Fire-fighting - a risky business?

Examining how FRS staff manage risk and make decisions at emergency incidents within the context of Health and Safety Management.
A Research Report (Phase Two)
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Background

The fire and rescue service (FRS) in the UK has undergone many major changes over the last decade, including changes to duty systems, a move from rank to role in management structures, training and development of personnel, and changes to the political and supporting systems structures.

Changes in the operating environment of this period include:
- Falling call rates to fires;
- greater complexity of incidents;
- more public scrutiny; and
- a more litigious society.
- some notable incidents where the FRS have been criticised on decision making

Throughout this time limited research has been undertaken in the UK examining how operational FRS staff understand and manage risk and make decisions at emergency incidents.

To address this shortcoming Belvidere Park Consultants Ltd has been commissioned to research how different members of the FRS understand and manage risk and make decisions at emergency incidents.

The work was prompted by a number of incidents where the management and understanding of risks had called into question the decision-making processes at a range of levels in the FRS. There was a working hypothesis that health and safety management policies and guidance may lead to constraints in the decision-making behaviours of FRS staff.

This independent research supported by Buckinghamshire FRS, Kent FRS, Hampshire FRS, Merseyside FRS and Mid and West Wales FRS and the Fire Protection Association (FPA), has rigorously explored this perception, examining how operational and health and safety management duties in the FRS co-exist with organisational policies and procedures and the duties of the health and safety management.

Context

As employers, fire and rescue authorities (FRA) must comply with workplace based employee legislation duties, including the Health and Safety at Work Act 1974 (HASWA) and The Management of Health and Safety at Work Regulations 1999 (MHSWR).

Compliance with these duties in the 'non-operational' workplace environment is no different to any other employer; it is important to recognise that these duties are qualified by the test of what is reasonably practicable, and are therefore not absolute. There have for many years been concerns with the FRS that the law does not always fully recognise the 'operational' environment in which the emergency services work - an issue acknowledged by Professor Ragnar Löfstedt - Reclaiming health and safety for all, and Lord Young's report, *Common Sense, Common Safety*.

This report is intended to:-
- Provide an evidence base to assist the FRS to understand service delivery compliance with duties alongside societal expectations of fire-fighters
- Make recommendations to maintain and improve fire-fighter safety including:

  - improving connections between organisational frameworks and operations;

  - improving communication of risk and decision-making;

  - improving risk awareness; and

  - developing an approach to addressing dichotomies in policies sand front-line interpretation.

The fieldwork with a range of service employees explored:-
- how fire fighters understand, perceive and manage operational risk;
- perceptions of health and safety management of both people and policies and its impact on their role in the service;

- how decisions are made in the course of a fire fighter's work (both operational and managerial);
- challenges between national and organisational guidance and health and safety management policies with operational involvement and employer duties.

A number of sectors that operate in similar high-risk environments were also explored in order to provide an insight into how service employees manage and fulfil their duties.

Findings

The findings demonstrated that there was a clear view of how health and safety management should work in practice in terms of structure, function and framework, but a much less clear view as policies and procedures filtered down the ranks in terms of interpretation and operation. Hence a gap was observed between theory and practice and amongst managerial and front line operational staff.

There is evidence that attempts to impose a formalised health and safety management structure on the FRS, embodied in a set of policies, procedures and guidelines, has had a less positive impact on the FRS in the way it operates at emergency incidents. Operations have become formulaic and innovation and intuitive thinking has been suppressed. This has influenced the way fire-fighters and managers and ultimately the organisations behave.

The more clarity was sought through documents and directives, and standard ways of operating, the more restrictive it appeared to be, with the focus on process rather than outcomes. Standard operating procedures seem to be redundant when dealing with specific events which all have a unique set of circumstances; they also stymied innovative thinking and practices.

Legislation produces policies, procedures and guidelines which appear to invoke two main responses:

- fire fighters using their experience and working alongside guidelines, tweaking where necessary;
- or, at worst doing nothing due to lack of clarity about what they should or should not be doing as standard.

Confidence to implement guidelines and to consider how they need to be tweaked within accepted tolerances accumulates with experience and appears to be fragmented and misunderstood between those with more operational experience and those with less.

There is a danger that if a clear way forward is not achieved, there could be a further fragmentation of behaviours and understandings within the FRS over the next few years due to those with experience and confidence to interpret and implement guidelines retiring. These experienced fire fighters will be replaced with less experienced staff, who are likely to have accumulated less experience over the years due to a reduction of incidents.

As these less experienced staff become further responsible for writing and implementing guidelines and policies, so the potential for FRS becoming risk averse becomes more of a reality.

This poses a significant organisational risk to the FRS and also a potential societal risk which has particularly manifested itself in terms of loss of property.

The range of views indicates an apparent struggle between "old style" ways of working and "new ways" which have been adopted since the organisation has changed over the last ten years or so. A number of different cultures seem to co-exist comfortably; however in operational situations they can conflict, with multiple views on what the best way forward might be and in some cases senior managers disagreeing whether to discipline or commend staff for their actions.

The research suggests that there needs to be a fundamental rethink about the FRS approach to health and safety management to provide, clarity, support and a network of skills and experience (not necessarily dependent on role) to underpin implementation and operational decisions.

Participants highlighted how the balance of health and safety management was influenced by a range of factors, including current organisational issues and high profile incidents by other FRS. Health and safety standards were described as often being developed in response to incidents and viewed as a possible knee jerk reaction or overkill. There was a collective view that there was sometimes a "box ticking exercise" taking place to address health and safety requirements and some policies were not realistically implementable.

Many of the participants, particularly senior managers, felt the Health and Safety Executive (HSE) played a role in adding to the confusion of how fire fighters should behave in relation to risk mitigation at incidents. The fear of potential litigation and blame following the actions of FRS personnel at incidents has become much more of a crucial issue and some FRS were perceived as writing safe systems of work to ensure that the legal requirements of the organisation

were maintained. This approach appeared to overlook the principle of a safe system of work, which was to protect the fire-fighter in the first instance. It was queried as to whether the current full range of duties is suitable for the FRS when attending emergency incidents and whether changes need to be made.

Evidence presented in the report also showed a lack of awareness between fire fighters:
- being risk aware - actions taken through greater understanding of these issues leading to caution; and
- being risk ignorant - where a lack of confidence and understanding leads to a default position of no action.

It is important to differentiate between these opposing positions. Modelling risk awareness and the associated decision-making processes needs to be communicated well so that it is not mistaken for risk aversion. Many misunderstandings may be due to a lack of communication about the way decisions are made.

On the whole, individuals working within the FRS felt that they had signed up to take some calculated risks and if these were eliminated, then the organisation would not be able to perform its duties as per public and taxpayers' expectations. It was felt that many risks have always been present, however the evidence suggests that the FRS have become more risk averse and may operate in a more defensive way.

Participants highlighted how the balance of health and safety management was influenced by a range of factors, including current organisational issues and high profile incidents attended by the FRS. The involvement of the HSE played a role in adding to the confusion of how fire-fighters should behave in relation to risk mitigation at incidents as did the fear of potential litigation and blame following the actions of the FRS.

There is a view that health and safety management obligations are necessary. It helps reduce risks and has saved lives. However there was a thread of confusion about how health and safety management manifested itself in the different FRS and sometimes a lack of understanding about health and safety management itself. There was a mismatch between:
- the requirements of what the fire-fighter needed to say and write down regarding the incidents as required by law, and
- what was actually needed to be done to fulfil the role as a firefighter.

There was not a common, well-defined view about health and safety management, risks and decision-making; in some cases it was perceived to lead to unsafe decisions. This indicated that a true health and safety management culture which everyone understood and which governed actions and behaviours was ultimately hard to achieve.

We report on the importance of training along with experience and "know-how" tempered with cultural, leadership and procedural expectations as to how decisions will be taken when someone assesses what the appropriate level of risk is.

Health and safety management policies can result in fire fighters feeling they are being de-skilled and being deprived of the opportunity to think for themselves leading to frustration as their ability to innovate is being stifled.

This could be a consequence of the influence of the policy authors, who may have drafted them in isolation demonstrating a lack of experience, or perhaps without input from others with the relevant necessary experience. This may have led to a perception that it was often the organisation at the forefront of their mind rather than the fire fighter. Some procedures, eg those relating to high-rise incidents, were highlighted as slowing down the operational response at an incident considerably, frustrating fire fighters in the process. Many misunderstandings may be due to a lack of communication regarding the way decisions are made.

Most incidents may have a good outcome but it does not mean that they have been as safe as they could be and the role of luck was reported as playing a part in the positive outcomes of some incidents.

Information sharing, particularly lessons learnt from incidents and how they are dealt with, across and between organisations is reported to be patchy. There was also a difficulty with fire-fighters feeling that their views were being heard but not responded to by the organisation.

Where blame might be apportioned, post-incident information was sometimes not shared, which was a lost opportunity for developing learning within the organisation. From a frontline perspective, it was reported that a blame culture was not helpful and that if senior managers will not back the calculated decisions made by operational personnel at incidents it may be safer for the individual to do nothing.

It was also noted that an organisation's senior management team often set the tone for how occupational risks are approached and managed within an FRS. The Representative Bodies also have an influence and it is recognised that there is a duty and a role for them to play in helping to ensure that workplace health and safety management requirements are properly understood.

The way that firefighter promotion is handled was a point of discussion. For front-line staff it appeared that more senior

staff are unaware of the practicalities of applying policies and that they were inclined to be more risk averse. This created difficulties as these senior managers did not understand why fire-fighters sometimes 'bent the rules' or went outside safe systems of work.

Good consistent leadership was considered necessary with consistent messages that flowed upwards and downwards. The issues relating to the impact of managers who have rapidly come up through the ranks without much exposure to incident making decisions was raised as something which could cause more risk aversion. From a front line fire-fighters point of view, they felt they needed leadership and mentorship from someone they could trust.

It was perceived that there are more graduate appointments within the FRS and less operationally focussed staff; the latter may have traditionally been recruited with a background in semi-skilled practical work and teamwork skills. It was expressed by some that some natural leadership abilities had been lost.

Changes that had taken place within their respective FRS, in particular the shift to community based fire prevention, while being successful had resulted in FRS attending fewer fire incidents; this specifically highlighted that fire fighters now have less experiences of these types of incidents. In the view of some front line staff, people who have not attained that experience had contributed to the erosion of practical firemanship (sic) allied to a large number of fire fighters reaching retirement age and a cadre of skills and experiences being lost.

Many interviewees mourned the loss of the old exam system as they felt it set a technical knowledge benchmark as well as giving those that passed a sense of pride. It was expressed that the current assessment process did not give the level of detail that may be useful in the FRS. However it was acknowledged that the old system did have its faults.

The culture of the watch or station also plays a crucial role in fire-fighters discharging their duties in accordance with procedures, with good teams recognising the skills and deficits in its team members and playing to their strengths. Age and experience can influence the safety culture and bring about a sense of confidence to those involved.

There were mixed responses to retained duty staff (RDS) and part-time (PT) front line staff. Some were perceived to be very good and others less so, due to their training and experience as a consequence of the limited time they have. It was perceived that a number of organisational changes seemed to be being brought into the FRS may or may not be good for the RDS/PT.

The issue of the HSE statement on heroism in the FRS was contentious with both frontline staff and senior managers uncomfortable with the concept, as it appears to conflict with the team based approach adopted by the FRS when attending emergency incidents. The public perception of a fire-fighter was considered to be a potential problem as this appeared to have been damaged by the reputation of the FRS as being overly rule bound and not able to adopt common sense approaches. Conversely the public viewed fighting fires as a high risk occupation, when in fact it may be less risky.

The importance of ensuring that equipment was up to date to support the range of situational incidents arising also presents some challenges; the equipment is often more technical which can present resource challenges when training staff.

There is also the issue of how financial constraints in the FRS may impact on health and safety management at the front line. It was acknowledged that the FRS is changing, particularly with regards to funding and demonstrating value for money. The need to fund ongoing developments is challenging, for example, developing a new document management system, updating older policies and introducing new technologies to support them is costing a quarter of a million pounds per year for one FRS.

Conclusion

The thread that runs through this research is the relationship between the changing face of UK FRS and their organisational needs to have operational staff with the knowledge and skills to make the necessary decisions at the right time to achieve the right outcome.

The learning from recent fire-fighter fatalities is recognised strategically with systems being developed by the CFOA National Operations Committee (NOC) and the respective workstreams of the National Operational Guidance Programme.

Health and safety management systems have a direct impact on operational risk management decision making. It is clear therefore, that the development and implementation of these systems should involve an integrated approach that provides flexibility to enable and support incident commander decision making on the ground.

Health and safety management policies and the need for a structured approach has crystallised these issues, which may have been in existence for some considerable time. There seems to be an ongoing issue with mixed messages

about practical implementation of policies and procedures, which will need to be resolved in order to move forward with developing a progressive health and safety management culture in the FRS.

The translation from the strategic level to the operational level appears to lack clarity and consistency of approach. It is important for all FRS staff to understand the relationship between health and safety policy, operational procedures and operational risk management.

Finally, it is important to recognise and acknowledge that nationally, regionally and locally each FRS is at a different stage of the fire-fighter safety journey.

Recommendations

The following recommendations have been categorised into organisational development and policy and are made with the intention to support the following areas:

- fire-fighter safety; and
- key areas of operational service delivery.

We believe that the overall effect of implementing these recommendations will help to ensure that FRS personnel are given every support in preparing for and dealing with operational incidents and risk-based decision making.

Organisational development

1. Incident Command training to include:
- flexible approach to health and safety management systems;
- training for all roles of operational staff;
- awareness of the consequences of decision making in terms of legal and moral duties.
2. Training to reflect the enabling nature of health and safety management.
3. Ensure all staff have the necessary skills and competencies for incidents to which they are expected to attend.
4. A standard framework to improve information sharing of key findings from post-incident local, regional and national (international) incident debriefs.
5. Local and national training directly linked to 'lessons learnt'.
6. Consistent approach to risk and decision making coaching/mentoring during training; simulation; operational incident and review.
7. Develop an organisational knowledge bank that captures individual risk based decision making knowledge and skills prior to staff leaving the service.
8. The use of sector competent external 'independent' facilitators to assist in the review of operational incidents.
9. Appointment of incident commanders based on proven knowledge, skills and experience not hierarchical status in risk critical situations.
10. Provide opportunities for 'hands-on' experience of incidents to all operational response staff.
11. Re-introduction of a technical sector specific examination process in addition to the IPDS process.
12. Recruitment that delivers a workforce with mixed skill-sets i.e. vocational, academic, and managerial.

FRS policy

UK FRS stakeholders should acknowledge that an incident that results in serious injury or loss of life to firefighters may be the result of a unique set of circumstances i.e. unlikely to re-occur. Consequently there may be no necessity for new or amended guidance, policies and procedures on each occasion.

1. Operational policies and procedures to emphasise the flexibility of 'so far as reasonably practicable' decision making.
2. Authors of policy and associated documentation should have proven experience and knowledge of the subject matter.

3. Co-development of learning and policy production with representative bodies.

4. Ensure the HSE Reducing Risk, Protecting People (RSP2) Tolerability of Risk framework is recognised in policy development and implementation.

5. Consider the use of external sector competent facilitators to provide support in the development and implementation of policy when stakeholder opinions differ.

6. Use of plain language to ensure understanding and interpretation of documents.

7. National guidance/information sharing notices prioritised and incorporated into local frameworks as soon as reasonably practicable.

8. FRS to consider development and implementation of a similar document to the 'ACPO Risk Principles' in relation to operational risk management.

9. National and regional approach to health and safety management policy development and implementation to provide improved interoperability and economies of scale.

10. Consider whether the full range of health and safety duties should be applicable at all times at all operational incidents.

11. All stakeholders should acknowledge that there may be occasions where Incident Commanders will have to deviate from the agreed procedure and associated policy statement. This appreciation of operational discretion should be factored into the relevant policy documents.

12. Explore the value of developing a FRS - HSE memorandum of understanding similar to that produced between the HSE and the Ministry of Defence.

13. Develop an approved code of practice specifically for the emergency services as per the 'Lofstedt Report' to provide additional guidance.

We wish to express our thanks to the individuals who volunteered and participated in the research that has allowed this independent report to be produced. Their contribution and the support of the commissioning FRS and the FPA, along with the work of the research team has we believe provided an independent evidence base and recommendations to contribute to improving the safety and effectiveness of FRS operational response.

1 Introduction

Evolutionary change in the Fire and Rescue Service (FRS) following the Fire Services Act 1947 was followed by significant change with the introduction of the 2004 Fire and Rescue Service Act (Fire Service (Scotland) Act 2005). Many changes have taken place over a relatively short period of time, which have resulted in the evolution of the culture of the UK FRS. The range of changes since 2004 include:

- changes to fire safety legislation and improved public fire safety awareness;
- reductions in the number of emergency fire incidents;
- more of fire fighters' time spent in community engagement;
- more technically advanced and complex equipment, with little or no increase in training time;
- a workforce with relatively less 'hands on' fire-fighting experience than their predecessors;
- incident Commanders with less technical knowledge than their predecessors; and
- increased duties and expectations to attend a variety of non-fire emergencies including terrorist attacks.

These changes have taken place during a period in which society has developed a greater blame culture and ultimately become more litigious. The duty of the FRS to comply with the Health and Safety at Work Act 1974, and a further duty for companies and other corporate bodies for corporate manslaughter/homicide, are commonly cited within FRS circles as reasons for the perceived emergence of a risk averse culture today in the FRS; however there is only anecdotal evidence to support this.

Belvidere Park Consultants Ltd was asked by the FRS to examine their understanding of how different members of the organisation understand risk and made decisions in relation to health and safety guidance. The work was prompted by a number of incidents where the management and understanding of risks had called into question the decision-making processes at a range of levels in the organisation. There was a working hypothesis that health and safety policies and guidance may lead to constraints in the decision-making behaviours of FRS staff. This research has rigorously explored this perception.

The work was supported by Buckinghamshire FRS, Kent FRS, Hampshire FRS, Merseyside FRS and Mid and West Wales FRS and the Fire Protection Association (FPA). These five services provide a range of different configurations and environments and this report presents a cohesive representation of the FRS staff views on issues relating to health and safety.

1.1   Rationale

An analysis of the literature (Penton & Reynolds 2012) *Examining how the FRS understand and manage risk – a literature review*, revealed a lack of rigorous information available on the subject of health and safety and decision-making in the FRS. Further research was commissioned to explore the perception of a risk-averse culture in the FRS. The research will build on the work that led to production of the 'Striking the Balance' statement, and take into account additional drivers that include:

- The recommendation in *Common Sense, Common Safety* that individual fire-fighters should not be at risk of investigation or prosecution, under health and safety law, if they have put themselves at risk as a result of a heroic act.
- Recommendations and considerations from:
- Reclaiming health and safety for all: An independent review of health and safety legislation, The Lofstedt Report
- Due to demographic changes within the FRS staff, the critically receding window of opportunity available () for qualitative capture of the individual human and organisational knowledge, held by fire-fighters and managers who had undertaken and led emergency response incidents, prior to and since the subject of risk aversion arose.

1.2   Background and Context

The role of the UK FRS extends far beyond responding to fires and rescuing people, they also attend road traffic collisions, Chemical, Biological, Radioactive and Nuclear (CBRN) incidents and rescues from water and heights. They play a vital role in community safety projects with young people and the wider public contributing to making communities safer; preventing and intervening to reduce the number of incidents, casualties and the human and financial costs that

these occurrences can bring.

Objectives of the FRS

When attending incidents the underlying value principles of fire-fighters are: -
- to save life;
- to save property;
- to render humanitarian services;
- to preserve the environment.

1.2.1   Frameworks for decision-making

The HSE sets out a framework for decision making in its document *Reducing Risk Protecting People* (2001) and organisations have to interpret and implement guidance to ensure their employees have a safe working environment. It also carried out an assessment of the FRS in 2010 and found the following criteria to be unclear of which implications for decision-making at an operational level:
- the extent to which fire-fighters should or should not take risks to save property;
- whether retained duty staff can fulfil all of the operational duties of a fire-fighter given the time they have available for training;
- clarity about how FRS can meet public expectations on water rescue; and
- how best to develop and implement consistent national guidance and improve interoperability on those matters that affect every FRS.

The framework clarifies that:
- the level of individual risks and the societal concerns engendered by the activity or process must be taken into account when deciding whether a risk is unacceptable, tolerable or broadly acceptable;
- the decision-making process and criteria adopted are such that action taken is inherently precautionary;
- as control measures are introduced, the residual risks may fall so low that additional measures to reduce them further are likely to be grossly disproportionate to the risk reduction achieved, though the control measures should still be monitored in case the risks change over time;
- the boundaries that HSE applies in assessing and regulating risks are generally much broader than those we would expect duty holders to undertake in complying with the relevant statutory provisions;
- 'so far as is reasonably practicable' (SFAIRP) in order to avoid the imposition of duties that no one can fulfill – because absolute safety cannot be guaranteed;
- ensure that preventive and protective actions are commensurate with the risks;
- other similar qualifications such as 'as low as reasonably practicable' (ALARP); 'as low as reasonably achievable' (ALARA).

All organisations have to adhere to the HSE guidelines and these are interpreted in different ways by industries depending on what their core business is. There are several organisations that are comparable with the FRS. Their approach to top level decision-making is broadly similar, however the ways in which the organisations manifest their training and operating procedures are very different. It is useful to look at these to consider the different ways that underlying principles have found their way into operational functioning.

1.2.2   Fire and Rescue Service

The FRS often has incidents where staff find themselves in dynamic situations and hostile environments' and has drawn its approach from several key theories. Flin (1997) examined studies on experts' decision making in dynamic high hazard environments' and the work contributed to thinking about Incident Command (ICD manual) and naturalistic decision-making (NDM) in the emergency services. This research has significance for the "psychology of command" – i.e. understanding what 'expert commanders' actually do when taking operational decisions in emergencies. Klein et al (1986) contributed to this by describing recognition-primed decision-making (RPDM) where individuals had to determine a course of action where there were high stakes, time pressures, dynamic settings, uncertainty, ambiguous information and multiple players. They found that a number of patterns developed in individuals who had to make decisions in these types of settings. Mostly they generated only one option by drawing on a repertoire of situational patterns (both through real and simulated experiences), which they'd compiled throughout their careers. If an option was assessed as appropriate it was implemented, if not, it was modified. If it was too difficult to modify it was eliminated and the process would begin again with the next most plausible option until a suitable course of action was found. In brief, training is focussed on three models:
- level 1 – making a simple match from past experience;

- level 2 - more complex diagnosis of the situation with a number of scenarios considered and matched;
- level 3 - evaluating a course of action, which requires more complex assessment and ongoing evaluation.

Although this forms the basis for training of techniques for decision making for FRS staff, it is acknowledged that this is by no means comprehensive and there are more factors involved which we discuss further in section 1.2.2. However there are also styles of decision-making and problem solving used by commanders (Kerstholt, 1997): creative, analytical, procedural/SOPs and intuitive/recognition-primed decision-making.

The most complex of these is the creative problem solving required for a novel situation, however in most dynamic situations analytical and procedural modes are used. In training, it is useful to determine what the tactical cues and key features used by experts are, and help use them as a training approach for less experienced staff so that they can move more quickly to a classification of the situation.

The London Decision-Making model provides a framework for the FRS to bring together understanding from theory and research into a practicable model for use by all staff. The key features of the model are deciding and acting, utilising the model to shape key components of the task: information gathering, information on resources, information on risks and benefits, and information on progress. The model can also inform other issues such as planning, communicating and evaluating, with some parts of the model more relevant for senior staff.

These models and understandings from research and the literature are extremely helpful in gaining insight of decision-making in dynamic situations. However, there are additional cultural and operational factors which may come into play to derail some of these operating systems.

Assessment of risk

The central tenet of decision-making is the assessment of risk, and the way this is done is a key part of influencing how decisions will be taken. Sibert (2012) provides a helpful view on this. The two are inextricably linked to each other: once the risk of a particular action has been assessed, it is then necessary to weigh that risk against the gain that could be achieved if the action is completed. If the gain is worth the risk, the action may continue. If the gain is not worth the risk, then the risk must be reduced to an appropriate level or a different course of action must be selected.

However, how does someone assess what the appropriate level of risk is? Under what circumstances might it be expected that risk is eliminated completely? If risk is only going to be reduced to an appropriate level (rather than eliminated) what is 'appropriate'? The answers depend on the outcome that is trying to be achieved. If the outcome is to save someone's life, it is reasonable to take a fairly high risk. But if the outcome is only to extinguish a grass fire, it is reasonable to expect mitigating measures to reduce risk to a very low level.

With a constantly changing risk and a constantly changing degree of information about the risk and the value of the potential outcome, the risk assessment process and the mitigating measures never stand still. The risk assessment process is 'dynamic'.

It is helpful to think of the risk assessment process as a set of scales and also to highlight the difference between an assessment of risk and the risk assessment process.

In Figures 1 and 2:

- an assessment of risk is the specific task of identifying the size of the RISK that is placed on the left-hand side of the scales.

However the risk assessment process also involves:

- identifying and quantifying the GAIN;
- having some concept of how risk and gain balance against each other;
- reducing or increasing risk as appropriate; and
- recognising an appropriate course of action that will deliver the best results.

Figure 1: The risk assessment process – do not proceed

If the risk of a particular course of action is big and the gain is small, the activity should not be undertaken – See Figure 1. Instead, another (lower risk) way should be found to achieve the outcome or mitigating measures must be put in place to reduce the size of the risk. However if the gain is big enough, it will even outweigh quite a large risk and it would be acceptable to proceed with the activity – see Figure 2.

Figure 1: The risk assessment process – do not proceed
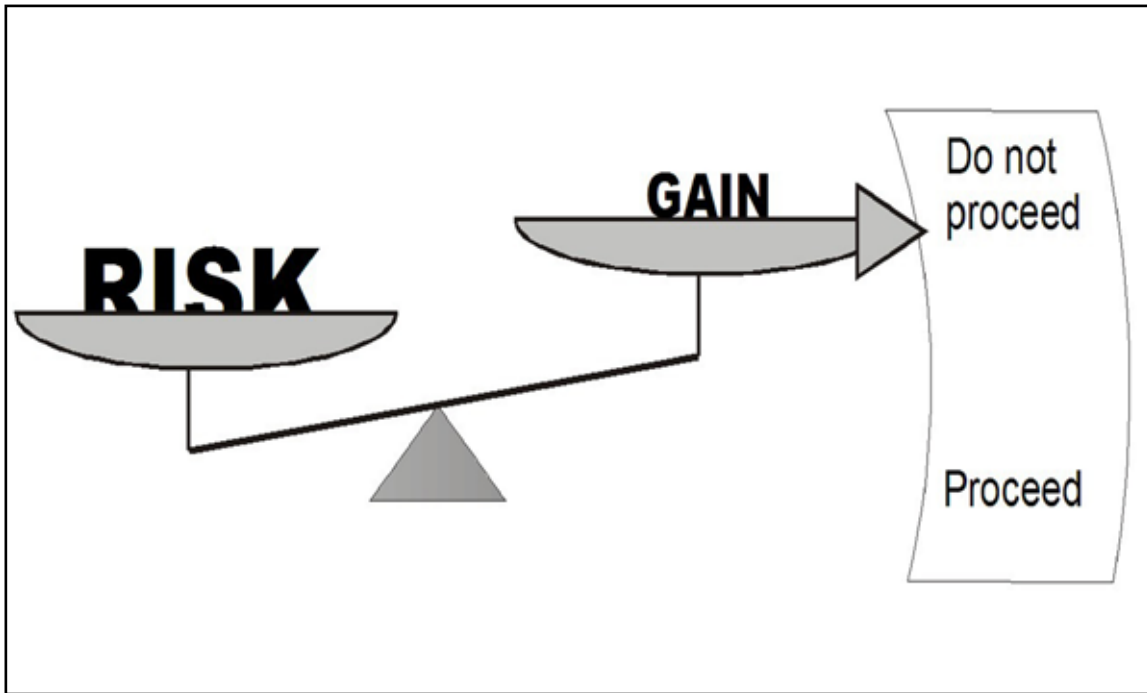
Figure 2: The risk assessment process –proceed
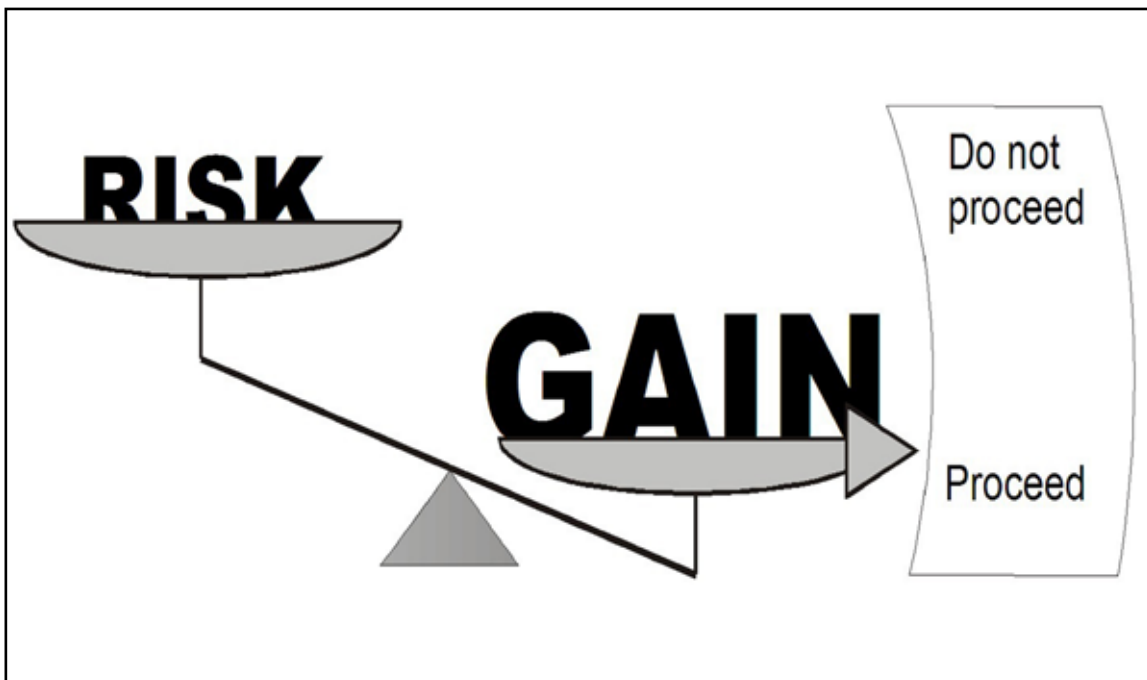
How people assess and move these scales and to achieve consensus in decision-making as well as possible is where training is important. However training, experience and "know-how" are also tempered with cultural, leadership and procedural expectations (see section 1.2.3).

