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Esperanza: A Foundation for Emergency Management, Transformation, and Hope

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Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral study by

Siamak Pouraryan

has been found to be complete and satisfactory in all respects, and that any and all revisions required by the review committee have been made.

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> > Walden University 2021

Abstract

Esperanza: A Foundation for Emergency Management, Transformation, and Hope

by

Siamak Michael Pouraryan

Professional Administrative Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Public Administration

Walden University

October 2021

Abstract

The research problem addressed in this study is the perceived gap that exists in community support in emergency planning and management. The community of Laguna Niguel, the focus of the study, is at the forefront of planning for and dealing with calamities including Earthquakes. There are 66,000 residents of Laguna Niguel and an estimated 15,000 Households served by one Emergency Services Coordinator. The purpose of the study was to create a recommended roadmap for community outreach, preparation and provide a basic set of tools for short-term survival during the critical week after a disaster. The conceptual framework focused on the qualitative approach to assess existing needs in line with existing practices while focused on a narrative assessment of the realities on the ground to analyze a sense of awareness, action, accountability, and results. Key research questions formulated were community outreach, understanding existing intergovernmental resources, staffing requirements and on-going training strategies. The survey was presented to the principal city official and followed up with interviews to assess the results and areas of support that can be provided to augment and enhance existing capabilities. The key recommendations envisioned include the launch of a web-based portal as a central repository for information & analysis. In addition, a preparedness kit encompassing a solar powered generator, a tablet powered by a Wi-Fi hotspot that would be deployed to households to allow the community to be informed throughout the emergency The implications for positive Social Change from the study is to build a culture of preparedness and togetherness that would overcome any calamity so that the community has the knowledge and tools to anticipate and overcome.

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Dedication

I hereby dedicate this to my family to simply say thank you for their selfless support and encouragement during this very challenging journey. I also dedicate this to all the first responders who are at the forefront of keeping all of us safe.

Acknowledgments

As I conclude this journey, I want to hereby pay homage to all who have been supportive throughout my journey here at Walden. I note that this is just a partial list because it truly takes a village to make such a journey even possible:

- my Student Success Advisor, Yoshi Yoshimine,
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Table of Contents	
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List of Figuresiii
Section 1: Introduction to the Problem
Background and Introduction 1
The Theoretical Foundation
Section 2: Conceptual Approach and Background
Problem Statement
Section 3: Data Collection Process and Analysis
Nature of the Study7
Proposed Interview Questions
Conceptual Framework
Significance
Sources of Information
Analytical Strategies and Concepts 10
Relevance to Public Organizations
Section 4: Evaluation and Recommendations
On the Challenge: A Summary
A Gap in Service and What Is Envisioned14
The Practice-Focused Question: Assessing the Current State of Affairs
Reporting and Analyzing the Data Collection17
Section 5: Dissemination Plan

References	. 21
Appendix A: Engagements With the City of Laguna Niguel	. 30
Appendix B: On Potential Partnerships and Opportunities for Collaboration	. 37
Appendix C: Example of Nationwide Strategy That Would Be Incorporated Into Community Outreach	. 39
Appendix D: The Future of Emergency Management	. 42
Appendix E: The Proposed Manifesto	. 51

List of Figures

Figure 1. California Fires, September 2020	
Figure 2. Component of Envisioned Disaster Kit	6
Figure 3. Area Map	7
Figure 4. Meals Ready to Eat Kit	19
Figure 5. Emergency Kit	19
Figure 6. Solar-Powered Generator	

Section 1: Introduction to the Problem

Background and Introduction

Emergencies have been a reality in California. One indication of the new reality is what recently transpired in California during the first week of September 2020 as fires raged throughout the state (California Department of Forestry and Fire Protection [CalFire], 2020), as depicted in Figure 1.

Figure 1

California Fires, September 2020



Note. From Title of Webpage, by California Department of Forestry and Fire Protection, 2020 (<u>https://url</u>). Copyright xxxx by Name.

The need to be prepared and to prepare residents for emergencies has led cities throughout South County to launch Community Emergency Response Teams (CERTs), Community Service Outreach Efforts (e.g., PACT Team in Laguna Niguel), and Citizens' Academies over the past 10 years. The mission of such initiatives has been to elevate and to engage the community in the event that an emergency occurs, as well as to educate the community (ReadyOC, 2020).

Discussions ensued with officials at the City of Laguna Niguel to assess the existing CERT structure, training, and outreach efforts to see where existing structures could be supported with additional community efforts. After a period of observation and assessment, a survey was developed to assess the existing view by the city as it provided necessary input on existing services and where the need existed for a more robust supplemental service at the core of the roadmap developed here.

Esperanza is an initiative that has been envisioned to ensure that communities are ready to deal with any calamity. It is intended for rollout in the community of Laguna Niguel and other communities and would involve establishing partnerships with other nonprofits throughout the United States. It must be noted that some regional organizations exist, including St. Bernard Project (SBP) in the southern United States, which grew out of Hurricane Katrina in 2005 (SBP, 2020). With the advent of COVID19, there have also been efforts such as the Sean Penn-led Community Organized Relief Effort (CORE), which that has been focused on COVID-19 testing in the greater Los Angeles Area (CORE, 2020).

The Theoretical Foundation

Simon (1946), in "The Proverbs of Administration," laid out what he noted as some commonly accepted administrative principles. One of the most important factors is administrative efficiency, which is increased by specialization of tasks. Simon identified that the problem is not just to specialize, but to "specialize in the particular manner and along those particular lines which will lead to administrative efficiency. The introduction of change in the public sector is very controversial and complex because it affects, directly or indirectly, the interests and lifestyles of members of the society. Public and private organizations cannot economize on change if they want to survive in an increasingly globalized, highly interdependent, and rapid evolution. The whole concept grew out of what Frederickson (1971) noted in making sure that services were less institution oriented and more client-impact oriented.

Simmons (1981) laid out a process to achieve humane organizations through an "intentional change sequence." He defined the steps as including (a) awareness, (b) problem solving, (c) decision networks, (d) action, (e) results, and (f) accountability. He underscored awareness in making informed judgements about the nature of the change, and he underscored the need for knowledge and information at the heart of transformation, which led to the formulation of this initiative. Bergstrom (2020) noted a challenge that must also be overcome: The ways in which information is acquired and shared are changing rapidly, especially with the rise of social media. The proliferation of misinformation has also been a profound challenge, which Esperanza is envisioned to bridge through the proposed education and empowerment.

Section 2: Conceptual Approach and Background

Problem Statement

California communities have a profound and unique challenge in emergency management. This was brought to bear with the COVID-19 pandemic, which stretched the resources of the state and localities to the limit. California has a very robust emergency management system that consists of the Office of Emergency Services, the California State Guard, and local jurisdictions and that is backed up by the resources of the federal government upon a formal declaration by the governor and request to the president. Despite these resources, the challenges of emergency management are profound due to the challenges that California continues to endure on a consistent basis. The recent challenge with the COVID-19 virus has also exposed the need to be prepared and aware on a consistent basis (ReadyOC, 2020).

Among the multitude of challenges faced by California is the challenge of earthquakes. In California, earthquakes occur every 3 minutes, with 1.8 million quakes occurring over the course of a decade. This problem is even more profound in communities throughout South Orange County. Although there are organizations that provide emergency management support, there is no real effort at mitigation that addresses education, empowerment, and recovery, which are vital for a community to get back on its feet after a disaster. As Lauren Markham noted in a recent Guardian of London article, "Disaster is an equalizer, but survival prep is only for the rich." According to the Public Policy Institute of California, only 52% of California residents own a disaster kit. Esperanza aims to change that with a plan of action (Markham, 2019) at no cost. One of the major challenges in California has been a prolonged drought.

Fortunately, the drought eased somewhat with a prolonged winter storm. The erratic nature of the climate, though, has seen destructive fires and the constant challenge of earthquakes. California has staggering statistics in terms of calamities, as reported by CalFire (CalFire, 2020):

- estimated acreage burnt = 259,823
- number of wildfires = 7,860
- fatalities = 3
- structures destroyed = 732

In the South Orange County area, the problem of fires is especially critical. Among the key areas of South Orange County cities are open spaces, which have presented a major problem. An example of such a space is Aliso Wood Canyon Park, which surrounds the communities of Laguna Niguel, Aliso Viejo, and Laguna Beach. A fire has not occurred in over 100 years in the canyon.

