How to use new media during crisis situations *Tips and tricks for citizens & public authorities*



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EXECUTIVE SUMMARY

The current document provides the final guidelines for the *Contribution of Social Media in Crisis Management* (COSMIC) project. The guidelines aim to enhance the safety and security of citizens by supporting both citizens, and public authorities, in their use of social media to complement their crisis management efforts.

The increased use of social media, in both day-to-day situations and during crisis situations has led to new opportunities with regard to crisis management. Within the current guidelines we refer to social media applications including: social networking sites, crowdsourcing applications, web-based tools and mobile applications where social media related techniques are incorporated. Advances in the use of these tools have led to barriers and challenges for the 'better use' of them by citizens and public organizations alike. Consequently, the COSMIC project has sought to support the 'best use' of social media during crises in a responsible and effective manner.

To do so, COSMIC has developed a set of key principles, what we refer to as 'AID', to be followed:

- Acknowledging the fact that civil society can be trusted;
- *Increasing* the ability of civil society to take responsibility for further guarding its own well-being;
- **Developing** the capacities of public authorities for adapting to social media use by civil society.

In accordance with the AID principles the COSMIC guidelines are split into two sets of tips and tricks for public authorities and members of the public. By public authorities we mean those governmental organizations that carry a prime responsibility for crisis management as well as those organizations that do not focus on crisis management, but that have a responsibility for crisis management in their own domain (e.g., Civil Society Organizations). Although not within the focus of this first set of tips and tricks, other organizations that find themselves involved in crisis management activities will be able to use these tips and tricks as well. The second set of guidance applies to civil society; citizens.

The central starting point for the tips and tricks for public authorities is that they should adapt to existing social media use in civil society. Furthermore, they should be aware of avoiding the temptation to '*reinvent* the wheel'. The following structure is used to present the tips and tricks:

Phase:	Tips and tricks (examples):
Pre-Crisis	Develop a social media policy and strategy.
Crisis	Monitor and adapt to emergent initiatives on social media.
Post-Crisis	Direct people to aftercare initiatives and seek feedback.

The central starting point for the tips and tricks for citizens is the fact that civil society can be trusted during crises. Past crises have shown that citizens are self-resilient and undertake different kinds of activities to aid themselves and others in crisis situations. The COSMIC tips and tricks are formulated to encompass these findings so that citizens can gain insight in how to use social media during crises in a responsible and effective way. The following structure is used to present the tips and tricks for citizens in the different roles they can have:

Citizens role:	Tips and tricks (examples):	
Preparing	Participate in disaster education and training programmes	
Seeking aid	Ask for help and disclose your location.	
Seeking information	Verify information and ensure information is trustworthy.	
Providing aid	Participate in the flow of information and the sense	
	making of data.	
Mobilizing	Create and stimulate networks.	
Recording and sharing	Ensure a broad scope and consider your communication	
	venue.	

The guidelines are based on information and knowledge collected and presented throughout the COSMIC project. The data on crises, and the use of social media therein, has been collected through a combination of methods such as desk-based research, content analysis, literature reviews, case studies and surveys. Furthermore various stakeholders, such as emergency response crews, law enforcement representatives, citizen journalists, and social activists have been engaged with throughout the COSMIC project to provide their feedback on the (working) documents, providing a review of the content and the relevance of the results.

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1 INTRODUCTION

For individuals and organizations to respond adequately to a crisis, information about the state of the situation is crucial. Receiving relevant, localised information can help to build situational awareness and inform those at the scene how to aid themselves or how to proceed with response efforts. Response efforts which can be carried out by both official emergency responders and citizens. Furthermore, timely knowledge about a crisis is necessary to activate and direct the provision of adequate, relevant and efficient aid. Whilst information is crucial, it is often the case in dynamic and complex situations that (accumulated) information is scarce. Therefore the sharing of information is key. It is crucial that emergency responders¹ at the scene share their insights as they possess or can obtain essential information about the local situation. Sharing their insights is especially relevant for citizens when they are providing aid before emergency services arrive, as their information might not yet be known elsewhere. Reporting citizens also provide other audiences (e.g., the mass media) with additional sources of information. Social media offers a public forum through which such information can be spread by and reach all relevant parties. Its additional value in comparison with traditional media is that information can be distributed extremely fast and direct, to very targeted groups. Lastly social media can take over the role of traditional media if those are no longer accessible or reliable.

The guidelines presented here are derived from information and knowledge collected and presented in the COSMIC project. The data on crises, and the use of social media therein, has been collected through a combination of methods such as desk-based research, content analysis, literature reviews, case studies, surveys, in-depth interviews and expert/stakeholder meetings. Well-known crises in the last decade have been a central focus of the research efforts. Through this mix of methods both academic as well as practical knowledge from the field has been incorporated and existing data has been supplemented with new data. Furthermore various stakeholders, such as emergency response crews, law enforcement representatives, citizen journalists, and social activists have been asked several times to provide feedback on the (working) documents, providing a check on the content and relevance of the results. The same has been done with these guidelines, ensuring them to be considered useful and accessible by the targeted group.

For further reading we refer to the COSMIC project website, where all the deliverables can be found.

1.1 KEY PRINCIPLES

During the last decade many examples have appeared of the self-resilient character of citizens during crisis and disasters. Such cases vary significantly in nature and scope and as such, can be divided into three different levels: societal, organizational and individual.² The COSMIC guidelines presented here show that it is necessary to trust civil society as the society affected by a crisis plays a significant part in response efforts. Generally there is a civic presence on the scene that can provide response agencies with the much needed localised information and which can itself provide an immediate response in the time that it can take response agencies to arrive at a scene. Additionally, response agencies do not always have the capacity required to provide

¹ By emergency responders we mean all those who provide aid at a disaster or crisis scene immediately after the incident has taken place. As such we refer to both (professional) first responders and citizens.

² Hayley Watson, Kush Wadwha and Rachel Finn, Ioannis Kotsiopoulos and Angelos Yannopoulos, Jelle Groenendaal, Arjen Schmidt, David de Vries and Ira Helsloot. 'Report on security crises with high societal impact'. *Deliverable 1.1 of the COSMIC project*, 31 July 2013.

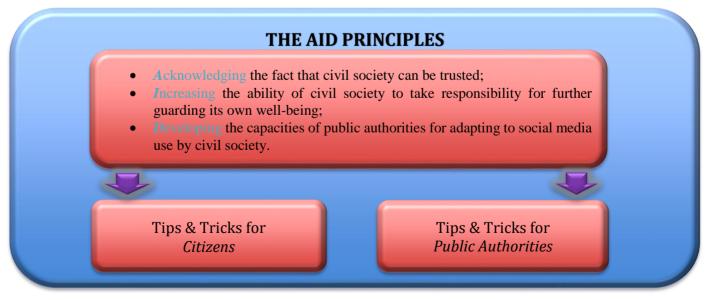
a sufficient response. As such, the self-resilience of civilians should be actively stimulated and the responsibility civilians have should be stipulated explicitly. In this respect citizens in society have to be (made) aware that the information that they disseminate during crises is "lying under a magnifier" by public organizations. Therefore citizens have to realize that during crises the function of social media changes from "entertaining" to "informing".

Simultaneously, the COSMIC guidelines advocate public authorities to adjust their behaviour with regard to social media in order to streamline their efforts to the behaviour civilians' exhibit. Mainly business and private organizations are leading the way in integrating social media techniques in their business' intelligence operations, for example using social media to target potential customers. Therefore public authorities should gather state of the art knowledge and insight into the use of social media by citizens and also in use of social media in the private sector. Furthermore, the COSMIC guidelines advocate a realistic approach to engaging and optimizing the use of social media. Citizens, for example, only prepare for those crises and disasters they perceive as urgent enough and worth preparing for, but not for crises in general³ while they are very active during and after crises. Subsequently, public authorities ought to recognise that there are limits to the extent to which civilians will adjust their normal behaviour.

As such it will also yield more effect for public authorities to organise and model their (social media) initiatives so that they connect to the way civilians use social media and behave regarding crises.

These insights can be translated in the following three key principles, otherwise referred to as AID:

- Acknowledging the fact that civil society can be trusted;
- *Increasing* the ability of civil society to take responsibility for further guarding its own well-being;
- *Developing* the capacities of public authorities for adapting to social media use by civil society.



³ Helsloot, I. and A.G.W. Ruitenberg, 'Zelfredzaamheid van burgers bij rampen en zware ongevallen'. 2004. COT.

1.2 How the guidelines will work

The COSMIC guidelines contain two specific sets of tips and tricks regarding the use of social media that differ in the type of actor that they address, the first of which is directed at public authorities. By which we mean governmental organizations that regularly carry out tasks within crisis management as well as those that are not usually involved in crisis management, but who may intentionally or unintentionally play a role in it. The former entails for example emergency services like the Police and Fire and Rescue, while the latter entails examples such as critical infrastructure providers. However, although public authorities are addressed explicitly, these guidelines also provide guidance for other organizations that find themselves involved in crisis management activities. Whether these are non-governmental organizations such as hotels or supermarkets that are not usually involved in crisis management but can play a role in it. In order to enhance readability and to make it easier to navigate the tips and tricks are organized according to different phases they apply to: pre-crisis, during the crisis and afterwards.

The second set of tips and tricks applies to civil society; citizens. It has been shown that civilians are self-resilient and undertake different kinds of activities to aid themselves and others in crisis situations⁴. Some examples include:

- Citizens will organise in groups to tackle a crisis
- Depending on the (size and type of) crisis and their place within a particular community, citizens will want to share their experiences with others
- Citizens are mostly self-resilient, and therefore do not always need immediate help
- Citizens are willing to offer or to request help

These examples show that citizens take on different roles in a crisis situation: citizen journalists, civil society activists, volunteers and emergency responders. Also important to note is that civilians only prepare for those crises that they perceive as presenting a significant and imminent threat to themselves or their relatives. When no danger is present civilians do not consider possible negative consequences of crises situations.⁵ This means that the general population often only *prepares* for a limited scope of disasters, although they will be responsive when disaster strikes. Consequently, the guidelines will focus on the '*during*' the crisis phase and provide guidance for the different types of actions – *when reporting, aiding, mobilizing, seeking information or seeking help* –that civilians can undertake. If a tip or trick is relevant for a phase other than 'during' this will be clarified in the text.

With the entire document some repetition will occur within the introductions and of tips and tricks as both sets of tips and tricks and even the sections within are meant to be able to be read independently. Furthermore, the timeframe of disasters and crises differs as there are slow onset and flash crises. The slower a disaster or crisis develops the more time there is to take action, meaning that some 'preparatory' actions can still be undertaken while the crisis or disaster is taking place. As the range of disasters and crises address is purposely held broad some tips and tricks might not apply to every disaster or crisis.

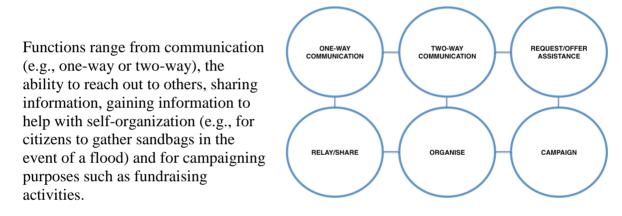
⁴ See the combined research efforts of the COSMIC project and specifically: Hayley Watson, Kush Wadwha and Rachel Finn, Ioannis Kotsiopoulos and Angelos Yannopoulos, Jelle Groenendaal, Arjen Schmidt, David de Vries and Ira Helsloot. 'Report on security crises with high societal impact'. *Deliverable 1.1 of the COSMIC project*, 31 July 2013.

⁵ Perry R. W. and M.K. Lindell, 'Understanding Citizen Response to Disasters with Implications for Terrorism'. *Journal of Contingencies and Crisis Management*, *11*(2), 2003, pp. 51–52.

First attention will be given to the functionality of new media: what they entail and how they can be used, prior to providing the guidelines. We also provide some critical insights for all users regarding the ethical, legal and social considerations with regard to using social media within crisis management.

1.3 FUNCTIONALITY OF NEW MEDIA

We consider new media as a form of computer technology that combines computing power, digital content and communication networks. Some types of new media such as social media are inherently 'social'; they enable the mass sharing of digital objects – text, visual and sound. New media thus help facilitate sharing, collaboration and connectivity between users. To be effective, they require the active participation of users to generate and share content. Within crisis management, new media includes: social networking sites, crowdsourcing applications, web-based tools and mobile applications. They can be accessed using mobile networks (e.g., 3G and 4G), by WiFi and in some cases, via SMS. Whilst applications are constantly being developed, currently, they can be seen to yield a variety of functions in crisis management.



