EENA Case Study

What Internet Companies can do
in Emergency and Crisis situations

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Authors and contributors to this document

Name	Organisation
Iratxe Gomez Susaeta	EENA
Adam Fried and Julie Mossler	Waze
Tom Tarantino	Twitter
Monica Desai, Carolina Rossini and Graeme Burrows	Facebook
Sims Witherspoon	Google's Crisis Response team (on behalf of)
Cristina Lumbreras	EENA

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Avenue de la Toison d'Or 79, Brussels, Belgium
+32/2.534.97.89 | info@eena.org

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1   Executive Summary

The way mainstream Internet Companies have been supporting Public Safety has interested EENA for some time now, and we're doing our best to learn from and disseminate the great work they are doing, through workshops, conferences and more.

We have produced this case study about how they can and do help in emergency and crisis situations, primarily for an audience of Emergency Services and Public Authorities, and we've reached out to several organisations for their contributions.

In this case study, you will find the services & technology that are available, and guidelines on how Emergency and Crisis Response organisations could use them, with relevant examples and use cases; also, future work and recommendations are provided.

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2   Introduction

It is undeniable that social networks, apps, and other internet tools and channels are increasingly used every day by people of all ages. Using those mainstream tools to educate and inform about emergency and crisis situations was the logic path to follow, and the reality is that nowadays in emergency and crisis situations people privilege such channels to look for essential information, communicate with family and friends and more.

With more and more Internet Companies allocating resources to support public safety and crisis response, the amount and quality of the services and solutions they provide keeps improving. However, it is worth mentioning that most of these efforts are done in collaboration with public safety organisations, public authorities and NGOs.

You have probably heard about the Facebook Safety Check[1] or Google People Finder[2] features, or that Twitter has undoubtedly become a key communication tool for many organisations, but you may not be aware of how the Waze Connected Citizens Programme[3] is helping public authorities, or not know about the Airbnb Disaster Response Program[4], or the new SOS Alert features from Google[5], to name but a few.
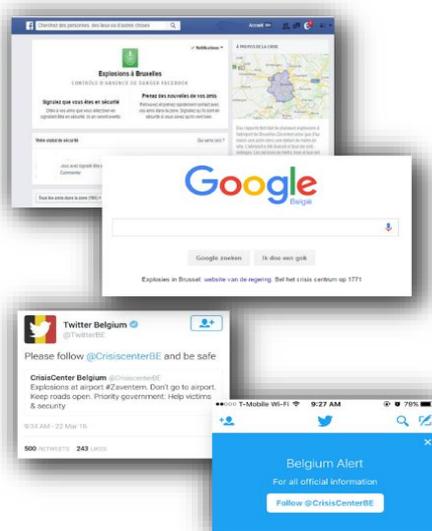
Brussels Bombings 2016: Examples of Facebook, Google and Twitter support

Emergency services need to make people aware of upcoming and ongoing emergency and crisis situations, by providing official and of course verified information through as many channels as possible, and they also need to be able to retrieve information that could be key in their response / recovery operations. With the availability of internet services that can help in finding people, providing safe shelter, and even safer transport during disasters, the work of public safety organisations can be made easier too, as long as there is a good coordination and communication between all stakeholders.

In the next sections of these documents we will provide an overview of some of the mainstream services and solutions that are available and how they can help emergency and crisis response organisations, with examples showing how and when they have or can be used. We will also look into future evolutions of some of those technologies, and of course provide recommendations for different stakeholders.

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[1] https://www.facebook.com/about/safetycheck/

[2] https://google.org/personfinder/global/home.html

[3] https://www.waze.com/en/ccp

[4] https://www.airbnbcitizen.com/disaster-response/

[5] https://support.google.com/sosalerts

3   Services & Technology

During an emergency and crisis situation, citizens and authorities require first information about what is going on, and based on the most recent emergency and crisis situations, social media channels are privileged for doing so (emergency services nowadays use mostly Twitter, Facebook or specific apps to quickly inform citizens and visitors).

While the situation is active, other resources are needed too:
- Amplification of key official information and provision of guidance using as many channels as possible (including Twitter, Facebook)
- Relevant traffic and transport information (i.e. through Waze)
- Mapping resources (i.e. location of shelters in Google Crisis Map)
- Other crowdsourcing efforts with regards to accommodation and transport (i.e. Airbnb, Waze, Facebook, Uber…)
- Fight rumours and hoaxes
- Etc.

Let's analyse how each of these aspects can be solved with the help of Internet Companies.

3.1   What is available

The **Waze Connected Citizens Program**[6] offers real-time information on crashes and major traffic events to assist Public Authorities in their life saving efforts, through their Connected Citizens data exchange program. WAZE provides real-time, anonymous, proprietary incident and slow-down information directly from the source: drivers themselves (the *Wazers*). PARTNERS provide real-time and advance information on government-reported construction, crash and road closure data.

Twitter provides survivors, responders, government, and news organizations with a real time, interactive media platform. During a crisis this platform can and is used as a means to broadcast critical information, gather greater situational awareness, and communicate among affected populations in real time. Additionally, Twitter can provide a window into events happening around the globe, facilitating communication between the general population --who wants to support the response effort-- and the affected locations and agencies. By working with official government, first responder and NGO Twitter feeds in a crisis, Twitter can also help vulnerable populations differentiate between genuine resources and sources of information and the fakes/scams that so often spring up following emergency situations.

For **Facebook**, there are two principles they think about when talking about Facebook's value after a disaster or to support the community in cases of emergency or crisis situations. The first is information as aid - the idea that immediately following a disaster, people affected, and first responders desperately need information. This can be information about where there is danger or safety, or information about friends and family. The second principle is this idea that Community Resilience - the ability for communities to bounce back quickly recover from disaster - is rooted not in physical infrastructure, but in social connections. Finally, they develop programs, best uses and practices for their tools, and partnerships to support governments and disaster response/relief organizations to better communicate before, during, and after a disaster. In this sense, they contribute with:

- Facebook's platform tools like Pages, Groups, and Events can help connect communities and governments before, during, and after an incident. Public Authorities can access and use these tools through their accounts on Facebook.

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[6] https://www.waze.com/en/ccp and https://goo.gl/ASqCoi