The need for a minimum 2-week sufficiency is part of the broader proactive stance that the proposed foundation is envisioned to address. The City of Laguna Niguel currently is a city with 67,000 people and over 4 miles of roads that is being served by a police services staff with about 24 police officers and 3 fire stations spread across three areas of the city. It will not be possible to get all residents—hence the proactive effort that is hereby envisioned. There have been challenges with volunteer staffing, which have been exacerbated by the pandemic. A component of the envisioned kit is shown in Figure

Figure 2

Component of Envisioned Disaster Kit



In addition to fire, the problem of earthquakes has been identified. A major fault—the Newport Fault—has not had an earthquake in over 100 years. The map in Figure 3 indicates the implications and the resulting destructive effect of a potential tsunami in the event of an earthquake, especially given that the area has a decommissioned nuclear power plant (U.S. Geological Survey [USGS], 2020).

Figure 3

Area Map



Note. From Title of Webpage, by Name, year (<u>https://URL</u>).

This proposal grew out of ongoing consultations with the City of Laguna Niguel and out of my years spent serving as a member of the CERT Team assessing the challenges of the gap that existed in the level of service. To provide further insight about how extensive the discussions were and the support extended by the city, a sampling of the correspondence and engagement is attached as Appendix A. The material in Appendix A underscores the commitment by the city to be supportive of this initiative.

Section 3: Data Collection Process and Analysis

Nature of the Study

The study entailed a period of observation, assessment, and collaboration with the City of Laguna Niguel, which resulted in the survey. There have also been assessments done of other cities. Each municipality has one coordinator who is supported by a network of volunteer-driven organizations that include CERT Teams, police volunteer teams, and radio teams; however, the extent of the teams and the availability of the resources during a calamity continue to be challenging at times.

An assessment of existing outreach and training endeavors will also be undertaken over the past 5 years and assess community participation—all data that are available. For instance, for the most recent Point of Distribution Exercise done by the County of Orange, some 500 people visited the exercise. Existing community engagements will be assessed through available data on social media (including Nextdoor, Facebook, and Twitter) to determine how effective they are (including number of likes, shares, and retweets) to assess engagement and outreach.

Proposed Interview Questions

To assess whether the roadmap is feasible, the following key focus points were in focus as the interview questions/surveys were designed and outlined in meetings held with the Emergency Services Coordinator for the City of Laguna.

With the advent of COVID-19, providing virtual outreach, training and engagement efforts was determined to be the most feasible way to ensure timely and effective efforts to ensure that the community was ready. There was a concerted effort to make things simple and thereafter work to translate it into an actionable plan and assess whether it is in fact feasible or not, which served as a supplement to the initial survey as outlined in Appendix B.

Conceptual Framework

The conceptual framework focused on a qualitative approach along with a narrative assessment of the realities on the ground, which was outlined in the background earlier and further amplified in the problem statement.

In ongoing discussions, assessment, and observations, the roadmap was determined to be the most realistic and practical approach, due to the need to gain a complete understanding of the realities on the ground and understand lessons in order to be able to, in turn, provide a roadmap based on the research questions and the resulting survey.

Significance

As noted earlier in the problem statement, California presents a unique challenge in emergency management. The challenges of emergency management are profound. This problem is even more profound in communities throughout South Orange County. Although there are organizations that provide emergency management support, there is no real effort at mitigation that addresses education, empowerment and recovery, which are vital for the community to get back on its feet after a disaster.

As earlier noted, one of the major challenges in California has been a prolonged drought. Although the drought eased somewhat with a prolonged winter storm, the upcoming spring and summer season will present challenges. Although COVID-19 has pre-empted some of the long-term plans, such challenges remain, and the need to be ready to deal with reality and ready to recover is paramount, given the erratic nature of the climate, which has seen destructive fires and the constant challenge of earthquakes.

Sources of Information

The availability of information presented profound challenges, especially involving the pandemic. The ongoing development of the Internet has presented profound opportunities to assess key data points and assess data sources. Data sources included available Federal Emergency Management Agency (FEMA) data on current CERT Teams, their activities, and their effectiveness, which are available by visiting opensource data sites including USAFacts.org (USAFACTS, 2019). USAFacts provides reasonable insight into necessary data that can be incorporated into the local focus that this study was envisioned to assess.

Beyond the national focus, local sources will also be used. A sampling of the correspondence and outreach has been noted as Attachment A as the survey continues to be developed. Furthermore, the plan is envisioned to begin with data available from open data sources and publicly available sources published by public agencies so as assess the viability of the roadmap (Orange County, 2019). The envisioned survey roadmap laid out earlier will serve as an additional data source and data point to be able to lay out the envisioned roadmap for education and mitigation as outlined above.

Analytical Strategies and Concepts

The project hereby begins with the launch and engagement of key stakeholders with the following survey in addition to research questions as noted during interviews as per the survey available in Appendix A along with the actual results noted in Appendix B, that will help drive the further planning design and engagement process.

Data acquisition will be based on assessing key historical data points to establish a base point for further analysis through the submission of the survey to the target cities. After the foundation of the study is launched as noted, the local outlook is also hereby noted with the initial survey questions and the follow-up straw polls as needed. This step is necessary to lay out the education and mitigation initiative to overcome the problem statement that has been established.

The timeline is envisioned as outlined below:

- creation and launch of the nonprofit foundation
- securing of nonprofit status

The creation and securing of the non-profit foundation will be at least a 6-month process, although it will all depend on the Internal Revenue Service (IRS). Discussions have also been held with Google to create a partnership for non-profits. At the same time that the creation of the foundation is being worked on, there needs to be a budget laid out that envisions bringing on an executive director and working on the following plan:

- creation of and launch of a MESH network
- creation and launch of the education initiative o outreach to potential customers o creation of the "Esperanza Kits," including
 - \Box emergency kits
 - □ information and engagement effort launch
 - an Amazon Kindle bundled with an educational platform with information customized to each key jurisdiction.

It is hereby envisioned that the foundation will be fully operational within the first 12 months, fully funded through securing envisioned grant funding.

The need to expand and empower the population to be ready to deal with any emergency is critical. When a major disaster occurs, the average individual is expected to be self-sufficient for at least 7 days. This study and the enabling and launch of the organization provide an opportunity to be a supplement to government outreach and ensure that all communities are ready to truly be able to deal with any disaster challenge, especially considering the occurrence of continued disasters in the climate in South Orange County, California. All lives matter and must be saved. This plan is a step toward elevating knowledge, empowering the community, and working to make sure to be supportive of the community's plan to be back to normal at the earliest possible time. It is also envisioned that this model will be rolled out nationwide to ensure education, empowerment, and preparation.

Relevance to Public Organizations

Prior to COVID-19, states had to contend with profound budget challenges. COVID-19 has brought forth a reality for public budgets that cannot be ignored. Although the United States represents the best in emergency management, gaps in service and planning persists, which Esperanza is envisioned to address. Esperanza is envisioned to help communities face the onslaught and rise above it by overcoming fear and anxiety. When California, for instance, is faced with an earthquake every 3 minutes, it is not a matter of if but when the next big one will occur. Esperanza is hereby envisioned to help local governments empower communities to be ready. It is about being a partner and enabler for public entities that will not be there to be supportive despite the

As underscored in Appendix D, there is the possibilities. Although Esperanza will be focused on short-term, immediate support as outlined above, there are long-term and technological possibilities notwithstanding the current challenges with COVID-19—to embrace the 3E's of education, outreach, and empowerment of local governments so that all are ready in the event that disaster hits. The Diamandis Memo reflects upon It (Diamandis, 2020).

As we gear up to launch our Virtual Community Portal, we note how the "Wisdom Manifesto" launched by Angela Blanchard will drive our effort to bridge the gap and support our ongoing work of service and will be adopted by the Esperanza to make a difference. As a former chairman of the Joint Chiefs of Staff noted, "This is no time for spectators" (Dempsey, 2020).

Section 4: Evaluation and Recommendations

On the Challenge: A Summary

California communities have a profound and unique challenge in emergency management. This was brought to bear with the COVID-19 pandemic, which stretched the resources of the state and localities to the limit. As California and the world have dealt with the pandemic, the challenges of wildfires and drought have persisted. As of May 25, 2021, over 500 wildfires had already occurred throughout the state (The Daily Outsider, 2021). Despite the resources, the challenges of emergency management are profound, due to the challenges that California continues to endure on a consistent basis, which require a proactive community (Esperanza, 2021).