As with any tool that aid communication within crisis management activities, it is important to note that there is no single tool that can be relied upon, for different tools yield different functions (e.g., not all tools facilitate two-way communication). There are advantages and disadvantages to each, and thus, citizens, authorities and organizations should carefully evaluate the purpose behind using a certain communication tool, the type of crisis they are dealing with, and with whom they wish to interact. Conventional information communication technologies (ICT's) such as the telephone and radio should not be considered redundant, but can be supplemented with new media applications.

NT	D • (NEW MEDIA TOOLS	TT
Name	Primary type of application	Function	How accessed
Twitter	Social networking site	One-way communication/Two-way communication/Request and offer assistance	SMS/Mobile/Web
Facebook	Social networking site	/Relay /Campaign /Organise One-way communication/Two-way communication/Request and offer assistance /Relay /Campaign /Organise	SMS/Mobile/Web
Google+	Social networking site	One-way communication/Two-way communication/Request and offer assistance /Relay /Campaign /Organise	Mobile/Web
YouTube	Social networking site	One-way communication/Two-way communication/Request and offer assistance /Relay /Campaign /Organise	Mobile/Web
Reddit	Social networking site	One-way communication/Two-way communication/Request and offer assistance /Relay /Campaign /Organise	Mobile/Web
Blog	Social networking site	One-way communication/Two-way communication/Request and offer assistance /Relay /Campaign /Organise	Mobile/Web
Google Crisis response www.google.org/ crisisresponse	Web-based applications	One-way communication/ Request and offer assistance / /Campaign /Organise	Mobile/Web
Airbnb	Web-based applications	Request and offer assistance/ Organise	Mobile/Web
AMBER alert Europe www.amberalert. eu	Crowdsourcing	One-way communication/Request and offer assistance/Relay	SMS/Mobile/Web
European- Mediterranean Seismological Centre www.emsc- csem.org/	Web tool	One-way communication/ Organise	Mobile/Web
Natuurbrandgeva ar www.natuurbran dgevaar.nl	Web tool	One-way communication/ Organise	Mobile/Web
Ushahidi	Crowdsourcing	One-way communication/Request and offer assistance/Organise	Mobile/Web/SMS
Ubalert	Web tool	One-way communication/Two-way communication/Relay/Organise	Mobile/Web
AmericaRedCross:CrisisApplications	Mobile tool	One-way communication/Request and offer assistance/ Organise/ Campaign	Mobile
Disaster Alert	Mobile tool	One-way communication/ Relay/Organise	Mobile
Earthquake	Mobile tool	One-way communication/Relay/Organise	Mobile
NL-alert	Mobile tool	One-way communication/ Organise	SMS
Red panic button	Mobile tool	One-way communication/Request assistance	Mobile

NEW MEDIA TOOLS

NOTE: This list is a selection of key tools identified in the COSMIC project as of August 2013.

1.4 ETHICAL, LEGAL AND SOCIAL ISSUES

The use of information and communication technologies during emergencies brings about some important questions regarding the safety and wellbeing of individuals and communities.

Act ethically and responsibly

The rise of mobile recording devices and the ease with which information can be shared via social media poses important questions regarding the consequences of such citizens' use of audio-visual devices (phones, cameras etc.) to record incidents.

Whilst sharing information in an emergency can contribute to response and recovery efforts, the recording of incidents that transpire during emergencies may have important consequences that threaten the safety, privacy and dignity of individuals. First, the rush for the next "newsworthy" footage, either by citizens or by professional journalists may result in physical harm to the public or individual carrying out the recording. Second, in many emergencies, both bystanders and those harmed may already be in an emotionally taxing situation whereby they will not be sufficiently equipped to protect their own privacy. In such situations, the act of recording does not only threaten an individuals' privacy but also his autonomy. Third, sharing self-recorded footage from the scene of political unrest may result in the identification of dissidents who may be engaging in legal, yet risky, behavior. Therefore it is important to avoid placing yourself or others in danger.

Make sure you yourself are safe

Social media also can make you yourself vulnerable because you may be under surveillance from unwanted sides. In order to protect yourself from undue attention of surveillance activities while using information and communication technologies to share or get access to information during emergencies and crises, there are a number of approaches you can use that are described in the present guidelines.

The digital divide

While information communication technologies, and particularly, social media are valuable sources for engaging citizens in emergency preparedness and response, and for sharing information that may help improve the effectiveness of emergency response efforts, it should be noted that a considerable proportion of society still does not have access to such technologies.

The gap between those who have access to information and communication technologies and those who do not have access to them, also called the digital divide, remains to be an important social problem in contemporary societies. Within the context of emergency response, however, such a digital divide would have important implications for the safety of those who do not have access to information and communication technologies.

In the long run, reducing the digital divide constitutes an important prerequisite for enhancing the safety of citizens during emergencies and their ability to stay resilient and involved in emergency response. In the short run, authorities should ensure that lack of access to digital and mobile technologies does not exclude individuals from key emergency response communications. This can be attained by ensuring that more conventional methods of communication such as emergency help lines remain functional and reachable during emergencies.

Be aware of unverified information

The last issue we raise here is one that is brought about by use of information communication technologies during emergencies and which concerns the dissemination of unverified or even false information.

During emergencies, online sources (fed by citizens), including social media, are becoming increasingly important sources of information for officials, response authorities, journalists and members of the public. This may particularly be the case in the wake of sudden onset crises, when information is recorded and disseminated by members of the public before official sources arrive at the affected area. The danger is that a portion of the reporting citizens adopt the 'publish and then filter' approach, thereby hardly verifying information before they share it. They expect that the readers will filter out false information after they publish it; a practise that leads to questions about the reliability of information by the public.⁶

Regardless of what is being shared and for what purpose, it is important to take measures to ensure the safe and reliable sharing of information. A point proven by cases such as the SARS outbreak in 2003, Fukushima Nuclear Plant meltdown in Japan in 2011, and the recent Ebola outbreak in 2014, in which rumors regarding unverified treatment methods and remedies circulated. The verification of content such as text, images, video etc. ensures that reliable and trust-worthy information is shared across social networks. Verification involves a critical approach to consuming and sharing information with others. Such an approach also prevents the misrepresentation of an individual and/or a community through the spread of false, incomplete or biased information.

Verification is particularly important as sometimes, false information may have cascading effects by which mass media sources also contribute to the dissemination of the false information in question.

⁶ Baruh, Lemi, Alex Papadimitriou, Zeynep Günel, Haluk Mert Bal, Yusuf Salman, Salvatore Scifo and Büşra Çildaş (2014), "Report on citizens' involvement in emergency communication", *Deliverable 4.1 of the COSMIC project*, January 2014.

2 TIPS AND TRICKS FOR PUBLIC AUTHORITIES

As citizens increasingly use social media before and during crises, public authorities need to think about how they can adapt to this development and understand how they can effectively use social media in the different phases of crisis management.

By 'public authorities that need to consider the use of social media' we first of all mean those governmental organizations that carry a prime responsibility for crisis management such as emergency services like the police, emergency medical services (EMS) and fire and rescue services. Additionally we refer to those organizations that do not focus on crisis management, but that have a responsibility for crisis management on their own domain such as municipalities or critical infrastructure providers, like public transport or water authorities.

Although these guidelines primarily address public authorities that have a responsibility for crisis management, it also provides guidance for other organizations that find themselves involved in crisis management activities. These can be non-governmental organizations that regularly carry out tasks in crisis management such as the Red Cross or private companies such as hotels or supermarkets that usually are not involved in crisis management but can still play a pivotal role in it. For example, the latter, by providing shelter, food packages or drinking water. Additionally they can be involved because they might hold responsibility for a particular type of crises (e.g. food-safety crisis).

For organizations or companies that do not focus on crisis management the tips and tricks can be used as a handbook for what to do during and after a crisis, especially in the case of flashcrises. This is due to there being a limited amount of preparation that they can be expected to perform, due to the fact that these organizations or companies do not normally carry out tasks in crisis management. Where-as public authorities that regularly carry out tasks in crisis management are expected to take extensive action in the pre-crises phase, because adequate preparation will greatly enhance their performance during a crisis.

The tips and tricks relate to different actions public authorities might undertake: monitoring, gathering and providing information and, if possible, sharing specific instructions to citizens during different phases of crisis management. The tips and tricks provide directions 'how to' and point out some concerns that should be considered.

An important starting point is that an organization should have a clear idea about their social media use: what should/should it not be used for, how and by whom. In this way they should develop a clear and concise social media strategy. The use of social media should be embedded in their wider communications strategy given that traditional communication channels still play an important role in crisis management and the use of social media can (at times) be somewhat limited. However it is equally clear that social media can provide a useful addition through opening up more communication possibilities, especially since traditional communication channels might be down or unreliable due to the crises at hand. A holistic communication strategy involving various communication channels can be an effective means of reaching different target groups and minimalize the prospect of being unable to communicate. The underlying principle of the tips and tricks presented is that public authorities should adapt to existing social media use in society and be aware of the seduction to '*reinvent* the wheel'. Furthermore, especially when considering a flash crisis, time is of the essence. By decentralising decision-making to those with direct perceptual access to the scene of the event, decision-making about crisis communication can be speeded up. Citizens, as well as other

aiding organizations or companies, can be informed quickly when first responders at the disaster site are allowed to communicate factual information immediately to those involved. A key condition is to ensure that those in the field have access to relevant information and know that they have the necessary mandate and means to gather and spread such information; social media can help facilitate this process.

2.1 PRE-CRISIS PHASE

Develop a social media strategy

To utilize social media effectively, it is important to consider what your goal is: who do you want to reach and for what purpose? Do you want to gather information to e.g. increase your or your first responders' situational awareness? Or, do you want to alert, provide information or provide action perspectives to the population or to specific groups? Or do you want to engage in sense making? Knowing your goal you can start thinking about how to go about reaching it.

Having a strategy in place for *how* and *when* organizational members will communicate via social media before and during crisis is important for effective social media use. Address **who** should communicate **what** and **when** during a crisis as not all information should be communicated directly or by communication officers. Some information belongs to the communication message of administrators and high public officials such as Mayors and elected politicians. When deciding on such matters it is important to keep in mind why and with what purpose, you are using social media.

Furthermore, in order to communicate effectively your communication channel, but also your message has to suit your audience, situation and goal. The more popular and accessible a social media application is, where the former can vary greatly on a geographic scale, the more likely it is to be used. For example, Facebook and Twitter are very popular on a global scale, whereas hi5 is particularly popular in Latin America. Keep in mind that your audience is fragmented and will use different communication channels to gather information. Subsequently, consider the content of your message with regard to the type of communication you are using; one size does not fit all. The use of the social media applications in a pre-crisis setting aids its use during crisis situations, as your followers are already familiar with it.

A special point of attention is that social media cannot and should not replace other crisis warning systems, but should be used complementary. Social media applications usually require mobile phones with Internet network access, but during crises, digital communication networks may break down which makes it impossible to use social media applications for those who are involved in a crisis situation. Therefore differentiation is the key: use both traditional and social media technologies in order to be sure that the information you want to share will reach (all) the different target groups.

Key steps:

- Determine your social media goals in relation to your crisis management activities: who do you want to reach and with what purpose.
- Compile a social media strategy that provides direction and guidance members of the organization as well as citizens:

- Why, when and how social media applications will and should be used (during a crisis) by **members of the organization** and who will handle the social media accounts.
 - Assign specific roles e.g., address who is responsible for monitoring social media coverage by citizens during crises.
 - Think about who is allowed to respond to posts on social media.
 - Decide if there is information that needs to be shared through a high-ranking official, e.g., a public officer, Mayor or elected politician.
 - The creation of a social media expert team responsible for communicating with the organization's stakeholders through social media could be of great importance.
- Why, when and how social media applications should and can be used (during a crisis) by **citizens**.
 - Determine when and how citizens can contribute via social media.
 - State that capturing pictures and sharing information should not interfere with the on-site emergency work.
 - State clearly that in case of an emergency, social media applications will not replace the emergency number.
 - Consider and address if there are exceptions, e.g., when traditional warning methods are not functioning, and how to proceed.
- Be explicit about **who** is allowed to communicate what kind of information. In essence, communication officers may be explicitly allowed to communicate factual information that is already visible for the public or journalists.
- State explicitly in the social media strategy that uncertainty and ambiguity should be accepted.
- Develop an associated social media data protection policy entailing data handling procedures; what will be done with information provided by citizens, how long will it be stored? To whom is it accessible? (*See the next tip on privacy considerations*)
 - Develop rules of conduct that ensure that images or footage captured in ways that are unethical or violate a person's privacy unacceptably are not used.

