



# Situation Awareness Under Task Complexity: The Role of Information

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## ABSTRACT

Performing tasks under task complexity (TC), for example, during the management of a crisis, can be challenging. One relevant research stream has so far dealt with modelling task complexity while another research stream has established the importance of situation awareness (SA) during crisis management. This study takes into consideration these two research streams and builds a model on how SA is achieved under task complexity. The research shows that information of high information quality (IQ) reduces the level of task complexity, and influences—as well as is influenced by—situation awareness. The practice of collecting and disseminating relevant and timely information as a critical resource in improving SA should be carried out continuously. This continuous process can be improved by using information technologies as automating tools. Moreover, the study shows how shared mental models can improve SA under task complexity. A case study approach, based on qualitative data focusing on theory building, is applied. Unit of analysis is a Norwegian hospital.

## KEYWORDS

Complexity, Crisis Management, Emergency Management, Information, Information Quality (IQ), Situation Awareness (SA), Task Complexity (TC)

## INTRODUCTION

We adopt the definition of “task as behaviour requirements” by Wood (1986, p. 62), stating that tasks are a behavioral responses of an individual. The aim of these responses is to reach a “specific level of performance” (Wood, 1986, p. 62). In our interpretation, the definition can include more than one person, as several individuals within and across organizations can be joining to perform the responses.

We use the definition of task complexity (TC) by Hærem, Pentland, and Miller (2015), who in turn draw upon Oeser and O’Brien (1967). Both sets of scholars establish TC similar to a decision tree. According to Hærem et al. (2015), tasks are paths and potential routes to reach particular goals in the network. This creates nodes and ties which may in addition change over time, which gives a

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