

# COSMIC Stakeholder Engagement Workshop

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Case studies on the use of new media in crisis situations.

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15/2/2014






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## Introduction to D2.2.




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- Purpose
  - explore the ways in which new communication technologies and applications are being used in crisis situations today.
- Means
  - Through an examination of eight different case studies.
- What was examined?
  - Nature of the crisis.
  - How new and more conventional technologies were used.
  - Lessons learned from the use (or lack of) of the technologies.
- Six functions of social media in crisis situations were established in COSMIC D2.1, “Baseline analysis of communication technologies and their applications”:
  - One-way communication (notify/alert)
  - Two-way communication (converse/provide feedback)
  - Request/offer assistance
  - Relay (share a piece of information with others)
  - Campaign (awareness raising/fund raising)
  - Organize (co-ordinate response/enable individuals to organize themselves)




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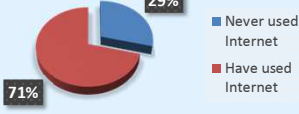
## Introduction to D2.2.



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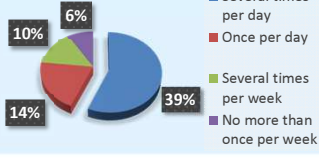
- Special Eurobarometer, a public opinion survey, published in July 2012 provides some information regarding Europeans’ use of the Internet.
- The survey suggests that use of the Internet in European Member States is widespread.
- People who had never accessed the internet were most likely to come from: Portugal, Bulgaria, Romania, Greece, Cyprus.
- Highest use of Internet: Denmark, Netherlands, Sweden.

### Internet Use in Member States




Category	Percentage
Never used Internet	29%
Have used Internet	71%

### Internet Use Frequency




Frequency	Percentage
Several times per day	39%
Once per day	14%
Several times per week	10%
No more than once per week	6%




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## Boston Marathon Bombing 2013, U.S.




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- On Monday, 15th April 2013, an estimated 23,000 people lined up at the start of the marathon. At approximately 2:50pm, two near simultaneous explosions occurred near the finish line in downtown Boston.
- Use of new technologies:
  - Radio channels, radio towers and new radios.
  - New software programme, the Emergency Patient Tracking System.
  - Wireless Emergency Alerts (WEA).
  - Federal Bureau of Investigation website.
  - American Red Cross encouraged people to “Register as Safe and Well”.
- Use of social media:
  - The Boston Police, the American Red Cross, the Massachusetts Emergency Management Agency, local universities and marathon organizers used Social media to publicize alerts, to re-unite families, to publicize openings and closures and to share information.
  - messages on social media accounts such as Twitter belonging to members of the public were recorded three minutes after the explosions.




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## Boston Marathon Bombing 2013, U.S.




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- Twitter, blogs were also used to document the events at the marathon as well as the police hunt for the suspects.
- Facebook, Google Docs and Twitter were also used to offer housing to those stranded in Boston after the marathon.
- Reddit publicised these offerings and was also used to share information and resources such as advisories, closures and openings and information.
- Risks
  - Reddit came under fire for its role in the wrongful identification of suspects during the police manhunt.
  - sharing of confidential police information.




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## U.K. Heatwave 2013, U.K.





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- Early estimates around the 2013 heatwave indicate that there may have been between 540 and 760 excess deaths in England and 60 to 100 excess deaths in Wales as a result of the heatwave.
- Little evidence of new technologies used.
- Use of social media:
  - publicize the heatwave and distribute health-related information, as well as being used as a relay to share this information among organizations and individuals.
  - the Met Office has publicised the heatwave warning and encouraged users to click on a website to find out more information.
  - On Facebook, posts from the Met Office included images of maps of the UK containing temperatures, notifications of record highs of temperatures and links to health related warnings.
  - share public health and safety information on the effects of the crisis.
  - Overall very poor relay of information.



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## U.K. Heatwave 2013, U.K.





**Met Office @metoffice** 22 Jul

Yellow warnings are in place for #rain in parts of the UK, keep up to date at [bit.ly/Weatherwarnings](http://bit.ly/Weatherwarnings)

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**Met Office @metoffice** 22 Jul

Current heat-health alert level: Level 3 - Heatwave action in one or more regions of England. Find out more at [bit.ly/12Ii52Y](http://bit.ly/12Ii52Y)

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**Met Office @metoffice** 22 Jul

Good morning, Emma here to help with your weather enquiries. Today will be very hot & humid, thundery conditions especially to the south.

