

# SECOND-HAND GOODS, BADS, AND UGLIES.



HCI 445 SPRING 2013 | GROUP: THRIFTERS

David Nguyen  
Ian Hall  
Jennie Johns  
Libby VanWhy

## TABLE OF CONTENTS

Executive Summary .....	3
Introduction .....	4
Competitive Review	
Related Academic Literature	
Methods .....	6
Participants	
Data Collection and Procedures	
Data Analysis	
Observation Analysis: AEIOU Framework	
Observation Analysis: Affinity Diagrams	
Interview Coding	
Survey Analysis	
Findings.....	8
Observation Findings	
Intake Types	
Interview Findings	
Survey Findings	
Discussion and Conclusions.....	13
Future Directions .....	14
Appendix A - Consent Forms.....	15
Appendix B - Bibliography.....	17
Appendix C - Interview Script.....	18
Appendix D - Survey Questions.....	21
Appendix E - Figures.....	22
Appendix F - Personas and Scenarios .....	25
Appendix G - Feature Matrix .....	29

## EXECUTIVE SUMMARY

In this study, we evaluated the intake of goods and customer interactions at four different types of second-hand stores (two thrift, one resale, and one consignment), conducted interviews with eight different second-hand shoppers, and surveyed 56 anonymous respondents. This formative research is intended to explore whether a technology-based tool connecting second-hand store enthusiasts with second-hand stores is worth developing.

In our observations we identified four types of parties who sell used goods to second-hand stores: customers, salvagers, volunteers, or consignors. Five common interaction types formed the process of used goods intakes: (1) Contact between submitter and store staff, (2) Goods Arrival, (3) Goods Reviewed, (4) Deal & Payment made, and (5) Submitter or Store Staff Break Contact. We found that the types of second-hand goods that were accepted were related to many factors. Factors included: (a) the stores' history of previous interactions with or trust in the seller; (b) the current store inventory for the type of goods the seller has available; (c) brand and condition of goods for intake; and (d) store clientele, e.g., taste in goods prices clientele were willing to pay.

In our interviews, four findings surfaced that have implication for the design of a technology-based tool to help people who shop or want to shop at second-hand stores: (1) interviewees felt they would value a tool which allowed them to discover stores by the category of the store and an estimate of the type of goods sold in the store, (2) serendipitous discovery is preferred over using a technology-based search in second-hand stores, (3) most shoppers enjoy hunting for and finding an item of monetary or personal value, and (4) quality of second-hand goods is important to shoppers.

Our survey data corroborated our initial findings from the observation and interview studies. The results of the survey gave us a better understanding of the demographics of second-hand shoppers and what they'd likely use most in a tool to connect with second-hand stores. When considering a potential tool in this space, useful features include: ability to show a general store's inventory, location-based notifications when in proximity to a second-hand store, ratings and comments about the store, and announcements of sales/clearances and special events.

## INTRODUCTION

According to the consumer research firm America's Research Group 16–18% of Americans will shop at a thrift store during a given year and 12–15% will shop at consignment/resale shops. To keep these figures in perspective, consider that during the same time frame - 11.4% of Americans shop in factory outlet malls, 19.6% in apparel stores and 21.3% in major department stores [1].

Second-hand stores provide an essential service to many, including low income families, families and individuals interested in sustainable living initiatives, students, bargain hunters, teachers, artists, and vintage enthusiasts. The quality and selection of the goods provided at many of these stores varies widely. We argue that this leads to difficulty for shoppers in finding stores that fit their needs of taste, quality, type, and desired shopping experience.

**For the purposes of our research, second-hand shopping patterns include both:**

- **Commonly considered “thrift store” type purchases** from stores like Savers, Wings, Salvation Army, Goodwill, Village Discount with items such as clothes, accessories, furniture, books, sporting equipment, toys, electronics, jewelry, and shoes.
- **And other less-commonly considered “second-hand” purchases** such as those of consignment clothes / accessories, used appliances / furniture, used eBay / Craigslist / Amazon purchases, estate / moving sales, church / garage sales, flea markets, and specialty stores like Gamestop or Play-It-Again Sports, used record stores, used music equipment stores, and even used cars.

The aim of this research is to explore user requirements (goals and needs) for a technology-based tool that supports people who want to shop at both types of second-hand stores listed above. While resources intended to connect shoppers with stores exist, we found the resources incomplete and did not provide consistent data; we review the competition in the next section.

## COMPETITIVE REVIEW

We found a number of competing products already occupying this space. Resources that exist within the current domain include Yelp [2] and Foursquare [3], which can be accessed through desktop and mobile applications to locate and review local businesses.

**YELP** allows users to search key terms, like “resale” or “thrift shop”, and then specify a location and location radius. Search results are based on “Category” tagging that is generated by business owners (e.g. Category: Used, Vintage & Consignment). Users can upload photos and write reviews, which gives them power to make or break a business.

**FOURSQUARE** allows users to search key terms as well, but returns with personalized recommendations and deals based on location and people users have identified as “friends”. While Foursquare provides business owners with free tools to engage customers, anyone can list a location on Foursquare. It is the responsibility of the business owner to claim their business and then manage information, including promote and send reviews (“tips”).

Reviews and blogs can also be utilized to connect shoppers with stores that meet their needs. Publications like Time Out Chicago run special articles. For example, in 2012 the editors published an article focused on high-fashion resale items and suggested five different shops in the Chicago area [4]. The Vintage Bazaar, is a blog created by Katherine Raz and Libby Alexander, about vintage home decor, fashion, DIY, and selling vintage [5]. They provide recommendations in their blog and operate a pop-up storefront marketed as a roving flea market. This pop-up shop is filled with reasonably priced vintage décor, furniture, clothing, and accessories, and appears in large and small storefronts every few months in Chicago.

## RELATED ACADEMIC LITERATURE

Pierce and Paulos (2011) presented a qualitative study that involved in-depth interviews with 18 people within or nearby Pittsburgh, PA [6]. In the study, they asked: (1) what motivated reacquisition; (2) what processes, practices, experiences and values are involved in reacquiring used items versus acquiring new items; (3) what role did technology play; and (4) what role did services and environments play in reacquisition? Their findings include recommendations on how to design for the reacquiring community and learn from the reacquiring community on how to bring the idea of reacquiring (or more sustainable living) to the mainstream.

*TreasureHunter*, a system to increase the reuse of local used goods, was designed (and submitted to a design contest) by a group of students from the School of Information at the University of Michigan in 2009 [7]. The system employed frequent thrift store shoppers to help find requested items for individuals who lack the time or inclination to search for items themselves. The goal of the study was to understand barriers that kept people from shopping at thrift stores. While this project is similar to ours, a working version of *TreasureHunter* does not exist today.

Christiansen and Snepenger (2005) explored how consumers acquire information regarding thrift shopping. They theorized that there might be someone who transmits this information about the market to others. Their findings support this theory and suggest that the value in this knowledge would benefit thrift outlets.

Our literature and competitive review supported the need for a technology-based tool to help second-hand shoppers find stores that have items that meet their needs. The observation, interview and survey studies we present in the following sections was a means to better understand the scope of the problem space. In the next sections we describe our methods, findings and then discuss the implications of our findings.

