

Looking At the Consequences Eight Layers Down: Institutionalizing Readiness in Disaster Response Organizations

J. S. Bowen

Is your organization ready to survive and exploit the opportunities that arise in every crisis? Disasters are increasing in scale, scope, and complexity and the structures currently in place are not designed to handle the now-common 'disaster within a disaster'. The COVID-19 pandemic has shown us that our current systems need revision and updating. Black Swan events—the exceedingly rare and highly disruptive events that can trigger existential crises for organizations and societies (Taleb, 2010)—once seen as generational events are now commonplace, interrelated, and compounding components of daily life (Kayyem, 2022; Marcus et al., 2019; Roux-Dufort, 2007). Despite this reality, the reactive design of many humanitarian and disaster response organizations leaves them vulnerable during major events thus at risk of being unable to fulfil their mandates. The mantras “it cannot happen here” and “it will not happen again” are naïve and dangerous.

Traditionally, crisis and emergency management structures and frameworks are reactive with the primary focus of funding, resourcing, and attention being placed on the response pillar of the emergency management cycle (Coppola, 2015; Kapucu, & Özerdem, 2013; Marcus et al., 2019; Mileti, 1999; Pearson, & Mitroff, 1993). Organizational crisis management literature and research largely focuses on weathering the crisis, treating it as a one-off exception (Roux-Dufort, 2007) and crisis communications frameworks (Coombs, 2009; Covello, 2003). Through repeated experience, this evolved into an integrated framework approaching crisis management through an analysis of the internal dynamics of a crisis and the management of external stakeholders, which enabled crisis leaders to determine the necessary actions for an organization in the throes of a crisis (Bundy et al., 2017; Paton & Johnston, 2017). More recently, researchers explored how to build

cultures of preparedness in organizations to start shifting the focus toward fostering organizational resilience in the face of acute disruptions (Alperen, 2017; Beckford, 2022; Cooper, 2019).

The focus on “right of boom”—reacting after the crisis has happened—does not help executives and community leaders design upstream—“left of boom”—frameworks that enable organizations to be inherently resilient and able to not only withstand the shocks of Black Swans, but thrive through them (Kayyem, 2022; Taleb, 2010; Taleb, 2012). Further, the literature on disaster mitigation is largely focused on hazard-specific mitigation measures (Coppola, 2015; Mileti, 1999; Pine, 2014) and the literature on disaster and crisis preparedness proscribes actions as a checklist of activities to be conducted in the lead-up to the implementation of crisis response mechanisms (Coppola, 2015; Kapucu & Özerdem, 2013). The result is a perpetual cycle of crisis Whack-a-Mole. It is no longer sufficient to simply address the symptoms of a problem; we need to go upstream to understand the root of the problem and put systems in place to address those root causes (Heath, 2020; Kayyem, 2022). A model that enables organizations to be truly adaptive and resilient, in which “resilient” does not mean simply “able to bounce back” but rather “thrive under adversity” (Taleb, 2012) is needed.

Being ready to weather adversity and disruption means more than simply being prepared. What does it mean to be “ready” and how does an organization achieve this lofty goal? Fundamentally, an organization ready to survive an unseen storm must be both adaptive and resilient. Adaptive organizations dynamically adjust to changing circumstances and conditions (Deloitte, 2022). Resilient organizations weather the crises that do arise and quickly adopt processes that reflect the realities of the “now normal” (Beckford, 2022; Kayyem, 2022; Paton & Johnston, 2017). Most organizations are neither. Some are one or the other. An exceedingly rare few are both. Being both adaptive and resilient enables organizations to succeed in a world of ever-increasing complexity (Kayyem, 2022; Taleb, 2012). In essence, crisis leaders must identify the

consequences of actions and decisions “eight layers down” and put systems in place to break the chain of events before the consequences are realized.