1.2.3   Military/Defence

The Ministry of Defence (MOD) acknowledges its obligations under the (JSP 815, 2009) and has developed a Memorandum of Understanding with the HSE relating to its obligations under the Safety at Work Act. Although many of the decision making processes are similar to the FRS, they have underlined at an organisational level that due to the nature of their work, there may be dynamic situations where compliance may be compromised.

As a general principle, environment and safety legislation applies to the MOD and to defence activities. Overseas, MOD will apply UK standards where reasonably practicable and, in addition, comply with relevant host nations' standards. There are number of pieces of domestic legislation where MOD can rely on exemptions or derogations. In these circumstances, it is MOD policy to introduce standards and management arrangements that are, so far as is reasonably

practicable, at least as good as those required by legislation. Where legislation applies to defence activities, it may detail any powers of exemption granted to the Secretary of State which may, in the interests of national security, include an ability to introduce specific exemptions by certificate.

Where exemptions are granted, MOD accepts there may be a higher degree of risk; this shall be managed appropriately, taking into account operational considerations. Specific conditions attached to the exemption shall be met and existing legislative or MOD requirements shall still apply so far as is reasonably practicable.

In addition to meeting the requirements of legislation, international treaties and protocols, the MOD seeks to comply, so far as is reasonably practicable, with Government policy.

Where duty holders wish to operate equipment, processes, systems and facilities outside their environment and safety constraints, or these are unclear for a particular set of circumstances, then they shall engage with the relevant authorities to ensure the environmental and safety implications are fully considered and risk assessments conducted before any deviation is authorised. Risk assessments shall justify the increased environment and safety risks against the operational need before proceeding with operations, subject to the time available.

The HSE has undertaken, through a Memorandum of Understanding, not to prosecute MOD individuals in lieu of corporate responsibilities under criminal law. Individuals can still be prosecuted in circumstances where they would have been prosecuted had they been individuals in a private company (i.e. individually negligent).

Risk Assessment

The MOD recognise that risk assessments are required to be suitable and sufficient, however they do not necessarily require the elimination of all risk, with employers required to protect people so far as reasonably practicable. Part of this protection involves an informed, rational and structured evaluation of the risks presented by working practices and or the working environment.

Types of Risk Assessment

All significant risks should be assessed, however, although the principles of assessment remain the same their application can differ. There are three recognised methods of assessment;

- Dynamic - a mental assessment of risk for use when any delay would increase the risk of harm. Dynamic assessment can also be used as the initial step in formal risk assessment.

Dynamic risk assessment allows for immediate mental safety assessments to be made without implementing the formal risk assessment process e.g. the decision to tackle a small fire, a task with obvious safety risks which would increase if delayed by formal assessment. Therefore dynamic risk assessment can be effectively used in emergencies where any delay increases the risk of harm, it is not to be used purely to save time or avoid additional work.

Dynamic risk assessment can be used as an initial step in establishing which risks are significant and require further assessment. It can also be used prior to the use of generic assessments to identify if the assessment is suitable and sufficient for the task in hand.

- Formal - a written method of evaluating the risk of harm.

Formal risk assessment is a documented process of assessing risks and involves a process of measuring the likelihood of an event occurring with its likely consequences.

- Generic - an evaluation of risk that can be applied to common tasks.

Some common tasks, tasks that share the same hazards and controls e.g. routine maintenance or cleaning activities, can be assessed and a generic risk assessment produced. These assessments can only be used when the influencing factors are the same and the line manager considers that the control measures identified and implemented adequately reduce the risk of harm.

Implications for the FRS

This protocol implies that in the same way as the FRS, a process of risk assessment should be used for incidents and that they are subject to health and safety duties. However there is clear acknowledgement that in dynamic situations there are situations where deviations from guidance are necessary, despite the best intentions of the teams. Staff are supported in responding to these in the most practicable way possible. All the skills and decision-making systems which

are applicable come into play, but the mind-set of the teams may be different due to this top level commitment.

1.2.4   Ambulance Service

The Ambulance Service is allied closely with the NHS and although it works closely with the FRS, it has a health and safety management framework, which is aligned to patients and the medical environment rather than the external physical environment. *NHS Litigation Authority Risk Management Standards for Ambulance Services* outlines the approach the standards and how services will be assessed. The Service must develop a management and assessment process which aligns with this.

The standards and assessment process are designed to:
- improve the safety of patients, staff and others;
- provide a framework within which to focus risk management activities in order to support the delivery of quality improvements in patient care, organisational governance, and the safety of patients;
- assist in the identification of risk;
- contribute to embedding risk management into the organisation's culture;
- focus organisations on increasing incident reporting whilst decreasing the overall severity of incidents;
- encourage awareness of, and learning from claims;
- reflect risk exposure and enable organisations to determine how to manage their own risks;
- encourage and support organisations in taking a proactive approach to improvement; and
- provide information to the organisation, other inspecting bodies and stakeholders on how areas of risk covered by the standards are being managed at the time of the assessment.

It is unlikely that during the course of their work there will be a potential loss of life to a member of the ambulance staff. However there may be situations where there is risk to health and well-being to staff or patients, for example certain addresses are red flagged where there may be a danger to staff from the public. Ambulance risk management policies reflect that it is impossible to have a risk free environment, but the challenge for all staff is to reduce the potential for incidents occurring by being proactive in the management of risk.

The underpinning principle is that a responsible risk management culture is developed empowering all staff to make sound judgments and decisions concerning the management of risk, and risk taking. The principles of strategies are consistent with the Service's key priorities – patient safety and staff. Risk management policies are integrated with other organisational risks such as reputational and financial.

However in the external strategic and assessment documents, there is very little reference to workforce safety and much of the focus is on patient safety, reflecting the underlying philosophy of the service. This is a different focus than the FRS, which face issues of a different type in their working environment. This reflects not only the different nature of the work, but also the differing philosophies and their organisational narratives.

1.2.5   Police

The Association of Chief Police Officers (ACPO) has adopted a single decision-making model for the Police Service (National Decision-Making model NDM) – a value-based tool to provide a simple, logical and evidence-based approach to making decisions. As with the Ambulance Service, there is a strong focus of the mission of policing and acting in accordance with the values of the service. There are also mechanisms in place to learn from experience and improve decision-making and the acknowledgement that in complex situations, things do not always go according to plan. The model is suitable for all decisions and is simple and flexible and can be used in a variety of situations.

Gather information and intelligence;

1. assess threat and risk and develop a work strategy;

2. consider powers and policy;

3. identify options and contingencies;

4. take action and review what happened.

As with the Ambulance Service, the Police make it clear that policies should not preclude taking urgent action.

"If a risk is identified and needs urgent action, then this should be taken. Such action must not be put off in the belief that a process needs to be adhered to." (Devon and Cornwall Police, Integrated Risk Management Policy, Nov 2012).

ACPO has also developed a number of principles relating to taking and reviewing risks.

1. The willingness to make decisions in conditions of uncertainty (i.e. risk taking) is a core professional requirement of

all member of the police service.

2. Maintaining or achieving the safety, security and well-being of individuals and communities is a primary consideration in risk decision making.

3. Risk taking involves judgment and balance, with decision makers required to consider the value and likelihood of the possible benefits of a particular decision against the seriousness and likelihood of the possible harms.

4. Harm can never be totally prevented. Risk decisions should, therefore, be judged by the quality of the decision-making, not by the outcome.

5. Taking risk decisions, and reviewing others' risk decision making, is difficult so account should be taken of whether they involved dilemmas or emergencies, were part of a sequence of decisions, or might appropriately be taken by other agencies.

6. The standard expected and required of members of the Police Service is that their risk decisions should be consistent with those of a body of officers of similar rank, specialism or experience would have taken in the same circumstances.

7. Whether to record a decision is a risk decision in itself which should, to a large extent, be left to professional judgment. The decision whether or not to make a record, however, and the extent of that record, should be made after considering the likelihood of harm occurring and its seriousness.

8. To reduce risk aversion and improve decision making, policing needs a culture that learns from successes as well as failures. Good risk taking should be identified, celebrated and shared.Since good risk taking depends on quality information, the Police Service will work with partner agencies and others to share relevant information about those who pose risk or those who are vulnerable to the risk of harm.

9. Members of the Police Service who make decisions consistent with these principles should receive the encouragement, approval and support of their organisation.

As with the FRS, the Police Authority has attempted to make clear a grey area about risk and decision-making. It can be seen that these principles from ACPO have permeated local risk policies.

1.3   Decision-making

Achieving decision-making principles which are core to the FRS philosophy, often results in fire-fighters and managers facing moral dilemmas, with the need to make decisions in what are sometimes extremely hazardous, emotionally charged and fast moving situations. They are required as employees to adhere to a wide range of guidance, of national and organisational policies and procedures that fulfil statutory duties and health and safety management requirements as well as make reasonable judgements in how to apply these to a dynamic situation. Clarity about how decisions may be made which conflict with the underlying principles of the FRS (i.e. to save life and property and render humanitarian services), together with the policies and procedures, needs to be as clear as possible when operating in what is often a safety critical environment. This conflict has led to several high profile cases where fire-fighters have been accused of being too rigid on adhering to health and safety management guidelines at the expense of saving life (e.g. Strathclyde), to those where the three principles seem to have over-ridden policy and procedure. Conversely some incidents seem to be driven primarily by the three organisational principles.

These conflicts have been acknowledged for some time and "Striking the Balance" invites FRS' to consider that there needs to be reasonable balance between these issues and refers to taking "reasonable risks" and "delivering an effective and realistic service". However each FRS will often interpret these statements differently, hence the dichotomy still occurs and is likely to continue. In exploring this issue further the research literature outlines a number of theories about decision-making and we have identified several key components of these which are important.

Decision-making is an inseparable part of all cognitive activities. One of the aims of our research is to examine the processes underlying decision making in different FRS environments, and to determine their commonalities and differences. In studying decision making, it is critical to examine both the processes by which decision alternatives are identified, evaluated and managed, and the actual selection mechanism that leads to the decision choice.

 The decision making process is dependent on a variety of factors, which may alter the decision choice. Our research focuses on factors that affect the decision making processes in the FRS (other factors, such as complexity and risk taking, are embedded within these five factors):
- time pressure;
- top-down and external context;

- expertise.
- age; and
- recognition primed decision making.

1. Time pressure: as time pressure increases, our ability to examine and compare choice alternatives is challenged, and the decision making process is modified. These changes include ignoring some choice alternatives altogether, making information more efficient, information selectivity, change of threshold for responding and more. We will examine these effects, focusing on how they interact with risk taking and the FRS.

2. Top-down and external context: decisions are not made in isolation. They do not only depend on 'objective' data-driven, bottom-up information. A variety of external top-down influences play a major role in how information is perceived, processed, evaluated and represented, which all have critical roles in the decision making process and its outcome. For example, a negative emotional state may increase the likelihood of taking one decision over another – if a situation evokes optimism or pessimism, this can influence the way we behave. These types of effects include many other factors, such as interactions with other people and with technology.

3. Expertise: the above factors that affect the decision making process and the decisions made are further mediated by experience and expertise. For those making decisions within highly specialised domains, such as the FRS, these issues are highly relevant.

4. Age: as cognitive resources change with ageing, a mismatch between task demands and resources available poses a challenge to the cognitive system. As with time pressure, the system dynamically attempts to compensate and overcome this challenge. Although cognitive resources decrease with age, experience and 'wisdom' increases. We will examine if decision-making processes is affected by age and experience. Age and experience interacts with many of the factors above, such as top-down influences.

1.3.1   Perception of risk

The quality of emergency response relies on making sound decisions and many cognitive factors are involved with decision making; these must be understood and harnessed so as to enhance the quality of actions. The quality of fire-fighter's activities remain dependent on the range of quality of decisions made at a strategic and operational level. As FRS staff interact and try to control members of the public, the environment and other factors, this inevitably needs a number of interactions and a variety of levels of staff involved. Cognitive understanding of FRS decision-making and the influences of other factors on this can lead to better procedures, training and use of technology, all of which enhance decision quality.

Many FRS procedures and guidelines determine if and how fire-fighters need to respond to a given situation. However, the crucial element in determining and action is not regulation, but how one perceives, interprets and evaluates the situation (these are highlighted in the case studies in section 1.4). It is relatively easy to ascertain and instruct under a particular situation X, that action Y should be taken; however this pivots on properly assessing the situation and considering the choice of alternatives. This involves complex cognitive processes that depend on a whole range of factors. It is therefore important to understand how perception and decision making play a key role in human performance and FRS emergency response activities. Perception and cognition is not only relevant to decision making, but also to a large extent, determines it. Humans are not passive encoders of information; subjective assumptions are made to impose order on the "objective reality". Perception is never going to be totally objective (Humpreys et al 1997). Deciding on a particular course of action involves considering a complicated decision making tree of consequences and probabilities of different alternative actions. These decisions are mediated by internal and external factors (Dror, 2007).

Decision making in the FRS is strongly based on the perception of risk and this perception is dependent on a variety of perceptual and cognitive mechanisms. For example we tend to perceive the environment in a way that fits our pre-existing beliefs (Dror, 2005). Even our views and political attitudes influence risk perception (Peters and Slovic, 1996). We therefore view the environment through a lens which is constructed of our past experiences, attitudes and beliefs and this in turn influences our behaviours and actions. Therefore, we must allow for the fact that our initial perception of risk only partially reflects the actual situation and much of our perception is related to our own cognitive mechanisms and psychological state. In this research we have sought to uncover what the influences on fire-fighters perceptual and cognitive mechanisms are, to lead them to perceive risk in the way they do. Decision-making is dependent on decision factors (see section 1.3.1) such as complexity and choice of alternatives, internal factors such as emotions and state of mind and external factors such as time pressure and context and other factors such as age and experience.

In this research we have considered how each of these elements apply to the FRS decision making and use the findings to consider how the FRS environment enhances or hinders these. Enhanced decision-making quality is necessary for the FRS, but to achieve it, we must have a better understanding and appreciation of the complexity involved in the cognitive approaches underpinning decision-making.

1.3.2 Decision factors

In understanding more about decision factors we can apply information from the research literature to real life settings, which enables us to understand more about the mechanisms which exist to influence decision-making. Decision factors relate to the structure of the decision, regardless of who makes it and under what circumstances. For example, different choices of alternatives contribute to decision complexity and the number of different choices and the relationship between them (such as their relative similarity) defines the decision space. For example if a situation is engaged where a fire-fighter has defined rules and protocols which provide distinct boundaries on decision-making (such as, train incident), the outcomes may be different to those where there are less well defined protocols. The decision maker has to balance the resource demands with the decision complexity. In some cases there is no need to make decisions outside well-defined protocols. If a decision needs to be made rarely from outside protocol, it will influence the nature and swiftness of their decision (Dror, 2010). How will the decision maker react to this and what strategy will they use? Will they examine every alternative choice or only a sub-set of them? Will they examine one aspect across different alternative choices? Different strategies depend on decision complexity and available resources (Biggs et al 1985). Other decision factors relate to the degree of certainty of the outcome of choices and the pay-off matrix – balancing outcomes from one situation against others. This may be evident in whether defensive versus offensive fire-fighting tactics are used. The payoff matrix defines the consequences of each decision choice: the cost of making the wrong decision (deciding to take action where none is needed), or deciding not to take action where some is needed. Payoff matrices have the potential to have a profound effect on the decision itself.

1.3.3 Internal factors

Internal factors relate to the decision maker rather than the decision itself and include experience, confidence, cognitive abilities, state of mind, personality, and many other factors that define us as individuals. Even cultural backgrounds can determine the propensity to take risks (Weber and Hsee, 2000). Expectations also play a critical role, and it can guide whatever information we attend to and what to ignore (Zuckerman et al, 1995). Other issues such as self-fulfilling prophecies, wishful thinking etc, can all cause decision makers to differ in their decisions. Therefore different people faced with the same decision may arrive at different decisions due to differences in internal factors. The same person can also make different decisions at different times based on their emotional state, expectation and other internal factors although personality, experience, age and cognitive factors remain fairly stable. The factor of feeling possible regret about making a wrong decision makes some alternative choices psychologically less preferable, especially if taking an action can have disastrous consequences (Wright and Ayton, 2005).

1.3.4 External factors

Even when decision factors and internal factors have been determined, the decision process and outcome is greatly dependent on a variety of external factors, including time pressure. Dror et al (1999) studied how time pressure affects risk-taking decisions. Time pressure reduced decision thresholds, rather than switching decision strategies; the decision makers modified their decision criteria for reaching a decision. This means that less evidence is needed to reach a decision. A polarisation was also found in that more conservative decisions were made when the risk was low, but conversely more risk taking decisions were made when the risk was high. Thus, time pressure caused more riskier decisions when risk was high. Lipshitz and Strauss (1997) found in a study of the military, that crisis decision makers have five strategies for coping with uncertainty: reducing uncertainty, assumption-based reasoning, weighing pros and cons of competing alternatives, and forestalling and suppressing uncertainty. Inadequate understanding was managed by reduction; incomplete information managed by assumption-based reasoning; conflict in alternatives managed by weighing pros and cons and forestalling was a back-up strategy for all sources of uncertainty.

It is also important in how information is presented to the decision maker. The framing of the decision can cause the decision maker to come to different conclusions. For example decisions that involve an action that will result in saving lives (e.g. 5 lives will be saved) or result in deaths (e.g. 5 people will die) are dependent on whether the decision is framed in one or other of these terms (Tversky and Kahneman, 1974). A particular course of action is more likely to be taken if it is thought of as "saving lives". Although decision and internal factors might be identical external framing can lead to opposite decisions.

External factors can also relate to other contextual elements such as social accountability for example, the degree of scrutiny the decision might be given later (Tetlock and Boettger, 1994). If a decision maker is faced with the prospect of having to justify their decision they might avoid taking a decision. These factors inter-relate with internal and decision factors: for example, decision factors that relate to complexity and best decision strategy given the cognitive demands of the decision, are highly connected to external factors. Time pressure increases cognitive demands and social accountability requires taking additional factors into consideration (Tetlock, 1985).

External factors may also facilitate decision-making, despite adding to the complexity. The use of technology can offer new external factors which can contribute to the quality of decision-making. If well integrated, these technologies can enhance the decision making process (Dror, 2005). Technologies can extend the cognitive capacity of decision makers in the field and at head-quarters. Conversely, an over-reliance on technology such as communication devices or protective equipment can also cause problems as exemplified in the London terrorist attack where communication between emergency services caused confusion. In critical situations overconfidence in safety equipment can lead to an over confidence which can affect decision-making and hence have a potentially negative effect on fire-fighter safety. Fire-fighters become reliant on these safeguards and hence may neglect some of the normal safety considerations in their own decision-making.

1.3.5   Risk in the FRS

As we have described above, there is a degree of uncertainty about consistency of managing risk in the FRS and this may vary in each service. There is anecdotal evidence suggesting that fire-fighters and managers' have become more risk averse and that this may be due to the prevailing culture and organizational factors. It has been suggested that litigation may play a role and the possible tension between the responsibility of the organization to maintain a safe working environment for staff, and the inevitable danger posed by the nature of the fire-fighters role and their obligation to the public. There is also a skill and knowledge issue where fire-fighters have less opportunity to experience ''realistic training environments" in fighting real fires. This results from anecdotal evidence that defensive modes are taken when there is confidence that no one needs rescuing; where there is little likelihood of rescue and survival when it is known there are casualties within a building fire; and where it is considered that there is little commercial or heritage value to a property and its contents.

A defensive mode of operations may also be more prevalent in infrequent non-fire emergency response incidents that require the use of specialist equipment along with their associated proscriptive policies of their use.

1.3.6   Cognitive decision-making

There is a growing body of knowledge which discusses two cognitive decision making systems. One is more cold and analytical, logical and deliberative, whereas the other is experiential, intuitive and affect based. Both types of system are involved in risk-taking decisions (Reyna, 2004). The deliberative system is conscious and flexible, but slow and the experiential system is spontaneous and quick. It is based on "gut" feelings and offers a quick ready-made decision. These "gut" feelings are based on familiarity and expertise. Where one or both of these are missing, the decision is more likely to be poor. Different decisions might occur in different types of situations and with different educational backgrounds. Rake and Nja (2009) found that commanders with academic degrees (bachelor or masters) were much more analytical and alert to possible situational cues than commanders with a traditional career development. From the case studies (section 1.3.8) below you can judge where poor spontaneous decisions have been made under pressure and where there is less time pressure. It might be argued that in case study one a poor decision was made due to a lack of perceived time pressure and over analysis, and in case study 3 in Hertfordshire, poor decisions were made due to a lack of analysis. Best decisions are reached when both systems are used.

1.3.7.   Expertise

Highly specialised domains such as the FRS require specific cognitive skills. Some of these abilities are brought into the job and others are acquired through training and hands-on experience at the job. As we become experts we develop knowledge, which is efficient and easy to use. This involves procedural knowledge, experience and increased cognitive capacity. Expert decisions are not only advantageous because of their speed and efficiency, but also their ability to deal with missing information and uncertainty. Rake and Nja, in their study of incident commanders reported that where situations were abnormal to them, respondents' feelings spanned from stress to a higher level of awareness and adopted strategies similar to those described in section 1.3.5.

The experiential decision system is highly dependent on familiarity and experience in the field. This type of experience is vital in time-pressured decisions. Some situations allow experiential knowledge to increase over time (e.g. fire-fighting),

however other less frequently encountered situations (such as the Strathclyde incident, case study 1), limit the expertise from experiential knowledge. Lack of personal experience can be mediated by the use of technology, such as the simulated environments, if it is made and deployed in ways which work with and facilitate experts in the field.

1.3.8. Organisational culture and decision-making

Organisational culture is a combination of managerial, organisational and social factors that create a work environment which fosters certain attitudes and behaviours. In the FRS this remains ambiguous and requires further research. Culture and sub-culture in organisations can promote or inhibit behaviours. If senior and front-line teams do not share the same organisational culture, then rifts in behaviour and attitudes can occur.

Crawford (2008) reported that fire-fighter's behaviours and attitudes to risk and decision-making can be influenced by their organisational culture and performance expectations. Combined with a fire-fighter's own self image and psyche, this creates an expectation for the individual on what a "good" fire-fighter is. Organisations with very aggressive fire fighting styles may lead fire-fighters to take unnecessary risks. If this behaviour is reinforced through praise and reward and no negative consequences result, it is likely to be repeated. Increasingly risky behaviour is likely to result in negative consequences. As the behaviour is repeated, it eventually becomes habitual and impulsive. Conversely the same applies to risk averse behaviour, which may eventually result in negative consequences and becomes increasingly habitual the more it is repeated. Such classic conditioning may lead a fire-fighter to approach all fires (commercial and residential) as similar tasks requiring parallel and programmed actions.

When considering safety, (which is an integral part of the FRS), it has been defined in several ways "the product of individual and group values, attitudes, perceptions, competencies and patterns of behaviour that determine the commitment to and the style and proficiency of an organisations health and safety management" (HSC, 1993, p23); "attitudes, perceptions, beliefs and values that employees share in relation to safety" (Cox and Cox, 1991); "the constructed system of meanings through which a given group of people of group understand the hazards of the world" (Pidgeon, 1991). Ultimately it is a shared commitment to think and behave safely underpinned by common values, beliefs and attitudes towards safety. It has a social element and a technical element. Research has also shown that there may be a mismatch between articulated culture and actual culture (Schein, 2004). Espoused values might include policies and procedures, talks and speeches, zero injury goals, but what people say may not mirror their actual behaviour. Fire-fighters may say they value safety, but take shortcuts in performing their jobs under pressure (Freimuth, 2006). This incongruence undermines the espoused culture and only by reaching the deepest level of basic underlying assumptions, where actual values are embedded can the true culture of an organisation be revealed (Schein, 2004). Values contain basic assumptions that have a powerful influence in culture and can become predictors of behaviour. People in immediate proximity and the 'way things are done around here' will have a strong influence on their values and assumptions.

Guest et al (1994) looked at characteristics of high and low accident work groups and found that low accident work groups were more trusting, cohesive, considerate, involved and interested in their work. They were also more reliable in following procedures than high accident work groups. Differences were partly due to the attitudes of supervisors who were more concerned with their workers and made them feel valued, informed and treated them fairly as consistent with transformational leadership. Leadership style had a significant impact on safety perceptions and performance. This is especially pertinent in the FRS, where leadership is a crucial element of teamwork. An example of where fire-fighters lost their lives was following failure to adhere to the instruction of their foreman while fighting a wild fire in Montana. Reasons given as to why they failed to follow instruction were: lack of trust as the crew did not know him well; rarely discussing safety matters, and a strong desire to protect their equipment. Orders from the team leader conflicted with the crew's underlying assumption in the culture of the fire-fighters. This incident underlines the intertwining of leadership and culture and the subcomponents of leadership style and safety culture. The failure of the leader to appropriately perceive the weaknesses in the safety culture and failure as a leader, to take action on those weaknesses had disastrous consequences.

There is little research on leadership style in fire chiefs and the relationship to safety culture and opinions on the matter vary widely. Daniels (2005) recommends strict adherence to procedures as the best way to improve safety performance and suggests that chiefs use a system of contingent reward and negative consequences for staff who fail to follow safety procedures – a transactional culture. Whereas Connealy et al (2003) assert that transformational leadership practices can help fire departments make institutional changes to reduce hazards, Buckman (2004) identified counselling, good communication channels and coaching as necessary softer skills for FRS leaders as well as having a vision that fire-fighters accept.

1.3.9   Organisational controls and safety

Reason (1998) points out that every organisation has a tension between the natural variability of human behaviour and the needs of the system to ensure a high degree of predictability and regularity in the activities of its members. Theorists have argued that how an organisation resolves this tension is a major influence on how the overall character of the organisation is shaped (Katz and Kahn, 1978). In organisations where operations can be potentially hazardous, staff can be limited to pathways of activity which are efficient, productive and also safe. Rules and procedures govern this activity and the behaviour of staff in organisations. Reason concluded that providing and enforcing prescriptive rules and behaviours is not sufficient to foster safe behaviour and supplementary methods of organisational controls are needed.

Reason et al (1998) showed that safety rules differ from other types of procedural guidance in the manner of their creation and development and how they are perceived by the workforce. As safe operating procedures become continually amended in response to incidents, additions may become increasingly restrictive and may reduce permitted actions to doing the job in anything but the optimum conditions. We should note that in the FRS it is difficult to establish whether an accident recurs in precisely the same form. This may lead to the workforce learning that violation from written rules and procedures in isolation generally carries no penalties. Workers may find this an easier efficient way of working and hence the likelihood of violations is ironically increased. These regular violations will also increase the probability of an error in the future. When confronted with hazardous situations, most experienced FRS staff think they know approximately where the edge is between safety and disaster and know not to exceed it except in extreme circumstances: they know when to violate a rule and when to follow one. This experience may offer some explanation about the role of experience in the case studies in section 2. An experienced manager may know when to violate a rule to achieve an outcome and what the likelihood of a poor outcome will be; less experienced staff may not know when to break or follow rules, and will not have the ability to foresee a range of outcomes and weigh up the risks. This results in either rule-bound behaviour (case study 1) or taking excessive risks (case study 3). Safety rules can never be wholly comprehensive or universally appropriate. There will always be situations in which no rules are available or in which variations in the local circumstances negate the applicability of the available rules.

Hale and Glendon (1987) note that organisations often find the formal nature of rules reassuring – they allow the responsibility for safety to be delegated to the people who do the job – supervisors are responsible for safety, (e.g. providing rules and safety equipment) and workers are responsible for accident prevention (wearing the equipment and following the rules). Procedures are a popular form of organisational control because they can be written and issued and closure seems possible. Becoming a rule-bound organisation potentially creates problems as the skills and initiatives required to solve problems is very different from the qualities needed to follow procedures methodologically and an over reliance on rules when unusual situations arise. Certain activities readily lend themselves to being proceduralised while others do not, for example situations which are poorly structured and unpredictable do not lend themselves to proceduralisation as there are too many exceptional cases.