## METHODS

We collected observational data to better understand the needs of second-hand shoppers. We observed owners and/or operators of those stores during the intake and presentation of used goods for resale. The team observed goods from four stores representing a range of markets:

- Pilsen Vintage and Thrift, who focus on “second-hand eccentric and surprising clothing, furniture, accessories, housewares, books and jewelry” [9]
- Mr. and Mrs. Digz, who focus on designer goods and consignment sales.
- Savers, who focus on excellence in selection and shopping experience [10]
- The Salvation Army, who focus on providing quality clothing, furniture and other goods to the community to help support various initiatives such as their Adult Rehabilitation Centers [11].

The research team also collected data from eight participants during one-on-one interviews. Interview questions were focused on learning more about personal needs and desires experienced when second-hand shopping.

We also conducted an online survey. Question types varied from closed to open ended questions which focused on preferences of second-hand shoppers, selling and donating habits, and demographics.

## PARTICIPANTS

Observation participants comprised of four (two owners, two managers) people running their respective second-hand stores. Participants were recruited by calling (over phone) second-hand stores and asking if they would allow us to observe the intake and presentation of used goods for sale.<sup>1</sup> We observed the intake of goods first-hand and also notated stories about intake through participant supplied anecdotal information.

For the interviews, we recruited eight (four female, four male) second-hand shoppers, from friends and family. All eight interview participants shopped and donated to second-hand stores at the time of the interviews. Ages of participants ranged from 26–69.

We received 56 completed responses (thirty-nine female, sixteen male, one non-response) for the online survey. The surveys were sent out via social networks such as Facebook, LinkedIn and Twitter. All respondents indicated they have purchased second-hand items within the last year. The majority of respondents were in the age range of 26–35 (55%). The next highest respondent category was in the age range of 36–45 (22%).

All participants were provided and agreed to a consent form (Appendix A).

<sup>1</sup> Our group faced a significant initial challenge when recruiting participants for our observational study; one researcher's request for observation was turned down at five separate stores and another turned down at two separate stores.

## DATA COLLECTION AND PROCEDURES

Observational notes were recorded with pen and paper and/or photography, and were supported by recall when necessary. We used the AEIOU framework (see analysis section for more) to guide our data collection and analysis. We used affinity diagrams to help us analyze the data.

The interview began with a warm-up question asking participants to remember their first second-hand shopping experience. We then discussed store discovery, shopping frequency, store organization and cleanliness, and donation habits. The final interview questions focused on technology comfort and demographic information.

Interviews were recorded with pen and paper or audio recording tools and took between 25–45 minutes. The research team transcribed all audio recordings and inductive coding performed by the research team guided our data analysis.

Surveys were conducted via an online survey service, SurveyMonkey.com. The survey began with two questions, built with branching logic, which determined if respondents met our criteria for analysis. From the original 89 responses, we omitted responses that fell into the following categories: (1) incomplete, (2) respondent was under 18 years of age, (3) respondent had never shopped at a second-hand store, and/or (4) respondent had not shopped at a second-hand store within the last year. Remaining questions covered shopping experiences, store preferences, selling/donating habits, current mobile use, and demographics. The majority of survey respondents were in the 26–35 age range, which would generally put them in a technical savvy category where they use apps on their phones.

## DATA ANALYSIS

### Observation Analysis: AEIOU Framework

The AEIOU framework was used to categorize Activities, Environments, Interactions, Objects, and Users involved in the intake and presentation of used goods. Activities represented the goals a user would be focused on accomplishing - for example, a woman with purses who wants to sell the purses to a store owner. Environments represented the areas in which and store workers/owners/manager interacted with shoppers and sellers to accomplish their activities or goals. Interactions represented the way all the people at the stores interactive with objects, or the environments to accomplish their activities or goals. Objects represented the building blocks of the environment, for example, a sales counter, checkbook, or cash register. Users represent the parties participating in the sale, intake, categorization, or presentation of used goods.

### Observation Analysis: Affinity Diagrams

We used affinity diagrams to sort and code our general observations of the stores as well as types of interactions, allowing us to observe patterns and themes.

Using <http://listhings.com>, a free online tool for organizing virtual post-it notes [12], we created “stickies” of the processes, interactions, and other observations. The stickies were then grouped by commonality. From there, general umbrella groups were created, resulting in the general observations affinity diagram (Figure 3).

Affinity diagram, task sequencing, and coding were also performed on the five observed intakes. An initial rough affinity diagram was created with Post It notes and Post It flags (Figure 1), and the final affinity diagram was created in iWork Keynote. The research team's final affinity diagram, five task sequences (Table 1), and five coded tasks is seen in Figure 2.

### **Interview Coding**

Interviews were inductively coded for common thematic elements by our research team.

### **Survey Analysis**

With the 56 results from the survey, we added filtering categories within SurveyMonkey.com and created a comparison table, which demonstrates the differences between male and female survey respondents. The team used descriptive analysis to identify themes in the results, as there were no statistically significant lenses with which we could perform inferential analysis. We also used the results of open-ended survey questions to develop personas (Appendix F), scenarios (Appendix F), and a feature matrix (Appendix G), while basing demographic data for each persona on the mean of our survey data results.

## **FINDINGS**

In the following sections, we discuss our findings at each research step: (1) observation, (2) interviews and (3) surveys.

### **OBSERVATION FINDINGS**

The larger chain stores we observed were non-profit organizations (e.g., Salvation Army) or had a large portion of their proceeds go directly to non-profit organizations (e.g., Savers). These stores included a variety of clothing types, toys, household goods, furniture, electronics, etc. and were organized like typical department stores. The smaller stores we observed (Pilsen Vintage and Thrift, Mr. and Mrs. Digz) were for-profit and offered a smaller, more curated variety of goods informed by the owners' preferences. Also, while regulars may visit larger chain stores, the smaller stores encourage more personal connections. Sometimes these connections involved an understanding of the customers' personal history; for example, we observed one exchange about a first date after the death of a long-term partner and another during the selling of goods left over from a recent divorce. We feel that the personal assistance rendered by the store representative should not be underestimated in these circumstances.

### **Intake Types**

Our team observed four types of intakes that took place across the five intake observations. These intake types were:

- Salvage Intake—during this intake type a vetted professional salvage contact brings in goods to be purchased by store representative.
- Customer Intake—during this intake type a store customer brings in goods to be purchased by the store representative.
- Consignment Intake—during this intake type a vetted consignment contact brings in goods to be placed on consignment by store representative.
- Volunteer Intake—during this intake type, a volunteer contact brings in goods to be donated to the store.

## INTERVIEW FINDINGS

After completing the interviews, we inductively coded interview transcripts for common themes. In the following lists, the most common themes are organized from most to least impactful on a potential tool:

- Most shoppers felt they would value a tool which allowed them to discover stores by the category of the store and an estimate of the type of goods sold in the store. (6 of 8 Interviewees)

*"I mean it might be if each store kind of had some kind of online inventory where they let you know the kinds of stuff they had. I wonder if there's some sort of tool they could use, like "we mostly sell A, B, C, or D." —Participant IH-1*

- Serendipitous discovery is more common than searching for second-hand stores. (2 of 8 interviewees, and corroborated by survey data)

*"It's really just if I see it on the street, that's how I find it. I don't necessarily look online or anywhere else." —Participant IH-1*

- Most shoppers enjoy hunting for and finding an item of monetary/personal value. (7 of 8 interviewees)

*"Most of all, I really like the hunt. There's just something fun about going through hundreds of items to find a unique one." —Participant DN-1*

- The quality of second-hand goods is important to shoppers. (5 of 8 interviewees)

*"We would figure out what their schedules were. You know, when they accepted drop-offs so we could see the latest and greatest right away." —Participant JJ-1*

- Second-hand stores are commonly visited while on vacation. (5 of 8 interviewees)

*"The time when we were up in Lake Geneva and just well, following along when we went to St. Charles, there were some on the way there. ... when we were in Florida and when we were in Arizona, we looked up antique stores too when we were just driving around." —Participant LV-1*

- Most interviewees both buy and donate/sell to second-hand stores.