This paper presents findings from a review of existing literature from the crisis and emergency management, organizational design, organizational psychology, and strategy fields as well as 11 semi-structured interviews with senior leaders and experts in emergency management from Canada and the United States conducted by the author. The results of the study provide insights into how senior leaders can consider strategic trade-offs, navigate uncertainty, and think about positioning their organizations for the future. Drawing on these insights, I propose a new model for building adaptive and resilient emergency management and humanitarian organizations through the establishment of a culture of readiness and the requisite enabling structures, tools, and processes. Through the model, the study addresses the question: How might crisis and disaster response organizations approach the strategic trade-offs related to readiness, responsiveness, and resilience in order to navigate the uncertainty inherent in the field? The implications of the model are significant as it provides a comprehensive approach towards building adaptive and resilient organizations in an increasingly complex and unpredictable world.

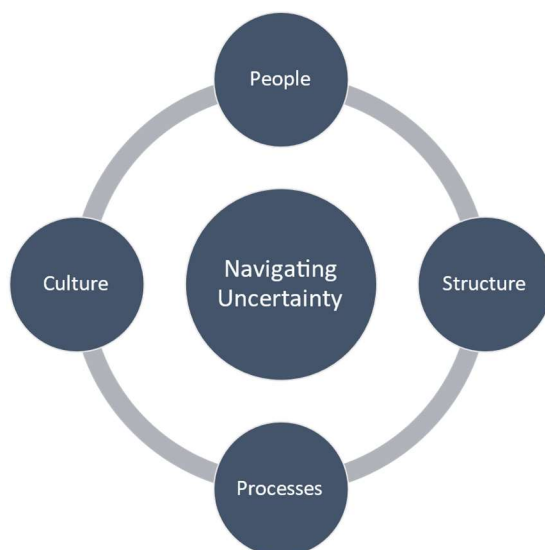
Proposing a Model for Building Adaptive, Resilient Emergency Management

Organizations

The original aim of this research project was to understand how to build adaptive, resilient emergency management and humanitarian organizations. Through the literature review, an initial model suggested this was dependent upon five key areas: the people; organizational structure; processes; culture; and, the ability to navigate uncertainty. The model (Figure 1) held the ability to navigate uncertainty at the core, representing this capability’s influence on the other four dimensions.

Figure 1

Initial model developed from literature review.



Analysis of the 11 expert interviews revealed that this initial model was insufficient. The model did not represent the dimensions and themes that surfaced during the interviews. While the five areas originally proposed remain important, they are better included as considerations embedded within a revised understanding of the critical concepts for building the adaptive, resilient organizations needed in the emergency management environment going forward.

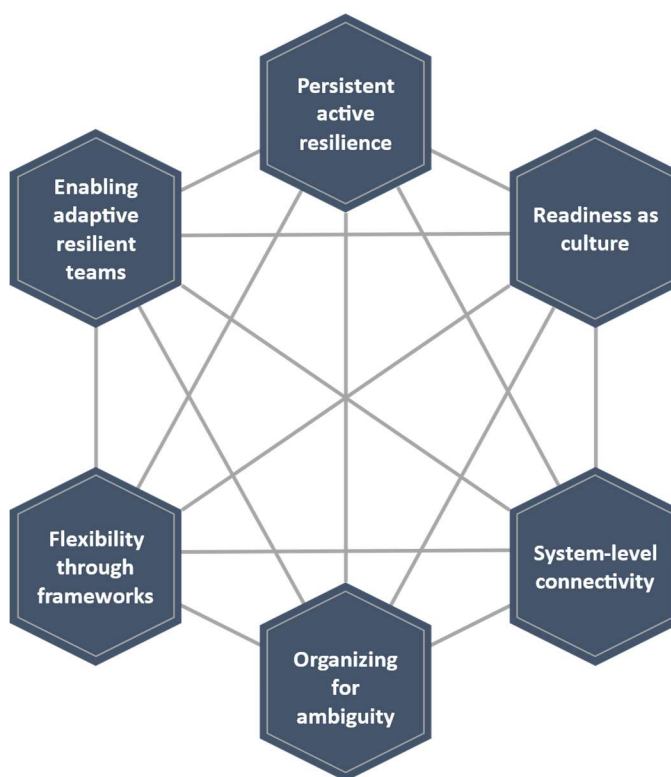
Resilience is a product of *ex ante* actions, processes, systems, and culture. In other words, organizational resilience—*ex post facto* or right of boom—in emergency management is a direct result of organizational readiness—*ex ante* or left of boom—actions. Disaster response operations are increasing in complexity due to system interconnectivity and co-occurring and compounding events, therefore more costly and resource intensive. Thus, we need to build a system that allows us to identify consequences eight layers down and eight silos across, and act to minimize the need for large scale disaster responses.

