Supporting Organizational Sensemaking with Collaboration Engineering

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Abstract
Organizations are increasingly facing complex problems that no single individual can solve alone. When dealing with complex and ambiguous issues, people must interact, discuss, and share their different perspectives and interpretations. Existing literature recognizes sensemaking as one way for group members to understand and talk about complexity. Unfortunately, little has yet been reported on exactly how the properties of sensemaking can be materialized in practice. Collaboration Engineering (CE), on the other hand, has a practical focus in supporting collective work with an attempt to design productive, task-specific work practices that practitioners can collaboratively execute for themselves. This paper seeks to gain a deeper understanding of 1) how sensemaking and CE are related and 2) how they can jointly support the collective construction of meaning by individuals who hold different pieces of information. Drawing on sensemaking and CE literature, the paper illustrates how a collaborative sensemaking process is designed and deployed in one case company.

1. Introduction
During the recent years, we have witnessed rapid development of information technology resulting with increased interconnectedness, transparency, empowerment of individuals, speed of transactions, and decreased cost of information [1]. Consequently, organizations are increasingly facing complex problems for which no single individual has sufficient expertise, influence, or resources to solve the problem alone [2]. When dealing with complex and ambiguous issues, people must interact, discuss, and share their different perspectives and interpretations. In order to effectively deal with complex problems, organizations need a common framework for interpretation and action. Metaphors and other mental models have been found to provide means for individuals and organizations to create and share understanding of the problems to be solved [3]. Mental models establish images, names and an understanding of how things fit together [3]. On an organizational level, shared mental models constitute the frameworks of organizational rationalities and belief systems on which formal analyses, policies and procedures are based. These models must be articulated and accepted within the organization from them to be effective, as the beliefs in mental models allow individuals to predict and control their environments [3].

Existing literature recognizes sensemaking [4] as one way for group members to understand and talk about complexity [5]. Unfortunately, little has yet been reported on exactly how the properties of sensemaking can be materialized in practice. We lack a clear conceptualization of how the building of mental models in sensemaking processes can be supported, i.e. how they can be systematically created, shared, and evolved in order for agents to reduce environmental complexity [6]. Collaboration Engineering (CE), on the other hand, has a practical focus in supporting collaborative activities. Drawing on a number of disciplines, CE seeks to develop, apply, and evaluate ways to design productive, task-specific practices that practitioners can successfully execute for themselves [2].

Both sensemaking and CE share similar kinds of objectives. Just as sensemaking, CE also sees the establishment of shared understanding as an essential organizational task, for which little support yet exists [7]. Just as sensemaking, CE also works towards a deeper theoretical understanding [8]. While the question of how sensemaking occurs in groups, organizations, and communities has yet been relatively little pursued in the sensemaking literature [9], CE works towards a rigorous theoretical understanding that can inform the designers of collaboration technologies and processes “to non-intuitive design choices that produce successes beyond those possible with an intuitive, seat-of-the-pants approach” [10].

The purpose of this paper is to gain a deeper understanding of 1) how sensemaking and CE are
related and 2) how they can jointly support the collective construction of meaning by individuals who hold different pieces of information. The remainder of the paper is organized as follows. Section 2 discusses the process and different forms of sensemaking in order to outline the common ground between sensemaking and CE. Section 3 describes an empirical case that illustrates one example of how CE can be used to support organizational sensemaking. Section 4 discusses the findings. Finally, conclusions are drawn in Section 5, articulating the contribution made to both sensemaking and CE literature.

2. Sensemaking

In 1995, Karl Weick published his book, Sensemaking in Organizations [4], in which he proposed a framework that seeks to explain how people structure unknown so as to be able to act in it. The framework that Weick called *sensemaking*, enables us to turn the ongoing complexity of the world into “a situation that is comprehended explicitly in words and that serves as a springboard into action” [11]. At its most basic, sensemaking is about understanding how different meanings are assigned to the same event [12]. In more concrete terms, sensemaking involves 1) coming up with a plausible understanding -a map of a shifting world; 2) testing this map with others through data collection, action, and conversation; and then 3) refining or abandoning the map depending on how credible it is [13].