Reason et al (1990) noted that tendencies to break rules are affected by age and gender, with the young and males more likely to violate than older people and females. Many see bending rules as a hallmark of skill and experience. In addition to this, errors are likely to be associated with certain personal characteristics such as a personality preference towards rigid compliance, mature age, females, inexperience, low morale and fear of sanctions. Other factors are group norms which stress unthinking obedience and authoritarian systems that are intolerant of non-compliance under any circumstances. Organisational factors have a strong influence on many of these – influencing group think and rewards or sanctions for behaviour.

1.4 Case Studies

Case Study 1: Strathclyde FRS, 2008 (Galston Mine Report, 2012)

Fire-fighters do not attempt to raise a woman from a well due to lack of training and confusion regarding the policy of use for safety harnesses with members of the public: an example of possible risk aversion.

Alison Hume, a 44-year-old lawyer and mother of two, fell down a disused mine shaft, at Galston, suffering a collapsed lung and several broken bones.

Although Strathclyde Fire and Rescue arrived swiftly, it was over five hours after their arrival that rescuers were able to remove her from the mine shaft.

The senior manager present refused to stray from guidelines, stating they were only allowed to winch other FRS personnel to safety and that non-FRS emergency responders were not allowed to use FRS equipment. Finally pulled up by a mountain rescue team, Ms Hume suffered a heart attack bought on by hypothermia and died. Public opinion would

suggest that it's not only Ms Hume's family who believe the fall alone wasn't responsible for her death, and that "health and safety" should be in the dock.

A report concluded that although there was never a guarantee that she would survive, it is absolutely clear that, for those charged with her rescue, the collective lack of focus on rapid medical intervention and the risk of hypothermia significantly decreased the likelihood of her survival.

In the Fatal Accident Inquiry Determination, the Sheriff concluded that:

"The attempted rescue of Mrs Alison Hume was impeded by restrictive and proscriptive policies adopted by Strathclyde Fire and Rescue Service which combined with an inadequate appraisal of the equipment available and their training in the use of that equipment".

This case-study is an example of how guidelines and procedures dictated the way FRS managers behaved in a situation where a member of the public required help.   It raises a number of questions which we have explored in the research and report:

1)   What might a fire-fighters perception of risk be? Perhaps the potential of loss of life was not clear in this incident.

2)   How would a fire-fighter carry out a risk assessment in this situation? What guiding principles would he/she use?

3)   What is the role of the equipment? How does this make a difference to behaviour?

4)   What role does the expectations of the public play?

5)   Does the time of the day play any part in behaviour?

6)   How does the presence and role of other services influence behaviour?

Case Study 2: London Fire Brigade, 2005

July 7 London bombing that killed 52 people: an example of possible risk aversion.

The London Fire Brigade and others have been criticized in their ability to respond to the terrorist attack.

Baffling jargon used by senior staff may have cost lives during the July 7 attacks on London.

The inquest indicated that:
- bureaucratic language meant emergency workers had no idea what other crews were doing;
- FRS and ambulance teams sometimes stood doing very little while victims lay dying amid the train and bus wreckage;
- fire-fighters did not enter Tube tunnels because of their own safety rules, and showed 'hostility' to a paramedic whose job they did not understand;
- it took fire-fighters almost half an hour to get into King's Cross station, close to the scene of the bomb on the Piccadilly Line. Even though survivors were coming up through the station, fire-fighters delayed going down because of worries there might be a chemical or biological attack in the tunnels;
- emergency services made their own separate checks for chemical hazards rather than taking a unified approach.
- the use of jargon was criticized in the FRS and it was suggested that people who have been trained, rather than taught how to think, often used confusing terminology and this obscured fire-fighters clarity of thought at the incident;
- jargon also allows unaccountable cliques to appear as if they alone have some sort of higher wisdom which was detrimental to working across services. Exclusive language was criticized.

Questions this raises:

1.   Why do risk assessments for different emergency services exist?

2.   Why did the fire-fighters respond in the way that they did?

3.   What role does seniority play in the management of risk and health and safety guidelines?

Case Study 3: Hertfordshire FRS, 2005

Harrow Court, Stevenage is an example of a less restricted approach to risk.

Flats, where two fire-fighters and one occupant lost their lives in a fire.

In the early hours of 2nd February 2005 a fire occurred in flat 85 Harrow Court, situated on the 14th floor of a 17 storey residential tower block in Stevenage, Hertfordshire. Two fire-fighters and one occupant were killed at this incident during an event of abnormal rapid fire development (ARFD).

A report concluded that:

- fire-fighters were clearly unfamiliar with the building and its fire protective features, paying little attention to the fire lifts, the nearest hydrant, or stair-shaft venting systems;
- the actions of the first two officers on-scene demonstrated a lack of experience of this type of incident and a lack of control over the crews they were responsible for;
- the fire-fighters did not follow procedures in taking the wrong equipment aloft. The officers allowed this to occur- they were ineffectively briefed. Crews self deployed and appeared to approach the fire floor incorrectly according to procedure , on numerous occasions;
- the command and control of the incident broke down further and never recovered during the initial stages as officers deserted their posts without obvious reason;
- having apparently heard a call for help, fire-fighters entered flat 85 completely in accordance with documented procedure, following the initial errors described above. They were successful in rescuing one occupant from the flat but lost their lives, along with a further occupant, as the fire rapidly developed.

Questions this raises:

1. What role do the senior managers play in managing risk?

2. How do senior operational staff perceive risk?

3. What is the role of the team in managing risk collectively?

4. What it the role of training in the management of risk?

5. What role does the concept of "heroism" take for a fire-fighter, when human lives are threatened?

②
Aims of the Report

- To examine how operational and health and safety management duties in the FRS co-exist with organisational policies and procedures and the requirements of the Health and Safety Executive (HSE).
- To make recommendations in improving connections between polices and operations in maintaining and improving fire-fighter safety.
- Provide an evidence base which helps us understand service delivery compliance with duties and responsibilities and societal expectations of fire-fighters.

2.1   Objectives

To summarise and analyse information from the FRS in supporting employees in potentially risky environments.

To carry out field work with a range of service employees to explore:
- how fire-fighters understand, perceive and manage risk;
- perceptions of health and safety management and its impact on their role in the service;
- how decisions are made in the course of a fire-fighter's work (both operational and managerial);
- challenges between national and organizational guidance and health & safety policies with operational involvement and employer duties.

2.2   Overview of the work

Phase one: review of literature, both published and unpublished, to better understand the concept of risk and how it might operate for professions such as the FRS, where there may be elements of danger in their work. We reviewed a range of sources from the HSE and the FRS as well as from the academic literature and other professions. Phase one informed the development of fieldwork, phase two explores in depth the issues, which the review has raised. The literature review is reported in its entirety elsewhere (Penton and Reynolds, 2012).

Phase two: is a qualitative research study to explore the concept of risk and decision making of fire fighters in more detail. A range of informants were interviewed including strategic, middle and supervisory management, frontline staff including members of representative bodies and fire authority members. The data was transcribed and coded and thematically analysed. This report includes recommendations and a description of issues raised by the different staff groups. This will help inform the commissioners about the attitudes and behaviours of staff to the concept of risk and how it is managed at strategic and operational level.

Phase three: findings from research in phase one and two will be available to inform the development and on-going debate regarding risk in the sector; particularly in the development of common sense strategies and policies in relation to health and safety management compliance in the workplace and training in risk management. A series of summaries will be collated.

3
Fieldwork methodology

In order to meet the aims and objectives a qualitative approach was used, utilising semi-structured interviews. This gave us rich data which we coded and analysed and allowed us to explore the depth and breadth the issues which are under enquiry. It also allowed a rigorous evidence base to be developed, and interpretations and recommendations made.

Fire fighters were interviewed using a semi-structured interview schedule (see appendix 1). Field notes and observations were also gathered. Issues can be explored and examined in detail and in depth.

Semi-structured interviews were not restricted to specific questions and were guided/redirected by the researcher in real time. The strengths of qualitative approaches and methodologies such as semi-structured interviews have been well documented and are appropriate for an area of enquiry where there is little authoritative research and where views and perceptions are to be explored.

- The research framework and direction was quickly revised as new information emerged.
- The data based on human experience that was obtained is powerful and sometimes more compelling than quantitative data.
- Subtleties and complexities about the research subjects and/or topic are discovered that are often missed by more positivistic enquiries.
- Data are usually collected from a few cases or individuals so findings cannot be generalized to a larger population. Findings can however be transferable to another setting and are trustworthy if they are analysed in a rigorous way which provides credibility for the audience for which it is intended. Viewing data under the criteria of rigour, credibility and trustworthiness can allow learning to be shared.
- We interviewed a range of fire fighters and managers from a broad range of settings as well as fire authority members. This allows us to produce findings which are robust enough to be credible across a range of settings.

Fieldwork was carried out between May 2012 and August 2012 in the five services. Staff were interviewed at FRS premises or at a neutral location convenient to them. Some interviews were carried out by telephone.

3.1 Research perspective

Semi-structured interviews were used to allow the research team to examine staff's views, feelings and behaviours towards decision-making and health and safety management. This approach was the most appropriate method to ensure that the issues under investigation were explored in the fullest way.

A grounded theory approach was used to underpin the qualitative approach (Strauss and Glaser 1967). This means that we will seek to use the corpus of data to develop a theory which develops inductively. A set of principles and practices were observed in relation to this approach. We sought to develop and explore views and perspectives which allowed us to gain the broadest description of the area of enquiry. In ensuring that we capture the "truest" perspective, the interview schedule was revised and developed in accordance with data gathered previously. We sought to ensure that all issues have been discussed in depth.

Our aim was not to produce numbers, but to analyse a range of views and uncover the issues in depth which cannot be captured by questionnaires or surveys. Our work may highlight issues which services may want to explore more specifically through more structured means, such as surveys.

The report is presenting findings which are supported by data (quotes) from different members of the FRS. The findings have been analysed by members of the research team and the credibility of the findings have been tested against experienced FRS and sector staff from the six commissioning bodies, which have also supported interpretation and discussion.

3.2 Setting

Five FRS took part in the research from a variety of locations and configurations as listed in table 1.

FRS	Type	Organisational Model
Buckinghamshire	Urban and rural	Whole-time, part-time (RDS/Whole-time retained)
Hampshire	Urban and rural	Whole-time, part-time (RDS/Whole-time retained)
Kent	Urban and rural	Whole-time, part-time (RDS/Whole-time retained)
Merseyside	Urban	Whole-time, part-time (Whole-time retained
Mid and West Wales	Urban, rural and remote rural	Whole-time, part-time (RDS/Whole-time retained)
Fire Protection Association	Industry and wider view	

Table 1.

This sample allowed us to get the range and variety of operational experiences with a range of different organizational models. This ensured that we were able to provide a realistic and representative view of the issues, rather than a "case study" approach which might only be applicable to one FRS or to FRS with specific delivery models.

3.3 Interview schedule

The schedule was developed inductively based on issues which the fire sector and the literature have raised in relation to the area of enquiry. A topic guide with areas to probe and discuss was developed in the first instance and this was developed and refined after pilot interviews were carried out. Any new issues which arose as a result of the interviews were noted and researchers discussed how these issues were incorporated into the topic guide. An overview of questions can be seen in Appendix 1.

3.4 Minimising the limitations of the research

The research is qualitative and is designed to develop a range of views and areas of enquiry. However there are a number of potential limitations we sought to minimize.

- Research quality is dependent on the individual skills of the researcher and more easily influenced by the researcher's personal biases and idiosyncrasies. To minimise researcher bias, members of the team regularly compared notes and listened to each other's interviews. Researchers are trained in qualitative approaches and adopted a non-biased approach to questioning including use of open questions and non-leading questions.

- The researcher's presence during data gathering, which is often unavoidable in qualitative research can affect the subjects' responses. We sought to be as neutral as possible and the presence of researchers from outside the organization encouraged candour in responses.

- Issues of anonymity and confidentiality can present problems when presenting findings. We minimised this by ensuring that no respondent identifiable data is presented in this report and that interviewees are aware of confidentiality issues. Respondents were invited to participate in an anonymous capacity.

3.5 Ethics

All potential respondents received a letter inviting them to take part in the research along with an information sheet outlining the purpose of the research. Research participants were assured of confidentiality and offered to be interviewed at a location of their choice if they wished. No raw data was shared outside the study team.

3.6 Analysis

Data was coded and analysed in accordance with the conventions of qualitative data analysis. Interviews were transcribed, read and reread in order to develop label variables which consist of categories, concepts and properties and their interrelationships. Data included observations and field notes from the researchers. Open coding was used to identify, name, categorise and describe phenomena found in the text. As more interviews were analysed, codes were revised and a comprehensive list of codes were developed which are suitable to describe all the data. Codes were then related to each other in order to develop a framework for the analysis.

3.7 Sampling strategy

Staff were approached via a local newsletter and invited to opt into the study. In order to gain a representative sample from each FRS to demonstrate the breadth of views (rather than isolated ones) in the organization and staff groups, we aimed for approximately nine members of staff in frontline (fire-fighter), supervisory (crew/watch manager), middle (station/group manager) strategic manager roles and fire authority members. We also looked at a range of service length of service.

The sample gave us the ability to look across the service in order to incorporate the breadth of views and perspectives from different services, different roles, different ages and experiences and different environments. This allowed us to develop a generalised view of approaches and perspectives. We did not analyse different services individually, but sought to gain a generic view of the issues presented.

3.8 Interviewees

Table 2 A description of interviewees

Designation	Total Number	Gender	
Fire-fighter	8	7m	1f
Supervisory Manager	25	25m	
Middle manager	17	17m	
Strategic Managers (including elected members)	14	12m	1f
Support Staff	2	1m	1f

Age Range

A	under 30	1
B	30-40	17
C	40-50	28
D	over 50	20

Length of Service (years)

A	Less than 10	4
B	10-19	23
C	20-29	29
D	over 30	10

3.9 Governance

A task and finish group oversaw the research and met at key time-points during the project. The role of this group was to provide expert comment and project assurance. This group consisted of the research team, senior staff from the FRS and the FPA taking part in the project. The group supported the research team to gain access to sites and staff and helped overcome any barriers to the research. This included discussions and liaising with various sector stakeholders to minimise the potential of the research being undertaken in isolation of related work-streams.

4

Outline of the Services

4.1   Buckinghamshire Fire and Rescue Service

Buckinghamshire Fire & Rescue Service serves a population of more than 750,000 in the South East of England. The area stretches from the outskirts of London to the South Midlands. It comprises the four districts of Buckinghamshire – Aylesbury Vale, Chiltern, South Bucks and Wycombe – and Milton Keynes.

Milton Keynes is the northernmost part of the area, bordering the East of England and the East Midlands. It is one of the fastest-growing places in England. Since 1971, its population has risen from 67,000 to around 249,000. During the same period, the population of the rest of Buckinghamshire has risen from 404,000 to around 505,000.

Government plans for housing in the region could see tens of thousands of new homes built in Buckinghamshire and Milton Keynes over the next 25 years or so, with most of this development taking place in Milton Keynes and Aylesbury Vale. The urban infrastructure will have to be expanded to cope with this growth, and there will clearly be an increase in demand for fire safety education, community safety partnership working and emergency response.

The area served by Buckinghamshire Fire & Rescue Service includes stretches of the M1, M4, M25 and M40 motorways, a section of the West Coast Main Line, several miles of the River Thames, part of the Silverstone motor racing circuit and Chequers, the Prime Minister's country residence. Heathrow and Luton airports lie just outside the area.

A large part of the south of Buckinghamshire falls within the Metropolitan Green Belt and the Chilterns Area of Outstanding Natural Beauty. Although many parts of Buckinghamshire and Milton Keynes enjoy the affluence associated with the Home Counties, there are pockets of deprivation throughout the area.

Buckinghamshire Fire & Rescue Service receives around 18,000 calls for assistance every year, of which about 8,000 are emergency incidents. It has 42 frontline and specialist fire and rescue vehicles and four Urban Search and Rescue vehicles.

More than 550 firefighters operate from Buckinghamshire Fire & Rescue Service's 20 strategically-placed fire stations, with an Urban Search and Rescue facility in Aylesbury.

The FRS has Wholetime shift stations at Aylesbury, Beaconsfield, Bletchley, Broughton, Great Holm and High Wycombe. Staff are employed on a continuous shift basis. The station is crewed 24 hours a day.

Wholetime day-crewed stations at Amersham, Buckingham, Gerrards Cross and Newport Pagnell. Staff are employed on a full time basis during the day and respond to personal pagers in the evening.

There are retained duty system (RDS) stations at Brill, Chesham, Great Missenden, Haddenham, Marlow, Olney, Princes Risborough, Stokenchurch, Waddesdon and Winslow. Staff respond from either their normal place of work or from home using a pager.

Operational crews have changed the focus of their work to help prevent emergency incidents from happening in the first place, supported by the community safety team who work in partnership with local statutory and voluntary organisations at a range of locations throughout the county.

More than 100 people work in a variety of support services, including teams in risk assessment, vehicle workshops, finance, human resources and corporate planning.

The emergency control centre employs 23 people who ensure 24-hour availability to receive emergency calls and carry out a broad range of related duties.

4.2   Hampshire Fire and Rescue Service

Hampshire has a population of over 1.7 million people, and covers an area of 1455 square miles.

To deliver services effectively, stations are divided into group areas, which are based around districts to enable closer working with local authorities. Each of the areas has its own unique circumstances which are taken into account when

deciding how to prevent fires and other risks. Risk profiles identify the main risks within each group area.

The Basingstoke and Deane

The group is in North Hampshire. It covers an area of 218 square miles and has a population of approximately 163,060 people. It has both built-up and rural areas. 90% of the area is covered by farms, woodland and forest. Major road and rail networks run through the area connecting Hampshire with rest of the country.

Rushmoor and Hart

The group is in North East Hampshire. It covers an area of 108 square miles and has a population of approximately 184,630 people.

The group includes urban and rural areas, and the main risks include the major road network which runs through the area, Farnborough Airport, and both the West Country and south coast rail lines.

Havant and East Hampshire

The group covers a mainly rural area of 220 square miles and has a population of 225,140 people.

The group contains some of the most socially deprived areas in Hampshire, large areas of open countryside, major road networks and high-speed rail links. These cause major risks for the area. The local economy is supported by a strong farming industry, as well as manufacturing and service industries.

The Ministry of Defence has large bases in Bordon and there is an airfield at Lasham with a facility for storing oil and gas.

Portsmouth

The group has a population of 216,650 within 24 square miles. It is the most densely populated area in the United Kingdom outside London. The city's population is expected to increase by 0.5% over the next three years.

The area contains a busy commercial port, the naval base with a facility to build ships, many historical buildings and a university which all present differing risks to the group.

Portsmouth is ranked 76th most deprived out of the 326 local authorities in England. This is worse than the previous 2007 ranking of 93rd of 354.

Each year Portsmouth attracts around 7.6 million visitors.

Fareham and Gosport

The group is on the south coast of Hampshire. It covers an area of 54 square miles and has a population of approximately 191,890 people.

The major risks include areas that are socially deprived and run down, the major roads, heavy industry, light industry, military establishments, an airfield and large areas that have become more urban.

The growth of the commercial and service sector and the M27 has meant that industrial parks have developed, mainly around Fareham, Hedge End and Whiteley, increasing the amount of traffic in the area.

Winchester

The group is in the heart of Hampshire. It covers an area of 252 square miles and has a population of approximately 97,770 people.

The area includes Winchester Cathedral, a large prison and a significant number of villages, and market towns connected by country roads where there are a high number of road traffic accidents.

Young people in the area are particularly vulnerable to road traffic accidents, and the major road network is a significant risk.

Winchester has an increasing number of elderly residents, and there is a clear link between this group and the number of accidental fires and injuries.

Winchester contains major employers and a thriving student population, both of which increase the risk of fire.

Test Valley and Eastleigh

The group is in the west of Hampshire. It covers an area of 262 square miles and has a population of approximately 182,420 people.

The group is extremely wide-ranging, and has areas that are economically developed but also has some areas that are

socially deprived. Work and industry across the area is also varied, including farming and heavy industry.

Eastleigh has almost equal proportions of built-up areas and countryside, but 92% of Test Valley is countryside.

Major risks in the area include Southampton International Airport, major roads and the rail network which connects the West Country and Hampshire to London.

Southampton

The group is on the south coast of Hampshire. It covers an area of 48 square miles and has a population of approximately 305,190 people.

The group extends beyond Southampton city into areas such as Hamble. The centre of Southampton has a high number of people living there and a large amount of rented accommodation which together increase the risk of fires.

There are many areas of industry, busy docks, large hospitals, two universities and a large road and rail network.

New Forest

The New Forest group is in the south west of Hampshire. It covers an area of 302 square miles and has a population of approximately 176,900 people.

There is a wide range of risk across the area. There are a number of towns and villages in remote rural areas, and a range of properties (including those with thatched roofs and those which rely on traditional heating methods such as coal fires).

The group has 110 miles of coastline which includes many marinas, the country's main military port and major chemical works and power stations at Fawley and Marchwood. There is a range of other businesses working across the group, with a significant number supporting agriculture and tourism.

The group includes most of the New Forest National Park, which has large areas of plantation and open heathland. There are two large trunk roads and many smaller roads across the National Park where there are a significant number of road traffic accidents.

4.3   Kent Fire and Rescue Service

Kent Fire and Rescue Service is responsible for delivering fire and rescue services to more than 1.7 million people in Kent and Medway, living in around 709,000 homes. There are also nearly 51,000 other properties, such as businesses, schools and hospitals, in an area of just over 3,700 km2. Kent is known as the 'Gateway to Europe' - There are 250 miles of motorway and major roads, six ports, four small airports and the Channel Tunnel. More than half of the UK's goods pass through Dover and 10,000 foreign lorries travel through Kent each day. Rail connections to the continent have been further enhanced with the opening of High Speed One services in December 2009.

The area is divided into one county authority, with 12 local district authorities and one unitary authority for Medway. The area is relatively affluent with Kent being one of the least deprived local authorities nationally, despite having some significant pockets of deprivation such as Thanet - one of the most deprived areas in the country.

With more than 400km (250 miles) of motorway and major trunk roads, they are used to dealing with a huge range of hazardous and dangerous incidents every day.

More than 225km (139 miles) of coastline, inland waterways and the busiest sea channel in the world means they work closely with HM Coastguard and the Royal Air Force when called upon to deal with off-shore ship fires and rescues. Firefighters also get called upon to help with many water incidents. The White Cliffs at Dover present their own unique challenge each time the service is called out to pluck people to safety.

Kent has two major growth areas - Ashford and the Thames Gateway. In the Thames Gateway alone there will be 53,000 new homes and 225,000 new jobs in the next 20 years.

Kent also has a diverse range of industries including paper-making factories, processing plants, nuclear power generators and other potentially hazardous businesses.

With 55 fire stations and 1,700 operational members of staff, it has a fleet of more than 76 fire engines and other operational vehicles, including pumps, rescue pump ladders and turntable ladders.

Every year firefighters deal with around 20,000 incidents. These include over 1,000 road traffic collisions, around 900 house fires, nearly 200 animal rescues and over 150 flooding incidents, making Kent one of the busiest fire and rescue services in the country.

The service delivers it service via the use of nineteen 'clusters' of community based fire stations.

4.4 Merseyside Fire and Rescue Service

Merseyside has a resident population of some 1.4 million living in an area of 653 km2. There are pockets of affluence, for example in West Wirral and North Sefton, however, large areas of Merseyside has some the highest rates of social deprivation in the UK.

Wards in all five local authorities in Merseyside (Liverpool, Sefton, Wirral, Knowsley and St Helens) are within the top 20 percent of the most income-deprived in England. There is a direct correlation between deprivation and greater risk from fire with the 20 percent most deprived wards are over twice as likely to have a fire or fire related injury as the 20 percent that are least deprived.

National statistics show the risk of death from fire is 16 times higher among children in the lower socio-economic group compared to children in the highest. Arson rates are 30 times higher in poorer areas with a 15 times increased chance of death compared to affluent areas. It is a sad fact that an older person is far more likely to die in a fire than any other age group.

The current emergency response resources include; 42 fire engines, 5 Rescue boats, 4 aerial appliances, and numerous specialist response and support vehicles which are based at 27 fire and rescue stations across Merseyside.

Knowsley

The borough covers 33 square miles, two thirds of which is green belt and has a population of 150,800 people occupying 66,000 households. Over the last 30 years, the borough has experienced a decline in its population. Almost 30 per cent of homes are social housing.

Merseyside Fire and Rescue Service has three community fire stations which work with the communities of Knowsley to proactively reduce risk through a wide range of local community initiatives as well as responding to a range of emergencies.

The borough does not have a single urban centre and the population is concentrated in three towns - Huyton, Kirkby, and Halewood. Smaller villages include Prescot, Whiston, Cronton, Stockbridge and Knowsley. The M57 and M62 motorways and the A580 East Lancs Road provide good transport links to Liverpool and Manchester.

The borough's industrial base is concentrated in business parks with retail and commercial activities focused on town centre - Kirkby in the north, Huyton in the west and Prescot in the east. Employment was traditionally based on manufacturing in areas like engineering, the car industry and food processing but over 70 per cent of companies and 60 per cent of jobs are now in the service sector. Three-quarters of all Knowsley businesses are small or medium-size enterprises.

Liverpool

Liverpool has 436,000 residents and it is the 4th largest UK city, it has 13,800 businesses and 226,000 people work within Liverpool every day. It is a city on the world stage and which in the past decade has undergone an inspiring revival with huge investment in both its city centre and waterfront. However there are significant challenges in many of the residential areas of the city. The stark reality is that Liverpool is still the most deprived area in England. It is ranked the most deprived local authority area in England (ID2007), the second most deprived authority on employment and the most deprived local authority for areas of concentrated deprivation.

Merseyside Fire and Rescue Service has ten community fire stations which work with the communities of Liverpool to proactively reduce risk through a wide range of local community initiatives as well as responding to a range of emergencies.

The challenges for Merseyside Fire and Rescue Service in Liverpool are multiple and varied. In order to better respond to the risks based on and around the River Mersey a new River Rescue Station was opened in 2011, sited on the new ferry terminal, which will be the base for our Marine Rescue Team.

In addition to providing emergency response activities are equally focused upon prevention of emergencies happening in the first place.

Sefton

Sefton is a large metropolitan district and an integral part of Merseyside. It has a rich and diverse community in terms of its socio-economic structure, its geography and the age-profile of its population. The boundaries embrace the Port of Liverpool in the south and the Victorian holiday resort of Southport in the north. From Bootle, which is in the northern sector of the Merseyside urban conurbation and supports a large office quarter, the Irish Sea coastline stretches the length of the borough, with nature reserves at Formby and Southport, dormitory suburbs in Crosby, Formby and Sefton East Parishes.

In terms of multiple deprivation there are nine wards which are in the top 10% most deprived in the country. 1% of England's most deprived neighbourhoods are located in Sefton's deprivation hotspots.

Merseyside Fire and Rescue Service has four community fire stations which work with the communities of Sefton to proactively reduce risk through a wide range of local community initiatives as well as responding to a range of emergencies.

MFRS has established effective partnerships within the commercial sector including links with the Hotel industry within the Southport area and the Port of Liverpool which encompasses the Royal Seaforth Container Base in the south.

St Helens

St Helens history is inextricably linked to the industrial revolution, being the location of the world's first commercial canal and its first passenger railway. These enabled the town to exploit its natural resources notably through coal-mining which fuelled significant chemical manufacturing and a world-famous glass industry. Coal mining and glass manufacture once employed around 50,000 people, well over half the workforce. However, the industries that built the town have now declined in importance, with over 30,000 jobs lost in the late 1980's. This fundamental shift in the pattern of employment has been at the heart of the challenges faced ever since, and it continues to shape community priorities and ambition.

In terms of Multiple Deprivation there are 27 Super Output Areas (SOA) in St. Helens which fall into the most deprived 10% nationally and 43 SOAs in the most deprived 20%. The decline in industry in St Helens is also reflected in the type of incidents the fire service now attends as its main areas of work are domestic and special service incidents.

Merseyside Fire and Rescue Service has three community fire stations which work with the communities of St Helens to proactively reduce risk through a wide range of local community initiatives as well as responding to a range of emergencies.

Wirral

Wirral is a borough of enormous opportunity but is also a place of sharp contrasts, with the overall picture masking stark inequalities for local people. The borough has some of the most affluent wards in the country and some that rate amongst the most deprived. Many of Wirral's citizens enjoy an excellent quality of life, with good quality housing, schools, employment opportunities and living environment. However, in Wirral's more deprived areas, which are mostly located on the east side of the borough, the lives of citizens can be very different. These areas are characterised by pockets of high unemployment, low skills levels, poorer quality housing, unacceptable levels of anti-social behaviour and high levels of ill health.

The socio-economic inequalities detailed above are reflected in the demand on MFRS resources. Predominately the majority of calls are to incidents on the east side of Wirral. As well as responding to emergencies there is a focus on resources to work proactively on wider ranging community initiatives.

Merseyside Fire and Rescue Service has six community fire stations which work with the communities of the Wirral to proactively reduce risk through a wide range of local community initiatives as well as responding to a range of emergencies.

4.5   Mid and West Wales Fire and Rescue Service

Mid and West Wales Fire and Rescue Service is responsible for providing public safety information, prevention and protection programmes, and emergency response cover for Mid and West Wales.

The organisation employees over 1,400 members of staff and covers around 4,500 square miles - almost two thirds of Wales.

Their responsibilities as a public body require them to undertake a wide range of activities and engage with many stakeholders. Developing and training the workforce, managing the resources, managing performance and working with others are just a few of the activities addressed as part of the day to day business.

