



# LEARNING THROUGH NETWORKS WITHIN EMERGENCY MANAGEMENT RESPONSE

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## Aims

- The aim of my research is to use Social Network Analysis to identify if there are network patterns of people's interactions. The success or failure of the response to bushfires may depend on these patterns.
- To improve disaster response and improve the performance of response operations.
- To assist bushfire managers in creating more effective network structure for their emergency management activities.
- To explore the inherent relationship between social networks and learning within the context of emergency management.

## Introduction

- Previous research has shown that interactions between nodes in the network resulted in important opportunities for learning.
- Existing studies of learning theory in human networks have looked at learning problems requiring stable working relationships with no environmental uncertainties.
- With emergency response management demanding learning in extreme situations, the designs of existing models are useful as a building block, yet flawed for application.
- This study adopts the view of networks of learning in a dynamic environment context

## Background

- The threat of natural disasters and potential catastrophe is always present.
- Such emergency incidents not only threaten human life and property, but also critical infrastructure
- Communities that do not learn from previous mistakes and lack sufficient capacities for self-adaptation make similar mistakes that increase their vulnerability to disasters.

## Research Questions

- Is there a relationship between the configuration of social network structures and learning in dynamic environment such as emergency management?
- How do the network relationships among emergency management groups affect their learning?
- Does the change to interconnectedness of actors (i.e., personnel involved in mitigating the emergency event) in the network have implications for the potential to learn as an event unfolds?
- How does a different pattern of actor collaborations affect learning and adaptability?

## Methodology

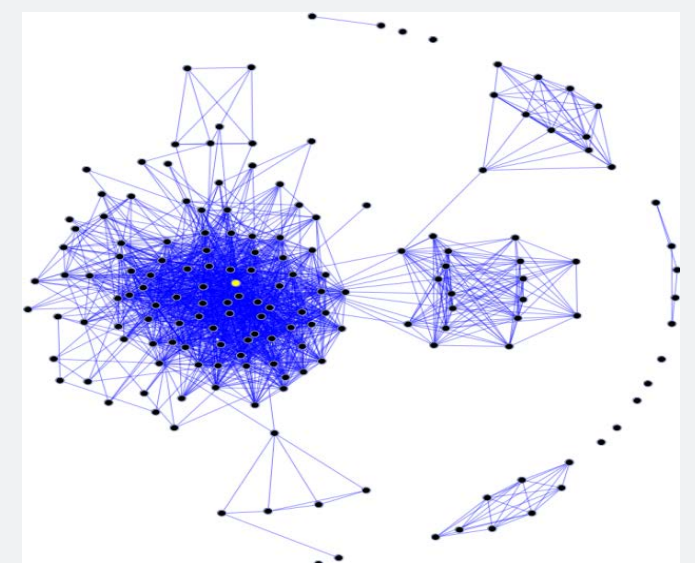
- Review literature to determine current state of knowledge in the use of SNA in emergency response, including bushfire-specific SNA work.
- The process of social network analysis typically involves the use of questionnaires and/or interviews to gather information about the relationships between a defined group and network of people.
- Determine/develop applicable social network and statistical analysis tools/techniques that can be employed to address end user(s) needs.
- Work with end user(s) to trial the application of SNA tools/techniques

## Literature Review

- Theories of Social Network
- Overview of Learning
- Network Affect on Learning
- Social Network and Learning in Dynamic Context
- Context of the Study – Emergency Incident Agencies in Australia
- Towards a Social Networks-based Model for Learning in Dynamic Environment

## Social Network

**Social network** is a social structure made of nodes (which are generally individuals or organizations) that are tied by one or more specific types of interdependency, such as values, visions, ideas, financial exchange, friendship, kinship, dislike, conflict or trade.



## Research Model