Example: Walmart is an example of a private organization extensively using new technologies during crisis situations. In particular, in the crisis of hurricane Katrina Walmart established one of the first online Emergency Contact Services to be accessed through any in-store kiosk and through its website, helping the public to locate and communicate with their friends and families. Walmart has also developed specific guidelines which are available online for both associates and customers to follow in a crisis situation.⁷



⁷ Walmart, "Media-information: Wal-mart's response to Hurricane Katrina", Walmart website, 2014. (Online) http://news.walmart.com/news-archive/2005/09/04/media-information-wal-marts-response-to-hurricane-katrina

• Consider the social media landscape of your country: explore which forms of social media are most popular and assess which platforms can be used to reach the largest audience. For example, look into statistics of social media usage per age group, and learn that Twitter is a suitable mean to reach young people in the UK, and could be used to inform them in a typical crisis, while being less suitable to reach elderly people.

Example: A simple Google search using the term "UK social media usage" provides the most recent information on the use of social networking sites in the UK.

- Use popular social media platforms (i.e., Facebook, Twitter, Google+) to increase citizens' involvement with your organization.
 - Create and start using social media accounts that are most popular amongst your target audience in an everyday situation.
 - Consult the social media analytics tools in order to identify which social media platform is most popular for your target audiences.
 - Observe how others use the social media application you are using. Ensure that you take a similar approach that fits with the tone of that application.
 - Make it clear that you will use this social media account in crisis situations.
- Consider the usefulness of interoperability between different accounts to help streamline your use of social media within crisis management. For instance, Twitter accounts can be connected to a Facebook account so that when a Tweet is sent it also appears on Facebook.
- Design and test a comprehensive risk and crisis communication strategy that highlights the interoperability of different communication systems you are choosing to use to reach your audience.
- Use analytics to track progress and adjust your strategy if needed.

Ensure privacy & data protection

Using new and social media to interact with and collect, store and use data relating to and from citizens might warrant privacy concerns. You should be aware of the right to privacy and should therefore address such issues in your strategy and associated data protection policy and investigate and implement measures to meet the national and regional policies and regulations that are relevant to your practices.

Informed consent, for example, is a key dimension of the European data protection directive. Part of ensuring a person's privacy is safeguarding personal information against misuse, through anonymisation (and pseudonymisation). Another important component of the European data protection regulation is proportionality and legitimate purpose. Proportionality is also linked to transparency, in that those collecting data should ensure they inform users if they are to use personal data for anything other than what the data was initially collected for. Transparency also helps build and improve trust in your organization and the relations you have with others. Furthermore pay attention to ownership of content by avoiding breaching copyright⁸ when sharing information through social media (or other means). Attention to

[[]Accessed: 28 September 2014]. Walmart, "Walmart's social media guidelines", Walmart website, 2014. (Online) http://corporate.walmart.com/social-media-guidelines [Accessed: 5 February 2015].

⁸ Copyright protects original work (images, website content, reports, video recordings etc.) and stops others from using it without the creator's permission.

ownership can serve to complement the development of trusting and mutually beneficial relationships between crisis managers and the public.

Examples of European policies and regulations to protect the rights of citizens include: the European Convention on Human Rights, the Charter of Fundamental Rights of the European Union and the European data protection regulation.

Key steps:

- Consider running an independent Privacy Impact Assessment (PIA) in order to ensure that applicable privacy related risks are identified and met adequately.
- Consider employing the principle of "Privacy by Design" (PbD) when designing and developing new ICT tools for crisis management purposes, to ensure that technologies are respectful of privacy considerations, which can in turn help to build trust in user's engagement with tools.

Prepare for increased communication and information flows during a crisis & take preparations to monitor these information flows

Crises are often accompanied by a much higher influx of and demand for information, while such information can be insecure and dynamic: it changes constantly, and may need to be related to many parties. Additionally the traditional communication channels might cease to be reliable during crises, leading to an increase in citizens contacting your organization through your pre-existing social media channels (e.g., Twitter and Facebook accounts).

Key steps:

- Provide back-up capacity to monitor all the information streams, requests etc.
 - Consider a possible temporary internal re-organization (of people and rotas) to be able to respond to an increase in communication via social media.
 - Consider training all staff on the know-hows of working with social media, especially those who are used to working with traditional media.
- Ensure staff access to additional mobile phones, tablets, or computers if needed.

Facilitate information sharing by first responders

First responders (EMS, police and fire service) have to be able to share the crucial information about the situation (e.g., the location and size of the disaster site) in order to advance their situational awareness and consequently the decision-making capacities of tactical commanders. For this and to be able to involve citizens and other organizations in crisis management (e.g., the local Red Cross) they need to have a mandate to communicate factual information immediately to those who are involved as well as the means to spread information easily and quickly.

Key steps:

• Equip first responders with smartphones that have access to Internet and social media applications.

- Create an infrastructure in which information from social media applications can be shared with front line first responders and vice versa.
- Make explicit how first responders should use the information from social media applications.
- Make sure that all first responders know what information they are allowed to share with citizens.
- Make explicit that time is of essence when it comes to communication with the general public.
- Take into account privacy issues and address these in an appropriate policy and associated social media strategy.

Establish collaboration and communication channels with relevant organizations like (other) public authorities before a crisis

The development of strong relations, or partnerships, with other organizations that will or might be involved in the crisis management efforts before a crisis will better enable you to gather and disseminate accurate and consistent messages from credible sources during a crisis.

Key steps:

- Identify and build partnerships with the most relevant public authorities, local businesses, critical infrastructure providers, community representatives etc.
- Lay the groundwork: determine your goals and expectations (e.g., common agreed hashtags, key points of contact etc.).
- Build trust through meetings and regular contact.
- Get an oversight of the most preferred communication channels of each organization.

Practice the relation between internal and external communication processes regularly

Find out how information from the outside can flow effectively to those inside the organization who may benefit from it.

Key steps:

- Discuss with first responders what they would like to know when dispatched to, or at work, at the scene of the event and examine whether this information can be obtained from social media. However, be aware of the danger of information overload. Do not provide emergency responders with too much information derived from social media rather this should be condensed into information that is essential for operational activities.
- Examine how information from inside the organization can be communicated in a timely manner to those outside who are involved in the crisis response.
- Exercise regularly the communication processes, e.g., by tabletop exercises, simulations or Twitter exercises. Use exercises to improve your social media strategy and training.

Advertise!

The more followers you have the greater the impact you can have, so make use of different communication channels to promote your presence on social media. As a public organization be aware that you have the ability to reach your audience via the services you provide to the general public. Also, the use of the social media applications in a pre-crisis setting aids its use during crisis situations, as your followers are already familiar with it.

However, even without many followers you can make a great impact. Firstly because you can utilize the networks of others. Secondly, using adequate keywords, e.g., relevant hashtags on Twitter, facilitates your message being found and possibly spread, even when you do not have any followers.



Key steps:

- Consider the different ways in which you have or can get in touch with your audience and choose the best approach to continuously promote your social media accounts.
- Ensure that advertising motivates citizens to engage with you via your social media applications.
- Consider where you could gain greater visibility through your social media accounts. For example, a retail organization can link promotional offers to the social media account they use. Public authorities can also use one of their more popular social media accounts to promote the use of a specific, less popular, social media application (see the example provided in the box below).
- Ensure that your public website and promotional materials provide audiences with links to your social media accounts.

Example: The Manchester Fire and Rescue Service (UK) uses their fire trucks to promote their Twitter channel.¹⁰ Furthermore, as citizens regularly visit their municipality to request new travel documents or a driver licence, these visits can be used by the municipality to promote their Twitter channel or Facebook page.



⁹ www.facebook.com/redcross/timeline

¹⁰ https://twitter.com/Wiganfireteam

Be careful with using participatory actions to increase follower engagement

Especially on Twitter, public organizations activities aimed at follower engagement may be vulnerable to "trolling". That is, social media users who are posting off-topic messages.

Key steps:

- Share positive examples, in order to gain and keep a positive flow of your messages.
- Monitor your organization on Twitter and intervene only when you think it will attract positive follower attention.
- Delete or replace off-topic messages.

Example: "The official @NYPDnews Twitter account made an attempt at social media outreach [see right picture] only to get promptly torn to shreds by users resisting the PR push. Hijacked hashtags are a common Twitter phenomenon, but tend to be played more for giggles ("trolling" some call it) than to make a coherent political statement. With #myNYPD, however, a harsh pattern emerged right away [see lower picture]."¹¹



Encourage citizens to support disaster management capacities by using social media when crises occur and provide them with guidance to help fulfil your needs

Use social media and an associated publicly available guide to explicitly promote and advise how citizens can help your organization by using their own social media accounts during crisis situations. Providing guidance about the usefulness of the sharing of content may help mitigate undesirable activities on social media.

Key steps:

- Make it explicit that citizens can help public authorities and companies by sharing content on social media with a focus on factual information.
- Clarify what citizens can and should do, especially how they can support crisis management activities. Try to avoid emphasizing what citizens should not do.
 - Create and promote a short list of do's (and don'ts) in social media usage during crises, which can be easily shared and distributed through social media, and that is available on your website.
 - Share Tweets and Facebook posts in which followers are encouraged to share pictures and factual information about emergencies.

¹¹ Coscarelli, Joe, "The #MyNYPD Hashtag Is Not Going So Well for the Police", *New York Times Magazine*, 22 April 2014. (Online) http://nymag.com/daily/intelligencer/2014/04/mynypd-hashtag-promptly-hijacked.html [Accessed: 17 March 2015].

- State what to include rendering such information useful, e.g., when sending a picture of large hailstones to include an object to determine the relative measure.
- Communicate explicitly to citizens when it is appropriate to take pictures and share information about the emergency.
- Thank citizens for their contributions.
- State that taking pictures and sharing information should not interfere with the on-site emergency work.
- Create a digital platform, e.g., a website or Facebook page, on which information is provided for citizen journalists how to act during a crisis situation.

Example: The website SF72 acts as a hub to build resilience and emergency preparedness in San Francisco. Created with the initiation of the San Francisco Department of Emergency Management, the platform encourages citizens to use social networks to stay connected as a community and with public authorities. The platform also provides tips about how social media should be used to prepare for a potential emergency and how it can be used to help crowdsourcing and rescue efforts.¹²



Create awareness for responsible and effective use of social media during crises by citizens and employees

Social media education and training can increase the awareness of threats (e.g., incorrect information or violating the privacy of individuals) following the sharing of information in online networks and the awareness of methods that can be used to protect the privacy and physical safety of individuals. Ensure all personnel accessing social media applications are familiar with the social media policy and associated strategy of the organization and are trained to use it properly.

Key steps:

- Actively spread the social media policy and associated strategy, by e.g., workshops and training.
- Train your staff on how to effectively use social media and assign roles.
- Provide details on where to find further information or instructions.
- Make an online list of social media training suppliers.

Stimulate recognizability of information and ensure continuity

Information is key during crises and steps need to be taken to ensure the circling information is relevant, accessible, clear and fully understandable. Therefore thought should be given to the (iconic) language and symbols to be used, while also trying to make it uniform and make the

¹² www.sf72.org/connect

public familiar with your approach. While no single incident is exactly the same, every incident consists of similar phases. These phases can be addressed in your social media strategy. Communication messages for social media can be prepared for each phase. For instance, in case of a large-scale structural fire, there will be some deposition of dangerous substances from the smoke. This event can be predicted, as it will recur in many large-scale fires. A communication message could be prepared that states what people living in downwind areas should do when they find substances in their garden, like fragments from a large explosion.

Key steps:

- Appoint social media watchers and communicators that will analyse and manage the information flow on social media during crises.
- Examine and adapt to broadly accepted language and/or symbols that other relevant parties, especially official authorities, use.
- Start creating unique, compact and simple hashtags for high probability crises in your area.
 - Consider liaising with other authorities and organizations to ensure a central hashtag is being used.
- Seek canonical symbols and icons for issuing disaster warnings.
 - Seek unambiguous symbols representing certain crises.
 - Start using these symbols in crisis-related communication prior to a crisis to ensure people are familiar with the symbols and their associated meanings.
 - When operating in cross-border crises, keep in mind that these symbols can vary between countries.



Use social media accounts to prepare citizens for high probability hazards and to inform them of the hazards they face

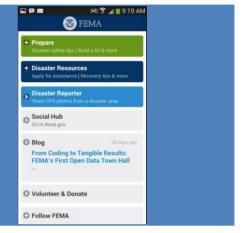
Citizens only prepare for those crises that they perceive to present a significant and imminent threat to themselves or their relatives; in the absence of danger, individuals do not like to think about any possible negative consequences of a crisis situation. Crisis situations related to frequently occurring (natural) hazards allow more scope for preparedness. Social media applications can be used to inform people about specific risks in their local environment.

¹³ UNOCHA, "Hashtag standards for emergencies", UNOCHA website, 2014. (Online) http://www.unocha.org/node/117960 [Accessed: 17 March 2015].

Key steps:

- Consider developing a smart phone social media application that keeps citizens informed about the hazards in their local environment and preparedness measures they can take.
- Promote the use of this smartphone application through the social media accounts of your organization.