Mid and West Wales Fire and Rescue Service provide operational fire fighting, Community Risk Reduction and Business Fire Safety capability for 6 unitary authorities in Wales. Namely;

Carmarthenshire

The County of Carmarthenshire is the third biggest in Wales covering an area of 2,385 square kilometres. The majority of the 190,000 people, who live in the County, live in or around the three principal towns of Llanelli, Carmarthen and Ammanford; whilst the remainder live within the many small and medium sized communities sprinkled throughout the region.

The administrative centre of Carmarthenshire is the market town of Carmarthen, whilst the most populated area is in and around the town of Llanelli.

Ceredigion

A predominantly rural County with a population of 77,000 of which 10,000 are a migrating student population; although the total population is swelled in the summer months due to the many holiday destinations. The County covers an area of 179,500 hectares (1795 km2). The vast majority of the County's population is located along the coastal belt, with the County becoming progressively more sparsely populated further east. There are three main centres of population at Aberystwyth, Cardigan and Lampeter.

Neath Port Talbot

The County of Neath Port Talbot covers an area of 442 square kilometres and with a population of approximately 137,000, is the 8th highest populated County in Wales. The majority of the people, who live in the County, live in or around the three principle towns of Neath, Port Talbot and Pontardawe whilst the remainder live within the many small and medium sized communities sprinkled throughout the region.

Alongside this, the County also has a deep water harbour, the M4 Motorway, dual carriageways, high speed rail links, extensive forested areas and numerous Coastal and Inland Waterways.

Pembrokeshire

Pembrokeshire County Command is aligned to the local authority boundary of Pembrokeshire with a total population of 117,000. It is a diverse County incorporating areas of arable lowland, scenic uplands to the north and with the main centres of population along its southern corridor and coasts.

Much of the coastal area, including the offshore islands of Skomer, Skokholm, Ramsay and Caldey form protected nature reserves and fall within the Pembrokeshire Coast National Park. Tourism is a prime industry particularly within the resorts of Tenby and Saundersfoot, which together play host to a large summer holiday population.

The development of the principal towns has predominately occurred along the coastal belt, or along navigable rivers; the more notable examples being Fishguard, Milford Haven, Pembroke Dock, Tenby and the county town of Haverfordwest.

Although tourism and agriculture are viewed as important economic elements within the County, the Milford Haven Waterway is amongst the most important marine trading ports in Europe, with its well established Petro-Chemical Industry served by the deep waters of the Haven. The banks of the waterway are host to two petrochemical refineries, a refined petrochemical storage site, two Liquefied Natural Gas (LNG) import and processing plants and an LNG powered electricity generating power station. At maximum capacity the LNG processing plants supply up to 25% of the UK energy demand.

Powys

Powys is the largest county in Wales, covering a quarter of Wales' landmass. The county stretches from the border of Wrexham and Gwynedd in the north, to the Swansea Valley and Monmouthshire in the south. It borders Ceredigion and Carmarthenshire in the west, Shropshire and Herefordshire in the east.

To the south the county also contains a substantial part of the Brecon Beacons National Park. At 5,197 square kilometres, Powys is twice the size of the next largest county in Wales and has a population of 131,313 people living in 60918 households. This makes it the most sparsely populated county in England and Wales at only 25 people per square kilometre. Nearly 90,000 hectares of Powys falls within the nationally significant landscape of the Brecon Beacons National Park.

Swansea

The Swansea Command serves the County area comprising 378 km² and a population of approximately 232,500, although the total population is swelled in the summer months due to the many coastal holiday destinations.

The County has many major risks ranging from chemical sites, high rise (commercial and domestic) and new developments have brought a number of new high rise buildings to the former docks area, the M4 Motorway, dual carriageways, high speed rail links, hospitals, universities, DVLA, numerous large industrial/retail parks, extensive forested areas and numerous Coastal and Inland Waterways.

The research brought together views from five very different FRS organisations across England and Wales on the issue of health and safety management and how it operates.

5

Findings

5.1 Health and Safety Management Policies and Procedures

This theme explores how health and safety policies and procedures are perceived to work in practice by the staff. It looks at how they are perceived to be effective along with organisation supports staff in terms of infrastructure communicating information to staff at the front-line, the role of the author and the influence of resources. Issues about linking to other services are also discussed.

5.1.2 Effectiveness of Health and Safety Management Policies and Procedures

The perceived effectiveness of health and safety policies was discussed and it was perceived that although teams were comfortable with the concept and management principles of health and safety, there were additional things which could improve the ability of fire-fighters to adhere to them. In some cases a policy might appear to prevent activity. There are some clear issues around perceptions of what the policies could achieve.

"Probably not as effective as they [H&S policies] could be". Middle Manager

"If the policies were fit for purpose as far as reasonably practical, there would be a much greater adherence to them. There would not be some stepping outside of them..." Watch Manager

Strategic and middle managers confirmed that they thought this was the case which could indicate potential risk for the FRS.

''In their assessment of the risks they're happy to take the "gamble" if you like. It's very clear that people are taking risks outside of our written procedures; I've no direct evidence of that obviously" Strategic Manager

"Do I think H&S restricts what I do? No, I don't think it does…I think H&S is a good thing." Middle Manager

"I don't think H&S is such a bad thing, it's how it is implemented, who implements it and how we do it." Middle Manager

"I have always viewed Health and Safety as an enabler not as something to stop you". Middle Manager

Some of these factors were due to the individual organisation and the fact that most if not all organisations author their own policies. Some areas were reviewing their policies and uncovering issues, which they were working on improving. One thing that was highlighted was that policies are often made up of procedure and information, technical and guidance and the delineation between them and their purpose wasn't clear.

"That's constraining because of course…policy has implications it should be approved by the fire authority, they are a paralysing organisation…so I think we have painted ourselves into a corner with how we apply our approach to policy." Middle Manager

An approach that one individual FRS are using as described by a middle manager, is to:

"Introduce four policies which relate to response, underneath that everything else becomes an information stream, whether it be guidance,…information, which hopefully makes the information sharing or the framework within which our staff operate, much more realistic and more applicable."

Complexity and confusion about policies, procedures, guidance and information may also have led to confusion about where to apply HSG65. A copy role model for frameworks based on this guidance may have been inappropriate to apply to other areas. This also leads to confusion about reinterpreting legislation in the policies (rather than referring to it) and focussing on implementation. It is also a large task to reorganise the system.

"I don't think we have helped ourselves previously, that's something we are looking to overturn;, but in itself that's not going to be easy to do especially because of course these things build up a momentum of their own and of course a culture of their own and an application of their own, so trying to turn it around won't be easy." Middle Manager

"The project was kicked off 8 or 9 months ago to get them into a position where they're fit for purpose and we're still nowhere near..if you look at the suite of SOPs…on a significant number of occasions they contradict one another". Middle Manager

In some cases health and safety management was perceived as a barrier by front-line staff and health and safety management also stymie activity.

"… I mean we have got into this culture I suppose and I know they're trying to move away from it you feel people are almost in putting health and safety as being an obstacle every time you try and do something health and safety becomes the obstacle…" Watch Manager

"Everything in the Health and Safety rules stops you doing anything, it can stop you from going into a burning house. They say if temperatures are high you can't go in there but what if someone is in there? Sometimes they are high but we can go in and get them out, rescue them, that is our job. This is not an improvement, the Health and Safety rules need to abide by Health and Safety themselves which is reality. We have procedures in which we try to adhere to the Health and Safety rules and as a result they just mess up the job." Fire Fighter

In some cases the policies do not seem to reflect what is perceived to need to happen. In some cases staff follow them slavishly because they feel they have to, even though they might perceive that it is not the correct thing to do. In such cases, they are perceived to have a negative influence.

"…if the policy is a load of crap then they are going to stick with it, even in their head they will say 'this is crap', but they are still going to do it. The reason they are still going to do it is they are then not going to be personally liable, or they have got a sound defence, 'I was just doing what it says in the policy". Fire Fighter

Some perceive that SOPs were detrimental to ensuring that work got done.

"…so if I wasn't sure about something…. I'll go and find out or I'll ask someone ….but the SOPs they always come back to them and it's almost like an incantation they wave them at you, like a cross to a vampire and say 'the SOP says this'. Well the SOPs wrong…would you do it any different? And then they sort of put you between rock and hard place…If we follow the SOPs the way there written we would never do anything, got to be honest with you." Fire Fighter

This was perceived by strategic and middle management as an organisational issue to be tackled.

"…don't just treat the Health and Safety Executive as bogey man; look at yourself a bit, look at your own organisation" – Strategic Manager

A perception was that there should be tolerances in taking risk rather than a black and white; it should be done this or that way. Others indicated that they thought could be detrimental to saving lives.

" I think some of the stuff has gone too far. And so we will have a failure to commit to save saveable lives at the fear that the risk may have slightly increased to the people carrying out that rescue. In my opinion some of that increased risk is within tolerance, but I honestly believe we are moving further and further away from it. And that health and safety impact does not just go to what we do on the incident ground, it goes to how we train and from when we first train" Watch Manager

There were views expressed that health and safety management policies and procedures haven't had any demonstrable effects in certain services.

'It's making the job difficult; the people have the skills, the know-how, the ability but you are not allowed to use them. We have better knowledge, better equipment, better training, however we have had more fire-fighter deaths in the last 10 years than in the last 20. Why when things have improved? ... Even though our equipment, training and our training standards have improved, the real ability to do the job has not improved. So many restrictions now even though they make it better they are not making it better at all'. Fire Fighter

5.2.2 Infrastructure to support Health and Safety Management

Underpinning the health and safety management framework should be a good structure which supports learning and on-going development and implementation. This is important because there are always lessons that need to be learned even where FRS thinks they are performing well. Although most incidents may have a good outcome (defined in terms of objectives met and personnel safe), it does not mean that they have been as safe as they could be and sometimes this is not picked up. Peer review and audits were perceived to be beneficial and support development and improvement of the FRS.

An individual FRS indicated that they had learned valuable lessons from a recent incident investigation. The ability to

highlight issues and follow them up rather than ignore them, is essential in moving organisations forward to high levels of safety and also showing gaps for improvement and addressing things in a more coherent integrated way. Actually having the ability to see where issues needed tightening was difficult, and the role of luck played a part in the positive outcomes of some incidents and the issue of false positives where an incident had a positive outcome despite poor health and safety.

"we assumed we were very good in certain areas and it [the investigation] had highlighted that we wasn't as good as we thought we were, so on how many occasions had we gotten away with it?...with some other incidents, its not so much that it happened, it's how they got away with it for so long…we're very vulnerable to so many different things which we don't perceive straight away, it's only afterwards we start to make sense of these things, that we realize, we were actually a bit lucky there." Middle Manager

"We're very proactive and read and learn from other reports; results are evaluated – we would never say 'that would never happen here". Middle Manager

An individual FRS indicated that the systems they had in place seemed to work well, with fire-fighters able to use policies and procedures flexibly as a guideline.

"I actually think Health and Safety within the organization works quite well…that's because firefighters (the operational side certainly) are used to assessing risk and used to dealing with risk". Middle Manager

"…there was a renewed focus and emphasis I would say on health and safety." Middle Manager

Strategic managers were particularly mindful of the systems they needed to develop to support health and safety management, which is currently not as good as it could be.

"Now one of the biggest constraints is not the culture to further change but is actually our systems." Strategic Manager

"We will risk a lot to save a saveable life needs to be reflected in the super- structure of protection of our people". Strategic Manager

"…what we should have been trying to do which is to rid ourselves of some of the structures that had been opposed, had been imposed when health and safety in the service was regarded as absolutely no different from health and safety use in 1970's manufacturing process" – Strategic Manager

5.2.3   Organisation of Policies

The organisation, updating and on-going maintenance of policies and procedures was a large task and there were often issues with how quickly updates were made. The way knowledge and information is managed by the organisation is perceived as key to how SOPs can operate.

Points were made by a middle manager about the delineation of policies and how they were weighted in terms of importance above other information.

"there is a perceived weight to them, so a policy has a higher perceived weight than an information note, when actually the intention behind them is the same, it's just a change of category to say that something else is guidance and something else is procedure…whereas calling something a policy, we tend to imply that it has a gravity that must be obeyed so we end up with 200 odd policies ranging from how to wear your helmet, through to how to make sure we are conforming with governance procedures." Middle Manager

A middle manager from a different FRS describes how updating health and safety management processes takes time and resources which can be a source of frustration. The time taken is also prolonged because of gaining consensus. This may be internal and external consensus.

Issues about the timing of updates and amendments to policies after incidents were discussed.

"Immediately after the accident there was restrictions placed on the building where it happened but it took nine months for the risk assessment to be updated. That's it, instantly they are very good but afterwards it tends to fall apart a bit." Watch Manager

There was also the issue that many policies were older (in some cases over 20 years) and possibly out of date and this could be a barrier to up-to-date practice. Keeping all the documentation up to date was really challenging to do within existing resources. In addition to this policies may lead to operational constraints.

"We've got procedures that were set up when we had a lot of people on the field. Now we have less than half the staffing but they still want us to adhere to them. For example you find four people on the fire engine there should be

five. In most cases a station had two fire engines now all have one fire engine. So a fire engine comes from here but we need another fire engine to support it. You have four people the officer in charge who doesn't do anything - well he does not physically, two men who wear breathing apparatus who go into the building, you have a driver and pump operator. When you go into a burning building in a breathing apparatus set you also have to take a tally to give in. Whoever takes those tallies should have no other duty that is what our procedures say. You have four people that are impossible. If you are a BA man your soul duty is the BA board, who is the pump operator? no one So they wait for another machine to come. Theoretically it works you can sit in a classroom and say, one man is dedicated to do this, another man is dedicated to do that but do we have those men, no we don't. Even if a second fire engine comes in they only have four men, so if it is a house you might have one two men going upstairs and two men going downstairs that leaves you with two drivers one a pump operator and one to be the BA board man. So then there are two officers who are not supposed to do anything physical, so you still don't have any manpower. So you have to wait for the third engine". Fire Fighter

Frontline staff indicated that it was useful to have policies and procedures updated regularly to ensure that issues, which had arisen were addressed and policies were in a cycle of continual improvement making them realistic to working practices. Sometimes this took longer than was useful – 8 or 9 months in some cases – this could lead to staff not being as aware as they could be.

"Some of our crews are not as aware as they could and should be about some of the implications of what is going on". Middle Manager

5.2.4. Resource issues

Resource-wise developing a new document management system and updating older policies and introducing new technologies to support them is costing a quarter of a million pounds per year for one FRS. How operating health and safety management policies eat into time was discussed. Some procedures e.g. those relating to high-rise incidents were highlighted as slowing down the incident a lot. The time spent on establishing these assessments may be frustrating for fire-fighters who view it as time lost in tackling the incident. The amount of information to take in at the frontline was considerable.

"Certainly more pressure when you turn up to a job. Because you have got to absorb and take in all the information that has been presented before you…. you would do that before but there would be an element of urgency but things now you've got to slow things down to a degree that well without being rude it is arse covering. You have got to be careful that what we do we can justify it". Watch Manager

There is also the issue of how cuts in the FRS spend may impact on health and safety management at the front line.

"Biggest threat at the moment is budgetary cuts, investment in training is obviously going to have an impact, the reduction in the number of appliances and stations and personnel, particularly front line… and the impact that that is going to have on public safety, fire fighter safety, and public perception of the service, because once we downgrade calls or tier call or do any of the charging for special services, that will probably have an impact". Watch Manager

"Some of my colleagues are on same position as me on other watches have had instances where they've rapidly deployed because they haven't had a fifth man, fifth person; you can't expect the driver to do messages, pump and board although he has to in that instance and that to me is a critical, that's where something could go wrong because the two that are in need to be constantly monitored and if you're trying to send a message, watch the pump, watch the board at the same time it doesn't really work". Watch Manager

"We might over resource incidents but in a managerial capacity". Strategic Manager

The accompanying paperwork was also seen as an issue in taking up time and effort, which some staff were less inclined towards along with ensuring that the skills of the crew are used sensibly.

"Incident command support is known as paper work fire fighting and there are people who don't like it; it's the job and it is something we have to do. There are some people who have no inclination to do it…. There are people on the command section who I could give input every day of the year and they wouldn't be interested. There is no point I can use them for other roles, one guy doesn't give a monkey about accountability, there is no point pushing him to do it he can do other jobs perfectly. Interviewer: What do you mean by accountability? It means if you are working in the sector as command support person you are helping with the running accountability of people in the sector, all the equipment, making sure the risk assessment is updated; making sure the risk assessment is relevant. It is not in some peoples mind set to do that. I think if you know they are uncomfortable doing that job, it is better to give them a job that they are good at, it's not a failing on their part. I think that is a sensible juggling ball". Watch Manager

Trying to meet everyone's expectations with reducing budget in the current climate is problematic. Senior managers

comment that they haven't got enough time to train everybody up in all the skills that they might be called upon to deal with and have to prioritise and rationalise on relative need. Rapid deployment teams of specialist skills may be needed, but not across the whole organisation.

5.2.5   Authors influence on the policy

Policies were perceived to be greatly influenced by the authors, who may have drafted them in isolation of experience and input from others with the relevant experience and also with the organisation at the forefront of the mind rather than the fire-fighter.

'…certainly some of our senior management doesn't come from operational fire fighters …it's easy to write something but actually if you've never seen it…". Fire Fighter

"The biggest problem is Health and Safety laws are written by people who are not in the field, who do not understand that some jobs are possible. In the history of the fire service not one fire fighter has been hurt going down a sliding pole, but the Health and Safety says they are unsafe, what are they basing it on? Somebody has to get paid for writing rules and saying it's unsafe, we accept it". Fire Fighter

''…ok working at height regulations in my 19 years I have never seen any fire fighter fall off a ladder, ever - so why did we introduce a system where that takes thousands of pounds to put in ?' it's one size fits all and takes no competence of the different roles that it will apply to, madness, absolutely madness ''. Strategic Manager

"The policies are geared towards protecting the institution of this service against litigation should anything go wrong. So when I read them I go 'well that's nonsense' and the first thing I do is go back and see who is the author and there is the usual suspects of people who are a bit nervous about corporate manslaughter. So it comes back down and I read it again and I see then and I make the connection and I can see why he's written that…". Watch Manager

"If you don't have the experience in there to do it you will not get a fit for purpose policy which has been robustly challenged from every direction. And unfortunately, now where we have got staff who under threat of losing their jobs, staff conditioned under different service, so we might have support staff writing policies;…. but then where do we then get the experience for doing things like writing policy….so I think the root then goes back to, policies procedures, what do we expect of people. Because as soon as we put something in black and white that is rubbish, people will follow the rubbish." Watch Manager

The way health and safety management policies are written, also influences how they can be implemented.

"But when you know a policy has come from the top and you can't see a practical reason behind it, it's very difficult to actually, you know, because they keep telling us that we as middle managers or supervisory managers, our job is to support the service and actually support the policies coming down. But what is difficult is, generally the policies stop with us, and we're the ones then who have to implement it, they just create it and we have to implement it and the implementation is not always as easy as making them, you know because it's something you've got to try and justify it to your crew and sometimes you are trying to justify something that actually you don't believe yourself …and that's where you're sometimes very nervous and knee jerk policies; then the next thing is bam! You must do this! So then you think right, how much has this been researched and checked or whatever? Sometimes it's necessary, you know if they're not sure I suppose, their job is to make sure no one else is injured or whatever; I understand that but sometimes it's questionable". Watch Manager

A view was taken that people that write health and safety management procedures focus on risks to fire-fighters rather than focussing on the wider risk. They are written firstly to adhere to health and safety management from a very safe perspective, which focuses on the negative and tends to be deficit-based, discourages reactivity.

"Health and safety is all don't to individuals". Strategic Manager

"And a lot of our policies you know will say do not enter if. Do not put water on the fire if. Do not you know? And they're very prescriptive whereas what they should be is consider x,y and z". Strategic Manager

It was thought that authors need a fresh look at writing some operational procedures, to exercise more discretion. With caution exercise the skills and experiences of the authors, allow those following them more scope to take calculated decisions

"I think its people with a little bit of knowledge about something writing a policy or a procedure without fully understanding what the full gambit of risk actually is …and then they end up being too prescriptive or too restrictive". Strategic Manager

"We are taking away that ability to carry out a balanced risk assessment". Strategic Manager

The difficulties between what the authors think and what the operational people think was also highlighted.

"What you have is this juxtaposition between operational people who say 'well that's not going to work' as opposed to the policy writers who think it's the best thing since sliced bread". Strategic Manager

However the authors of policies were also struggling.

"Don't feel comfortable to commit to paper a policy which actually is a little bit more risk". Strategic Manager

It is apparent that there is not a cohesive understanding of health and safety management across the FRS, and there is a lack of comfort from both the authors and those who are charged with implementing them.

5.2.6   Working with other FRS

To ensure that scarce resources are maximised, one FRS is harmonising their procedural approaches neighbouring FRS in their region; although this can be frustrating and difficult in practice. This provides a generic set of procedures with tweaking in-house to consider their own unique resources e.g. equipment etc. The FRS in question provided information of how this was working in practice.

"We are pushing things a bit our own way. We will make it happen internally whether the regional things happen or not. We need to reform our document systems so the big challenge is the time and money of making things happen". Middle Manager

"A decision was made when regional control fell apart to use some good procedural work so we can work better with our neighbours, to have a universal approach to most things…The detail is more in-house". Middle Manager

There were however challenges with working regionally on a political and bureaucratic level.

"I've got frustrations with the regional stuff and very early on I wanted to be our own FRS focussed, implementation focussed. So these new documents that are being created for the internal implementation, that's where my effort goes". Middle Manager

Sharing information and harmonising policies and procedures might also help communication at incidents with other FRS, however there seemed to be local political pressures which stymied the true harmonisation of processes and procedures and the longer term gains of regional policy setting.

6
Health and Safety Policy Implementaion

Implementing policies and procedures was a complex issue and relied on a number of different factors from communication, leadership, skills and experience and the organisations approach to it. In some cases it was necessary to "work outside" policies and procedures, but again there was a lack of cohesion about what this exactly meant. For some the policies and procedures are a guideline which allows flexibility and for others they need to be followed exactly. There were differing views even within FRS which suggests that clarity needs to be communicated on these issues.

6.1 Communication of policies and procedures

There were issues with making policy information accessible to others. Some policies are obscure and not easily accessible on the intranet. This means that they need translating for managers to be able to use them. An example was given by a middle manager on the noise assessments.

"I found them by chance produced in a format that you can't understand a damn thing about them". Middle Manager

This presents a barrier to implementation and it has been suggested that some policies do not lend themselves easily to translation. Health and safety teams may not have the capacity to respond to support some of these issues. This leads to the view that there is sometimes a "box ticking exercise" which is taking place in the Health and Safety function of the service. Individuals would have to be very committed to read everything and then translate it into practice.

"If we need a noise assessment for every piece of equipment, we will do it. Is that noise assessment of use to anyone? No. But it doesn't matter, we've got to have one… there seems to be a bit of a difference between common sense and the health and safety department". Middle Manager

Sharing of incidents and how they are dealt with across the organisation is patchy. In some cases information is shared informally through case studies, but these tend to be the larger incidents where there have been deaths. Better processes have been needed, through a more formal incident review or log.

Communication of many procedures with frontline staff is problematic. There are many updates and information overload with updates which are not given priority level There is also a large amount of information to remember on each policy and procedure and also a perception that some of the material is *"a bit dry"*.

Staff expressed their frustration at being overloaded with information

"Because you've got external legislation you've got internal standard operating procedures, we have internal memo's give us updated information, we have technical bulletin's we have so many avenues of information coming through to us, it becomes an overload…". Watch Manager

Senior managers also admitted at times they struggled to keep up with the amount of directives that were coming through the system, including EU directives although some of the work may be shared with other services. One FRS with partners has attempted to address these issues with a generic set of guidance, which looks at making the information easier to digest.

"Let's say there's a hundred different types of problems that the FRS could solve. Each one of those hundred will have a set of documents to go with it…[with] a brief aide memoir style procedure and how you solve that problem. A flow chart that goes with it, a resourcing for that…the risk assessments that go with that solution…they will be adopted by every FRS and there will be some local tinkering…". Middle Manager

It is understood that solutions such as these have or are being developed nationally and tailored locally and delivered in a variety of formats where information can be *"sold to them in a different way"* so that important information is highlighted. They could even be produced on a tablet, which fire-fighters could take to incidents. This could also be underpinned by a training programme, which supported fire-fighters in a user technology-friendly way. This approach could be delivered regionally rather than locally. A solution was also suggested in using flash cards which are similar to those used by pilots.

This approach was echoed by one FRS although without the emphasis on technology where it was emphasised that staff had a generic skill set and the mandate to apply common sense solutions to different situations.

As well as the systems for communicating there needs to be clarity on the rationale and meaning of policies and why they are important.

"If a policy is sound and has been well thought out and is relevant when people read it will go right ok, yeah that's fine I understand that". Strategic Manager

"I think it's down to the fact that the policy and the rationale behind the policy decision were not articulated and not communicated with the crews". Strategic Manager

"I think again it's that feedback that we need to be open and honest with our crews and say tell us what doesn't work. If you're having to work outside policy, clearly the policy is wrong so tell us why it's wrong, how it's wrong, how we can adapt it.". Strategic Manager

6.2   Leadership in policy implementation

It was thought that most fire-fighters are able to apply a common sense approach to what has to be done and what needs to be done. However this approach may not link specifically to policies. Adhering slavishly to policies and procedures was indicated to be a sign of inexperience by some, however how this is formally articulated is difficult. It was clear that a lack of coherence might potentially lead to a serious incident and that communication needed to be clear. Good consistent leadership was necessary with consistent messages that flowed upwards and downwards.

"I think it is imperative that the head of the organisation sets that example". Strategic Manager

"But you know you're only one Atherstone upon Stour catastrophe away from, where Warwickshire are". Strategic Manager

Risk aversion was acknowledged:

"We are alive to the fact that our own culture can create that risk aversion, it's our interpretation after all of what the health and safety is going to do and what it wants which ultimately is the patter that our troops get". Strategic Manager

Leadership on the front-line was also important:

"Fire-fighters are common sense people and they can identify a dangerous process and risk and they will generally make measures to protect themselves and members of the public". Middle Manager

It was a general view that everybody in the FRS understood their responsibility about health and safety management policies and procedures supporting safety for themselves and others. However it was also understood that not all policies and procedures are adhered to all the time.

"I wouldn't say that all policies and procedures are adhered to by all first responding appliances…there are still occasions where people are rushing in without giving themselves time to formulate a plan and look at the risks". Middle Manager

"People are given some latitude in making good decision". Strategic Manager

Sometimes the roles of incident commanders become blurred as they may get drawn into helping at the front end of an incident which is against the policy expectation of them standing back commanding, perhaps going against their desire to be actively involved with the incident.

"A lot of times where an incident commander is right in there on the tools and you have to grab him by the scruff…and say 'you're going to see a lot more of your incident if you are standing 3 or 4 meters back rather than having your head stuck in a door". Middle Manager

A lack of adherence to policies at the higher end of the command structure may be an indication that it is not being operationalised very well at the front line. This may not affect the outcome of many incidents, but the role of this structure and the leadership given by the incident commander could be critical in a more difficult incident. This was noted as a possible factor in a recent high profile incident. A good structure was essential.

"If that [command and control] isn't established properly, the risk critical isn't being managed very well either". Middle Manager

"What we rely on is not only control measures and dynamic risk assessment but you really, really are relying on your chain of command". Strategic Manager

There are a number of factors that may play a role – experience of the leader or they may have difficulty commanding. In some cases where a crew manager role is being acted into for a short time, individuals are wary of their relationships with other fire-fighters which may have to be re-established if they leave that role.

Another issue is the emphasis on hazard perception and awareness should perhaps be tempered more with procedural solution, so that there is a balance between what is occurring and also what needs to be done about it. Problem solving is key to this and supporting staff to solve the problems and be outcome focussed rather than more risk focussed.

"They're not hazard aware enough of the processes [to solve the problem]". Middle Manager

There were policies, which were perceived to work well and lead to real changes and others less so. Reasons for this related to operational efficiency and things that have to happen and have to work. But others for example a change management policy [example given by one FRS] may not have not seen changes worked through the policy for years, indicating it does not serve any useful purpose.

More senior managers view themselves as being able to take an overview and see the greater good of how health and safety management is designed and spread over the organisation. The implementation is viewed as being patchy with some stations taking different approaches. Some view mandatory risk assessments as turning fire-fighters into "desk secretaries" and it has been up to more senior managers to demonstrate that this process is not to uncover "normal" risks but anything exceptional. No significant risks at an incident should mean that fire-fighters are able to tackle it satisfactorily. This process helps senior managers identify areas where more support is needed. However this issue doesn't seem to be well communicated to staff.

"Now that we are identifying significant risks or hazards and supporting incident commanders it is a lot better". Middle Manager

There is a view that health and safety management should support the FRS rather than driving it. Views expressed were that sometimes a common sense approach is not adapted to implementing policies. In some cases the staff will wait for a senior manager to arrive so that they can abdicate decision-making.

"I know of some officer, some supervisors who have said we will wait for the flexi to come, because it's his decision. He takes over the incident and it's his name that's on the log book not ours". Watch Manager

6.2.1   Balancing risk

Participants highlighted the issues about how the balance of health and safety management is influenced by a range of factors, including current issues and high profile incidents and how the balance between risk to the person is understood. There were a range of opinions from across all sectors of the FRS. This suggests that this is an area where there is a lack of clarity.

In some cases current hot topics influence how a de-brief is managed or prioritised.

