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Proposal Abstract

Disaster can strike anywhere. Many people believe that if they avoid the fault lines, hurricanes and tornadoes, they are probably safe. But did you know that the highest risk city in the U.S. is Dallas, TX? High Ground is a mobile disaster preparedness app that helps you prepare your household for an unexpected disaster and make a safe evacuation.

High Ground is targeted towards college-educated women in their early thirties who have an interest in protecting their households. Most users will have been personally affected by a natural disaster or know someone who was. Using a combination of APIs and web technologies including HTML, CSS, and JavaScript, High Ground will help the user design a household disaster plan that includes a go-bag, emergency meeting places, social media communication and more.

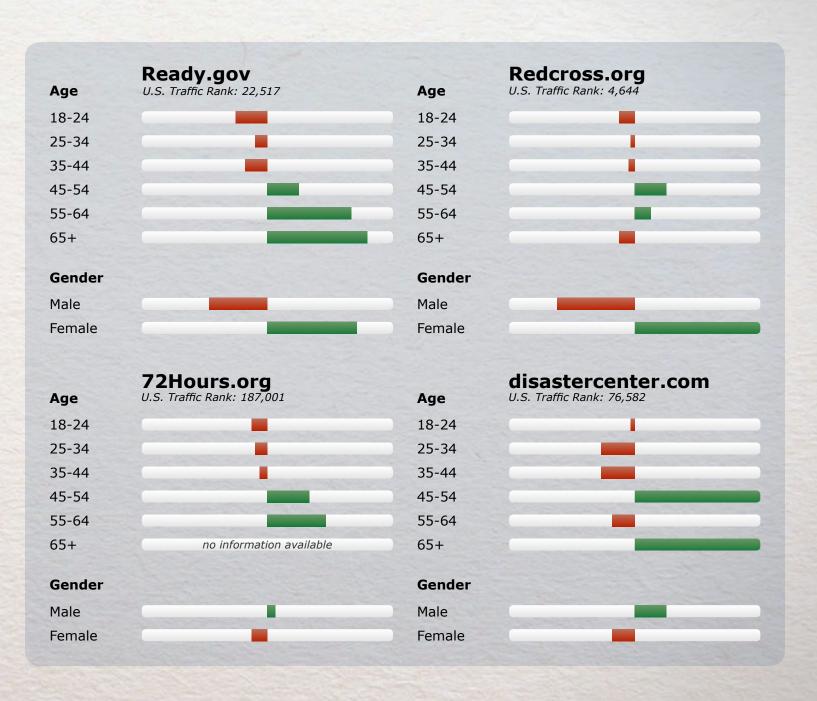
Target Audience Research

My initial research was somewhat surprising because the majority of people browsing emergency preparedness sites are college-educated women over the age of 45. The number of men using sites like this tends to be much lower than the internet average. I also found that well-credentialed sites like Ready. gov, see a higher-aged demographic than less official sites.* This suggests that even though the information is probably better on agency sites, it is presented in such a way that younger audience segments are less likely to read it. While High Ground can be used by women or men, the target audience will be women in their thirties who are missing out on essential information for protecting their households.

The primary user will be a woman who has personally experienced an unforeseen disaster and was caught unprepared. She will want to defend herself against similar situations in the future.

The secondary user will be a woman who has not personally experience a disaster but has friends or family who have. She will be aware of the potential dangers and is wondering how she can prepare her household.

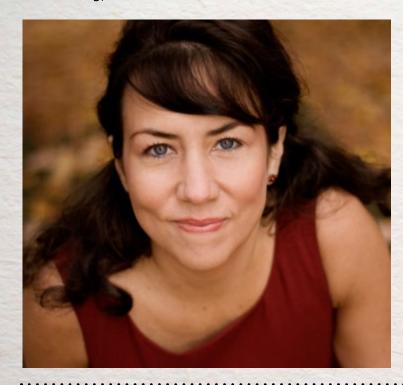
The tertiary user will be a person with an interest in being prepared and protecting a family, but will have a low commitment to completing the entire plan. This person knows that emergencies are possible but is researching out of caution and not fear.



^{*}Statistics based on data from Alexa.com.

Heide Collister

Age: 36 Greensburg, KS



"I will never be caught unprepared again."

HEIDE COLLISTER WAS WATCHING A MOVIE in her home on May 4th 2007 in Greensburg, KS when a tornado blew through the town. She was unaware of the warning issued earlier by the National Weather Service and did not realize the magnitude of the approaching storm system.

