

Offering Professional Development Workshops in 'Human Factors'

Utilising Research to Enhance Capability

This program of professional development is consistent with and delivers on the Bushfire CRC's Research Utilisation Strategy and AFAC's Learning and Development Strategy.

Why Human Factors?

In seeking to improve operational decision making and performance there is a growing awareness in the emergency services sector of the need to take 'human factors' into account. Human Factors is a body of knowledge about human abilities, human limitations, and other human characteristics that are relevant to work and its design. Research in this area is aimed at applying human factors knowledge to the design of tasks, jobs, tools, technologies and systems, to help achieve to achieve safe, effective and efficient operations.

The Bushfire CRC has had a dedicated group of researchers who have undertaken human factors research in fire management and their research has delivered important outcomes for the industry. Many agencies have been exploring the application of 'human factors' in their business for some years. It is also expected that the next edition of the Australasian Inter-service Incident Management System (AIIMS) manual and training resources will have additional emphasis on human factors

The proposed workshops are aimed at assisting agencies to build underlying capacity and understanding human factors that influence decision making and performance in emergency services contexts.

Professional Development or Training?

The focus of these introductory workshops and specialised modules is the professional development of personnel within the sector on key Bushfire CRC research outputs and their implications for operational improvement.

At the workshops, participants will be encouraged to explore the impact of the research on their work and to consider opportunities for embedding the research into their workplace practice. The diagram on the last page of this brochure demonstrates how intertwined human factors are within an organisation's context, and how their significance can be viewed from many perspectives – three key ones are through an operation, systems improvement or a learning and development lens.

This initiative is intended to support agencies working actively in this area, as well as equipping those agencies with knowledge to assist them in further developing their capabilities. Where appropriate, alignment to existing and future accredited training will be undertaken.

Workshops - Introduction to Human Factors

Two half-day **introductory** workshops are offered at no charge to all jurisdictions within Australasia. A minimum of 15 participants (and a maximum of 30) is required, and interested agencies are asked to contact the Research Utilisation Manager, Dr Noreen Krusel on noreen.krusel@bushfirecrc.com to arrange. These workshops will be substantially subsidised for Bushfire CRC member agencies and will be available from September 2011 – December 2012.

The two Introductory Workshops have been designed with the following *learning objectives*:

1. Participants will develop a familiarity with human factors language
2. They will acquire an understanding of introductory concepts of Human Factors
3. They will be able to identify these concepts (which include failure points) in their own work situations
4. They will be able to identify and develop strategies to mitigate the risk of potential failures in their workplace

The Introductory workshops are suitable for a wide range of participants, including;

- lead fire-fighters, station officers and senior station officers
- sector and divisional commanders
- incident management team members and incident controllers
- real-time performance monitors, incident investigators
- Personnel involved in development of training resources and programs
- Trainers, instructors and assessors
- Senior managers and those more broadly engaged in emergency incident management.

Workshop (max 30 participants)	Purpose	Cost *
Introduction to human factors concepts – Part A, half day	Will introduce human factors concepts by a series of short presentations and case study assignments to consider the issues relating to individuals	First one free if paired with Part B, or \$2500 (ex GST) /workshop
Introduction to human factors concepts – Part B, half day	Will introduce human factors concepts by a series of short presentations and case study assignments to consider the issues relating to teams and groups	First one free if paired with Part A, or \$2500 (ex GST) /workshop

Each workshop is a four hour half day, and it is highly recommended to conduct these over consecutive days (i.e. Afternoon Day One and morning Day Two) so that participants and teachers can reflect on the first day and prepare for the second.

Costs cover the development, materials, and all presenters' expenses. Agencies will be asked to provide a venue and catering, as well as expenses for their participants.

**There will be a charge of \$500 (ex GST) per day per person for participants from non-Bushfire CRC member agencies*

Working in partnership to meet specialised needs – Specialised modules

Human Factors can be incorporated into agency business in many ways - such as through operations; performance improvement and learning and development.

To meet these potential needs, more **specialised** half to one day modules that build on the basics will also be offered and can be made available according to demand. Participant numbers are limited to a maximum of 20. Again, agencies are asked to contact Dr Noreen Krusel at the Bushfire CRC.

Tailoring the professional development program in partnership with agencies will also ensure that agency expertise and any agency specific tools can be embedded, where possible, to complement the program. Professional development will be conducted collaboratively with agency staff where possible, for example, this can mean researchers and practitioners teaching together

Possible examples of specialised modules that may follow from the Introductory workshops:

- Improving Operational Decision Making/Avoiding Error
- Facilitating Worst Case Scenario Thinking
- Conducting After Action Reviews
- Using the Human Factors Interview Protocol (HFIP) learn from incidents (Triumphs, Accidents, Near Misses)
- Designing case studies, role play scenarios, and simulations
- Enhancing Emergency Management Leadership
- Communication and Team Work Culture
- Using observation strategies for HF assessment
- Designing a Lessons Learned Field Trip (Staff Ride) to facilitate critical thinking and learning

Cost - \$ 4000(ex GST) per day for the modules listed above, and an additional \$1000(ex GST) per day for researcher engagement in tailoring the product to meet specific needs

Key researchers



Dr Mary Omodei

Mary is a Cognitive Psychologist whose overall research program focuses on the human factors underlying decision making in complex systems, including military command and control and emergency management. She has developed the *Networked Fire Chief* simulation software and the helmet-mounted video debriefing technique. Mary led the Bushfire CRC 'Safe Behaviour and Decision Making' and 'Volunteerism' projects.



Dr Christine Owen

Christine has a strong background in organisational development and extensive experience in a range of high reliability domains. Current Bushfire CRC Project leader Organising for Effective Incident Management and was leader for Enhancing IMT effectiveness and organisational learning (to 2010) as well as Bushfire CRC Education and Training Program Leader (2006-2010).

Enhancing capability through human factors professional development