Drawing on the work of Donald Campbell [14], Weick [15] proposed that sensemaking can be organized as a cyclical process which consists of *enactment*, *selection* and *retention* mechanisms (ESR). In his later work [11], Weick and his colleagues argue that “sensemaking can be treated as reciprocal exchanges between actors (Enactment) and their environments (Ecological Change) that are made meaningful (Selection) and preserved (Retention)” (Figure 1).

According to the ESR model, sensemaking is typically triggered by an ecological change that somehow violates peoples’ expectations. When this occurs, people begin encountering issues, events, or situations that interrupt people’s ongoing flow, disrupting their understanding of the world and creating uncertainty about how to act [9]. The triggers for sensemaking may take many forms. For example, changes in technology, government regulations or competitive landscape may significantly undermine stakeholders current cognitive structures to deal with situations [16]. Crisis situations have been found to be a particularly strong trigger for sensemaking [17]. Sensemaking can also be triggered by events that are anticipated and planned. As an example, organizational or strategic changes, despite initial planning, may violate expectations and generate considerable uncertainty, ambiguity and confusion for those involved [9].

![Figure 1. The process of sensemaking [1]](image)

*Enactment* is the process by which reality of the puzzling situation is in the first place created. The term ‘enactment’ is used to preserve the central point that people play a key role in creating the environment in which they find themselves [9]. According to Weick [15, p. 133], enactment is action that produces the raw materials which can then be made sensible. The process occurs in two steps. First, people notice unexpected events and try to make sense of them by bracketing the noticed events, i.e. trying to connect the noticed events to their own mental models [6, 11]. Second, people think by acting within the context of these bracketed elements, under the guidance of their mental models [17]. The product of enactment is an orderly, material, and social construction that is subject to multiple interpretations [17]. Thus, at the end of the enactment phase a first reduction of ambiguity can be recognized, but no decision-making has been prepared yet [6].

*Selection* is about the reduction of possible meanings [11], which is achieved by negotiating stakeholders’ bracketed and labeled mental models from the enactment phase into a connected mental model [6]. The categories and labels are woven into an emerging story that addresses the concerns group members have highlighted for immediate attention [5]. The final product of selection is a tentative, provisional and locally plausible story [11] that
explicate the logical conclusions drawn to rationalize a decision [6].

Through retention, the products of successful sensemaking are stored in the form of enacted environments and/or causal maps. The result is a meaningful version of the ambiguous situation, reduced through action and communication [18, p. 48]. When a plausible story is retained, it tends to become more substantial because it is related to past experience, connected to significant identities, and used as a source of guidance for further action and interpretation [11].

2.1. Different Forms of Sensemaking

Due to the rapidly growing body of research examining how sense is made in organizations, the literature on sensemaking has eventually become fragmented (see [9] for an overview). Some of the diverging viewpoints on sensemaking includes topics such as: 1) whether sensemaking takes place largely in individuals’ heads or is it a process of social construction that is carried out through interaction between people, and 2) whether the nature of sensemaking is inherently retrospective or can it be a prospective or future-oriented process [9]. Our interest in this paper is to understand better how sensemaking can be supported as a collective activity that is carried out by multiple actors in organizations. This is a topic that has received wider attention during recent years [e.g. 19, 20].

Studies addressing sensemaking as an organizational process often credit the work by Gioia and Chittipeddi [21] for expanding the concept of sensemaking with the term sensegiving – “the attempt to influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality”. When Maitlis [19] compared organizational processes on the basis of leader sensegiving and stakeholder sensegiving. However, the notion of sensegiving [21] is problematic in that it objectifies sense and suggest it can be transferred identically to a recipient [22]. In other words, it is based on an outmoded conception of communication [see 23, 24]. Due the above-mentioned limitations with the term sensegiving, we adopt a modified version for classifying different forms of organizational sensemaking, in which leader sensegiving is replaced with facilitative leadership [25], and stakeholder sensegiving with dialogue [26]. In our view, these replacements give a greater emphasis on mutual learning. Facilitative leadership and dialogue not only include the capability to share and express thoughts, but also the ability to listen, respect other views and doubt prevailing beliefs. According to [25], facilitative leaders, among other things: 1) use active listening skills including paraphrasing, summarizing, reflecting, and questioning, 2) encourage and generate participative discussion in groups, 3) help stimulate creative thinking through brainstorming and other idea-generation processes, 4) stimulate strategic consideration of alternatives and informed decision-making of appropriate choices, 5) manage contrasting perspectives and opinions that might result in conflict among members of a group, 6) help individuals and groups reflect on their experiences and capture relevant learning, 7) help shape more powerful and strategic questions for exploration. In dialogue people learn to use the energy of their differences to enhance their collective wisdom by 1) speaking their true voice, and encouraging others to do the same; 2) listening as a participant; 3) respecting the coherence of others’ views; and 4) suspending their certainties [26].

