Technological adoption in the recovery phase

When disaster strikes for the first time people tend to follow the familiarity principle and use the technology they are used to, but they also learn a lot about the best practices. For instance, after the Nepal earthquake, a survey among LastQuake mobile application users showed that the app had mostly been downloaded after the first quake, when discovered through people's personal network. Indeed, when an earthquake strikes a region for the first time in a while, the websites are the main source of testimonies and it is only for subsequent shocks that the app is widely used (Bossu, Laurin, et al. 2015). Studying the 2011 Tuscaloosa tornado, Stokes & Senkbeil (2016) found that there were statistically significant differences in Facebook and Twitter usage both before and after the tornado. More people were reported to use the social media after the Tornado than before, with some people under 20 years old starting to use them and some students moving from using Facebook a lot to adopting or increasing their use of Twitter. After the 2011 Joplin Tornado, social media inactives were also reported to have used social media for the first time (Williams et al. 2012). Before that, (Palen & Liu 2007) found that after Hurricane Katrina, some victims from Baton-Rouge used a computer for the first time in order to share and find information about their home (with one of the firsts online crisis maps), or about missing people. In another survey, half of the people who used text-messaging after the hurricane had learned to do so during or soon after the hurricane (Shklovski, Burke, Kiesler & Robert Kraut 2010). We could also suppose that the adoption of best practices can vary with the type of crisis and could be facilitated if the crisis is anticipated, but no proof of this hypothesis was found in the literature review and this requires further research. Working on codified hashtags for disasters in Italy, Valentina Grasso and Alfonso Crisci showed that even if it was a citizen initiative, it is complex to use codified hashtags during an effective disaster, as they may not be enough know by the public or perceived as useful. They found that they started to be used but not enough citizens were aware of them. They argue that codified hashtags will only function if institutions support them before, during and after the emergency (Grasso & Crisci 2016). Government and institutions' role in technology adoption is thus important and should not be neglected. Finally, when a disaster strikes some technologies or tools are created to help during the recovery phase. For instance, after the earthquake that struck Emilia-Romagna (Northern Italy) in 2012 Tagliacozzo and Magni found that websites created for the reconstruction were the second most used tool after Facebook to communicate bidirectionally with the authorities. These new tools were adopted quite easily by the citizens that were the most web-skilled and at ease with the navigation on different type of websites, mostly young and educated people. But in their study, they found that the lack of IT skills was not the only reason to explain the non- adoption of new tools. Lack of time and of trust in the authorities were also strong barriers (Tagliacozzo & Magni 2016). This last example shows that the needs and the familiarity principle cannot fully explain the adoption and use of technologies during a disaster. However, this is an opportunity for disaster managers to educate citizens about the best uses of technologies during all phases of a disaster.

Note: See source document for full reference.

Applicable to:

Stakeholders: <u>Norms/values</u>

Disaster Phases: <u>Preparedness</u>, <u>Recovery</u>

Types of Actors Concerned: <u>Non-active citizens</u>

Hazards: <u>Natural hazards</u>, <u>Man-made non-intentional hazards or emergency situations</u>, <u>Man-made intentional hazards</u>

Recommendations:

- <u>The use of new technologies (e.g. Bluetooth) can improve communication strategies in disaster management situations</u>
- <u>Use cultural factors to improve the effectiveness of disaster communication</u>

Source

[Deliverable D3.1 "Cultural factors and technologies" (page 39)](#)

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