

UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Measuring Resilience and Creating a Culture of Preparedness

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Community, Wellbeing

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Measuring Resilience and Creating a Culture of Preparedness

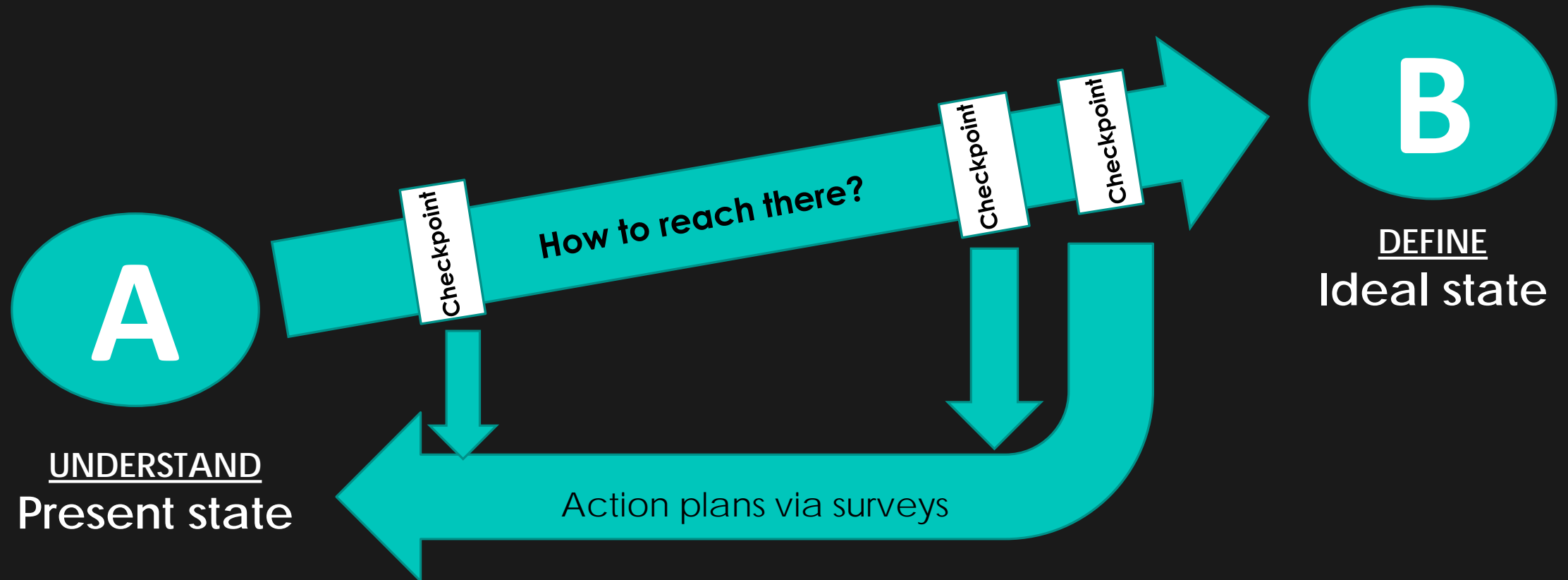
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Executive Summary

- The scope of the project is to create a culture of resilience as well as arrive at the performance matrix to measure it. This culture shall help UBC as well as City of Vancouver to reduce the impact from acute shocks and be more resilient
- The methodology involves identifying current state of resilience via survey (online as well as offline, in different language). The survey shall be conducted by people amongst the community of people, who are well knit via social circles, such as, clubs
- Depending on the results of the survey, next steps are decided and another survey is conducted to measure implementation of the same. Thus, it is an iterative process, with small progress at each step, ultimately reaching the ideal state of urban resilience
- The recommendations are centred around two broad themes – organization to community and community to community. The latter forms a part of social cohesion and for better implementation, both of the themes need to be implemented together
- Parallels can be drawn between City of Vancouver as well as UBC, however, the scope has been presently focussed on using UBC as a pilot, and eventually rolling to the city