Her house was nearly leveled by the tornado and she attributes her survival to hiding under a mattress in a bathtub throughout the duration of the storm. When the skies had cleared she found herself without electricity or water. Most of the food she could find required one or the other to prepare. For two days, she struggled to satisfy her basic survival needs before government aid was set up to serve the community.

Heide was able to rebuild with the insurance money she received but she will never be caught unprepared again. She is ready to act now.

fear of disasters sense of urgency belief in self-sufficiency amount of research done dedication to finishing plan

Key Characteristic

• Former victim of a tornado disaster.

Goals

- Design a comprehensive disaster preparedness plan.
- Establish peace of mind.
- Learn more about how to prepare outside of home.

Questions

- How can I guard against future catastrophes?
- Where should I store an emergency preparedness kit in my home?
- What do I do if I'm not at home when disaster strikes?

Mariclare Lopar

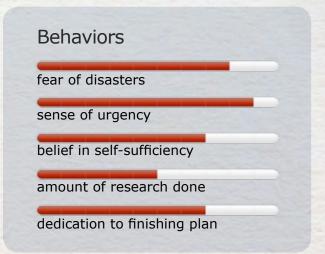
Age: 35 Raton, NM



"I don't ever want to be a victim."

LAST YEAR MARICLARE'S BROTHER lost his house to a flood. He did not have adequate insurance and had to rely on the good will of the community in order to provide for his family. They have a new place to live but Mariclare still hears the pain in his voice whenever he talks about the loss he experienced.

Mariclare and her husband were alarmed by the situation because they never considered their own vulnerability. Their records are not protected and they have no emergency plan in place. Mariclare has decided that the time to prepare is now and she is ready to start putting her family's plan in place.



Key Characteristic

 Knows a family member who lost everything because he wasn't prepared.

Goals

- Learn about disaster preparedness.
- Build a disaster kit.
- Find out what kind of documents she needs to backup and protect.

Questions

- Do I need an emergency plan in my situation?
- How many days should my kit provide for?
- Do I live in a high risk area?

Randall Dodge

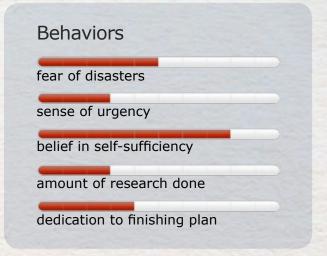
Age: 31 Steubenville, OH



"I want to learn more about protecting myself."

IN 2005 RANDALL DODGE PLANNED a late August vacation. He had always wanted to take his family to see New Orleans but decided to visit San Diego instead because a friend of theirs invited them to stay with him. When they were in San Diego he watched the news as New Orleans was destroyed by Hurricane Katrina. At the time he considered his family lucky.

But since that time Randall has watched other major disasters on the news. He saw the Japanese coast flooded by tsunamis and he watched the interviews of people who lost their homes in the Joplin tornado. The unusual frequency of natural disasters has Randall concerned that climate change could be the cause and things could be getting worse. He no longer feels lucky and wants to start thinking about his own safety and the safety of his family.



Key Characteristic

• Concerned about safety just in case.

Goals

- Research emergency options.
- Find some advice for disaster preparedness in his community.
- Gain understanding of what it takes to be prepared.

Questions

- What kind of disasters can strike my area?
- Can I rely on the government for assistance?
- How much will it cost to assemble a disaster kit?

Ready.gov

view site at ready.gov

Relation to Project:

Provides user with a disaster readiness plan for an individual or household.

Pros:

- Thorough Presentation
- · Official credentials
- Well organized
- Includes information for everyone in any situation
- Available in many languages

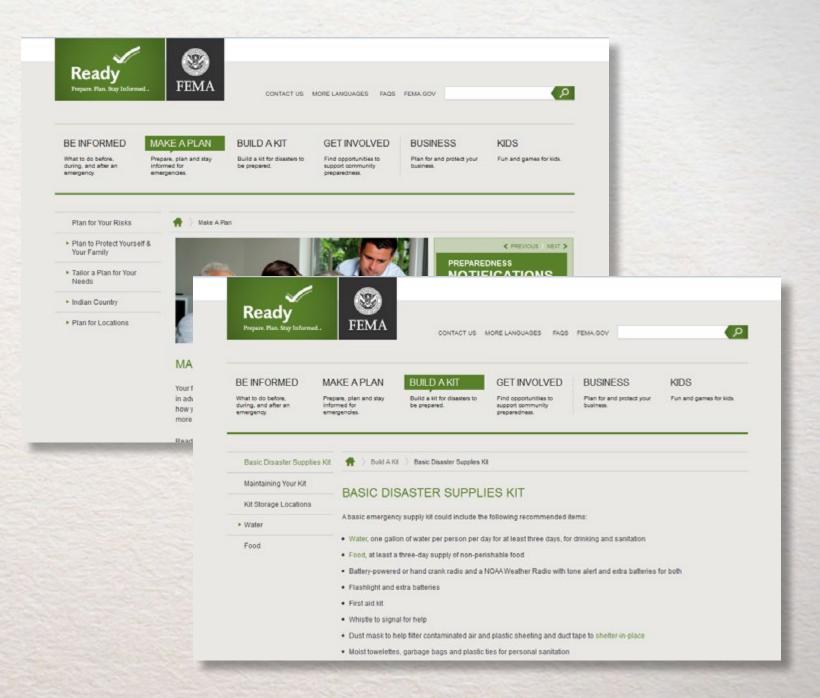
Cons:

- Not very engaging
- Aimed at a broad audience instead of being targeted at specific users
- Too much information

Impressions:

The FEMA site for emergency preparedness ranks number one in most search results for disaster readiness. Ready.gov is a comprehensive site for developing a plan to deal with emergencies. It gives information about building an emergency kit, how to protect your home and business and also has an area for kids.

The main problem with the site is that it does not have a clear audience. It tries to provide information to cover any person in every walk of life. This makes the process of designing a plan for your own household a cumbersome task and it seems likely that much of the information goes unread. There are few visuals on the site and the process of making a plan makes the topic seem dry and unappealing.



72 Hours

view site at 72hours.org

Relation to Project:

Provides user with a disaster readiness plan for an individual or household.

Pros:

- Simple to use
- Appealing visuals
- Language options
- Unique navigation system

Cons:

- Home page not clear if it's a shopping site of information site
- Targeted at a specific geographical area but not clear about which one
- Site has interesting navigation but lacks new technologies to make site more interactive

Impressions:

72Hours is sponsored by the city of San Francisco to prepare citizens for earthquakes, flooding and other disasters. It provides an easy-to-use three topic preparation guide including Making a Plan, Building a Kit, and Getting Involved. Information is thorough without being overwhelming and it is easy to choose the topics that are relevant to your particular household situation.

The graphics make the site easy to navigate and fun to explore. Once you browse the site for a while you start to see the design fail. The text is poorly formatted with very narrow margins and it is initially difficult to understand the color coding system.





www.72hours.org Are you prepared?

After a major disaster the usual services we take for granted, such as running water, refrigeration, and telephones, may be unavailable. Experts recommend that you should be prepared to be self-sufficient for at least three days. Store your household disaster kit in an easily accessible location. Put contents in a large, watertight container (e.g. a large plastic garbage can with a lid and wheels) that you can move easily.

Your basic emergency kit should include:

- · Water one gallon per person per day
- . Food ready to eat or requiring minimal
- · Manual can opener and other cooking
- · Plates, utensils and other feeding
- First Aid kit & instructions
- A copy of important documents & phone numbers

HOW TO PREPARE



English | Español | 中文 | Russian | Vietnamese |



























bReddi

view site at bReddi.com

Relation to Project:

App that helps household prepare for emergencies.

Pros:

- Connects users to each other
- Provides personal preparedness stats
- Gives continuous threat levels

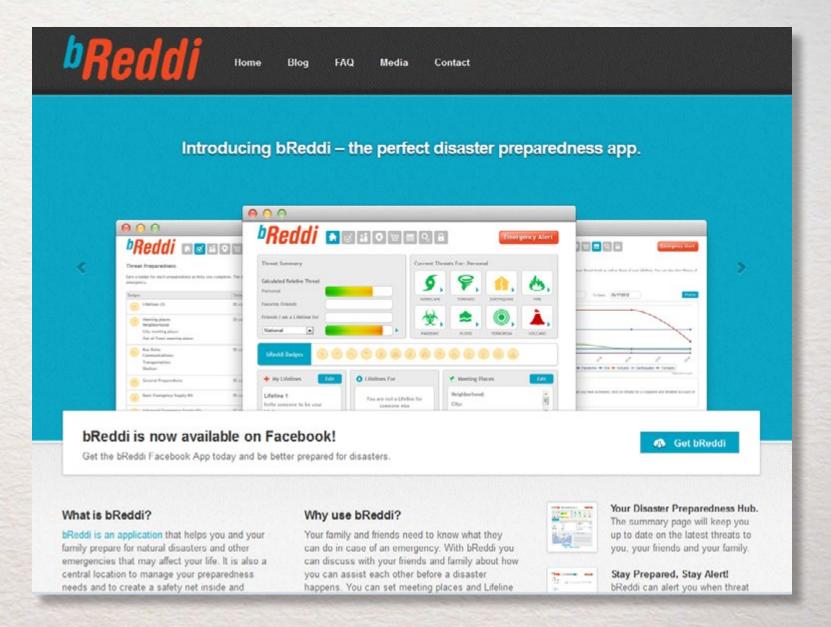
Cons:

- · No evacuation assistance
- Requires participation from friends to be fully effective.