(6 of 8 interviewees)

*"Yes, I donate once every few months. My wife and I like to clean out the house and make a pile of stuff. Then we'll go to the Salvation Army and donate. ... I've sold stuff on Craigslist before, many times. And ebay. Half-Price books, I've sold lots of stuff to them. Books, records, mostly books and comic books." —Participant LV-2*

- Shoppers are willing to take risks when purchasing low-cost items.

(4 of 8 interviewees)

*"The clothes are usually cheap enough where if they didn't fit, you can give them to somebody else or it just became a loss." —Participant JJ-1*

- Some items, such as undergarments, are not considered acceptable for purchase. (6 of 8 interviewees)

*"Mattresses, undergarments, shoes. It's grody (sic)." —Participant DN-2*

- Most shoppers spend 30-90 minutes in a store, depending on its size.

(6 of 8 interviewees)

*“...probably about a 1/2 hour. It’s a small store. If I’m in a bigger store, probably over an hour. Because you really have to sift through everything.” —Participant JJ-1*

- Many shoppers desire organization and open spaces in second-hand stores.

(5 of 8 interviewees)

*“It just feels like you’re squeezing by people to look at everything. You know everything on the racks is just so cramped, it’s just not an easy experience to go there.” —Participant IH-1*

*“...called Wings. That one is pretty nice. Nicely organized. I feel like that Savers I went to with my parents was good. It’s big, but it was organized. Every shirt was organized by size, not color.” —Participant LV-2*

- Shoppers often began second-hand shopping as teens or young adults.

(3 of 8 interviewees)

*“Well I started going to rummage sales at a really young age, and that probably set the tone for me in other peoples clothes, like I remember being six or seven and going to the church rummage sale and being really excited about that. I started actually buying used clothes when I was 12, like my prom dress was from a thrift store.” —Participant IH-1*

## SURVEY FINDINGS

Survey data was used to create two personas and two scenarios (Appendix F), and a feature matrix (Appendix G).

We found that 55% (N = 31) of survey respondents have been second-hand shopping in the past month, and an additional 18% (N = 10) have been second-hand shopping in the last three months. This indicated that second-hand shopping was common among our responders (Figure 4); i.e., almost 75% (N = 41) of our respondents have been second-hand shopping recently. This is corroborated by our finding that 83% (N = 46) of respondents have been second-hand shopping in the past three months (Figure 5).

**Q2 When is the last time you purchased a second-hand item?**

Answered: 56 Skipped: 0

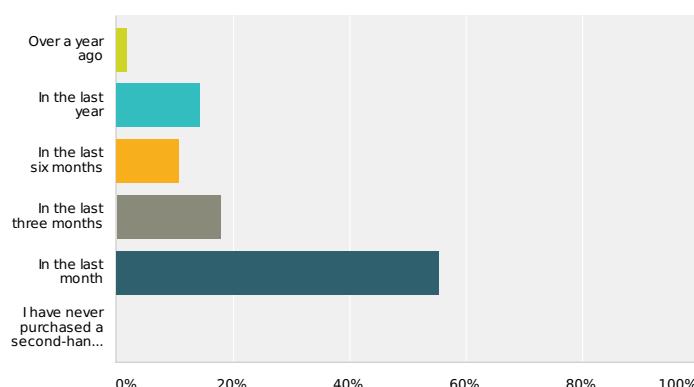


Figure 4 - Second-hand Shopping Was Common

**Q7 In the last year, how often did you second-hand shop? Choose the best answer:**

Answered: 53 Skipped: 3

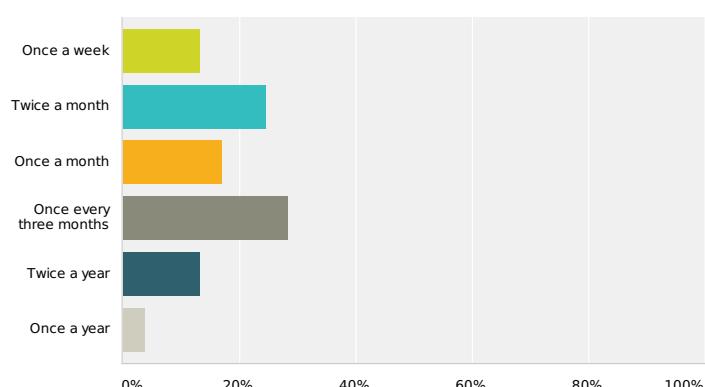


Figure 5 - Second-hand Shopping Last Three Months

Most responders had a bachelors degree, are most likely to be female, and were comfortably middle class with the most common yearly household income reported as between \$50,000-\$75,999 (N = 16).

Bargain hunting (44%, N = 25) was identified as the primary factor driving second hand shopping, followed by finding something unique (27%, N = 15) and fun (24%, N = 13).

Most (80%, N = 45) of those surveyed have discovered second hand stores by either driving by (49% N = 27) or through word of mouth (31%, N = 17). The primary means of travel to second-hand stores was by car (78%, N =44).

Thrift stores (89%, N =50), temporary/garage sales (84%, N =47), and online retailers (73%, N =41) account for the most frequented types of second-hand sales of those surveyed (Figure 6).

**Q5 Where have you purchased second-hand goods? Choose all that apply:**

Answered: 55 Skipped: 1

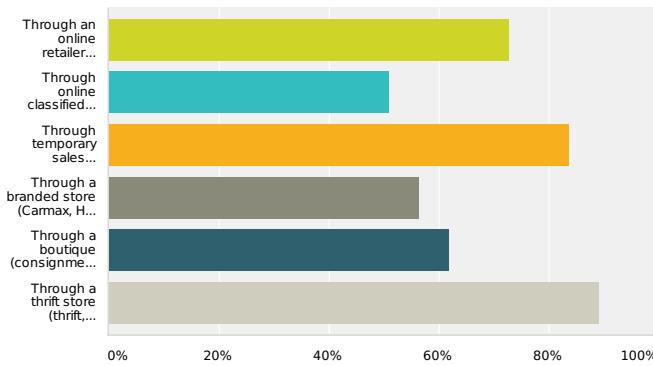


Figure 6 - Most Frequented Second Hand Stores

Over half (63%, N = 35) of respondents have not sold to a second hand shop in the last year (Figure 7) and about the same number, 61% (N = 34), mentioned that knowing what was accepted was the largest barrier to selling used items. The next largest barrier was not knowing where to take goods to be sold at 28% (N = 16). Contrasting with this number, 95% (N = 53) have donated to thrift stores in the past year (Figure 8). Understanding this disparity may be key to creating a successful tool in this space.