- A new center for Crisis Response on Facebook[7], launched in September 2017, where people can find more information about recent crises and access their crisis response tools – Safety Check, Community Help, crisis-related content from public posts (Articles, Photos and Videos) and more – all in one place.
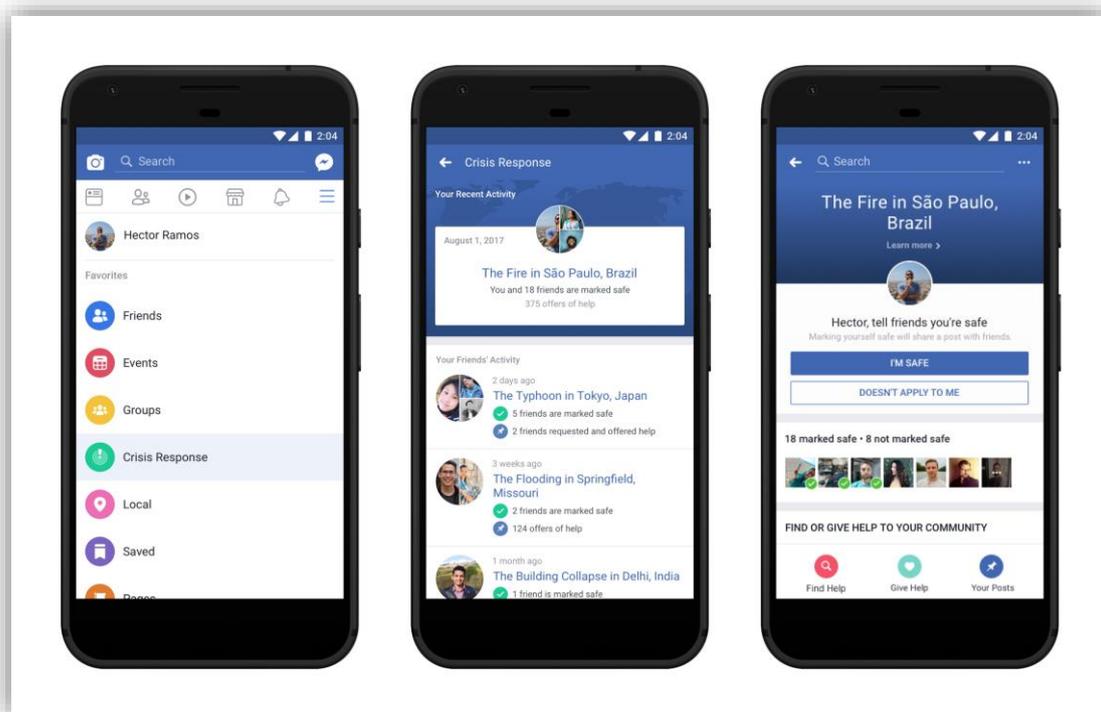
- Safety Check[8] is a convenient way for people to connect with friends and family during a crisis. When a lot of people post about an incident from the affected area, they may be invited to mark themselves safe through Safety Check

Police in Munich shared Safety Check on twitter after the 2016 shootings [9]

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[7] https://newsroom.fb.com/news/2017/09/a-new-center-for-crisis-response-on-facebook/
[8] https://www.facebook.com/about/safetycheck/
[9] https://twitter.com/PolizeiMuenchen/status/756578993705484289

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- With Community Help people can find and give help, and message others directly to connect after a crisis. Posts can be viewed by category and location, making it easier for people to find the help they need after Safety Check has been activated (Community Help is available for any incident that Safety Check launches).
- In the hours immediately after a crisis, information is scarce. Because of their work on Safety Check, they are in regular contact with crisis response organizations, who told them Facebook was in a unique position to help because the activity on Facebook could be a powerful signal about what's happening on the ground in the hours after a crisis (when little is known). For this reason, they introduced disaster maps that use aggregated, de-identified Facebook data to help organizations address the critical gap in information they often face when responding to natural disasters. This initiative is the product of close work with UNICEF, the International Federation of the Red Cross and Red Crescent Societies, the World Food Programme, and other organizations.
- They launched AMBER Alerts on Facebook in 2011 to help families and authorities successfully recover missing children and have since expanded the program to over 12 countries (the U.S., Canada, the Netherlands, South Korea, the UK, Greece, Malaysia, Taiwan, Mexico, Malta, Jamaica and Luxembourg.) People in a designated search area where local law enforcement has activated an AMBER Alert, will see the alert in their News Feed. The alert includes a photo of the missing child, a description, the location of the abduction, and any other pertinent, available information. Users can share the alert with friends to spread awareness, tapping into an organic desire to help. We know the chances of finding a missing child increase when more people are on the lookout, especially in the critical first hours. Our goal is to help get these alerts out quickly to the people who are in the best position to help.
- Suicide prevention tools have been available on Facebook in the US for more than 10 years and were developed in collaboration with mental health organizations such as Save.org, National Suicide Prevention Lifeline, Forefront and Crisis Text Line, and with input from people who have personal experience thinking about or attempting suicide. In 2016, they expanded the availability of the tools globally — with the help of over 70 partners around the world[10] — and improved how they work based on new technology and feedback from the community. In March 2017,[11] they also announced that we had integrated these suicide prevention tools to help people in real time on Facebook Live.

During a crisis, **Google** works with local authorities and first responders to help disseminate critical information and resources through Google's products, people and funding. Google's products aim to provide the most relevant, credible, actionable information to help people stay safe and informed.

For instance, SOS Alerts are a set of features in Google Search and Maps that activate during major natural, manmade, or humanitarian disasters to connect people with news, maps, and whenever available, updates from local authorities, emergency resources, donation opportunities, and more - all organized in one place for easy access and sharing. Google has multiple products that aim to help people during a crisis, and they are constantly working to improve them. Additionally, Google supports humanitarian organizations through Google.org, Google's philanthropy. Google.org leverages both funding and volunteers to help nonprofits support and rebuild impacted communities.

3.2 How can Emergency and Crisis Response organisations use them

3.2.1 Twitter

Twitter is an open media platform, free to anyone or any agency who wants to register for an account at www.twitter.com or through the Twitter App. Additionally, many can receive twitter content via sms by texting the local Twitter SMS short code[12].

While Twitter does actively work with NGOs and First Response agencies to ensure that they can make the most out of the platform in a crisis, what they have to offer is entirely contained within the Twitter service. However, through partnerships with developers, local NGOs and agencies can build enhanced capabilities for alerting and raising money through their advanced Direct Messaging API.

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[10] https://www.facebook.com/help/103883219702654
[11] https://newsroom.fb.com/news/2017/03/building-a-safer-community-with-new-suicide-prevention-tools/
[12] https://support.twitter.com/articles/20170024

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The Twitter Public Policy Team regularly trains NGOs and Government Agencies[13] on how to best use Twitter in a crisis. For example, before Hurricane Patricia made landfall in Mexico, Twitter worked with the President's office to ensure that all critical information from the government was being tweeted from one central account. They then used tools on the platform to direct anyone who opened the Twitter App in Mexico to the account that was tweeting official information. They also worked with a partner in the media to amplify that content, ensuring that critical crisis related information was seen by the people who would be most affected. This process is replicated regionally[14] as crisis and natural disasters develop.

