

Top five open source-powered solutions to mitigate the impact of natural disasters announced as finalists in Call for Code global coding challenge

IBM and David Clark Cause unveil best Call for Code 2019 Global Challenge solutions designed to help mitigate the effects of natural disasters, optimize response efforts, and help promote resilient communities around the world

NEW YORK, Sept. 17, 2019 /[PRNewswire](#)/ -- Call for Code Founding Partner IBM (NYSE: [IBM](#)) and Creator David Clark Cause today announced the top five finalists for the 2019 edition of the Call for Code Global Challenge, an initiative that unites hundreds of thousands of developers to create applications powered by open source technology that can tackle some of the world's biggest challenges.

Building on the success of last year's inaugural challenge, Call for Code 2019 is focused on creating solutions to help mitigate the effects of natural disasters and help communities better prepare and respond to the needs of survivors, as natural disasters are a growing issue affecting every region worldwide. A recent survey conducted by the Associated Press-NORC Center for Public Affairs Research found that almost three-quarters of Americans see weather disasters, like Hurricane Dorian, worsening and attribute it to the harmful effects of climate change.¹

More than 180,000 independent and enterprise developers, data scientists, activists, and students from 165 nations took part in this year's challenge. The teams used Weather Company data and open source-powered technology – including IBM Cloud, IBM Watson, and IBM Blockchain – to create more than 5,000 applications designed to enhance access to vital information that could help first responders and health practitioners assist survivors of natural disasters.

"Natural disasters are not going away. Rather, as the impact of devastating wildfires, landslides, and hurricanes grows fiercer every year, preparation and response to these events must evolve," said Bob Lord, Senior Vice President, Cognitive Applications and Developer Ecosystems at IBM. "IBM believes that we should apply today's newest technologies not just to business needs, but to global humanitarian crises as well. From enabling the independent developer with a new disaster-relief app, to the nurse with an idea about using AI to help triage in emergencies, we can do more to support our first responders and health providers; we can give them technologies that are customized to workers' and communities' needs and scaled for maximum effect to expand what's humanly possible when disasters strike."

The \$30 million, five-year Call for Code Global Challenge – whose Charitable Partner is United Nations Human Rights – is housed under IBM's Code and Response program, an initiative that harnesses the power of open source to deliver effective solutions on the ground in local communities around the world. Along with the [IBM Corporate Service Corps](#)—which deploys IBMers to partner with government, businesses, and civic leaders to address high-priority issues such as education, health, and natural disasters—Code and Response is a part of IBM's ongoing commitment to harness and deploy tech for social good.

These five finalists were chosen from an [elite group of dozens of the top solutions from each region of the world](#):

- **AsTeR (Europe)** – During natural disasters, emergency call centers are overwhelmed and lack the human resources to deal with the sudden uptick in calls. Project AsTeR helps prioritize these calls based on their level of emergency. Instead of being directly connected to an operator, victims are asked to briefly explain their emergency over the phone. Their responses are then converted to text and analyzed to extract key information, such as the number of victims, type of emergency and location. AsTeR then provides first responders with a map identifying areas with high levels of emergency based on the number of people involved and the type of injuries.
- **Healios (North America)** – Healios can provide victims of natural disasters accessible, high-quality mental healthcare by streamlining the process for case workers to connect with survivors who may be struggling after a traumatic experience. By leveraging the IBM Watson platform, Healios can provide high-quality mental healthcare at scale by way of a mobile application, compatible with both iOS and Android. Through its approachable user experience, Healios aims to revolutionize the way all people perceive and treat their mental health.
- **Prometeo (Europe)** – Currently there are not individualized strategies and policies to help protect firefighters from the cumulative effect of smoke and toxic substances that are inhaled while they're on duty. Prometeo is a cognitive platform that collects data from IoT sensors worn by firefighters and sends it to Watson Studio, a Watson Machine Learning service, with professionals to monitor their health in real time, detect trends, and recommend intervention.
- **Rove (North America)** – Project Rove is an emergency response solution that connects responders to victims deemed to be most in need. Natural language processing and crowdsourced SMS messaging first attempts to organize victim health, food, and hygiene needs by priority and location. Rove then groups and highlights at-risk victims on an interactive web dashboard. Lastly, real-time satellite imagery analysis enables rescue workers to quickly reach victims by generating routes avoiding damaged buildings and roads.
- **Sparrow Platform (Asia Pacific)** – Sparrow Platform is an open-source ecosystem that can ensure

