

Fire Sector Federation

Fire and rescue service efficiency review 2013.

Issues Paper

Introduction

The efficiency review led by Sir Ken Knight clearly has its roots in the relationship between spending reductions and the ability of the fire and rescue service to innovate the change necessary to drive through greater efficiency. The assumption being that this will enable Fire and Rescue Authorities to operate with less money but without detriment to the quality of service provision.

The Fire Sector Federation believes that internal organisational efficiencies are only part of the story. Whilst it is recognised that Fire and Rescue services are essentially local services, increasingly designed to meet the specific risks within their locality, it is also the case that those same services form part of a larger whole, not only in terms of national resilience and interoperability, but more as part of a wider industry sector concerned with the safety of those who live, work and play in our built environment.

It is also likely that as the role and impact of the Fire Service widens so will that of the whole sector, an example might be road safety and collision response which gives the road construction industry and Highways Agency a legitimate interest and participation in the Fire Sector.

There are, however, for the purposes of the review a number of key issues which we would wish to raise in the belief that if handled properly they can contribute to workload reduction and consequently efficiency of the fire and rescue service:

1. National Policy

We recognise the local nature of the Integrated Risk Management process and the success it has had in driving down fire deaths and injuries. However, we are concerned that the inevitable result of an entirely local approach is inconsistency, not only in operational response but also in the application of prevention and protection. This inconsistency creates wider inefficiencies throughout the sector and for the operators of the buildings we are all trying to protect. It also reduces the ability to share best practice with those outside the direct FRS sector and thus reduces the opportunity for industry and commerce to work with the FRS.

We believe that a closer working relationship including the sharing of best practice among the whole fire sector will provide for better intelligence in the design and protection of buildings enabling us to do more to control societal risk.

An example would be the proposed primary authority schemes which will engender far greater consistency between similar buildings and potentially alleviate some of the workload from Fire and Rescue Authorities, whilst retaining some capability to deal with an immediate or maverick risk locally.

The Fire Sector Federation exists to bring those interest groups together and Fire and Rescue Authorities ought to be encouraged to actively participate in the Federation.

We also feel that the National Framework document is still too complex and ambiguous, it ought to simply express the Government's expected priorities for the fire and rescue services based on statistical analysis of risk activity and an understanding of what is going well and

what less so, in a manner which allows the rest of the sector to contribute. It needs to recognise that the Department for Communities and Local Government (DCLG) and the fire and rescue services are part of the wider fire sector and it should detail the expectations and their respective roles and responsibilities as part of that sector.

We also want to draw attention to the cost of fire analysis. This Federation is seeking to continue the refreshment and updating of this work and believe that DCLG ought to maintain some responsibility for supporting its production. It is very difficult for anyone to produce a developmental business case for any risk reduction initiative without understanding the size and scale of the problem, or what it is we are trying numerically to achieve.

We are also concerned that there are differences in training, assessment and operational capability and that associated operational doctrine has still not been updated, which leaves the current fire and rescue service dangerously fragmented. We are aware of the new arrangements for Operational Guidance but remain concerned at the make-up of the Operational Guidance Group and the pace of progress for guidance to be commissioned and completed.

2. Technology

The development and implementation of new technology can and will make a huge difference to the effectiveness of the sector, provided that the technology is allowed to lead change rather than being incorporated alongside existing policies and practices.

We highlight the early work being done to pilot the installation of new intelligent alarm technology. (*Appendix 1*). The project has the potential to completely eradicate false alarms due to apparatus, meaning that every call to a fire and rescue service will be either a genuine incident or malicious. Clearly it is essential that FRAs understand that technology and are prepared, when the time is right, to abandon reduced response policies. Other areas where the FRS might engage to achieve efficiency is involvement in pre commercial innovation in aspects of technology that may improve the effectiveness of fire and rescue service intervention such as pumping appliance automation and the development of generic solutions for equipment and practice.

Fire and Rescue Authorities need to understand the potential that lies in technological development and seek a conduit to facilitate discussion with the wider fire sector on this issue. The government also has a role to play insofar as it could provide more encouragement for technology providers to enter the fire market e.g. by highlighting the market size and potential or by assisting in breaking down barriers to entry such as the need for product approval by each fire and rescue service individually prior to purchase.