Orange County is one of 58 counties throughout California. Orange County constitutes 34 cities, one of which is the City of Laguna Niguel (County of Orange, 2021). Esperanza has been envisioned to be supportive of the 15,000-strong household community of Laguna Niguel, which is spread over 18 Master Associations and sub associations. As noted earlier, the city is served by a staff of 24 sworn sheriff deputies and an emergency management services coordinator, which will present challenges in the event that a calamity occurs. Esperanza is envisioned to help mitigate the said South Orange County is the focus of this study is the community of Laguna Niguel.

A Gap in Service and What Is Envisioned

California has a very robust emergency management system that consists of the Office of Emergency Services, the California State Guard, and local jurisdictions, which are backed up by the resources of the federal government upon a formal declaration by the governor and request to the president (Esperanza, year). Despite the robust structure in place, there is a need to be of immediate help in the aftermath of a major calamity. Esperanza has been brought about after having assessed the state of emergency management and preparation over a 10-year period. It is envisioned to be a supplement to all existing efforts by local entities.

To assess the state of affairs, consultations were held with the City of Laguna Niguel to assess the current situation and to seek out guidance on the roadmap ahead. To assess the current state of preparedness, discussions were held and thereafter formalized with the city to assess the situation, as the city was supportive of and consented to the discussions. The said process also entailed working on creating a survey to provide an initial assessment the situation and to gain further insights with the results of the survey, as noted, that provided the baseline for the subsequent meeting and conversations. As part of the ongoing consultation process, the city was presented with an initial survey. The survey was done to assess the current state so that a true of the possible to educate and prepare the community to be ready to return to a sense of normalcy at the earliest possible time by providing a sense of necessary tools, educational efforts, and ideas on a consistent basis so that the community would be ready and able to return to a sense of normalcy at the earliest possible time. The response by the city is reflected in Appendix A.

What was comforting to note in the raw survey data was how the city noted how there was an underlying commitment to work with partner agencies and organizations (Question 22), as well as the ability of city staff to be self-driven in their responsibility absent any leadership (Question 33), along with planning and coordination with other local agencies (survey question 18). This underscores a solid basis to sustain these efforts so that the community can be further strengthened.

The next area of focus was answers to survey questions 26 through 32. The city agreed with the staffing questions regarding how all within the organization were willing to change and were amenable and open to change. Furthermore, there was an underlying confidence in the leadership in understanding a sense of purpose, including the teamwork aspect as noted by the city in survey questions 23 and 24. Further, there was an interesting note about training, as noted in survey questions 13, 20, and 21. What is critical to note are the areas where the city indicated that the areas identified were listed as average, starting with survey questions 2 and 3 in the event of a major emergency, as emergencies are a reality in California. One key objective in focus for Esperanza has been being supportive of the proactive planning process. Communication and community engagement are key in underscoring a sense of proactive planning, which must be a priority to ensure that communication is maintained. In addition, the response to the 4th Question on overall preparedness was noted as average, where Esperanza is envisioned to be supportive. Several key questions on resources were rated as average, where

Esperanza can be supportive to enhance and further strengthen outreach and engagement both on an ongoing basis and upon the advent of an emergency.

The Practice-Focused Question: Assessing the Current State of Affairs

After the execution of the survey (as reflected in the Attachment A in the study), meetings were scheduled to assess the situation, and the following key focus questions were further explored to assess the current situation with the city's emergency service coordinator, who consented to the interview. The interview was done over a 2-hour period (including several email exchanges), whereby a set of follow-up questions was addressed to make sure that the key focus areas were addressed, and affirmations were hereby affirmed. The questions were posted during the interview session and have been noted in Appendix A.

One of the key areas that can overcome some of the initial survey results was determined to be partnerships with Neighborhood Watch Communities, which can be enhanced through the efforts of community officers. As part of this effort, discussions were held regarding social media—the city and police services maintain a social media presence that is typically leveraged to educate. In addition, the city has developed iOSbased and Android-based apps that can be leveraged further, which can be enhanced through the eventual development of the Esperanza app.

As part of the interview discussions, current county, state, and federal resources were assessed to get an understanding of their availability in the aftermath of a disaster declaration. There were discussions as part of this 2-hour process to assess how to leverage resources, which addressed FEMA, the California State Office of Emergency Services (CalOES), and what the County of Orange has available. One area in which Esperanza can potentially be supportive is streamlining some of the training resources available for city personnel as part of the ongoing community effort. Among the key things in focus during the discussions were limitations and how to overcome them, as well as how to enhance and strengthen community outreach and engagements. What was critical was the survey result in terms of resources and preparedness, which was also underscored in discussions that affirmed what Esperanza has been envisioned to address to help alleviate the challenges being faced. There was also the need to make sure that a central repository of information was important to avoid the overwhelming amount of information that is generated on a consistent basis.

Reporting and Analyzing the Data Collection

The survey and notations were assessed to further validate the insights and develop a sense of what the community entailed and what the expectations were. During the discussions, I gained a sense of the magnitude of the outreach and the engaging effort necessary to launch this initiative.

One of the first key initiatives that resulted from the discussions was community outreach. A test portal has been established at <u>https://esparanza.thedailyoutsider.com/</u> that is being tested to serve as a portal of information and community outreach efforts, which will thereafter be built out as part of the information and engagement effort. It is also envisioned that the community outreach effort will entail an active and engaging social media presence. Further, it is envisioned that an Esperanza Empowerment Kit will be launched. It will begin with an Amazon Kindle Fire Tablet that will be provided to community associations with key information at users' fingertips. It is envisioned that the tablet will have access to a MESH network to ensure connectivity and have up-to-date information during the immediate period after the emergency.

As part of this community empowerment effort, it is also hereby envisioned that an Esperanza Kit will be developed. The components, based on the assessment of what will be required for short-term sustainability, include a meals ready to eat kit to sustain a household for 2 weeks (see Figure 4 for an example), an emergency kit that includes water and batteries (see Figure 5 for an example), and a solar-powered generator with solar panels as a backup generator (see Figure 6 for an example).

Figure 4

Meals Ready to Eat Kit



Note. From First Aid Kit, by Grainger, 2021

(https://www.grainger.com/product/GENUINE-FIRST-AID-First-Aid-Kit-34WK75).

Copyright 1994–2021 by W. W. Grainger.

Figure 5

Emergency Kit



Note. From Personal Emergency Kit, by Grainger, 2021

(https://www.grainger.com/product/READY-AMERICA-Personal-Emergency-Kit-

44ZK94). Copyright 1994–2021 by W. W. Grainger.

Figure 6

Solar-Powered Generator



Note. From Jackery SolarSaga 60W Portable Solar Panel for Explorer 160/180/500 Power Station With USB Outputs, by Campeqp, n.d.

(https://vips.campoutdsale.com/index.php?main_page=product_info&cPath=&products_i d=7).

Section 5: Dissemination Plan

This comprehensive strategy will be developed through the creation of a nonprofit foundation that will leverage partnerships with Google to launch the foundation. It will involve securing 501©3 status and thereafter going after grants. It is also envisioned that

there may be some community contributions involved to help underwrite and ensure a timely engagement effort on a consistent basis so that the community is empowered and ready to respond. Esperanza is envisioned to do its part to serve as it embraces wisdom from disasters as well as promotes thinking about the potential for technological advancement based on the information reflected in Appendix D as the principles embraced in Appendix E are adopted for the future.

References

Afshar, V. [@ValaAfshar]. (2020, June 20). 22 inventions that are saving the earth

[Tweet]. Twitter. https://twitter.com/ValaAfshar/status/1096556250240876544

Andrews, E. L. (2020, April 2). The 1930s depression was "great." This one might be greater. Stanford Graduate School of Business.

https://www.gsb.stanford.edu/insights/1930s-depression-was-great-one-mightbegreater

Associated Press. (2019, April 19). California has earthquakes every three minutes, scientists say. The Guardian.

https://www.theguardian.com/usnews/2019/apr/18/tiny-earthquakes-californiascience

Association of California Cities, Orange County. (2020, June 5). Building your city's

virtual EOC & city hall services.

http://events.r20.constantcontact.com/register/event?oeidk=a07eh2ln41m287424e

7&llr=v4766leab

Awesome Movement. (2020, June 21). Awesome Movement.

https://awesomemovement.co.uk/

Barry, J. M. (2020, June 21). The great influenza: The story of the deadliest pandemic in history. Virginia Museum of History & Culture.

https://virginiahistory.org/learn/historical-media/great-influenza-story-

deadliestpandemic-history

Bergstrom, C. T. (2020). Calling bullshit. Random House.

