RESEARCH ADOPTION STRATEGY
2008 - 2010

The objective of the Bushfire CRC is to provide research that enhances the management of the bushfire risk to the community in an economically and ecologically sustainable way.

The formation of the Bushfire CRC in 2003 was a move towards a better understanding of the complex social, economic and environmental aspects of bushfires. The combination of partner resources and the Australian Government's Cooperative Research Centres program grant is a substantial investment in this research.

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INTRODUCTION

The Bushfire CRC Mission is to enhance the management of bushfire risk to the community in an economically and ecologically sustainable manner.

In November 2007 the Bushfire CRC Board determined that the adoption of research should be given one of the highest priorities; this strategy aims to facilitate the process of research adoption.

The Bushfire CRC is working closely with the Australasian Fire Authorities Council (AFAC) to provide strong leadership in driving research adoption in recognition that success is largely dependent on collaboration and engagement with our industry stakeholders.

DEFINITION AND OBJECTIVES

Research adoption definition

For the purposes of this strategy research adoption has been defined as: 'new information' (research) developed into products and initiatives to assist agencies inform policy and practice.

Objectives

- Developed quality products used by the industry
- Demonstrated strong collaboration and engagement throughout the process
- Better informed industry and community
- Strengthened capacity of the industry

The measuring of research adoption success for Bushfire CRC will be the degree to which research outputs are made available to the industry as quality products and/or initiatives; the utilisation of those by the industry; and effective communication and engagement activity to support this adoption process.

Scope

The scope of the strategy is inclusive of all research undertaken by the Bushfire CRC; 28 current projects; 40 post graduate student projects and some previous research commenced prior to the Bushfire CRC and subsequently supported and enhanced; specifically fire behaviour and smoke plume prediction research.

The strategy is integrated with the following documents: the Bushfire CRC Commonwealth Agreement; the Bushfire CRC Operational Plan; the Bushfire CRC Commercialisation and Utilisation Plan; the Bushfire CRC Communication Plan and the Research Adoption Implementation Plan (under development).

BUSHFIRE CRC RESEARCH ADOPTION MODEL

LEARNING FROM OTHER FIELDS

Approaches to research adoption from other fields have informed this Strategy - from the health field ('pull' and 'push' strategies) and the natural resources management field (good practice principles); and from the stakeholder and community engagement model utilised by the Victorian Department of Sustainability and Environment and the Country Fire Authority to inform the Fire Ready Victoria Strategy.

'Pull' or 'push' strategies

The CRC for Aboriginal Health articulates two types of strategies for research adoption. Researchers use strategies to push out research to agencies - known as 'push' strategies. Alternately agencies can take the lead by moving forward to adopt research - known as 'pull' strategies[1]. Effective research adoption require both types of strategies – leadership nationally by the industry (CRC and AFAC); leadership from agencies to adopt using 'pull' strategies and researchers involved in developing research adoption products ('push' strategies). An example of using the 'push' and 'pull' strategies in the implementation model is the combining of an AFAC member (advocate) and a researcher in project management teams (see Implementation).

Good practice principles from natural resource management[2];

Whole of organisation/industry
A 'whole of industry' example refers to leadership through Bushfire CRC & AFAC; ensuring a quality research program; fostering collaboration to develop quality products and initiatives and ensuring effective communication strategies & resources to support adoption. Ultimately agencies adopt research outputs. Agency management leads the individual agency to prepare for adoption; engage with the research process and adoption planning & implementation; ensuring organisational systems & processes support adoption and provision of adequate resources;

Whole of life cycle
Research adoption needs a planned approach spanning the life cycle of a project, effective engagement is critical from the early stages of the research through to adoption [see Stakeholder Engagement Model below];

Outcomes orientated
Clearly stated research adoption outcomes informed by the Commonwealth Agreement; the Operational Plan; the Commercialisation and Utilisation Plan; the Communication Plan and the Research Adoption Implementation Plan [to be developed when the budget and project plans are finalised]; and

Responsive management
A built-in process for monitoring and reviewing progress that allows the industry to learn and so build capacity (refer to the Communication Plan). The Research Adoption Strategy and Implementation Plan are linked with the Bushfire CRC Operational Plan and project budgets with regular reporting through the Bushfire CRC Board Research Adoption & Education Committee. A process to survey use of current CRC products is incorporated into the planning and monitoring of research adoption.