3. The Built Environment & Fire Protection

The National Interests workstream of the Fire Futures work highlighted that the built environment is the area where most fire and rescue service activity is undertaken and that a greater knowledge of that environment is needed along with closer working with the wider fire sector. The built environment continues to become more complex especially with the development of modern methods of construction coupled with the sustainability agenda. We are sure that the threat of fire will be significantly more difficult to counter in the future and will require greater joint working to encompass and find effective solutions to deal with the potential risks introduced through technological progress.

There is concern that fire safety is currently lagging behind these changes and needs to catch up, otherwise there is a major risk that fire safety problems are simply, albeit inadvertently created and locked up in the built environment with the potential to cause problems for fire

safety in the future. Although the regulatory framework is seen as substantially fit for purpose the key issue, however, is securing compliance with the regulations and guidance. This remains one of the key concerns of the sector. Fire Futures highlighted a perceived low level of competency within the sector in relation to fire safety and built environment, not helped by the fact there is no common qualifications' framework that covers building and fire safety competencies. This is something which the Fire Sector Federation is currently aiming to address with progress on the work to be completed by the end of 2013.

Data Sharing/Knowledge Management

It is generally accepted that substantial benefits could quickly be realised if the quality of information gathered was improved and more effective information sharing protocols were adopted sector wide. It is clear that Federation members collect a vast and varied array of information which could be usefully utilised by fire and rescue services and vice versa. Amongst the reasons cited for data sharing not being common place, despite the obvious advantages that can be gained, are over bureaucratic internal procedures, particularly in the public sector and issues around data protection.

There appears to be a clear steer from the government for more transparency from local government services in the processes employed for decision making and the supporting data held. It is inefficient and frustrating that over bureaucratic processes are currently acting as a barrier to progress in this area. An example of this is the availability of the IRS data and the problems that have been encountered in matching this with insurer large loss information. The benefits of combining these databases for risk modelling and calculation of economic cost are clear, however, bureaucratic hurdles continue to be erected which prevent this occurring. Government assistance by way of clarification would be useful in addressing issues of data protection and the requirement to simplify and improve access to information held.

We believe that a move to encourage data sharing across the sector would be simple to achieve and would bring immediate and clear benefits. For example, whilst the fire and rescue services undertake building safety checks, no single organisation can take on responsibility for awareness of fire safety amongst building designers, constructors, owners and occupiers. To be effective the sector needs to work together more closely, be less introspective and implement more effective channels of communication, in particular, with those outside the core specialist fire safety sector who, although not fire specialists, are in practice responsible for delivering fire safety (e.g. general design, specification, and construction owners). This remains one of the primary purposes of the Fire Sector Federation.

One of the greatest challenges for the sector as a whole is to fully mobilise and apply the collective sector knowledge that is available. Dissemination of information and best practice is a growing imperative given the increasing complexity of the built environment and the challenges that the varied levels and type of occupancy present across communities. In that context, central and critical to the sector knowledge base, is to implement and maintain more cohesive and complete sources of information.

Added to this mix of change is the increasing development and application of risk-based design approaches under the banners of fire safety engineering or expert judgment. Where a building is too big, too complex, or too innovative to fit comfortably within the more rigid standards there is a growing tendency for these techniques to be applied beyond their limits of applicability, without adequate scrutiny, and essentially outside the scope of approved practice. The concern is that the boundaries are being increasingly pushed into areas of uncertainty, where applicable supporting knowledge is at best weak and, at worse non-

existent. The risk is that safety margins are being increasingly squeezed; leading inevitably to potential increases in life and property losses, particularly should the unexpected occur.

Competence & Accreditation

There is undoubtedly an important role for industry endorsed third party certification schemes, however, the schemes must themselves be fit for their stated purpose and properly accredited. The optimum effect will only be achieved by ensuring the integrity of the accreditation and competence process for commercial enterprises and individual practitioners. Officially mandating third party independent schemes, or requiring wider specifier and client endorsement by insisting on third party schemes to mitigate risks by specification are illustrations of how efficiency might be improved.

