bushfire CRC

The role of multiple agency approaches to emergency management in enabling and constraining efficacious outcomes.

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The challenges and benefits of a multi-agency approach to bushfires in Australia.

Background: In recent times it has become increasingly important that agencies involved in responding to bushfires are able to interoperate their technical and non-technical systems.

The scale of resources, technological and human, available to respond to bushfires increases from one fire season to the next. For those resources to be deployed effectively it is necessary for a wide variety of agencies and organisations to come together to achieve a high level of interoperability.

Interoperability: '. . . the ability of systems, units or forces to provide services to and except services from other systems, units or forces and to use the service so exchanged to enable them to operate effectively together. . .' [1](Warner 2003 p, 3) (Stewart et al 2004, p, 2) '. . . without altering or degrading the information exchanged'[2] (Clark and Jones 1999 p, 4)

Effective multi-agency interoperability requires effective multi-agency collaborative work practice. A collaborative approach, by a diverse variety of organisations, provides a number of positive conditions.
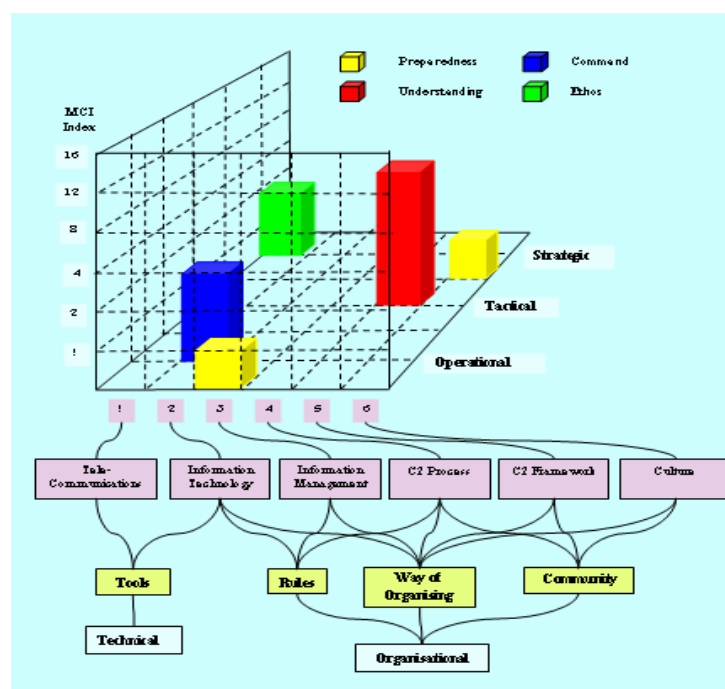
Effective collaboration contributes to:

• Better situation assessments, plans and decisions
• In operations it enables force self synchronisation
• A better set of views of what is happening, the reasons for these occurrences, and their impacts on the team mission
• A better set of possible actions to take in response to these impacts
• A better set of criteria to consider when evaluating the desirability of these actions
• Better estimates of possible consequences of the alternatives being considered
• Collaboration, by enabling team members to leverage each others' experience, expertise, and imagination, improves situation awareness, understanding, and decision making
• Sharing the responsibility for keeping track of various kinds of information is one of the biggest advantages of teamwork

Two varieties of interoperability

1. Technical interoperability

2. Organisational interoperability/Non-technical interoperability/Multi-national (multi-agency) Co-operability

The figure below combines a number of organisational dimensions with areas identified in the literature and this research as significant factors in the effective collaboration between multiple organisations.

Theoretical Approach: By applying an Activity Theory approach to the Issue of organisational (non-technical) interoperability disturbances to collaborative work practice can be conceptualised as tensions and/or contradictions. Interventions informed by Activity Theory are designed for the purpose of providing personnel the means by which such tensions/contradictions can be resolved.

Preliminary findings: Interviews with IMT personnel (n75) has found that there are a number of issues which hinder interoperability between agencies. They are:

• The inhibiting of information flow
• A variety of technological and information systems
• A variety of agency specific nomenclatures
• Different systems, processes, procedures and organisational structures
• A variety of training approaches and methods
• Different resource bases
• Unfamiliarity with environment and personnel

References

[1] Australian Department of Defence (2000) Australian Defence Force Publications 101, Commonwealth of Australia.
[2] DoD, NATO, ADF C&C Information Systems Plan (1995/6)