3.2.2 Waze

All a Public Authority needs to do is to complete their online application for the Connected Citizens Program (CCP)[15]

Waze recently partnered with EENA through the CCP program to directly support emergency service providers throughout Europe, and together we are running a pilot project involving emergency response organisations from Austria, France and Italy: Retrieving incident information from Waze, informing Wazers of ongoing incidents affecting traffic, and using Waze routing capabilities for emergency vehicle dispatching, in order to reduce response times.
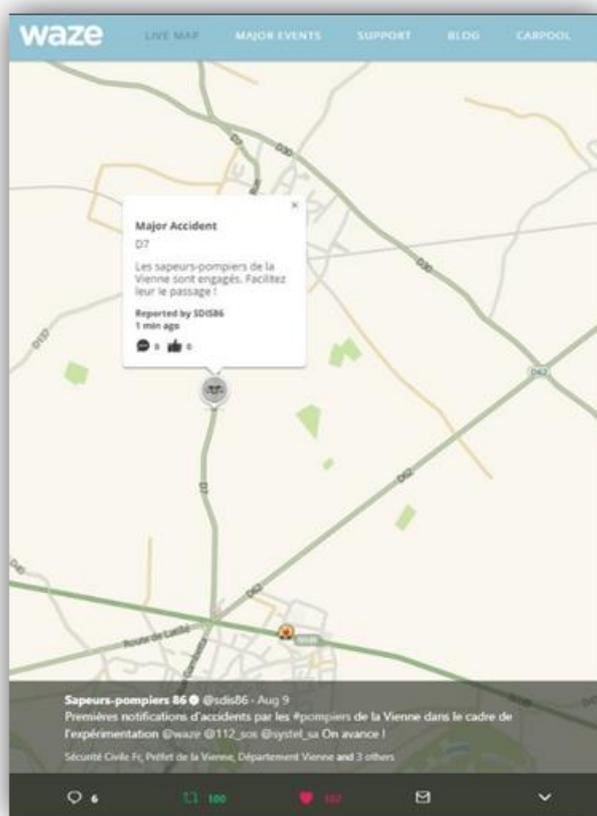
Waze used for public communication by French Firefighters at SDIS86[16]

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13 https://blog.twitter.com/official/en_us/a/2016/tweettotransform-using-twitter-to-save-lives.html
14 https://blog.twitter.com/official/en_us/a/2016/twitter-for-crisis-and-disaster-relief.html
15 https://www.waze.com/en/forms/ccp
16 https://twitter.com/sdis86/status/895276010291290112

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During major weather emergencies[17] like Hurricanes or Cyclones, Waze partners work together with the Waze Map Editor Community and Waze HQ to upload critical closure and shelter information to the Waze map, and as a layer of the Google Crisis Map.
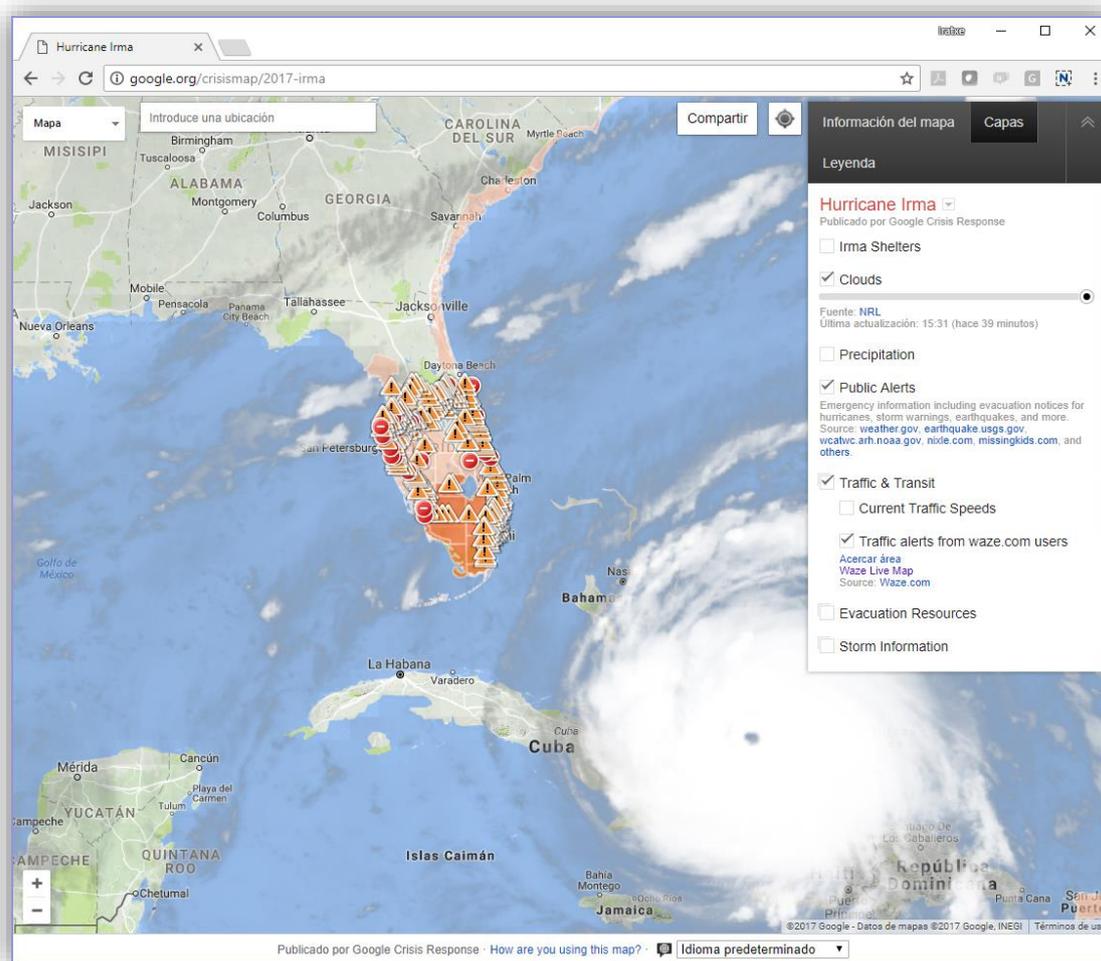
Waze traffic data as a layer in the Google Crisis Map of Hurricane Irma.

Waze work with 3rd parties who provide additional tools for their partners to analyze and respond to Waze data. Some of those are working with the EENA pilot sites to help ingest and analyze Waze data for first responders. Their goal with these partnerships is to meet their partners where they are and help them leverage Waze data with the tools they're already using, for example through their global partnership with Esri[18] and their mapping services.

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[17] https://goo.gl/Hdq5u3

[18] http://go.esri.com/waze

3.2.3 Facebook

Public authorities all over the world use Facebook Pages and Events to keep their communities informed during a disaster and to hear from those affected.

Safety Check, Community Help, and tools like Pages and Events can be accessed and used by anyone on Facebook. Disaster Maps is a new initiative that they are starting with UNICEF, the International Federation of the Red Cross and Red Crescent Societies, and the World Food Programme as beta partners. As they work on scaling their disaster maps offering they are building in tools to allow public authorities to access the maps.

The Suicide Prevention program involves a series of experts and steps. First, when someone reports a suicidal post, they have a 24/7 team trained by suicide prevention experts, who reviews the post and escalate it to authorities if there is imminent danger. Their community can also report any distressing content to them. Facebook's operations team has people working around the world, 24/7, who review any reports that come in related to potential suicides. Their team prioritize the most serious reports, like self-injury, and send help and resources to those in distress. Facebook has the ability to escalate imminent threats of suicide, however their operation teams are required to follow very strict guidelines that outline when this is necessary. For an effective service, Facebook would need to have the right mechanisms and agreements in place to share information with the relevant public safety organisations worldwide.

Finally, regarding AMBER alerts (or equivalent child abduction alerting systems), local law enforcement can work with Facebook representatives in their country to launch and activate AMBER Alerts.

Facebook is a partnership based company they work and actively involve experts and partners in all their crisis related initiatives.