Example: The U.S. Federal Emergency Management Agency (FEMA) has created a smartphone application for public use. The goal is to educate, notify and distribute and collect information to citizens across all U.S. States and territories.¹⁴



• Monitor the hazards, and if the risk of such hazards increases, take timely precautions and communicate by social media.

Example: Walmart used its own hurricane tracking software to track hurricane Katrina. Based on their observations they got emergency supplies, including satellite phones, ready to deal with a crisis situation.¹⁵



2.2 CRISIS PHASE

Communicate regularly, quickly and with honesty, candour and openness

Crisis situations create a huge need for immediate, up-to-date information, while the available information is always ambiguous to a certain degree. As such uncertainty and ambiguity have to be accepted and communication should be deliberate in a timely and accurate manner. Providing information and responding to citizens' concerns of risk and uncertainty, regardless of whether the perceived risk is manifested, may ease uncertainty and supports citizens to behave in a well-informed self-reliant manner. Additionally, by dialoguing, rumours can be extinguished timely. Hence, do not wait too long before communicating to citizens and acknowledge to citizens when you do not know something. Be transparent and respond honestly to questions. If you do not know the answer, it is better to communicate the uncertainty of the

¹⁴ Hanchard, Doug, "FEMA smart phone app review part 1", *Crisis and disaster management magazine*, 9 May 2014. (Online) http://emergencysafety.blogspot.ca/2014/05/fema-smart-phone-app-review-part-i.html [Accessed 28 September 2014].

¹⁵ Horwitz, Steven, Wal-Mart to the rescue: private enterprise's response to Hurricane Katrina, The independent review, 2009. (Online) www.independent.org/pdf/tir/tir_13_04_3_horwitz.pdf [Accessed 28 September 2014].

situation and explain what you are doing to find out the answer than to answer incorrectly or not at all.

Key steps:

- Share factual information as soon as possible.
- Be transparent in what you do and do not know.
- Share information as factual as possible.
- If you share unconfirmed information, make sure that this is clear to your audience.
- Provide pictures and links if possible.
- Respond quickly to concerns and questions from citizens: state e.g., what can be verified and what not.
 - Monitor what people are saying (about you) on social media, to be able to respond in due time.
 - Act upon concerns from citizens by stating what can be verified and what not.
 - Respond to victims' requests for communication through social media.
- Create an online frequent asked question list and keep this as up to date as possible.

Example: On May 2012, a 30-year old male threatened to cause a massacre in the Rotterdam Zuidplein Mall. The threat led to a stream of messages on Twitter, while the defendant himself did not use that application. Some Twitter users posted an old picture of police vehicles in front of the shopping mall.¹⁶ Other Twitter users suggested a terrorist attack was taking place. A number of shops in the mall closed their doors for precautionary reasons. The Twitter messages were also picked up by regional and national news media. The regional television station RTV Rijnmond even dispatched a live-broadcast vehicle to the scene of the event. This example shows that rumours can easily be considered truthful. Response and counter information can reduce the influence of rumours.



Ensure information reaches your target audience & differentiate in communication channels

Communicate in a way that fits your target audience to make sure they receive the message. Your network expects you to interact with them via the communication channels you used prior to the crisis (the pre-crisis phase). For example, if you use Facebook in a pre-crisis situation, your followers will expect you to also use this type of media application when a crisis situation occurs. So be consistent and use the social media accounts you set up in the pre-crisis phase and/or communication channels that your target audience uses. Finally, tailor the message to your target audience to make sure they find it relevant and understand it. Be aware that some communication channels may be down; therefore you may need to spread your message through different channels.

¹⁶ https://twitter.com/Fuckingobey_

Key steps:

• Disseminate information directly to relevant parties: authorities, support organizations and/or citizen groups.

Example: The international private organization Partners in Health (PIH) used social media extensively during the Haiti earthquake in 2010. It was able to disseminate information from its colleagues in Haiti immediately after the disaster. Having a social media plan in place greatly facilitated mobilizing the online resources immediately.

PIH's activity during the earthquake greatly enhanced its network. "PIH's Facebook group jumped from 4,000 fans before the disaster to nearly 50,000 since, and their Twitter account, @PIH_org, has added nearly 500 followers per day since the quake."¹⁷



- Communicate through old and new communication technologies.
- Be consistent! Use your pre-existing social media accounts to communicate crisis management information to your network. Avoid starting to use new social media applications during crisis situations.

Example: During the Boston Marathon Bombings the American Red Cross used Twitter to disseminate information to the public. They also used their 'Safe and Well' website for people in the crisis area to enter information regarding their welfare so family and friends could check their wellbeing.¹⁸ Both Twitter and the website had been established prior to the bombings.

https://safeandwell.communityos.org/cms//				
	American RedCross			
	Back to Redcross.org			
	» Safe and Well Home	Safe and Well		
	List Myself As Safe and Well	ouro una rion		

- Ensure that the information you share through social media is relevant for both your target audience and the social media platform.
- Ensure that the information you share is easy to understand.

Ensure clear, effective, to the point communication and continuity

To enhance the clarity of information and increase its uptake the symbols used in crisis communication must clearly relate to the crises addressed and/ or be iconic or common. This is increasingly so when such symbols and language are used in a consistent manner and by all relevant parties. So it's important to try and join existing practices to ensure continuity.

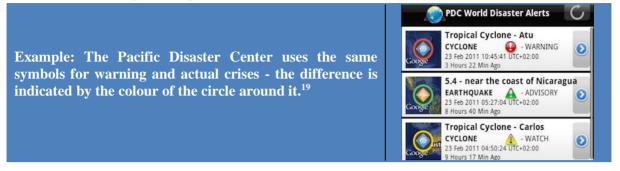
¹⁷ Simmons, Lesly C., "Disaster recovery: PR teams use networks to gather, share Haiti news", Public Relations Tactics, March 2010. (Online)

 $www.prsa.org/Intelligence/Tactics/Articles/view/8537/1008/Disaster_recovery_PR_teams_use_networks_to_gather#.VQg8_-HiLIU$

¹⁸ Knowles, David, "The Red Cross and Google use 'Safe and Well' and 'Person Finder' websites to help locate the missing following the Boston Marathon terrorist attack', *New York Daily News*, 15 April 2013. (Online) www.nydailynews.com/news/national/safe-person-finder-helps-families-aid-workers-real-time-article-1.1317480

Key steps:

• Use the same canonical symbols and icons in communicating crisis information as used when issuing warnings.



- Adapt to broadly accepted language and symbols that other relevant parties use.
- Use existing, canonical Twitter hashtags for specific crisis situations rather than creating your own
 - $\circ\,$ Identify and determine which hashtags officials use in the crisis/ are well established.
 - Use the same hashtags and promote the use of these hashtags to facilitate information sharing.
 - Otherwise create unique, compact and simple hashtags.

Example: During the 2011 floods in Queensland, Australia the hashtag #qldfloods rapidly emerged as a central Patrick Mele mechanism for coordinating discussion and information Lets use #QLDfloods *and* #NOTspam to exchange related to the floods, leading several official filter out spam tweets! cc @QPSMedia sources such as the Queensland Police Service (OPS) to @gldses #bigwet quickly adopt the #qldfloods hashtag for their own tweets. + The QPS even amended its social media strategy: they started using Twitter rather than Facebook in lieu of some rbuerckner difficulties stemming from the Facebook medium. Ö. 2. Volgen @QPSmedia can you use the hashtag #aldfloods so this syndicates :) Alternative hashtags such as #bnefloods and #thebigwet did not become equally prominent established. Most likely as Twitter users were trying not to fragment the conversation,

but establish one official hashtag.²⁰

¹⁹ https://play.google.com/store/apps/details?id=disasterAlert.PDC

²⁰ Bruns, Axel, Jean Burgess, Kate Crawford and Frances Shaw, #qldfloods and @QPSMedia: Crisis Communication on Twitter in the 2011 South East Queensland Floods, Brisbane: ARC Centre of Excellence for Creative Industries and Innovation 2012.

Work with others to gain information, encourage the sharing of information and the building of situational awareness

For an adequate response, during or in the aftermath of a crisis (also in terms of accountability), information about the crisis situation (areas seriously affected by the disaster, related needs and request for help, etc.) is key. Seek out (other) organizations, governments and emergency services, involved in the crisis management or citizens reporting about it as they might provide useful information. Check the information circulating in your network and beyond (e.g., through citizens) and monitor information coming in through your own social media accounts. Where required, you can also put in a request for specific information. Social media users can be explicitly asked to gather crisis-relevant information that could be used in the crisis response. For instance, in the case of a large-scale building collapse, ask users to take pictures of the disaster site. Or, ask people to check information provided by other social media users or first responders at the scene of the event. Such activities will help to build situational awareness.²¹

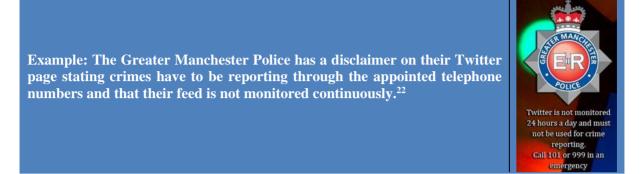
It is important to specify that citizens can help and how during an actual crisis as they might not know this.

Key steps:

- Monitor relevant communication channels, e.g., websites or Twitter accounts of (other) emergency services or (citizen) journalists.
- Cooperate and interact with the sources of information to elicit more specific information for key issues.
 - Pose questions that will help you to get a clearer picture of the situation.
 - Ask your sources to recommend more sources.
- Make it explicit that citizens can help public and private organizations through sharing content on social media. State explicitly what will be done with this information and how long it takes before emergency responders will use the information.
- Clarify what citizens can and should do, especially how they can support crisis management activities. Try not to emphasize what citizens should not do.
 - Distribute a short list of do's (and don'ts) in recording and sharing content about the crisis situation at hand, which can be easily shared.
 - Share Tweets and Facebook posts in which followers are encouraged to share pictures and factual information about emergencies.
 - Specify other contributions that are needed and where to find explicit directions
 - Communicate explicitly to citizens when they are allowed to take pictures and share information about the emergency.

²¹ **Situational awareness** is the perception of environmental elements with respect to time or space, the comprehension of their meaning, and the projection of their status after some variable has changed, such as time, or some other variable, such as a predetermined event. It is also a field of study concerned with perception of the environment critical to decision-makers in complex, dynamic areas from aviation, air traffic control, ship navigation, power plant operations, military command and control, and emergency services such as fire fighting and policing; to more ordinary but nevertheless complex tasks such as driving an automobile or riding a bicycle, further reading: Endsley, M.R. (1997). The role of situation awareness in naturalistic decision making. In Zsambok, C.E. & G. Klein (Eds.), *Naturalistic decision making* (pp. 269–283). Mahwah, NJ: LEA.

- State that taking pictures and sharing information should not interfere with the on-site emergency work.
- Make clear that social media applications will not replace the emergency number.



- State when there is an exception, e.g., when traditional warning methods are not functioning, and how to proceed then.
- Ask your target audience to provide updates about the situation and related needs.
- Stay in touch with those harmed that contacted you by social media but are not receiving help yet.

Encourage citizens to inform and help others

Help is most often very needed during a crisis and many citizens are willing to help others, but do not know how they can. By specifying this need and providing some directions where and how citizens can assist others they can be effectively engaged. For instance, via social media users can be requested to inform their neighbours about a possible threat or to take care of each other and especially less-agile citizens. The diffusion of this type of information is especially important, as those who face the greatest risks during crises are often those with the least access to information.

Key steps:

- Define different kinds of help that could be provided.
- Advise citizens on what they can do and what they are not supposed to do.
- Explain to citizens where there is a need for help.
- Ask followers on social media to encourage others to help each other.
- Explain the importance of the information getting to the least informed and provide if possible examples of who this might be.

Attention point: Social isolation is a key risk factor for citizens during crises. This was also the case during the 2013 Heat waves in the UK. Older people, in particular, need to rely upon their social networks to ensure good health during heat waves. Keep in mind that overreliance on social media versus traditional communication methods may increase social isolation for those who do not use new technologies, and could adversely affect the most vulnerable during this type of crisis.

²² https://twitter.com/gmpolice



Stimulate the flow of information & add value

The better someone's information position is in a crisis, the more adequate his or her situational awareness will be and the more effective he/she, citizen or emergency first responder, can respond to the crisis situation. Therefore the spread of information is important, especially when the information is important for a broader audience. By providing positive feedback, citizens and organizations will be encouraged to keep offering relevant information for other citizens as well as for professional emergency organizations. Also ensure that your information gets passed along. Be aware that tweets with links, unique content and hashtags are often retweeted more often. Therefore use pictures, a hashtag or a link to accompany your message with. Hashtags also ensure your message can be found (more easily). Furthermore connecting to individuals that have well-established networks, e.g. (citizen) journalists, stimulates your message having an impact without needing to have a large amount of followers yourself.