Impressions:

Good app that leverages social media to create an emergency preparedness network. Gives a lot of information about preparedness level and current risks in your area and those of your network.

Only provides users with half the disaster plan because there is no evacuation assistance that will help the household follow their plan in a methodical and calm manner.



stopDisaster!

view site at itunes.com

Relation to Project:

App that helps household prepare for emergencies.

Pros:

- Gives users a selection of disasters to choose from
- Ranks importance of go-bag items

Cons:

- Unprofessional presentation
- No evacuation assistance
- Focuses on go-bag items and not total preparedness plan.
- Costs \$1.99 from itunes.com

Impressions:

Useful app that will help the user make detailed disaster plans. The overall navigation is cluttered and there is no clear task flow or indicators that help the user design a plan. App is designed for preparing for specific types of disasters instead of building a plan that will work for every disaster scenario.





Grab n' Go Kit

view item at homedepot.com

Relation to Project:

An alternative to building your own household go-bag.

Pros:

- Inexpensive
- · Requires no research or planning
- Easy to store and carry

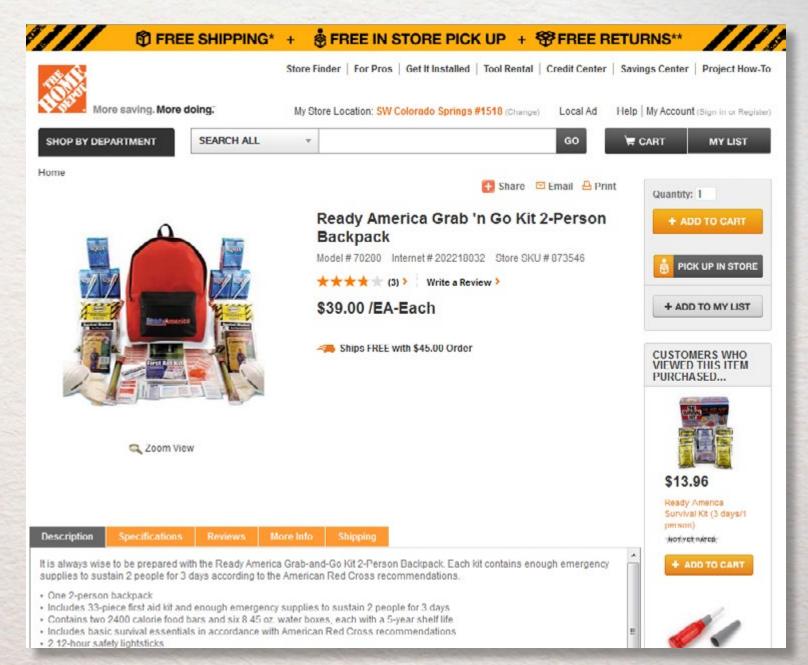
Cons:

- Does not provide comprehensive emergency prevention solution
- · Missing important items recommended by FEMA

Impressions:

As an alternative to building your own kit, you can purchase a ready-made kit that has many essential disaster readiness items including food and water. This can be an easy way to buy peace of mind with very little research or expense.

The downside with this approach is that your kit is not customized to your household and you have no control over the quality of items in the kit. The Grab n' Go kits , and similar products, only provide you with a part of your readiness plan instead of a comprehensive disaster emergency blueprint.



Berkeley campus map

view site at berkeley.edu

Relation to Project:

Shows interactive city map with clickable areas similar to my waypoint destination map.