On Safety Check, Facebook works with two global crisis reporting agencies – NC4 and iJET International – to find out about incidents globally. For Safety Check to activate, for instance, two things need to happen:

- First, global crisis reporting agencies NC4 and iJET International alert Facebook that an incident has occurred and give it a title, and they begin monitoring for posts about the incident in the area.
- Second, if a lot of people are talking about the incident, they may be prompted to mark themselves safe, and can invite others to do the same.

These organizations provide a description of the incident that they display for people on Facebook.

For Disaster Maps, they are working with 3 beta partners -IFRC, UNICEF, and the World Food Programme to design and scale the program.

And within their Suicide Prevention, they have developed and solidify decade long partnerships with mental health organizations such as Save.org, National Suicide Prevention Lifeline, Forefront and Crisis Text Line, and more recently with the help of over 70 partners around the world.

For AMBER Alerts, Facebook partners with the National Center for Missing and Exploited Children in the US to distribute AMBER Alerts to the Facebook community. They have since expanded the program working with local law enforcement agencies in over 12 countries (the U.S., Canada, the Netherlands, South Korea, the UK, Greece, Malaysia, Taiwan, Mexico, Malta, Jamaica and Luxembourg).

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3.2.4 Google

Public authorities can make use of Google crisis response tools in a variety of ways. First, by keeping their official communication channels (website, twitter, etc.) up to date with the latest information they want to share about a crisis. Some Google features, such as SOS Alerts, link to information from these sources, so it is best to ensure they display what authorities want the community to know. Google then becomes a platform where authorities can share their message with a broader audience. Alerting agencies can output alerts in the CAP format[19] to make them available to Search and Feed via Public Alerts. And lastly, public authorities can consider using Google Posts[20] to add their content directly to Google Search.

Google partnerships with organizations and government agencies that are on the front lines of relief efforts—including the Red Cross, the Federal Emergency Management Agency, the Philippine Atmospheric, Geophysical and Astronomical Services Administration, and many other third-party content providers—enable emergency alerts, public safety information, and other timely material to be distributed through Google products. Google is looking to add more partners that can provide helpful information[21].

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[19] https://developers.google.com/public-alerts/reference/google-cap-requirements
[20] https://posts.withgoogle.com/us
[21] Governments, local authorities or other official crisis content-providers can also engage directly with Google's Partnerships team by filling out this form[21] and Crisis Response team by emailing crisis-response-external@google.com.

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4   Examples from recent crisis situations

The following screen captures show how help was provided in specific tragic events in Europe and beyond:

4.1   Big fires

- We've had a terrible wildfire season in 2017, and also a terrible fire in the Grenfell Tower (London)
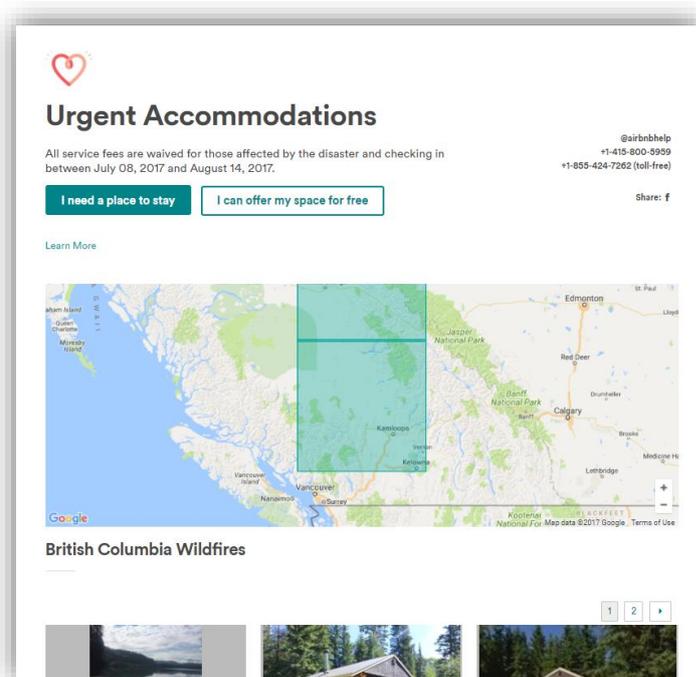
Airbnb disaster response tool: British Columbia Wildfires[22]
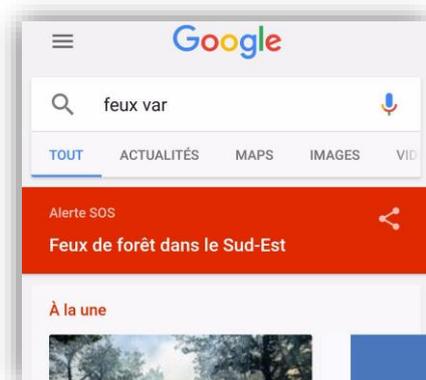
Google SOS Alert for Wildfires in Southern France[23]

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22 https://www.airbnb.com/disaster/bcwildfires
23 https://twitter.com/@Nico_MSGU30

4.2   Terrorist attacks

- In the last few months, Europe has suffered terrorist attacks in many cities.

Twitter Spain pinned tweet after Barcelona attack
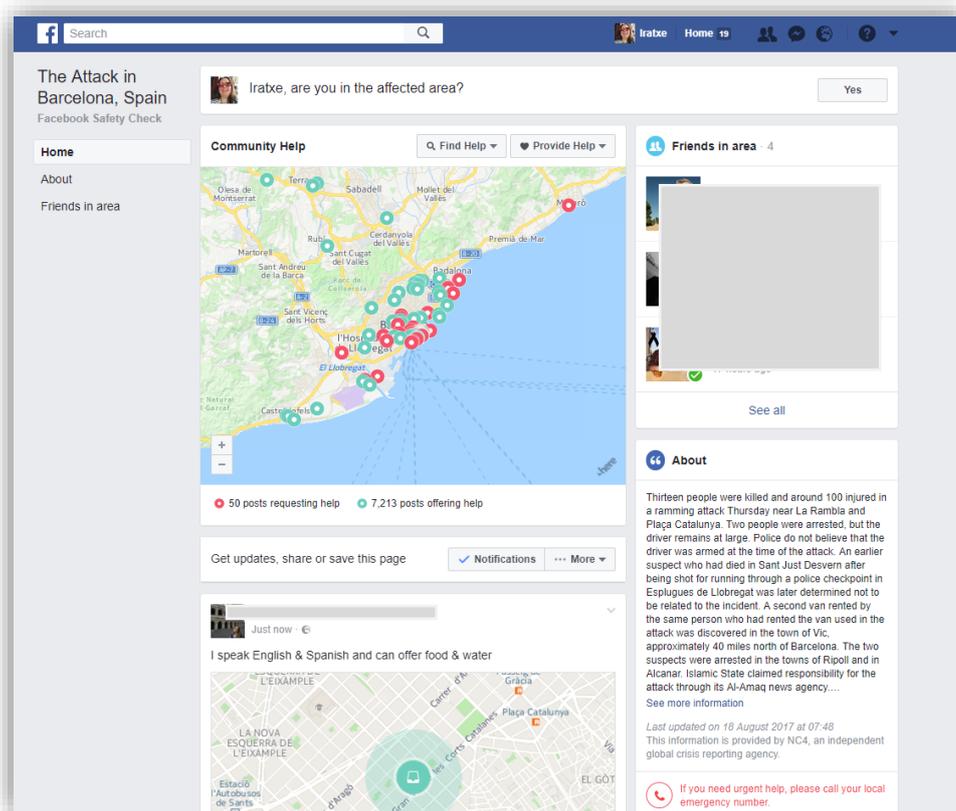
Facebook Safety Check & Community Help for Barcelona attack[24]

