
Preface

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Biographical notes: Shoshana Altschuller is an Assistant Professor of Information Systems at the Hagan School of Business at Iona College in New York where she also serves as a member of the Center for Business Continuity and Risk Management. She has published and lectured on the topic of information systems for crisis response including at the International Conference on Information Systems for Crisis Response and Management and via Henry Stewart Talks. Her other research interests include virtual communication and collaboration systems and e-commerce. Some of her previous research has been published in *European Journal of Information Systems*, *Journal of Computer Mediated Communication*, *Ethics and Information Technology*, *IEEE Transactions on Professional Communication*, and other journals.

Recent history has been no stranger to unexpected debilitating events such as natural disasters, political disturbances, and terror attacks. While major crises punctuate world history, emergency situations of all scales are a real part of everyday life at all levels. They threaten the continuity of governments large and small, businesses, social structures, and individual lives. In order to minimise the impact of crises, individuals, communities, and organisations must be prepared to mobilise, mitigate, and mend at a moment's notice.

The community of scholars involved with emergency management is dedicated to continually improving the means and methods of most effectively predicting, detecting, and responding to emergencies. However, challenges abound. Predicting the unpredictable, organising within mayhem, and servicing via broken infrastructure are just some of the paradoxes met by emergency response personnel. Emergency managers find themselves making grave decisions under great pressure and solving complex problems in short amounts of time. However, while no two emergency situations are alike, it is well known that when disaster strikes, the ability to collect, share, and distribute accurate and timely information can make the difference.

In fact, information management is often one of the most important goals in response and recovery efforts. While crisis scenarios are unpredictable, they usually include uncertainty, complexity and physical damage. On this backdrop, information to support significant decisions and depict the state of events must come quickly – and there is little room for error. Still, numerous recent examples have shown that the crisis scenario presents many challenges for the successful management of information during these trying events. Multiple collaborators and disparate sources of data, as well as difficult

conditions and rapidly changing environments create unique information needs to be addressed by emergency information systems.

This special edition of the *International Journal of Business Continuity and Risk Management* explores the roles of information management before, during and after crisis events. The collection of articles herein, represents both analyses of past events and proposals of novel information systems and techniques to address future events. Contributions include both theoretical and practical solutions to analysing and addressing information needs during crisis.

One of the most effective ways of determining how to address situations and where to apply efforts for improvement is by examining past incidents. Experience is often the best teacher of what challenges could potentially arise and how to contend with them. Bartel Van De Walle and Julie Dugdale contribute a powerful piece, 'Information management and humanitarian relief coordination: findings from the Haiti earthquake response', that delves into the response to the large scale disaster area that was Haiti after the earthquake of January 2010. The firsthand accounts of responders' experiences in obtaining, analysing, and sharing information in that scenario highlight the strengths of the approach taken and the difficulties involved. Lessons learned, and to be applied to information management in any humanitarian relief effort include, among other things, the need to extend our coordination and validation efforts to the volumes of information that come through democratised information sources, such as social media.

In fact, a similar subject arises throughout our special issue. Although most emergency scenarios do not occur on as grand of a scale as in Haiti, survival and assistance are of utmost important to the people who are impacted even by smaller scale events. Social information sharing systems seem to be taking centre stage in response to these situations as well. Michael E. Long et al. in their paper, 'Modelling communication network effect on emergency evacuation times: public vs. personal', take an engaging approach to literally illustrate the power of personal communication networks on the evacuation efforts of small scale emergency sites. Using agent-based modelling, they demonstrate how much more effectively an area can be evacuated when people depend on their own information networks to gather and evaluate information rather than on official public announcements.

In a similar vein, Michael Lang, in his paper, 'Supporting the 'chain of survival': how ICT can facilitate rapid response for out-of-hospital cardiac emergencies', explores how the new generation of information and communication technology can be applied to personal emergencies, specifically, cardiac arrest. Some of his suggestions include the use of social networking systems, location-aware devices, radio frequency identification (RFID), 3G mobile communications, and iPhone™/Android™ applications to implement solutions that are flexible and efficient enough transmit emergency information to emergency responders with enough time to save victims' lives. He presents a provocative set of proposals that paints a promising picture of the potential improvements to the response speed in cardiac and other emergencies.

Indeed, in emergency situations, time is of the essence, and the more quickly decision makers can get accurate information, the more effective their decisions will be. Guenther Sagl et al. describe a unique approach to providing emergency responders with up-to-date information about the state of an emergency scene. In their paper, 'Standardised geo-sensor webs and web-based geo-processing for near real-time situational awareness in emergency management', they propose and test a sophisticated system of geo-sensors to detect and spatially depict the field conditions in near real-time

to support in-crisis decisions. The success of their approach in a radiation safety exercise is promising for situational awareness in other realms as well.

Certainly, situational awareness is a key element in crisis management. Under dynamic and unprecedented circumstances, a solid and detailed understanding of the situation they are dealing with will help responders determine what needs to be done and where. In 'Knowledge management systems for emergency management: a situational approach', Magiswary Dorasamy et al. understand this interactive nature of emergency situations and underscore its importance by defining it as a success factor in applying knowledge management systems (KMS) to emergency scenarios. In this theoretical piece, the authors convincingly call for an evaluation of KMS systems in emergent situations from the situational perspective that they require. Since the success of an emergency information system may be influenced by the unique situation in which it is applied, situational factors must be used in its evaluation.

Similarly, Shuyan Xie and Markus Helfert emphasise the context of emergency information exchange as they propose a tool to assess information quality that takes the context into account. Unlike traditional evaluations of information quality, in 'An assessment technique for information quality support in emergency response', the authors analyse the emergency medical services field to illustrate the importance of considering the context along with the data that is being assessed. The assessment technique that they develop includes a two-phase approach, beginning with process modelling that addresses both the data and the context in which it is used.

Thus, this special edition discusses both the timeliness and quality of emergency information. It highlights the significance of the dynamic environment in which the information is collected, shared, and analysed. It addresses both past and potential crises; both theoretical and actual tools. The broad coverage of this special issue is rooted in medical emergencies, natural disaster, and nuclear accident. However, we expect that this important publication takes us one step further in enhancing both scholarship and service in the field of crisis management.