The National Interest Workstream of Fire Futures recommended that the core strategy for reducing fire risk through the built environment should consist of five main elements as reproduced below, and this remains the view of the Fire Sector Federation.

- First, improvements can be made through better application of what is already known.
- Second, a better understanding of fire behaviour and building response to fire is required – a common core curriculum.
- Third, there needs to be improved compliance with regulation, legislation and industry driven best practice.
- Fourth, the strategy needs to take a wider view on the impacts of fire in line with requirements to lower the costs of fire damage taking note of community needs.
- Finally, there needs to be better collaborative working for interlinking fire safety requirements from design to the ongoing management of the occupied building.

4. Research

It seems clear that the localism agenda has led to considerable shrinkage in the size of central government departments, particularly in our case DCLG. This in turn has meant that so called national functions have been reallocated elsewhere or redesigned, albeit with DCLG retaining oversight in some cases.

We are concerned that there now exists a lack of coordinated fire research or indeed a recognised and accessible body of sector knowledge. This is why research forms one of the key workstreams for this Federation.

We cite as an example our earlier comments regarding the economic cost of fire review which was previously carried out by DCLG. Without such knowledge it seems difficult to make effective judgements about the impact of initiatives on efficiency in terms of maximising the economic impact of the whole sector. Again, the Fire Sector Federation has installed this as one of its key workstreams.

We reiterate our previous position that whilst the Fire Sector Federation fully supports the government view that much of its policy and guidance work would be more appropriately undertaken and led by the sector there must also be recognition that they remain an important part of the sector and in certain areas such as research, the government's leadership role remains key. We therefore look to government to recognise the value of such work and to actively support and promote it because an expectation that such knowledge will

be used as part of decision making by all the partners within the sector will lead to a more joined up approach and contribute to greater efficiency across the piece.

5. Procurement

We are aware that there are some areas of very notable practice in procurement throughout the fire sector, and our experience over recent years informs us that simply attempting to impose routes to procurement is largely unsuccessful. We feel there remains much work to do in developing an effective procurement dialogue between all the parties involved. Not least because the current burdensome and multiple tendering processes drive up costs for suppliers and ultimately our largely public sector customers.

Encouraging innovation by streamlining product evaluation and approval

The Fire Sector Federation wants to see a vibrant and flourishing market place which drives product innovation and affordability but to achieve that we must stop sinking cost into repetitive product evaluation.

The advantages of third party product certification are well known to many in the fire sector and are common practice to those involved in the supply of fire protection products and services. For the purchaser, they can be assured that the product has been competently, vigorously and independently tested to the requisite standard. They will also know that the third party certification body has visited the supplier, assessed their quality management system and reviewed their established procedures to ensure that should problems arise they are appropriately handled. For the manufacturer (supplier), although adding some initial cost to the process, they can be reassured that once the third party certification mark has been awarded, it will be accepted as an assurance of quality without having to undergo costly and time consuming re-evaluations by its customers or potential customers.

The Fire Sector Federation benefits from the membership of several independent third party certification bodies and although these organisations involvement in the fire sector is currently centred on fire protection products they would be keen to lend their expertise to establish an appropriate equivalent for fire-fighting and or rescue equipment if so desired.

We look to the review team to highlight the cost benefits and commercial advantages of collaborative procurement and effective sharing of product evaluation intelligence.

Fire and rescue services clearly need to refine their buying processes; they need to cut bureaucracy as this merely adds to cost whilst encouraging supplier innovation as they look to deploy resources (particularly staff) more efficiently in the future, for example through evaluation of imaging, cold cutting and misting systems such as the COBRA project currently being undertaken by GMF&RS.

Commercialisation of the process

To reiterate, Fire & Rescue Services need to take a more commercial approach to procurement and to better embrace technology particularly in the efficiencies and cost savings it can bring. For example, one major worldwide supplier in the fire and security industry used technology to cut its UK Head Office workforce by 40%. That same company also tasks its procurement team to reduce component costs for its product by 10%, year on year and they regularly succeed.