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24 https://www.facebook.com/safetycheck/the-attack-in-barcelona-spain-aug17-2017/home/

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4.3 Natural Disasters

- The hurricane season has been extremely hard too: Harvey, Irma, Ophelia…
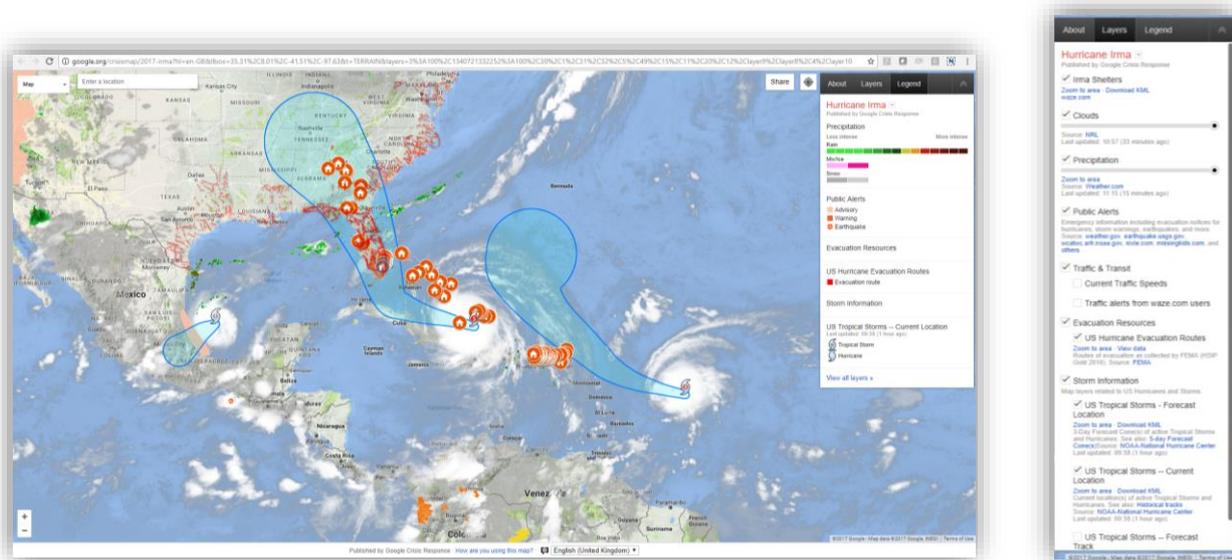
Google Crisis Map of Hurricane Irma[25]
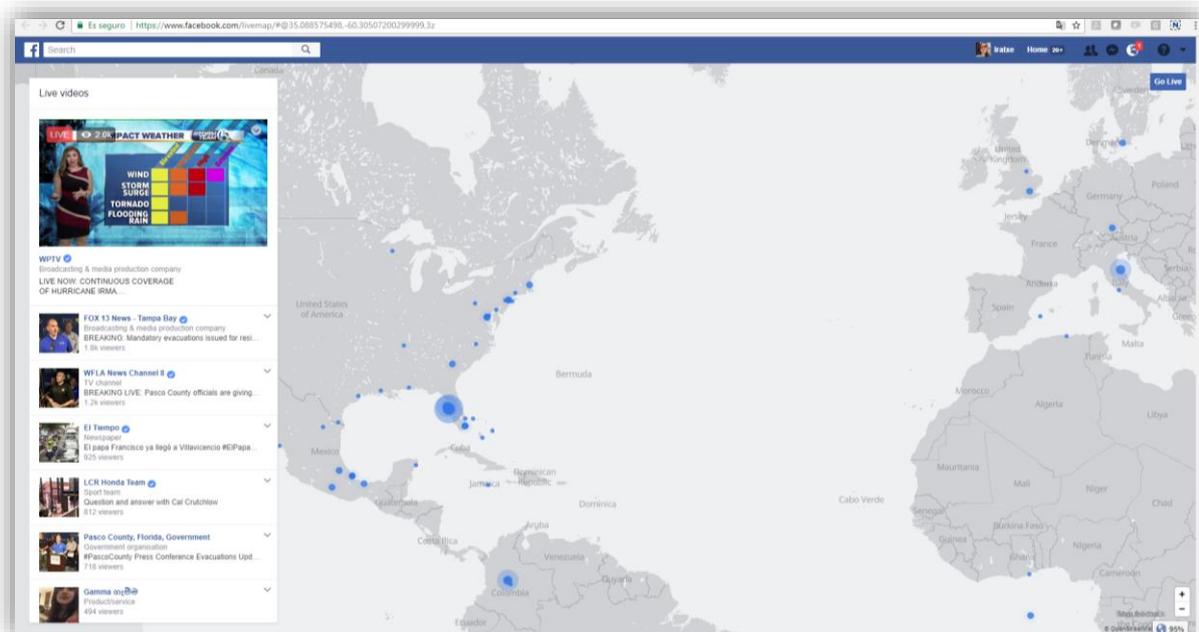
Facebook Live map during Hurricane IRMA[26]

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[25] https://goo.gl/HbNvBZ

[26] https://www.facebook.com/livemap/#@35.088575498,-60.30507200299999,3z

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- Floods, City of Santa Barbara - Flash Flood Disaster Area Maps - January 2018

The County of Santa Barbara experienced in January 2018 the Thomas Fire, California's largest wildfire on record. This was followed by a heavy rainstorm that triggered flash floods, landslides resulting in road closures and impeding evacuations, search, rescue and recovery efforts. Maps and apps were redirecting people to alternate routes, however, all roads and US 101 major freeway were blocked by walls of mud, trees, boulders and debris rendering all of south Santa Barbara County impassable even by emergency personnel.

City of Santa Barbara Police Department Community Services Sergeant and Public Information Officer reached out to Google for help facilitating immediate updated mapping and information for the public and emergency responders. The City provided a list of street closures and Google activated SOS Alerts, and updated Waze and Google Maps to assist with traffic mitigation. Google also provided an additional updated hi-resolution map to help search and rescue teams.
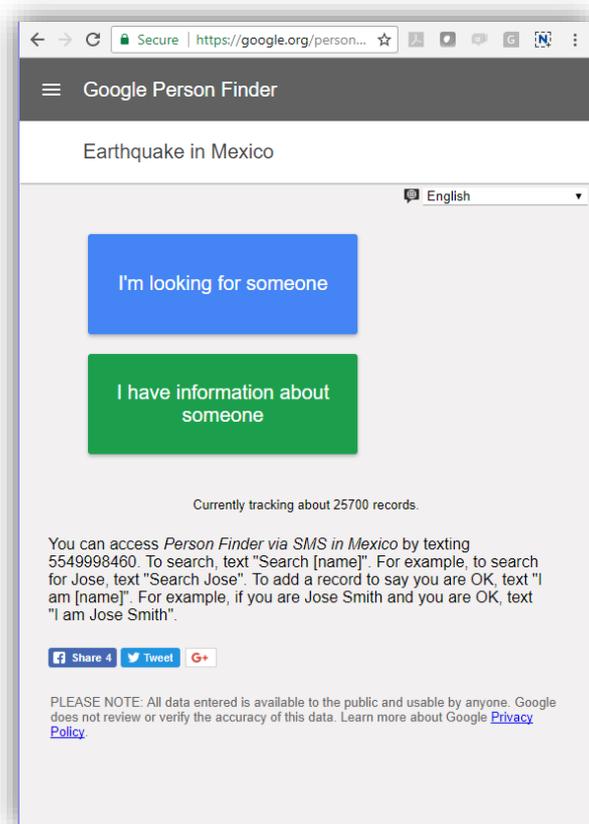
- And even Earthquakes, like the ones in Mexico