Urban resilience – a journey from present to future



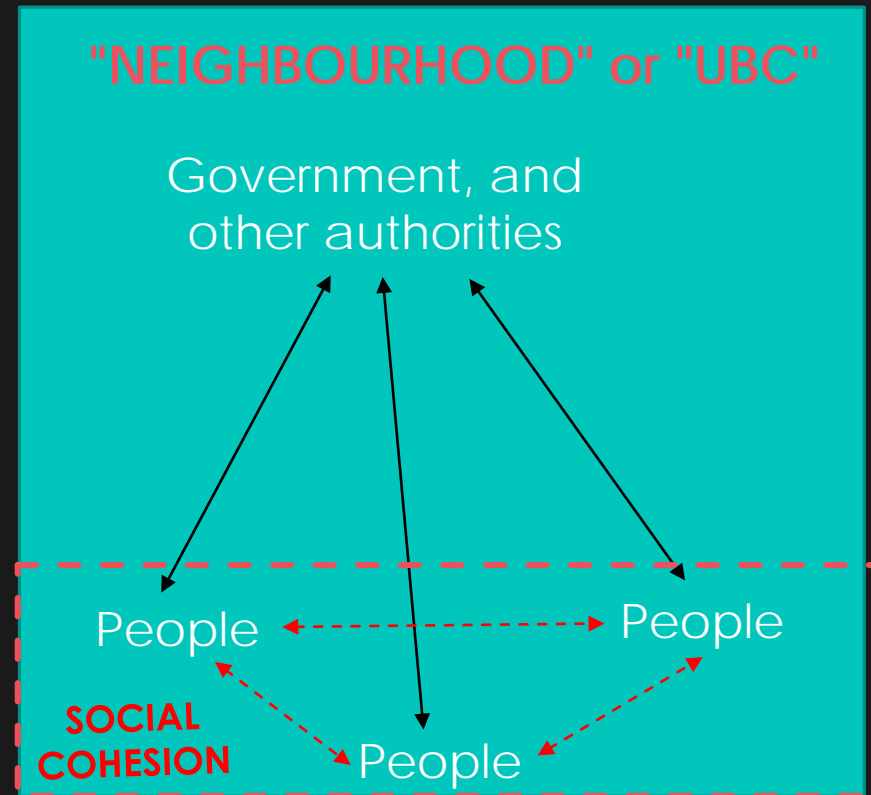
Urban resilience and long term social cohesion



- Earthquake
- Tsunami
- Flood
- ...



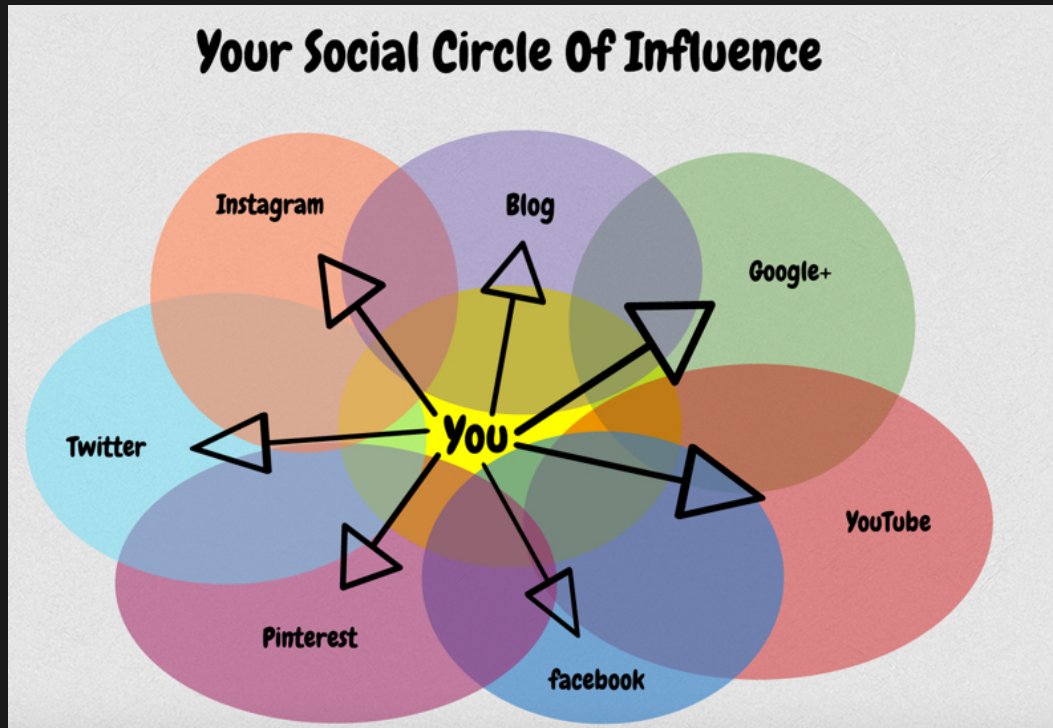
LONG TERM SOCIAL COHESION



Technologies are overemphasized in disaster planning



SOCIAL COHESION – incorporating local knowledge and social capital



Questions and Approach

○ Research questions:

- Part 1: How to measure neighborhood preparedness in the City of Vancouver, in response to emergency planning?
 - Using UBC as a pilot "neighborhood," we develop a survey that include indicators that are 1) easy deployable in different neighborhood, 2) accessible to neighborhood residents, and 3) culturally sensitive
 - We also propose a roadmap that details the recommendable process to measure resilience
- Part 2: How to create a culture of preparedness at UBC? Given the following challenges:
 - Geographic isolation
 - Diverse population
 - Challenge of jurisdiction
 - Lack of social cohesion

Project Context

○ City Context

- This work builds on the success of the Disaster Support Hub program initiated by the Office of Emergency Management in 2016.
- Our clients are Katie McPherson – Chief Resilience Officer City of Vancouver and Katia Tynan, Neighbourhood Resilience Coordinator.
- The Healthy City Strategy framework gathered data that is useful to measure resilience in a neighborhood, our work expands on this previous effort.