Pros:

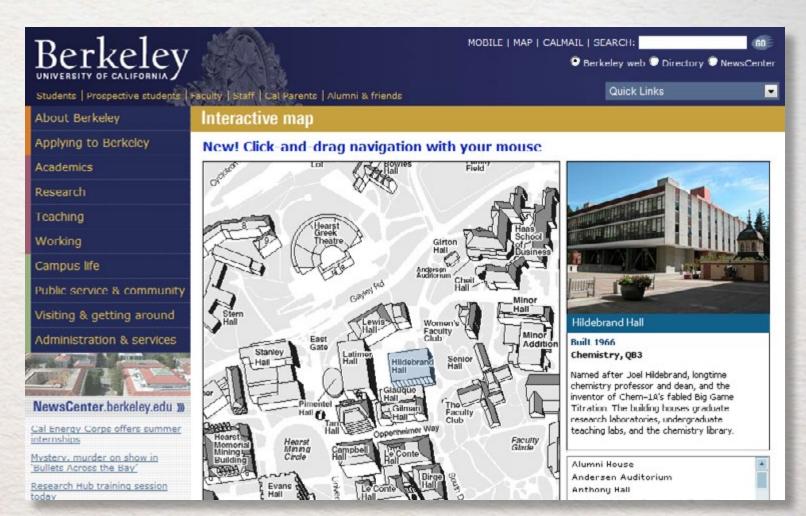
- Images on map tied to data in the side bar
- Easy click and drag navigation

Cons:

- 3D renderings pixelated
- Visually unappealing
- Lack of color palette

Impressions:

The Berkeley Interactive Map is intuitive to use and provides information that would be useful to visitors and new students. It is user friendly in that you can click on the map to learn about a building, or search for a building and have it highlighted on the map. The only problem with the map is that it provides information without being interesting to look at. The graphics look outdated and the photographs do not look current.



Disaster plan comparison

	ready.gov	72hours.org	bReddi.com	redcross.org	stopDisaster!
Ease of use	0		•	0	0
Depth of information	•	0	•	0	•
Ease of creating plan	0	•	0	0	0
Visual appeal	0		0	0	0
Audience targeted	0	0	0	0	0
Official credentials			0		0
Size of disaster kit	0	0	0	0	•

Disaster kit comparison

	ESC	Grab n' Go	Stansport	Mayday Deluxe	Lifeline
Assortment of items		0		0	
Cost		0		0	0
Number of days	3	2	n/a	n/a	3
Number of people	2	2	n/a	4	2
Weight	0	0		0	0
Portability				0	•

Unique Positioning Statement

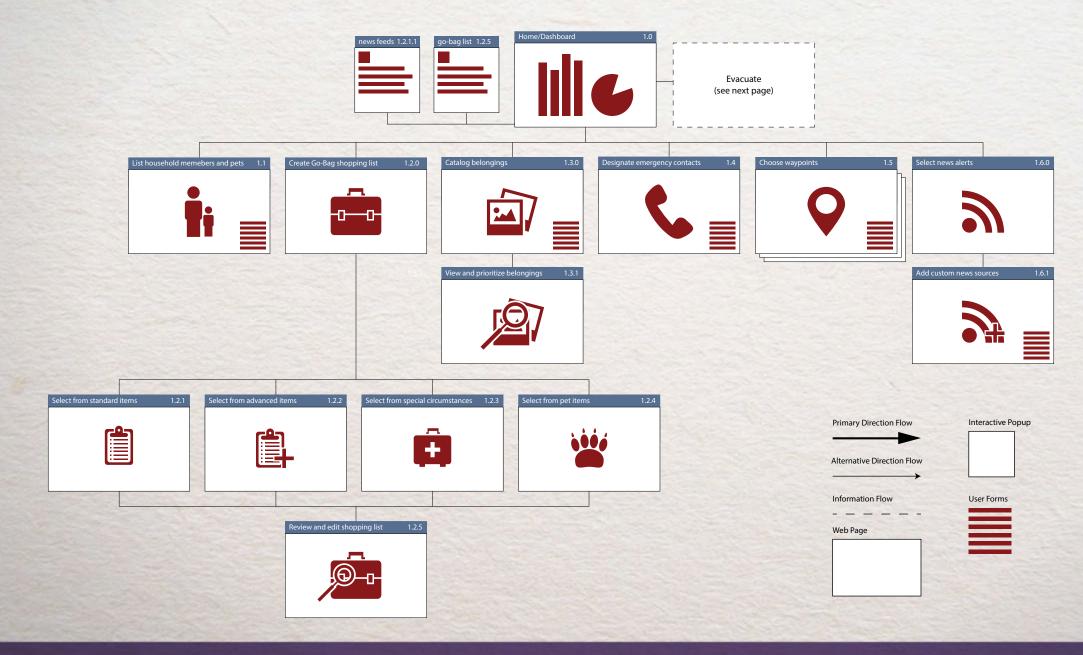
Unforeseen disasters can affect people no matter where they live. These disasters can include anything from a hurricane to a house fire. The universality of the risk has led to a wealth of information about the subject that can be accessed online, in printed material and other places. The quality of preventative advice offered to people ranges from very official to merely anecdotal.