**Q17 Last year, did you sell items to a second-hand shop?**

Answered: 54 Skipped: 2

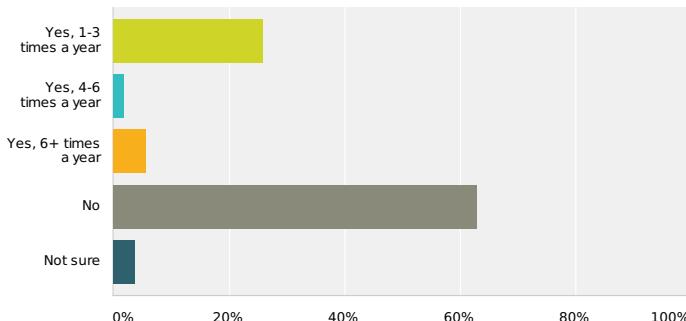


Figure 7 - Selling Items

**Q20 Last year, did you donate items to a second-hand shop?**

Answered: 55 Skipped: 1

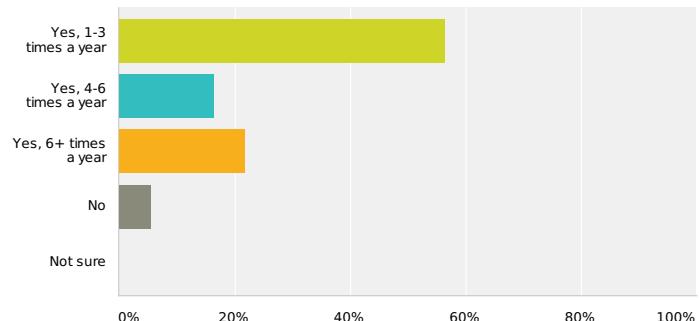


Figure 8 - Donating Items

Most respondents donate to get rid of belongings they no longer use. Deciding factors of where the donation takes place is due to the convenience of the experience (e.g., distance, how offloading is handled) or the political/religious stance the organization receiving the donation takes (e.g., stance on gay rights).

An overwhelming majority (89%, N=49) use a mobile phone which has a data plan (Figure 9).

**Q25 Do you have a mobile phone with a data plan?**

Answered: 55 Skipped: 1

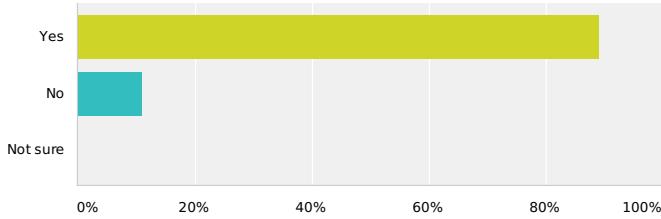


Figure 9 - Dsts Plan

Highlights from what respondents feel would be helpful in a second-hand store tool:

- Map that shows all nearby stores
- Sales/Clearance days
- Store inventory
- Customer reviews (e.g., ratings)

Two personas, one male and one female, were created based on our survey findings. One scenario for each persona was also created. Both Personas and Scenarios can be found in Appendix F.

## DISCUSSION AND CONCLUSIONS

In this study, we evaluated the intake of goods and customer interactions at four different second-hand stores, conducted one-on-one interviews with eight second-hand shoppers, and analyzed the results of 56 experienced second-hand shopping survey respondents. The aim of this research is to explore how a new technology can support people who want to shop at second-hand stores.

We found that similar interaction types occur when selling salvage, consignment, or customer goods to a store as well as when donating goods. This finding indicated that offering a component, which allows salvagers, consignors, or customers to sell their goods, may be a simple and useful addition to the tool, which results from this research. The task sequences for these four types of goods intakes also follow similar patterns, with the exception of the consignment intake, further supporting a “sell your goods” component addition to a technology-based tool.

However, the process of approving goods for intake into a store does not appear to be formulaic, but rather an organic process of selection during which the store representative considers a number of variables before committing to purchase the goods. Easy transmission of photos will be a primary need for any tool that would aid the intake process.

We suggest a tool should also capitalize on one of the areas in which our competitors consistently fail, i.e., including a very complete list of vintage, resale, consignment, second-hand stores and other similar stores in the “second-hand” space. There is currently no tool available, which has complete listings of second-hand store locations and information.

Our interview findings suggested that patrons of and people who donate to second-hand stores will find it useful to understand the type of store and general distribution of goods in a store. Our interviews also found that participants tend to enjoy serendipitous discovery of new stores over an active search for them (even while on vacation). This may mean that a digital solution could make use of proximity features in smart phones to alert users when they are within a certain radius of a second-hand store. Additionally, existing second-hand store owners can put this information to use through physical signs advertising the store location posted within close proximity of the stores. The store type and a category list of goods sold could be useful on both the application itself and the physical signage.

From the surveys, we found that second hand shoppers primarily buy clothing, books and furniture and these items are usually found at a thrift store. The most memorable items purchased involve scoring a really good deal—price compared to retail.

Second-hand shoppers value a second-hand store that is organized, where the goods and facilities are clean, and where the store has a good variety of merchandise. Shoppers enjoy impromptu visits allowing them to pass time if the store is near another destination (e.g., early to dinner, grocery store) and enjoy shopping on weekend afternoons. Second-hand shoppers felt having digital information such as the store’s inventory and the ability to read reviews of a store would be very useful.

A Feature Matrix (Appendix G) was created to emphasize highly valued features, including the following features deemed high priority based on survey data:

- Comprehensive permanent second-hand outlet directory.
- Mapping of locations
- Categorization of permanent outlets.
- Specifics of permanent outlets (hours, phone number, specials/discounts, payment types accepted, etc.)
- Push Location Settings (set frequency, radius, categorization)

#### **Limitations**

The highly similar response results from our survey likely represent a coverage sampling error due to the methods used to recruit survey participants (snowball) and the venue through which recruiting took place (our social media networks).

## **FUTURE DIRECTIONS**

In future research, we plan to conduct focus groups with a mix of second-hand store owners and second-hand store shoppers. The goal will be to better understand how each group categorizes the types of goods carried by second-hand stores, various store specialty classifications, and other categorization aspects of the second-hand shopping experience. This will allow us to build a tool which communicates effectively between stakeholders.

Additionally, our survey results revealed that almost all respondents did not categorize themselves in the “necessity” category for “reasons why you second-hand shop”.

To fully understand the scope of a second-hand shopping tool, we feel it would be necessary to find respondents who would categorize themselves in this way.

# APPENDIX A: CONSENT FORMS

## Informed Consent—Observation

The purpose of this document is to inform you about a research study we are conducting and in which we would like you to participate. Please read and understand the paragraphs below before our observation begins. This document is yours to keep.

1. My name is \_\_\_\_\_, and I am a graduate student at DePaul University. I am a member of a team that is researching methods to connect thrift store patrons with thrift stores that cater to their tastes and needs.
2. I am asking you to take part in this research study that will help us evaluate and recommend ways to facilitate connections with existing and potential patrons. We have asked you to participate in this study because you take in goods for resale and may help us understand how to better connect you with existing and potential patrons.
3. We will be observing you taking in, sorting, and categorizing donated goods.
4. During the observation session, we are not testing you in any way. Our goal during this observation is to watch how you sort the goods you receive to better understand the variety of products you provide for sale. All the information we collect will be kept strictly confidential and our report will maintain your anonymity.
5. Risks: The team does not believe there are any risks to you while participating in this study. The sole purpose of observation is to watch you take in, sort, and categorize goods. We may ask you questions to discover or clarify anything we feel may help us better understand the intake and sorting process.
6. Benefits: The results of this observation will help you better understand how to connect with your existing and potential patrons based on the way you take in, sort, and categorize used clothing and goods.
7. Your participation in this study is completely optional. If you do not want to participate in this study now or at any point during the study, please let me know and we will stop. There are no consequences for non-participation.
8. To participate in this study, you must be 18 years of age or older.
9. You may ask any questions about the study and we will answer to the best of our ability. If you think of a question later, please contact me at:

---

Name

Phone

Email

10. If you have any questions regarding your rights as a participant in this research study, you may request to speak to the Coordinator of the DePaul University Institutional Review Board for the Protection of Research Participants by calling (773) 325-2593.