Key steps:

- Mandate and enable emergency responders in the field to share information directly to other active parties and civilians.
 - Specify which information they are allowed to share.
- Where possible, include a hashtag, picture or web address to your messages.
 - Make sure your hashtag is general but directed at the crises, so that it can also be used by other organizations.
- Connect to individuals with impact: online opinion leaders, (citizen) journalists.
- Ask people who post on your social media accounts to re-share the specific information, e.g., by retweeting it, to reach as many citizens as possible.
- Ask the public explicitly to share the information through other channels if they can.
- Explicitly thank citizens for sharing information (via social media).
- Point out the added value of their sharing information during the crises, also retrospectively so that people will be encouraged to participate during the next crises.

Be transparent in how you use data & address copyright and privacy issues

In the pre-crisis tips and tricks we advised developing a social media data protection policy. Privacy is a key right; therefore you should pay attention not to violate others' privacy.

²³ https://twitter.com/safeinchch

Key steps:

- Be transparent in your data use and handling practices during a crisis: direct your audience to your social media data policy. If you do not have such a policy yet state why you gather data, how you use it and how you process it.
- Avoid collecting unnecessary amounts of data.
- Remove personal information and weak identifiers (i.e., information that can be used to identify a person).
- Provide some form of citation when sharing information to demonstrate where it comes from.
- Integrate practices to gather informed consent before collecting data. If informed consent cannot be obtained rely on "legitimate interests", which can be used in some EU Member States to justify data processing (i.e., is there a legitimate reason for the processing of data?)

Ensure information is correct: Verify, Validate and correct (mis)information!

When using and communicating information about a crisis, be sure that the information you present is as accurate as possible. You should therefore check all information you receive for accuracy, otherwise, there is a high risk of spreading rumours and falsehoods! Also counter and dispel any rumours and misinformation that might be circulating, which in turn might help in building trust between your organization and your audience. It is important to establish a trustful relationship between your organization and your target audience because the latter can work as a self-correcting mechanism when it comes to rumours on social media during crisis situations.

Example: During the response to Hurricane Sandy, Twitter users began posting tweets that claimed to be critical first-hand accounts of the situation on the ground, which were often retweeted hundreds of times. The highly discussed inaccurate report that the NY Stock Exchange flood had flooded with three feet of water and the Con Edison power company was cutting off power was even covered by mainstream media as a factual report.

In such cases, other Twitter users can be asked to verify or falsify these messages and requested to post pictures of the scene of the event. For the examples given other users already spontaneously debunked it, while some asked for sources.²⁴



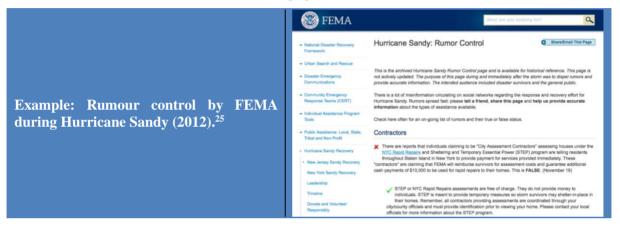
Key steps:

• Use trustworthy sources.

https://twitter.com/ComfortablySmug/status/263083953152466947

²⁴ Drake, Bruce, *Twitter served as a lifeline of information during Hurricane Sandy*, Pew Research Centre 2013. (Online) www.pewresearch.org/fact-tank/2013/10/28/twitter-served-as-a-lifeline-of-information-during-hurricane-sandy/

- Check how accurate the people or organizations you follow are.
- Try to verify information as soon as possible:
 - Check the provenance, time and date of the information.
 - Crosscheck with other organizations in crisis management and information that citizens share.
- Correct misinformation:
 - Actively monitor for and counter any rumours or false information via social media and an associated webpage.



- Pay attention to information that might misrepresent individuals and/ or communities:
 - Eradicate essentialist categories related to race, ethnicity, gender, and nationality.
 - Minimalize use of language of conflict.

Example: InSTEDD and the Red Cross utilised Ushahidi during the Haiti Earthquake to crowdsource information from people on the ground in order for the gathered information to support coordination efforts between the various humanitarian relief providers. ²⁶ Ushahidi is regarded as a credible source of information given that it provides accurate information by conducting checks and verifying reports received from a range of external sources.



Facilitate the (enhanced) communication needs

As the need for information is high during crises, there may be an increase in citizens contacting you through your pre-existing social media channels, especially when traditional communication channels cease to be reliable. Be prepared and able to deal with this to enhance the affected citizens' wellbeing.

 $^{^{25}\} www.fema.gov/hurricane-sandy-rumor-control$

²⁶ Hersman, Erik, *The nuts and bolts behind 4636 in Haiti*, 2010. (Online) www.ushahidi.com/2010/01/22/the-nuts-and-bolts-behind-4636-in-haiti/

Key steps:

- Consider a temporary internal re-organization (of people and rotas) to be able to respond to an increase in communication via social media.
- Ensure staff access to additional mobile phones, tablets, or computers if needed.

Private companies: Monitor and cooperate with the (conventional) channels of crisis communication by public authorities to ensure that communication and advice directed at citizens will be recognized

To have the utmost effect, information circulation should be as uniform as possible. By adjusting your efforts to those by public authorities you can make your efforts more efficient and/ or adequate.

Key steps:

- Make sure you stay up to date with information provided by public crisis managers. For example, you can download their apps and/or follow or connect with their social media accounts.
- Exchange information on how you intend to intervene in the crisis to avoid duplication of work and to make sure affected citizens are not overlooked.
- Consider sharing your social media network with public crisis managers to increase the chances that all citizens affected by the crisis are reached. If doing so, make sure you do not breach data protection policies that exist between you and your network.

Example: In the USA, several major wireless carriers, such as T-Mobile, subscribed to the Federal Emergency Management's Wireless Emergency Alerts. In the likelihood of a crisis, text-like messages are sent to mobile phones in the geographic area at risk.²⁷



Cooperate with and adapt to emergent group initiatives on social media during crises and encourage citizens to do so, too

After a crisis many citizens and organizations (for example NGO's) will undertake immediate action and set up initiatives on social media to provide aid and information to others. Aligning with existing initiatives can increase the effectiveness by e.g., making it easier to find access to all relevant information shared by these initiatives.

Key steps:

• Support emerging initiatives on social media. For instance, promote emergent initiatives that are helpful for citizens and support these initiatives with resources.

²⁷ City of Lakeway, Wireless Emergency Alerts (WEA). (Online) www.lakeway-tx.gov/index.aspx?NID=1053

- Promote the use of social media applications that are already widely used during the crisis situation through, among others, social media. For instance, you could encourage the use of Google's Person Finder (an application which helps people reconnect with friends and loved ones in the aftermath of crises) instead of using a different application.
- When sharing information check if there are hashtags which are already in use and use those if possible.
- Stay in contact with citizens who are already tweeting (or blogging etc.) about the crisis and have a great outreach to the public to share information.

2.3 POST-CRISIS PHASE

The post crisis phase provides opportunities for the use of social media in communication and information sharing between public authorities, organizations and citizens dealing with aftermath issues, but also requires "aftercare" from the organizations that used social media during the crises.

Direct people to after care initiatives & encourage them to care for each other

Crises can have a severe impact on the psychosocial well-being of citizens. Social media applications can be used to encourage citizens to take care of each other (e.g., to encourage self-help groups or story sharing through blogging). In addition, social media applications such as smart phone applications could be developed in which people can do a self-test to see whether they should search for psychosocial trauma care.

Key steps:

- Consider developing an application that people can use to see whether they should seek help:
 - Develop a list of symptoms which can indicate psychological trauma
 - Formulate questions in order to measure if citizens show these symptoms
- Make sure that people can use this application in order to identify possible psychological trauma of others.
- Provide information about where and how people can seek professional help if necessary.
- Provide information on the ways to cope and about where and how to find relating initiatives, like self-help groups or story sharing blogs.

Example: In 2006, several public authorities, including the Turkish Red Crescent, Social Service Experts Association, Turkish Psychiatry Association founded the Union of Psychosocial Services for Disasters. In the aftermath of the mine disaster in Soma (2014) the union quickly established a treatment centre to assist the public in the affected area. The Turkish Psychiatry Association used Twitter to disseminate a request for qualified volunteers to provide psychosocial support, including therapy sessions, to the community.²⁸



²⁸ Image: www.haberler.com/soma-da-madencilere-psikolojik-destek-suruyor-6644678-haberi/

Elicit resources for the recovery

In the aftermath of a crisis, social media can play an important role in crisis recovery, for example for fundraising purposes. You can set up your own online initiatives, but also stimulate others to set up initiatives by e.g., creating awareness and providing information as to what aid is still needed. Furthermore existing initiatives, both on or off social media, can be promoted through social media.

Example: The Red Cross' Haiti relief fund raised more than \$32 million through texting in just a couple of weeks. People were able to donate \$10 by texting to the American Red Cross.²⁹ Social media played a key role since Twitter, YouTube and Facebook were filled with messages from survivors and photos of the devastation as well as information about aid efforts.



Key steps:

- Set-up online initiatives through which citizens can contribute.
- Inform communities and citizens what help is still required.
- Inform citizens which initiatives exist and how they can contribute:
 - Distribute giro numbers for fundraising efforts.
 - List on-going volunteer efforts and opportunities e.g., in reconstruction or (mental) after care.
- Thank communities and citizens for their contributions and show what they are being used for to ensure continuous willingness to help out.

Seek feedback from those you communicated with during a crisis situation

Feedback can help to improve future communication strategies. For example, you can report on your website what you did to manage the crisis and can provide readers with the opportunity to provide online comments or create an online forum to encourage discussions to take place.

Key steps:

- Create a questionnaire or ask citizens to respond to posts via social media applications to gather opinions about the emergency response.
- Ask if the opinions of citizens may be used in the emergency evaluation process.
- Ask if citizens are willing to cooperate further in the emergency evaluation process.
- Use the feedback to improve your social media strategy.

²⁹ Chinhoay, "Impact of mobile phone on public relations", 2014. (Online) https://chinhoay.wordpress.com/2014/09/15/mobile-smartphone/

Maintain communication through your social media accounts

Avoid going back to minimal communication via social media if this proved to play an important role during a crisis that occurred. Citizens have come to know this as a useful way of receiving information.

Key steps:

- Keep sharing information through the channels proven valuable.
- Make clear what communication channels will remain in use after the crisis is over.

Example: The American Red Cross is constantly active on Twitter. They do not only provide information about on-going disasters, but also e.g., statistics afterwards about the actions undertaken. They also thank people and organizations for their contributions and provide information about what is being done with contributions. Furthermore there is general information about e.g., all ways citizens can support the Red Cross, provided.³⁰



Utilize the momentum and inform citizens about the risks they face

Citizens only prepare for those crises that they perceive to have a significant threat to themselves or their relatives; in the absence of danger, individuals do not like to think about any possible negative consequences of a crisis situation. As such the momentum of a recent crisis can be used to educate citizens about this risk (and sometimes some specific related risks in their local environment) and motivate them to undertake some preparatory actions.

Key steps:

- Develop a (smartphone) application that citizens can use in case of crises or your organization can use to warn a specific target group who faces a threat.
- Promote the use of this application through social media etc.

Example: Earthquakes are (the most) prominent natural disasters in Turkey and therefore are emphasized in preparedness activities. The Prime Ministry Disaster & Emergency Management Presidency (AFAD) of Turkey used social media (including YouTube) to promote its new smartphone application for earthquake updates.³¹



³⁰ https://twitter.com/RedCross/status/554685083333169152

³¹ www.youtube.com/watch?v=Vq0fc2o-yzQ

3 TIPS AND TRICKS FOR CITIZENS

You, a reasonable citizen, will act when confronted with a crisis. Here a crisis refers to any situation that in your opinion calls for an immediate response because you feel society is seriously threatened and the situation is not under control of public authorities. You may decide upon different kinds of actions depending on your situation:

- You may be harmed and in need of help and therefore actively *seek aid*. Aid that is often provided by the public emergency response services but, during disasters, in the first crucial hours and days also by your fellow citizens and other organizations.
- You may help yourself or be one of those citizens that *provide aid* to other fellow citizens in need of help.
- You might be in need of help, want to provide help or just want to know more and therefore are *searching for information*.
- Having been informed you may decide to start *mobilizing* others and/ or resources to cope with the crisis at hand.
- You may decide to start *reporting or sharing information* about the crisis situation.

The following guidelines aim to help you in these situations by giving you tips and tricks per action as well as some guidance on how to prepare. When confronted with a crisis you can immediately read the relevant part of these guidelines. Prior to doing so, we have included some relevant concepts in greater detail.

