

Creation of a Virtual Fire Research Academy and National Fire and Rescue Research Strategy

Background

1. The trend in recent years has been for Government Departments increasingly to sponsor only applied research in support of their current policies and to rely on funding for fundamental research to be provided through the Research Councils.
2. In July 2000, Professor Dougal Drysdale representing the International Association for Fire Safety Science, and Dennis T. Davis representing the Institution of Fire Engineers wrote to the Government's Chief Scientific Adviser. The letter suggested that a consequence of the above trend in the context of fire research had been that Government funded fire research had become fragmented and that support for fundamental, underpinning research had seriously diminished.
3. In response, Government formed, what has become known as the Interdepartmental Fire Research Group (IFRG), which acknowledged that both charges had some basis. In response to the issue of fragmentation, a website which lists all current (and some past) Government-sponsored research has recently been completed. This will now be maintained as the repository for details of all present and future Government-sponsored fire research.
4. The problems of dwindling support for fundamental underpinning research is more problematic. For many years the fire research community looked to the Fire Research Station (FRS) to carry out such work. However, the FRS became part of the Building Research Establishment, which was eventually privatised.

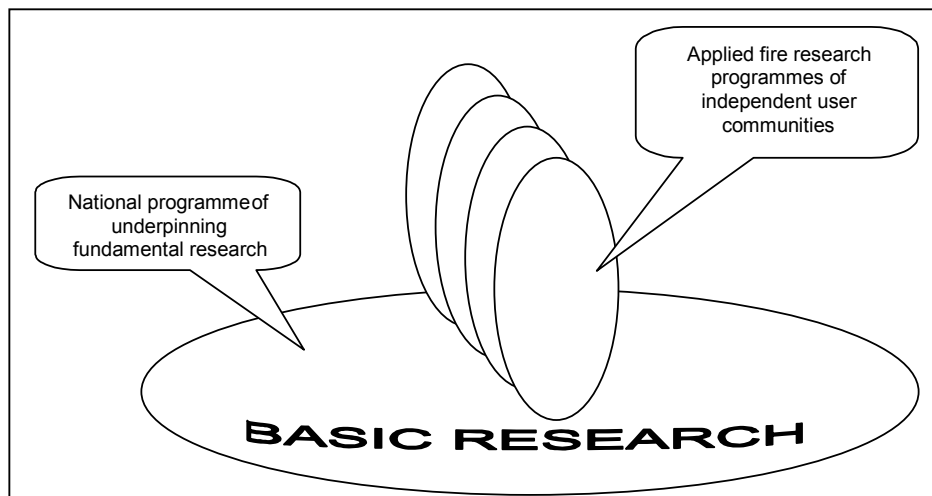


Figure 1. A National Model for Fire Research

5. In tackling the issue of underpinning research, the Interdepartmental Fire Research Group has distinguished two broad categories of Government-sponsored fire research:
 - demand-led applied research which is identified and sponsored by a variety of (Government and non-Government) user communities.
 - fundamental research, carried out almost exclusively by academia.
6. The subjects pursued within the applied research area are seen as being very much the business of the sponsoring communities, but it is recognised that, without access to a sound programme of fundamental research, the health of the applied research will eventually suffer. For example there is already evidence that some fire models (on which performance codes for fire safety in the buildings are based) are complex and therefore open to misinterpretation, at least in some practitioners' hands. Failure to address these basic issues could lead to serious deficiencies in the UK building stock in due course.

The National Fire Framework

7. One of the requirements of the National Fire Framework (which we have already met) is to outline a Fire Research Programme for ODPM. It will be published on the ODPM web site in due course and covers five strategic areas:
 - Risk Measurement and Management
 - Fire Prevention, Community Fire Safety and Arson
 - FRS Management, Resources and Operations
 - Human Behaviour and Social Research
 - Fire Science and Fundamental Studies
8. However, a second requirement is that we should produce a draft national strategy for fire research by December 2004. Clearly, such a strategy would require a broad partnership between the many interest groups, but ODPM wishes to seek such a partnership, in the longer term interests both of the Department and of the country.
9. In our view an early priority of the strategy would be *fundamental* fire research. The basic physics and chemistry of fire initiation and growth need greater understanding if the continuing move to fire safety engineered building designs is to be properly underpinned by the relevant theory, whilst much greater understanding of human behaviour is required if fire prevention initiatives, fire alarm procedures, and evacuation plans are to be fully effective.

10. However, compared with other areas of research, fire research is thinly spread and can find it difficult to muster a sufficiently high profile when spending plans are being drawn up within Government, within boardrooms, and within Europe. We believe that a broad coalition of government, industry and commerce, and academic fire research interests would help raise the profile of fire research and could provide a focus for dealing with those general fire research matters that do not have confidentiality issues associated with them.
11. By making use of 'virtual' communities and e-management procedures such a coalition could achieve a number of objectives.