---

Signature

Date

## Interview Consent–Interview

The purpose of this document is to inform you about a research study we are conducting. We would like you to participate in this study. It is important that you read and understand the paragraphs below before we begin. This document is yours to keep.

1. My name is \_\_\_\_\_, and I am a graduate student at DePaul University. I am a member of a team that is researching methods to connect second-hand store patrons with second-hand stores that cater to their tastes and needs.
2. I am asking you to take part in this research study that will help us evaluate and recommend ways to facilitate connections with second-hand store patrons and second-hand stores. We have asked you to participate in this study because you have indicated that you shop at second-hand stores.
3. We will be asking you questions about previous interactions you've had at second-hand stores and how you find second-hand stores.
4. We want to make it clear that, during the interview session, we are not testing you in any way. All information that you provide in this research study will be kept strictly confidential and any report of this research will keep your anonymity.
5. Risks: The team does not believe that there are any foreseeable risks to your participation in this study.
6. Benefits: The results of this interview will be analyzed and used to make recommendations for connecting second-hand store patrons and second-hand stores.
7. If you do not want to be in this study, you do not have to participate. Being in this study is entirely up to you and no one will be upset if you do not want to participate. Even if you change your mind later and want to stop, you may withdraw your agreement to participate without any consequences.
8. In order to participate in this study, you must be 18 years of age or older.
9. You may ask any questions that you have about the study and we will answer your questions to the best of our ability. If you have a question later that you did not think of now, you can:  
call me at \_\_\_\_\_  
send me email at \_\_\_\_\_
10. Recording Consent. This conversation is being recorded for research purposes. Please let me know now if you do not agree to being recorded. You may request that the recording stop at any time.
11. If you have any questions regarding your rights as a participant in this research study, you may request to speak to the Coordinator of the DePaul University Institutional Review Board for the Protection of Research Participants by calling (773) 325-2593.

## APPENDIX B: BIBLIOGRAPHY

1. Narts: The Association of Resale Professionals, 2013. Industry Statistics & Trends.  
<http://www.narts.org/i4a/pages/index.cfm?pageid=3285>
2. Yelp, 2013.  
[http://www.yelp.com/search?find\\_desc=thrift+shops&find\\_loc=Lincoln+Square%2C+Chicago%2C+IL&ns=1](http://www.yelp.com/search?find_desc=thrift+shops&find_loc=Lincoln+Square%2C+Chicago%2C+IL&ns=1)
3. Foursquare, 2013.  
<https://foursquare.com/explore?near=4307%20N%20Troy%20St.%20Chicago%20IL&q=thrift%20shop>
4. Time Out Chicago, October 2012, “Best Consignment Shopping”  
<http://www.timeoutchicago.com/shopping-style/shopping/15796656/best-consignment-shopping>
5. The Vintage Bazaar, 2013, “The Pop-Up Market: What is Vintage Bazaar?”  
<http://www.thevintagebazaar.com/popup-market/>
6. Pierce and Paulos, “Second hand Interactions: Investigating Reacquisition and Dispossession Practices around Domestic Objects” *CHI 2011 • Session: Sustainability 2* (May 7–12, 2011)
7. Koh, Kua, Lauterbach, Liebman, and McVittie, “TreasureHunter: A System to Increase the Reuse of Local Used Goods” *CHI 2009 ~ Student Design Competition* (April 4-9, 2009)
8. Tim Christiansen, David J. Snepenger, “Information sources for thrift shopping: is there a “thrift maven”?”, *Journal of Consumer Marketing*, Vol. 22 Iss: 6, pp.323 - 331 (2005)  
<http://www.emeraldinsight.com/journals.htm?articleid=1519852&show=abstract>
9. Pilsen Vintage and Thrift, Facebook, 2013  
<https://www.facebook.com/pilsenvintageandthrift>
10. Savers, 2013  
<http://www.saversonline.com/>
11. Salvation Army, 2013  
[http://www.salvationarmyusa.org/usn/www\\_usn\\_2.nsf](http://www.salvationarmyusa.org/usn/www_usn_2.nsf)
12. Listhings, 2013  
<http://listhings.com>

## APPENDIX C: INTERVIEW SCRIPT

### **Types of second-hand stores:**

For use when probing on second-hand buying habits, as they may consider some types of purchases “second-hand” if they are less costly (t-shirt) rather than other purchases as “new used” if they are more costly (cars, speedboats, helicopters, etc.).

**Consignment:** Clothes, Accessories, Appliances, Furniture, used eBay purchases, Craigslist, Estate sales, Moving sales, Church Sales, Garage sales, Flea Markets, second-hand Amazon, specialty stores like Gamestop or Play-It-Again Sports, Records, Music equipment, Used cars.

**Thrift/Donated:** Savers, Wings, Salvation Army, Goodwill, Clothes, Accessories, Appliances, Furniture, Books, Sporting Equipment, Toys, Electronics, Jewelry, Shoes

### **Introduction**

Hello, my name is \_\_\_\_\_ and I'm part of a DePaul University research group. We are attempting to explore methods to connect second-hand store patrons with second-hand stores that cater to their tastes and needs. Would you mind taking the time to answer several questions to help with my project?

**If No...** Thank you very much for your time, your real name will not be used in the final research presentation. Have a great day!

**If Yes...** Great, thank you for taking the time to meet with me today. Before we begin, Is it alright with you if this conversation is recorded? This is an audio consent form. It indicates that this session will be recorded, but will not be used for anything outside this research study. Please read through it and, if it sounds alright, please go ahead and sign it.

[Have interviewee read consent form and sign]

### **Screening Question:**

So can you tell me about the first time you remember going to a second-hand store?

**Answer: Yes.** PROBE - Was there anything that really stuck in your mind from the experience?? **GO TO QUESTIONS**

**Answer: Never been.** PROBE – What are your reasons? **END INTERVIEW.**

### **Questions START**

1. How have you found out about new second-hand shops?  
PROBE - Have you ever considered other ways of finding second-hand shops?
2. In the last year, how often have you looked for new second-hand shops?  
PROBE - When you wanted to find new second-hand shops how did you find them?

3. Have you ever gone second-hand shopping in a city you didn't live in?  
Tell me about that ...  
PROBE - How did you find second-hand shops there?
4. How often do you second-hand shop? Why?
5. Do you have a favorite second-hand shop? Why?  
PROBE - How do you determine if you will return to a second-hand shop?
6. Tell me about the last time you went second-hand shopping?  
PROBE - What items were you most interested in? (Is that typical?)  
PROBE - have you ever shopped for ...then you can list ones not mentioned  
PROBE - What is the last item you bought at a second-hand shop?  
PROBE - How much time did you spend? Was that typical?
7. Let's say you're looking through a section of shirts, how would you expect them to be organized?
8. What is the number one reason you second-hand shop?
9. Do you go to second-hand shops to find specific items?
10. Do you go to second-hand shops to browse?
11. Let's talk about quality of the shops. Tell me about the dumpiest second-hand shop you have been in. Can you tell me about the nicest?  
PROBE - How did the quality of the shops affect your opinion of the second-hand shop?
12. What types of facilities do you expect to be available at a second-hand shop you visit? For example, do you expect a restroom, dressing rooms, etc.?
13. Do you expect to try on second-hand clothes before purchasing them?
14. Are there any items in a second-hand shop that you would NEVER buy? Why?
15. What payment types do you expect to be accepted at a second-hand shop you visit?
16. Have you ever donated to second-hand shops? Tell me about that. Is that typical?  
PROBE - How often? What kinds of items?
17. Have you ever sold items to second-hand shops? Tell me about that – was that typical?  
PROBE - How often? What kinds of items?
18. Do members of your family shop at second-hand stores?
19. Have you ever given an item you purchased from a second-hand shop to someone as a gift? Why or why not?
20. Have you ever used online or mobile resources to find second-hand shops? Which ones?

