

THEME

The theme of our main design relates primarily to Neighbourhood Resilience and Volunteer Engagement. Our design also touches upon Emergency Preparedness and Knowing Hazards as well. Grassroots data collection and the interactive representation of that data are two major areas our design focuses on in relation to our primary themes.

TARGET AUDIENCE

The key users we are designing for are the city volunteers who would be responsible for creating and maintaining the database, as well as wweveryday citizens of all ages who would supply their information to the volunteers and interact with the public map display.

RATIONALE

We chose the themes of Neighbourhoods Resilience and Volunteer Engagement due to the current lack of detailed information on the earthquake preparedness of individual residents and their neighbourhoods. With this in mind, we aimed to design a system where detailed data on the preparedness and vulnerabilities of homes and neighbourhoods could be collected, viewed, discussed, and visualized in graphical form for citizens to understand, engage with, and work to improve upon.

DESIGN DESCRIPTION

Volunteers would be responsible for canvassing their neighbourhoods in order to speak with neighbours and collect data on their home's level of earthquake preparedness. When volunteers collect data, it is done in a way that simulates a disaster. They arrive impromptu at a neighbour's residence as if a disaster is occurring. The residents are asked several questions relating to what they should do and how prepare they are. After the drill, the volunteer interview the resident in order to obtain information about number of residents, whether any are elderly or disabled, whether or not there is a proper earthquake kit, etcetera. They would then input this data into an app that collects and organizes the census information while simultaneously updating the neighbourhood's console map display. Before moving to the next house, volunteers could recruit, share emergency information, and answer any questions their neighbours may have about earthquake safety and preparedness.

The interactive map on the deployed console would display a variety of the collected data on maps pertaining to the earthquake preparedness of different houses within the neighbourhood. Residents and members of the public who interact with the console could change the overlay of the display being presented in order to illustrate different levels of earthquake preparedness. A house with a high level of preparedness would be represented with a green overlay, whereas an unprepared house would be shown as red. Separate overlays could be cycled through to show more general information such as safe meeting places within the neighborhood, nearby emergency services, or any major hazards.

BENEFITS

The expected benefit of our design is that residents who interact with the console could get updated readings on the most current earthquake preparedness statuses of their neighbours as well safe zones and hazards in the area. Another benefit of our proposed design is that it will keep volunteers engaged and practiced in their roles while residents will be motivated to update their home preparedness in order to appear as green (prepared for earthquake) as possible on the map.

QUESTIONS

Would you trust a volunteer to collect data like this? And would a crowd-sourced map with data collected by volunteers be something permitted by the city?



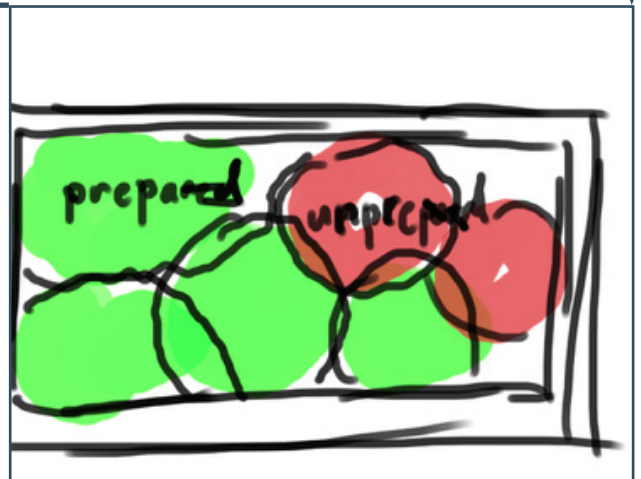
1 - Volunteers canvas their neighbourhoods, collecting data and running simulated emergency disasters with residents



2 - Volunteers input residents' emergency preparedness data into app, which then sends data to a neighbourhood console map display



4 - Through the neighbourhood map, residents can also view other information such as safe meeting zones and major hazards to avoid in case of emergency



3 - Interactive neighbourhood console map displays visually the collected data pertaining to residents' emergency preparedness. Levels of residents' emergency preparedness status are displayed in either green (prepared) or red (unprepared) on map.



5 - Mobile App is used by volunteers to collect data and guide through simulations with residents. App links to neighbourhood map and updates visuals.