The adapted model [19], describing four forms of organizational sensemaking is presented in Figure 2. According to Maitlis [19], guided organizational sensemaking occurs, when leaders are very active in constructing and promoting understandings and explanations of events and of the process, while stakeholders are also actively engaged in taking part in discussions about issues, their significance and resolution the issues. This form of sensemaking is characterized by continuous rhythm and free information flow of highly animated sensemaking and the systematic, organized approach of a highly controlled process, leading typically to the production of accounts that are unitary and rich.

![Figure 2. Four forms of organizational sensemaking (adapted from [19]).](image-url)
Fragmented organizational sensemaking processes emerge when stakeholders raise issues, generate accounts of a situation, and argue for potential solutions in the context of leaders who do not try to organize or control discussions. This form of sensemaking produces multiple individualistic accounts, each of which tend to be quite narrow, representing the construction of a single individual or group [19].

Restricted organizational sensemaking occurs, when leaders are active in promoting overreaching accounts of issues they encounter, which stakeholders tend to accept with relatively few attempts to provide alternative understandings. This often produces a narrow, dominant interpretation of issues that largely incorporates only the leaders’ perspectives [19].

Minimal organizational sensemaking results from processes in which neither leaders nor stakeholders are active. As stakeholders fail to offer constructions of issues, and the leaders neither encourage them to do so nor put forward their own interpretations, minimal sensemaking only produce nominal accounts of issues [19].

2.2. Finding Common Ground: CE and Sensemaking

The objective of CE to support collaborative work practices without the help of a professional facilitator [8, 27] is related with sensemaking particularly if sensemaking is considered as a collective activity rather than individual. Taking this view, the ESR model suggests that sensemaking is most closely related with CE in the process of selection, in which the negotiation of different stakeholders need to be supported in order to reduce the number of possible meanings towards a shared understanding and common goals. Moreover, the model of four forms of organizational sensemaking (Section 2.1) suggests that CE share common ground particularly with guided organizational sensemaking, in which both leaders and stakeholders are actively collaborating towards a unitary and rich account that guide further action. The objective of CE to focus on mission-critical and recurring collaborative tasks [8] narrows the common ground between CE and sensemaking even further to a less investigated form of prospective sensemaking [28], that underpin future oriented group processes, such as strategy making new product development, and the planning of organizational change [29]. Guided by a literature review of sensemaking, we argue that CE is particularly closely related to guided and prospective organizational sensemaking.

2.3. Processual view to Guided and Prospective Organizational Sensemaking

Even though we have now considerably narrowed down our interest in sensemaking for the purposes of this paper, we still lack a sufficient understanding of how guided and prospective organizational sensemaking can be supported in practice. Past research on collective sensemaking has largely emphasized conversational practices that support convergence around a common interpretation of unexpected or ambiguous events [29]. However, understanding collective sensemaking in purely linguistic terms may lead one to overlook the important ways in which material practices and artifacts affect the process [29]. To this end, Stigliani and Ravasi [29] conducted an ethnographic study in one company with an attempt to outline a process model that accounts for the interplay between conversational and material practices in the transition from individual to group-level sensemaking (Figure 3). This model [29] suggests that team members deliberately share their “chunks of experience” with the rest of the team so that the cues they have noticed and bracketed are permanently available for collective cognitive work. Team members attempt to consciously organize these experiences into emerging new understandings. This occurs largely by verbally articulating tentative understandings while simultaneously attempting to manipulate material artifacts to support concept formation in a nonverbal way (material classification). The articulating phase has been found to help team members organize their experiences and ideas on the basis of patterns of difference and similarity, helping them to detect commonalities and emerging themes [29].

