

Boulder72 Final Report

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Summary

Despite widespread recognition that simple preparedness measures can save lives and help people weather major disasters, few people follow disaster preparedness steps put out by the CDC, the American Red Cross, and other organizations. At the same time, when disasters strike, responding agencies struggle to communicate effectively to affected individuals. Boulder recently underwent major flooding events and is currently looking at longer term strategies to increase the resilience of the city to future events. Our project prototypes a simple smartphone app that will seek to capitalize on the attention disasters are currently receiving by building a tool that 1: Lets users enter household information related to their preparedness, and receive updates on how to better prepare themselves and their families for emergencies; 2: Receive news and alerts from the Boulder Office of Emergency Management and other relevant sources during times of crisis; and 3: Send basic communications to friends and family expressing their situation or needs during emergencies, as well as staying informed with others about their current situation. We hypothesize that by capitalizing on people's current interest in disasters and desire to stay informed during emergencies, they will be willing to download the app. Once installed, the tool can be used to encourage them to follow basic precautions to prepare for the next disaster.

Major Changes

The overall concept of the project has remained the same while we have made changes based on user test results and feedback from the instructor and TAs.

1. **Map:** Right from the initial prototype testing, users wanted the evacuation map to be more intuitive. Many of them asked for clear written instructions for evacuation rather than a red zone on the map. Since the map is an important part of our app we decided to include more written information about evacuation in addition to marking a red zone in the map.
2. **Custom items:** After the initial prototype testing some users had voiced their desire of being able to add the items they think are important for their preparedness to the preparedness checklist. Thus one of the major changes we made to our app was to include custom items in the preparedness section.
3. **More social features:** People liked being able to compare their level of preparedness to their friends and see who was doing what in this regard. Over the course of the

semester we definitely expanded this part of the app, and there was interest from testing participants to add even more.

Next Steps

If we had more time we would undertake the following activities:

- **Inclusion of local emergency services contact information:** Initially we had only planned to include emergency information from various social networking sites. After the mid fidelity prototype based on the user tests we decided to include contact information of the local emergency services since the users thought that that might be helpful.
- **More information about your contacts:** Another suggestion from participants was to be able to know which of your emergency contacts were in evacuation areas. We have added this feature to both the alerts section, which already contains a map, as well as the emergency contacts feature, which shows an icon or highlight contacts whose home address is in a dangerous area.
- **Further User Testing:** There are a number of ideas we have in development, such as the inclusion of Zippy, the Boulder 72 mascot, into key parts of the app as well as gamification of preparedness activities, that would benefit from the opportunity to conduct further user testing around. We would also like to release an alpha version of the app into testing with a small number of real users for a period of 3-5 months and assess how well the app helps them prepare further for emergencies in Boulder.

Lessons Learned

1. Make things as obvious as possible. Users wanted straightforward text-based interaction. A common problem was users getting lost in interface options we thought were already intuitive.
2. Users wanted control over their experience and were interested in options to customize (eg custom item in the document checklist).
3. In disaster scenarios, it is helpful to include as much relevant information as possible. Users appreciated having access to information from variety of sources.

Contribution Summary

We all contributed to the video but Jennings did most of the editing. Robert, Sayani, and Kevin worked on the Final Report.