Bipartisan Policy Center. (2018, April 24). Can America's infrastructure withstand the next natural disasters? <u>https://bipartisanpolicy.org/event/can-americasinfrastructure-withstand-the-next-natural-disasters/</u>

Blanchard, A. (2020, July 25). Wisdom of disasters.

http://angelablanchard.com/wpcontent/uploads/2020/03/Guidelines-for-Disasters-Angela-Blanchard.pdf

Bloomberg Philanthropies. (2020, April 22). Follow the data.

- California Office of Emergency Services. (2020, June 15). Earthquake, tsunami & volcano programs. <u>https://www.caloes.ca.gov/cal-oes-divisions/earthquaketsunami-</u> volcano-programs
- Campeqp. (n.d.). Jackery SolarSaga 60W portable solar panel for Explorer 160/180/500 power station with USB outputs.

https://vips.campoutdsale.com/index.php?main_page=product_info&cPath=&pro

ducts_id=7

Carona, J. (2018). In the Common Interest. Austin: Greeleaf Books.

Center for Disaster Philanthropy. (2020, June 21). Home page.

https://disasterphilanthropy.org/

Chessell, M. (2018, June 10). Ethics for big data and analytics.

http://www.ibmbigdatahub.com/sites/default/files/whitepapers_reports_file/TCG

%20Study%20Report%20-%20Ethics%20for%20BD%26A.pdf

Childers, V. (2020, July 18). Is your business a place of healing?

https://socapglobal.com/2019/07/is-your-business-a-place-of-healing/

City of Laguna Niguel. (2019, Feburary 9). Emergency preparedness in Laguna Niguel.

https://www.cityoflagunaniguel.org/35/Emergency-Preparedness

City of Newport Beach. (2018, April 28). Tsunami inundation map.

http://www.newportbeachca.gov/home/showdocument?id=58851

Community Organized Relief Effort. (2020, August 6). Home page.

https://www.coreresponse.org/

County of Orange. (2019, February 9). Emergency.

https://www.ocgov.com/about/emergency/

County of Orange. (2021, May 21). Orange County open data portal.

https://dataocpw.opendata.arcgis.com/

CrossRef. (2020, June 21). Home page. Retrieved from https://www.crossref.org/

Dempsey, M. (2020). No Time For Spectators. New York: Missionday.

Dewan, A., Pettersson, H., & Croker, N. (2020, April 16). As governments fumbled their coronavirus response, these four got it right. Here's how. CNN.

https://www.cnn.com/2020/04/16/world/coronavirus-response-lessons-

learnedintl/index.html

Diamandis, P. (2020, June 25). The future of emergency management.

Esparanza. (2021, May 24). https://esparanza.thedailyoutsider.com

Federal Emergency Management Agency. (2020a, April 15). Adminstrator letter to emergency managers.

https://content.govdelivery.com/attachments/USDHSFEMA/2020/04/16/file_attac hments/1428674/FEMA_Advisory_F1LettertoEmergencyManagers_FINAL_202 00416.pdf Federal Emergency Management Agency. (2020b, June 15). FEMA releases 2018 National Household Survey results. <u>https://community.fema.gov/story/FEMA-</u>

Releases-2018-National-Household-Survey-Results-on-Individual-and-

Community-Preparedness?lang=en US

Federal Emergency Management Agency. (2020b, March 9). Home page.

http://www.fema.gov

- Federal Emergency Management Agency. (2020, June 21). Strategic & operational planning. <u>https://www.fema.gov/plan</u>
- Federal Emergency Management Agency. (2020, June 25). Whole of America response. https://www.fema.gov

Fink, D. S. (2020, May 1). Triage, Ethics & Operations: Healthcare Emergency Prepardness & Response. Retrieved from FEMA:

https://www.fema.gov/preptalks

Frederickson, H. G. (1971). Toward a New Public Adminstration. In E. Frank Marini,Toward a New Public Adminstration: The Minnowbrook Perspective. New York:Harper & Row .

Gallo, A. (2015, November 4). A Refresher on Regression Analysis. Harvard Business Review.

Grainger. (2021a). First aid kit. https://www.grainger.com/product/GENUINE-FIRST-

AID-First-Aid-Kit-34WK75

Grainger. (2021b). Personal emergency kit. https://www.grainger.com/product/READY-

AMERICA-Personal-Emergency-Kit-44ZK94

Harrari, Y. N. (2020, June 21). the World after coronavirus. Retrieved from Financial Times: https://www.ft.com/content/19d90308-6858-11ea-a3c9-1fe6fedcca75

- Headquarters, Department of the Army. (2020). ADP 3-28: Defense Support of Civil Authority. Washington, DC: U.S. Department of the Army .
- Holland, O. (2020, May 9). Our Cities may never look the same again after the pandemic. Retrieved from CNN: https://www.cnn.com/style/article/citiesdesigncoronavirus/index.html
- Markham, L. (2019, December 17). What's in your "go-bag"? . Retrieved from The Guardian of London:

https://www.theguardian.com/commentisfree/2019/dec/17/whats-in-your-gobagdisaster-is-an-equalizer-but-survival-prep-is-for-the-rich

Mock, B. (2020, March 24). A Green Stimulus Plan for a Post-Coronavirus Economy. Retrieved from CityLab: https://www.bloomberg.com/news/articles/2020-03-24/green-stimulus-plan-for-a-post-covid-19-economy

Monbiot, G. (2020, May 25). Covid-19 is nature's wake-up call to Complacent

civilization. Retrieved from Guardian:

https://www.theguardian.com/commentisfree/2020/mar/25/covid-19-is-

natureswake-up-call-to-complacent-civilisation

National Oceanic & Atmospheric Adminstration. (2020, June 21). Sea Level Rise Viewer.

Retrieved from NOAA: https://coast.noaa.gov/slr/

Noble, A. (2019, August 27). Facebook Expand Tools that lets' Local Government Send

Alerts. Retrieved from RouteFifty :

https://www.routefifty.com/publicsafety/2019/08/local-governments-can-use-

facebook-send-alerts/159477/

- Oni, E. .. (2016). Public Adminstration & Public Policy. In E. .. Oni, PRINCIPLES OF PUBLIC ADMINISTRATION (pp. 296-321). Concept Publications Ltd.
- PandemicPolicy.US. (2020, June 20). COVID-19 Policy Response. Retrieved from Pandemic Policy: http://pandemicpolicy.us/
- Pariser, E. (2019, July 15). What Obligations Do Social Media Platforms have to the greater Good? Retrieved from TED: https://www.ted.com/talks/eli_pariser_what_obligation_do_social_media_platfor

ms_have_to_the_greater_good?utm_source=recommendation&utm_medium=em ail&utm_campaign=explore&utm_term=newest-talks-3

Piper, K. (2019, October 29). A Crucial Federal Program Tracking Dangerous Diseases is Shutting Down. Retrieved from Vox: https://www.vox.com/futureperfect/2019/10/29/20936921/usaid-predict-

pandemic-preparedness

ReadyOC. (2020, March 9). Retrieved from ReadyOC:

http://www.readyoc.org/index.html

Real-Time Notifications, Feeds & Web Services. (2018, May 6). Retrieved from USGS Earhquake Hazards Program: https://earthquake.usgs.gov/earthquakes/feed/

Rivera, M. B. (2020, June 21). Seven Key Actions Businss Can Take To Mitigate the effects of COVID-19. Retrieved from Strategy & Businss: https://www.strategybusiness.com/blog/Seven-key-actions-business-can-take-tomitigate-the-effectsof-COVID-19

RouteFifty. (2021). Management in City & County Government. Washington: RouteFifty

Routley, N. (2019, August 9). Our Impact On Climate Change & Global Land Use in 5 Charts . Retrieved from Visual Capitalist:

https://www.visualcapitalist.com/impact-on-climate-change-and-land-use/

- Sanchez, R. (2020, April 17). America's New Normal will be anything but ordinary. Retrieved from CNN: https://www.cnn.com/2020/04/16/us/coronaviruspandemicnew-normal/index.html
- SBP. (2020, March 9). St Bernard Project. Retrieved from https://sbpusa.org/

Scaling Up. (2020, April 15). Advise From Verne. Retrieved from Scaling Up:

https://scalingup.com/advice-

.

fromverne/?utm_campaign=Crisis%2FDownturn%20Leadership&utm_source=hs em ail&utm_medium=email&utm_content=85459019& hsenc=p2ANqtz-

Cpa6YgMxwmvoURCSChFCDVDDYAwY4Bs20G25ymQ eaSLXSmhJTdMu

AlwvmLF2 E8fE2yY YeBsX1jzFj3OrK8aSKWjQ& hsm

Schwarzer, M. (2020, March 10). Lessons From History: Museums & Pandemics.