3.1 SELF-RESILIENCE AND THE NEED FOR AID

The concept of resilience refers to the active response of both individuals and groups confronted with a crisis situation. Self-resilience means that people are able to improvise and save themselves and their loved ones. Nevertheless not all citizens can be expected to be fully self-resilient. The self-resilience of persons that are severely injured in an emergency or the sick and the elderly are limited. It is surprising however how self-resilient even these groups can be. Therefore never underestimate your own capabilities or that of other citizens.

Examples of self-resilience include:

- During the 2007 power outage in the Bommelerwaard, The Netherlands many citizens exhibited adequate self-resilient behaviour: taking care of themselves by simply dressing warmer, using candles, cooking on gas stoves, going to bed earlier and providing for their elderly parents. Also several elderly were perfectly capable of taking the right precautions themselves; 'Back in the days we didn't have electricity either'. Larger initiatives included private enterprises and individuals using own generators to generate power which they shared with neighbours or the entire village and/ or (subsequently) offering services e.g., hot coffee, warm shelter and phones services to others.³²
- Shortly after the air crash on the Schiphol runway 'Polderbaan' (2009), a person involved in the crash who suffered from a broken neck was able to get herself to safety walking hundreds of metres to a safe distance of the plane holding her head in a fixed position.³³

³² Scholtens, A. and Helsloot, I. 'Stroomuitval in de Bommeler- en Tielerwaard in december 2007: een evaluatie van de hoofdstructuur van de rampenbestrijdingsorganisatie in de regio Gelderland Zuid in termen van effect'. 2008. Nederlands Instituut Fysieke Veiligheid: Arnhem.

³³ Scholtens, A. and Groenendaal, J. 'Zelf)redzaamheid tijdens de Poldercrash: een onderzoek naar het handelen van burgers mede in relatie tot de professionele hulpverlening'. 2011.

However even when civilians, more specific those injured, are self-resilient this still implies that subsequent aid may be required. To obtain aid it is important that those harmed and self-resilient citizens send messages by which they can be identified and that they give signals where they are located, for example to guide search and rescue teams. Social media and mobile devices offer new opportunities to do so.

3.2 THE PROVISION OF AID BY CITIZENS

Citizens do not only care for themselves. Experience shows people go to great lengths to save others in a successful manner, even going so far as to consciously place themselves at risk. Resilience is especially valuable since citizen first-responders can provide essential aid in the first hours often before emergency services are present, and in some instances, emergency services are not equipped with the capacity or resources to provide all the assistance required. As a result, an appeal must be made to the resilience of society.

This shows that during a crisis the sharing of information is key. Up to date details about the on-going situation offer insight into how and where aid can be best provided, as well as what aid is needed, enabling the effective distribution of aid. However, in dynamic and complex situations of large-scale crises such information is often scarce, making it virtually impossible to cumulate a central up to date overview of the overall situation. As such, it is crucial that the emergency responders at the scene, who possess essential information about the local situation, share their insights broadly. This is particularly relevant for citizens acting as emergency responders directly after a crisis if emergency services have not yet arrived, since the information they gather might not yet be known elsewhere. Social media can assist by providing a public forum through which such information can reach all relevant parties.

The aid that citizens can provide differs widely. They might assist in the field with direct aid such as search and rescue efforts, administering first aid or engaging in simple tasks such as the provision of blankets, shelter, food and water. Additionally, they can also offer secondary aid by supporting the emergency services or by donating (e.g., money or goods). For such contributions distance from the affected area mostly provides no obstacle, enabling a broad scope of people to help out. Any initiatives that are crowdsourced utilize the capacity of the mass and as such do not impede on the already stretched capacity of emergency services.

Example: After Hurricane Sandy (2012) an initiative called Occupy Sandy involved citizens organizing their own aid provision, clean-up and rebuilding efforts.³⁴



An important task is helping authorities and members of the public to get reliable information. Often, social media networks provide a wealth of information that can be used for increasing situational awareness and the public's knowledge about an event. However, collecting and interpreting the relevant information often requires a lot of human resources. Especially, since the reliability of information is difficult to verify.

³⁴ http://occupysandy.net/

3.3 USING SOCIAL ACTIVISM TO ADDRESS CIVIC CRISES

A distinct type of crisis occurs when citizens feel that a crucial part of societies' structure is threatened such as their freedom of speech or equal rights. Citizens may then become social activists who turn to online networks to organize, coordinate, collaborate or mobilize actions to get attention for those perceived crises of societal values. The following formations are very flexible, have horizontal structures and can be tailored towards the specific social crisis at hand. This allows for easy access for new participants, direct participation in decision-making processes and simultaneous participation in multiple networks. The most important point to consider when reading these guidelines however is that social activists operate essentially independently from official authorities and still should be trusted for their good intentions.

3.4 COMMUNICATION AND CITIZENS AS INFORMATION CONSUMERS AND SENDERS

Communication is to inform and to be informed. In times of crisis, people want to receive information, even if they are not involved themselves in a particular incident. They may search for guidance or may simply want to stay up to date or become involved in the aftermath of a crisis to offer assistance or raise money. Additionally, citizens who are not directly involved in a crisis as someone affected may want to help provide information. However, during a crisis, effective and efficient communication can be difficult. For example during mass events or blackouts traditional media cannot necessarily meet the demands of the public who may be anxious for very fast and specific information, or even be relied upon with regard to the provision of (reliable) information.

In such crisis situations, using social media accessed through mobile devices is an effective way of acquiring and spreading information between members of the public. The very structure of 'the cloud' provides an opportunity to give individuals information. However for factual information, trusted official sources may still be needed and thus be at the core of crisis communication by social media.

Example: The Outbreak of H1N1 in 2009

Consider, for example, how social media was used for information purposes during the H1N1 outbreak in 2009. According to an analysis of utilization of three social media platforms—Blogs, Twitter, and Delicious—a major source of the information being bookmarked was from the Center of Disease Control and Prevention (CDC),³⁵ an organization with a strong reputation and level of credibility in crisis situations, which is also a traditional source of information active in a non-traditional media environment. The CDC was also the most-tagged key organization and social media site. Other traditional sources of information tagged included newspapers and newspaper blogs, demonstrating a clear interaction among traditional and new media.

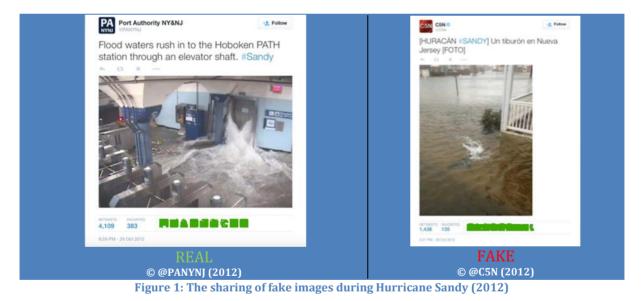
This is why the rise of new media and communication technologies enable citizen journalists to increasingly contribute to the production and distribution of news. This is highlighted in times of crisis where the need for information is high and citizen journalists often play a more prominent role. Online sources, including social media, are therefore becoming increasingly

³⁵ Freberg, Karen, Michael J. Palenchar and Shari R. Veil, "Managing and sharing H1N1 crisis information using social media bookmarking services", *Public Relations Review*, Vol 39, No. 3, p. 178-184. www.instituteforpr.org/social-media-bookmarking-services-managing-sharing-information-centralized-source/

important sources of information for officials, response authorities, journalists and members of the public. This may particularly be the case in the wake of sudden onset crises, when information is recorded and disseminated by members of the public before official sources arrive at the area affected by the emergency.

Rather than engaging in citizen journalism and publishing their own content, citizens can also share information that they have come across or received from others. Regardless of what is being shared or for what purpose, however, it is important to take measures to ensure the safe and reliable sharing of information.

For citizen journalism and information sharing to function properly social media is essential. Social media offers citizens various communication tools by which short, fast and direct messages can be given. Tools that often also enable two-way communication. The danger of social media however is that information which is shared is not verified and validated. At times this is because it cannot be verified. How can it be proven that a person really is who he or she claims to be and whether the presented information is actually true? Or because practices related to information verification and dissemination differ significantly from mass media, as mostly a "publish and then filter" approach rather than a "filter and then publish" approach is being applied. The former approach means that often verification (and correction of false) information occurs after publication. Consequently, under the "publish and then filter" approach, false information is more likely to be replicated and disseminated.



Circulating information that is unreliable and untrustworthy may even have cascading effects by which mass media sources also contribute to the dissemination of the false information in question. Therefore senders as well as recipients of information should be aware of the dangers of using social media, and approach consuming and sharing information critically. Senders should take effort to make sure their information is verified or can be while recipients should consider the source and content and try to verify. Especially, prior to sharing it with others!

Disclaimer: The existing literature on the use of social media during crisis is largely focussed on how citizens receive information. The important aspect of spreading information by citizens is as yet only researched to a small extent. Therefore the tips and tricks in this chapter should be read as a first step in that direction.

3.5 HOW TO PREPARE

The following tips and tricks may assist you in understanding what you can do to prepare for the effective use of social media during crisis.

Prepare yourself for crises

An important aspect in dealing efficiently with potential crises is to be prepared for them. Social media offers initiatives like instructional videos through which you can prepare yourself for a crisis. Furthermore, through social media local authorities or agencies might offer opportunities to join (online) training programs that help to deal with emergencies or report on them. It is also possible to seek out crowdsourcing efforts for emergency support purposes. By doing this before a potential emergency you can develop sufficient know-how and contribute efficiently to the efforts in the wake of an emergency.

Key steps:

- Make sure you know how authorities are prepared: request information from authorities regarding what preparations they have in place for the use of social media during crisis. Is there (for instance) a predetermined hashtag?
- Participate in online disaster education and training programmes.

Example: One in six English properties is at risk of flooding, therefore the environment agency has part of their website dedicated to flood awareness. The site includes a link to the EnvironmentAgencyTV YouTube channel information on flooding and instructions on how to prepare are provided.³⁶



- Make use of events and social media, focused on crisis preparedness, organised by agencies or authorities.
- Download social media applications regarding crisis preparedness or response and providing first aid, such as Disaster Alert or the Red Cross first aid app.
- Identify (and follow on social media) emergency services that may be called into action in case of an emergency in your area.
- Form or join crowdsourcing networks for emergency support purposes.
- If you decide to set up a citizen journalism blog or account on social media, make sure you have the broadest scope possible.
- In order to do so, it is best to organize beforehand; creating a large group of followers and joining citizen journalism networks (local, national, global) in pre-crisis situations can help to share information during a crisis.

 $^{^{36}}$ www.gov.uk/floods destroy & www.youtube.com/user/EnvironmentAgencyTV

3.6 WHEN SEEKING AID

If you are directly affected by either a natural or man-made crisis, it is very likely that you might need (additional) help.

Ask for help and disclose your location

When seeking aid it is important to broadcast a request with specific details about you, your location and situation to others that provide aid, so that they know that you need help, what kind of help you require and crucially, where to find you.

Example: During the 2011 earthquakes in Christchurch, New Zealand Rob Thompson		
requested instructions to get help for a friend's parents, while providing detailed directions of their location so they could be found directly. An alternative contact		
number for Christchurch emergency services was quickly provided. ³⁷		

Key steps:

- Send out a plea for help:
 - Make use of mobile devices; they can transmit information rapidly and can disclose your location, while they remain functional for a couple of hours during blackouts.
 - Use the appropriate channels as much as possible, to maximize chances that your plea will receive attention. So unless specified that this is ok or there are alternatives try not to use social networks for emergency calls.
 - Always consider which new media communication tool will be most effective as this will depend on the circumstances.
- Share your location, as this might help emergency responders to find you.
- Communicate regularly how you are doing and what you are doing.
- Share images in addition to text (e.g., social media posts).

3.7 WHEN SEEKING INFORMATION

In order to decide how to protect and aid yourself or others, or to simply stay updated on unfolding events - information is essential.

³⁷ Jackson, Sally, "Twitter captures NZ earthquake drama as it unfolds", The Australian, 23 February 2011. (Online) www.theaustralian.com.au/news/world/twitter-captures-nz-earthquake-drama-as-it-unfolds/storye6frg6so-1226010355818

Ensure your information is trustworthy

To ensure you base your actions on correct information it is important that while you search for information that you also filter and, if circumstances allow, verify the information that you receive.

Key steps:

- Make use of mobile devices, as they should remain functional for a couple of hours during blackouts.
- Use trustworthy sources for relevant information (e.g., local police accounts).



- Visit the websites of governmental and non-governmental organizations dealing with emergency and crisis situations (e.g., British Red Cross).³⁹
- Use social media services through which agencies offer the possibility for direct contact with citizens such as the official Twitter accounts of emergency services.
- Be aware of the fact that such services do not guarantee a direct connection, because of technical/personal situations.
- Follow the official social media accounts of agencies and local organizations involved in crisis.