Figure 3. A Process Model of Collective Prospective Sensemaking [29]
As the new understanding emerges in the articulating phase, collective cognitive work begins to shift to the gradual integration of understandings into more complex mental structures linking various elements of the task environment (elaborating) [29]. This occurs largely with interactive talk, while working with permanently available cues (material memory) and visualizing tentative linkages among emerging mental structures (visual integration). This process continues until the group feels that they have produced a plausible interpretation out of the cues that they have gathered at the beginning of the project. According to [29], the final phase (influence) is related to sensegiving as the team attempt to persuade clients and other stakeholders about their “preferred interpretation”.

2.4. Supporting Guided Organizational Sensemaking in Practice

Despite recent advances towards processual understanding of prospective organizational sensemaking [29], studies addressing how sensemaking can be supported in practices are still sparse. Progress in this topic is important, because research has shown that key outcomes of collaborative work can be improved by using collaboration technologies [30] and that diverse groups can perform better than homogeneous groups [7]. Hence, heterogeneous groups are more likely to gain efficiency and produce better results, if techniques and processes can be designed for the creation of shared understanding [7].

The development, application and evaluation of collaborative processes and techniques has been a primary focus of Collaboration Engineering. This stream of research seeks to address simultaneously the details of a work practice, the configuration and packaging of required technology, and documentation of the guidance that practitioners must give a group to move it through useful patterns of collaboration toward its goals [2]. During the recent years, collaboration researchers have produced a substantial and growing body of exploratory, theoretical, experimental, and applied research that could inform the design of collaborative processes to deal with a particular task [30].

A key mechanism in enabling the development of repeatable collaborative processes is thinkLet – a codified packet of facilitation skill that specifies the facilitator’s choices and actions in terms of the tool used, the configuration of this tool, and scripted prompts to accomplish a pattern of collaboration in a group [27]. ThinkLets are used as building blocks, when designing collaborative processes to deal with a particular task [27]. We argue that guided and prospective organizational sensemaking is one example of collaborative process that deals with a particular task. This would imply that thinkLets are potentially useful building blocks to design and implement guided and prospective organizational sensemaking process, as described in Section 2.3.

3. The Case Study

Due to the findings from the literature review suggesting that CE is a potential source to inform the design of guided and prospective organizational sensemaking processes, our empirical work focused to the question of how CE and sensemaking can jointly support the collective construction of meaning. For this purpose, we designed and deployed a sensemaking process in one company. The case company, Suomen Piennyrittäjän Mainostoimisto (SPYM), is an advertisement company that offers services for business development, website design/development, graphical design, media advertising, digital marketing, communication and content creation. Founded in 2008, SPYM started their business by offering advertisement services to small businesses. Since its establishment, SPYM has systematically expanded its business. Today, SPYM employs 14 persons in the Finnish cities of Jyväskylä and Helsinki. In addition, SPYM utilizes several subcontractors for a wide range of activities.

In recent years, SPYM has started to serve increasingly larger customers while still serving the small businesses. This has started to introduce new sources of complexity to the way SPYM operates. Larger customers expect more disciplined collaboration compared to the small businesses, who prefer hands-on attitude and quick responses. Balancing between planned and ad hoc modes of working have led to confusion, inefficiency and eventually exhaustion of SPYM’s employees. It has become evident that SPYM needs to find new ways of working in order to be able to cope with new sources of complexity in their business environment.

In our effort to design a collaborative process for SPYM for making sense of their working environment and determining future actions for improving it, we relied on the process model of collective prospective sensemaking (Section 2.3) while taking advantage of thinkLets whenever applicable. The process we designed and deployed is presented in Figure 4 and explained below phase by phase.

Phase 1: Noticing and Bracketing. Collective future-oriented sensemaking begins with a purposeful exposure of team members to different experiences
that are likely to feed the constructions of new understandings related to a particular task [29]. Hence, the objective of the first workshop was to explore from the individual viewpoints the context that SPYM is currently operating at. To this end, we first conducted two brainstorming sessions that followed the form of OnePage thinkLet [31]. Three of SPYM’s key persons including Managing Director, Production Manager and Graphical Designer were first asked to brainstorm with the help of a collaboration software: 1) things that they considered good in their current operating environment, and then 2) things that they would wish to see improved. These activities resulted with two separate worksheets with 75 things that were considered good in SPYM’s current work environment, and 60 things that were wished to be improved in the current work environment.

After the brainstorming session, the workshop continued by asking the participants to individually select, in the order of significance, ten most significant things that they considered good in their work environment and ten most significant things that they would wish to see improved. These activities resulted with two separate worksheets with 75 things that were considered good in SPYM’s current work environment, and 60 things that were wished to be improved in the current work environment.