Retrieved from American Alliance of Museums:

https://www.aamus.org/2020/03/10/lessons-from-history-museums-

andpandemics/?utm_source=American+Alliance+of+Museums&utm_campaign= 3c9 f6ea61d-

FieldNotes_Mar16_2020&utm_medium=email&utm_term=0_f06e575db6-3c9f6ea61d-60980885

SImmons, R. (1981). Achieving Human Organization. Malibu: Daniel Spencer Publishers

- Simon, H. (1946, Dec 1). The Proverbs of Adminstration. Public Adminstrative Review, pp. 53-67.
- Solnit, R. (2020). A Paradise Built in Hell. New York: Penguin Books .

Solnit, R. (2020, May 14). The Way we get through this is Together: the rise of mutual aid under coronavirus. Retrieved from Guardian: https://www.theguardian.com/world/2020/may/14/mutual-aidcoronaviruspandemic-rebecca-solnit

- Spinney, L. (2020). Pale Rider: The Spanish Flu of 1918 & How It Changed the World. New York: Hachette .
- St. Bernard Parish Mission. (2020, June 21). SBP's MIssion to Shrink The Time Between Disaster & Recovery. Retrieved from St. Bernard's Parish:

https://sbpusa.org/start-here

- Stanford University. (2020, June 21). The Influenza Pandemic of 1918. Retrieved from Stanford University: https://virus.stanford.edu/uda/
- Swan, J. (2020, May 3). Exclusive: FEMA Braces for COVID-infested Hurricane Season. Retrieved from Axios: https://www.axios.com/fema-coronavirus-hurricaneseasonef660cda-f4b3-4002-b8ac-71438c8edebd.html
- TechSoup. (2020, 2 1). Google For Non Profits. Retrieved from Google For Non Profits: https://www.google.com/nonprofits/
- The Daily Outsider. (2020, Sept 19). Esparanza. Retrieved from The Esparanza Initiative : https://esparanza.thedailyoutsider.com/
- The Economist of London. (2020, April 23). Microsoft embraces big data. Retrieved from The Economist of London:

https://www.economist.com/business/2020/04/23/microsoft-embraces-big-data

U.S. Department of Homeland Security . (2018, April 27). Retrieved from National Emergency Communciations Plan: https://www.dhs.gov/sites/default/files/publications/2014%20National%20Emerg

ency%20Communications%20Plan_October%2029%202014.pdf

- U.S. Department of Homeland Security. (2020, June 21). Plan Ahead for Disasters. Retrieved from Ready.Gov: https://www.ready.gov/
- USAFACTS. (2019, Feburary 9). Retrieved from USAFACTS: https://www.usafacts.org
- USAFacts. (2020, April 17). Welcome to 2020 Government 10-K. Retrieved from

USAFACTS: https://usafacts.org/annual-publications/2020/government-

- 10k/?utm_source=MailChimp&utm_campaign=10K-2020 USAFacts 2021 Annual
- Report. (2021). Washington: USAFacts . U.S. Geological Survey. (2020, July 21).

Earthquake BETA site.

https://earthquake.usgs.gov/beta/map/?extent=4.39023,-

142.4707&extent=61.68987,-47.54883

What Works. (2020, June 21). What Works Cities. Retrieved from WhatWorks:

https://whatworkscities.bloomberg.org/

 Wiselancer. (2020, August 5). Introduction & Theory of Public Administration. Retrieved

 from
 https://wiselancer.net/public-administration/:

https://wiselancer.net/publicadministration/

World Bank Research . (2018, May 6). Retrieved from World Bank : http://www.worldbank.org/en/search?q=disaster¤tTab=1

Appendix A: Engagements With the City of Laguna Niguel

Mike,

In no order, some thoughts on the survey. I figure as it is your project that you are your own cheerleader, I on the other hand am looking to poke holes and find fault; so, take the below in that spirit. Hope it helps.

You wrote, "1) On Data: I plan on exclusively depending on public data..."

* I wonder if that will be sufficient to answer your questions. Have others looked at this area of non-profit development and would their work be of benefit to you. While you have a much better feel for this and your material, I wonder how much information you will be able to glean from a survey.

I think I've seen this survey before. I can't remember where but seems like it. If I've seen then others have as well.

- * We regularly get survey requests, why should I look at yours?
- * If I've seen it before, why am I doing it again?
- * If it is geared towards the Silverado Fire aftermath, how will that address your information need?

I would recommend tailoring the survey to your needs.

* I assume that the idea is to get information about individual programs so as to identify gaps and then attempt to fill those gaps with Esperanza. OK, now that I look at it in that light it makes more sense to me. However:

o Why are you asking each of these questions?

o What value do you draw from each?

o What data does this survey generate?

o What are you really going to learn?

o Does the survey facilitate the development and implementation of a/your NPO?

More of the same.

* How does the data (what you will learn) forward your project?

* If you are arguing that a non-profit is necessary to fill gaps, what are you offering?

* How will you execute?

* How does this answer whether a non-profit is feasible or necessary?

* How does this determine whether your non-profit will be accepted?

o Have you dug into this?

How is Esperanza different from other NPO's in this field?

* I'm guessing, but I'd say that the path in is difficult.

o Who are you?

o Why should I trust you?

o Why do I need you?

* Have you investigated failed NPO's? What was the issue(s) and why couldn't they gain traction?

* How will you compete with existing larger better-known groups (American Red Cross, Team Rubicon, Etc.)?

The Interview Questions: An Overview

- □ What is your current strategy in Community Outreach?
 - o What are your current efforts in reaching out to Neighborhood

Watch communities?

o What, if any, engagement do you currently have in social media?

□ What is the current County, State and Federal Resources you have used?

- o What are limitations that you have experienced?
- o How have you overcome the limitations?
- What is your staffing requirement currently?
- What are training strategies you have pursued?
- What current training programs you must prepare for the next major

emergency?

These interview Questions will thereafter be part of the key Research Questions out there:

- A Current Assessment of all the mitigation programs throughout Orange County
- What have been successful strategies in mitigation?
- o Are there any "Virtual Efforts"?
- o What are current programs at the Federal level and the impact it has had at

the local level?

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Appendix B: Survey Instrument

LEVEL OF PREPARDNESS & ON-GOING COMMUNITY ASSESSMENT

For each question below, circle the number to the right that best fits your opinion on the importance of the issue. Use the scale above to match your opinion.

Rating of PREPAREDNESS, PERSONNEL, PROCESSES, and RESOURCES		Inadequat e	Below Average	Averag e	Above Average	Excellen †
0v 1.	ERALL PREPAREDNESS In the event of a large scale emergency involving multiple jurisdictions, how would you rate your organization's ability to communicate with other responding organizations within your organization	1	2	3	4	5
2.	In the event of a large scale emergency involving multiple jurisdictions, how would you rate your organization's ability to communicate with other responding organizations NOT within your jurisdiction	1	2	3	4	5
3.	In the event of a lorge scale emergency involving multiple jurisdictions, how would you rate your organization's ability to communicate <u>with other</u> responding organizations across multiple jurisdictions	1	2	3	4	5
4.	How would you rate your organization's overall level of preparedness at present to respond to disasters in general?	1	2	3	4	5