Objectives of a Virtual Fire Research Academy

12. The long-term objectives of a virtual academy would include:
 - Developing and maintaining a National Research Strategy
 - Creating a virtual Centre of Excellence for Fire Research
 - Fostering a coherent Fire Research Community
 - Building Research capacity
 - Building links between Research Community and Funders (Policymakers)
 - Allowing researchers to work collaboratively
13. Essentially, a national strategy for fire research would comprise a broad statement of fire research 'gaps'; suggestions on how the gaps might be filled; the relative priority for doing so; and who might do the work. The strategy would have a 5-10 year planning horizon and would be 'owned' by the coalition, the latter perhaps acting as a 'virtual' Fire Research Foundation; 'virtual' because the coalition would have no substantive identity other than on an Internet website.
14. The Research Councils have promoted centres of excellence in recent years for multi-disciplinary subject areas, such as fire, whose lack of 'critical mass' in individual university departments disguises the overall magnitude of the dispersed research effort existing in some fields of research. Such an arrangement might also help with some of the pressures in academic fire research where, in recent years, lack of visibility has challenged the viability of some schools of fire science. Such developments threaten the future supply of research, researchers, and fire safety engineers.
15. The creation of a coherent and continuing virtual fire research community (ie physically dispersed but acting as a single e-organisation) would increase the credibility of the subject area and might in due course attract additional funding from the Research Councils.

Stakeholders

16. The establishment of a National Fire Research Strategy and Virtual Fire Research Academy would require a broad partnership of stakeholders. These might include:

- Government
 - ODPM
 - Analytical Co-ordination Team – Research Networks
 - Thames Gateway Division (includes Buildings Division)
 - Fire & Rescue Service Directorate (FRSD) members
 - Fire Service College
 - Department of Trade and Industry (DTI)
 - Ministry of Defence (MoD)
 - Office of Science & Technology (OST)
 - Health & Safety Executive (HSE)
 - Health & Safety Laboratories (HSL)
- Industry/Commercial
 - Fire Protection Association (FPA)
 - Steel in Fire Forum
 - Concrete in Fire Forum
 - Corus
 - British Construction Steel Association
 - Building Research Establishment (BRE/FRS)
 - Chiltern research
 - Warrington research
 - Pilkington
 - Cargill
 - Arup
 - BuroHappold
 - Tenos
 - Qinetiq
 - AEAT
 - Ansys
- Academia
 - HUBFIN
 - Fire Engineering Research Network (FERN)
 - Fire Safety Engineering centre of excellence
 - Fire Chemistry Network
 - Ulster University
 - Edinburgh University
 - Central Lancashire University
 - Greenwich University
 - Anglia Polytechnic University
 - Nottingham Trent University
 - Leeds University
 - Sheffield University
 - Aston University
 - Portsmouth University
 - Cranfield University
 - Imperial College

- Kingston University
- Bolton Institute
- University College London
- City University
- Manchester University
- Other
 - Trade Unions
 - Engineering and Physical Science Research Council (EPSRC)
 - Fire Brigades
 - The Institution of Fire Engineers (IFE)
 - Chief Fire Officers Association (CFOA)
 - The Fire Protection Association (FPA)
 - The Passive Fire Protection Federation (PFPF)
 - Institute of Naval Engineers
 - Institute of Occupational Medicine
 - Mines Rescue Service Limited (MRSL)

Short to Medium Term Project Governance

17. Clearly, all of the objectives set out above will not be achieved overnight. With ODPM committed to the requirement within the National Framework to achieve a National Fire Research Strategy by December a distinction will need to be drawn between the short to medium term project goals and the long-term aims.
18. The objectives outlined previously are intended to reflect the longer-term aims of establishing a virtual Fire Research Academy and represent the aims of the community as a whole. In the shorter term ODPM aims to deliver, by December, in consultation with stakeholders a National Fire and Rescue Research Strategy document and set up an early online Fire Research Academy which can be used to publish ideas, float discussion and continue the development of a National Fire Research Strategy thereafter.
19. The project will be governed in this period by a small project committee made up of a broadly representative sample of the stakeholders mentioned above. The project committee will oversee the initial draft of the National Research Strategy as well as the early development of the Virtual Academy website.
20. The goals and timescales for delivery are dependent on many factors including the results of consultation. However the general timescales are set out below are set out below:
- August 2004 – commission report on Fire Research Nationally
 - August/September 2004 – Discussion with APU regarding support for Fire Research Academy website
 - August/September 2004 - Contract to be let to management contractors to provide administrative and document drafting support for project.
 - 13th September 2004 – Consultation meeting to which stakeholders to be invited.

- September/October 2004 – First meeting of the project committee meeting
- September 2004 - Draft National Research Strategy to be posted on website for consultation.
- September 2004 – Aim to have early website go live with process for Stakeholders to feed into drafting of research strategy.
- September-November 2004 – Continued meetings of project committee
- September-November 2004 - consultation process
- December 2004 – Deliver a National Fire Research Strategy

Potential Resources and Funding

21. Anglia Polytechnic University have offered to provide resource for the development and hosting of an early website for an initial 6 month period. The domain name would be registered to ODPM. This offer is gratefully received and progress is continuing.
22. The Engineering and Physical Science Research Council (EPSRC) recognise the importance of Community Networks and have expressed interest in collaborating on this project. EPSRC has in the past made funds available to other research communities that have seen fit to organise themselves into research networks. ODPM are continuing discussion with EPSRC.
23. The ODPM generally has already recognised the importance of research to the work of the department and has set up four Research Networks arranged by the Analytical Co-ordination Team of ODPM and jointly funded by ODPM and the Economics and Social Research Council (ESRC). Each network has a Research Co-ordinator drawn from academia, who is paid a salary to manage and administer the running of the network. These research networks broadly have similar objectives as the Fire Research Academy. The possibility exists to set up the Academy within the framework of the ODPM Research Networks project, which could in turn provide some additional level of funding towards the cost of a Research Co-ordinator. Discussion is happening between the FRSD and the Analytical Co-ordination Team.