○ Pilot Neighbourhood Context (UBC)

- UBC can work as a pilot model for measuring resilience and also to create a culture of preparedness.
- Based on this analogy:
 - Neighbourhood = UBC
 - Block = Schools/Faculties
 - Neighbors = Students
- Our client is Danny Smutylo, Emergency Planning Manager at UBC.

Methods: Stakeholder Interviews+ Neighborhood Observation+ International Case Studies

- SCARP – Penny Gurstein
- IPREM – Miranda Myles
- UBC Emergency Manager – Danny Smutylo
- UBC Students and staff
- Metro Vancouver Population
- UBC iHouse
- Vancouver City
- First Nations' Emergency Services Society of British Columbia
- Katia Tynan- Neighborhood Resilience Planner City of Vancouver
- Peter Marriot- Social Policy specialist
- Ann Pace- Dunbar Earthquake and Emergency Preparedness
- Helen Ma- Downtown east side policy planner at City of Vancouver
- Katie McPherson – Chief Resilience Officer City of Vancouver



Survey Overview- Understand where we are now

- Questions for Emergency Planning Office

- How many days can you provide shelters, food, water and sanitary supplies for your population?

- Questions for community members

- Demographic

- Do you need mobility aid assistance?

- Sense of trust and safety

- How many people do you feel confident to turn to help in case of emergency?

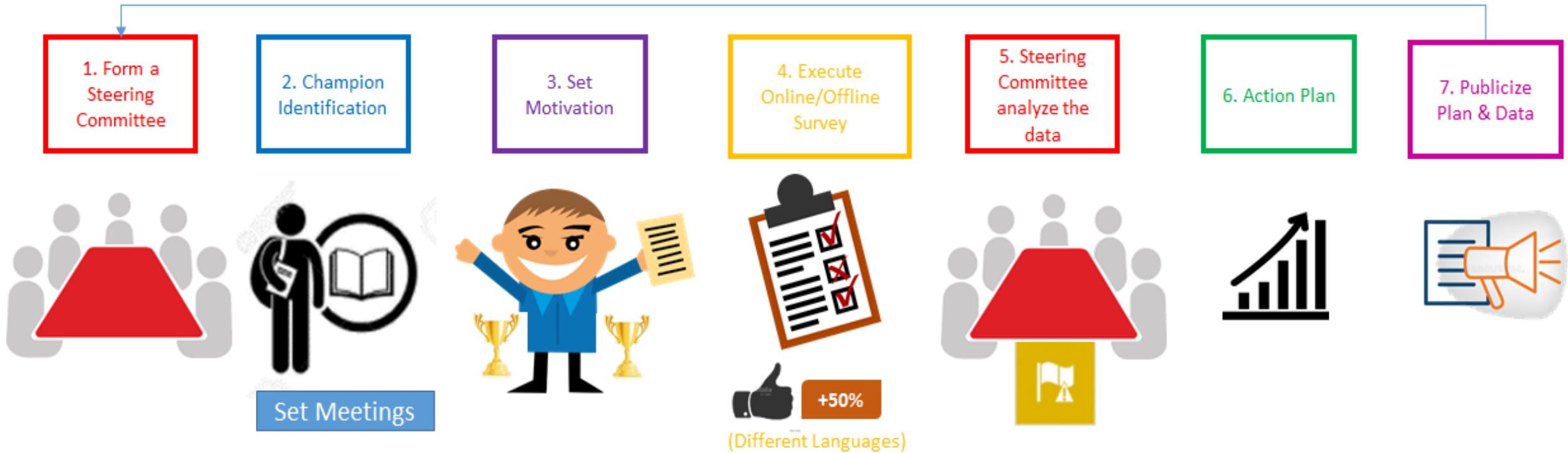
- Sense of community belongingness

- How many times do you volunteer in your community per year?

- Sense of preparedness

- How far do you live from the nearest reception center/Hub (where you go to in case of an emergency)?

Regular frequency



How to execute?