medical and psychological preparedness, well-being, and recovery. By leveraging AI, IoT, mesh networks, and cloud, Sparrow enables ubiquitous access to medical help, medical records, information and alerts during and after disasters. For users, Sparrow is a conversational AI that is accessible through many devices or chat/social apps, with or without internet connectivity. It can act as the user's single point of connection with doctors across the world, information from application/disaster management platforms, communication channels, and more. Doctors can onboard Sparrow to help those in need, and developers can create 'Sparrow Applets' to make their new or existing apps accessible to users through Sparrow.

The global winner will be chosen by some of the most [eminent global leaders](#) in human rights, disaster response, business, and technology, including former President Bill Clinton.

The winning solution will be further developed and deployed via IBM Code and Response, an initiative in collaboration with some of the world's leading disaster, technology, and human rights organizations including: United Nations Office for Disaster Risk Reduction, Clinton Foundation and Clinton Global Initiative University, The Linux Foundation, AT&T, FirstNet Authority, Consumer Technology Association Foundation, and Partnership for Inclusive Disaster Strategies. These innovative organizations and agencies are helping to equip developers – ranging from academia to enterprise – with the tools to address pressing societal needs by:

- Providing developers with important knowledge from the field;
- Co-hosting events to harness modern, emerging, and open source technologies;
- Assisting with the testing of potential solutions; and/or
- Connecting technologists to affected groups in preparedness, response and recovery efforts.

With the insights and resources from the Code and Response ecosystem, developers have the ability to make a real difference in the world. For example, Code and Response is currently piloting [Project Owl](#), the winning solution from Call for Code 2018, in regions recently affected by natural disasters, including Puerto Rico and Houston, Texas.

"While climate change and natural hazards place a greater burden on low and middle-income countries, this problem is not just confined to the developing world. We must all find opportunities to transform our communities and societies," said Mami Mizutori, Special Representative of the UN Secretary-General (SRSG), who served as an eminent judge for this year's challenge. "I want to commend the participants in this year's Call for Code Global Challenge for their ingenuity and commitment to using tech for good. I

believe these ideas hold immense potential for empowering local communities around the world to build resilience in the face of disaster risk."

The Call for Code Global Prize recipient will be announced on October 12, 2019 at the Code and Response Celebration at the United Nations Delegates Dining Room in New York City. The winning team will receive a cash prize of USD \$200,000 and support from IBM, The Linux Foundation, and other partners interested in turning the winning idea into a real-world, open source deployment to benefit communities in need.

About Call for Code Global Challenge

Developers have revolutionized the way people live and interact with virtually everyone and everything. Where most people see challenges, developers see possibilities. That's why David Clark Cause launched [Call for Code](#) in 2018 alongside Founding Partner IBM. This five-year, \$30 million global initiative is a rallying cry to developers to use their skills and mastery of the latest technologies, and to create new ones, to drive positive and long-lasting change across the world with their code. Call for Code global winning solutions, among others, are further developed and deployed via IBM's Code and Response initiative.

About IBM's Code and Response Initiative

[Code and Response](#) is a \$25 million, four-year deployment initiative to put open source technologies developed as part of coding challenges—such as Call for Code—in the communities where they are needed most. Code and Response aims to provide resources to build, fortify, test, and implement solutions at scale. The initiative is supported by IBMers as part of the IBM Corporate Service Corps, as well as government and multinational NGO partners to put those technologies to work to help save lives.

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¹ AP-NORC poll conducted August 15-19, 2019: "[Is the Weather Getting Worse?](#)"

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<https://newsroom.ibm.com/2019-09-17-Top-five-open-source-powered-solutions-to-mitigate-the-impact-of-natural-disasters-announced-as-finalists-in-Call-for-Code-global-coding-challenge>