Google Person Finder after Central Mexico Earthquake[27]

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[27] https://google.org/personfinder/2017-puebla-mexico-earthquake/?lang=en

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5   Future work

We asked Internet Companies to give us some hints about their future work, but due to internal policies this is not always possible for all.

5.1   Twitter

Twitter's utility in a crisis is largely determined by what their customers find useful. They believe that the community determines what is most useful. Their role is to educate them on the possibilities, make what they are trying to do more functional, and use their tools to increase signal in crisis communication while reducing noise.

5.2   Facebook

They plan to scale the *Disaster Maps* program over the next months to allow access to organizations beyond their initial beta partners. In order to scale the disaster maps data offering they are working with their partners to optimize the types of datasets they share, how they share the datasets and for what natural disaster they activate. Once they have an understanding on how to best scale the offering they will begin opening up the application process to other organizations.

On their *Suicide Prevention* program, based on feedback from experts, they are testing a streamlined reporting process using pattern recognition in posts previously reported for suicide. This approach based on artificial intelligence will create an option to report a post about "suicide or self-injury" more prominent for potentially concerning posts like these. The initial tests will be done in the USA.

5.3   Google

Their future plan involves reaching people faster with critical information and to expand support where Google's tools would be useful. Examples include *helping detect and predict natural disasters*, such as flooding and fires, and exploring the *use of user-generated content to surface hyper-local information* (e.g. locally flooded areas) by engaging people who use our products.

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6   EENA recommendations

Stakeholders	Actions
European Authorities	Define harmonised rules for the prosecution of wrongdoers using tools provided by Internet Companies for emergency and crisis response, i.e. by defining common mechanisms for quickly and effectively prosecuting users providing fake or abusive content that could affect public safety.
National / Regional Authorities	Establish frameworks for collaboration between emergency / crisis centres and internet companies for emergency and crisis situations
Emergency services	Work closely with Internet companies and integrators for stablishing direct channels for public safety and security purposes (i.e. public warning, suicide prevention, disaster response…)
Internet companies	Collaborate with public authorities to promote the use of available services for public safety and security and develop new ones together.

7   Additional links

Google Crisis Response

There are several pages describing overall services offered by the Google Crisis Response team, summarized in the following: https://www.google.org/our-work/crisis-response/

The description of the SOS Alerts in Search and Maps, and Public Alerts can be found here:
- https://crisisresponse.google/
- https://www.blog.google/products/search/helping-people-crisis/

Other Crisis Response features are described here:
- Google Person Finder: https://google.org/personfinder/global/home.html
- Google Crisis Map: https://www.google.org/crisismap/weather_and_events
- Google Public Alerts: https://www.google.org/publicalerts

And of course, a very relevant feature for the location of emergency calls, the Android Emergency Location Service, is described in this blog entry: https://www.blog.google/topics/google-europe/helping-emergency-services-find-you/

AirBnB disaster response

AirBnB disaster response team has been very active in the last months, facilitating the allocation of accommodation for evacuees from disaster areas, as described here: https://www.airbnb.com/welcome/evacuees

Uber

We have seen Uber actively supporting people affected by crisis situations, such as the ones affected by Hurricane Harvey in Texas: https://www.uber.com/blog/austin/hurricane-harvey-relief-efforts/

PayPal

Also Paypal, through their giving fund, have been setting up disaster relief campaigns, as described here: https://www.paypal.com/stories/us/helping-in-the-wake-of-hurricane-harvey

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9   Annex – Questionnaire

The following questionnaire was provided to several Internet Companies:

- *What type of technology / services does your organization offer to support Public Authorities during emergency or crisis situations?*
- *What do Public Authorities need to do to access / use such technology / services?*
- *Do you work with any 3rd party to provide these technology / services? (do you have any relevant partnership for the provision of such technology / services?)*
- *Can you provide some practical examples of successful collaboration with Public Authorities during emergency or crisis situations?*
- *Do you have a roadmap for the evolution of technology / services you can share?*
- *And last, do you have any objection to be listed as contributor to this case study?*
-

9.1   Full response provided by Facebook

The following section contains the full response provided by Facebook to our questionnaire:

1.   What type of technology / services does your organization offer to support Public Authorities during emergency or crisis situations?

There are two principles we think about when we talk about Facebook's value after a disaster or to support our community in cases of emergency or crisis situations. The first is information as aid - the idea that immediately following a disaster, people affected and first responders desperately need information. This can be information about where there is danger or safety, or information about friends and family.

The second principle is this idea that Community Resilience - the ability for communities to bounce back quickly recover from disaster - is rooted not in physical infrastructure, but in social connections.

Finally, we develop programs, best uses and practices for our tools, and partnerships to support governments and disaster response/relief organizations to better communicate before, during, and after a disaster. In this sense, we contribute with:

a. Platform tools - available to 2 billion people on Facebook:

Facebook's platform tools like Pages, Groups, and Events can help connect communities and governments before, during, and after an incident. Public Authorities can access and use these tools through their accounts on Facebook.

a.1. Pages
Facebook Pages are the foundation for a two-way communication channel between organizations, including Public Authorities, and their community. The different features of Pages — like call-to-action buttons, the ability to share videos and photos, and Notes — allow organizations like governments and disaster relief organizations to tell a robust story and have engaging and enduring interactions with the people they serve.

Pages, managed by agency staff and/or volunteers, facilitate a dialogue between agencies and the public – not just as a one-way communication tool. This dialogue helps keep the public informed and allows responders to quickly address misinformation. Organizations that keep their pages up to date build a following before disasters so that when disaster strikes, their Page will automatically be the place people turn to for information and help.

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a.2. Events

Facebook Events are a great way to bring people together, either on Facebook or in person, before, during or after a disaster. When people accept an invitation, they'll be able to participate in a conversation on the Event page, and will be reminded of the upcoming event through Facebook. Organizations and communities can use events to do the following:

- Raise awareness around disasters and prep
- Promote volunteer opportunities
- Organize responders

a.3. Groups

Facebook Groups are used to coordinate and organize different groups of people. Groups can be open, closed or secret, depending on how private a group should be. This can be an effective way to create a dedicated communication channel for family members of those affected by a disaster, or amongst first responders. Groups have been a useful tool for internal coordination among shifts and crews, and for organizing volunteers and tasks. After disaster strikes, there are many examples of communities naturally organizing in Facebook Groups, sharing information with each other, offering resources, and requesting help. Government and non-profit organizations can use groups to:

- Create public or private communication channels
- Coordinate internal tasks
- Connect group members, share documents

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b. Safety Check

Safety Check[28] is a convenient way for people to connect with friends and family during a crisis. When a lot of people post about an incident from the affected area, they may be invited to mark themselves safe through Safety Check.