 Since The Sliverado Fires, how would you rate your organization's increased spending, or shifted resources, to address terrorism-related incidents? 	1	2	3	4	5
How would you rate the following:					
6. Your Organization's Written emergency plan to be used during response to Major Disasters?	1	2	3	4	5
7. Your Organization's Knowledge and Expertise regarding response to major events	1	2	3	4	5
8. Your Organization's ability to prepare and respond to a major event	1	2	3	Ø	5
 Your organization's ability to communicate and coordinate with other organizations likely to be involved in response to a major event. 	1	2	3	4	5
 How would you rank your organization's overall preparedness? 	1	2	3	4	5
Agreement with PREPAREDNESS, PERSONNEL, PROCESSES, and RESOURCES	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
 5 5 Since The Silverado Fires, Are you more or less prepared to respond to major disasters 	1	2	3	4	5
12. Adequate equipment for incidents	1	2	3	4	5
13. Personnel trained in response	1	2	3	(4)	5
14. Personnel trained in incident command/management	1	2	3	4	5
15. Resources to address preparedness	1	2	3	4	5
16 Coordination of preparedness activities with other local response organizations and/or interagency task forces	1	2	3	4	5
 Integration of preparedness activities with that of state and federal agencies 	1	2	3	4	5
tederal agencies					

3	4	5
3	(4)	5
3	4	5
	3	3 (4)

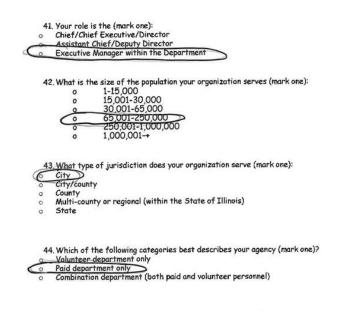
ORGANIZATIONAL CULTURE	Inadequate	Average	Above Average	Excellent
22. From an organizational leadership viewpoint, how would you rate your organization's teamwork or ability to work well	1	3	4	5
with other organizations 23. From an organizational leadership viewpoint, how would you rate your organization's teamwork or obility to work well with mixed- jurisdictional or task force organizations	1	3	4	5
24. Sine 09/11/2011, how do you rate OTHER organizations' teamwork with your organization	1	3		5
25. How would you rate your organization's knowledge and expertise about responses to a terrorist event	1	3	4	5

From an organizational leadership perspective, how do you rate the following concerning organizational learning:	Strongly Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
26. Subordinates in my organization are continually learning.	1	3	4	5
27. Subordinates in my organization are striving to achieve the organizational mission.	1	3	4	5
 Subordinates in my organization accept change. 	1	. 3	4	5
 Subordinates in my organization resolve conflict arising from change. 	1	3	4	5
 Subordinates in my organization have confidence in the abilities of their peers. 	1	3	4	5
31. Subordinates have confidence in our primary supervisor's abilities.	1	3	4	5
32. Subordinates in my organization have confidence that our primary supervisor is properly using influence to achieve individual, group, and organizational goals.	1	3	4	5
33. In the absence of orders or direction from the primary supervisor, subordinates in my organization have authority and direction to make decisions consistent with the primary	1	3	4	5
supervisor's intent.				
 Subordinates in my organization positively deal with high levels of stress and competition. 	1	3	4	5

ORGANIZATIONAL INFORMATION

40. Your first response organization is a (mark one): Law enforcement agency Fire department Emergency medical service department

0 0 36



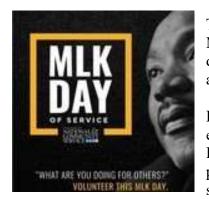
Thank you for taking the time to complete this important survey. If

you have questions regarding this study, please contact Mike Pouraryan at

siamak.pouraryan@waldenu.edu or (949) 413-1145

Appendix B: On Potential Partnerships and Opportunities for Collaboration

Be a Preparedness Volunteer on the MLK Day of Service



The <u>2020 Martin Luther King</u>, Jr. (MLK) Day of Service is Monday, January 20. Treat the holiday as "a day on, not a day off," and consider volunteering for a preparedness activity!

By volunteering this day and throughout the year, you can engage with your community while honoring the legacy of Dr. King. For example, you can plan to mentor a young person on <u>youth preparedness</u>, help to clean up a public space, or work with your community to <u>prepare</u> for an

emergency.

If you are still looking for a way to participate, consider these and other activities that build disaster preparedness:

- <u>Talk with your neighbors</u> about their preparedness plans. Help them create a family plan or tailor one to their individual needs.
- Join a local Community Emergency Response Team (CERT); or
- Take a training like <u>You Are the Help Until Help Arrives</u> and share with others what you've learned. Encourage them to take the training as well!

Learn about other <u>volunteer activities</u> or search for <u>opportunities</u> in your area! Then, share your thoughts and photos from your volunteer service on social media with the hashtag #MLKDay.

Find more tools, tips, and resources to volunteer and strengthen your community with the <u>Corporation for National and Community Service</u>!

	Rob Schnabel <r.schnabel@safety.com></r.schnabel@safety.com>	Aug 21, 2020
to info		, 12:4 6 PM
Hello,		

I noticed that you are providing helpful resources for seniors and the elderly community on the following page: http://vision.thedailyoutsider.com/2018/01/notations-on-our-world-special-w-end.html

As we all find ourselves more homebound than usual during the current pandemic, safety around the home is of the utmost importance. This is especially true for seniors that may be home alone more often.

One of the most likely rooms that accidents occur is in the bathroom, and especially the shower. With that in mind, Safety.com has created a helpful article with timely tips to assist seniors and caregivers lower the risk of an accident.

You can view the article here: https://www.safety.com/family-safety/senior-bathroom-and-shower-safety/

Please feel free to use this article on your website where you feel it best fits. Thank you for your efforts in continuing to educate the community.

Please Stay Safe.

Thank you,

Rob Schnabel Communications Coordinator Safety.com | Secure What Matters Most <u>r.schnabel@safety.com</u>

Appendix C: Example of Nationwide Strategy That Would Be Incorporated Into Community Outreach

Coronavirus (COVID-19) Pandemic Whole-of-America Response

Attached you will find today's FEMA Daily Briefing Points for the Whole-of-America response to coronavirus (COVID-19) pandemic. These briefing points include Topline Messages, as well as information associated with FEMA and Department of Health and Human Services (HHS) Response; FEMA Response Capacity; Strategic National Stockpile; CDC Public Guidance; CDC Respirator Guidance; Hydroxychloroquine/ Chloroquine; FDA Ventilator Guidance; National Guard Activation (Title 32); Community-Based Testing Sites; Defense Production Act; and Other Federal Response.

Topline messaging includes:

- FEMA, HHS, and our federal partners work with state, local, tribal, and territorial governments to execute a whole-of-America response to COVID-19 pandemic and protect the health and safety of the American people.
- On March 31, the president extended the nation's <u>Slow the Spread</u> campaign until April 30.
 - The American people are critical in the campaign to slow the virus' spread and keep high-risk populations safe. For updates and information on how to protect yourself, visit <u>www.coronavirus.gov</u>.
- FEMA Project Air Bridge expedites movement of critical supplies, in varying quantities, from the global market to medical distributors in various locations across the U.S.
 - The air bridge was created to reduce the time it takes for U.S. medical supply distributors to receive personal protective equipment and other critical supplies into the country for their respective customers.
 - FEMA covers the cost to fly supplies into the U.S. from overseas factories, reducing shipment time from weeks to days.
 - While FEMA schedules daily flights, it does not have detailed visibility on PPE amounts until the cargo is loaded.
 - As of April 6, 13 flights have landed, containing critical personal protective equipment (PPE): gloves, gowns, goggles, and masks.
 - Seven flights are scheduled to arrive today, 6 in Chicago and 1 in Los Angeles. This is the greatest number of air bridge flights in a single day since the start of the program.
 - o An additional 72 flights are scheduled over the next three weeks.
 - Overseas flights arrive at operational hub airports for distribution to hotspots and nationwide locations through regular supply chains. Flight arrivals do not mean supplies will be distributed in the operational hub locations.
 Per agreements with distributors, 50 percent of supplies on each plane are for customers within the hotspot areas with most critical needs. The remaining 50 percent is fed into distributors' normal supply chain to their customers in other areas nationwide.
 - HHS and FEMA determine hotspot areas based on CDC data.
- HHS is releasing \$160 million dollars in additional CDC funding to dozens of regional hotspots for effective response to the worsening situation in their jurisdictions.
- The Strategic National Stockpile has begun shipping doses of hydroxychloroquine to New York and Los Angeles County based on their requests.

- Considering both scarcity of ventilators in the Strategic National Stockpile (SNS) and current capacity of the private sector to meet demand, the federal government has adopted a process to manage federal ventilator resources to ensure the right number of ventilators are shipped to the to the right states to manage the immediate crisis.
 - The federal government has 8,644 total ventilators available: 8,044 in the Strategic National Stockpile; 600 from the Department of Defense.