The new model of adaptive, resilient organizations presented here for consideration is structured around six concepts drawn from the literature and interview themes: persistent active

resilience; readiness as culture; system-level connectivity; organizing for ambiguity; flexibility through frameworks; and, enabling adaptive resilient teams. These six interconnected concepts complement and enable each other (Figure 2). In combination, these elements provide a model of an organization ready to deliver on its core mandate while continuously learning and adapting from experience. Drawing on the primary and secondary data, each of the six concepts will be explained here in turn.

Figure 2

A model for building adaptive, resilient emergency management organizations.



Persistent Active Resilience

Persistent active resilience refers to the ability of an organization to adapt to, withstand, and thrive in the face of disruptions and challenges. The term “persistent” denotes that fostering organizational resilience is not a one-and-done effort, but rather a continuous and iterative set of

actions. “Active” resilience assumes the presence of passive resilience structures and processes—a sequential framework of processes consisting of early detection and warning, redundancy, backup, insurance, incident and crisis management, business continuity planning and disaster recovery. It then applies a cyclical process of hazard and risk detection, foresight and forecasting, learning, and the application of lessons to organizational structures, processes, and culture. Here, it is recognized that cooperation and collaboration both across organizational silos and with external partners are key, and that organizational resilience is not a zero-sum game.

By establishing the structures to actively identify potential risks to the organization, its people, and its operations, and then layering in processes and systems to act on that information, emergency management organizations will be better able to minimize the disruption caused by disaster events. Integrating this proactive approach across the organization, including supporting and corporate functions, is core to enabling a culture of readiness.

Readiness As Culture

Integration of readiness practices into an organization's way of being—i.e., its culture—serves as a control system to guide decisions, the social glue to bond people together, and sense making to guide people in the “why” of the organization. Together these elements build great cultures by building psychological safety, sharing vulnerability, and establishing purpose. Readiness becomes a part of the organization's values, beliefs, and behaviors, rather than just a set of procedures or protocols. Core elements of a culture of readiness are leadership commitment, clear and transparent communication, a drive for continuous improvement, iterative and scaffolded education and training, conducting exercises and drills to build familiarity and trust, and an encouragement of experimentation and innovation.

Organizations that operate with a readiness culture understand the ongoing and changing needs of the communities they serve, understand thresholds of tolerable impacts to their

organization, and relentlessly stress-test their systems and processes. This pursuit of knowledge and adaptation based on new information is critical to establishing a culture in which simply being prepared for what has happened before is not enough; the organization relentlessly strives to be ready for whatever is next and asks, “what is the next best thing we can do to be ready?”. That next thing is often connecting with other organizations at the system level.

System-Level Connectivity

A coordinated approach to managing risks and hazards across different organizations and sectors establishes connections and communication channels between different entities to ensure that they can work together effectively in the event of a crisis. No organization can independently address the complexity of disasters in the “now normal”. A systems-level approach needs to consider interconnectivity, an understanding of inequity and vulnerability rooted in continuous community engagement, and cross-sectoral collaboration to enhance collective capabilities and capacities. Here, it is about connecting eight silos across the system, and well beyond the singular scope of any one organization. Building structures that enable collaboration, information sharing, and coordination of action based on the needs of those being served, results in more efficient, effective disaster response operations. This collaboration extends to the full system and full cycle of emergency management so that as one organization prepares to complete its mandate in support of a community, another is ready for a warm handover and seamless continuity of service to that community.

By implementing the structures, processes, and partnerships necessary to connect at a system level, organizations can leverage the insights of partners and collaborators to build a more comprehensive and robust system that enables faster, more effective crisis response while also mitigating organizational risks. It also means that no one actor feels compelled to be everything to

everyone and the strengths of each actor in the system can be leveraged to maximize service delivery and minimize negative impacts for individuals and communities impacted by disasters.