Commercialisation of the buying process forces organisations to examine, not only items of external spend but also, what is being undertaken internally, and to evaluate and test the market to explore whether there are more efficient and effective solutions available

elsewhere. Clearly this can produce quite different results such as the decision to move to pure outsourcing or into collaboration agreements with others where pure economies of scale can produce a more cost effective result. Several members of the Fire Sector Federation have considerable experience in the commercialisation of the buying process and have expressed their willingness to assist fire and rescue services if so required.

6. Trading

As outlined above the Fire Sector Federation generally welcomes a more commercial approach by fire and rescue services, unsurprisingly however, where there has been some tension is in the area of trading and particularly as there are different approaches by different brigades and quite diverse interpretations of what is permissible and what is not. The Federation's main concerns are regarding consistency and fairness or the need for 'a level playing field', both of which we believe could be quite easily addressed through production of definitive guidance and we believe that DCLG has a role to play in the coordination and support of such guidance.

One of the main areas of confusion surrounds the use of the fire and rescue service 'brand' by an arms-length company and whether the use of the brand falls foul of state aid provisions. Several Fire Sector Federation members consider that the use of the brand has an intrinsic commercial value and is being and could be used by fire and rescue services and fire and rescue authorities' as arms-length trading companies to gain a competitive advantage over independent providers in the market, and that this distorts competition. Without decisive action by DCLG, Local Government Association or Chief Fire Officers Association we are concerned about the likelihood of a position paper being lodged with the Office of Fair Trading concerning fire and rescue authority arms-length companies and their use of the fire and rescue service brand and/or a complaint being filed with the European Commission's Competition Directorate-General. This will be an expensive process, a waste of scarce resources and something easily avoidable through decisive action by one or all of the key players.

The Fire Service College operates in a competitive training market in which a number of customer fire and rescue service bodies directly compete with it, leading to over-supply in the market. The local training facilities and staff at these fire and rescue services are generally funded by the tax payer/rate payer and represent additional cost to the public purse – this does not appear to represent value for money in any way. We are also concerned that once again the playing field for pricing may not be a level one. This landscape has led to fragmented standards of training, as identified in the recent HSE reports, especially around incident command.

7. Charging

Charging is another area of confusion and potential conflict within the sector and several members of the Fire Sector Federation have been attempting to gather information on the level of charging by fire and rescue services. Putting the unsatisfactory and inefficient situation of having to use Freedom of Information (Fol) requests to gain access to such information to one side, Fol requests have been used to gather information of the level of charging and other details such as revenue and customers. It is worrying to report that none of the Fol requests revealed any information concerning gross profit while some gave limited details with regard to costs and others said that costs matched revenue. All but one fire and rescue service refused to supply a list of customers in the first instance and mainly because of this the remaining ones were made the subject of complaints to the Information Commissioner's Office. As a result of these complaints the Information Commissioner ordered the release of the customer lists. Two County Council fire and rescue services are

currently appealing the Information Commissioner's decision on the customer lists. This is hardly an efficient use of resources and seems to cut straight across the transparency sought by DCLG.

Under the Localism Bill Fire and Rescue Services have the ability to charge, after consultation, persistent offenders for attendance at certain types of 'False Alarm'. It is likely that there will be little charging possible because of the restrictions of the Localism Bill and the persistent offenders are typically other publically run bodies such as hospitals. Thus if they are charged it will be perceived by the media and the public as taxpayers' monies being moved from one State 'pocket' to another. There is also the concern that detection and alarm systems will be disconnected if charging is a possibility with, in many cases, the people affected being the most vulnerable in society.

The Fire Sector Federation believes that if there is to be charging then there should be consistency between fire and rescue services and that the charges should be levied on the Responsible Person (as the offender) rather than the Alarm Receiving Centre (ARC) which is simply the transmitter of the signal. We understand that Merseyside Fire and Rescue Service is apparently sending out letters to ARCs inferring that that they regard them as the Responsible Person, this is potentially confusing and clarification from DCLG would be extremely useful in this respect. The Fire Sector Federation is extremely concerned that if the ARC's are charged then it is likely that they will consider not transmitting any fire signals at all.