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[1] RESEARCH TRANSFER 2006 CRC FOR ABORIGINAL HEALTH- HTTP://WWW.CRCAH.ORG.AU/RESEARCH/RESEARCHTRANSFER.HTM

[2] KNOWLEDGE AND ADOPTION STRATEGY: LAND & WATER AUSTRALIA 2005

Stakeholder Engagement Model

The Community Engagement model for communication and behaviour change highlights that improved outcomes occur more readily and in a more sustained way with engagement between stakeholders. The model illustrates a progression along a continuum of increasing communication and engagement of organisations and individuals in the process.

informing $\longrightarrow$ consulting $\longrightarrow$ involving $\longrightarrow$ collaborating $\longrightarrow$ implementing[3]

Stakeholder engagement will be strengthened by working closely with AFAC members as a vital link to the industry and the development of project management teams will strengthen researcher engagement with the industry (AFAC) and industry (AFAC) engagement with researcher/s.

Engagement progression	Types of activity	Comment
informing	Website, publications, workshops, fire note, product launches, showcasing, FKN	Important first step to inform 'what is the impact of this research?'
consulting	Discussions focus group,	'What is in it for me?'
involving	planning, identifying key people/agencies	Who will be involved? what do we want to achieve in this involvement?
collaborating	Working groups, trials, FKN, developing materials & feedback	'What are we to do?'
implementation	Promotion activities Planning for implementation	Let's do it! Review & monitor

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[3] IAP2 PUBLIC PARTICIPATION SPECTRUM- HTTP://WWW.IAP2.ORG.AU/

UNDERSTANDING THE INDUSTRY ENVIRONMENT

There are a number of positives for research adoption to draw upon, these include:

- quality research is being delivered;
- some user agencies are actively engaged in product development and adoption;
- strong interest in research outputs, demonstrated by the high number of research reports consistently downloaded from the website;
- user agencies planned and supported the research portfolio from inception and through the research phase;
- collaboration between researchers and users is occurring; and the
- industry has a high profile with considerable political interest.

However, there are challenges to research adoption; these include;

- resources need to be available for research adoption in the agencies;
- uncertainty for agencies as to what the 'product' will look like;
- how to prioritise among the many projects and tailored to the needs of individual agencies;
- managing expectations that research adoption occurs quickly (it may actually take many years); and
- that a number of agencies are relatively resource poor and have difficulty allocating staff resources to research adoption.

The table below outlines mitigating actions for the challenges to ensure effective research adoption.

Challenges	Mitigating Action	Reference
resources need to be available for research adoption in the agencies	budget requirements for adoption are being addressed through the Bushfire CRC budget process; with finalisation of the Research Adoption Implementation Plan awaiting approval of the research budget & project plans	Performance Measures
uncertainty for agencies as to what the 'product' will look like	the implementation process requires collaboration between stakeholders to identify the impact of specific research and what the 'product' will look like through project management teams that will oversee the product development to ensure a 'fit' of the product with agencies needs	Implementation
how to prioritise among the many projects and tailored to the needs of individual agencies	A prioritisation process for research adoption has been developed	Prioritising the research
managing expectations that research adoption occurs quickly (it may actually take many years)	the Research Adoption Strategy and Implementation Plan and each project management team will develop and monitor a project plan (endorsed by CRC management and relevant AFAC group manager) with clear time frames and resources identified	Implementation
that a number of agencies are relatively resource poor and have difficulty allocating staff resources to research adoption.	implementation model uses stakeholder collaboration, AFAC expertise so that research adoption products & initiatives are developed collectively to maximise benefit and impact.	Implementation

The following examples of research adoption successes demonstrate both 'pull' and 'push' strategies that have often occurred in an uncoordinated way. Developing a research adoption strategy will expedite adoption and create greater impact both for the industry (by building capacity) and to the community by improving information and service delivery.