Organizing For Ambiguity

An organization establishes structures and systems to enable it to remain effective when operating with high levels of uncertainty and/or rapid change by establishing clear decision-making frameworks, enabling flexibility in action, experimentation and learning, and leveraging foresight and forecasting. Aligning governance structures employed in day-to-day and crisis operations provides the consistency necessary to enable rapid, consistent decision-making irrespective of circumstances. The key difference should be a reduction in the layers needed to make decisions during a crisis. Teams must be empowered to act in line with pre-established decision-making frameworks. Here, leveraging a deep understanding of potential risks or hazards through scenario planning, trend analysis, and other forecasting techniques can speed the decision-action cycle both in and out of disaster contexts.

When leaders provide clear, concise direction, consistent and frequent communication on what is happening and what is changing, and establish the mechanisms to enable problem solving at the team level, organizations are able to smoothly navigate uncertainty. Developing the structures and processes to identify Grey Rhinos and imagine Black Swans, coupled with a culture of readiness and learning, serves as a foundation for organizational adaptability and resilience.

Flexibility Through Frameworks

Organizations must establish clear frameworks that provide guidance, structure, and allow for flexibility in response to changing circumstances. This involves developing scalable, adaptable processes and procedures. Consistency in process and flexibility in application is essential for successfully navigating uncertainty and ambiguity. The key is establishing clear, malleable frameworks for decision-making to guide processes, people, and even culture. Frameworks and

guidelines must be directly tied to a well-understood, clearly articulated organizational purpose, mandate, and scope. Frameworks, as opposed to detailed proscriptive plans, can then be adapted to the situation at hand while maintaining consistency in approach. Here, training people at all levels in the application of the frameworks is critical, as is the practical application and adaptation of the frameworks in various scenarios through exercises.

By employing consistent and well-understood frameworks, organizations empower their teams via a structured approach to problem-solving and decision-making. Encouraging the team to adapt the framework to the situation at hand enables them to look eight layers down and preempt and/or mitigate risks and hazards. By implementing these practices, organizations can develop a more flexible approach to risk management that allows them to respond effectively in a wide range of scenarios while still maintaining a common and consistent framework for decision-making.

Enabling Adaptive Resilient Teams

Organizations must build teams that can adjust processes and systems in response to changing conditions. This involves developing a culture of continuous learning and improvement, fostering collaboration, and building diverse, adaptable teams. Two primary team typologies were explored in this study. *Resilient teams* share a common belief in the team's ability to complete tasks, a common mental model of teamwork and how they operate together, the ability to improvise, and a sense of trust and psychological safety. *Adaptive teams* are built with a culture of continuous learning and improvement, a drive to be collaborative, and with diverse and adaptable people and systems. When seeking to employ these teams to their full potential, it is important to establish clear goals and objectives while also allowing them the flexibility to adjust their processes as needed. This can involve establishing key performance indicators or other metrics that help track progress towards organizational goals while still allowing for adaptation in response to changing circumstances.

By combining the elements of resilient and adaptive teams and leveraging the flexible frameworks discussed above, emergency management organizations will be able to magnify their people's skills, talent, and passion in a way that enables the structures and processes needed to entrench adaptability and resilience in the organization. People are the heart of every organization and, especially in organizations that live in rapidly changing environments, need to be empowered to act if it is in the strategic interest of the organization.

Conclusion

This study addressed the question: How might crisis and disaster response organizations approach the strategic trade-offs related to readiness, responsiveness, and resilience to navigate the uncertainty inherent in the field? through the presentation of a new model for building adaptive, resilient emergency management organizations. It draws from multiple fields and expert interviews to offer a comprehensive approach to address the complexity of our ever-changing world. Through its application in whole, the goal is for emergency managers to have the capabilities, processes, structures, and systems needed to identify consequences consistently and predictably eight layers down and act to minimize the need for large-scale crisis and disaster responses.