This situation is further complicated by the recent judgment with regard to the Weston-Super-Mare Pier fire where the Judge says in para 35

35. Finally, there is the default rule, which is reflected by the statement in section 9 of the CFA Protocol of September 2008 that: "The default for all call filtering should be: if in doubt, a FRS response should be made". I accept Mr Dow's evidence that this was generally regarded as the right practice well before the Protocol came into effect, and is implicit if not express in section 6.5 of BS5979:2007 which I have already quoted. The rationale for the default rule is obvious. There may be many reasons why the keyholder who is the first point of contact cannot easily be contacted. One of them is that he could be in the premises themselves and be a victim of the fire. It is better to be safe than sorry and to notify the local FRS after an appropriate period of filtering has failed to raise a keyholder response. The opening paragraph of the section in Yeoman's website dealing with Fire well illustrates the point. It says:

"Yeoman plays a crucial role in fire detection and prevention. Fast alarm signalling saves lives and property, and can mean the difference between life and death, particularly at night when the most serious fires occur. Prompt action is vital. Even if there is no one around, as soon as an alarm is received, help is on its way immediately to deal with the fire and prevent it spreading.. ."

A filtering arrangement which has the effect of preventing any notification to the emergency services when a fire alarm signal is received would be potentially catastrophic. It was in fact catastrophic for the Grand Pier on 27 July 2008.

As can be see this judgment could result in many more signals being passed by the ARC.

Quite clearly the situation is complicated and confused and is likely to lead to legal challenge which will do little to improve community safety. The Fire Sector Federation fully accepts that the automatic fire alarm issue now requires urgent attention, but consistency is key and government backed guidance is now urgently required. If charging for attendance at false

alarms is to occur there needs to be a consistent approach particularly with regard to definitions of what can be regarded as persistent and who is to be charged.

6. Europe

The Fire Sector Federation has allocated resources to deal specifically with managing our relationship with and the impact of Europe. This is because we recognise the affect that Europe has on the whole fire sector whether it is through standards making, specification within the built environment, knowledge sharing, trade, working practices and policy. We believe that government should take a lead in helping to develop those issues and concerns more robustly rather than it being left solely to individuals from the fire sector.

Three interconnected areas of interest that arise involving the FRS are: the UK's competitiveness; the value of the UK FRS quality; and the ability to gain insight into other FRS performance models.

The Federation recently responded to the Foreign and Commonwealth Office call for evidence on the balance of competencies with the European Union. Although a substantial part of the response related to the current Union Mechanism for response to civil protection the underlying message was that the UK, in both public and private sectors, has expertise that if utilised could facilitate greater public safety, reduce public expenditure and increase competitiveness.

The current approach, apart from a notable success in promoting 'safer cigarettes', is generally weak in FRS 'end user' representation especially in standard setting, lacks interdepartmental cohesion, provides few reference points for global sales campaigns and underutilises and reduces income and other opportunities for the FRS and UK Fire.

The review of the Mechanism and its accompanying Financial Instrument for adoption in 2014 is indicative of a missed opportunity; particularly given the high regard in which the FRS is held in Europe. In a similar light the absence of the FRS in any meaningful way from the ongoing debate on Horizon 2020, the Union's ambitious research programme to be implemented from 2014 that includes development of disaster preparedness, also illustrates an ineffective use of UK expertise in innovation.

One further area of efficiency is the requirement to have outward looking learning organisations. Accepting that ultimately all organisations define their own culture, including politics and willingness to explore alternatives, there is a wealth of diversity in the delivery of the FRS in Europe (from private to volunteer) with some purportedly operating at lower costs to their community in provision and loss. Undertaking a comparative exercise to assess possible improvements may be useful.

7. Cross sector working

As the role of the fire and rescue service expands so too does the scope and range of the whole fire sector. We see significant potential for efficiency in developing relationships and collaborations both across and beyond the fire sector far more closely.

The inability to take a nationally unified approach on co-responding is a good example, so too is the apparent lack of joined up coordination between the department of transport, highways agency and fire and rescue authorities despite their shared responsibilities for an increasingly busy transport infrastructure and reduction of the risk which is currently leading to an increasing number of road related casualties.

We suspect that this is, in part, due to poor communication and intelligence sharing between government departments. We recognise that in a small way the Chief Fire Officers Association led fire futures forums have tried to address this in some specific areas. Also

where Ministers have identified a national imperative there has been some good progress such as the joint emergency services interoperability programme but there is much more that could and should be done.