"If acetylene is topic of the month, we have had an acetylene incident that doesn't go well, that all of a sudden is a new topic;, but if something happens in a high rise today and that's not on the talk about list…well let's not bother". Middle Manager

In one FRS it was acknowledged that there was a period when more junior staff seemed to be more risk averse. But the balance of risk has now changed towards a greater awareness of risk and how to manage it with less risk aversion.

"I think we probably had a blip of about 2 years where people coming to me for assessments for junior officer roles were risk averse. So they were providing a very safe system at work to deal with incidents that we set up here, but they weren't attacking the fire and they weren't rescuing anyone". Middle Manager

It was acknowledged that the balance of risk assessment needed to shift to make sure that safety was maintained, but objectives were met also.

"We have moved away from risk averse to where there is a balancing of risk and we still need to achieve the objectives, but there has got to be some risk and you manage as much of that out as you can. But at the end of the day, you can't just stand outside and watch something burn". Middle Manager

"I think our people are much more balanced than that. I've seen massive risks been taken by people, but I've also seen why they have been taken and they have not been taken because, shit because you can just can do". Strategic Manager

Senior managers generally agree that offensive fire-fighting is preferred.

"We should be putting people into that fire unless information says the building is inherently dangerous or is going to fall down" Strategic Manager

The issues about health and safety management as a supportive infrastructure, was not viewed the same across the FRS. In one FRS there was an on-going debate about *"how far does health and safety management contribute to what we do? How far does it hamper what we do?".*

Health and safety management policies were described as being developed in response to incidents. Sometimes these were thought of as knee jerk reactions or an overkill. Some policies still produce mixed responses in teams. Putting BA equipment on prior to getting into the fire-engine, putting it on en route (but having to undo seat belts) or putting it on at the incident, where the public may perceive that you are wasting time. Where time is of the essence different decisions may be made like putting equipment on in the fire-engine which technically goes against policy. There were different approaches to this in different teams.

A middle manager in one FRS shared an underlying philosophy of the FRS about how risk is balanced.

"…we've got this concept – you put yourselves at risk to save a life that is saveable and then you won't if it's not saveable."

The manager goes on to say that some people are reckless or gung-ho, and *"Your average people who will not normally do anything unless the situation arises and they have to make a snap decision".*

It was acknowledged that despite the enhanced equipment and technology and the fact that many risks are similar to what they have always been, the FRS have become more risk averse and may operate in a more defensive way. Warehouses was given as an example of where a more defensive stance might be taken, but domestic properties were viewed as someone's home and more measures should be taken to save them.

"Why would we commit people to warehouses, where there is no life risk, but there may be a risk to us". Middle Manager

This view was not prevalent everywhere as it was acknowledged that often people's livelihoods were at stake if a warehouse burned down.

"We also have a duty to protect property, what are the long term consequences of say that business burning down". Strategic Manager

Managers also suggested that as their views about offensive and defensive fire-fighting has changed.

"There is a certain amount of pressure, the buck stops with you, but also the culture has changed over the last ten years. The defensive fire fighting, the non-entry fire-fighting is more prevalent. Compartment fire fighting is one of our main skills, moving from compartment to compartment, tackling as you go. With a large open space, we are not committing teams if no-one is saveable… we call it default defensive". Middle Manager

"Initial responders they would just have got on and done it". Strategic Manager

"It probably is more defensive and there is obviously the priority is of being on life risk rather than property risk" Strategic Manager

"We will save a life but still minimize the risk to your own fire-fighters". Strategic Manager

Frontline staff also expressed their frustration with risk assessments and how it adds to paperwork.

"Something I do find perhaps a little bit frustrating is the fact that it doesn't matter what function you do nowadays it has to be risk assessed, which can actually make the simplest- trying to arrange a meeting to allow us to use a room….. as an example a charity YMCA asked if they could use one of our rooms for a meeting for 6 people....but then obviously it has to be risk assessed but to put together a risk assessment and get the people there to get it done it goes on and on and on and you think all this to just sit down, have a meeting and go out again". Watch Manager

Balancing risk was also about being articulate in explaining when you had stepped outside policies. Some front-line staff struggled with this.

"These are the sorts of things where I realised a wide variation in ability and experience of station officers but sometimes you have to accept we've made a decision we know what the health and safety or the paperwork tells us to do. Often or not in fires you have to stretch a little bit or maybe go outside of them but my argument has always been I know when I'm stepping outside of what the paperwork tells me to do but there is always a good reason for it but when things have calmed down and you explain it in words it doesn't sound quite so good but it gets the job done". Watch Manager

Senior managers acknowledged this was the case.

"We'll do it right to the very last moment when they just throw that piece of paper in and go off and do completely whatever they want to do". Strategic Manager

Senior managers agreed that staff should be allowed to develop their own tactics and license should be allowed for the incident commander to be able to make that decision.

"Human beings don't make linear decisions and they certainly don't make them on fire ground". Strategic Manager

6.2.2 Role of skills and experience

Although the roles of skills and experience sometimes help to mitigate risks, there are times when people think they know better and do not adhere to guidance. This may be due to personality issues too.

There are often two different approaches that are taken by different officers. One middle manager described the differences in skills and approach;-. some are "more practically driven" and others are "more process driven". Those that are keen to look at making sure the processes and assessments are correct may have less experience with incidents and tend to "read from a script sheet". This can sometimes make them appear less supportive and more bureaucratic. This is often dictated by where they are based and how often they get called to incidents. This by the book approach can have the advantage of acting as an aide-memoir for those who are less experienced. This is not thought to be detrimental to the decision-making although it might be viewed as being bureaucratic by other members of the team rather than helpful.

Sometimes the structure and organisation of the incident teams can seem stilted and operating according to a recipe approach. It was also highlighted that a recipe-type approach may not be helpful to solving the incident if it is not applied in a way which supports implementation.

"So here is the recipe to apply to this operational incident and it's almost as if there is an expectation that by applying the incident command system in a way that's written by the book, the fire will go out by itself…it was there to help us resolve an operational incident, it won't do the resolution by itself…we've got the equipment, policies and big shiny fire engines which in themselves don't do anything; it still needs the application of skill and knowledge and the experience to use the equipment that you have to deal with the incident with which you are faced". Middle Manager

Recent generations of fire-fighters now have less experience of incidents; they need to learn to hone their decision-making skills in other ways, such as through simulation training. Hence this may lead to variable decision-making. This variability in practical experience is perceived to make a difference to decisions and also give out mixed messages to fire-fighters.

"…if we are looking at a pre-primed decision making process, then we can get that from an incident or through training, so it's not necessarily the incident but it is the experience. How they get that experience is two different things, one could be in a training scenario, one could be on the incident ground. But the fact is they are not getting that experience. They are not getting the ability to make pre-primed decision, … so we are getting people who are just making decisions because they think they need to make a decision….doing something because they think they have got to do something, and then we get people making decisions not to do something at the other extreme who may be more senior and it's just mixed messages to the fire fighters". Watch Manager

"…not just mixed messages but the inconsistency of messages, has such a detrimental effect. That inconsistency can come through hierarchical structure or can come from a lateral structure so we get different people from the same rank giving you different messages." Watch Manager

"Sometimes they may feel that actually do you really know what you're sending me into here". Strategic Manager

However, it was also thought that certain individuals did not adhere to policies because they thought they knew better due to age and experience and this could cause problems. Where staff were known to behave in this way, there was no system for highlighting this lack of adherence if an incident had gone well. But there was only an opportunity for a strong negative response when there had been problems. This may not be perceived as very helpful and allows some difficult behaviours to persist.

"Then again somebody who is a crew or watch commander who has a lot of experience and has a perception that the policy, procedures, health and safety, litigation and all that is nonsense, or is not as useful as it ought to be, will break the rules more often in my experience. And they will justify what they have done because of their experience and that the bottom-line is they think they know better. Quite often, I was going to say they will get away with it, but the outcome will be good. And sometimes the outcome will not be good. When we deal with them for the outcomes that have not gone so well we will absolutely hammer them 10% or 20% or whatever, the smaller percentage, for the other 51% were it goes right we ignore it, and we do not punish people for it and that ethos, that culture has been long standing". Watch Manager

Strategic management acknowledge that the FRS is a unique organisation where:

"There is a beginning of an acknowledgment from health and safety exec the same rules don't apply".

"There's an issue there for me in terms of risk taking, fire officers are taught to take some risks and they should be able to". Strategic Manager

"I actually think you are a better strategic manager if you still have a connection and an understanding of the job in the operational sense". Strategic Manager

6.2.3 Ability to apply experience to policies

As the number of incidents, particularly fires has fallen, there is a feeling that it is more important to have principles which can be applied to other situations readily. Training, experience and development are vital in giving fire-fighters these skills.

"That's where I like to think that common sense and the bit of prior experience you have can be built on to make it work out right". Middle Manager

"You do have to take more risk particularly where there are lives involved". Strategic Manager

However it was also acknowledged that there will be times when there is no prior experience to build on with unusual events. There was also an acknowledgement that theoretical capability was not the same as operational capability. As fire-fighters were less exposed to incidents than in the past, it was thought that decision-making tools could help support staff when faced with unfamiliar incidents.

"If you haven't got a standard operating procedures for something or there isn't a right or wrong answer then you do something on the balance of what is likely to happen". Strategic Manager

"When we get called to incidents that are not perhaps covered by statutory duties you are just hoping your people on the ground make the right decisions at the time". Strategic Manager

Ensuring consistency is important and sometimes an attitude in individuals on situations where something could be learned are not capitalised on. Where blame might be apportioned, incidents are sometimes not shared, which is a lost opportunity for developing learning in the organisation.

"I think, phew, that was a close call, I don't want to be doing that again…I like to build up my knowledge base…but I don't actively share very well". Middle Manager

One element of the old exam system was that it required staff to memorise lists, which in turn gave them a framework to operate in at an incident. Without a framework for decision-making, it is perceived that it is harder to operate.

"There are one or two Brigades who have good systems, but the majority of the UK, there is probably a big knowledge gap there". Middle Manager

The issues of being able to apply knowledge and experience to a situation is very important.

"For me this is where the officers earn their money. They take the SOPs and apply them to a situation. A list of things to do and a piece of paper will not always tell you what to do. It will cover lots of very generic things, but there will be things it just doesn't fit and that's when you need to use your experience and your knowledge of engineering to actually say "no we can't do that we'll do it this way". Middle Manager

"Our professionalism is about making very, very clear choices and decisions". Strategic Manager

"If you do something what are the consequences, if you don't do something what are the other consequences. Are the consequences of not doing something worse than doing something?". Strategic Manager

Senior managers are clear about how this needs to be justified, but acknowledge that it happens.

"Everyone can move off that path but if you do so with the understanding you have to justify to senior management or an inquiry as to why you moved off that path of guidance". Strategic Manager

"There will be occasions when the urgency of the situation means that the proper procedure cannot be put in place and this will mean action rather than procedure". Strategic Manager

One middle manager stated that the training is good, but the implementation of the training is less good and this is partly due to culture and issues of professionalism and pride. This needs to be addressed consistently through a whole organisational approach rather than in individual areas. Some of these issues may arise, because of the shift in the organisations operational activity – it is beginning to be seen as less important.

"It's not practiced as regularly as it should be, not in the variety of ways that it should be…there doesn't seem to be the same professionalism, the same pride in what we do, how well prepared we are and how good we are, that there used to be." Middle Manager

The length of time it takes to learn lessons from major incidents such as Galston and Warwickshire was also questioned. The legal process held up the ability to view the facts of the cases.

6.2.4 Managing risks and decision-making in relation to policies and procedures

It was acknowledged by many that there were often incidents, which required staff to go outside policies and procedures for a number of different reasons. For some, there may not be a policy that existed for a particular situation and for others; a complex situation might mean that multiple policies contradicted each other. For others, it was a way of getting the job done in a pragmatic way, where contexts might vary which acted against policies.

6.2.5 Working outside of policies and procedures

At times it is inevitable that staff will work outside policies and procedures, because of the volume and complexity of the issues they face. It was widely acknowledged that staff did work outside policies and procedures from time to time and a number of specific examples were given. Views about how and why this happened differed.

For some it was about ignorance of the specifics of the policies and procedures, for others it was confusion about how they should be implemented at an incident and for others it was purely pragmatic.

"It's about good quality policies that need to come out as opposed to we'll just have the policy for the sake because we think that will protect the organisation" otherwise you may create "a situation where people are feeling completely hide bound that they must work to a set of very, very prescribed systems". Strategic Manager

''I don't think they adhere to policies in a way that that senior managers think they do". Strategic Manager

"…if people were stepping outside the policy then the policy is wrong". Strategic Manager

"…sometimes you have got to work outside these procedures…you can't have a procedure written for everything you have to face". Middle Manager

"The document says you should be doing this; we've trained you to do this, why have you done something different? They don't do it because they are being stupid or annoying; they think that's the right solution on the day". Middle Manager

"People will go outside policy and procedure for a variety of reasons, it may be because the policy is not fit for purpose, it may be that their perception of the policy is that it is not fit for purpose in which case they will ignore it and that is down to their own training and experience or lack of. It may be that we have not explained why there is something in a policy, which means that they should go out of it. If they believed that the policy was fit for purpose and was going to achieve the task, they have to carry out they will follow that policy. If they think the policy will not achieve that task they will go outside it". Watch Manager

FRS staff at an operation level are very pragmatic and particularly long-serving staff have been trained to develop innovative solutions to issues.

"We all work outside the box, we break the rules it's impossible to do it without breaking the rules. As I said earlier we were turned out to water incidents but we were told we couldn't go in water. People did it anyway because there are times you have to do what you have to do... if it's bad you are in trouble that is why people won't go that extra mile now. Instead of people looking at your good intentions they look at what you didn't do and that kills the job". Fire Fighter

Health and safety management was also thought to play a role in deskilling fire-fighters and not giving them the opportunity to think for themselves or expecting them to think for themselves.

"..for example the wearing of lines on a ladder, whereas they have the leg lock, and fire-fighters are by nature innovative people, now they are saying, you must not do this, do this. We are losing and essence of that innovation and skill…they are trained fire-fighters, they are sensible, they know how to work with a ladder, they are willing to take a little bit of risk". Middle Manager

This was also borne out by fire-fighters who felt frustrated at the way their innovation was stifled.

"…if it is written down its right and that's what we must do. So people are rigid like that. I don't know if they are scared of coming up with things, or scared of coming up with something new. That is the worst part of this job...". Fire Fighter

Senior managers tended to disagree with this approach.

"There will be those whose natural response and natural reaction is to give it a go and there others in the cold light of day say well actually that's not in the rules we shouldn't be doing that". Strategic Manager

Some local policies might actually be putting fire-fighters in danger in particularly situations – e.g. putting out a fire on a thatched roof.

"If the roof collapses, you don't want somebody who is actually clipped onto a ladder who falls into the fire". Middle Manager

However, staff were under no illusion about the fact that they might not receive support from the organisation if things went wrong, despite the fact that there was a perception of the organisation needing them to bend the rules.

"Policies well written relying on the fact that they know we will bend the rules and policies to achieve the objective, knowing too well that we will take full whack if something goes wrong". Fire Fighter

"I think front line staff...the service relies on us doing things that aren't the way it is written in black and white to get things done. Otherwise we wouldn't get it done or in time, if we got to the fire station in our 4 minutes and waited till everyone got dressed and got fire kit on, got into the truck before I booked that mobile we would miss that target every time. So we have to bend it to be able to do our job". Watch Manager

This is confirmed by senior staff.

"I think they do very regularly (work outside policies) because the policies are too restrictive. Not always in an unsafe way. That they work outside of them. It's because there's better ways of doing things". Strategic Manager

"They would go outside of the boundaries of that procedure if they felt they needed to". Strategic Manager

"You go to a heath fire you don't want your fire engines facing on a dead end track so you turn them round so if you need to make an exit you can. That's sensible stuff, that's Health and Safety, it's not written down in policy it's a sensible application of looking after yourself and your crew". Fire Fighter

"Where it's practical we will use health and safety legislation to the letter; but there are times it wouldn't save lives, it would kill people, it would put us at risk but we have a job to do". Fire Fighter

Fire-fighters explained that moving swiftly to eliminate a problem was often the best course of action to stop matters escalating.

"Potentially it could be a worst outcome, for example people can die from a small escalating incident whereas the quick approach of knocking it out quickly eliminates the risks". Fire Fighter

"Sometimes you've got to take a risk to carry out a task; now if you implement all health and safety that goes behind that would take you 3 times 4 times as long, when it's about making them machines available for the next incident that potentially could do instead of tying a machine up for 4hrs where you can do a job and it be boxed off in an hour. Potentially if you put all the health and safety in place that you need it could take you a lot longer". Watch Manager

Senior staff also acknowledged the fact that policies and procedures could be restrictive.

"Now my view is actually if that was little bit more relaxed, that gives you the freedom to act, gives you freedom to be more flexible and gives people that opportunity". Strategic Manager

"And what some of the policies have done in recent years is taken away the ability to be able to make a decision, gather all the information and make a decision based upon those facts". Strategic Manager

However, it is very difficult to reconcile adhering or not adhering to a policy and where those boundaries lie. The issue about whether to ignore it or take action is unclear.

"I don't think you can have a policy that says you do it and then we just turn a blind eye to it". Strategic Manager

6.2.6   Flexibility in using policies and procedures

There are occasions where a common-sense approach is needed and senior managers sanction staff who adopt common sense approaches to working outside policies. These need to be supported by the appropriate risk assessments. This approach has to be sanctioned by senior staff. Managers will not feel comfortable adopting this approach if they feel they could be reprimanded later A number of examples were given.

There was a perception that the Health and Safety legislation played a role in moving staff to become more risk averse.

"We had fire-fighters not wanting to wade through a shallow pond, some Brigades seem to be caught up in their policies and they are quite rigid and the policy should be a steer to better guidance and as the officer in charge sometimes you have got to make a judgement call and say "yeah, the policy is there, but actually I can see what I'm doing and I'm going to do just that", and take the risk and it's their risk". Middle Manager

Experience about how to handle a situation and produce a good outcome is also a product of age and experience, which newer recruits have yet to develop.

"Our fire-fighters have been so for 20-30 years. They do know the job inside out, they know the short-cuts, they know who you ignore and who you don't ignore and of course they pass that information on and that's their job". Middle Manager

The ability of fire-fighters and managers to interpret and apply SOPs was discussed and the need to amend them in complex situations was raised particularly in relation to the Galston Mine incident. It was noted that if you could not record why you deviated from SOPs that is when there might be problems.

"Well if you look at your SOPs and that's not going to allow you to do what you need to do, well you need to amend it… and OK you might be at increased risk, what you need to do to is to save a saveable life, you know, that's kind of what you are here for…and as long as you record that you've done that process and that there was a logic behind it and you did everything you can to minimise risk…its taking a calculated risk to save a saveable life…So the SOPs…they're not the 10 commandments". Middle Manager

"It doesn't mean that you got to follow every single letter…actually the dynamic nature of fire and rescue is such that you may actually not do that, but come with a reasoned argument why you didn't follow that…and we will accept that". Middle Manager

Front-line staff gain job satisfaction from solving problems and achieving a good result at an incident, but sometimes feel that this is being taken away from them.

'… I still to a degree actually get a- not a kick that's not the right word- but that buzz from actually turning up to an incident where you can't get control of it as an individual. Sometimes I think 'Jesus Christ how am I going to do this' and I know I've haven't got a magic answer but someone in the team will, and then you work collectively to actually sort that out and actually yeah that's good… that's not 'I want a pat on the back' type of satisfaction its actually as I like the collective actually achievement of actually doing it together". Watch Manager

6.2.7   Context influence on decision-making

The context and information at the time of an incident often drives decision-making in a dynamic situation. Staff said that they needed to make sure that the context was recorded so that they could justify their decisions.

"There's too much blame attached to and I wouldn't say poor decision making but decision making without the full facts; 20 minutes after you got there or 20 hours later in a proper de-brief all the information is there and they can say 'well why didn't you do that?' 'well at the time I didn't know that or I believed this' because you take your prejudices into a job…". Watch Manager

The context of decision-making has changed for frontline staff and they find that they feel constrained by constantly think about the legislation.

"…also I would say and I'm fairly, to say despite everything that I said I'm acutely aware of decision making, how now it could actually turn to a criminal prosecution; that is something that we never ever, ever thought about, never even crossed your mind, never worried about things like that you went there and you done your best ..with whatever means available, working within the guidelines as best possible and that you know, now you are aware and it actually makes you a little bit nervous…..". Watch Manager

Auditors too do not seem to fully understand the context of a dynamic incident.

"People on the front line don't have the luxury of picking up a document, the more we prescribe the more we are in danger of having those things happening". Strategic Manager

"Health and safety inspectors that come into fire and rescue services look at us in our buildings and in our fire stations …………… what they rarely do is come onto an incident ground and say 'oh crikey I now realise how much of a paradigm shift this is". Strategic Manager

"They were wrong decisions later you can call them bad but on the night you couldn't call them that". Strategic Manager

''I can't describe how difficult it is to turn up at an incident and make those instant decisions. It's a very skilful job". Strategic Manager

"Until people have actual experience of being on a battle ground or an incident ground and the chaos and confusion, then it is arrant nonsense that you can apply very, very systematic approaches to controlling risk as you can do in a manufacturing industry, which is a hugely routinised process". Strategic Manager

The context of the situation may be something that cannot be entirely trained for. Despite training, there may be a greater emotion that takes over.

"Sometimes it not about training it is about fear, it is about confusion, it is about human beings over loaded with you know with information or with physical conditions". Strategic Manager

"When you have fire fighters that are lost in a building and you know they are in trouble, emotions come to the fore front and you are trying to hold on to that structured approach but it becomes almost impossible". Strategic Manager

It was acknowledged that even in similar incidents there were many variances which may affect behaviour and decisions.

"Unfortunately an incident type there will be many variances". Strategic Manager

6.2.8   Confidence

Middle managers perceive that their knowledge of the FRS and the abilities of crew and watch managers, play a key role in how confident they are in decision making and risk assessment. Longevity in the same FRS and exposure to a range of staff meant that they were able to assess abilities and leadership at incidents. The ability of crews to work well as a team was also a factor to consider.

SOPs should not be slavishly adhered to if decisions were made and recorded and should be thought of as guidance. All decisions should be recorded with a rationale for why they were made. Senior management were aware of these factors.

"It's about individuals being trained to have the confidence if you like to make decisions which are pragmatic so there not reckless, we are paid to take risk and we will". Middle Manager

Middle managers indicated that they noticed incidents if an officer was confident it made him less risk averse; but areas where they were not experienced meant that they followed the SOPs much more closely.

"When they move up to station manager, they are out of their comfort zone, so they actually become quite risk averse in areas where they are not as comfortable". Middle Manager

"The least confident say that is what is written down and that's what we follow - the least confident person will follow the guidance to the letter". Strategic Manager

Experience and structured thinking played a role and having a decision-making model that works for the individual. The London decision-making model was mentioned as providing an underpinning for operating.

"I would be happy standing up in court saying that because I would have taken every reasonably practical at the time to look at what my actions were". Strategic Manager

The difference between confidence and arrogance was explored. Confident managers may encourage staff to challenge them as a way of confirming their decisions.

"It's about knowing yourself and knowing where you are on that line…I don't want you to tell me in debrief, I want to hear it now. And I encourage any people in my support team to voice any concerns, so at least I've heard it". Middle Manager

"I think with experience comes confidence". Strategic Manager

"Knowing that actually what you are doing is the right thing". Strategic Manager

Lack of experience can erode confidence and prevent action.

"We are almost getting to the point where we have spoon fed people to the point that unless there is an aide memoir or they can't find it on the mobile data terminal, they might not act". Strategic Manager

Middle managers were expected to have the confidence to act and lead, but there was some dubiousness about whether they were all able to do this.

"It's the extent of the training the middle managers have that concerns me; …you can't just promote someone to a job without giving them the skills and tools they need". Strategic Manager

Not all staff have this confidence.

"..that's a continual challenge for us to make sure that we've got people that are confident.". Strategic Manager

Training and development play an important role in this.

"People recognise there is risk but I think they're more comfortable and confident that they get the training they require and feel they have the tools to do the job". Strategic Manager

"Coaching, mentoring, good role models seeing people in the organisation making good, clear confident decisions will make them more confident". Strategic Manager

7

Culture of the Organisation and Influence on Health and Safety Management

The organisation from the senior management team set the tone for how risks are approached and managed in the FRS. A number of issues had a key influence on the behaviours and attitudes of staff. In some services an approach is clearly expressed but in others there may be a less clear approach which means that operational policies may be construed in different ways. The representative bodies (RB) also have an influence on this.

The culture is set by the lead of the FRS and is filtered down through the different arms of the organisation. However each station can develop its own organisational culture and this was evident in the range of views that were expressed in the interviews. This can also be influenced by representative bodies like the Fire Brigades Union (FBU). Cultures take a long time to build up and cannot be changed quickly. This study did not seek to understand the culture of the FRS, but to look at its effect on approaches at work.

Some managers expressed the view that fire-fighters will follow the instructions of their senior manager; however some fire-fighters also expressed the view that they sometimes *"got round"* instruction if their experience led them to believe that an incident should be handled differently. However this was very different in different areas and different stations and often depended on the strength of the leader.

It was agreed that whenever a risk to personnel was indicated, there was no disagreement about the course of action to take to protect individuals. Even when there may be a saveable life.

Perceptions were that a small number of incidents may have led to a disproportionate response in the development of policies and in some cases have been influenced by the author of the policy. The policies have also been influenced as a means of pulling into line individuals who insisted on following their own beliefs in the way something should be done. From a very strong focus on health and safety management which contributed to a culture of risk aversion, it is now acknowledged that the pendulum is starting to swing back towards supporting flexibility in *"thinking past what it actually says on a piece of paper."*

"I think that pendulum has swung over a little too far in terms of the written word, the written word has influenced the minds of some of the officers on the front line". Strategic Manager

The problems of this are recognised.

"The safest thing to do but it's not the safest thing to do for the public". Strategic Manager

"It's a balance between delivering the service to the public or exposing your crews and possibly yourself to risk of either death or injury or risk of prosecution". Strategic Manager

A Lake incident was discussed and the decision not to go in was endorsed by FRS personnel as it was a procedure they would have followed when there was a non-viable person.

"Probably a stronger decision not to go in, than it was to go in, so they must have been passionate about it". Middle Manager

"Chief actually I think you might be wrong, but I've got to do this anyway because he's the Chief. No you don't, no you don't! You need to do the right thing. So you know again it goes back to culture again". Strategic Manager

7.1.   Sub-Cultures with the organisation

At an operational level, it is sometimes hard to effect change and new systems seem to have a number of cynics who feel that change will negatively impact their day job. There are also a number of sub-cultures which are particular to the watches – some of these are based on ingrained habits which may be perpetuated by longer serving staff who adhere to past working practices.

'… well the station I cover in the nights at the moment, its like, sticking my seatbelt on and they were like 'oh, we don't wear seatbelts here' like, and I'm like, 'alright yea, but I'll wear mine' then I think, you know what I mean, it's just a little bit of a culture there at the moment, a lot of older people there, they're I don't know, 50's or 60's some of them and they

never wear seatbelts, but I'm generation of clunk click, every trip…'. Fire Fighter

The element of trust by senior teams about the correct course should be able to be taken by the manager.

"We trust our crew managers and watch managers every single day to make them snap decisions yet we can't seem to trust them to say you can wear your seatbelt or you can't, something's gone wrong there". Strategic Manager

However there are different approaches to ongoing learning about policies in different parts of the organisation, with some showing less aptitude.

"People often don't like learning and they may have a scathing view of what is going on, but they know themselves that they don't know these policies in any depth". Middle Manager

A view was expressed about how the organisation perceives the policies

"Are they there to be obeyed or there as a guideline? So if we were more organisationally mature in the way we view our policies…here are a set of guidelines as to how something should be used, then it gives the individual the discretion to delegate away from those guidelines if they choose to and if they feel the situation warrants it". Middle Manager

This moves away from the approach of having a policy as a means of safety only for the organisation and makes it work better for the development of the organisation, where people are not complying in a blind or regimented way, but an informed way.

There was a very strong view that health and safety management policies and procedures were there to protect the person and that it was everyone's responsibility to protect themselves, however this has been present in the organisation throughout i its life-span and the newer name of health and safety management has replaced what used to happen.

"..the emphasis on what they're called has changed". Middle Manager

Having health and safety management at the heart of all your activities was important. People can just be paying lip service to it and box ticking, but this can be picked up by managers who might find a person doing something in the yard that they would know not to do in training or at an incident. Yet they did not regard the underpinning reasons for behaving in a "safe" way as compelling. This was thought to be because of the culture

"…it's just on the station, so it's out of the danger zone. People aren't thinking safely, they haven't got that culture where you must be concentrating, to put in reverse, you must have a guide automatically, like when you get in your car and put your seatbelt on straightaway". Middle Manager

Even within organisations there are differences in how incidents are tackled.