**Met Office shared a link** July 17, 2013

UK has now had 11 days with temperatures over 25°C somewhere in the UK, making it the longest hot spell since 2003. Heat-health warnings are in place in some regions of England. See <http://bit.ly/12Ii52Y> for more information.



July starts dry, sunny and warm  
[metoffice.met.rdg.ac.uk](http://metoffice.met.rdg.ac.uk)

Early Met Office figures for the first half of July show that it has been warmer, drier and sunnier than usual so far this month.




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## Sandy Superstorm 2012, U.S.




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- There were at least 72 direct deaths, and 75 indirect deaths in the U.S. Damage caused by the hurricane is estimated to have cost at least \$50 billion in the U.S.
- Use of new technologies:
  - The Google Crisis Response team provided the Google Crisis Map.
  - Wireless Emergency Alerts (WEA).





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## Sandy Superstorm 2012, U.S.



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- Use of social media
  - Terms “hurricane”, “Sandy” outsourced “FEMA” and “Obama”.
- Preparation:
  - Many organizations and individual responders used Twitter, Facebook and Pinterest to contact citizens in the affected region, informing them about the threat and providing information about measures that citizens should take before the storm arrives.
- During the storm:
  - People, including those suffering power outages but using mobile devices, could stay informed by receiving critical weather updates through social media such as Facebook and Twitter, and with Instagram and Pinterest surging in popularity for the sharing of information in image format.
  - Many organizations, such as the American Red Cross monitored social networks and were able to respond according to the information they were receiving from individuals for example, by receiving emergency requests for help, and by learning about areas seriously affected by the disaster.
- Risks: Spread rumors, falsehoods and bogus donation requests.






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## Haiti Earthquake 2010, Haiti.




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- On January 12, 2010, an earthquake of magnitude 7 in the Richter scale struck Haiti, a poor Caribbean country. The epicentre was near the capital city of Port-au-Prince. The death toll was at least 100K with other claims ranging from 100K to 300K.
- Use of new technologies:
  - Internet through cell phones, Skype.
  - An Emergency Information Service was set up and using SMS, Haitians were enabled to report missing persons, shelter problems and food issues, while the service also sent SMS texts with important information to registered users.
- Use of social media:
  - Twitter was the first social media outlet used, it remained heavily used throughout the aftermath of the disaster, and its use was widely publicized.
  - Other social media were taken up soon afterwards, including Facebook, YouTube, iReport, Flickr. Facebook and TwitPic enabled the publication of the first pictures of the earthquake's effects, while YouTube and iReport provided the first videos.
  - Organizations such as the American Red Cross turned to social media to raise donations in order to aid Haiti.
- Monitoring of social media could have prevented a cholera outbreak.




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## Gezi Protests 2013, Turkey.