We look to government to champion more cross departmental working groups to lead the multiagency and multi sectoral discussions which will lead to far more efficient outcomes for our citizens.

The Fire Sector Federation has begun to show the benefits of cross sector working and as time goes on and the workstream deliverables are completed and disseminated these will quickly become ever more apparent. However, as decision making becomes more localised the challenge is to ensure individual fire and rescue services recognise the benefits and engage across the sector in the communities they serve. It has been suggested that a Fire Sector Federation Scotland could be quickly established and if successful could provide a model for more localised engagement in the future.

8. General comments

Although perhaps not strictly within our remit, we have observed evidence of where the existing governance of fire authorities through a sometimes large number of proportionately and geographically appointed representatives has become a barrier to efficiency.; largely because of the danger of parochialism or small 'p' politics. Although we intend no criticism of anyone and on the contrary praise the commitment and hard work of many individuals, on this matter we would simply pose the question: is it likely that, having some 720 indirectly elected Members responsible for 46 fire and rescue authorities, is going to best promote innovation and efficiency?

We believe that the fire sector increasingly forms part of the wider social risk reduction environment and as yet we do not understand the full scope of the contribution that we can make to that whether from the private, public or volunteer sectors. There has to be a very clear focus on exploring and maximising those possibilities in order to promote a continually safer built and natural environment for all of those who develop, use and try to protect it.

- The problem: Over 95% of all fire alarm signals generated from Automatic Fire Alarm (AFA) systems are false or unwanted. The methods being adopted by all stakeholders to cope with the 'presumption of falsity' benefit no-one, have considerably reduced turnout times for fire and rescue services responding to alarms and can only result in higher commercial fire losses and reduced safety.
- Project Objective: To respond to the Fire Minister's Challenge of finding and demonstrating a practical, technology based solution to the UK's very poor record on false and unwanted AFA activations, resulting in improved F&RS intervention, reduced insurance losses within the commercial estate, and a simplification of F&RS turn-out policies. Anecdotally, it has been suggested that the adoption of practical modern technologies could instantly reduce false and unwanted alarms by 80% which will warrant an absolute reversal in the confidence with which all parties may attribute to an AFA signal.
- Project Method: To study the false alarm history of a number of known high offending occupancies across a range of categories (i.e. Offices, Industrial, HMO's, Schools, hospitals etc.) and Fire Authorities and seek to influence performance by the replacement of the currently installed smoke detectors with more discerning 'multi-sensing' (Smoke / Heat / CO) detectors. The project will evaluate whether the expected improved false alarm rate is significant enough to influence F&RS policy in respect of buildings fitted with these newer technologies. Costs, signalling issues, and Standards / Certification will also be addressed.

Start-up actions, considerations and discussions for FSF Technology Group Meeting 2

1. Need for a separate Project Group for the AFA project
2. Appointment of the Project Lead for the AFA project group
3. AFA Working Group stakeholder make-up
4. Selection of appropriate Fire Authority's
 - a. Metropolitan
 - b. Urban
 - c. Rural
5. Need to consider UK aspect (Scotland, NI, Wales)
6. Resource commitment by engaged parties
7. Project Programme (start and finish date ambitions)
8. Data maturation period
9. Deliverable, reporting, recipient
10. Insurance (project works)

Background

In January 2004 a meeting was held at the House of Commons to discuss a way forward in addressing the high incidence of falsely generated and unwanted automatic fire alarm signals and the non or reduced turnout policies some Fire Authorities were having to adopt to manage their resources. Chaired by Chris Hanks, General Manager of Allianz Insurance and Chairman of RISC Authority, the meeting was attended by representation from insurers, FPA as their technical advisors, the Chief Fire Officers Association (CFOA), the fire industry through what is now the Fire Industry Association (FIA), government ministers and civil servants with responsibility for our building regulations. Commitments were made at that meeting to collaboratively work towards a viable solution but all that has happened in the intervening period is that stakeholders have adopted measures to 'manage the deficiency' rather than seek a long term solution:

- Fire Authorities have adopted sundry methods to determine the nature of the alarm before turning out that results in inevitable delay in attendance
- The fire alarm industry have attempted to preserve reputation by advising customers to take additional measures to check the validity of the alarm (including re-entering the building following evacuation)
- Insurers have reduced greatly their view on the benefit that might be received from F&RS response and indeed the logic of installing AFA systems is now being called into question by them and their customers
- End-users, faced with charging for false alarm call outs, are likely in many incidences to disable their fire alarm systems entirely.