## Demographic Questions

1. We are exploring connecting second-hand stores with those who frequent them, are there any features you feel would be helpful in a tool like this?
2. How comfortable are you with technology?  
Scale Not at all | Somewhat | Normal | Highly  
PROBE - Ask about mobile use if they haven't already mentioned.
3. How old are you?
4. Male/Female

## Closing END

Thank you very much for your time, your real name will not be used in the final research presentation. Have a great day!

## APPENDIX D: SURVEY QUESTIONS

1. Are you 18 or older?
2. When is the last time you purchased a second-hand item?
3. Rank, in order of importance, the reasons why you second-hand shop. 1=most important 5=least important
4. In one or two sentences, tell us about your last second-hand shopping experience.
5. Where have you purchased second-hand goods?
6. Which of the following second-hand goods have you purchased?
7. In the last year, how often did you second-hand shop?
8. Rank, in order of importance, how often do you typically use the following resources when locating a second-hand shop. 1=most often 5=least often
9. Rank, in order of importance, How often do you typically use the following digital resources when locating a second-hand shop? 1=most often 6=least often
10. How do you typically (currently) get to second-hand shops?
11. At most, how many miles are you willing to travel to shop at a second-hand store?
12. What time of day would you prefer to shop at a second-hand store?
13. Have you ever stopped at a second-hand store when it was not planned?
14. Write one or two sentences about a time you stopped at a second-hand store, when it was unplanned.
15. Rate how important the following store qualities are to you.
16. Rate how important the following store facilities are to you:
17. Last year, did you sell items to a second-hand shop?
18. What is the most difficult aspect of selling used goods?
19. How many miles are you willing to travel to sell items?
20. Last year, did you donate items to a second-hand shop?
21. Of these second-hand stores, which do you prefer to donate to?
22. Please write one or two sentences about why you prefer to donate to this second-hand store.
23. What is the reason you most often donate goods?
24. How many miles are you willing to travel to donate items?
25. Do you have a mobile phone with a data plan?
26. Do you currently use push notification settings on your mobile device?
27. Do you use apps on your mobile phone?
28. Are there any features you feel would be helpful in a tech-based tool that connects second-hand shoppers with second-hand stores?
29. What is your age?
30. What is the highest level of education you've completed?
31. What is your yearly household income?
32. Do you have anything you would like to share with us?

## APPENDIX E: FIGURES



Figure 1 - Rough Affinity Diagram

## APPENDIX E: FIGURES (continued)

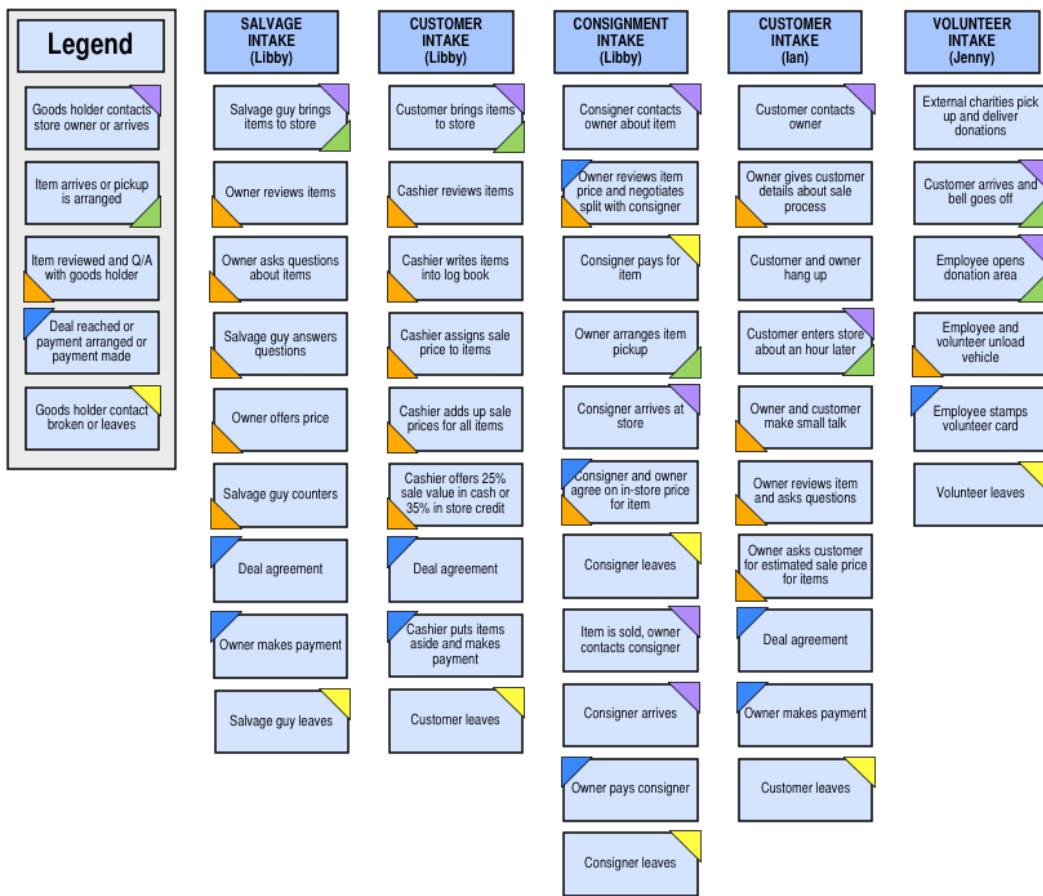


Figure 2 - Final Affinity Diagram

Coded Activity Type	Coded Activity Color	Coded Activity Description
Contact Initiated	Pink	the store representative or goods holder initiate contact or arrive in person
Goods Arrive	Green	the goods holder brings the goods to the store or goods pick-up is arranged
Goods Reviewed	Orange	the store representative evaluates goods and asks questions; goods holder answers questions
Deal & Payment	Blue	the store representative and goods holder reach a deal and payment is made
Contact Broken	Yellow	the store representative and goods holder break contact via phone or in person