- **'safety in vehicles'** research has gained endorsement from AFAC and is being used to develop training (D1)
- the development of online **smoke plume prediction** tool through the Bureau of Meteorology website (B2.1)
- **tertiary level courses**; University of Melbourne, School of Forest and Ecosystem Science and Charles Darwin University (B)
- **'stay and defend or leave early'** work is informing agency community education material (C6)
- incorporation of **biodiversity findings** into burning plans in SW Australia (B1.1)
- large number of case study evaluations of **community education** programs (C7)
- **fire behaviour** research has been included in a training package, field guide and CD ROM (A1.1)

PRIORITISING THE RESEARCH

Targeted outcomes

To manage emerging research for adoption several processes were used; firstly projects were placed within targeted outcomes. The targeted outcomes were developed at the establishment of the Bushfire CRC as key research themes. These have been validated by the industry in 2007 & at the Research Program and Research Adoption planning workshop in January 2008.

fire fighter safety; is aimed at protecting fire fighters on the fire line by providing a sound basis to promote safer fire ground practices and improve decision support systems for individuals, IMTs. Agency recruitment and deployment strategies should also be enhanced.

aerial suppression; will provide decision support tools to enable optimization of aerial fire fighting at both tactical and strategic levels.

prescribed burning; will provide a scientific basis to establishing and maintaining appropriate fire regimes in the landscape and incorporating the interests of communities, biodiversity and other values.

community safety and engagement: will provide a sound basis for better planning for and living with fire. It will improve information and warnings to communities to inform their decision making and behaviours related to bushfires.
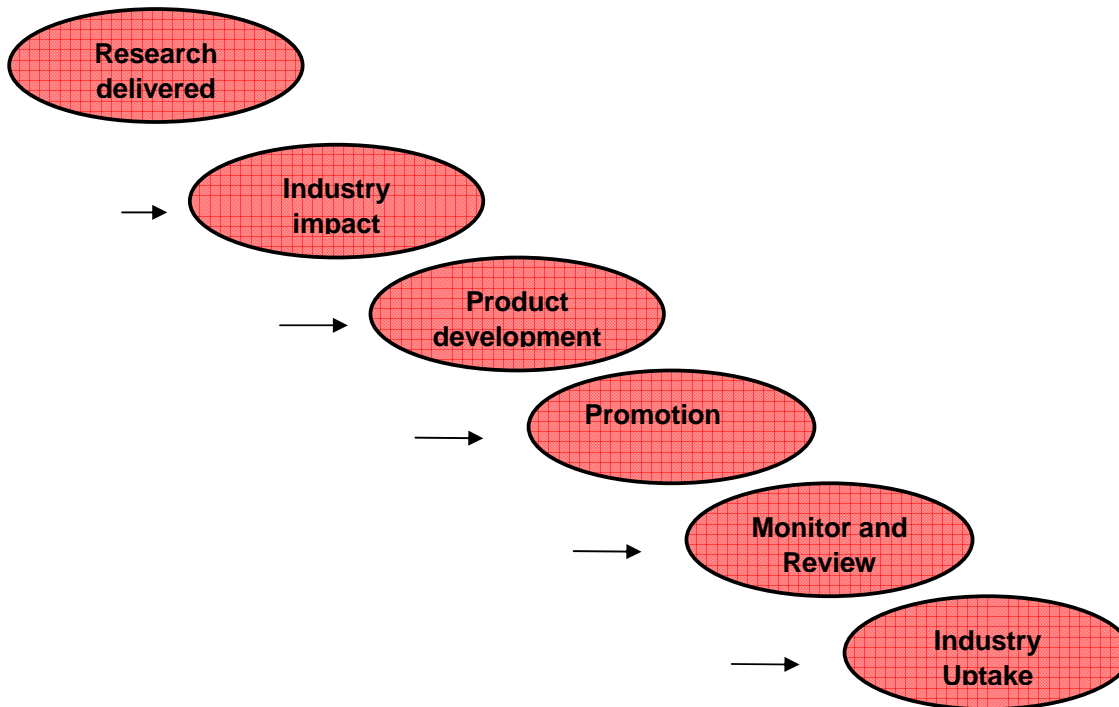
In addition, key processes to enable research adoption were validated, those being: capturing the knowledge (refer to Communication Plan); developing decision support tools and providing evidence to underpin policy.

