TECHNOLOGY TO THE RESCUE!

WHEN DISASTER STRIKES!

Technology's Role in Disaster Responses and Aid Relief

A year ago Hurricane Harvey's 5 day unprecedented rainfall flooded thousands of homes and displaced more than 50,000 people in the Greater Houston area. The resulting floods inflicted the highest cost ever in US history for a natural disaster of 125 $B. Although this tragedy presented challenges to the Houston-based community, it was a crucible for companies and federal agencies to innovate technological advancements.

Disasters highlight unmet needs and present important gaps for problem-solving and collaboration that can create long-term entrepreneurial opportunities and provide technological advancements, which play critical roles in relief before, during, and after natural disasters. Moreover, during disasters tech professionals and companies benefit from volunteering and collaborating with tech-focused relief efforts. This allows the building of tools and networks for fundraising, coordination, and resource sharing. Inevitably the gathering and sharing of data enhances disaster resilience. During Hurricane Harvey, social media networks, open data, drones, and fundraising apps helped residents, as well as local and national agencies- including Federal Emergency Management Agency (FEMA)- create faster and more effective disaster response and relief aid.

Social Media

Social media supported and expanded civilian rescue efforts during Hurricane Harvey. For the first time, publicagency officials like Parisa Safarzadeh, digital media manager for Harris County Sheriff's Office (HCSO), and Francisco Sanchez, PIO for Harris County Office of Homeland Security and Emergency Management (HCOHSEM), relied heavily on social media to lead their emergency communication efforts during Hurricane Harvey.

Snap Chat's Map section, which shows areas where a high volume of people are using the app, helped present up-to-date information about areas that need emergency assistance. Facebook has been another platform for disaster citizen engagement, particularly with the emergence of Facebook Live. Not only can people mark themselves as "safe" to inform loved ones, but many posted video pleas to help get the word out about where action was needed. Nextdoor offered unique benefits for public agencies to communicate weather updates, emergency contacts, and disaster preparedness to the public before and during a disaster. During the storm, Safarzadeh utilized the geo-targeting feature on Nextdoor for Public Agencies to ensure that the right messages went to the right audiences.

The use of social media platforms during Hurricane Harvey proved to public agencies across the greater Houston area and beyond that social media is a powerful communication tool for the police department and communities to be well connected before and during disaster strikes.

Open Data

FEMA is tasked with responding to disasters and helping citizens recover. Open data became instrumental in providing residents and emergency agencies, including FEMA, with vital information. The local open-data resource used flood gauge sensors that transmitted accurate and up-to-date data to their website about flood levels and shelter locations during Hurricane Harvey. Over the last decade, FEMA has worked on revamping its culture and methods for reacting to emergency situations using cloud infrastructure. Turning to the cloud will help FEMA scale its response so that it can access data faster and deliver services more efficiently.

Drones

In 2016, the Federal Aviation Administration approved drone technology for commercial use during Hurricane Harvey, which included AT&T, Farmer's Insurance, Allstate Insurance, and major oil & gas companies. The effort in Houston is likely to be the first wide scale use of drones to measure damage since.

Fundraising apps

During the aftermath of a natural disaster, people in need used to look to nonprofits and government for financial aid. Now they can raise their own funds in record time using apps like GoFundMe. From Hurricane Harvey campaigns alone, the company took in an estimated $3.5 million in donations.

Management Crisis Event

On this one-year anniversary of the Harvey tragedy, our two panel discussion focuses on the lessons learned from Hurricane Harvey and how technology continues to play an important role in times of critical environmental crises and natural disasters. With advanced technology based on open data and drones, we are becoming more prepared than ever to manage disaster when it strikes. More importantly, these technological advancements can create early warning systems in order for communities to prepare beforehand, which significantly counteracts the impact of natural disasters like Hurricane Harvey. Our event provides an opportunity for Houston tech and startup companies and other emergency agencies to collaborate in creating innovative solutions for managing natural disaster, environmental crises, as well as a variety of other pertinent

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