- Be aware of social media pages of people claiming to work for an agency or of unofficial homes of agencies.
- Filter the information you receive or come across:
 - Always evaluate and consider the reliability of the information you receive can you trust it?

³⁸ Kent Police (UK), Twitter account, 2015. (Online) https://twitter.com/kent_police [Date accessed: 17 March 2015].

³⁹ www.redcross.org.uk

⁴⁰ https://twitter.com/safeinchch/status/42846637122535424

- Verify the information you receive:
 - Check if it is an original piece of content.
 - Evaluate the source of the information.
 - Conduct additional searches to gather new information and evidence that can help corroborate information.
 - o Use IT supported verification techniques
 - Check the time and location stamps of content.
 - Authenticate images (e.g., conduct a reverse image search to determine if the picture has been posted online in the past).

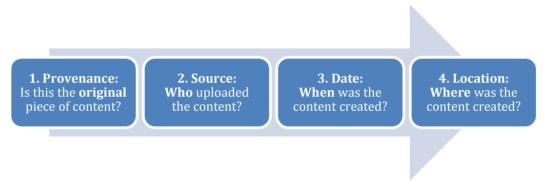


Figure 1: based on verification tips by Wardle, C. (2014)⁴¹

You can also use various online applications to help verify information you receive.

- Use online platforms like *Ushadidi*, *UbAlert*. These platforms use crowdsourcing to collect, verify, visualize data about emergencies and even alert the public who may be impacted by an incident.
- Journalism tools like *Storyful*, which is already being used by mainstream news sources like Reuters, are also useful for verifying information.
- More specialized information verification applications also exist.
 - *Twitcident* is an application that has been developed to provide real time filtering and verification of data from social networks.
 - Services including *Google Images*, *Tineye.com*, *Izitru* can help you verify the credibility of images through a reverse image search to determine if the picture has been posted online in the past)

3.8 WHEN PROVIDING AID

During a crisis you as someone caught up in a crisis, a passer-by or even a citizen at a distance can also provide aid. You can directly help others caught up in a crisis by e.g., help to get them to safety, provide first aid or comfort. You can also provide assistance for emergency services at the scene or aid their effort through secondary services such as engaging in the sense making of data.

⁴¹ In Silverman, Craig, ed., *The Verification Handbook: A Definitive Guide to Verifying Digital Content for Emergency Coverage*, European Journalism Centre, 2014, p.27, http://verificationhandbook.com/

Participate in the flow of information

Information is crucial during a crisis. Those providing and needing aid are dependent on information to adequately determine what to do and where to go. As an aid provider present at the crisis site you simultaneously possess relevant (snippets of) information about the situation at hand. By spreading what you know about the crisis and the actions that you are undertaking and are additionally still needed you stimulate the information flow and help others direct their actions. Both individuals and organizations can respond to your aid efforts, but also those who are injured might learn where (not) to go.

Key steps:

Spread information about your situation

- Publish what you know about the crisis and the current situation as well as the actions you are undertaking: location disaster/ shelters/ field hospitals, nature, scope and magnitude of the disaster, hazards, number of people injured, the aid efforts under way etc.
 - o Share real images in addition to text and voice communication
 - Be to the point and use clear language
- Publish what you offer to others (e.g., shelter) and make sure aid seekers and emergency responders can find you.
 - Add a location to your hashtags.
 - Combine the geographical location/abbreviation and incident type in a hashtag that is agreed with officials.⁴²

have a place to offer - Boston Marathon explosion (Responses) : Form Responses Timestamp Other info Name NOTE: Boston.com has removed personal information from this list, but left up the details column as a tribute to all those who offered up their homes an Example: After the Boston Marathon Bombing a hearts. More information here http://bo Google Doc was circulated on social media sites. In /13jyf61 V15/2013 17:39:46 Small apartment, can accommodate 1 or 2 people. V15/2013 I don't live in the city-but can come get anyone who needs this spread sheet people offered up places to sleep, 4/15/2013 I don't live in th 17:39:48 a place to stay rides and donations, accompanied by their personal 4/15/2013 17:39:57 4/15/2013 we have a one pull out couch and space for about 2-4 17:40:10 others details.43 17:40:10 others 47/52013 two double beds available in a single family house in 17:40:10 Medford. 4/15/2013 We have space in our apt for 4 people, or a family who 17:40:11 needs a place to stay 4/15/2013 17:40:16 Have an open bed, futon and couch

• Regularly send out updates: specifically address the changes in your situation and your progress.

⁴² See also 'Hashtags, SMASHashtags', *Chiefb2.com*, www.chiefb2.com/2014/11/06/hashtags-smashtags/

⁴³ Knowles, David, "The Red Cross and Google use 'Safe and Well' and 'Person Finder' websites to help locate the missing following the Boston Marathon terrorist attack', *New York Daily News*, 15 April 2013. (Online) www.nydailynews.com/news/national/safe-person-finder-helps-families-aid-workers-real-time-article-1.1317480 and

https://docs.google.com/spreadsheet/pub?key=0AoXVKFw1Uci5dFNpRGdWd2pXZTN4a3Fza0VhVTRVaGc &output=html&utm_source=buffer&buffer_share=25647

- Always consider which communication tool is the most appropriate, as the effectiveness of a tool depends on the type of crisis and the affected population.
 - Use the communication tools your target group uses
 - Use blogs and social media to reach a large group of people in a short time
 - Using several communication channels maximizes your messages getting through, since some communication channels might be down.

Stay updated about other's efforts and relevant information

- Visit the websites and follow the social media accounts of governmental and non-governmental organizations dealing with the crisis situation.
- Follow the social media accounts of other individuals providing aid or (trustworthy) information.
- Do not follow the social media pages of people claiming to work for an agency or of unofficial homes of agencies.

Ensure information is correct and can be verified

- Add sources to your information, to facilitate verifying and fact checking, by including pictures and video clips to your text.
- Emphasise the factual information, so people can make their own choices.
- If you are not sure of your information: report that the information you are spreading is unverified or not validated.
- If your information proves to be incorrect, set this right by notifying your followers.
- Connect your information to credible hashtags that are already being used.
- If you retweet information from others, verify the original source.
- Before sharing or commenting on information from others, use multiple sources to verify the information:
 - Evaluate the source of the information.
 - Corroborate the information by gathering new information and evidence through additional research.
 - Use various online applications to help verify information you receive.
 - Verify information through crowdsourced platforms that collect, verify, visualize data about emergencies as *Ushadidi* and *UbAlert*.
 - Verify information spreading on social networks through applications and web-based tools as *Storyful* and *Twitcident*.
 - Check the time and location stamps of content or authenticate images (e.g., conduct a reverse image search to determine if the picture has been posted online in the past) through tools as *Google Images*, *Tineye* and *Izitru*.

Stimulate and help manage the information flow

• Utilize hashtags properly to ensure that your content can reach the intended audiences. For this purpose, familiarize yourself with the "Hashtag Standards for Emergencies" that are proposed by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA).⁴⁴

- Use common hashtags that are being used by officials, or use a hashtag that is general but directed at the crisis, so others can use it as well.
 - Combine the geographical location/abbreviation with the incident type.⁴⁵
- Share messages you receive through your own social media accounts, unless you are not sure about it.
- If you notice misinformation, correct it and spread the correct message.

Example: The rumours on social media about a second perpetrator in the shooting incident (2011) at a shopping mall in the Dutch municipality Alphen aan den Rijn were followed by new messages correcting this.

There were also messages stating that the picture of the supposed shooter circulating was in fact not a picture of the actual perpetrator. This shows both the power of social media in collecting and spreading (mis)information and the self-correcting mechanisms at play.⁴⁶



- Add value to your messages to ensure they get passed along:
 - Add, if possible, a hashtag, picture or direct link to every message.
- Ask people continuously to share/ retweet your information.

Volunteer to support emergency services

Joining crowdsourcing networks for emergency support purposes while a crisis is occurring can contribute efficiently to the efforts during an emergency. Regardless of where you are, if you have time and know the area affected by an emergency, or the language primarily used in the area, you can contribute to emergency response efforts via volunteering for crowdsourcing efforts.

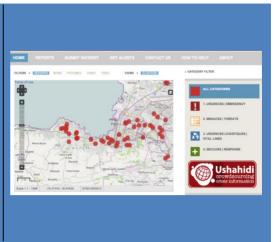
 $^{^{44}} See \ https://docs.unocha.org/sites/dms/Documents/TB\%20012_Hashtag\%20Standards.pdf$

⁴⁵ See also 'Hashtags, SMASHashtags', Chiefb2.com, www.chiefb2.com/2014/11/06/hashtags-smashtags/

⁴⁶ Duin, Menno van, Pieter Tops, Vina Wijkhuijs, Otto Adang and Nicolien Kop, "Lessen in crisisbeheersing: dilemma's uit het schietdrama Alphen aan den Rijn", Politieacademie. (Online) https://twitter.com/search?f=realtime&q=alphen%20aan%20den%20rijn%20%20tweede%20dader&src=typd&l ang=nl

Example: After the Haiti earthquake Patrick Meijer started a live crisis map of Haiti, by mapping tweets through the Ushahidi platform. Friends joined his efforts and volunteers were recruited and trained by reaching out to friends at the Fletcher School.

Secondly, through crowdsourcing efforts, colleagues at OpenStreetMap could fill in the gaps in the Google Map of Haiti and produce a very detailed map to address increasing mapping problems. In addition, several individuals and organizations helped set up an international SMS number to receive further reports. After which volunteers were requested for translating messages written in Haitian Creole and geo-locating them.⁴⁷



Key steps:

- Search crowdsourcing initiatives being set up.
 - Join crowdsourcing networks pre-crisis, and develop sufficient know-how to contribute efficiently during and after a crisis.
- Follow information provided by official emergency services to see if there are resources they need or to understand and learn about any initiatives that might be initiated.
- Offer your help to those at the crisis site, especially if you have relevant skills
 Provide necessary resources e.g., vehicle for transport, shelter facility.

3.9 WHEN MOBILIZING

Besides providing direct aid yourself or assisting emergency services, you can also mobilize others and set up independent aid initiatives. Initiatives that provide a direct need, such as collecting, filtering and making sense of the data available through social media, but also initiatives like collecting money.



⁴⁷ Meijer, Patrick, 'How crisis mapping saved lives in Haiti', website National Geographic 2012. (Online) http://voices.nationalgeographic.com/2012/07/02/crisis-mapping-haiti/

⁴⁸ Prescott, Shaun, 'World of Warcraft pet raises 19m for ebola relief', PC Gamer, 12 February 2015. (Online) www.pcgamer.com/world-of-warcraft-pet-raises-19m-for-ebola-relief/

Before setting up an initiative make sure the information you are basing yourself on is correct, so as to increase effectiveness and avoid spreading rumours. For further information on how to ensure information is correct view the 'when seeking information' section.

Create and stimulate networks

The stronger your network the more people you can mobilize, so invest in your network. It is not necessarily about the number of followers or connections you have yourself, but also the 'quality' of those connections. You need to connect to the right people. Connecting to a few individuals with well-established networks can have a much greater impact than just randomly connecting to as many people as possible. So try and use and build from pre-existing networks.

Example: After Hurricane Sandy struck eastern US in October 2012, participants from the Occupy Wall Street (OWS) movement were quick to use their existing networks to mobilize to help local communities recover.⁴⁹



Key steps:

- Form crowdsourcing networks, starting pre-crisis will enhance the chances of success.
 Use the idea of "network parties".
- Maintain the continuity of "public forums".
- Ensure a broad scope:
 - Use blogs and social media to reach a large group of people in a short time.
 - Use English as a second language.

Stimulate the networks action potential

In order to mobilize people it is important to not just get them together, but to also structure the interaction and stimulate and facilitate the decision-making processes.

Key steps:

- Methods like creating e-mail lists can help working together. There are also a host of applications (e.g., Google Apps) that can help to organise and share information.
- Try to develop methods that can help improve and standardize decision-making processes.
- Further developing, standardizing and promoting of Friend of a Friend (FOAF) and Semantically-interlinked Online Communities (SIOC) is needed.⁵⁰

 ⁴⁹ Baruh, L., et al. (2014). Report on Citizens' Involvement in Emergency Communication. Deliverable 4.1.2 of the COSMIC Project. Retrieved from http://www.cosmic-project.eu/sites/default/files/deliverables/D4.1.2.pdf
 ⁵⁰ FOAF is an RDF based schema to describe persons and their social network in a semantic way. http://semanticweb.org/wiki/FOAF. SIOC is a semantic web technology that provides methods for interconnecting discussion methods such as blogs, forums and mailing lists to each other. http://semanticweb.org/wiki/SIOC.