Part 1: Measuring Resilience



Part 2: Creating a Culture of Preparedness at UBC

Creating a Culture of Caring at UBC at UBC

- Two-fold:
 - Organization to the community
 - Community to community
- The University cares for you:
 - Office of emergency planning and related departments: be operational ready in case of emergencies
 - UBC Tennis Centre
 - Sea Can
 - Mobile Food Concept
 - St. John Ambulance Brigade
 - Humanizing emergency planning
 - Physical infrastructure resiliency
 - Lessons from International case studies
 - Plan for school after emergency: Temporary establishments
 - Berkeley website
 - Adopt an alert system, required when onboarding
 - Integrate disaster preparedness into orientation
 - International house



Creating a Culture of Preparedness at UBC

- Community - Community
 - Peer to Peer training
 - Work more with students leaders on campus
 - Disseminate critical emergency prep information
 - Bottom line: emergency kit
 - Drills:
 - Start small: clubs, residence halls
 - At all levels

Future Opportunities

- Start with stable population: staff, faculty and business
- funding for portable water
- How can you be operational ready when your first respondents live far away from campus?
 - Affordable housing problem
 - Subsidize housing- the City of Seattle
- More coordination
- Hire a chief resilience officer at UBC
- Engage researchers and work with students more

Thank You!

March 16, 2018

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QUESTIONS?

Appendix

Survey- Office of Emergency Planning

Questions for office of emergency planning (these questions need to be translated into scales):

- How many days can you provide shelters, food, water and sanitary supplies for your population?
- Do you have an alert system in place so that residents can receive text messages in case of an emergency?
- How many times per year do your residents perform drills?
- How many staffs do you train each year?
- How many community members do you train each year (either directly provide training to community members, or work with community leaders to provide peer-to-peer training)?
- On a scale of 1-4, please rate the coordination efforts your office has with various responsible departments in case of emergency planning
- What is the response time for an emergency (fire and police, etc?) during the day?
- What is the response time for an emergency at night?
- Do you know where is the vulnerable population (illness/handicaps/pregnant)

Survey- Demographic

Questions for Community Members

Demographic

- Demographic

- What is your gender
- What old are you?
- What is your knowledge of official language?

English only

French only

English and French

Neither English nor French

- Have you experienced an acute shock before (such as an earthquake)?
 - Yes
 - No

- What is your aboriginal identity?
 - First Nations (North America Indian)
 - Métis
 - Inuk (Inuit)
 - Multiple
 - Aboriginal identity not included
 - Non-aboriginal identity
- Visible minority population
 - South Asian
 - Chinese
 - Black
 - Filipino
 - Latin American
 - Arab
 - Southeast Asian
 - West Asian
 - Japanese
 - Visible minority, n.i.e
 - Multiple visible minorities
 - Not a visible minority

Survey- Sense of Community Belongingness

Sense of Community Belongingness

- How many people do you know in your neighbourhood?
Score 1: None
Score 2: 1-4
Score 3: 5 - 10
Score 4: more than 10
- How many groups do you belong to in a community?
Score 1: None
Score 2: 1-4
Score 3: 5 - 10
Score 4: more than 10
- Are you aware of where vulnerable population are located?
Score 1: No
Score 4: Yes
- How many times do you volunteer in your community per year?
Score 1: 0-2
Score 2: 2-5
Score 3: 5-10
Score 4: more than 10
- Do you know at least 1 community center in your community ?
Score 1: No
Score 4: Yes
- How often do you participate in community events per year?
Score 1: None
Score 2: 1-4
Score 3: 5 - 10 e
Score 4: more than 10

Survey- Sense of Trust and Safety

Sense of trust and safety

- How comfortable do you feel to leave your keys to your neighbors to water your plants when you are away from home?

Score 1: Least confident

Score 2:

Score 3:

Score 4 : Extremely confident

- How many people do you feel confident to turn to help in case of emergency?

Score 1: None

Score 2: 1-4

Score 3: 5 - 10

Score 4: more than 10

Survey- Sense of Preparedness

Preparedness

- How informed are you regarding what to do in case of an emergency?

Score 1: Not informed

Score 2: slightly informed

Score 3: Mostly informed

Score 4: very well informed

- Do you receive an alert text message/email in case of emergency?

Score 1: No

Score 4: Yes

- How far do you live from the nearest reception center/Hub (where you go to in case of an emergency)?

Score 4: I can get there in under 10 mins

Score 3: I can get there in an emergency between 10-30 mins

Score 2: I can get there over an hour

Score 1: I can not get there

- Do you have an emergency kit (include medicines, food/bottle water for 72 hours, flashlight, batteries, first-aid, etc) in case an emergency?

Score 1: No

Score 2: Yes, but I only have minimal things needed in a kit

Score 3: Yes, I have most things needed in a kit but I need to upgrade it

Score 4: Yes, I have everything I need

- Would you be able to help in case of emergency

Score 1: No

Score 4: I am willing to help my friends and neighborhoods as best as I can.

Score 4: I can see what I can help with (languages, become runners for information, childcaring, etc).

Score 4: I am professionally trained and are willing to help others.

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