"You've even got a discrepancy there at the same kind of incident in same brigade it's just how different people react, whether they think, I might be prosecuted but I don't care its worth giving it a go". Strategic Manager

7.2   Perception of blaming/disciplinary or legal action

Having incidents such as Warwickshire mean that fear of litigation and blame has come more to the fore. Incidents such as these often skew how individuals look at risk, influencing how action will be taken. The difficulty of knowing the details mean that other FRS find it hard to determine if they were *"completely silly"* or whether *"they tried their best and it went wrong."* There was also the fear that now individuals were at risk of prosecution

"…that's on my head possibly if I make those decisions". Middle Manager

In other cases where there had been injuries sustained even where there seemed to be text book procedures followed, it might be perceived, that fault had to lie with someone – often the most senior manager in charge at the time. This can also undermine morale in the team

"We've got to blame somebody because it happened…immediately people jump back and say well "who's to blame? I wouldn't have taken that decision". Middle Manager

"You're damned of you do and you're damned if you don't". Strategic Manager

Some policies were perceived as being written to ensure that the legal requirements of the organisation were maintained.

"Some other policies, I have to say, nationally are written to keep the Brigade out of litigation, not to achieve the best outcome for the people caught up". Middle Manager

An example was given of the Water policy:

"If you are not trained, you don't go into water. Well if I was fishing I could walk into a pond, why can't I if I have all my

PPE on, walk in. And I've got colleagues there who can throw me a line if I got stuck". Middle Manager

"My station has got a river, literally a hundred yards away, if someone fell in that river we would not be allowed to respond to it… but we would try and do something with the equipment we had… the alternative was, and what they did do at the time, was a station from about 10 miles away had to attend ….because of the policy because we was not allowed to go to water incidents because we didn't have the equipment, we didn't have the training… and was also seen that if you went there peer pressure would be such that people expect you to do something which to a degree is true but of course the alternative, the alternative what happened, is you then get members of the public jumping in with no training no equipment… That has changed because the policy, I mean and again a lot of that was because a fire-fighter drowned up in Manchester trying to save someone.. legislation came very very nervous at the top level therefore put in policies that don't allow us to respond… but it then gets to the point when actually, It's almost the knee jerk reaction as such that you can't actually do anything until we have a new policy in place?". Watch Manager

There is a perception that a number of things are in play when determining how staff respond to health and safety policies and procedures. It could be that they operate in a more defensive way due to a blame culture, which goes beyond health and safety legislation and is more pervasive in the organisation. If senior managers will not back decisions, then it may be safer for the individual to do nothing.

"If I don't do anything, I can't get it wrong…we don't do anything outside policy, because if we don't then we can't be doing anything wrong…so for a litigation point of view, if it were ever to reach that stage, we were almost untouchable… if we do something in this way, we can't be held liable, to if we do something in this way, even though it's right, we're actually making ourselves vulnerable, so I think it's more than a health and safety restraint". Middle Manager

Litigation was viewed as something which did guide decisions, particularly when the full facts e.g. in the Warwickshire incident are not known until much later on.

"….before you make a brave decision always think what you would say at the subsequent enquiry?". Middle Manager

Lack of knowledge causes fear in that staff might feel *"there but for the grace of god"*.

There was also the threat of personal culpability that may be found from the HSE, where if the culpability of an individual was demonstrated they might be given an unlimited fine or end up in prison. This threat has been compounded by the Warwickshire case.

"I like where I live and I don't particularly want the HSE to come and take it from me. And I don't want to go to jail because of procedure failure at an incident which may be down to me or your procedure that you've had in place…You can't insure against a HSE punitive damage fine". Middle Manager

"It's clearly changed where litigation can actually not just go after the brigade but after individuals and the officer in charge. So again that's something else in the back of your mind, you never thought years ago, if I did something wrong I could actually end up in prison which you potentially could". Watch Manager

From a frontline perspective, the blame culture was not helpful as front-line staff felt at times under high scrutiny.

"Sometimes I think the blame game with health and safety in this brigade is a little… they're always looking to blame an OIC or a fire fighter or a junior officer at an incident whose working with very little information at the beginning of a job and is trying to set thing up and do six things at once and I don't know if you know. ICT roll up now after 7, 8 10 minutes sometime so you're through the first part of it and you come to end of it and you might have sort of think to yourself I'm bit short handed and I need to do a,b,c and you haven't got to d and they'll turn up and in the de-brief castrate you for not achieving d and I've got to the stage now where I just say yes ok". Watch Manager

In some cases fear of litigation could stop staff from making additional effort in their roles and the perception that they would be supported by their organisation.

"But that is the procedure, I mean when we get there we just do it, but the problem is if something goes wrong they will retrace what went on and now we can't go that extra mile because that could be your final mile, a few years ago they went that extra mile because you had the backing of the job but now with the Health and Safety rules you don't want that so as a result you just do what you can do". Fire Fighter

"If an individual makes a decision that is wrong, then they are going to get hung drawn and quartered". Strategic Manager

"When you see people have been cited and taken to court and arrested…people get the fear factor and some people think wrongly that taking no action is going to be OK". Strategic Manager

7.3 Reflection on deviating from procedure

Managers have differing views on how flexible they can be in looking at areas where health and safety policies have been breached. In some cases they feel that they lay themselves open to attack from other managers or have to make decisions which they know could have adverse consequences either way.

One middle manager describes how his approach sometimes contradicts the approach of some of the other managers.

"I have had some experiences of going to incidents and actually talking to officers about their decisions. Potentially could lead to disciplinary charges by them ignoring health and safety policies and procedures, but I could see why they made the decisions…I would interview that person and explain to them and the watch where they went wrong, potentially bearing in mind the information they had at the time. And then I would always give a debrief and give the individuals involved a written letter…if another senior officer finds out what you have done, they may come gunning for you, because that's the culture we're in". Middle Manager

An example was given of when a team fitting smoke alarms were called to a fire on the same street, where a woman said her mother was in the house. A fire officer with BA equipment was deployed which went against policy (there should be 2). The matter was investigated and resolved, but disciplinary charges could have been made. If it had gone wrong, the officer in charge could be facing manslaughter charges. However, if they did nothing and a life was lost, the reputation of the FRS would be destroyed by the media.

Fire-fighters perceive that working outside policies and procedures is an inevitable part of their job and they should be trusted to make reasonable adjustments based on common-sense, knowledge and experience.

"But I think what the job is doing is that every time an injury or an occurrence or a near miss they're writing something into the SOPs to close it down and I don't say that is a bad thing but there has to be a reasonableness about it.. a certain flexibility, a trust in their ranks to know and understand the SOPs and to be given some latitude to step outside. If I go and do a snatch rescue I try the SOPs and I get away with it more often than not, thanks very much….I always say things to myself like 'I'm going to follow SOPs seriously, I'm not going to do this, that or the other' but realistically when you turn up and you see something and you know you can do it with a little tweaking we'll do that and it's difficult to stop the fireman anyway". Watch Manager

"I'm thinking just sometimes they need to relax and trust us, it goes back to what I was saying station officers used to be trusted to get on with the job. Experienced fellows like myself, and I do say this, I can still make mistakes and can still probably get a telling off and deserve it I accept that, but most of the time you can leave me alone". Watch Manager

Views were also expressed that sticking to a SOP meant that there was a greater likelihood of doing nothing. A lack of action also meant that their leadership might be in jeopardy and fire-fighters would take matters into their own hands.

"…I want to have a little team that I can immediately put into action to do any number of things and not having five (on a pump) prevents me from doing a lot. If I stick to the SOP then I will do what they did in Scotland and stand at the side until second pump. The reality of it is and fire fighters agree with this….we would do something, we would get involved, we would set something up…. if you turn your back on them [fire-fighters]they will probably self deploy so you got to sort of give them something to do, you can't just stand there and watch what happens". Watch Manager

7.4 Organisational appetite for risk and awareness of risk

The organisations appetite for risk often sets the tone for how senior managers need to behave; however this can in some cases not be well understood by those nearer the front-line or inconsistently applied. Even within FRS, there are conflicting views. One example of adherence to a policy which probably didn't fit the circumstances

"The then Deputy Chief Fire Officer who said to me 'I want to start thinking about commendations for these guys' and I said 'well that's strange I was thinking about disciplining them". Strategic Manager

Hazard awareness is clear in some places, how this then translates, in what actions to be taken may vary. Staff needed to be risk aware, but ensure that this did not make them risk averse or dangerous. Sometimes this middle ground and balance is lost or the "pendulum has swung too far" between the balance of risk to the organisation and the fire-fighter and the public.

"I think people's hazard knowledge is as good as it should be, so we're procedurally focused on this and how you solve this sort of problem, but not on the thorns that occur. We should be very aware of the solutions for those issues". Middle Manager

In some cases it was thought that the steer on the balance of risk should come from senior management but at the moment it is blurred.

"I don't think there is a corporate line on it [risk]. Maybe we could do with a bit of a corporate steer sometimes on risk…I don't mean that in a derogatory sense to our top tier, I think they'd rather not have the question". Middle Manager

It was also stated that what the public thought played a role in this.

"We don't get a corporate steer on – we will support you if you have done the right thing in the right way inside your remit…as long as you haven't taken things into your own hands". Middle Manager

"…if it can be demonstrated to be negligent and someone decides to sue you, well, you shouldn't have been negligent… and that might have been the driver for some people in some organisations to protect themselves from litigation". Middle Manager

It was noted that more senior managers were inclined to be more risk averse. The dynamic phase (noted to be the most difficult) of the incident, was usually handled by crew and watch managers. By the time more senior staff arrive, saveable lives have usually been saved.

"Higher up the food chain, you tend to be more risk averse, because the higher up you go, the more likely if someone gets hurt or killed, the more likely it's going to end up on your desk…it's going to be on your neck". Middle Manager

"I could ask you as a member of the public, would you want us to make decisions based on what is in front of us at the time or would you want us to be making decisions or delaying decisions based on the thoughts that this might, I might have to sit on committee in front of the House of Commons parliamentary committee in 5 year's time". Strategic Manager

One middle manager described how he felt the FRS was vulnerable to investigations.

"If a fire-fighter dies, I think there's people in this organisation who don't realise the trail that will lead the HSE and other agencies into investigating that death and I believe the FRS is vulnerable to investigation. Because I don't think we have boxed off and…yes there is a lot of good work going on, but the service is vulnerable". Middle Manager

For front-line staff it appeared that more senior staff were unaware of the practicalities of applying policies. Other options of being safe within a situation should be explored so that staff can have options depending on the differing circumstances.

"When I compare the system of operation our biggest problem here is we have procedures that are more theoretical than practical. We come here to a training school here in a controlled environment and we stick to the strict rules about doing something but the real world doesn't have those conditions. So we try to stick to those rules that apply here, we don't always succeed. Those rules are put to protect reputations in case something goes wrong- we have a procedure that is laid down. You know did you follow procedure? But it was impossible to follow procedures!! I think our procedures should be flexible because our job is not rigid.…In other situations when the 3 formulas don't work completely, that is the aspect we tend to ignore…There is no written rule of a D, so we don't do it but we are expected to get to an incident and fit that ladder in a way we haven't been trained. So my view is instead of us sticking to those hard and fast rules, when we get to the training ground we should explore all other ways of safely doing all other things". Fire Fighter

Potential risks can at times seem to be focused on fire-fighter not risk to the public. As well as mixed messages on health & safety coming from the government – they are also coming from the FRS.

Senior managers noted that the organisations were not big risks takers and a culture of risk aversion had become more prevalent.

"Take us away from the front line and just financially and culturally were quite risk averse as a total organisation I don't think we are massive risk takers". Strategic Manager

"Some of it is our own fault the culture that we have and some of it is created because of this spectre of health and safety". Strategic Manager

It was also acknowledged that there were times when the prescriptions of health and safety management made it difficult for fire-fighters to think creatively.

If it says you got to boil this to two degree c, you boil it two degree c; you don't boil it to three degree c, because it said two degree on the top, end of story, two degree it is. You know is that going to work all the time, ninety five percent of the time yes, then when a seagull lands on a lake no - Strategic Manager

"I think it is to do with the organisation so about healing ourselves as much as beating up the health and safety executive. We deserve it sometimes I could be wrong I'm not apologising for them". Strategic Manager

"Historically and traditionally health and safety, we've had a fairy negative culture towards health & safety in that it's used as an excuse not to do things as opposed to as an excuse to do things". Strategic Manager

7.5 Role of the Representative Bodies (RB)

There was a perception that the RBs and others were not always helpful in their discussions about health and safety management and they may have at times been manipulative in using these policies and procedures as a means of pushing forward their own agendas. This meant that these policies and procedures might be perceived as being important.

"And unfortunately health and safety does get abused not least of all by more vocal members of watches who tend in that structure to be a bit older and to have better influence and by union officials. One of the tactics used by union officials if they want to get something through, is they will try to get it through using the negotiation consultation procedure. If that does not work, they will do it through health and safety, because the perception is they have greater laws on that side to drive it through. So one of the problems we face is that health and safety is not used it is abused. And that then gives a negative connotation to fire fighters that health and safety; you know what it is a load of crap. 'Why does it affect me?' All it is used for is for having a go at managements or brigades, and 'it does not affect me personally', when clearly it does. But it's seen as a stick to beat services with and not necessarily for the protection of fire fighters and the public which is what it is there for". Watch Manager

On some occasions, the RBs can play a role in influencing fire-fighters attitudes towards health and safety management. This is not always thought to be helpful.

"They was trying to do a BA exercise…and the Union guy said we can't go in there, some of the mirrors are cracked, we might rub our hands on the mirrors." So he got a hammer and smashed all the mirrors…and said, 'There's no more mirrors, get on with it!". Middle Manager

To support the legal duty for RBs to play an integral role in health and safety management, it is important to ensure that they support the need for health and safety management to be properly understood by all staff.

"I think if you want to get over making a safer work force you have to take rep bodies on board there are ways and means of doing that, and services don't always go about it in the right way by any means, and some of the things that they think they can do are quite badly counter- productive". Watch Manager

Sometimes there is direct conflict between the view of RBs and other members of the FRS about what needs to be done to improve health and safety management.

"The FBU locally who are fine; but somebody got lost in a fire and they immediately said there was a lack of training in knowing how to get out of that type of building, 'no it's not, it's not, it's very dark they're confused and frightened' accept that". Strategic Manager

A view was taken that the RBs may have contributed in some way to confusion around flexibility in health and safety management.

"We use to have a saying at the office that, however the officer in charge has, discretion he or she may take other actions. They don't put it there anymore, because it was felt by the unions and the individuals that it was putting too much of an onus back on the individuals". Strategic Manager

"At the end of the day if you listen to the Fire Brigades Union we wrap everybody up in cotton wool, we wouldn't go anywhere, we wouldn't do anything just in case their staff became exposed to risk". Strategic Manager

"I think sometimes the staff lose sight of the fact that sometimes it's their trade body, you know it's the Fire Brigades Union that push quite hard for some of these changes. Management probably don't want to introduce some of these things". Strategic Manager

Although it was acknowledged that the RBs had the best interests of their members, in some cases their approaches were described as unhelpful in relation to health and safety management.

"I distinctly remember the then FBU head of health and safety gave a presentation to senior officers and his words were 'I'm just waiting for one of you bastards to kill one of my members and then we'll come after you". Strategic Manager

7.6 Consistency of approach to dealing with breaches in policies

It was acknowledged that there may be some inconsistencies in dealing with breaches in policies and procedures. This again ran the danger of giving mixed messages, or even that the senior managers did not agree with the policies and procedures.

"The reason then, in that scenario that people would continue to step outside the policy, or not, would be dependent on the consequences; and being that maverick and so long as knowing they can have some flexibility to go outside the strict guidelines of a policy, knowing what the outcome of it would be, we are inconsistent in our approach at present to allow that to happen. Because we are, on some occasions they may be disciplined and some a formal talking to and some might get a commendation. We have got to be consistent on how we deal with someone who does step outside". Watch Manager

"I've even questioned senior management when they've actually brought some policies and said 'look you know this still goes on' and they do; they still know it happens so they're a bit crafty in a way. They bring in implement a policy that they know can't really you know, adhere to or unlikely to but it's almost as if they've …of the responsibility because they've told you. You get it wrong, we'll tell you; but we also know they turn a blind eye so you still know they want the best of both worlds sometimes". Watch Manager

"I just think it kind of melts away as everything was ok. Our guys weren't injured or anything it kind of just melted away, and there were no consequences". Strategic Manager

Senior managers admitted that there was a lot of difficulty in identifying issues from events and incidents which had been concluded satisfactorily.

"Who knows what under reporting is going on, who knows what compliance is going on? We don't really know, the only indication we got is accident reports and the likes. And if they don't even put those in then we got no indications of that iceberg we have". Strategic Manager

8

Senior Managers

Senior managers have responsibility for the decision-making lower down the management tiers and may be responsible for setting the tone for the culture in the organisation. It was agreed that mistakes or sloppiness in upper management, could send signals to ranks below. Mistakes made at a higher level can also set expectations for lower down the ranks. Getting the organisational structure right protects all levels in the organisation.

There was a perception that some senior managers did not acknowledge the reality of issues for fire-fighters at the front line. This made life difficult as they did not understand why fire-fighters sometimes bent the rules or went outside policy. There was also a difficulty with fire-fighters feeling that their views were heard and not responded to.

There were comments about managers who were fast-tracked through graduate schemes not having the experience to make decisions or lead. A feeling was that the service is losing practical skills and abilities, with more of a focus on political and office-based skills.

"I think we concentrate on the wrong areas when we choose leaders". Fire Fighter

Senior managers also commented on deficits in skills.

"The individual, a station manager, wasn't able to make a very simple mitigation of risk process". Strategic Manager

One fire-fighter noted:

"Everyone above makes the job for the one below more difficult than it should be." Fire Fighter

8.1   Reputation of the organization

The organisation was perceived as making sure that the top team were covered with regard to policies and procedures that may affect them.

"They wanted to cover themselves first, so we know the top team. They created systems to protect the vulnerability of themselves for anything flung up that way". Middle Manager

However this needed to filter down to other parts of the organisation and in some cases this was taking time. It was clear what was needed, but does take time to translate at an operational level and develop a framework. In some ways this may be restrictive.

It was perceived that certain policies are in place to protect the organisation. The middle ground is lost in translation.

"Without a doubt it [SOPs] is protecting the organisations. You have to have a policy to protect what your service delivers". Middle Manager

"You've got the policy that protects the corporate body if you like and actually if you abide by this policy will never ever get anything wrong. But equally there's a public expectation that we will do those things and we do have to take risks because it is a risky job and it's balancing that risk against reward". Strategic Manager

The difficulties of always keeping to procedures was acknowledged by Strategic Manager as unrealistic.

"You can't always have people that will be able to then act in absolute accordance with that procedure". Strategic Manager

Other senior managers were clear about how they wanted to be perceived.

"My view is that I want our fire-fighters to be pro-active…I would expect them to take an offensive mode unless the risks outweigh that tactical approach".

8.2   Responsibility for Fire Fighters

Senior managers feel a responsibility for their teams. When there is a potential saveable life, if there might be unseen hazards, the team would wait for back-up.

"Without a doubt the number one priority is the safety of personnel". Middle Manager

"We really owe people that are working on the front line a duty of how we protect them". Strategic Manager

Managers are also required to be aware that sometimes, judgement calls have to be made and understand the details of why, to support staff and the decisions they make, even if they are outside policy.

"And because it's outside policy, but it's still best endeavours and if you've got to take a view on it, well don't do it. But I understand why you did it. So I think management needs to be aware that just sometimes, judgement calls have to be made". Middle Manager

This issue is also reliant on senior staff being confident with their managers about their ability to make appropriate decisions.

"If you're confident in your staff and your managers, then what they're doing should be inherently safe but weighted… you can be risk averse, but then be a bit Cavalier, and you need to find that balance. In my experience, most times we get it right. There have only been one or two occasions where I've had to chase people to get them into a job". Middle Manager

There have been notable changes to risk, particularly as staff move up the management roles.

"I'm not going to take as much risk, anywhere near as much risk, as I would have done maybe 10, 15 years ago, because I don't want to be the person that goes to explain to the husband, wife, partner…because they died in a school fire, trying to rescue little Johnny's paintings or whatever". Middle Manager

It is also the responsibility of the most senior member of staff to support any decision that is made to work outside procedures.

"He has got to be there, be supportive and tell the officer in charge of the crew, 'this is what I want you to do and I will accept full responsibility for it…but I am not going to make you do something you don't want to do'…I regularly gotta do that now with junior officers". Middle Manager

Leadership was important and even though managers stand back from operational work, they would not commit crews to situations that they themselves would not be comfortable doing.

From the fire-fighters point of view, they feel they need leadership and mentorship from someone they can trust.

"Yes again that's the other thing experience is very important in our leaders. You need leaders who are experienced not ones who just tick boxes. When you go out on an incident some officers you feel really confident with, then you have others who you don't feel confident and 'I can't rely on him to make proper decisions, he can make basic decisions' and that affects and you just don't feel confident". Fire Fighter

Senior managers try to ensure that the messages about personal safety are clear to staff.

"I will reiterate this, you must if you are going to go away from anything, you must make sure that you have assessed the fact and the probability of success of what you are doing; not putting people at undue risk". Strategic Manager

Senior staff also spoke about how they were prepared to support their staff.

"We absolutely stuck to this guys decision and we defended him to the point where the organisation never once said we're deserting him." Strategic Manager

However it was acknowledged how front-line staff perceived this may involve a cultural shift; where previously there has been a blame culture and it needed to return to a point where people had confidence in their own organisation.

"The culture where people are proud to do a very professional job and they know that confidence that they will even if they make a mistake they will be supported". Strategic Manager

"I would like to think that there would be some form of support for the individuals". Strategic Manager

"I don't think individuals would believe that an organisation would stand by them like that. And they would feel that perhaps the organisation would say well you moved away from the policy, you are on your own". Strategic Manager

8.3   Openness and transparency

There were issues about openness and transparency of debriefing and organisational learning.

"I don't think we are open or honest enough in our debriefing systems". Middle Manager

Also some people were not properly aware of their responsibilities when they were promoted and senior managers

might be signing off competency forms without taking on board the full demonstration of those competencies.

"I know people who have filled in that form not honestly. They just sign it off, because they don't want to be the one that is stopping that person getting full pay…it's not just to sit in the front, the extra pay and the extra kudos. It's a very responsible job and you have to make decisions and stand by your decisions and get the trust of the staff to respect your decision-making". Middle Manager

8.4. Approach to risk

Senior managers' approach to risk was described as being more circumspect than those at the front-line service.

"We may get strategic managers afraid of committing themselves for the personal impact and the impact it will have on the service. And that cascading system then feeds down to middle management where most of the potential difficulties in commitment can lie because, if they are worried about career progression as another impact on them, they may be more reticent in committing people where perhaps they could be committed". Watch Manager

It was also acknowledged that the approach to risk of the senior teams could lead to a deficit-based approach, where positive work was not acknowledged, and only mistakes were highlighted, even if they were very small.

"It doesn't work that way if you have got a yellow helmet and you take orders from the white helmet. The person in the white helmet decides what happens. When the big boss comes in he opens the book and sees that all procedures are being followed he doesn't want to know what is happening and the reasons why things were happening. You need to follow procedure; you are supposed to follow procedure. Everybody else wants to pull the book on the next one instead of this person coming in and seeing rules have been broken for the continuation of the operations and accepting this is the nature of our job. They want to dwell on that small mistake not what have we done, the bigger picture not did we contain the fire or did we save lives. That suddenly becomes unimportant they want to dwell on rules we have broke.

It makes lives difficult, and now they tell us to just wait, it's not always possible". Fire Fighter

"We are all duty bound but I think as crew managers and watch managers we are primarily supervisory officers. I still think that there is an element above us who have abdicated responsibility. There are now slopey shoulders; it is down the lower levels as opposed to with them". Watch Manager

It was thought that senior managers tended to adopt a more text book approach to situations and were generally more risk averse and slower to make decisions.

"I wouldn't say bend the rules….. I would say make judgements against guidance". Strategic Manager

For some, the issues are very black and white.

"Irrespective of the fact we've left absolutely no grey areas whatsoever that this was not to be undertaken they still, the officer in charge undertook to do it; if that's not wrong then I don't know". Strategic Manager

But for others, the factor of the ability to respond sensibly and pragmatically.

"When I'm not in charge and you see some decision making from the senior management where sometimes you think, 'god if we were just could actually go in and get the job done it would be finished in no time…'. But they're almost hanging about, thinking 'well we won't do any of that because of the risk involved..' But we done it better in the old days, we took more unnecessary risk probably. But having said that we also got the job done quicker… there is a balance there somewhere along the line I think to the point where you know 'oh yeah there's no one in the building so we'll all stand outside and just let it burn' and you think is that really right?". Watch Manager

Some of these dichotomies may be due to training.

"I think the way we have trained our managers in the past has led to this unrealistic expectation and I think we have got managers there who are weak and are not being allowed to make decision". Strategic Manager

This was also seen as a result of managers being promoted who didn't have the experience to lead decision-making. An example was given by a fire-fighter.

"Ok we went to building on fire, got there and we could see through a vision panel on the door that it was smoke filled we could see the fire concentrated in the corner….so we broke the vision panel and put the hose through, sprayed the fire and the smoke changed because we put out the fire. The guy outside less experienced shouted 'its gonna flash ! its gonna flash!!' Me and my partner thought we have got this under control, we are ready to break the door and go in and we could see that there was more smoke than anything and there were no gases in there we had sprayed and there wasn't any chance of anything else happening. Suddenly the call comes to withdraw, so when the call comes you

don't know what that is, so we withdrew quickly. So we got outside and they said 'its going to be a flash over' "Where?" I said "Where you were…" Why? "The smoke changed" I said "it changed because I poured water onto the fire". We stayed outside for 35 minutes and the building burnt down". Fire Fighter

Senior managers acknowledged this and put it down to lack of technical knowledge.

"They don't understand the construction of the building that actually it's safe to enter, to put crews '". Middle Manager

"You can almost become chief fire officer now without riding a pump as a rank and I think that it has shown it has been a challenge for us". Strategic Manager

"We have had individuals who have never been in charge of a fire appliance and end up as station manager. And by one of their own admission came up to me one day and said 'for Christ sake don't put me flexi as I wouldn't know what to do". Strategic Manager

In some cases management who did not sort out problems or issues was seen as not proactive.

"I think also it's a damn sight easier to stop things than try and actually sort it out. It's so much time and effort saying as from now, 'no you will not, blah blah blah', instead of actually saying, 'right, ok if we do something, how can we look at this and perhaps we accept that, we might need to do that, but try and make it safer'. Sometimes, I mean, I'm not saying that it happens all the time, but there is some classics and they are very good at doing that, unfortunately, but that's the way it goes". Watch Manager

Some senior managers took different approaches to risk and would be more lenient when viewing front-line staff who had stepped outside of them.

"And I can honestly say that there are times when we do go off the reservation to get the aims and objectives achieved before our flexi duty officer will turn up…..We got a good working relationship with our flexi duty officers and we know those who will give us the latitude to achieve the objective and we also know those that will say no". Watch Manager

There was also the view that there needs to be an element of trust in the front-line, which seems to have been eroded with insisting on a text book approach.

"We have to accept the fact that our crews are not going to be equipped and able to deal with every type of incident they ever come across". Strategic Manager

A distinction between leadership (from the frontline and experience) and management was made.

"An officer is a leader; a manager is someone who manages and that's how I separate the two…..you do tend to lead by example, perhaps some of the young ones they're not that young either- they may be fireman or fire fighters for a long time but they haven't been a rank for as long as say I have for 18 years or something like that. They're sort of trying to run and they're almost frightened of their own decision making capabilities and you go to jobs sometimes and think 'why have you done that?' and you have a quiet word with them, 'this is what you should have done' and you sort of say to them 'right we need to fix this so we will do is this' and that's what used to happen in the past. But it just doesn't seem to happen these days anymore". Watch Manager

Senior managers demonstrate the view that they would look very carefully at the risks and benefits.

"Is the risk worth the benefit? No, I would not take the risk". Middle Manager

Middle managers did not admit to stepping outside policies, but viewed dynamic risk assessments as being the guide to what further action was required.

Supporting officers with decision-making was perceived to be an issue for the organisation to sanction and to have the structure in place to ensure that those decisions are high quality.

"Should be more around flexibility…it's about organisational culture, it's about having a culture to support officers in decision-making, based on skill, expertise, knowledge and equipment, to deal with an incident. If we support and are seen to support it and not punish it, that will be healthy, I think it's about expectation, what we are there to do and it's about making and taking difficult decisions". Middle Manager

From the front-line there is a perception that decision-making is predominantly the domain of those who are first on the scene and this is perceived to be a double-edged sword which puts them under a lot of pressure.

"They have devolved the responsibilities down, they have also educated us to a standard were we should be able to make decisions…..It is, there is far more caution exhibited by OICs and myself now than there ever was before; we have got to think about the welfare of the crews and the potential outcomes of our decisions that are being made far more.

We are scrutinised far more ....certainly more pressure when you turn up to a job". Watch Manager

8.5 Seeking promotion

It was recognised that staff who were seeking promotion may be more risk aware.

"Clearly that has an impact on decision making at the highest level not least the fire authorities themselves who are then issuing instructions about the way in which they want strategic managers at senior level to proceed. It's bound to have an impact....if somebody is a chief fire officer in one service looking to move to a bigger service or an area manager looking to move upwards they are going to not want to put themselves in the frame for making decisions that could lead to potential injury and I think the perception is that they may not be supported by the fire authority and their principal managers". Watch Manager

Also some managers who have been promoted quickly and who lack the frontline experience of incidents could be more risk averse due to ignorance of risks.

