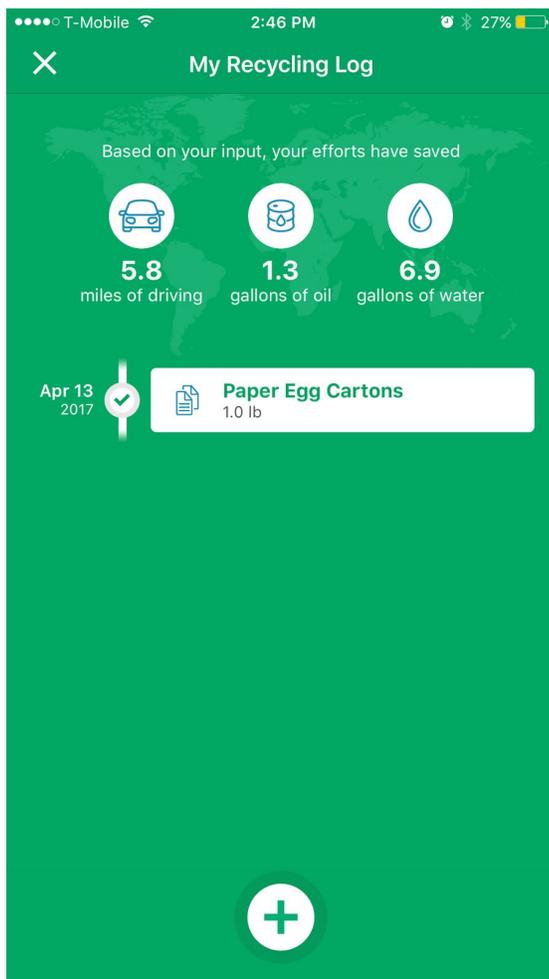


Figure 7: Feature where you can keep track of what you recycled and how it directly helped the environment

User Interview

Interview Questions

1. For the purposes of this interview we will be using recording devices, are you ok with being recorded?
2. For a typical day, how do you go about disposing all of your waste (trash, recycling, and compost)?
3. What are some of your personal experiences, either positive/negative with disposal?
 - a. Have you ever witnessed anyone else with their disposal experience?
 - b. How confident are you in separating your trash/recycling?

4. Have you ever an item that you didn't know how to dispose?
 - a. How would you dispose of:
 - i. Mattress?
 - ii. Couch?
 - iii. Medicine?
 - iv. Batteries?
5. Do you know where the nearest waste facility is?
6. What types of facilities are you currently aware of?
7. What are some alternative uses you have found for items that would've otherwise been waste? (repurposing, reusing)
8. What do you have available around the frat/sorority for waste disposal?
 - a. Where do you usually go to take out trash/recycling/compost?
9. How would you go about searching for information needed?
 - a. Do you have different method you would prefer?
 - b. Out of your chosen methods, what would you expect from it's use?
10. Would you generally care enough to look up ways to dispose specific items?
 - a. Would it depend on what the item is?
 - b. What would make you want to look into this app
11. Are you aware of any fines that come from improperly disposing of your waste?
12. What is the size of your sorority/frat/apartment complex and how often would you say people move in and out of the building?

Note: The questions were above were the main ones, but as the interview went on, a few new ones popped up as well.

Interview

I interviewed a 19 year old student who is currently experiencing her first year in a sorority at the University of Washington.

Q: For a typical day, how would you go about disposing all of your waste? So trash, recycling, compost and anything else that comes to mind?

A: So downstairs we have like three separate bins, there's one recycling bin, there's a compost bin and there's a garbage bin. So when you're done eating you just slide all of your food into the compost and if there's like, I don't know, a wrapper you throw it into the garbage ... yeah and upstairs we don't really have a lot of compost stuff we just have the garbage in the bathroom and our own garbage so yeah it's just on the main floor that we have segregated or sorted bins.

brief interruption here as I double checked if the wind wasn't interfering with my recording

Q: What are some of your own experiences either positive or negative with disposal?

A: Well if we have to get rid of boxes, like packages in the mail, we have to go outside to the dumpster so I don't know, leaving the house is annoying but other than that.. Smaller items we can just throw away in the bathroom but if it's cardboard boxes we have to leave the house to throw it away. I don't know.. I don't know *laughs*.

Q: Have you witnessed anyone else with their disposal experience?

A: Everybody pretty much does that (Later it was clarified she was referring to people in her sorority).

Q: Does the same thing?

A: Yeah

Q: Are there different bins in the bathroom?

A: No, it's just trash for paper towels, like we're not supposed to throw away our own stuff in there, we're supposed to actually take it out ourselves. So technically we're supposed to take out our own trash from our rooms. And just any trash, cardboard boxes, whatever we have. We're technically supposed to take it out to the big bin, what's it called, the dumpster or I guess we could throw it away downstairs but no one really does that.

Q: So you, just to make sure I understood, so you guys don't, like if you were at home you would just throw it away in the trash in the house, but you guys aren't supposed to do that you actually have to go straight outside?

A: Yeah, you can throw it away in your own trash can but you're not necessarily supposed to throw it away in the bathroom cause it's just meant for paper towels and that stuff.