As of April 6, FEMA and HHS have provided or are currently shipping, 8,920 ventilators from the Strategic National Stockpile (SNS) and the Defense Department to: Alaska (60), California (170), Connecticut (50), Florida (200), Georgia (150), Guam (30), Illinois (600), Louisiana (350), Maryland (120), Massachusetts (100), Michigan (700), New Jersey (1,350), New York (4,400)

Massachusetts (100), Michigan (700), New Jersey (1,350), New York (4,400), Oregon (140), and Washington (500).

 Governor Brown of Oregon sent the state's 140 ventilators directly to New York; and, o
 Governor Inslee of Washington is returning 400 of the state's 500 ventilators to the SNS to be deployed to areas of greatest need. o
 Governor Newsom of California is sending 500 state-owned ventilators to medical hotspots across the country through Emergency Management Assistance Compacts (EMAC). o

Additional allocations in process include a 250-bed Federal Medical Station and a Public Health strike team for Michigan; and a 250bed Federal Medical Station for the Metro D.C. area.

• Forty states, four territories and 24 tribes have issued stay-at-home orders.

Contact Us

If you have any questions, please contact FEMA Office of External Affairs, Congressional and Intergovernmental Affairs Division:

- Congressional Affairs at (202) 646-4500 or at <u>FEMA-Congressional-Affairs@fema.dhs.gov</u>
- Intergovernmental Affairs at (202) 646-3444 or at <u>FEMA-IGA@fema.dhs.gov</u> Tribal Affairs at (202) 646-3444 or at <u>FEMA-Tribal@fema.dhs.gov</u>
- Private Sector Engagement at (202) 646-3444 or at nbeoc@max.gov.

Appendix D: The Future of Emergency Management

Between 2005 and 2014, natural disasters have claimed the lives of over 700,000 people and resulted in total damage of more than US\$1.4 trillion.

During the past 50 years, the frequency of recorded natural disasters has surged nearly five-fold.

In this blog, I'll be exploring how converging exponential technologies (A.I., Robotics, Drones, Sensors, Networks) are transforming the future of disaster relief — how we can prevent them in the first place and get help to victims during that first golden hour wherein immediate relief can save lives.

Here are the three areas of greatest impact:

- 1. A.I., predictive mapping, and the power of the crowd
- 2. Next-gen robotics and swarm solutions
- 3. Aerial drones and immediate aid supply

Let's dive in!

Artificial Intelligence and Predictive Mapping

When it comes to immediate and high-precision emergency response, data is gold.

Already, the meteoric rise of space-based networks, stratosphere-hovering balloons, and 5G telecommunications infrastructure is in the process of connecting every individual on the planet.

Aside from democratizing the World's information, however, this upsurge in connectivity will soon grant anyone the ability to broadcast detailed geotagged data, particularly those most vulnerable to natural disasters.

Armed with the power of data broadcasting and the force of the crowd, disaster victims now play a vital role in emergency response, turning a historically one-way blind rescue operation into a two-way dialogue between connected crowds and smart response systems. With a skyrocketing abundance of data, however, comes a new paradigm: one in which we no longer face a scarcity of answers. Instead, it will be the quality of our questions that matters most.

This is where A.I. comes in: our mining mechanism.

In the case of emergency response, what if we could strategically map an almost endless amount of incoming data points? Or predict the dynamics of a flood and identify a tsunami's most vulnerable targets before it even strikes? Or even amplify critical signals to trigger automatic aid by surveillance drones and immediately alert crowdsourced volunteers?

Already, several key players are leveraging A.I., crowdsourced intelligence, and cuttingedge visualizations to optimize crisis response and multiply relief speeds.

Take One Concern, for instance.

Born out of Stanford under the mentorship of leading A.I. expert Andrew Ng, One Concern leverages A.I. through analytical disaster assessment and calculated damage estimates.

Partnering with the City of Los Angeles, San Francisco, and numerous cities in San Mateo County, the platform assigns verified, unique 'digital fingerprints' to every element in a city. Building robust models of each system, One Concern's A.I. platform can then monitor site-specific impacts of not only climate change but each individual natural disaster, from sweeping thermal shifts to seismic movement.

This data, combined with that of city infrastructure and former disasters are then used to predict future damage under a range of disaster scenarios, informing prevention methods and structures in need of reinforcement.

Within just four years, One Concern can now make precise predictions with an 85 percent accuracy rate under 15 minutes.

And as IoT-connected devices and intelligent hardware continue to boom, a blooming trillion-sensor economy will only serve to amplify A.I.'s predictive capacity, offering us immediate, preventive strategies long before disaster strikes.

Beyond natural disasters, however, crowdsourced intelligence, predictive crisis mapping, and AI-powered responses are just as formidable a triage in humanitarian disasters.

One extraordinary story is that of Ushahidi.

When violence broke out after the 2007 Kenyan elections, one local blogger proposed a simple yet powerful question to the web: "Any techies out there willing to do a mashup of where the violence and destruction is occurring and put it on a map?"

Within days, four 'techies' heeded the call, building a platform that crowdsourced firsthand reports via SMS, mined the web for answers, and — with over 40,000 verified reports — sent alerts back to locals on the ground and viewers across the World.

Today, Ushahidi has been used in over 150 countries, reaching a total of 20 million people across 100,000+ deployments. Now an open-source crisis-mapping software, its V3 (or "Ushahidi in the Cloud") is accessible to anyone, mining millions of Tweets, hundreds of thousands of news articles, and geotagged, time-stamped data from countless sources.

Aggregating one of the longest-running crises maps to date, Ushahidi's Syria Tracker has proved invaluable in the crowdsourcing of witness reports. Providing real-time geographic visualizations of all verified data, Syria Tracker has enabled civilians to report everything from missing people and relief supply needs to civilian casualties and disease outbreaks — all while evading the government's cell network, keeping identities private, and verifying reports prior to publication.

As mobile connectivity and abundant sensors converge with AI-mined crowd intelligence, real-time awareness will only multiply in speed and scale.

Imagining the Future....

Within the next 10 years, spatial web technology might even allow us to tap into mesh networks.

As I've explored in a <u>previous blog</u> on the implications of the spatial web, while traditional networks rely on a limited set of wired access points (or wireless hotspots), a wireless mesh network can connect entire cities via hundreds of dispersed nodes that communicate with each other and share a network connection non-hierarchically.

In short, this means that individual mobile users can together establish a local mesh network using nothing but the compute power in their own devices.

Take this a step further, and a local population of strangers could collectively broadcast countless 360-degree feeds across a local mesh network.

Imagine a scenario in which armed attacks break out across disjointed urban districts, each cluster of eyewitnesses and at-risk civilians broadcasting an aggregate of 360-degree videos, all fed through photogrammetry A.I.s that build out a live hologram in real time, giving family members and first responders complete information.

Or take a coastal community in the throes of torrential rainfall and failing infrastructure. Now empowered by a collective live feed, verification of data reports takes a matter of seconds, and richly layered data informs first responders and A.I. platforms with unbelievable accuracy and specificity of relief needs.

By linking all the right technological pieces, we might even see the rise of automated drone deliveries. Imagine: crowdsourced intelligence is first cross-referenced with sensor data and verified algorithmically. A.I. is then leveraged to determine the specific needs and Degree of urgency at ultra-precise coordinates. Within minutes, once approved by personnel, swarm robots rush to collect the requisite supplies, equipping size-appropriate drones with the right aid for rapid-fire delivery.

This brings us to a second critical convergence: robots and drones.

While cutting-edge drone technology revolutionizes the way we deliver aid, new breakthroughs in AI-geared robotics are paving the way for superhuman emergency responses in some of today's most dangerous environments.

Let's explore a few of the most disruptive examples to reach the testing phase.

First up....

Autonomous Robots and Swarm Solutions

As hardware advancements converge with exploding A.I. capabilities, disaster relief robots are graduating from assistance roles to fully autonomous responders at a breakneck pace.

Born out of MIT's Biomimetic Robotics Lab, the Cheetah III is but one of many robots that may form our first line of defense in everything from earthquake search-and-rescue missions to high-risk ops in dangerous radiation zones.

Now capable of running at 6.4 meters per second, Cheetah III can even leap up to a height of 60 centimeters, autonomously determining how to avoid obstacles and jump over hurdles as they arise.