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[28] https://www.facebook.com/about/safetycheck/

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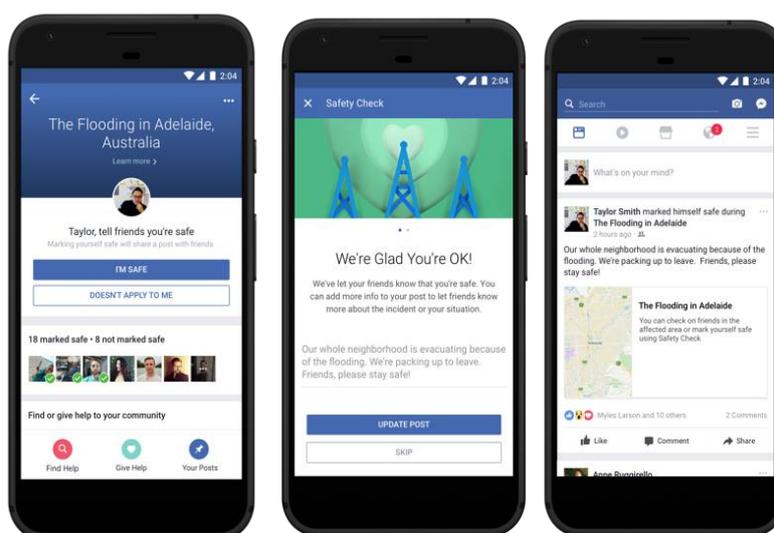
We built Safety Check to make it easy for people to connect with friends and family during an emergency or crisis situation. The 2011 earthquake and tsunami in Japan was devastating. According to the Japanese Red Cross, more than 12.5 million people were affected nationwide, and more than 400,000 people were evacuated. During that crisis, we saw how people used social media to stay connected with people they cared about. Our engineers in Japan took the first step toward improving communication during a disaster by building a message board. They launched a test of this message board a year later as the response was overwhelmingly positive. This project later evolved into Safety Check and was launched globally in 2014.

Currently, once an incident occurs, a third-party source alerts Facebook. As part of that process the incident is automatically titled in line with the third-party alert. If a lot of people in the area are talking about the incident, they may be invited to mark themselves safe, and can invite others to do the same, through Safety Check.

Public authorities have shared Safety Check links with affected communities during a disaster to encourage friends and family to check on each other on Facebook, reducing traffic on phone networks when first responders need them most. Some public authorities also encourage friends and family to use Facebook's Safety Check as a resource if disaster strikes while traveling out of country to let loved ones know they're OK.

Police in Munich shared Safety Check on twitter after the 2016 shootings [29]

c. Community Help[30]

Our belief is that the community teaches us new ways to use the platform. Facebook saw the community use Facebook to ask for and offer help, message others directly, and connect after a crisis. People use Groups and posts, like in the aftermath of the flooding in Chennai, India, in December 2015 or after the fires in Fort McMurray, Canada in May 2016, to connect and recover. We talked with experts, humanitarian relief organizations and our own in-the-field researchers to learn how to make it easier for people to find and give help after a crisis.

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[29] https://twitter.com/PolizeiMuenchen/status/756578993705484289
[30] https://newsroom.fb.com/news/2017/02/empowering-people-to-help-one-another-within-safety-check/

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With Community Help people can find and give help, and message others directly to connect after a crisis. Posts can be viewed by category and location, making it easier for people to find the help they need after Safety Check has been activated.

Community Help is available for any incident that Safety Check launches.

For the community to use Community Help after an incident, Safety Check must first be activated. For Safety Check to activate, two things need to happen:

- First, global crisis reporting agencies NC4 and iJET International alert Facebook that an incident has occurred and give it a title, and we begin monitoring for posts about the incident in the area.
- Second, if a lot of people are talking about the incident, they may be prompted to mark themselves safe, and invite others to do the same. Community Help will launch with Safety Check for any incident globally.

D. Disaster Maps

In the hours immediately after a crisis, information is scarce. Because of our work on Safety Check, we are in regular contact with crisis response organizations. They told us we were in a unique position to help because the activity on Facebook could be a powerful signal about what's happening on the ground in the hours after a crisis (when little is known).

For this reason, we introduced disaster maps that use aggregated, de-identified Facebook data to help organizations address the critical gap in information they often face when responding to natural disasters.

This initiative is the product of close work with UNICEF, the International Federation of the Red Cross and Red Crescent Societies, the World Food Programme, and other organizations.

Based on these organizations' feedback we are providing multiple types of maps during disaster response efforts, which will include aggregated location information people have chosen to share with Facebook.

- **Location density maps** show where people are located before, during and after a disaster. We can compare this information to historical records, like population estimates based on satellite images.[31] Comparing these data sets can help response organizations understand areas impacted by a natural disaster.
- **Movement maps** illustrate patterns of movement between different neighborhoods or cities over a period of several hours. By understanding these patterns, response organizations can better predict where resources will be needed, gain insight into patterns of evacuation, or predict where traffic will be most congested.
- **Safety Check maps** are based on where our community uses Safety Check to notify their friends and family that they are safe during a disaster. We are using this de-identified data in aggregate to show where more or fewer people check in safe, which may help organizations understand where people are most vulnerable and where help is needed.

E. Amber Alerts[32]

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[31] https://code.facebook.com/posts/1676452492623525/connecting-the-world-with-better-maps/
[32] https://www.facebook.com/AMBERalert/

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We launched AMBER Alerts on Facebook in 2011 to help families and authorities successfully recover missing children and have since expanded the program to over 12 countries (the U.S., Canada, the Netherlands, South Korea, the UK, Greece, Malaysia, Taiwan, Mexico, Malta, Jamaica and Luxembourg.) People in a designated search area where local law enforcement has activated an AMBER Alert, will see the alert in their News Feed. The alert includes a photo of the missing child, a description, the location of the abduction, and

any other pertinent, available information. Users can share the alert with friends to spread awareness, tapping into an organic desire to help. We know the chances of finding a missing child increase when more people are on the lookout, especially in the critical first hours. Our goal is to help get these alerts out quickly to the people who are in the best position to help.

F. Suicide Prevention

People come to Facebook to share what matters to them with family and friends. We are a community where people look out for one another. The conversations that happen here often mirror offline conversations. In instances when someone shares distressing content about self-injury or suicide, we want to be sure the person posting, as well as their friends and family members, have access to tools and resources for support. Suicide prevention is one way we're working to build a safer community on Facebook. With the help of our expert partners and people's friends and family members on Facebook, we're hopeful people will feel more supported over time.

Suicide prevention tools have been available on Facebook for more than 10 years and were developed in collaboration with mental health organizations such as Save.org, National Suicide Prevention Lifeline, Forefront and Crisis Text Line, and with input from people who have personal experience thinking about or attempting suicide.