Q: Does that include food waste?

A: Yeah, well people do, but you're not supposed to, because it's just easier to throw away whatever in the garbage

Q: So it's to maintain cleanliness in the sorority?

A: Yeah the cleaning lady shouldn't be throwing away our own garbage like you should be able to go outside and throw away your own stuff.

Q: What garbage is the cleaning lady there for then?

A: Just like the paper towels, I mean you can throw..

Q: Oh so like bathroom type items?

A: You can throw away trash stuff, like you can throw away a wrapper, it's fine, but you're not supposed to be throwing away like your whole garbage bin that you've like accumulated, like you're supposed to take that out yourself.

Q: How confident are you in separating your trash and recycling?

A: Umm, not really that confident, like I know what compost is, but when it comes to throwing away, I still have to think for a sec, like I don't know if I'm throwing away a bottle or like a can, a pop can, like I'm still not 100% sure if it's it's recycling or I don't know *laughs* or like a wrapper from a candy bar, recycling or garbage.. I don't know.

Q: Do you just wing it each time?

A: Yeah I kind of guess..

Q: Have you ever had an item that you didn't know how to dispose of?

A: Yes... Do you need a specific item?

Q: Yeah do you have a specific item as an example?

A: Let me think.. I guess like plastic bottles... actually no just kidding that's recycling, umm yeah like pop cans or yeah I don't really know if I should put that as recycling or garbage and also plastic wrappers like I think you put it in the garbage but I'm not 100% sure, like if I'm not really thinking about it I would just toss the wrapper.. Yeah.

Q: How would you dispose of a mattress?

A: Like if it was.. If I didn't have a car?

Q: Just whatever comes to mind.

A: Umm I would take it to like.. Waste management.. And leave it there or I might throw it in the dumpster, maybe if it was small enough.

Q: What about a couch?

A: Umm I would probably.. Leave it for.. I don't know, the garbage man? Or take it to waste management.. I don't really know.

Q: What about medicine?

A: Like what kind of medicine?

Q: Any kind of medicine.

A: Garbage?

Q: Just straight to the garbage?

A: Yeah..

Q: And what about batteries?

A: I think you need to dispose of those.. Umm well I know there's a special way of doing that, I'd have to look it up, I don't know

Q: Do you know where the nearest waste facility is?

A: No

Q: What types of facilities are you currently aware of?

A: What do you mean?

Q: So it'd be, kind of like the types of facilities like where..

A: ..they throw garbage away?

Q: I'm trying really hard not to lead you on.

A: Oh ok *laughs*

Q: Since I'm aware of a few.

A: Umm.. like waste management? *laughs* the garbage truck? No what's... what's that green company called? I think it's like waste management?.. I don't know.. Well that one.

Q: You can be vague, like if you know the existence of a type of facility you don't need to know the name, like if you feel there could be a specific thing for this.

A: like dump yards?

Q: One example of a facility could be an e-waste facility, like for tech waste, specific places like that.

A: Oh ok, yeah I mean I'm aware that there are different recycling facilities and then just one facility for garbage, I think, I don't know.

Q: What are some alternative uses you have found for items that would've otherwise been waste? So like repurposing or reusing.

A: Umm.. repurposing an item?.. Let me think..

Q: It doesn't have to necessarily be you , you can look at an item and think, well thi could be used for this.

A: umm the only thing I can think of, for an art project, you can make, for example, to make a coin tub, you can use a gallon milk jug and decorate it and make it to like a piggy bank, I don't know! *laughs*

Q: How would you go about searching for information needed?

A: What information?

Q: If you didn't know how to dispose of something?

A: Oh I'd probably look it up online, maybe ask someone who is more knowledgable than me.

Q: And what device would you use for that?

A: My cellphone?

Q: Do you have a different method you'd prefer?

A: To look up information?

Q: Yeah

A: Just my computer and my cellphone.

Q: Is it kind of an either or situation or do you have a preference?

A: Well my cellphone is faster, like I can just go on safari and look it up, so yeah I'd probably prefer my cellphone

Q: So out of your chosen methods, so your cellphone, what would you expect from it's use? Like when you're looking up the information you need? So think in terms of ease of use or how would you want it laid out. What are your goals when you're looking for information?

A: Probably just that the answer that I'm looking for is in the top few searches or websites that pop up, or you know how google will write that little paragraph explaining, you don't even have to click anything, it'll just pop up. But are we talking about my cellphone?

Q: Yeah so if you clicked a website and saw a link and you thought "ok this looks like it's gonna have what I need".. Like would you bother scrolling through?

A: Probably, I'd probably zoom in.

Q: In general, would you care enough to look up how to properly dispose of specific items?

A: Would I?.. it would probably depend on how big it is, like if it was something bigger like a computer vs. like a wrapper, then I would probably look it up on how to dispose it but if it was a wrapper. I'd probably be like, "eh" I wouldn't take the time

Q: Are you aware of any fines from improperly disposing of your waste?