Table 1 - Affinity Diagram Task Codes

## APPENDIX E: FIGURES (continued)

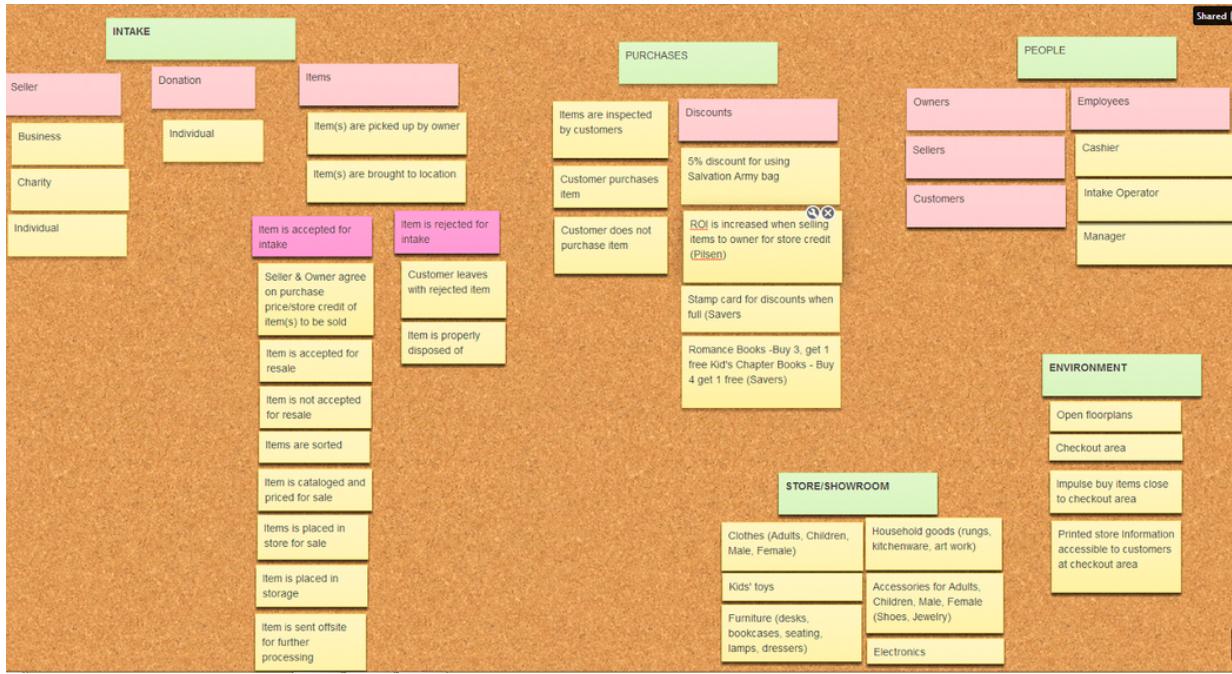
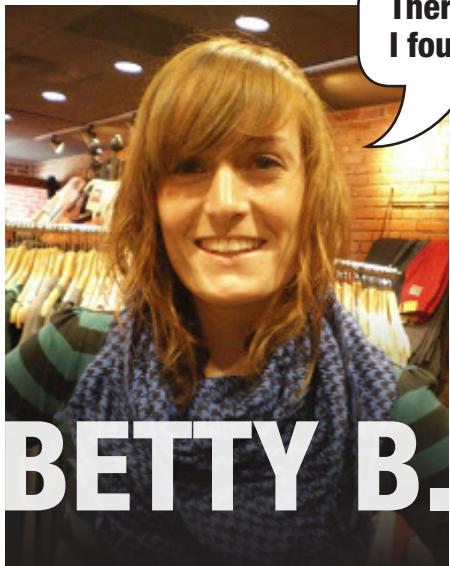


Figure 3 - General Observations Affinity Diagram

## APPENDIX F: PERSONAS AND SCENARIOS



**There are a few second-hand stores I shop at monthly. Last week I found a crib for \$40. Retail price would have been \$200 or more!**

**Age:** 32

**Education:** MS in Health Science

**Occupation:** Physician's Assistant

**Home Life:** Married with one 11 month old daughter and one 5 year old son

**Household Income:** \$85,000

**Key Characteristics:** Organized, compassionate towards others in need, bargain hunts for fun

# BETTY B.

# BARGAIN-HUNTING

### Technology Experience:

**BEGINNER**

**INTERMEDIATE**

**ADVANCED**

**Description/User Story:** Betty's schedule is packed with work and family responsibilities. She works Monday through Fridays and is on call on the weekends so she keeps her mobile with her when leaving home. She has a high tech phone but is not entirely comfortable using all of its advanced features. When driving past local second-hand stores, Betty quickly scans the windows for a sale/specials sign and will stop in if she has extra time or just feels like quickly shopping. If she finds a great deal, she likes to boast about it to family and friends.

### Second-hand Store Frustrations:

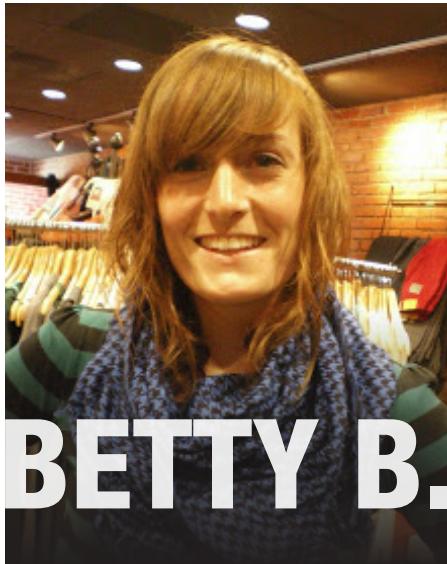
- Second-hand stores that are unclean
- Items for sale are unorganized throughout the store
- Staff is not friendly or helpful
- No dressing rooms available
- Cash is the only method of payment accepted

### User Goals:

Betty would like this second-hand store listing app to:

1. Send her information about sales/specials that her local second-hand stores are offering on her mobile phone.
2. Display a detailed listing of inventory and types of items for sale
3. Have a "Other stores you might like" feature to broaden her knowledge of local second-hand stores
4. List the payment types accepted at stores along with general store information

## APPENDIX F: PERSONAS AND SCENARIOS (continued)



# SCENARIO

**Problem:** Betty wants to know what a store is selling, and if there is a deal.

**Features:** App that notifies her of a nearby second-hand store running a sale on toddler clothes.

**Expectations:** Wants to know when and where to get great deals on things she needs.

# BARGAIN-HUNTING

Betty is on her way to work a mid-shift after dropping her daughter off at daycare. Traffic is light and she arrives at the downtown medical complex where she works as a Physician's Assistant 30 minutes ahead of schedule. Betty sits in her car wondering if she should head into work or not when she remembers her daughter is growing at a prodigious rate and needs some new toddler clothes.

Betty has just enough time to visit one of the new thrift stores that have recently opened nearby. Her friend recently introduced her to a phone app that finds thrift stores, so she opens the app and presses the "shops near me" button. After waiting for the screen to show stores around her, Betty selects three stores, Baby Barn, Village Discount, and Thrifty Mom, and clicks "compare." A list of comparison categories appears, and Betty chooses "Price," "Store Quality," "Stock Quality," and selects "Baby / Toddler" from the item stock she is interested in.

The display shows Betty information for the three stores. Baby Barn is the most expensive, has an excellent store quality rating, and has a large stock of baby and toddler clothes. Village Discount is very cheap, and has a low store quality rating, and has a large stock of baby and toddler clothes. Thrifty Mom is average priced, has a good store quality rating, and has a large stock of baby and toddler clothes.

Betty chooses to visit Thrifty Mom, as it seems to be the store most likely to carry what she wants. Just as Betty is starting her car, a notification pops up that Baby Barn is having a spring cleaning sale and all baby clothes are 25% off. Betty has been to Baby Barn before and knows that it carries the type of clothes she's interested in. With a discount, she is even more interested.

Betty changes her destination from Thrifty Mom to Baby Barn. She feels great because she's getting better quality baby clothes and a great deal at the same time. She knows that from now on she'll be spending most her life, living in a thrifers paradise.