"I think they know they've promoted some fellows how should I put it, a little bit quickly and with them having less fires to go to they're not picking up the experience that they use to. With some of the newer ranks they tend to be let's say they're managers rather than officers". Watch Manager

'...we were the second machine and there were a load of lads sitting at the pump looking and I'm like 'where your boss?" We don't know he's just wondered off with hydrant' So there's a fire going and he hasn't left them anything to do; and like 20 minutes after I got there he turned up; because he couldn't make a decision and he didn't know what to do, he micro managed himself off to somewhere else. It just can't be allowed to happen and I was thinking to myself that's absolutely horrendous.

Interviewer: *So what happens in situations like that?*

He went on to days, he got promoted.' Watch Manager

9
Role of Teams

The team or crew is an important unit in dealing with incidents. How they communicate and interact can make a difference in how safely the event is tackled and brought to a conclusion. There are a number of factors which support and provide barriers to this, including the length of time they have worked together and the respect they have for each other and the influence this has on decision-making.

9.1   Confidence as a unit

Teams that work well together as a unit inspire the trust of managers. The ability to assess an incident and decide whether it is within their capabilities and whether to ask for assistance is paramount.

Although more senior managers may attend incidents they do not necessarily need to support teams that are able to control the incident. Training was perceived to be a time where specific advice and mentoring should be given. A good team recognised the skills and deficits in its team members and played to their strengths.

The role of the team as a unit was highlighted and an established team was able to utilise individual expertise to get the job completed satisfactorily. In some cases it was thought that managers can be a little bit big headed due to their rank.

"In this job irrespective of rank, you don't necessarily know more about that particular incident…if you have a local crew attending who are farmers themselves, they will know more about farm machinery than I will ever know, so I am happy to delegate responsibility to someone to give me advice…but I will accept full responsibility if it goes wrong". Middle Manager

"They worked very well together…they trained together. Because they worked together, they see their capabilities and I think they are very aware of their own limitations and that's a healthy place to be". Middle Manager

Teams played a very strong role in making sure that health and safety management was manifested in their work. Trust and demonstration of abilities were highlighted.

"If they have got strong members - they trust so and so to do this…If they lose that, then all your health and safety is going to go out of the window isn't it?". Middle Manager

An example was given of where two colleagues were not trusted to wear the breathing apparatus, so they were always put on other duties.

Age and experience can influence safety and confidence, but managers are aware of their roles in training and supporting newer crew members.

"I will sometimes go outside the SOPs because they're quite keen to get the job done as well; we're all at the same age, we're all quite experienced on the watch; if there were younger people on the watch I would stay more within the parameters so they didn't pick up bad habits. But with the guys I'm with they know when they're safe and they know when they're not. When they know they're not, it's usually for a reason, a good reason to effect a better rescue, a quicker rescue". Watch Manager

'…but that comes down to training, knowing each other in the team and you know (Interviewer Absolutely who you can rely on?) You know their strengths you know that right someone's in the water and he's not a very good swimmer … and that's the way you rely on… again that's how you base your risk how you, going back taking a risk and taking a risk you know those that if you give them that little bit of rein they might go over the edge… you know you can totally rely on, and you know there is a mutual respect I think so....'. Watch Manager

9.2   Barriers to team working

A barrier to team working are teams that do not communicate well, therefore they do not have the depth of discussion and debriefing around incidents that add value to learning from experience. Also communication at an incident may be non-verbal, so this adds to their effectiveness as a unit, some difficulties were highlighted in the lack of time some teams had to do this and starting too many new people at once in a crew. Some FRS teams had deep seated disagreements due to previous employment issue related disputes affecting teamwork among members

One issue that could be a barrier to team working is that of role confusion and the perception that some staff are given higher status perceived not to have been earned. For example, those entering at a senior level who had not gained experience and retained staff who were given equal or senior status similar to full-time fire-fighters. This interfered with some individuals being able to lead incidents or be respected by more experienced or junior staff and in some cases meant that they were not listened to.

"It was very frowned upon that retained sub-officers were given a higher status…They get through old men's rights, you know dead men's shoes". Middle Manager

"Yes again that's the other thing experience is very important in our leaders. You need leaders who are experienced not ones who just tick boxes. When you go out on a incident some officers you feel really confident with, then you have others who you don't feel confident and 'I can't rely on him to make proper decisions, he can make basic decisions' and that affects and you just don't feel confident". Firefighter

The issue of people not willing to change and having the years of experience to ensure that they are not challenged was discussed. Also the ability of certain individuals to apply leadership. The role of strong characters in the team and their ability to influence the team should not be underestimated as this will play a strong role on the culture which is established and problematical in organisational development.

"You could have strong characters on the watch, who the officer in charge, who has probably got not a great deal of control over, as these people see it, as we've always done it this way…You could have a person who has been in 4 years could be in charge…and a person who has been in 20 years and has always done it that way, and doesn't like to be told what to do or thinks actually you don't know what you're talking about. Or if it's a female – they don't like females". Middle Manager

9.3   Team culture

The culture – that is the commonly held and accepted values, behaviours and norms of the team, has a very strong influence on the learning of individual members. It could sometimes be difficult if a team did not accept a new member due to a perception that they are different in some way, or have different backgrounds, beliefs and concepts. This potentially poses particular problems as the more experienced crew-members are vital in passing on their skills and for watching their team members' backs.

"You only learn to be a fire-fighter, by them teaching you…if you don't fit in because you're either a bit of an odd ball to them, or you're (years ago) a female, or you were a black person…or you're a member of the HR department…if you prove yourself to be a proper fire-fighter, they will teach you your trade". Middle Manager

As well as these issues, there was also the issue of proving yourself to the teams to gain respect. Traditionally this is done through operational work in supporting the team and may be difficult for leaders who don't have significant operational experience and need to stand back more to gain an overview. This may also lead to difficulties in more senior staff being respected who, in turn, may come from a different organisational background.

"Officers used to lead men in, but you can't any more, out there on the side, so you're not part of the gang, a proper fire-fighter". Middle Manager

The culture of the watch also plays a crucial role in fire-fighters discharging their duties in accordance with procedures.

"You've got to work as part of a team, work within the policies, the rules and regulations. You got to be fit, fit to do the job, you've got to wear the appropriate PPE, use the correct equipment. Organisationally you have got to advise safe equipment, safe training, proper training, proper supervision, proper standard procedures, so people can actually be facilitated to work within those parameters, whether they do all the time is down to an individual culture of the watch". Middle Manager

Strength of leadership is important to develop when managing teams and applying SOPs in relation to incidents. If team members ignore a request, and think it is in the best interests of the incident, the senior manager has to be strong in dealing with that member of their team.

At times people with many years operational experience may cause difficulties for the newer managers.

"The number of times when I have gone out with the pump and I have had a far older generation in the back. Because we are mixed crews we go out with whole timers as well as part timers. And I have huge issues with the old generation in the back. They go off on their own and do their own thing. And you have got to tell them and in the end you got to shout at them. Or you have got to get it written down on a piece of paper 'I told him not to do that'. And two minutes later he has fallen over the wall and is on his back like a turtle. It's not so much of an issue now, because we got a newer

generation in we are all maybe singing off the same hymn sheet; but my hands are tied as far as what we can and cannot do within the boundaries of being safe". Watch Manager

'When we go out I know who is the best breathing apparatus crew, I know who is the best casualty care and RTC I know who is best for the jobs. I know who to put someone to shadow with". Watch Manager

9.4   Acceptance by teams

Being accepted as a member of the team was due to being good at your job and you rose through the ranks and carried experience, knowledge and skills with you, which was supplemented by learning through exams.

In the view of some, people who have not got that experience have contributed to the erosion of practical fire and rescue skills. .

"Recruits that are coming in now are not of the same standard…in 1980 a lot of the people I worked with were either ex-military or ex-trade people who were very skilful practically. Unfortunately I am now working with people who have been promoted, who have never been in charge of a station, a watch, never been in charge of a fire appliance and I have noticed that a lot of our middle managers and junior officers lack the ability to make decisions or lead effectively". Middle Manager

The lack of operational experience may contribute to decisions being made according to rigid adherence to policies which is not mitigated by the on- the -ground experience that would allow them to take more calculated and informed risks.

The issue of the *"them and us"* attitude was noted to exist to a lesser extent or not. One manager describes how his team's attitude changed to him when he got promotion.

"Some people changed their attitude to me overnight, because suddenly I was one of them, cause I had a white helmet and a white shirt". Middle Manager

⑩
Learning and Skills

All FRS operate on a training matrix-type or skills- need type of approach, where the training goes on record against specific need for skills and training is provided to reduce the gap. Some things which are risk critical are given higher importance. The breadth of training is acknowledged to have substantially increased, with a mixture of coaching, mentoring, training and experience. This theme draws out some of the issues of how approaches to health and safety management are supported by experience and teaching, and how the essential skills are retained in the FRS, given the wider range of incidents and the changing service.

10.1. Learning through experience

Learning through experience is a key part of becoming a competent fire-fighter, although there is less opportunity due to fewer incidents.

"On the job training has disappeared now because we don't get the jobs (incidents), yes we have computer simulations, yes we have exercises but there's no substitute. We have to try and get to is a situation where the training that we actually deliver is so realistic". Strategic Manager

A number of learning opportunities were provided at incidents. One example - hot debriefing sessions were essential to understanding incidents and what went well and less well. Transparency and openness and a lack of blame were essential for learning and developing decision-making skills.

"You made that decision right at the time on what you knew at the time…now seeing it in the daylight, having other people's opinions filtering in, with a fuller picture, you can say something different". Middle Manager

Learning from incidents can also be supported by looking at other similar episodes. Time is needed to gather evidence, but it is thought that it is necessary to spread learning across the organisation in order to obtain evidence to provide new equipment or to make recommendations and influence training and development. It is important to have the structures in place to share learning and develop insights in committee and also the opportunity to make some mistakes and learn from them.

"I also think that people need to be able to make mistakes". Strategic Manager

One example was given of a younger fire-fighter being shown how to use a jet as a venturi to extract smoke from a building. Learning is constrained due to less operational fire experience and also learning from the more experienced members of the crews.

"But I learnt that from older firemen when I joined, but because you don't get the fires, that learning is more difficult". Middle Manager

"As a probationary fire fighter you're put under the wing of the old hands and that's what happened, you serve your apprenticeship if you like under the wing of a long serving fire fighter who says to you don't do that because you'll hurt yourself". Strategic Manager

When looking at other incidents that had occurred and the subsequent investigations it was thought to add to the mixed messages fire-fighters were getting about their role.

"If you look at a number of them (incidents) the legalisation would say that what they did was right but morally on a number of incidents, morally you would say that is wrong". Strategic Manager

These comments suggest experience, through learning from others directly or from other incidents is important to equip fire-fighters with the skills to understand risks and make good decisions against a dynamic risk assessment, as an addition to training.

10.2 Learning from and working with other agencies

It was acknowledged that other agencies such as the military, police and ambulance service had developed approaches to health and safety management, risk assessment and decision-making, which could be learned and shared. Taking a

cross fertilised approach could potentially enhance and deepen the understanding of health and safety in the FRS. We have described some of these in section 1.

The military was mentioned in that it had good decision-making models which could be t utilised to support training for the FRS.

"There are many parallels between the way the military make a decision and the way we do". Middle Manager

In addition to this the military have an excellent leadership and communication training approach which could be applied to the FRS to support leadership development.

"The fire-ground is very transactional so unless we understand better what our management capabilities are, what our leadership capabilities are and what our command capabilities are… that's where the military can teach quite a bit in how they structure better". Middle Manager

However difficulties were highlighted when working with other agencies and although multi agency working is desirable there were still difficulties.

"…it's really difficult. Its extraordinarily difficult…well who is in charge for a start?". Middle Manager

There is also the issue of how risk assessments are done, how to deploy into a situation, not knowing how others are going to behave. Examples were given on working with the military, ambulance and with police where hazardous materials might be involved and the inability to put control measures in place with all understanding of what they are and how to behave in relation to them. The issue of protective clothing was also mentioned and how other agencies deploy themselves in different ways. A Paramedic who entered water and rescued a member of the public was hailed as a hero, but fire-fighters did not enter the water due to policies preventing them.

Aspects such as regionalisation were discussed and the possibility of sharing resources. It was acknowledged that FRS are perceived very differently and sharing a registration desk with the Police for example might change the communities' perception of them as a 'neutral service'.

"Joint working takes place for the ambulance service, again not necessarily a problem. But if it takes place with the police perhaps there is a problem with the neutrality of the fire service. Just locally they are having, the proposal is to have police front desks based on fire stations, a bit difficult to maintain the standard of public support we get if we are seen as not being neutral in some communities". Watch Manager

Unfortunately some previously close relationships between services are in danger of being lost, which may in part be due to health and safety management issues.

"…And we used to have a very close working relationship with the local ambulance service. We have not got it any more. It is because our management are driving a wedge between us and them. We used to have you know a relationship…. Cut the car you know with the tools, working together to get the casualty out….You know we are not allowed to fly in the helicopter. The air ambulance is used quite regularly ... There has been incidences were we have gone away to the hospital to assist the paramedic in the back. We are not allowed to do it anymore; we are not allowed to get in an ambulance any more". Watch Manager

'But going back to the bariatric side you know we can assist but where would we sit if we were injured? And all of a sudden now they do not want us to do bariatric. They don't want us to carry patients in the ambulance, sorry in the appliance. Which I can see where they are coming from but it's not a cost effective way of a resource is it?". Watch Manager

'"…fire and rescue convey people to hospital quite regularly when there isn't an ambulance available. You know we have turned up to an incident- carbon monoxide they had to wait 45 min for an ambulance to come … and all we've got is our oxygen therapy. So we obviously have got to give or administer the first aid, the oxygen therapy. But when that, if that casualty for whatever reason passed away on us where do we stand. You know there is this fear factor within the service about, if something happened to a member of the public, whilst were dealing with an incident. The finger pointing there is that element of it. It's the culture we are in today unfortunately". Watch Manager

Divisions between the emergency services does not promote good teamwork when they might be required to attend major incidents, and this includes joint training.

'…But we are not all working towards the same thing. The police, ambulance and fire we have got our own little areas. We are more concerned about our own staff and the risks associated for them you know". Watch Manager

'….Yes if there was a dirty bomb in one of our city or town centres, we would be mobilised from our station because we are a decontamination team….You know we have done a number of scenarios where we are supposed to get 300

people through these showers in a set hour….We can't get the police or the ambulance to come and attend these training scenarios we got. Because ultimately if there is one we got to know what we are all doing? Another example they haven't got the financial resources to spare crews to attend these training days and they are good days. We need to its part of the resilience following 9/11 and 7/7 the bombings. That's a bit frustrating". Watch Manager

10.3   Fire Service Exam System

Many interviewees mourned the loss of the old exam system as they felt it set a technical knowledge benchmark as well as giving those that successfully passed a sense of pride. It was thought that the current assessment process does not give the level of detail that may be useful in the FRS.

"You had to know more than all the fire-fighters knew and I think we have lost that". Middle Manager

"I think the fire service…missed a trick when they got rid of the statutory exams, that was where operational experience came together with knowledge. Now you can probably pass those papers with experience, but if you didn't have the experience, you had to study hard". Middle Manager

There is a perception that the FRS has moved away from operational technical proficiency towards community safety which needs a different skill set to the detriment of technical skills and knowledge base

"The way people are being trained and developed a lot of soft skills and the lowering of input of the technical skills…. and we now leave ourselves very, very exposed". Strategic Manager

"It encouraged me to go and read the procedures I wouldn't have read before…People say I'm not a book person, you know, I don't do lists…but you need to know those lists I'm afraid…to know it on the incident ground…you need to do that in order to protect your staff so they can go home to their families at the end of the day". Middle Manager

"The format might not be right, but the concept is. You need to learn the stuff". Middle Manager

FRS may be starting to move back towards operational proficiency and it was noted that teaching styles had progressed considerably with multi-media approaches to training addressing some of the previous difficulties with varying skill acquisition.

This was thought to be a major part in the reduction of skills moving into more senior roles. However it was acknowledged that the old system did have its faults.

"We don't pick the right, the most skilled people – we pick those who can pass the test at the moment". Middle Manager

A balance needs to be struck in keeping the assessment of knowledge, but building the skills needed for leadership.

"There's a number of officers out there that have never had to sit a technical or a practical examination". Strategic Manager

It was thought that in some cases training should be updated to accommodate hazard perception awareness management. Currently some syllabuses are quite old and might need to be updated to accommodate newer hazards.

Some FRS are moving back to doing a command competence which looks similar to the operational element of the old exam. However it was noted that there were things which were difficult about the older system.

"It's about how we manage time and how we manage our training better because even some of the old traditional methods of training weren't the best". Strategic Manager

⑪
Decision-making

New tools and techniques are now able to be explored, for example using cameras to record real incidents. In order to support training and decision-making where experiential learning may be diminishing, it is important to have real life situations to demonstrate how decision-making evolves at real incidents.

"We need to continually expose our incident commanders to as many incidents real or simulated…and evaluating their decision-making process and getting them to understand that the information you need, you will never have it at the time you want it…it's just the exposing people all the time to that trade off between availability of information and relevance of information". Middle Manager

Models of decision-making are important and these need to be developed allowing skills to develop to apply these models in a flexible way. More sophisticated training might be useful in looking at decision-making.

"We make a decision and then we'd find the things that justify that decision: we don't do objectively, and the trade-off between a good decision-making model and one through which training and exposure teaches us to recognise the cues that we are looking for…we tend towards a dissonance type decision than we do an actual dynamic decision…looking for gaps and information flows, looking for gaps in real-time knowledge". Middle Manager

"And we don't even get into the realms of the psychology of decision making or anything like that because we don't teach it, because sometimes I think we can be a bit arrogant and think that either we know it or senior managers know it or we will not teach them that because they just will not get it". Watch Manager

Others made sure that all their decisions and the decision-making process was recorded on a Dictaphone or suggested that cameras should be carried to ensure that the context in which they made their decisions was clear. Comparisons were made to the incident where John Charles de Menezes was shot erroneously. Although data protection issues were also raised in relation to this approach.

"As you make those critical decisions you have to have a recording mechanism for that. I carry an electronic Dictaphone to record anything I do". Middle manager

Not recording risk assessments and a record of decisions made can have serious repercussions later on as demonstrated in Warwickshire.

"They hadn't actually recorded and looked at some of the risks that had gone on, so there were serious failings in risk management". Middle Manager

Another issue raised, is the consideration of the way health and safety management is approached through training.

"The health and safety management training we provide is based around the health and safety at work act and policies. Perhaps we should spend more time discussing incidents and 'what if', and going through the different scenarios and saying 'yes, in that location you made the right decision". Middle Manager

11.1   Retaining skills

Maintaining core skills was highlighted as an issue with a large number of firefighters at all levels currently reaching retirement age and a cadre of skills and experiences were going to be lost. This is thought by staff to start presenting very big problems.

"I think in the next three-four years we are going to see quite a dynamic shift away from particular age group to another age group. I think we have the retirement kicking in. A lot people joined after 1976 /1974. There are a lot of them now coming up to their 30 years. Some of them have done in excess of 30 years, some managers 38, and 39 years. When they go, I think the service will change dynamically…. ''. Watch Manager

"How do we maintain our core skills and competencies at a time when a lot of our officers are reaching an age where they are retiring and we don't have any new staff coming through or many new staff coming through which can learn that level of experience before it disappears at a time when we're not exposed to operational incidents which develop that experience in the first place?". Middle Manager

Skills around innovation and how to assess a situation and use risk assessment to a greater depth are at risk of being lost.

"How do we replace that application and flexible thinking and that ability to make decisions and all those sort of risk implications to sit behind it. How do we instil someone the confidence to make those choices?". Middle Manager

It was acknowledged that in order to make good decisions, experience had to underpin the availability of information and the knowledge base. Also one SOP may not cover a complex problem.

"The ability to a) make good decisions, critical decisions based on the information you've got available, to you, which is never all the information, and the skill to weed out the chaff and the skill and ability to record that. They are sophisticated skills and to be able to that properly, you need to have the knowledge, the training and development, you need to have experience…Problems can't just be resolved by referring to a SOP because they're complicated". Middle Manager

The old style training was also discussed and issues and the discipline required around health and safety management. Also the training around the practical issues of the job used to be more prevalent, where the FRS was very hands-on.

"…I think the experience certainly does play a role but also training is the key thing, I think something that we tend to bang on about from up the old fire fighters if you like, The training nowadays is nowhere near what we went through… when we first joined….it was a very very disciplined course for that period of time and that stands you in good stead for the rest of your career. They just don't get it now, the change in recruitment, the way they do it, they're bringing in part time guys who joined and joined very easily, very easily because the needs of their area's at the time and actually get into the service that way. They have now been able to transfer to a whole time, they've gone through none; they've had some training to come over but they've never had that discipline. And you see young lads now, because there's no discipline in themselves and no discipline from where they come from in terms of their past or their stations. They then think they can bring that into the job and that is the danger; because it's that discipline if they haven't got it elsewhere then there's risk they won't have it in the fire ground when they're at most risk and it's from lack of knowledge and lack discipline which then makes it harder on the managers to actually manage and keep an eye of them even more". Watch Manager

Changing Service

The FRS is changing, particularly with regards to funding and demonstrating value for money. For some the changes that had taken place were difficult as the shift in the FRS has meant there are fewer fires and other considerations, such as a focus on the community and environmental priorities in the use of resources. For some this is a difficult shift and means that their identities as fire-fighters need to be reconsidered.

12.1   Reduced incidents and shift in focus to community safety

The shift towards prevention has replaced some of the operational work. Much of this involves home safety checks and the provision and fitting of smoke detectors. It was suggested that this element of the FRS might be better delivered by other agencies - such as Age Concern to fit smoke alarms etc. In order to give value for money, the highly trained fire-fighters technical skills would be better employed strategically engaged in doing what they were professionally trained for. However as operational readiness is key to the FRS in meeting its obligations to the public as well as visibility – these activities may be vital to sustainability. Operational and prevention are often two parts of the same coin.

There is a feeling that reduced incidents and the increasing focus on community safety have left the FRS with a reduced level of practical experience.

"What is the point of carrying a tool box full of tools that he can't use?...". I feel our fire-fighters have not got the necessary skills to deal effectively with some of the incidents". Middle Manager

It was suggested that fire-fighters' time could be better spent focussing on operations, and other organisations could fit smoke detectors. It was also suggested that they were not reaching and educating the sectors of society who would benefit most from these initiatives.

"I am all in favour of community safety, but not at the expense of the main purpose of the fire service which is to respond and assist the public". Middle Manager

"I very rarely see the fire crew practicing up the yard, whereas before that was the mainstay of the job". Middle Manager

"…my job is more about the risk reduction than response nowadays… I go to one fire and as a result of that I get 10 tons of work and got to go out there and meet everyone else. We had a fire with a Nepalese family now I've got to go around the whole of the Nepalese community, which is fine I haven't got a problem with that but it is, again that would have never happened years ago but that's a good thing". Watch Manager

It was acknowledged that resources in some services were diverted into prevention which is described as valuable; but this did take firefighters away from operational work and shifting the nature of their role. This is described below.

"We seem to generate a huge amount of momentum in one direction to the exclusion of others; we did it relatively recently, we had a move from focus on purely response base service to prevention work and community safety…we have almost ignored the response service, consequently there is a discussion now about whether our staff are not adequately trained to do the job". Middle Manager

12.2   Experience

There is a large number of experienced staff who are due to retire in the next five years. The loss of these staff was highlighted as something which will have an impact on the health and safety management of these organisations.

In some cases it was thought that organisations were not taking the necessary precautions to mitigate the risks of losing these staff.

"I honestly don't think they care about losing experienced staff". Middle Manager

Another point raised was about the practical skills of new recruits. A perception was that there are more graduates appointments and less operationally focussed staff who might have traditionally be recruited with a background in semi-skilled work with more practical, work structure and teamwork skills. Its also thought that people who have been trained

in a trade are more adept at an operational level and therefore have greater aptitude in understanding and managing risks.

"So people are coming from an environment where they had to be safe…when they joined the fire service they were used to working in a risky environment. Also there was discipline…there was a structure; there was a mutual respect for people's abilities and the fact that you worked as a team. We have now got people joining… from school who have got no life skills…They haven't proved themselves". Middle Manager

The issues of the impact of managers who have not come up through the ranks making decisions was raised as something which could cause more risk averseness potentially through not being able to fully understand a dynamic situation.

"We got managers making decisions that have never been there. They have been fast tracked through the service and have never made it…they have got to realise the dynamic nature of this job and some of the pressures that officers and crews come under". Middle Manager

"…again when I was a fire-fighter it was very hands on. The fire service was a little bit different you used to know the ins and outs of the equipment, you knew the limitations you would know the pressures, how many bar the pump would work at, and you'd know the practical side of that. Whereas the fire-fighters of this day and age seems to be very, a theory seems to be very good at using computers, very good at using the phones etc but practically they are probably not as hands on as years ago". Fire Fighter

12.3   Changes in culture

There has been a change in the culture of the FRS. Senior managers are more open that they used to be to take on board suggestions regarding health and safety management. Front-line staff can challenge decisions or make suggestions, which never used to happen.

"In the old days it was more Militaristic. If I say jump, you say how high and that was how it was then". Middle Manager

"I think in the first half of my career I think there was a denial that Health and Safety applied to the fire service". Strategic Manager

This was thought to be harmful in situations where concerns had been raised and then been quashed by a more senior manager.

However there was a perception that from a closed door culture where people were "spoken to quietly" and trusted more, there is now a much more drastic approach to incidents where there seems to be a lack of trust about the way things are done.

"When I was a fire fighter, station officers were trusted I think by senior officers, if you done something disastrously wrong I would expect now as then a DO or ADO would come and have a quiet word with you ….I might agree and say to be honest with you I made a mistake …Once in a blue moon quietly behind a closed door people would tend to know but it was a good way of doing it I thought and you might learn something and also the job would learn from me 'why did you do it like that?' 'because sometimes there is a reason…'.Now it seems to be that every time an ADO turns up which they do now to watch if there is a possibility that life risk involved the first thing they do is look at you and say right what's he not done right". Watch Manager

It was noted that everyone's approach to risk taking had changed, but from being more haphazard and gung-ho, it had moved to become much more risk aware which if translated to risk averseness , could be damaging for the FRS. It requires an honest debate to help the FRS move forward on the issue.

"But to become paranoid about risk has not done us any favours….we need to have an honest debate and an honest exchange about what are we doing and where are we going with risk because some of the consequences from the changes in community fire safety…. you may have to make a decision where you have to put people at a greater risk than they would be exposed to,; it does not mean that you have to put them at such a risk that they will get hurt, but you have to accept that there is a difference between exposing someone to injury or death to exposing them to a greater risk than sitting at home wrapped in a duvet. It's that balance and I don't think necessarily some people in the fire service have got the balance right". Watch Manager

12.4   Role of the HSE and the legal system

Many in the FRS, particularly senior managers felt that the HSE played a role in adding to the confusion of how fire-fighters should behave in relation to risk. The FRS- as indeed other emergency services- were in essence different to

other manufacturing businesses. In the FRS, individuals felt that they had signed up to take some risks and if those were eliminated, then the organisation would not be able to perform its duties as expected by the public and tax payers.. Managers have already expressed feeling uncomfortable about how the HSE may personally blame or prosecute them (see section 7.4.2.).

"We will take risks, that's what we all signed up to really, that's what I signed up to". Strategic Manager

"Very hard to engineer that [risk] out with policy procedures or whatever". Strategic Manager

The FRS was regarded as a safe organisation by some.

"The fire and rescue service over last 10, 20 years is a safe working environment considering the risks etc. is comparatively safe so that doesn't mean take risks, doesn't mean put people in danger, but at some point you got to get in". Strategic Manager

In cases which have gone to court or are being investigated, it was felt that the inappropriate sort of standard was being applied.

"There was no acknowledgment that that was any way different from a factory processing". Strategic Manager

"It's quite clear that the representational bodies with great gusto will be pushing for some sort of prosecution". Strategic Manager

This created a lot of difficulties when trying to balance the demands of the duties placed on fire and rescue authorities with the demands of the HSE- the enforcing body- felt to be unrealistic.

"Part of the pressure we're under is being able to service both sides". Strategic Manager

One key issue is the interpretation of the guidance.

"Warwickshire sent shock waves through the fire and rescue service sector HSE are saying that they think the fire service has misinterpreted the guidance". Strategic Manager

"You've got to factor in hindsight issues and massively dynamic risks that you don't have any control over, I think we are coming to a point where both the Health and Safety Executive and the Fire Service have a common understanding that it does apply in recognition of the environment. There has got to be assertion under health and safety legalisation that sometimes you know what fire fighting is bit of a risky business". Strategic Manager

The interests of the public may not being served at the moment.

"I have to say irrespective and I don't know the case or any more than any outsider but absolutely outraged that the CPS could in any way think this is going to be in the public interest". Strategic Manager

"Why do I pay my rates to you know, to fund a fire service if you're not going to do what I expect you to do when you arrive?". Strategic Manager

The legal system which follows the health and safety legislation may be obscure and influence how the public may view the FRS.

"Prosecutions are a key thing in this, they can influence people opinions and people's views in term of how they are going to make decisions on the fire ground and that is something is really key". Strategic Manager

Prosecutions do not appear to be in the public interest.

"The idea that fire fighters could be prosecuted for doing, for trying to do a good job seems to me to be perverse in many ways". Strategic Manager

It was queried as to whether the legislation was suitable for the FRS and whether robust changes needed to be made.

