In collaborative information management settings, different stakeholders use different data and privilege different uses of given data. Making decisions cooperatively requires the ability of all parties to examine the validity of the information produced by other members. To do this, a person needs to be able to identify who or where the information has come from, the context for its production and dissemination, and the motives for the information gathering. Without this, it is easy to misinterpret or misapply the information, putting all parties at risk of error and liability. To support cooperative decision-making practices, a collaborative information management system needs to encourage users to include background information to support contextual reasoning: around who and where the information has come from, why it was gathered, the intentions for use, and the conceptual frame of reference used to produce the information.

Guiding Questions

How are participants able to provide background to their data?

What are mechanisms for determining what background is needed?

What ways are there to avoid making this 'extra' work?

Further Information

One of the major challenges of a collaborative information management system revolves around how diverse stakeholders engage with the data within. Each group might interpret data differently, drawing on different interpretive contexts and previous experiences, their understanding of the situation at hand, the stakeholders they are engaged with, and their routine practices. Much of what a given set of data is based upon cannot be translated for other groups, since it reflects not just different terminologies or contexts but also different ways of acting in the world. Supporting contextual reasoning helps make sure that one group's data is not misused or misapplied, avoiding unintentional liabilities. In addition, collaboration requires common expectations and shared goals, which are not possible without understanding the why and the how of the information being shared. Working with this context to understand these different practices and forms of reasoning will make for more ethical interactions.

Examples

In one BRIDGE co-design session, first responders were concerned about logging information without sufficient contextual information. As they argued, while the logging

might be useful for training purposes, it could problematic if used for evaluation, because the log of the event misses large parts of situational context which is crucial for evaluating the performance of rescue personal fairly. As one paramedic explained.

> "I'm afraid of the logging system telling what I did on that patient, because we [only] see the patient's vital data, we don't see how the patient lies, what was around in the room, did the paramedic have a bad situation of working that influenced what he was capable of doing. So the log shows a poor treatment of a patient, but that was actually the best treatment the patient could get in that situation. So that's my concern about logging and use it without thinking about consequences or you see the point on a screen and you say, "oh, he's doing it, he's not doing it well", but he was maybe on the worst part of the scenery and that could be a problem, … we have to go in the "why" it must be, the logging must be the scene, which puts up the next question – why did it happen like that? To investigate more of it. Then the logging is good."

(Liegl et al 2017: 103)

A picture is not necessarily worth a thousand words. When images of flooding are sent in by responders in the field, areas that look flooded to a farmer may not look flooded from the point of view of an environment agency officer.

Resources

Bannon, L.J. and Schmidt, K. (1989) CSCW: Four characters in search of a context. In John M. Bowers, Steven D. Benford (Ed.) *Studies in Computer Supported Cooperative Work* (3-16). North-Holland, Amsterdam, Netherlands. [Link]

Bernard, L., Kanellopoulos, I., Annoni, A., and Smits, P. (2005). The European geoportal––one step towards the establishment of a European Spatial Data Infrastructure. *Computers, Environment and Urban Systems*, 29(1): 15–31. [DOI]

Liegl, M., Büscher, M and Wahlgren, P. (Eds) (2017) 21st Century Social, Legal and Ethical Emergency Collaboration *BRIDGE Deliverable D12.3*

Schmidt, K. and Bannon, L. (1992). Taking CSCW seriously. *Computer Supported Cooperative Work* 1 (1): 7–40. [DOI] [Link]