What is difficult to find in all this information is an interactive approach that is targeted enough to a specific audience that the content is helpful and practical rather than overwhelming. Sites like Ready. gov contain a wide expanse of information but do little to inspire preparation. Products like the Grab n' Go emergency kit are ready-made and inexpensive but they are only one piece of a larger plan that many people would like to develop.

This thesis project is aimed at helping people make up a disaster plan that is tailored to a small household. The goal is to create an immersive planning experience that will inspire the user to finish a disaster plan that will grant her and her household peace of mind and security.

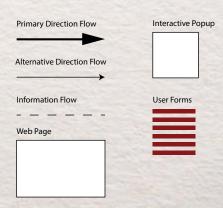
The key feature of High Ground is the mobile, stepby-step evacuation walkthrough that utilizes HTML5 technologies and social media help a family safely evacuate a home and preserve quality of life for a short duration of time.

Information Architecture



Information Architecture, continued



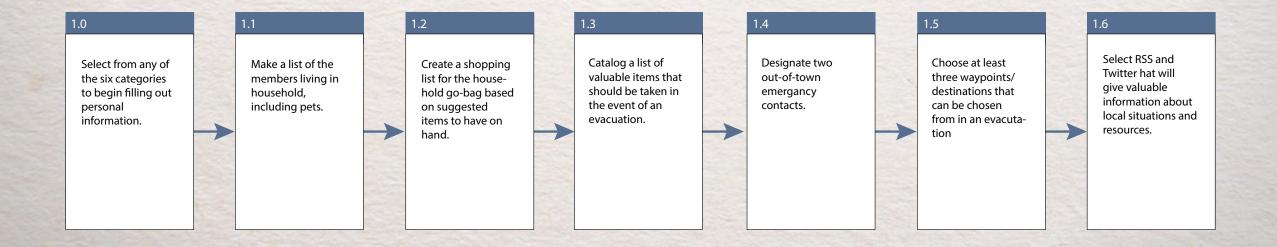


User Scenarios and task flows

How do I develop a plan?

User Scenario and task flow 1

Heidi Collister has been researching emergency disaster preparedness ever since her home was destroyed by a tornado. She found High Ground and decided to use the site to design a comprehensive plan for her household. She reads the information on the homepage and commits to finishing the complete plan. She downloads the app and begins filling out information to create her personalized plan based on six areas of information.

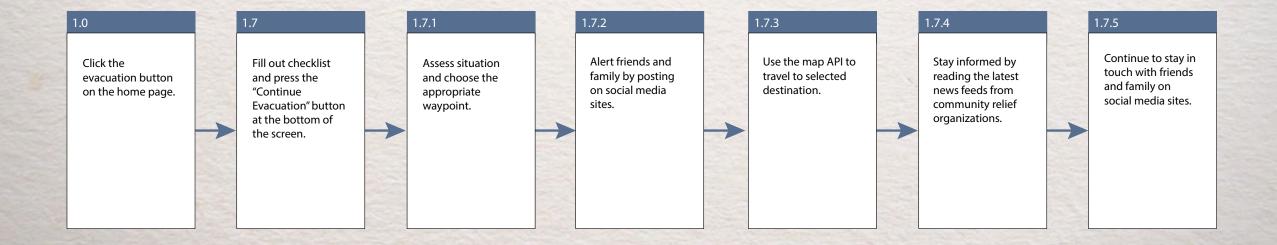


User Scenarios and task flows

I need to evacuate. What do I do now?

User Scenario and task flow 2

The unthinkable has happened. Heidi Collister has completed her disaster plan and the she finds herself in a position where she has to evacuate her house with only a thirty minute notice.

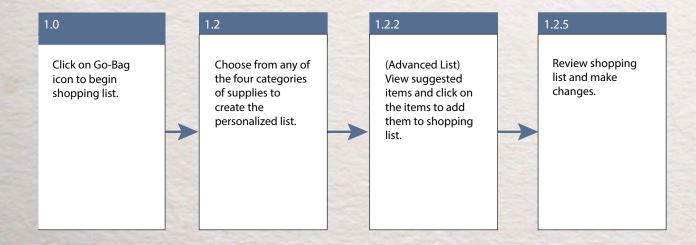


User Scenarios and task flows

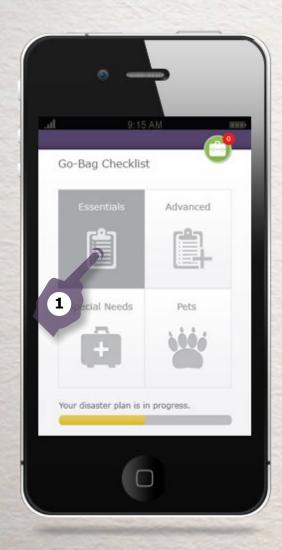
How do I design a go-bag?