## APPENDIX F: PERSONAS AND SCENARIOS (continued)



**Shopping at a second-hand store is a cathartic experience for me after having a long day or to relieve stress. It puts me in a better mood being able to find even just a small, unique something, that I didn't know I needed.**

**Age:** 30

**Education:** BS in Multimedia Design

**Occupation:** Continuing Education Instructor and Freelance Multimedia & Website Designer

**Home Life:** Lives with his fiancé

**Household Income:** \$70,000

**Key Characteristics:** Laid back, spontaneous, bargain hunter

### SCOTTY S.

#### Technology Experience:

BEGINNER

INTERMEDIATE

ADVANCED

### SERENDIPITOUS

**Description/User Story:** Scotty's work schedule fluctuates greatly on a weekly basis. As a Continuing Education Instructor, he teaches mainly during the week. When working on a freelance project, Scotty may work over 12 hours per day. Due to the nature of his work, he keeps his mobile phone on him at all times. His free time is generally on weekends where he enjoys serendipitously finding second-hand stores to browse in when waiting to hang out with friends or family. When vacationing out of town with more time to kill, he has to rely on web-based searching or word of mouth to locate stores.

#### Second-hand Store Frustrations:

- Finding out at the check-out that the store does not accept credit/debit cards
- Going into a store that does not have air conditioning on a hot day
- Items for sale are unclean and not ready for immediate use
- Realizing a store has a small variety of items for sale
- Not able to easily find second-hand stores using his mobile phone when on vacation
- Not able to find information for donating and/or selling items

#### User Goals:

Scotty would like this second-hand store listing app to:

1. Use geolocation to find second-hand stores which are within a certain radius of his current location
2. Display the type of store, general inventory listing, and instructions for donating and/or selling items
3. Display user reviews so he can read if the store is something he should check out or avoid
4. Receive notifications of specific items he is searching for

## APPENDIX F: PERSONAS AND SCENARIOS (continued)



# SCENARIO

**Problem:** Scotty wants to know when there's a second-hand store nearby.

**Features:** App that notifies him when there is a nearby thrift store.

**Expectations:** He should be pleasantly surprised when he finds a new store that fits his tastes.

# SERENDIPITOUS

It's a beautiful July morning and Scotty is at a downtown coffee shop with a friend who just told him about a new thrifting app. The app tells you when you're near a second-hand store you might like, based on simple criteria.

Scotty downloads the app from the app store and signs into the app by connecting it to his Facebook account. After signing in with his account, a screen appears asking Scotty if he would like to set his store tastes. "Why not," he thinks, "this is supposed to be the cool part." Scotty tells the app he favors second-hand stores with mid-range quality goods, large breadths of goods, moderate median price per item, "department store" amenities, and specialize in vintage western shirts, records, or music equipment. He also mentions he is not interested in womens clothing, baby clothes, or furniture.

He taps around in the app absentmindedly while talking with his friend, and then closes the app to focus on their conversation.

Scotty is surprised when, despite being pretty familiar with the neighborhood, his phone buzzes. The app is notifying him that a new second-hand shop has opened up a few blocks over. The app has given the store 4.3 stars, which means it is a good match for his second-hand store preferences, so Scotty and his friend decide to check it out.

As they browse the store, Scotty realizes it's a bit more expensive than he was expecting and that the quality of the goods is pretty high as well, so he opens the app and rates the store as having a "high median price range" and "high quality goods." While the store carries a large breadth of goods, Men's, Women's, Baby/Kids, Household, etc, Scotty notices he's finding a lot of items he is interested in. He buys a western shirt that catches his eye, and he and his friend head out to find lunch.

While walking toward their favorite food truck a few blocks away, Scotty notices that they just passed a second-hand shop called Baby Barn. His phone didn't buzz, which is great as it only carries baby clothes, not something he would be interested in.

A month later, Scotty is in Albuquerque on business. It's 6pm and he is exploring the city when his phone buzzes. He glances down, "Del's Discount Western Wear" is two blocks away.

And it has Air Conditioning.

## APPENDIX G: FEATURE MATRIX

Feature	Persona Connection	Priority	Impact	Feasability	Source/Notes
Comprehensive permanent second-hand outlet directory.	 BETTY  SCOTTY	High	High	Med	Solution to original question, supported by responses during Interviews and Surveys
Mapping of locations	 BETTY  SCOTTY	High	High	Med	Response from survey "A map feature is important to me, if I'm using my phone."
Categorization of permanent outlets. Specifics of permanent outlets (hours, phone number, specials / discounts, payment types accepted, etc.)	 BETTY  SCOTTY	High	High	High	Responses from interviews and survey suggested broad categorization would be very helpful. Response from Survey "Broad category classifications (has large furniture, has clothing) along with more specific if possible (specializes in lighting or electronics)." "... what kind of good they specialize in (clothing, toys, furniture, etc.) ..." "Helpful to know what sort of items the sell. Some places get great reviews, but then when you get there it's more furniture than clothing, or vice versa. Certain stores are good for certain things."
Push Location Settings (set frequency, radius, categorization)	 BETTY  SCOTTY	High	Med	Med	Response from survey "An app that showed ... the store's hours, and if they take credit cards." "This is asking a lot, but I'd love to have some idea of the type of inventory they have (e.g., plus sizes) and when new arrivals are on the shelves."
Seller direct connection with shop, incorporating photo sharing.	 SCOTTY	Low	Low	Low	Ability to turn ON/OFF is important as some will want discovery of a second-hand shop to be more serendipitous. Quote for serendipitous discovery "The whole point in going to a second hand store is the low-tech hunt. Using a smartphone makes finding something harder, and takes the "fun" out of it as a choice item would be instantly gone." Quote supporting less serendipity "An app that showed where the closest second-hand/thrift stores were to my location ..."
Comprehensive temporary/seasonal second-hand outlet directory.	 BETTY	Med	Med	Low	Response from survey "I would like to see an app where I can put in what I want to sell to them and it would let me know how much I would get in cash or store credit before I even brought in the items."
Push Preference Settings (by category, location, specific items, etc.)	 BETTY  SCOTTY	Med	High	Med	Solution to original question, supported by mention of temporary sales by respondents. Response from survey "I'd also love to see an estate sales app." "An app that has accurate listings for estate or garage sales would be great too."
Seller information. Shops list what they're currently accepting or have needs for. Comprehensive list of quality requirements	 SCOTTY	Med	Med	High	Response from survey "Perhaps a feature that could notify me that something I am looking for is now available would be nice."
Donor information. Shops list what they're currently accepting or have needs for. Comprehensive list of quality requirements.	 SCOTTY	Med	Med	High	61.11% of survey respondents said "Knowing what is accepted" is the most difficult aspect of selling used goods?
Shop connection - An algorithm that matches category tags and makes suggestions based on preferences.	 BETTY	Med	Med	Med	Response from survey "...drop-off locations and times." Response from survey "Something that connects cities. e.g., if you like Unique located in Chicago, then check out Veteran's in Pomona (LA area). Kind of like "Other movies you might like" on Netflix. I would like one of these for restaurants too! e.g. If you like "Nightwood" in Chicago, try "Church and State" in LA. It would be a great travel tool, but also for people who move from city to city."
Shop ratings - users can provide a rating and add a comment. Connected to categorization.	 SCOTTY	Med	Med	High	Response from survey "Some places get great reviews, but then when you get there it's more furniture than clothing, or vice versa. Certain stores are good for certain things." "A tool that would also show reviews for that store ..."