

# Roadmap plots the way ahead

Six key themes provide a roadmap to current and future fire research activities in New Zealand's built environment.

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Last August, BRANZ's second annual Fire Research Workshop in Wellington brought together stakeholders from the New Zealand fire research community. The aim was to develop a pan-industry Fire Research Roadmap, giving a coherent picture of current and future research activity and needs in the New Zealand built environment.

Participants included the country's main fire research providers – the University of Canterbury, the University of Auckland, Victoria University Wellington and BRANZ – and representatives from the NZ Fire Service, the Department of Building and Housing, the Society of Fire Protection Engineers (representing the fire safety engineering practitioners) and the Fire Protection Association of New Zealand (representing the fire protection industry).

## NZ leading world in research

A lot of fire research is currently planned or being carried out in New Zealand. At the Fire-NZ 2011 Conference in Auckland, visiting US academic Associate Professor Brian Meacham's presentation 'Delivering better fire safety performance – how New Zealand is championing change worldwide' was full of praise for the advances made in New Zealand fire engineering, both on the regulatory and research fronts, particularly in world-leading performance-based fire safety engineering.

## How the roadmap was developed

In developing the roadmap, workshop participants first agreed on the overall focus of fire research in the New Zealand built environment (called a research portfolio) as being the 'societal impact of building fires' with the associated outcome being 'the reduction of the social, economic and environmental impact of fire in buildings in New Zealand'.

The definition of 'built environment' is somewhat narrow in this context, applying to buildings within the scope of the New Zealand Building Code.

## Six research themes

The second step was identifying current and future fire research activity and needs and grouping these into research themes. Six key themes were identified and agreed on (see Figure 1).

### RESILIENCE OF BUILDINGS IN FIRE

This involves research into ensuring new and existing buildings/structures perform more dependably in fire situations, including post-earthquake fires, at a global level as well as an elemental scale.

### PERFORMANCE-BASED FIRE SAFETY ENGINEERING

The largest and most active research area includes a move to research that will help provide design tools addressing risk and uncertainty in fire safety engineering as well as a sound technical basis for the performance-based regulatory framework in New Zealand.

### SUSTAINABILITY AND FIRE

To ensure optimal outcomes, it is increasingly important that research is undertaken to provide data that quantifies the interaction between fire and sustainability.

### NEW TECHNOLOGIES

As new technologies are playing an increasingly important part in delivering effective fire safety in buildings, it is important New Zealand research remains abreast of these.

### SECTOR PERFORMANCE

Research that provides a feedback loop on the actual installation and construction of fire safety features and systems in buildings is an important part of holistic sector performance.

### FIRE SCIENCE

While the majority of the research themes are at the applied end of the spectrum, the sixth theme encapsulates research that makes advances at a fundamental scientific level, which subsequent research will apply to the built environment.

## Coordinated approach going forward

The workshop was useful in creating a picture of the fire research in New Zealand and of mapping the inter-relationships with the requirements of different stakeholders.

The roadmap will be an invaluable tool to help coordinate fire research to ensure the most effective investment of funding. ◀

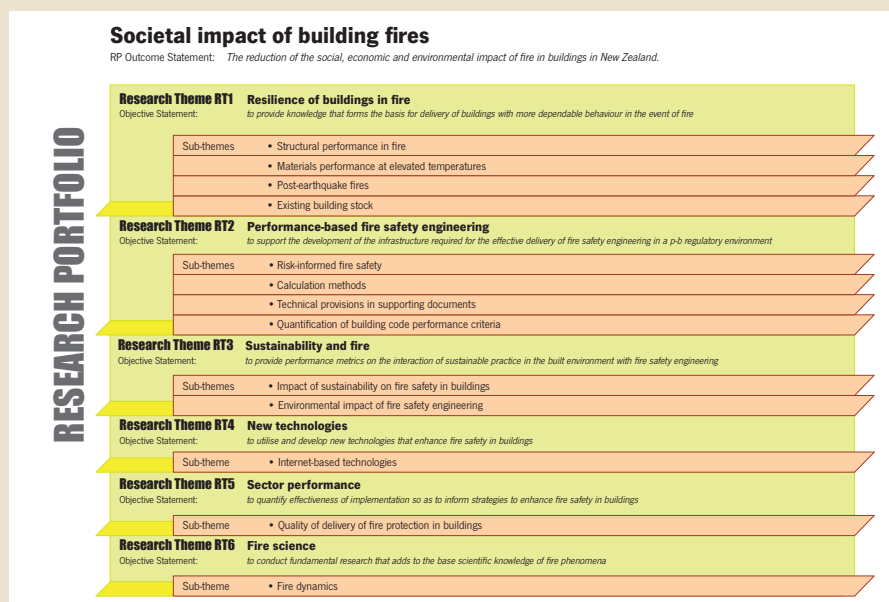


Figure 1: Fire Research Roadmap.