In 2016, we expanded the availability of the tools globally — with the help of over 70 partners around the world[33] — and improved how they work based on new technology and feedback from the community.

In March 2017,[34] we also announced that we had integrated these suicide prevention tools to help people in real time on Facebook Live.

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[33] https://www.facebook.com/help/103883219702654
[34] https://newsroom.fb.com/news/2017/03/building-a-safer-community-with-new-suicide-prevention-tools/

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- Suicide prevention experts tell us is that if someone is livestreaming and considering harming herself, what's best for her safety is to let her engage with viewers and see comments of support.
- We also think about people who are watching the video and know some people who see suicide attempts are more likely to consider suicide.
- When people report livestreams for suicide or self-injury, we will now show them and the broadcaster support tips and suicide prevention hotlines in their countries, just as we do for reported suicide or self-injury content in posts.
- We take down this content once there is no longer an opportunity to help the person and will now also provide these resources to viewers when we have to cut a stream.

We also launched a video campaign[35] with partner organizations across the globe (15 countries) to raise awareness about ways to help a friend in need. We're also testing pattern recognition to identify posts as very likely to include thoughts of suicide. Our Community Operations team will review these posts and, if appropriate, provide resources to the person who posted the content, even if someone on Facebook has not reported it yet. We are starting this limited test in the US and will continue working closely with suicide prevention experts to understand other ways we can use technology to help provide support.

We also provide, within this program live chat support from crisis support organizations through Messenger. We recently added the ability for people to connect with our crisis support partners over Messenger. Now people will see the option to message with someone in real time directly from the organization's Page or through our suicide prevention tools. Participating organizations include the National Eating Disorder Association[36] and the National Suicide Prevention Lifeline.[37] This test will expand over the next several months, ensuring the organizations can support any new volume of communication. Zendesk donated some of the company's backend tools to make this integration possible.
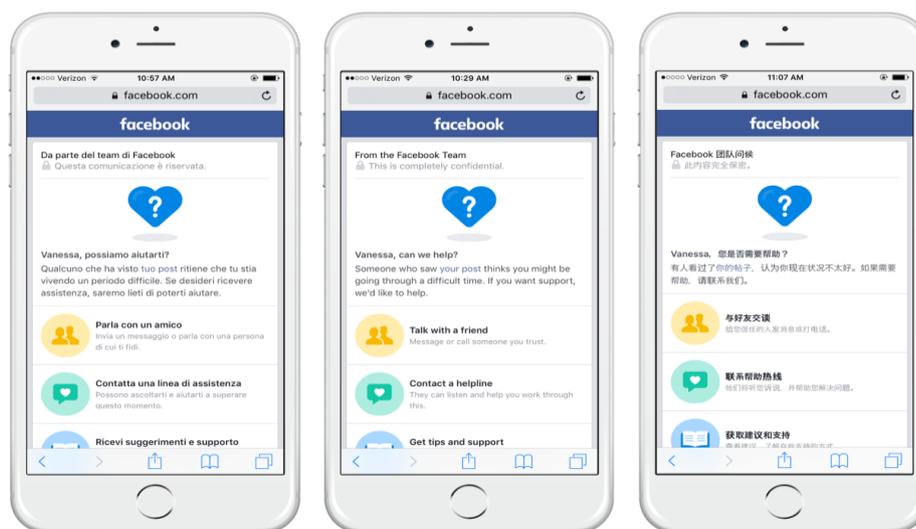
2. What do Public Authorities need to do to access / use such technology / services?

Safety Check, Community Help, and tools like Pages and Events can be accessed and used by anyone on Facebook. Disaster Maps is a new initiative that we are starting with UNICEF, the International Federation of

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[35] https://www.facebook.com/125459124158601/videos/1253402394697596/
[36] https://www.facebook.com/NationalEatingDisordersAssociation/
[37] https://www.facebook.com/800273talk/

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the Red Cross and Red Crescent Societies, and the World Food Programme as beta partners. As we work on scaling our disaster maps offering we are building in tools to allow public authorities to access the maps.

The Suicide Prevention program involves a series of experts and steps. First, when someone reports a suicidal post, we have a 24/7 team trained by suicide prevention experts, who reviews the post and escalate it to authorities if there is imminent danger. Our community can also report any distressing content to us. Facebook's operations team has people working around the world, 24/7, who review any reports that come in related to potential suicides. Our team prioritize the most serious reports, like self-injury, and send help and resources to those in distress. Facebook has the ability to escalate imminent threats of suicide, however our operation teams are required to follow very strict guidelines that outline when this is necessary.

Finally, regarding AMBER alerts, local law enforcement can work with Facebook representatives in their country to launch and activate AMBER Alerts.

3. **Do you work with any 3rd party to provide these technology / services? (do you have any relevant partnership for the provision of such technology / services?)**

Facebook is a partnership based company and we work and actively involve experts and partners in all our crisis related initiatives.

On Safety Check, Facebook works with two global crisis reporting agencies – NC4 and iJET International – to find out about incidents globally. For Safety Check to activate, for instance, two things need to happen:

- First, global crisis reporting agencies NC4 and iJET International alert Facebook that an incident has occurred and give it a title, and we begin monitoring for posts about the incident in the area.
- Second, if a lot of people are talking about the incident, they may be prompted to mark themselves safe, and can invite others to do the same.

These organizations to provide a description of the incident that we display for people on Facebook.

For Disaster Maps, we work are working with 3 beta partners -IFRC, UNICEF, and the World Food Programme to design and scale the program.

And within our Suicide Prevention, we have developed and solidify decade long partnerships:
- Suicide prevention tools have been available on Facebook for more than 10 years and were developed in collaboration with mental health organizations such as Save.org, National Suicide Prevention Lifeline, Forefront and Crisis Text Line, and with input from people who have personal experience thinking about or attempting suicide.
- In 2016, we expanded the availability of the tools globally — with the help of over 70 partners around the world.

For AMBER Alerts, Facebook partners with the National Center for Missing and Exploited Children[38] to distribute AMBER Alerts to the Facebook community. We have since expanded the program working with local law enforcement agencies in over 12 countries (the U.S., Canada, the Netherlands, South Korea, the UK, Greece, Malaysia, Taiwan, Mexico, Malta, Jamaica and Luxembourg).

4. **Can you provide some practical examples of successful collaboration with Public Authorities during emergency or crisis situations?**

Public authorities all over the world use Facebook Pages and Events to keep their communities informed during a disaster and to hear from those affected. Besides examples mentioned above, we are compiling a brochure with examples that will be publicly available shortly.

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[38] http://www.missingkids.com/AMBER

5. Do you have a roadmap for the evolution of technology / services you can share?

Yes, we plan to scale the *Disaster Maps* program over the next months to allow access to organizations beyond our initial beta partners. In order to scale the disaster maps data offering we are working with our partners to optimize the types of datasets we share, how we share the datasets and for what natural disaster we activate. Once we have an understanding on how to best scale the offering we will begin opening up the application process to other organizations.

On our *Suicide Prevention* program, based on feedback from experts, we are testing a streamlined reporting process using pattern recognition in posts previously reported for suicide. This approach based on artificial intelligence will create an option to report a post about "suicide or self-injury" more prominent for potentially concerning posts like these. The initial tests will be done in the USA.

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