The results of the first workshop represented "embodied experiences" that were made permanently available for the later interpretive processes, as members -first individually, then in groups- produced new provisional interpretations of elements of the task, in the form of emerging mental models [29].

**Phase 2: Articulating.** In the second phase (articulating), team members attempt to verbalize new understandings of elements of their task, by systematically producing and/or manipulating material artifacts to support concept formation [29]. For such purpose, one typical practice identified in earlier research [29] is a grouping of artifacts to facilitate the emergence of broader categories.

In order to support the articulation phase, one of the researchers exported all previously brainstormed data to a spreadsheet application in such way that each of the participants’ responses was represented as an individual text box. Each text box was also color-coded in order to illustrate which of the questions the response was answering to. Green text box represented things that were considered good. Red text box represented things that were wished to be improved. The analysis of gathered responses proceeded from here visually by dragging the textboxes so that similar responses were moved close to each other. This step of analysis, similar with an ExpertChoice thinkLet [31], resulted with an interpretation of gathered data, described as a map of textbox clusters with similar statements next to each.

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**Figure 4. Collective prospective sensemaking process designed and deployed at SPYM**
other. Each of the clusters were then labelled with a name that resembled a theme that emerged from the gathered data. The emerged themes, translated from Finnish to English is presented in Figure 5.

![Figure 5. Essential themes that emerged from the first workshop.](image)

**Phase 3: Elaborating.** As new understandings emerged, cognitive work increasingly shifted to the gradual integration of these understandings into more complex mental structures linking various elements of the task environment [29]. The second workshop was organized in order to help in the creation of provisional understanding of salient elements and how they are related with each other. In this workshop, the emerged themes were presented and discussed. Both Managing Director and Production Manager were then given an A3 paper, similar with Figure 5. The participants were asked to individually draw connections between the themes and describe how the themes are related with each other. The participants were then asked to present their work.

Based on the gathered data from the second workshop, the researcher created two diagrams, each of which described individual views of how essential themes were related with each other. These diagrams were then further interpreted by the researcher (ExpertChoice thinkLet [31]) in order to create a simplified understanding of what could be the most salient themes to be improved and what kinds of actions could likely to facilitate such improvement.

As one example, the analysis of one of the individual views resulted with interpretation arguing that the ultimate goal of the firm is profitability that can be defined in terms of quality and efficiency (Figure 6). According to this interpretation profitability is more likely to be reached if there are right kinds of conditions in terms of facilities, personnel and work practices. In this interpretation, communications was seen as a key enabler for personnel to develop effective work practices to pursue for profitability.

![Figure 6. A simplified interpretation from one individual viewpoint.](image)

At this point, the researcher also analyzed top ten lists that were individually created in the first workshop. The results of this analysis highlighted the clear differences in individual thinking regarding what was considered good in SPYM’s working environment and what was wished to be improved. Each individual view is depicted as a colored area in Figure 7.

![Figure 7. Different views of SPYM’s working environment](image)

All analysis results were presented and discussed in the third workshop which intended to develop a shared view of SPYM’s current working environment and to decide what will be the focus of forthcoming development activities. The presented research results met acceptance among the participants. Consequently, SPYM’s management outlined in the workshop that, although profitability is the ultimate goal of the company, improvements in profitability are likely to be obtained by improving: 1) communications practices, and 2) ways to clarify the roles of SPYM’s personnel.

**Phase 4: Influence.** Now that communications and roles were selected as two primary themes to concentrate on, the focus of research collaboration started to shift from the development of shared understanding towards action. For such purpose, a new workshop was organized for the whole personnel.
of SPYM. This workshop sought to 1) further discuss and adjust the interpretation of SPYM’s environment, 2) gain the acceptance and the involvement of SPYM’s employees and 3) initiate the collective dialogue for developing ways to improve communications and to clarify roles within SPYM.