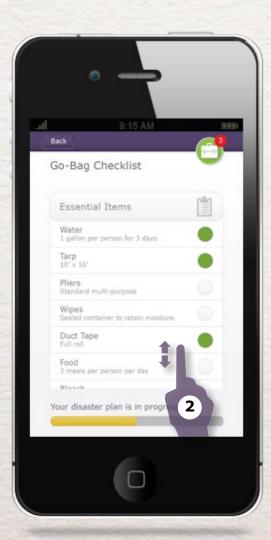
User Scenario and task flow 3

Mariclare Lopar's brother lost his home to a flood. She realizes that her area is at risk too and does not want to experience a similar loss without being prepared. She found the High Ground app while browsing the internet for information on emergency preparedness. Mariclare is looking for information and will create a checklist of important supplies to purchase next time she goes shopping.



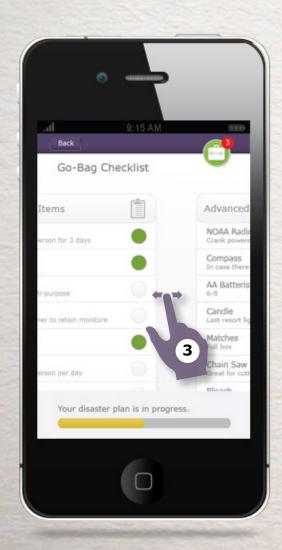
Create a go-bag shopping list

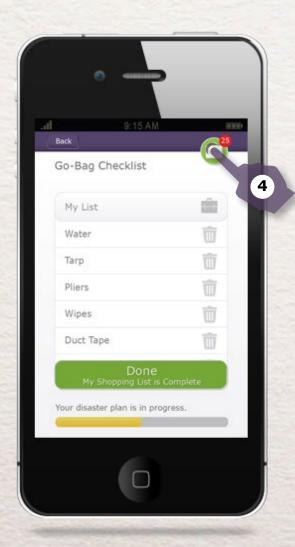




- User chooses from four different categories of items to add to go-bag shopping list.
- Choose from suggested items. The item is added to the shopping list when the user clicks on the circle. A vertical finger swipe scrolls through the list.

Create a go-bag shopping list, continued





- User can go back to go-bag home page to see additional categories or perform a horizontal swipe to switch categories.
- Click on the go-bag icon to see the shopping list. Items can be removed from the list on this page by clicking the trash can icons.

Designate Waypoints

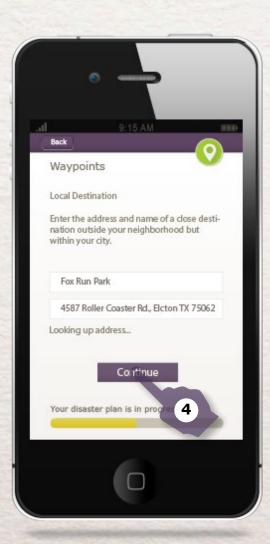




- User clicks the Waypoint icon on the home page of the app.
- An instruction page appears showing what kinds of information will be required to complete this portion of the planning process. The user clicks the "Continue" button after reading the short the instructions.

Designate Waypoints, continued

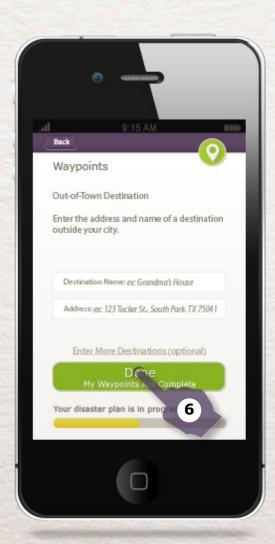




- User designates the gathering point by name. This gathering point is where the household will meet immediately outside the home in case they need to evacuate.
- A local meeting place is entered by name and address. Once address is entered the system verifies that the address exists. If the address does exist the "Continue" button appears.

Designate Waypoints, continued





If the address entered by the user can not be found, a list of alternatives is given.

The user can select from the suggestions by clicking on the link.

Once all three mandatory waypoints have been chosen the user has the option to enter more or return to the home page of the app. Additional addresses could include city shelters, locations for relief services, and any other location the user wants to have stored.