Mobilize to address crises of societal values

Sousveillance can help expose a crisis of societal values. You can help by collaborating with fellow citizens via the use of web-based platforms to report for example misconduct by authorities or others.

The concept of sousveillance, also known as inverse surveillance, refers to the ability of people to reduce crises of societal values, such as misconduct by authorities through documenting and/or recording their actions. Recent political unrests have been particularly illustrative in showing how sousveillance can expose police misconduct and can help communicate and increase awareness regarding norms about acceptable and unacceptable uses of authority.

Key steps:

- Members of the public could make use of readily available recording devices (including smart phones), as well as applications such as "Stop and Frisk Watch", a smart phone application that monitors police misconduct. In doing so, however, diligence is required to prevent putting oneself or others in harm's way while recording incidents.
- Make sure that the act of recording does not interfere with an emergency response effort and does not threaten the privacy, safety or dignity of parties involved, including those harmed and response team members.

Example: The Stop and Frisk Watch by the	STOP &	27 ♥ ∞ ÷ ⁴⁴⁵ al ■ 406 Incident Report	X 😏 🚥 🧓 чवा 🚛 4:08 My Settings Personal Information
New York Civil Liberties Union gives New	FR SK	Location Person Officer(s) Extra Did the Officer(s)	Your Name Optional, but can be useful for an incident
Yorkers a tool to 'monitor police conduct	WATCH (())		Your Phone Number Optional, but can be useful for an incident
and hold the NYPD accountable for	E RECORD	use force (push, shove or hit) Required	Your Email Address Optional, but can be useful for an incident
unlawful stop-and- frisk actions and other	IISTEN •	yell, curse or insult the Required	Application Trigger Settings Lock Screen on Trigger
police misconduct'. ⁵¹ The app provides instructions as well as recording and	REPORT	contact	Check here to make screen lock when video capture stops. This will secure your device if it is setup with a screen lock (using a pattern, pin or password).
reporting functionalities. The recording	NYCLU	draw or use a weapon (gun, nghistick, pepper spray, TASER)	Broadcast My Location Would you would like to alert others to where you are when you trigger the app?
function includes a geotagging system.	How to Your Help My		Use Camera Button Would you like to start recording immediately when you click your phone's camera button?
	Video Rights Help My Settings		Application Information

Ensure your and others safety

Whilst sharing information in an emergency can contribute to response and recovery efforts, it is important to avoid placing yourself or others in danger. Therefore, it is important to ensure your own and other citizens' safety while communicating in an emergency. Trying to protect the privacy of yourself and others by masking personal identifying information can be an important part. Also do not hinder those providing aid.

Key steps:

• Be conscious that the data you share via new media may be being monitored.

⁵¹ New York Civil Liberties Union, "Stop and Frisk Watch App". (Online) www.nyclu.org/app

- Consider the political environment you are participating in. It may be best to avoid sharing person identifiable information (e.g., the use of location identifiers if this could cause trouble for you).
- In order to protect yourself from undue attention of surveillance activities while using information and communication technologies to share or get access to information during emergencies and crises, there are a number of approaches you can use.
 - Virtual Private Networks (VPN) and encryption technologies can help you stay anonymous while accessing, creating and sharing information. For example, applications like Hushmail offer encryption technologies to enable individuals to communicate with each other while safeguarding anonymity.
 - When sharing sensitive information, if the situation requires it, consider using applications that remove information after a specified time period such as $Efemr^{52}$ or $Wickr^{53}$ that can be used to create messages and tweets that self-destruct shortly after being viewed by the recipients.
 - While using these technologies, please note that being anonymous is not a free pass for engaging in activities, such as inciting violence, which may put others at risk. Indeed, such uses of technologies may in the long run be used to rationalize even more intrusive surveillance and censorship mechanisms.
- When recording information or requesting others to record information for you, ensure you are respectful of your and their physical wellbeing (e.g., avoid any potential risk of injury).
- Also respect the professionals working on the disaster site and do not get in their way.
- Avoid staying any longer than necessary in a threatened area.

3.10 WHEN REPORTING INFORMATION

In addition to traditional media you might be reporting on or sharing information about the current situation.

Ensure a broad scope and high impact & consider your communication venue

To report most successfully, to a broad audience it is best to organize beforehand and create a large network etcetera in advance, since citizen journalists initially mainly reach people in their own network. In order to enhance the chance that your messages reach your target audience and have the desired effect, you have to adapt your communication to fit your target audience and goal. Part of this is using the communication venues your target audiences uses and communicate in the way: e.g., language, your target audience would. Adding relevant keywords and hashtags also ensures your target audience can find your message.

Key steps:

• Create (preferably pre-crisis) a large network (of followers).

⁵² Efemr allows for the self-destruction of tweets. Efemr is an application that can be connected to a Twitter account. Once connected, the user can use a hashtag to enable the Tweet to be deleted after a certain amount of time e.g., #2h will result in the Tweet being deleted after 2 hours. See www.efemr.com

⁵³ See www.wickr.com/

- Organize (preferably pre-crisis) as citizen journalists by creating a network and/ or subsequently try to use an account to which citizen journalists can login to disseminate information.
 - Some examples of worldwide websites for citizen journalism are Global Voices Online, Open Globe and Watchdog International.
- When possible try sharing information in language(s) that will be accessible to people who are at the locus of the emergency.
 - Use English as a second language when a crisis has an international component
- Use to the point, clear and easily understood language
- Always consider which communication tool is the most appropriate, as the effectiveness of a tool depends on the type of crisis and the affected population
 - Use the communication tools your target group uses or are utilized by a large group of people. For example, it makes little sense to alert older people for an evacuation as a precaution by Twitter. It is better to use other means, such as the telephone or a direct house visit, thereby considering their needs.
 - Use blogs and social media to reach a large group of people in a short time
 - Using several communication channels maximizes your messages getting through, since some communication channels might be down.
- Ensure that your content can be found by the intended audiences. Therefore e.g., utilize hashtags properly. For this purpose, familiarize yourself with the "Hashtag Standards for Emergencies" that are proposed by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA).⁵⁴ To streamline the flow of information:
 - Use common hashtags that are being used by officials, or use a hashtag that is general but directed at the crisis, so others can use it as well.
 - Combine the geographical location/abbreviation and incident type in a hashtag that is agreed with officials.⁵⁵
- Make a distinction between informing and instructing. You take on much more responsibility when instructing or advising people.
- Ensure your messages get passed along:
 - Add value; if possible, add a hashtag, picture or direct link to every message.
 - Ask people to share/ retweet your information.

Ensure your information is correct and can be validated or verified

For some members of the public, searching for news to verify unfolding events is a key means to gaining a greater understanding of a situation. If that information is to be shared with others, it is worth taking the time to verify information you receive before sharing it in order to avoid the spread of unverified information. This is particularly relevant as others (e.g., the news media) may re-share unverified information prior to completing any fact checking exercises.

⁵⁴ See https://docs.unocha.org/sites/dms/Documents/TB%20012_Hashtag%20Standards.pdf

⁵⁵ See also 'Hashtags, SMASHashtags', *Chiefb2.com*, www.chiefb2.com/2014/11/06/hashtags-smashtags/

Example: Twitter helped spread some rumours at great speed during the 2011 UK riots; e.g. a tiger let loose from the London Zoo and the London eye being burned down (both including pictures). The rumour that rioters were breaking into McDonalds and began cooking their own food was even captured by the Daily Mail, headlining: "Youths storm McDonald's and start cooking their own food". This coverage by mainstream media greatly enhanced the rumour; the link to this story was the most often shared link on Twitter. The story however proved to be false, emphasizing the risks of sharing unverified information.

Analysis of Twitter use during the UK riots did however also prove Twitter to be equally powerful in dispelling such rumours.⁵⁶

Frank Lenggenhager @Lenggenhager - 6 aug. 2011 Schlagzelile des Tages: "youths storm McDonalds and start cooking their own food" #dailymail #tottenhamRead more: http://bit.ly/qhwTAg
Pip Jones @PipsJones - 6 aug. 2011 'Youths storm McDonalds and start cooking their own food' great Daily Mail subhead. Well, you know, a rioter's gotta eat. #tottenham
4 t7 2 ★ ···
Eve @Eve_Says_So · 6 aug. 2011 Reading about #tottenham riots on daily mail website. "Shop looted and youths storm McDonalds and start cooking their own food" wtf! Cooking their own food" wtf!
SoFull No.9 '432hz' @SoFull1 · 6 aug. 2011 DailyMail saying kids broke into Mcdonalds and cooked burgers :-S #tottenham
Super Hans @Niall_McDermott - 6 aug. 2011 The Daily Mail can be quoted as 'Youths storm McDonalds and start cooking their own food' - Possibly my favourite thing ever. #tottenham

Key steps:

- Before sharing or commenting on information from others, use multiple sources to verify the information.
 - Evaluate the source of the information.
 - Corroborate the information by gathering new information and evidence through additional research.
 - Use various online applications to help verify information you receive:
 - Verify information through crowdsourced platforms that collect, verify, visualize data about emergencies as *Ushadidi* and *UbAlert*.
 - Verify information spreading on social networks through applications web-based tools as *Storyful* and *Twitcident*.
 - Check the time and location stamps of content or authenticate images (e.g., Conduct a reverse image search to determine if the picture has been posted online in the past) through tools as *Google Images*, *Tineye* and *Izitru*.
- Add sources to your information and use those that can give the reader the confirmation of information:
 - Include pictures and video clips to your text.
 - If you share or retweet information from others, verify the original source.
- Emphasise the factual information, so people can make their own choices.
- If you are not sure of your information: report that the information you are spreading is unverified or not validated.
- If you do not trust your information, do not share it.
- If your information proves to be incorrect, set this right by notifying your followers.
- Connect your information to credible hashtags that are already used.

Be aware that when you are reporting and/ or sharing information there are some ethical, legal and security aspects to take into consideration, regarding e.g. the privacy and safety of yourself and others. Upholding professional journalistic standards will address some of those.

⁵⁶ Richards, J and Lewis, P., 'How Twitter was used to spread – and knock down- rumours during the riots', 2011. (Online) www.theguardian.com/uk/2011/dec/07/how-twitter-spread-rumours-riots;

Engage ethically in citizen media practices

If you decide to engage in citizen journalism practice and act as a reporter from your area you might become a source of complementary or alternative information about the crisis. Sharing information however can lead to potential harm on the privacy, identity or dignity of others. Therefore it is important that you behave responsibly and try to incorporate appropriate news media ethics into your practice.

Key steps:

- Filter then publish! Rather than simply publishing material check and verify your content prior to publication.
- When sharing images with others, try to provide contextual information of where/when the image or video was recorded, what it shows, who it was taken by (if it is indeed safe to share this information).
- Before sharing information recorded by others, familiarize yourself with the recommendations provided by the Eye Witness Hub.⁵⁷
 - \circ Ask for permission before sharing, provide proper credits if the original uploader requests it, and at the same respect the uploaders' wish for confidentiality.⁵⁸
- Ensure the confidentiality of your sources.
- Consider the potential harm the recording of incidents may have on the privacy, identity or dignity of others.
 - Lack of "objection" cannot be taken as consent for being recorded or identified, as in many cases during emergencies, individuals will not be in a position to make informed decisions regarding whether they want to be recorded or communicate those decisions.
- Avoid harming others with the sharing of false content.

Example: Harmful content can include the publication and sharing of unverified information and participating in group behaviour that targets individuals. A well-known example of this is the (mass) diffusion of false information through the social networking website, Reddit, following the 2013 Boston marathon attacks. Such an example reiterates the importance of verifying information and avoiding participation in 'witch hunts' and online vigilante activity.



Michelle Fitzsimmons, Tech Radar, 22 April 2013

⁵⁷ See www.eyewitnessmediahub.com/. Twitter handle: @emhub.

⁵⁸ Wardle, Claire, Sam Dubberly and Pete Brown, 'Amateur footage: a global study of user-generated content in TV and online news output, *Columbia journalism school, Tow Center for Digital Journalism*: A Tow/ Knight report, 2014 http://usergeneratednews.towcenter.org/recommendations/

- When recording incidents: ensure you take measures to avoid sharing identifying information. Measures could include, for example blurring details of the faces of the members of the public in taken pictures and remove identifying information such as names.
- When recording or sharing information/images, respect social norms regarding the appropriateness of recording incidents in ways that trivialize the severity of victims' and communities' experience.



- While recording the incidents during an emergency, you need to pay the utmost attention to make sure you do not interfere with the emergency response processes.
- When recording information or requesting others to record information for you, ensure you are respectful of your and their physical wellbeing (e.g., avoid any potential risk of injury).
- Overall, do not stay longer than necessary in the threatened area.
- Consider seeking out professional training in journalism standards to ensure ethical and legal conduct (pre-crisis).