Great strides have been made in respect of 3rd party specification but it is FPA and RISC Authority's view that at the root of the problem are the detection devices themselves. Whilst they are called 'smoke detectors' and do indeed respond to smoke, they respond to other stimuli too, and of course not all smoke originates from a source that demands F&RS attendance. In short, the technology is not providing an alert that is believable enough to commit scant F&RS resources to, or benefit any of the other stakeholder groups, and as such this is seen as the single most important factor that needs addressing by way of this project proposal.

A dependable fire alarm guarantees the best possibility of early intervention which will have significant benefits for the safety of personnel and preservation of property and business viability. Fires accelerate as they grow; within the space of 2 to 5 minutes an incident may change from one where the F&RS may have an opportunity to control the fire at source, saving the building and business; to one where the only job left to do is protect adjacent properties from radiated heat and direct fire spread.

For the last 4 years the FPA has been tasked by the Ministry of Defence, Royal Navy, with the development and specification of high reliability detection systems for use on surface ships and submarines. These are hazardous and 'sensor-confusing' environments where automatic detection and suppression systems are rarely trusted or used but as the platforms get larger, and crew sizes decrease, only automation can make up for the reduced manual presence. The study is now complete and such is the success of the programme that the project deliverables are at this moment being specified on all future craft including Astute and Successor submarines, the Type 26 frigate, and the new large aircraft carriers.

Whilst this may appear high-tech and expensive for the built environment the project brief specified that only current, off-the-shelf (COTS) equipment could be used to achieve the set goals. During the course of study it became evident that there are actually no technological hurdles to the reduction of false and unwanted alarm signals, only financial ones and the will to improve matters.

'Reliability' in fire detection inevitably leads to the use of devices that can sample multiple fire emissions. Valid fire fingerprinting species include 'heat', 'smoke', 'carbon monoxide', and 'light' (visible, UV, and IR). In isolation, none of these will ever describe the presence of fire with great reliability, but if you start to combine them the potential for false alarms reduce dramatically with every introduced species. A sensor capable of simultaneous measurement of heat, smoke and carbon dioxide instantly becomes discerning enough to not trigger on the presence of a cigarette

smoker, steam production from a shower, burning of the morning toast, or use of vehicles within the protected space, but it will respond to a fire.

In pursuit of reliable detection systems industry has responded and these devices are readily available in a format for drop in detector replacement to many modern alarm systems commonly in use in the commercial environment requiring only reprogramming of the alarm panel. FPA has investigated the detectors in depth and found them to be highly dependable for reliable alarm provision.

This project will seek to upgrade the detector suite in a range of premises with a known poor record of false and unwanted alarm signalling. These premises will be selected in a range of Fire Authority areas covering at least a Metropolitan Brigade, Urban County Authority, and Rural County Authority, who have found, through necessity, the need to adopt very different AFA policies to manage their resources in light of the false and unwanted alarm issue, so that benefit to each might be established. From this, the overall benefit for insurers may be determined once each of the FAs view on improved sensor capability is known.

Initial discussions on this project deem it highly suitable for pursuit through the Fire Sector Federation's Technology Working Group on the grounds of:

1. The project is of National importance and urgently needed
2. It tops the RISC Authority pole of issues that require a solution
3. Savings should not be difficult to demonstrate and there is form in this area in respect of security alarm systems
4. It has ministerial interest
5. It demands wide stakeholder participation and presence
6. It already has interest from key stakeholders
7. It is wholly in keeping with the need to spend government money wisely and seek savings without comprising safety where possible
8. Its funding demands are too great for RISC Authority alone

Insurers active participation in a false alarm problem caused by intruder detectors in the 1980's where police response was similarly threatened resulted in a regime where the problem has largely been eliminated and response is reasonably uniform across the UK