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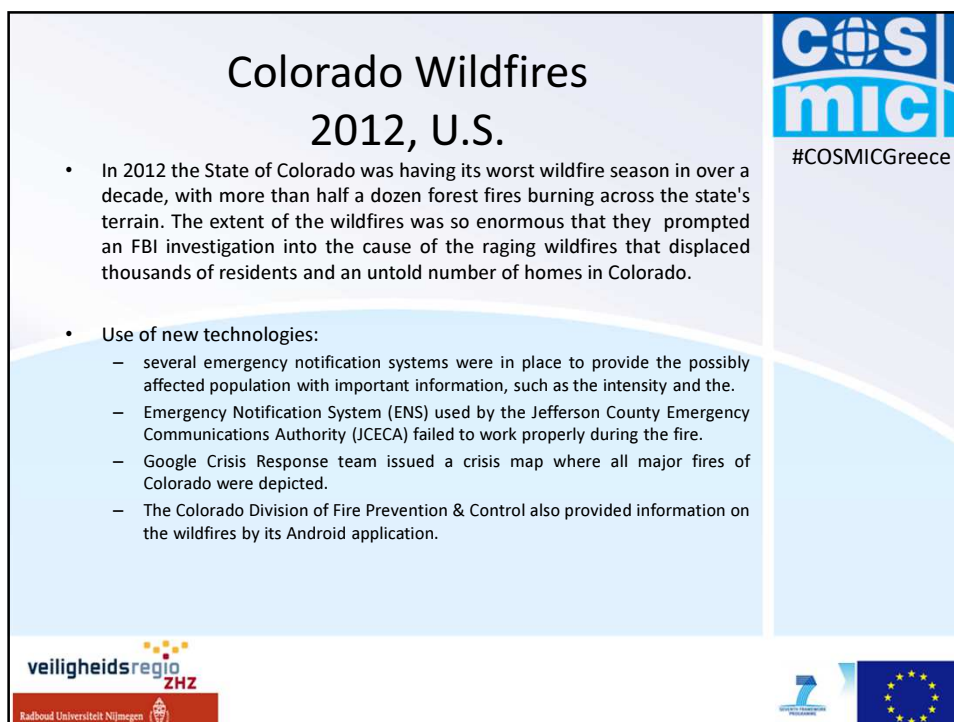
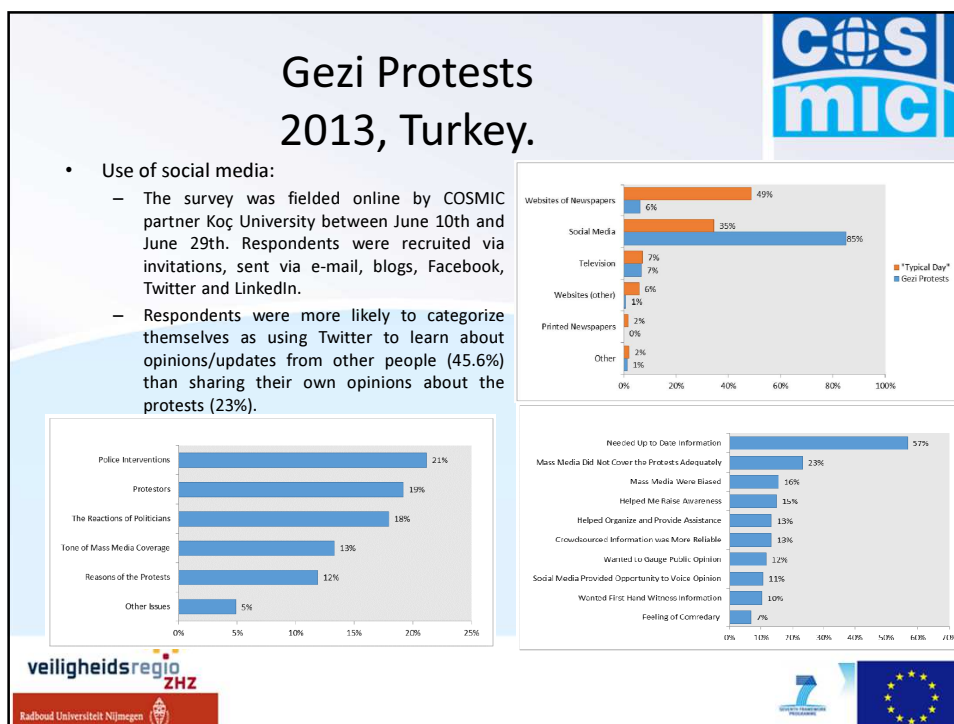
- Gezi Protests started in May 28th 2013 as a relatively small sit-in protest against removal of trees for the new redevelopment project in Taksim square area and Gezi Park.
- The agenda of the protestors quickly evolved to include not only the redevelopment project in Taksim but also issues such as the increased encroachment of the ruling party in the private lives of the citizens, threats to freedom of speech, freedom of assembly, and freedom of the press.
- Use of new technologies:
  - protestors frequently utilized Google and Yahoo e-mail groups to communicate with each other.
  - SMS applications such as Whatsapp were used to form information networks.
  - conventional SMS messaging was used to send information to users abroad.
  - Live streaming services like Livestream and Ustream were used by citizen journalists to provide real time coverage the protests.
  - Google Maps was utilized to mark the locations of nearby healthcare facilities, pharmacies, open Wifi hotspots, shelters.



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## Colorado Wildfires 2012, U.S.



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- Use of social media:
  - Colorado Office of Emergency Management used Facebook and Twitter to inform the public of ongoing operations. This included specifically the use of social media to gather and share information, to post alerts, and possibly receive information about potentially new fire outbreaks. When the disaster struck, several hashtags were also created so that Twitter users could comment on each fire separately.
  - An important use of social media during the crisis was also to share and relay important third party information between organizations and citizens. Re-sharing and re-tweeting information will most likely reach family, friends, customers or community and can provide help quickly to someone who may need it.






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## U.K. Floods 2012, U.K.



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- During the biggest part of 2012, the United Kingdom was severely hit by a series of weather events that had great impact on its population. At the beginning of 2012 the country experienced droughts and a heatwave, which were then followed by massive floods throughout the country for the remainder of the year as well as the start of 2013.
- Use of new technologies:
  - Eligible residents will be able to sign up to Floodline Warnings Direct which is a free service that sends you a direct message when flooding is expected and may affect your property. You can receive warnings by telephone, mobile, email, SMS text message or fax.
  - The Environment Agency would also post warnings on their website.