A: No *laughs* , Actually, kind of, cause once we got yelled at, well we got fined by the people who pick up our trash, Umm I don't really remember what it was for.. But.. oh I think it was for not crushing our boxes or something or just throwing them fully and not crushing them. We got fined for that. So yeah I know about it, kind of. I just don't know specific ones except for the boxes.

Q: Would an app make things convenient? Like would an app with everything in one place be helpful?

A: Like information on how to dispose of certain things?

Q: Yeah.

A: Yeah, sure.

Q: Is that something you'd keep on your phone or do you prefer other methods, like just searching it?

A: Umm, I don't have storage but if I had a bigger storage on my phone I'd consider keeping it but because I don't have that much storage on my phone, it definitely wouldn't be a priority, so yeah I'd probably look it up more.

Q: What is the size of your sorority and how often do people move in and out of the building?

A: How many people live in it?

Q: Yeah that can work.

A: I think in the actual house we have 80 to a 100 living and how often people move in and out? Technically.. So mostly freshman and sophomores live in and some juniors. So they're not graduating.. So they're not going to be graduating in the middle of the year or anything and when we move out, so we change rooms every quarter and we don't move our stuff out of the house we just move it onto our beds and then when we come back from break we move into our new rooms.

Q: Do they shift the beds for you?

A: No, so the rooms stay exactly the same, we just switch roommates and we switch rooms and our beds stay the same cause they're in the porches, they're like the bunk beds, so how often people move in and out?

Q: Yeah so just like you said, at the end of the year?

A: Yeah just at the beginning when we move in at the beginning of the year and then everyone moves out at the end. That's when you have to take all of your stuff out.

Q: Do you guys dispose of your mattresses?

A: No.

Q: So they're the same ones every year?

A: Yeah.

Q: What about any furniture?

A: No well because our desks.. Well.

Q: So it'd only be if something broke?

A: Yeah like if a chair broke or something, we'd just get a new one.

Q: Do you have anything else to add?

A: No I don't think so.

Q: Well that's it for the interview!

Pause here, we stayed and talked for a bit and then my user remembered she had some waste stories about the neighboring frat

A: SO from my *experience* on *21st Ave* so I'm walking down the street, ok? There's a couple couches, you know, that have been there a couple of months.. Umm there's a lot of food, on the ground.. on the sidewalks.. especially out of this one fraternity, I don't wanna say names.. TKE's. *laughs* So the thing is they will take their couches, literally it's on the sidewalk. Like you have to walk around it but like they'll take it out but they won't do anything about it. They'll just leave it there for a couple of months and yeah, oh right there's this other couch across the street that was there for a couple of months too and they recently got rid of it. I think they took it away in a truck or something..Umm.. what else, oh also I was looking out my window onto the street. A convertible pulls up. Four frat boys, one of them is drinking a beer in the backseat. Me and my friends are watch and we're like "no.. don't do it.." He finishes it, crumples it up. We see him slowly put his arm down over the edge of the convertible, over the door and we're like "don't do it, don't do it" ...he drops it, onto the street and we're like "*this douche*" *laughs* So as you can imagine, our street is pretty trash, red solo cups, beer cans, so yeah I don't think fraternities are really held to the same *standard* as sororities are in terms of throwing shit away. So they just kind of throw stuff onto the street and leave it.

Q: So none of the sororities, you've never witnessed them doing something like this?

A: No, I don't know why, I think there's just like, double standards, like sororities are held to a higher standard than fraternities are. So we can't just like throw shit out. We have to be all proper, so yeah.. What else have I seen, OH this OTHER time *laughs* TKE's, which is our next

door neighbor, I was in a room that looked into their backyard, that was fun. Anyway it was the end of winter quarter and I woke up and looked out the window and there was just a pile of trash, like they did a whole house clean or something like it was a pile in their whole backyard, of shit like broken furniture, clothes.. Just so much shit. And it stayed there for a couple of days and then I woke up another day and like I think their whole house was like "ok I gotta clean this shit up " so everyone was out there dragging shit out to the dumpster, *laughs* one by one going back and forth cleaning their own backyard so yeah umm.. I think it just takes them longer and yeah.

Q: *laughs* I guess they got different priorities?

A: *Definitely*.. My mom gets scared when she drives down the street.. She worries about my HEALTH. And then one time I was walking down the sidewalk and they had spaghetti for dinner and a whole tub of spaghetti was spilled onto the sidewalk and.. I had to walk around it... and you could smell it. Ah yeah that's my story

Q: Do you have any more?

A: Ah let me think.. Furnitures a big one, beer cans, solo cups.. Hmm what's another one... yeah that's it. Did that add anything? *laughs*

Q: *laughs* Oh yeah that adds a lot!

Citations

[1] RecycleNation. "RecycleNation Mobile App." *RecycleNation*. Electronic Recyclers International, Inc., n.d. Web. 13 Apr. 2017.

[2] RecycleNation. "Frequently Asked Questions." *RecycleNation*. Electronic Recyclers International, Inc., n.d. Web. 14 Apr. 2017.

[3] RecycleNation. "Find A Recycling Location." *RecycleNation*. Electronic Recyclers International, Inc., n.d. Web. 14 Apr. 2017.