Evacuation Phase 1





- Slide toggle to unlock evacuation button. This screen only available after user has completed the disaster planning preparations.
- Press the central button to activate emergency disaster procedures.

Evacuation Phase 1, continued

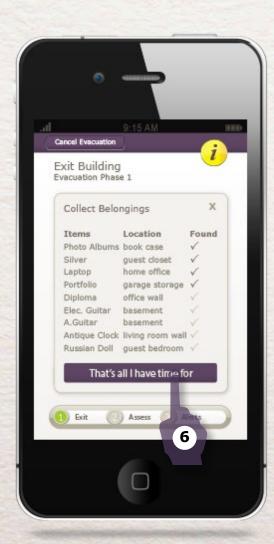




- User clicks on information button to get brief instructions about how to complete the step.
- Close instructions by pressing the "Return to Checklist" button or clicking the information button again.

Evacuation Phase 1, continued





- Check off steps as they are completed. Click on a menu item to reveal additional details if available.
- Close details by pressing the button or clicking the "X" again.

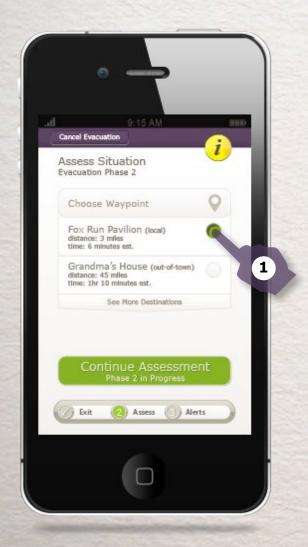
Evacuation Phase 1, continued





- When the steps are complete the user can evacuate the household and continue to the next phase by pressing the "Continue" button.
- The evacuation process can be cancelled at any time by clicking the "Cancel Evacuation" button. It will prompt a confirmation and return to the app home page.

Evacuation Phase 2



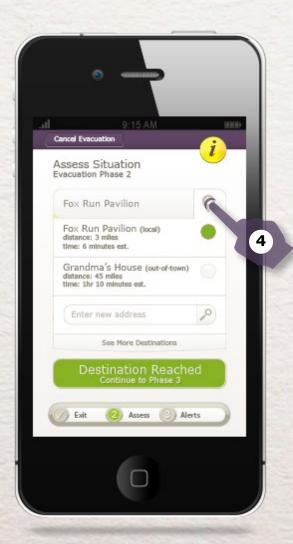


- Once the user and household are safe outside the building they choose a waypoint from the list of addresses they entered during the planning process. Depending on the emergency situation they can choose their close waypoint or their distant option.
- After choosing a waypoint the user has the opportunity to post about their situation on various social media sites.

The sites are selected by scrolling through a list of available options.

Evacuation Phase 2, continued





The final step of phase 2 is to travel to the chosen waypoint. A mapping system provides directions to the destination.

As new alerts are issued by designated news sources, they appear on-screen. The user can flick between feeds with a horizontal finger swipe.

The user has the ability to change waypoints while en route by pressing the marker icon and selecting or entering a new address.

Evacuation Phase 3





- When a household has reached phase 3 it is time to make short-term plans for the next few hours or days. In this phase the user can read new news alerts as they come in and post more messages on social media sites.
- The sites are selected by scrolling through a list of available options.

Mood Board

visuals

This mood board depicts the kind of visuals that will be used on High Ground. It will use cool colors with lower saturation values. It will also employ graphic illustrations as icons. The purpose is to off-set some of the heavy content discussed in the site and keep the user entertained while producing the personalized disaster plan.



Mood Board content

This mood board expresses the content elements that will be shown and discussed on High Ground.

While High Ground is about a serious topic, the overall purpose is to give the user hope and comfort. So, equally important to the disaster imagery are the planning and preparation images.



UI/UX Inspiration

The sources of inspiration for the user interface provide design references for leading mobile usability practices. Samples show good typography and color choices and innovative ways of displaying feeds, creating dynamic user lists, and communicating data.



Logo Concepts

















Final Logo Concept



Index of Sources

GENERAL INSPIRATION AND RESOURCES

The Complete Idiot's Guide to Disaster Preparedness, Dr. Maurice A. Ramirez, DO, and John Hedtke 2009
The Prepper's Pocket Guide - 101 Easy Things You Can Do to Ready Your Home for a Disaster, Bernie Carr, 2011

TARGET AUDIENCE

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COMPARATIVE ANALYSIS

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VISUAL MOOD BOARD

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CONTENT MOOD BOARD

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