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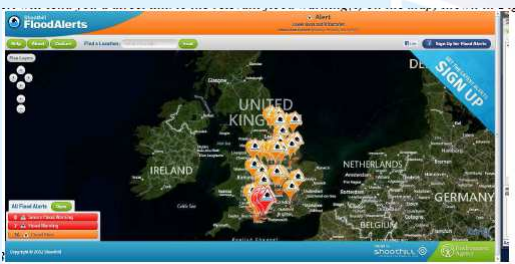



## U.K. Floods 2012, U.K.




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- Use of social media:
  - The Authorities primarily used social media for one-way (from authorities to members of public) and two-way communication.
  - FloodAlerts, provided by the Environment Agency, is the first graphical representation of the flood warning data which provides localized updates every 15 minutes, keeping users informed about the potential flood risks in their area. To monitor a location you will need to register with the Flood alerts app on Facebook.



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## Xynthia Storm 2010, France





- In 2010, between the 27th of February and the 1st of March, a violent storm, named Xynthia, crossed Western Europe, with Portugal, Spain, France, Germany and Belgium all suffering strong gusts and heavy rain. France, the worst-hit country, recorded at least 51 victims and several missing.
- Use of new technologies:
  - Meteo France issued a warning on its website on the 27th of February, stating that a severe storm was imminent. However, missing in this warning was the potential for the storm to cause flooding.
  - Real time river water levels are monitored by SCHAPI service. Does not monitor coastal flooding.







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## Xynthia Storm 2010, France




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- Use of social media:
  - Little evidence to suggest social media were used by the authorities.
  - Some local authorities did not even have social media accounts.
  
  - Members of the public utilized social media to:
    1. Share information among them.
    2. Exchange thoughts about the disaster.
    3. Campaign for funds and support.
  
  - News agencies also used social media to inform the public of the impacts of the storm and how the recovery process progressed even several months after the event had occurred.




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## Conclusions



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Key points from the examination of European and international case studies include:

- Some case studies demonstrated that there is a high risk of misuse of social media. Kinds of misuse include the following:
  - spreading of rumors and falsehoods,
  - bogus donation requests for individuals posing as official response and support channels,
  - tweeting by the public for help when they should be using conventional channels,
  - sharing confidential police information, such as the location of officers in the case of the Boston bombings and,
  - potential misuse by mainstream media for the sake of speed instead of accuracy and correctness in their news flow.
- Even though social media are used during an event, does not always mean that a wider audience will be reached. Journalists may henceforth take on an active role assisting and participating in the efforts of first responders.
- In many respects, the use of social media may be driven by a lack of alternatives from mainstream media.
- Social media can act as counterbalance when conventional warning systems fail to operate.
- Several cases indicate that it would be wise for organizations and authorities to utilize both traditional media technologies and social media when supporting and communicating with the public.




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## Conclusions





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- Even when there are alternative and potentially more proper means of communication, people will use social media. Responders must monitor social media in order to be informed of the situation, and can use social media themselves to disseminate important information.
- Social media will prove to be the most effective communications tool available to some citizens, depending on the particular problems (such as power or service outages) affecting them.
- Crisis maps, especially when enriched through crowdsourcing approaches with information aggregated from social media communications, are very powerful tools.
- Social media usage can be aggregated to discover information not present in individual messages. Aggregates provide information ranging from which topics are trending, to tracking or recognizing the movements or patterns of movement of large numbers of individuals.
- A large number of people will follow local organizations on their Twitter account during a crisis.
- Organizations should not pay attention to low interest in their social media accounts during the absence of crises. Establishing a social media strategy before a crisis occurs is important.
- Content generation on Twitter varies predictably during a day. Organizations should therefore interpret changes in attention accordingly.
- When tweeting, hashtags should be well defined to avoid irrelevant content from being displayed on online discussions concerning the event.




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## Discussion Topics



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- Has there been a case when your Agency used new media tools to manage a certain crisis? If not, can you think of a case when they would have been helpful?
- Which functions of Social Media would serve your Agency better? Which ones would be most likely to be used?  
How would you implement such functions?
  - One-way communication (notify/alert)
  - Two-way communication (converse/provide feedback)
  - Request/offer assistance
  - Relay (share a piece of information with others)
  - Campaign (awareness raising/fund raising)
  - Organize (co-ordinate response/enable individuals to organize themselves)
- Do you think new media tools can be effective in crisis management? How possible would it be for agencies in Greece to adopt such tools? When?
- Are there any notable good practices in optimizing the use of new media in crisis management?



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