Breadth of application

To understand the breadth of application for each project two broad pathways for adoption were developed: they are:

1. Australasian pathway: Research that has regional application will be developed into products utilising a collaborative process with the industry. Research outputs will be developed into 'products' to facilitate greater adoption by agencies. 'Products' could indicatively mean; guidelines, software tools, publications, assessment criterion, policy guidelines, training materials or operational procedures.

2. Agency pathway: Research that is focussed on agency specific needs will require a relevant agency to 'champion' the lead in identifying processes and products to enable adoption within an individual organisational context. Engagement with the AFAC community may be undertaken with agency lead. Agencies would be encouraged to document the process of implementation, for example in a case study format as a learning tool for other agencies and for incorporation into the Fire Knowledge Network.

IMPLEMENTATION

Research delivered

→ **Industry impact**

→ **Product development**

→ **Promotion**

→ **Monitor and Review**

→ **Industry Uptake**

The Research Adoption plan expedites this progression

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Below is an outline of the implementation process to be undertaken working closely with the industry through AFAC and included are some high level deliverables. Finalisation of the research adoption implementation plan is dependent on the approval of project plans and budgets.

Research delivery – quality research is delivered [researcher & CRC responsible] with scientific checks ready for adoption [CRC responsible]

Industry Impact Assessment – using AFAC expertise through the existing Group structure and project management from the CRC office (via a specifically convened project team) an assessment will recommend a research adoption pathway, identify product development and resources required and promotion activities [CRC and AFAC and researcher responsible]

Product development and initiatives – the project team will develop a project plan, implement and monitor product development and guide passage through the AFAC system for endorsement. Products may include software tools, operational procedures, decision support tools, policy guidelines, good practice

guides, tertiary courses, short courses, publications, workshops, stand-alone training or enhanced existing training materials.

Promotion- requires a focus on relevance, or significance to the industry (the 'what's in it for me?' principle) and may include activities to communicate with stakeholders, community or government. Examples of promotional materials may include: media, websites, Fire Knowledge Network, publications, Fire Notes and Fire Updates, Newsletters, online communication tools, workshops, product launches, representation to members of parliament (refer to Communication Plan). Promotion will include documentation of successful adoption as case studies for industry learning and capacity building.

Monitor and review – Overall program reporting will occur through the CRC Board Research Adoption and Education Committee while the actual use of any product or research outcome is to some extent beyond the control of the Bushfire CRC, but it is recommended that periodic review and survey of product utilisation be conducted to inform future research and development (to be included in the Research Adoption Implementation Plan).

Budget: Specific funding has been identified for research adoption in part a shifting of project funds to research adoption. Once budgets are finalised at the following Board meeting the Research Adoption Implementation Plan can be finalised and research adoption project plans be developed and implemented.

MEASURING PERFORMANCE

The Research Adoption Strategy will be monitored and reported against the Objectives and the Implementation Plan, inclusive of requirements under the Commonwealth Agreement will be monitored on the project outcomes. Some high level deliverables have been included here.

High level deliverables	Time frame
Stakeholder survey	April 2008, 2009, 2010
Research Adoption Strategy approved	April 2008Board meeting
Communication Plan	
Budget and project plans approved [research program responsibility]	29 May Board meeting
Research Adoption Implementation plan developed	30 June
No. of industry impact assessments completed	30 Nov & 30 May
No. research adoption project plans completed	30 Nov & 30 May
% delivery of project plans	30 Nov & 30 May
No. and type of promotion activities	30 Nov & 30 May
% delivery of communication plan	30 Nov & 30 May

FURTHER INFORMATION

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