The workshop started with a OnePage thinkLet [31] with the purpose of asking participants to brainstorm what kind of consequences they would expect from improved communications practices. Based on the brainstormed items, themes were collectively identified by following RichRelations thinkLet [31]. The collective work proceeded from here to organize brainstormed items under the themes by following PopcornSort thinkLet [31]. Once the brainstormed items were organized under the themes, content of each of the themes were further improved by conducting a BucketWalk thinkLet [31]. Finally, for each identified theme, a discussion forum was created so that participants can choose the topics they prefer and brainstorm/modify and comment improvement actions related to that topic (LeafHopper thinkLet [31]). After this series of thinkLets, focusing on improving communications, the process was repeated with the intent to focus on improving the working roles at SPYM.

4. Discussion

The literature review of sensemaking (Section 2) suggested that CE and sensemaking are related in a mutually beneficial way. Our experiences of supporting organizational sensemaking in practice at SPYM support this finding. The conducted interventions presented in Section 3 illustrate that thinkLets provided usable practical guidance at SPYM in supporting an organization towards the collective construction of meaning. We used existing thinkLets particularly for: 1) making individual experiences visible (workshop 1), and 2) elaborating the emerging collective understanding further and preparing the stakeholders for action (workshop 4).

Our effort to take advice from the sensemaking literature, on the other hand, suggested to begin by developing first a conceptual understanding of the problem at hand in the context of each individual separately. For this reason, we complemented the use of thinkLets with activities that supported individual cognitive work. In the first workshop, we designed a collective activity (TopTen) that was not intended to reduce the amount of data, but rather to develop the individual views, thus creating alternate views to the problem [32]. The collaborative activities in the second workshop were also designed to develop individual views further, although these views were also presented to others and discussed collectively. Similar with findings in Section 2.3, our practical experiences suggested that the more sensemaking progressed towards collective negotiation, the more support thinkLets provided.

5. Conclusions

It has been argued recently that several fields would benefit from rigorous research that connects sensemaking to other important team and organizational processes [9]. To this end, this paper explored how CE and sensemaking are related and how they can be jointly used when supporting organizations towards the collective construction of meaning and action. Based on a literature review, we have discovered that these two lines of research share common ground particularly when sensemaking is considered as a collective, rather than individual, activity. By examining different forms of sensemaking [19], we have identified CE to have most in common with guided and prospective organizational sensemaking.

When Stigliani and Ravasi [29] outlined the process model of guided and prospective sensemaking (Section 2.3), they paid particular attention to the interplay between conversational and material practices in the transition from individual to group-level sensemaking. Their concern appear to have been similar with Orlikowski [33], who has argued that “our understanding of organizational knowledge, learning, and capabilities is limited to the extent that we disregard or downplay the critical role of material forms, artifacts, spaces, and infrastructures in everyday knowledgeable practice”. Orlikowski [33] argued that the metaphor of scaffolding could provide a useful lens for understanding how the material matters structure human agency (and thus knowledgeability) over time. While in the construction industry scaffolding refers to the use of temporary structures that support the building or repairing of physical structures, in the context of organizational practices scaffolding could be seen as provisional artifacts, spaces, and infrastructures that help stakeholders to rethink and improve their activities and performances in a way that could not be done without the scaffolds. Once those activities have ended, actors stop engaging with the specific materiality engaged in those activities, and their scaffold is consequently dismantled (just as when a building is completed the scaffold is no longer needed for that purpose, and is consequently dismantled) [33].

Guided by the process model of future-oriented organizational sensemaking [29] and documentation
of thinkLets [31], we supported organizational sensemaking in one case company. Our experiences from this particular case study suggest that thinkLets (the technology used in the case study) and the produced artifacts can be considered as scaffolds, deliberately enhancing the articulation and elaboration of understanding. The process that was designed and deployed received positive feedback from the employees of the case company.

In our view, this study contributes to the literature of sensemaking and CE alike. The presented literature review of sensemaking contributes to the CE literature, by locating it into a larger theoretical framework of organizational behavior, answering to the call of deeper theoretical understanding of other collaborative activities [8]. Furthermore, this study made a contribution to the CE literature by illustrating the use of practical methods in one case company to develop individual interpretations of problem at hand that supported the sensemaking process.

The study contributed to the sensemaking literature by illustrating the value of CE in supporting sensemaking in practice. This work particularly addresses the reported gaps in sensemaking literature [9] stating the need for research examining: 1) the relationship between sensemaking and key team processes, such as coordinating, decision making, and strategizing and 2) the possibility and importance of “shared understanding” in organizations, and in particular, how individuals who hold different pieces of information are able to collectively construct new meaning.

6. References


