bushfire CRC

Information flow and Incident Management Team Effectiveness

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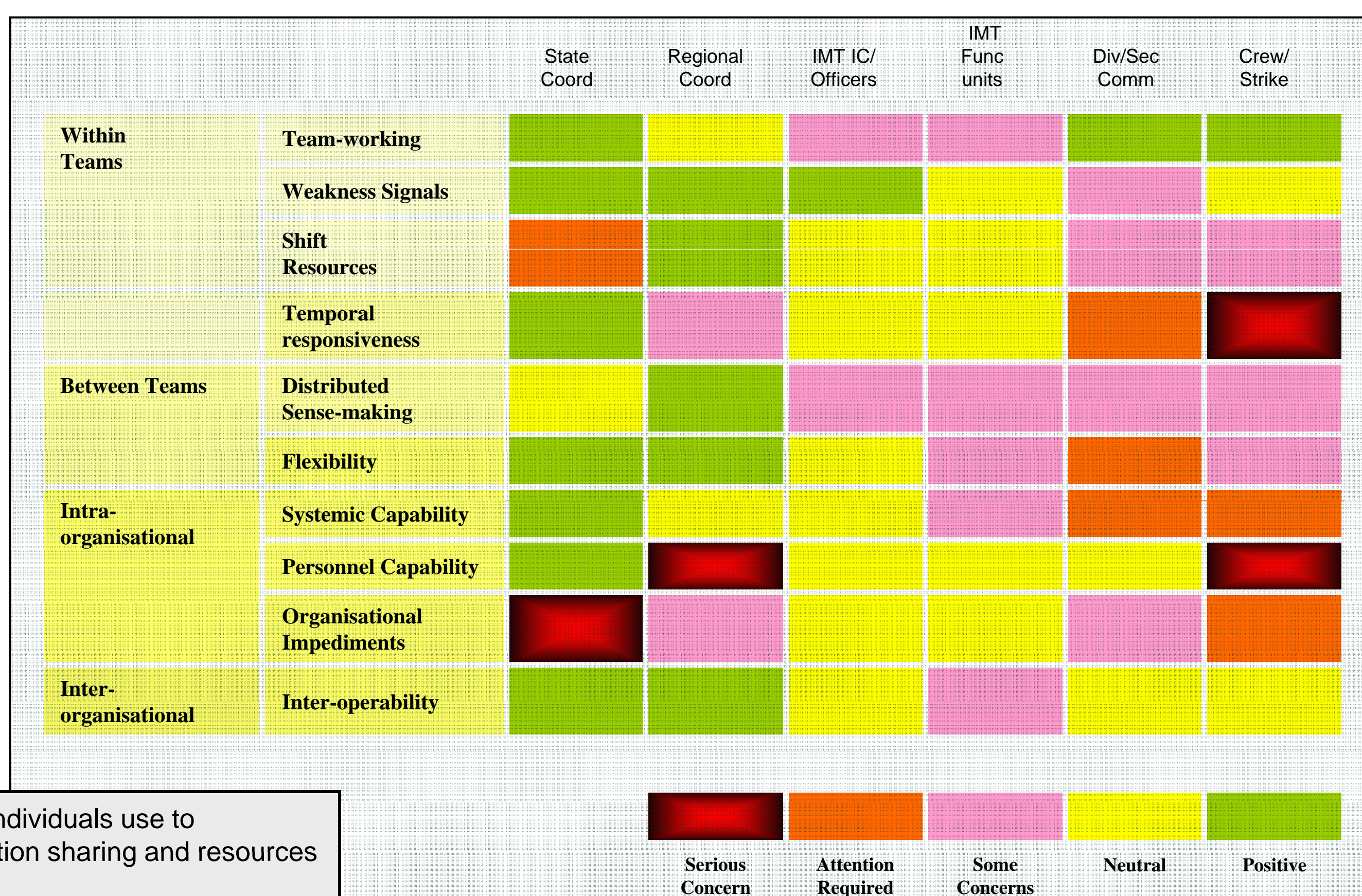## The purpose of the research has been to:

- Review information and communication flows
- Review how teams work with the AIIMS/CIMS systems
- Identify opportunities for improvement

The challenge: to better understand the extent to which existing approaches to emergency incident management support effective communication practices, information flow and coordination, as well as the extent to which the existing system enables and/or constrains the organisational flexibility that might be needed in escalating and complex situations. The research conducted included strategies to obtain emergency management personnel perceptions about ICS in fire and emergency management of natural disaster events, and their satisfaction levels with the organisational principles underpinning ICS.

To review how teams work with the AIIMS/CIMS systems a survey was distributed to Fire and Emergency personnel (n=780).

Personnel were asked to report on an incident they were involved with and give their assessment of the AIIMS/CIMS processes at work. This meant that an evaluation could be made of information flows:

- Prior to the arrival at the incident
- On arrival at the incident
- During the incident

The above table shows the functional work units operating with the Incident Control Structure cross-tabulated with the indicators developed. In the Table, the rows represent each of the factors identified through the **Factor Analysis process** (see below) and the columns represent each of the work groups in operation within the ICS structure. The Table represents a **colour-coded synthesis of all data analysed**. It identifies key areas proposed for intervention in order to improve emergency incident management performance.

A **Factor Analysis was conducted on the survey data** which meant that survey items that were correlating could be grouped into factors and normalised scores could be generated which allowed **direct comparison across factors**. A summary of the factors extracted from the analysis can be found in the table on the left. These factors were then be used to indicate **perceptions about different aspects of emergency management operations in different parts of the system**. The levels included on the Fire- or incident-ground; within an Incident Management Team as well as within a regional or state level of coordination.

Factor	Description
Team working	The processes decisions and activities that individuals use to coordinate their behaviour, including information sharing and resources to attain shared goals.
Pre-occupation with failure	Taking note of ALL small warning signals and openly discussing them in a constructive manner.
Shift Resources	The resources available on the shift that were available to meet logistical requirements including fatigue management and continuity of information between shifts.
Temporal responsiveness	The capacity of the IMT to respond and meet needs in a timely way
Distributed sense making	The capacity for communication between the IMT and the Incident Ground to share information and risks in a constructive manner
Flexibility	The capacity to be able to adapt performance strategies quickly and appropriately to changing task demands
Systemic Capability	The organisational capacity that supporting lateral and horizontal sharing of information so that it is timely and effective and supports effective decision-making and confidence in safety processes.
Personnel Capability	The level of confidence personnel have that their training and informal knowledge of the incident provides them with sufficient familiarity with incident management systems in use including policies and procedures and confidence to do what needs to be done.
Organisational Impediments	The degree to which personnel experienced demands where they needed to go outside normal procedures and/or outside of the chain of command; and where they experienced contradictions in policies guiding the management of the incident.
Inter-operability	The technological systems, policies and procedures and culture that enables the effective inter-operability between agencies