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Many companies use quantitative business intelligence (BI) technologies to collect, process and analyse data, which provides valuable information that can be used in the decision making process. The extent to which an organization can use all available data effectively plays an important role in how successful an organization is. BI can be useful for commercial purposes, but can also be applied in the public sector (Olszak, 2016).

Within the domain of crisis management, however, little attention has been paid to the subject of designing quantitative business intelligence processes successfully to manage crises. Literature on crisis and disaster management tends to focus on how information can be qualitatively processed. In order to successfully use available information in the decision-making process, these theories tend to focus on the concepts of sense-making and meaning-making (Klein et al., 2010). The available research considering data management within the crises domain, e.g. research examining early warning systems, seems to overlook the useful principles that existing literature provides (Poslad et al., 2015).

The relevance of effectively combining business intelligence processes with existing procedures in crisis management processes was demonstrated during the COVID-19 crisis. In light of this crisis, organizations were challenged with the task of designing quantitative supporting structures (Janssen & Van der Voort, 2020). But how do we connect the 'quantitative domain' and the 'qualitative domain' adequately?

We argue that crisis management literature lacks an overall theory of how the gathering, processing and analysis of quantitative data can be unified with the qualitative processes of sense-making, meaning-making and decision-making. Therefore, we developed an initial model that includes and connects both worlds.

Literature

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Exploring Future Work Practices for Information Sharing and Achieving Common Situational Understanding in Disasters