Source: Massachusetts Institute of Technology (MIT)

Initially designed to perform spectral inspection tasks in hazardous settings (think: nuclear plants or chemical factories), the Cheetah's various iterations have focused on increasing its payload capacity, range of motion, and even a gripping function with enhanced dexterity.

But as explained by the Lab's director and MIT Associate Professor Sangbae Kim, Cheetah III and future versions are aimed at saving lives in almost any environment: "Let's say there's a fire or high radiation, [whereby] nobody can even get in. [It's in these circumstances that] we're going to send a robot [to] check if people are inside. [...] [And even] before doing all that, the short-term goal will be sending [the] robot where we don't want to send humans at all, [...] for example, toxic areas or [those with] mild radiation." And the Cheetah III is not alone.

Just this February, Tokyo's Electric Power Company (TEPCO) has put one of its own robots to the test.

For the first time since Japan's devastating 2011 tsunami, which led to three nuclear meltdowns in the nation's Fukushima nuclear power plant, a robot has successfully examined the reactor's fuel.

Broadcasting the process with its built-in camera, the robot was able to retrieve small chunks of radioactive fuel at five of the six test sites, offering tremendous promise for long-term plans to clean up the still-deadly interior.

Also, out of Japan, Mitsubishi Heavy Industries (MHi) is even using robots to fight fires with full autonomy. In a remarkable new feat, MHi's Water Cannon Bot can now put out blazes in difficult-to-access or highly dangerous fire sites.

Delivering foam or water at 4,000 liters per minute and one megapascal (MPa) of pressure, the Cannon Bot, and its accompanying Hose Extension Bot even form part of a greater AI-geared system to conduct reconnaissance and surveillance on larger transport vehicles.

As wildfires grow ever more untamable, high-volume production of such bots could prove a true lifesaver. Paired with predictive A.I. forest fire mapping and autonomous hauling vehicles, not only will solutions like MHi's Cannon Bot save numerous lives but avoid population displacement and paralyzing damage to our natural environment before disaster has the chance to spread.

But even in cases where emergency shelter is needed, groundbreaking (literally) robotics solutions are fast to the rescue.

After multiple iterations by Fastbrick Robotics, the Hadrian X end-to-end bricklaying robot can now autonomously build a fully livable, 180-square meter home in under 3 days. Using a laser-guided robotic attachment, the all-in-one brick-loaded truck simply drives to a construction site and directs blocks through its robotic arm in accordance with a 3D model.

Source: Fastbrick Robotics

Meeting verified building standards, Hadrian and similar solutions hold massive promise in the long-term, deployable across post-conflict refugee sites and regions recovering from natural catastrophes. But what if we need to build emergency shelters from local soil at hand? Marking an extraordinary convergence between robotics and 3D printing, the Institute of Advanced Architecture of Catalonia (IAAC) is already working on a solution.

In a major feat for low-cost construction in remote zones, IAAC has found a way to convert almost any soil into a building material with three times the tensile strength of industrial clay. Offering myriad benefits, including natural insulation, low GHG emissions, fire protection, air circulation and thermal mediation, IAAC's new 3D printed native soil can build houses on-site for as little as \$1,000.

But while cutting edge robotics unlock extraordinary new frontiers for low-cost, largescale emergency construction, novel hardware and computing breakthroughs are also enabling robotic scale at the other extreme of the spectrum.

Again, inspired by biological phenomena, robotics specialists across the U.S. have begun to pilot tiny robotic prototypes for locating trapped individuals and assessing infrastructural damage.

Take RoboBees, tiny Harvard-developed bots that use electrostatic adhesion to 'perch' on walls and even ceilings, evaluating structural damage in the aftermath of an earthquake.

Or Carnegie Mellon's prototyped Snakebot, capable of navigating through entry points that would otherwise be completely inaccessible to human responders. Driven by A.I., the Snakebot can maneuver through even the most densely packed rubble to locate survivors, using cameras and microphones for communication.

But when it comes to fast-paced reconnaissance in inaccessible regions, miniature robot swarms have good company.

Next-Generation Drones for Instantaneous Relief Supplies

Particularly in the case of wildfires and conflict zones, autonomous drone technology is fundamentally revolutionizing the way we identify survivors in need and automate relief supply.

Not only are drones enabling high-resolution imagery for real-time mapping and damage assessment, but preliminary research shows that UAVs far outpace ground-based rescue teams in locating isolated survivors.

As presented by a team of electrical engineers from the University of Science and Technology of China, drones could even build out a mobile wireless broadband network in record time using a "drone-assisted multi-hop device-to-device" program.

And as shown during Houston's Hurricane Harvey, drones can provide scores of predictive intel on everything from future flooding to damage estimates.

Among multiple others, a team led by Texas A&M computer science professor and director of the university's Center for Robot-Assisted Search and Rescue Dr. Robin Murphy flew a total of 119 drone missions over the city, from small-scale quadcopters to military-grade unmanned planes. Not only were these critical for monitoring levee infrastructure, but also for identifying those left behind by human rescue teams.

But beyond surveillance, UAVs have begun to provide lifesaving supplies across some of the most remote regions of the globe.

One of the most inspiring examples to date is Zipline.

Created in 2014, Zipline has completed 12,352 life-saving drone deliveries to date. While drones are designed, tested, and assembled in California, Zipline primarily operates in Rwanda and Tanzania, hiring local operators and providing over 11 million people with instant access to medical supplies.

Providing everything from vaccines and HIV medications to blood and IV tubes, Zipline's drones far outpace ground-based supply transport, in many instances providing life-critical blood cells, plasma and platelets in under an hour.

Source: Zipline

But drone technology is even beginning to transcend the limited scale of medical supplies and food.

Now developing its drones under contracts with DARPA and the U.S. Marine Corps, Logistic Gliders, Inc. has built autonomously navigating drones capable of carrying 1,800 pounds of cargo over unprecedented long distances.

Built from plywood, Logistic's gliders are projected to cost as little as a few hundred dollars each, making them perfect candidates for high-volume, remote aid deliveries, whether navigated by a pilot or self-flown in accordance with real-time disaster zone mapping.

As hardware continues to advance, autonomous drone technology coupled with real-time mapping algorithms pose no end of abundant opportunities for aid supply, disaster monitoring, and richly layered intel previously unimaginable for humanitarian relief.

Concluding Thoughts

Perhaps one of the most consequential and impactful applications of converging technologies is their transformation of disaster relief methods.

While AI-driven intel platforms crowdsource firsthand experiential data from those on the ground, mobile connectivity and drone-supplied networks are granting newfound narrative power to those most in need.

And as a wave of new hardware advancements gives rise to robotic responders, swarm technology and aerial drones, we are fast approaching an age of instantaneous and efficiently distributed responses, during conflict and natural catastrophes alike.

Empowered by these new tools, what might we create when everyone on the planet has the same access to relief supplies and immediate resources? In a new age of prevention and fast recovery, what futures can you envision?

Appendix E: The Proposed Manifesto

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Wisdom from Disasters

"the human spirit is not extinguishable"

- 1. No one is coming. We must move at the speed of need. Don't wait. Work.
- You may not be at fault, but you are responsible. This disaster chose us. We
 must own it.
- You can't build on broken. Pay attention to the strengths, skills and aspirations of those around you. Build on those.
- 4. Do what you can with what you have where you are. Right now.
- There is nothing more powerful than a family, company, community in touch with its own aspirations and principles. Revisit the principles that will guide your decision making as you move through this unprecedented period.
- Allow everything that is not destructive. Especially art, music and dance. Even in disasters, people need joy.
- Isolation is a breeding ground for rage and despair. We may be physically distant, but we must remain spiritually, emotionally, socially connected. Connect today.
- At every milestone there will be gratitude and grief in equal measure. Even as we recover, we will also see what has been lost. Allow gratitude and grief to reside in your heart together.
- Practice loving detachment. Others may not behave as we would want. We learn not to react to panic and fear, even as we manage our own.
- 10. There is enough to go around. Act as if it's true.
- 11. When you come to the fork in the road, between resignation and acceptance, take the path of acceptance. No whining.
- People can survive individually, but they thrive collectively. Place your faith beyond survival.
- 13. Leaders practice "when I know it, you know it." People can handle the truth. We unravel when we are forced to play detective in a disaster. If you want people to follow you, you don't have to be certain, but you must be transparent.

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