The study contributes to the literature through the unique application of organizational design, resilience, and strategy fields to emergency management organizations. While seemingly intuitive, there are no models in the literature or in practice that resemble the one presented herein. While specifically designed for emergency management organizations, the model could be used to inform organizations who operate in rapidly changing contexts, industries, and sectors. Further refinement and real-world testing will assess its implementation feasibility and long-term effectiveness.

References

- Alperen, M. J. (2017). Resiliency and a Culture of Preparedness. In *Foundations of Homeland Security: Law and Policy, Second Edition* (pp. 397-406). Hoboken, NJ: John Wiley & Sons, Inc. <https://onlinelibrary-wiley-com.login.ezproxy.library.ualberta.ca/doi/pdf/10.1002/9781119289142>
- Beckford, J. (2022, September 01). *A Systemic Perspective on National Preparedness*. National Preparedness Commission: <https://nationalpreparednesscommission.uk/2022/09/a-systemic-perspective-on-national-preparedness/>
- Bundy, J., Pfarrer, M. D., Short, C. E., & Coombs, W. T. (2017, July). Crises and Crisis Management: Integration, Interpretation, and Research Development. *Journal of Management*, pp. 1661-1692.
<https://journals.sagepub.com/doi/full/10.1177/0149206316680030>
- Coombs, W. T. (2009). Conceptualizing crisis communications. In R. L. Heath, & H. D. O'Hair, *Handbook of Risk and Crisis Communication*. New York: Routledge.
<https://doi.org/10.4324/9781003070726>
- Cooper, T. R. (2019). *Creating a Culture of Preparedness*.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8352363/pdf/djph-54-003.pdf>
- Coppola, D. P. (2015). *Introduction to International Disaster Management, Third Edition*. Boston: Butterworth-Heinemann.
- Covello, V. T. (2003). Best practices in public health risk and crisis communication. *Journal of Health Communication*, 5-8. <https://www.tandfonline.com/doi/abs/10.1080/713851971>
- Deloitte. (2022). *The Adaptable Organization*.
<https://www.deloitte.com/global/en/services/consulting/content/the-adaptable-organization.html>

- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology. *Organizational Research Methods, 16*(1), 15–31. <https://doi-org.login.ezproxy.library.ualberta.ca/10.1177/1094428112452151>
- Heath, D. (2020). *Upstream: The quest to solve problems before they happen*. New York: Avid Reader Press.
- Kapucu, N., & Özerdem, A. (2013). *Managing Emergencies and Crises*. Burlington, MA: Jones & Bartlett Learning.
- Kayyem, J. (2022). *The Devil Never Sleeps: Learning to live in an age of disasters*. New York: PublicAffairs.
- Marcus, L. J., McNulty, E. J., Henderson, J. M., & Dorn, B. C. (2019). *You're It: Crisis, change, and how to lead when it matters most*. New York: PublicAffairs.
- Mileti, D. S. (1999). *Disasters by design: a reassessment of natural hazards in the United States*. New York: Joseph Henry Press.
- Paton, D., & Johnston, D. (2017). *Disaster Resilience: An integrated approach, Second Edition*. Springfield, IL: Charles C Thomas Publisher, Ltd.
- Pearson, C. M., & Mitroff, I. I. (1993, February 1). From crisis prone to crisis prepared: a framework for crisis management. *Academy of Management Executive*, pp. 48-59. <https://eds-s-ebsohost-com.login.ezproxy.library.ualberta.ca/eds/pdfviewer/pdfviewer?vid=1&sid=4a09644e-d42c-42c3-b29e-8f6c232a0689%40redis>
- Pine, J.C. (2014). *Hazard Analysis: Reducing the impacts of disasters, Second Edition*. Boca Raton: CRC Press. <https://doi-org.login.ezproxy.library.ualberta.ca/10.1201/b17463>
- Roux-Dufort, C. (2007, May 04). Is Crisis Management (Only) a Management of Exceptions? *Journal of Contingencies and Crisis Management*, pp. 105-114. <https://doi.org/10.1111/j.1468-5973.2007.00507.x>

Taleb, N. N. (2010). *The Black Swan: The Impact of the Highly Improbable, Second Edition*.

New York: Random House.

Taleb, N. N. (2012). *Antifragile: Things That Gain from Disorder*. New York: Random House.