"I would to see changes in health and safety legalisation, maybe even exception in cases of emergency services and that's not exemption from health and safety law as such but an exemption that says if your faced with I don't know, a fast changing, dynamic environment". Strategic Manager

"Where the conundrum comes in for an emergency service is you know the interpretation of your place of work becomes infinite; it could be anywhere doing anything". Strategic Manager

"Health & Safety Executive, any improvement notice that's issued on one fire service is basically a health and safety improvement notice served on the British Fire Service". Strategic Manager

Although there have been calls at government level for change, these need to be in the underlying legislation to effectively support this.

"It's OK ministers saying there needs to be more sense with health and safety more reasonable, then when acts to undertaken that go wrong, if it happened here it wouldn't be that minister that in a court in front of somebody with a curly wig on and being personally prosecuted for corporate manslaughter". Strategic Manager

"Irrespective of whether you think is a good thing to do, irrespective if you think it was a brave thing to do, irrespective if you think might have achieved and saved somebody's life, if something had gone wrong it would not have prevented the health and safety executive from prosecuting this organisation". Strategic Manager

12.5   Promotion

The way that promotion was handled was a point of discussion and it was thought that some traditional natural leadership abilities have been overlooked in favour of newer models. Discussion about the calibre of new managers has been discussed elsewhere. Newer ways of assessing a portfolio does not give a picture of real experience and this shift in leadership styles is challenging for some.

"We have got to go back to that sort of development where on those concourses the good fire-fighters who have clearly got good leadership qualities are taken to one side and said "there's an opportunity there for you do you fancy taking it on board". Watch Manager

"… doesn't matter for all your health and safety training in the world or whatever you know from your training…but when you get there and look at, you assess something, you look at something, you know it's going to be a bit dodgy; but it doesn't stop you doing it, because you are risk assessing and thinking well if you've got to- you've got to… I mean I had a lot of respect for the manager in those days because, a lot of their assessment was based on experience and generally the ones that have got to that position were very very good for that reason. Different promotion system in those days compared to what they use now….a lot of promotions now are done through paperwork… none of its based on fire-fighter knowledge anymore it's all based on….So I think there's a danger now of actually having a core management that haven't got that experience anymore. Definitely therefore they've become very much reliant on policies because they haven't actually got the practical experience to fall back on". Watch Manager

For one middle manager, the changes meant that recruitment to the FRS should be reviewed.

"We call them fire-fighters – we actually spend more time on leave than we do fighting fires, so there is a perception issue there. Historically it's been about the perceived heroism of what we do… so equally in a world where we don't do those things in a way we did, to the same level, how do we attract and maintain career paths for individuals with different expectations of what we do". Middle Manager

To gain promotion senior managers have often recognised that they have a skills deficit in their operational knowledge which also causes worries.

"I have actually told a number of them that they need to go back on the pumps before I even considered them. And I am considered to be skirting with fairness and equality issues there". Strategic Manager

"My bigger concern in fire and rescue service at the moment is the supervisory managers. There's a number of reasons behind that but one of those is how we promoted people in the last six or seven years". Strategic Manager

Skills and experience are crucial in order that good leadership can be provided to teams.

"For people who follow orders they need to know that the people who lead are proficient; they don't want to be thinking 'Well here's a wally'!". Elected Member

12.6   Risk taking

The FRS has undergone significant transformation in its approach to risk, and subsequently, the attitudes and culture of individuals has also changed.

"So I would not say we're any more professional now, I certainly wouldn't, you know, label the older fire-fighters. I mean they were professional and they were very good at what they had at the time, what they did you know and some very brave people, in those days as well. (Interviewer – Yes, so by brave do you mean that they took more risks than…?) They weren't frightened of taking a risk so they actually were sort of a different group at that time and they were probably more, yeah, weren't frightened of taking risk. They didn't take unnecessary risk but you know there's a lot of brave people about, I'm not saying there isn't now, probably still be the same but we were different I think." Watch Manager

Heroism in the Fire and Rescue Service

The issue of heroism in the FRS was contentious, with a view that it took the FRS back to the old days which conflicted with the new approaches to policies and procedures. Certain risks are also thought of as normal in the service and heroism might elevate or encourage some gung-ho behaviour. Both frontline staff and senior managers were uncomfortable with the concept.

13.1   Problematic (reward for risk taking)

In the FRS there is an underlying ethos that fire-fighters are in post to protect members of the public. The issue of heroism was problematic as risk was considered to be part of the job. Working outside policies and procedures might either be a sackable offence or something that could be rewarded. There are a range of perceptions and some staff felt vulnerable to discipline while others felt comfortable to work in areas where policies were viewed as ambiguous.

"One person's hero…could be sacked because he deviated so far from it". Middle Manager

This was demonstrated through the example of a fire-fighter who stood on the topmost step of the ladder to help someone down from a high window.

"He got the person down and he got a gallantry award for it; he could just have easily been dismissed for jeopardising his health and safety…I don't think that I've actually squared that sort of conundrum in my own mind…because at the end of the day, what is our role? Our role is to save people's lives". Middle Manager

'If we commit people in there and we save a life you're a hero; if you don't, you kill one of your own". Watch Manager

The 'Heroes Statement' makes many feel uncomfortable as it seems it is viewed as giving some the right to deviate from policies and procedures and abdicate responsibility for their actions. Again the issue of effective risk management is confused with bending the rules.

'….no there are some things we do that we know are wrong, that maybe we should be held accountable". Fire Fighter

'We do something called rapid deployment with breathing apparatus. The rules are if it is a snatch rescue or to stop immediate escalation of the fire that's rapid deployment and that's a procedure. If we got to a fire and we are the first pump there and second pump was just behind and a child is screaming from a window. I am sorry they are going in unless the building is going to engulf my crew. They are going in, so yes we bend the rules to do a certain job if there was nobody in there, I wouldn't send then in, I would send jets in and wait until the other engine arrived. If somebody is stuck in there and we think we have a very good chance of helping them I am going to bend the rules… As an acting JO and my crew could see what was going on and they I didn't send them in, I'd have mutiny and they would think I was crazy. I think yes (bending the rules) it is accepted. Where it is practical we will use health and safety legislation to the letter but there are times it wouldn't save lives it would kill people, it would put us at risk but we have a job to do". Watch Manager

Senior managers expressed how the discussion about heroics put them in a tricky position in giving clear messages.

''We can't take a line that says actually in that circumstances we're going to discipline that person for trying to save someone's life". Strategic Manager

"The commendation bit is difficult because you are then raising expectations - setting an environment where it's ok to do that". Strategic Manager

"If I had magic wand and could change anything it would be around if government in modernising our attitudes to health and safety, particularly from an emergency services perspective". Strategic Manager

Staff were comfortable that they were willing to accept risk and had understood the implications of this and were trained to manage it.

"So there is this acceptance that in some circumstances whatever measures you take to manage at risk then there is going to be risk and that's the job we are in, we are fire fighters and that's our job". Strategic Manager

"Give us a little bit more license to do the job that we're trained to do". Strategic Manager

"You have to take risks, it's a risky job, you know you don't become a bomb disposal expert and then don't want to go and tackle a bomb do you?". Strategic Manager

The opportunities for heroism were quite rare.

"Might be the only time in their career that they take those sort of decisions

If somebody breaks the rules and they say it was a heroic act as per the Health and Safety Executive and then we have to decide do we give them a medal or discipline them". Strategic Manager

"I think acts of heroism are about actions that are made inside the building of the brief given without further instruction or recourse rather than the idea of rushing off and jumping off a building to save someone". Strategic Manager

Senior staff thought that making awards gave a clear message to other members of staff.

"I made a point of awarding a chief officer commendation to the fire fighters who did that solely because I wanted to send a message that is what this is about we are here to save people not stand there and put safe systems of work in place for someone to go and jump off the roof that's not what we are about". Strategic Manager

''I think we have a unique role in protecting the community. You should recognize where people have really put their life on the line to try and save others". Strategic Manager

"I am thankful that the Health and Safety Executive is part of that appreciation of our environment that we operate in and that they see acts of heroism as part of our business". Strategic Manager

14
Media and the Public Pressure

Pressure from the public was acknowledged as playing a significant role. Members of the public have certain expectations, but lack the knowledge of health and safety legislation and the reasons behind why fire-fighters make particular decisions. It was noted that the media also tend to highlight negative issues to make news headlines. Recent challenging incidents were highlighted where difficult decisions about whether crews should or should not take risks were discussed. Fire-fighters have been portrayed less than favourable in the media although fellow fire-fighters understood why decisions had been made. It was acknowledged that managers should start to become more media savvy as the FRS may be in danger of being made to look overly rule bound and bureaucratic.

It was suggested that the FRS operational crews should make maximum use of cordon tape to keep the public away where possible, as the public do not fully understand how and why the FRS operates. Some sectors of the Press have made damaging comments by labelling the FRS as being overly rule bound, and very anti health and safety legislation. This consequently has the effect of damaging the overall reputation of the FRS.

14.1.   Expectations of Fire Fighters

The public perception of fire-fighter was considered to be a problem. The public do not necessarily know how a risk assessment works and indeed what the risks are. This sometimes makes the operational crews compelled to demonstrate that they are actively addressing an incident.

"With the public standing around, we feel almost compelled to do something, when actually common sense and training and experience say don't do anything…if we know there's a Sky News helicopter or there's a local film crew, we'll squirt water onto a building, it's not going to put the fire out, and it's not going to do anything, but if we are standing, there, the perception is doing nothing there will be an accusation this burnt to the ground". Middle Manager

Another middle manager described a situation where a group of young people put pressure on the FRS to use their BA equipment to find a lost friend in the water and wanted to see that something was being done. Consideration had to be made that the young people may have put themselves at risk by going into the water.

"He said to his crew, right, put your sets on and walk into the water and just bob your head under to see if you can see anything, so it looked like you were doing something…where the pressure from the crowd or the people around will make you do things perhaps you shouldn't…without actually putting themselves at risk". Middle Manager

"You can have members of the public see something and try their best to rescue somebody then you could have whole fire and rescue services stood by watching them or try to prevent them from doing so". Strategic Manager

The reputation of the FRS is sometimes compromised.

"So FRS looks a bunch of clowns now because they stood along and let some chap with a net and a pair of waders". Strategic Manager

An issue for a smaller close-knit rural communities is that incidents may involve friends and family of FRS personnel, which may consequently influence firefighters actions.

14.2.   Lack of awareness

Conversely the public view fighting fires as risky, when in reality it may be less risky due to the fire-fighters having had training and carrying sophisticated equipment to help them deal with the situations. Public expectations are that firefighters will risk their lives and the FRS may be vilified by press if firefighters are not seen to access these dangerous situations and fulfil expectations regardless of health and safety policies etc..

"Public expectations are way out of line with what we are allowed to do; …if public were aware of what we are not allowed to do there would be an outcry". Fire Fighter

"The public don't give a flip if you say to them actually the performance measure has improved dramatically over the last

few years say to them we rescued people today, yesterday, tomorrow they understand that". Strategic Manager

The public also perceive there to be many more deaths due to fire than there actually are. A survey in one particular FRS showed the public to perceive between 200-400 deaths a year due to fire, in their fire authorities area; in reality there were actually 2 in the last 5 years.

"There's a real dislocation between the public understandings of the fire service and what we're here to do... we are to blame because, we don't sell ourselves". Middle Manager

14.3   Managing expectations safely

The FRS has to be prepared in advance for possible media appearances and members of the public who may have certain expectations and may also take risks themselves if there seems to be no FRS intervention

"If we have someone in the water we have to put these big dry suits on we have to wear these big what are called PFDs, the floatation device which take a lot of time to put on you can't just... it's like the diving stuff to a degree, so what I say to my guys is right if we're going to go to something like this we put it all on before we leave the station because that way if we are 5 minutes late to turn up people aren't aware of that, they don't know what's happened in that 5 minutes, if you turn up there and they're watching you dress and you've got someone screaming in the water and drowning and your trying to put all this gear on and they're all screaming; the peer pressure would be horrible but at least when you turn up whether 5 minutes later and you're ready to go you can get to work just like that and do something and that's what people see. It looks better than seeing you faffing around trying to put equipment on they'd say 'come on' you know…". Watch Manager

'My fear is when we take time, members of the public will go in if we don't do anything'. Fire Fighter

'….the public don't understand the risk so they wouldn't understand why we do things in certain ways. They don't understand why we do door procedure or different cones on our hoses; they wouldn't understand that and we wouldn't expect them to. We have to be flexible with what we do, we can't expect the public to be flexible- they have an expectation. If my house gets burgled I expect the police to turn up if my house is on fire I do expect the fire service to be there and not just stand outside". Fire Fighter

Role of Equipment in Health and Safety Management

Fire-fighters were very strict about wearing their kit:

"We wear our fire gear all the time, we don't even question it". It was acknowledged that there were immense opportunities for equipment to enhance their work, but also challenges.

15.1   Opportunities

It was acknowledged that equipment has played a role in enhancing the ability to support incidents and reduce risks associated with them. Managers highlighted the importance of their on-going role in ensuring that equipment was up to date and supported the range of incidents that they were needed for.

"Equipment wise, we're buying some really good kit…the best that money can buy, so that people are as armed as they can be to deal with those challenges". Middle Manager

It was acknowledged that as equipment became more sophisticated and specific, it also present some challenges.

There were plenty of opportunities for ensuring that equipment could be used outside scope through using dynamic risk assessments to explore the full extent of its utility.

"We have a dynamic risk assessment which should be employed more flexibly on the fire ground, where we have a piece of equipment…I think the process is there – I'm not sure how well it is applied". Middle Manager

It was also mentioned that equipment can support learning and development. For example, using micro pens to record issues at the incident and also using cameras to record incidents in real time or for review afterwards. These can develop a better understanding of what has happened and the context in which it has happened. They can also act as ongoing learning tools.

It was acknowledged that training could play a significant role in helping to use equipment more smartly.

"With a bit more training we could use our kit more intelligently rather than being blinkered in you can't do this and can't do that". Fire Fighter

15.2.   Challenges

Equipment which is more technical presents challenges in resources to train staff. Examples have been given where equipment is available but cannot be used because staff have not been trained on it or procedures for using it not written and approved. Sometimes things which are "flavour of the month" can become operational more quickly.

"That would have taken three months to write the procedure, talk about their stowage, get the crews aware and trained on it before it becomes available…It's a one year thing sometimes". Middle Manager

In addition to this sometimes officers from other teams need to be brought in to use it. This was exemplified in the Galston Mine incident which led to a life being lost. Here officers were directed to wait for colleagues who were considered to have the correct equipment and necessary training. On occasions some cutting equipment had very specific instructions for use. It was felt that some of these issues discouraged fire-fighters from being innovative in their work.

"Well the perceived constraint that health and safety has placed on us are that we can only use the equipment for it's designed intended and tested purpose, which perhaps restricts our ability to use things in an innovative way". Middle Manager

Specialist equipment isolated in designated stations, thus not utilized to full capacity as often travel and set up time restraints means they don't get called.

Teams tend to search for alternatives rather than call specialized teams due to time constraints

"We're told not to use certain things because it's outside of equipment guidelines maybe because it's not what its designed for; ok fine but you know you can actually put a system in place, use the equipment that it's not designed for, you know it will be perfectly safe for someone to go down that hole with a line around them and another line or

whatever, not what its designed for or whatever but you know full well if you put someone down there you could get them back. Now that's gone completely outside the guidelines for that piece of equipment or whatever but you know…. we've got lines broken for want of a better word and we are not allowed to use them for rescuing or anything like that but you can hang an elephant off them and you know that". Watch Manager

This is also noted to reduce the ability of fire-fighters to use their innovation.

"…but the pendulum can be seen as having gone too far the other way, and I've no desire to place anyone at an unacceptable risk, but to say to people, look you can't use this piece of equipment because it was not designed to do that job, when we have spent years teaching people how to be dynamic and change a piece of equipment to put it to a second use. Well sometimes you just want to say actually you can if you used your common sense, but we are not teaching that". Watch Manager

Health and safety management can also put restrictions on the use of equipment which may seem perverse to staff and lead to frustration where they feel they cannot use their skills.

"We have a wonderful piece of kit called a multi-role vehicle and a year ago retained got taken off it. They said we didn't have the time to train on it, we said give us the extra time to train on it and we'll stay competent. Now that vehicle stays at the station because whole time gets called out and they need the equipment on the multi-role vehicle but we can't move it. So they have to wait for the next nearest one which takes an hour and a half to get to the job! I am still qualified to drive the vehicle... They say they have no time to train and budgetary reasons for health and safety, so they have taken us off them and that is very frustrating. We know when we go to a heath fire we need a Land Rover and a multi-role vehicle but we can't take it...". Watch Manager

16
Retained Duty System (RDS) / part-time staff

There were mixed responses to RDS and part-time staff, some were perceived to be very good and others less so, due to their reduced training and experience as a consequence of the limited time they have. However in many areas they are vital in allowing the FRS to discharge its duties.

Leadership of RDS stations was thought to play a key role in how staff operated within them.

RDS positions were generally not thought of as being attractive as staff were retained on a low hourly wage with the expectation that they were available all the time and also available for training. A lot of commitment for not a lot of reward but some FRS' could not operate without them.

16.1   Risk to health and safety management

Some viewed RDS and part-time staff as posing a particular risk to making a safe environment and although this did not apply to all RDS staff (some were thought to be as competent, if not more than full-time staff), they were viewed as having lower levels of skills. However in some areas they were vital in allowing the FRS to discharge its duties.

An over reliance on RDS may lead to problems in delivering a high quality safe service and leave the individuals themselves open to danger increased risk. RDS were viewed as holding an important support or assistant role rather than a full time fire-fighter role.

"..generally their knowledge is less, their capability is less and their experience is less, which makes them more vulnerable". Middle Manager

The RBs were thought to have played a role in seeking parity for RDS staff, but this had inadvertently led to compromised health and safety management in the workplace for some teams and individuals.

In one FRS station that that had low activity levels, staff were required to be available for twenty four hours with twelve of those on duty and the other twelve on-site in accommodation. A training system was worked out where they could often attend sessions at night.

The Warwickshire incident was mentioned in relation to retained staff.

"Something wasn't right with the knowledge of the decisions that were being made…but what can you do if you have got those individuals for two or three times – two-three hours a week?". Middle Manager

The physical fitness of teams and their ages was also noted which might be a disadvantage in their ability to function at an incident.

"Again with the retained, we sort of touched on it earlier let's say some of them joined the job maybe for the uniform, making themselves look good to their peers outside the job, unfortunately the fitness side of the part-time members isn't particularly good I don't feel, maybe they haven't got as much discipline to keep physically fit;, and again the retained personnel the age seems to be…I'm not sure what the average age is but it seems to be a little bit higher than the majority of the fire service, seems to be quite a few old boys that need to hang up their boots". Fire Fighter

"Some of them have said you know they are not physically capable of going into a house as a watch manager you know. They are expected to go into a house and cut cars. ...There are incidents; you know you should see some of the shape and size of them… I think if we brought in a medical related fitness test in I think we would be in trouble in some areas… I got a watch manager myself, he is 58 years of age... He swims in water he could have a heart attack where would the service stand then. He is exerting himself. Where do we stand?". Watch Manager

Frontline staff indicated that they didn't view them in the same way as full-time staff and did not have as much confidence in their ability and skills.

"It's more of a hobby isn't it? It's not a job". Fire Fighter

One watch manager, who tends to work in an "offensive" way in his job, encourages RDS members of the team to be defensive because they don't have the experience to be safe to be offensive.

"No I think they've definitely had the training and experience I just think that they just don't tend to remember it. They are just not practically minded. They work in offices and stuff. The ones that tend to not work in the offices tend to be the ones that are better if I can class them you know there's always going to be an odd one that's not but. Erm yeah there's some people that have been in like ten, eleven years and still they don't get it. But then they only do three hours per week". Fire Fighter

16.2   Support service provided

The ability of RDS to provide an excellent service was also noted and they brought practical skills from different areas which were thought to add value to the existing FRS skills. There was also a reliance on RDS staff in certain areas of the country.

"I've audited other Brigades as a peer assessor and I have to say some of the visits I had on retained stations were really, really fantastic experiences, really positive. They do extra stuff in the community by themselves". Middle Manager

One FRS with a particular reliance on a significant number of stations are all fully retained and are able to operate effectively due to "experience, good leadership from their crew managers and common sense".

There was also the issue that FRS RDS staff will be lost if a whole tranche of them retire together. There is also the issue of retaining those staff.

'"It's only the good faith of individuals and this hard core of people who have been in for a number of years that they are keeping it going. It's only a matter of time before they start retiring and then this new batch keep back filling. And I think in time we will be in trouble. Because we won't get appliances on the run in the day... So we are going to have problems. We have got problems with recruitment now and retention. We have a high turnover". Watch Manager

16.3   Changes in the Retained Duty System

A number of changes seem to be being brought in which might or might not be good for the RDS. Some staff were considered as being excellent, with the view that lots of practical training does not necessarily help make staff better understand the requirements of health and safety management. However, RDS staff were treated and viewed as being *"different"* from the whole-time. This is reinforced by differences in uniform in some areas.

"If you are training for two hours a day, rather than a week, does that give you a greater awareness, [of risk] maybe not. And I have worked with fire fighters, whole time, who have a worse sense of risk than an RDS. Yes, there are some RDS I would work with every day of the week quite happily, you know is it's oranges or apples, we fall into the trap of reinforcing that, we don't say fire fighters, fire fighters conditioned to RDS. We say RDS, fire fighters, whole time fire fighters, day crew, we pre-empt it. Some brigades I notice that one FRS is going back to changing the helmet designs, they will differentiate between the whole-time on the fire ground. So at one end we say a fire fighter is a fire fighter, is a fire fighter we value you all equally and by the way you can have different gear, different equipment, probably not the best move. So we have to deal with what we have got, the consequence of that is we will have to rely more on different duty systems different shifts, different ways of working and we have to make sure that the people that are going to carry that out, with and for us have got the ability to do it, that means more training and correct training". Watch Manager

It was thought by senior managers, that the challenges facing the RDS staff and their commitment meant that they may not be able to operate in the future without changes. Changes mentioned were- profiling training to their skills and attendance, redefining their role, giving them support roles on busy stations and offering intensive two week training courses.

⑰
Limitations of the Research

There were two key limitations in the research, which should be noted.

Although we went to some lengths to ensure that the participants selected were representative of a broad range of views which the service held, by inviting people to participate using a self selection process might mean that possibly only those with strong views participated and those who were indifferent or did not trust the research were not heard. We attempted to mitigate for this by employing a rigorous analysis, whereby a collective view was reported which meant that isolated or disparate views were not reported. Specific views were substantiated across a range of participants in different areas before being presented.

Our sample only included one female fire-fighter and one from a black or ethnic minority group. Although we did not set out to explicitly seek views from these groups we are noting that they are under-represented in our study sample.

There were less front-line staff interviewed that middle and senior managers, however, there was still a reasonably large number of fire-fighters (n=x) which allowed us to complete a rigorous analysis. However during the analysis it became apparent of a "them and us" divide between managers and frontline staff, this may be a causal in less fire-fighters coming forward and there is a danger of the report being viewed as a management focussed report. There may have been feelings about repercussions of speaking freely. We tried to mitigate this risk, by allowing staff to be anonymous.

17.1   Further Research

- Further research with frontline staff to ensure that we can further explore views on how decisions are made and the impact on risk adversity and also further probe into cultural issues and topics of mistrust and indifference. Also ensuring a more representative sample is gained in terms of gender, ethnicity and length of service.

- Further analysis or data collection on individual services to inform service improvement at a local level to examine individual groups or services.

- Further research into the cultural aspects of the FRS including looking at changing and developing culture, a shared set of values and aspirations.

Discussion

This research set out to explore how the FRS perceived and managed risk, how health and safety management impacted on their roles, the key challenges and how health and safety management is embodied in the actions and behaviours of staff.

The findings demonstrated that there was a clear view of how health and safety management should work in practice, but a much less clear view as policies and procedures filtered down the ranks to the operational level. Hence a gap became obvious between theory and practice and between managerial and front-line operational staff. At senior management level and from government reports such as Loftstedt and Lord Young, the way forward seems clear, but the key messages on tolerability of risk seem to present implementation problems.

There is evidence from this research that attempts to impose a formalised health and safety management structure on the FRS, which is embodied in a set of policies, procedures and guidelines, has had a negative impact on the FRS because of the complexity which each operational incident presents itself. This has had an impact on the way fire-fighters and managers and ultimately the organisation behave. The more clarity was sought through documents and directives, and standard ways of operating, the more restrictive it appeared to be, with the focus on process rather than outcomes. Standard operating procedures seem to be redundant when dealing with specific events which all have a unique set of circumstances; they also stymied innovative thinking and practices.

Legislation produces policies, procedures and guidelines which at best invokes fire-fighters to use their experience and work alongside guidelines, tweaking where necessary or at worst doing nothing due to lack of clarity about what they should or should not be doing as standard. Confidence to implement guidelines and to consider how they need to be tweaked within accepted tolerances comes with experience and appears to be fragmented and misunderstood between those with more operational experience and those with less. This is embodied in legal rulings with cases in Hampshire and Warwickshire where organisations were culpable if they had not demonstrated a health and safety policy and the necessary structures to implement it, but were less culpable if they showed these were in place and operationalised. In response to legislation, the FRS often reacts swiftly with to ensure that their organisations do not leave themselves open to similar prosecutions, but this can happen in a fragmented way, without consistency and may make internal systems more complex, which ultimately does not improve the implementation of changes.

There is a danger that if a clear way forward is not achieved, there could be a further fragmentation of behaviours and understandings within the service over the next few years as those with experience and confidence to interpret and implement guidelines will retire and be replaced with newer less experienced staff, who are less likely to have accumulated experience over the years due to a reduction of incidents. This has the potential to make the service more risk averse as more, inexperienced experienced staff are writing guidelines and policies and attempting to implement them. This poses a significant organisational risk to the FRS.

The range of views expressed regarding the struggle between "old style" ways of working and "new ways" which have been adopted due to organisational changes over the last 10 years. A number of different cultures seem to co-exist comfortably;, however in operational situations, they can conflict, with multiple views on deciding the best way forward, and in some cases senior managers disagreeing whether to discipline or commend staff for their actions.

The research suggests that there needs to be a fundamental rethink about the FRS approach to health and safety to provide clarity, support and a network of skills and experience (not necessarily dependent on rank) to underpin implementation and operational decisions.

Health and safety culture

Respondents were clear in their views that health and safety management was a good thing, for staff, the organisation and society. It helped reduce risks and saved lives. However there was a thread of confusion about how health and safety management manifested itself in the different services and sometimes a lack of understanding about health and safety management itself. There was a mismatch between what needed to be said and written down as required by law, and what actually needed to be done to fulfil the requirements of the role of the fire-fighter. There was not a common, well articulated view about health and safety management, risks and decision-making and in some cases it was perceived to lead to unsafe decisions. This meant that a true health and safety management culture which everyone

understood and utilised to govern actions and behaviours, was hard to achieve.

Participants highlighted how the balance of health and safety management was influenced by a range of factors, including current organisational issues and high profile incidents by other FRS. Health and safety management standards were described as often being developed in response to incidents and viewed as a possible knee jerk reaction or overkill. There was a collective view that there was sometimes a "box ticking exercise" taking place to address health and safety management requirements and some policies were not realistically implementable.

Many of the participants, particularly senior managers felt that the (HSE played a role in adding to the confusion of how fire-fighters should behave in relation to risk mitigation at incidents. The fear of potential litigation and blame following the actions of FRS personnel at incidents has come more to the fore and some FRS were perceived as writing safe systems of work to ensure that the legal requirements of the organisation were maintained. This approach appeared to overlook the principle of a safe system of work, which was to protect the fire-fighter in the first instance.

Evidence presented in the report also showed a lack of awareness between being risk aware and the actions taken through greater understanding of these issues leading to caution and risk ignorance, where a lack of confidence and understanding leads to a default position of no action. It is important to differentiate between these opposing positions. Modelling risk awareness and the associated decision-making processes needs to be communicated well so that it is not mistaken for risk aversion. Many misunderstandings may be due to a lack of communication about the way decisions are made.

Organisational culture

It was also noted that an organisations' senior management team set the tone for how occupational risks were approached and managed within a Service. The Representative Bodies also had an influence in this and it was recognised that there was a role for the Unions to play in helping to ensure that workplace health and safety management requirements were properly understood. An organisations appetite for risk often set the tone for how senior managers influenced safe systems of work; however at the moment the key influences appeared to be blurred, with different perspectives from the front-line, senior managers and representative bodies.

Clearly this approach shows a mismatch between what is said and what is actually done which influences organisational culture and appears to be fragmenting it, with those that write the policies doing so from the top down. If senior and front-line teams do not share organisational culture, rifts in behaviours and attitudes are at risk of occurring. Managerial, organisational and social factors foster certain attitudes and behaviours which may become ingrained. A culture can promote or inhibit behaviours (Crawford, 2008). Our research showed that there seemed to be individual sub-cultures on different Watches and with different crews. Culture may not be shared if there are mixed messages – i.e. mismatch between what is articulated and what actually happens. Culture is a product of individuals and groups attitudes and behaviours; if there is no clear view or common cohesion with attitudes and beliefs, this will mean that smaller sub-cultures may develop as individuals with shared understanding and approaches cleave together. We found evidence of this in the study, but this would clearly merit further in depth work in this area where the organisational culture could be better understood and the ability to respond to a significant incident changes culture. As reported in section 1.4 case study 1.

It was a general view that everybody in the FRS understood their responsibility about health and safety law, supported their personal safety and others; but procedures to achieve safe systems of work were sometimes perceived as a barrier by front-line staff and detrimental to ensuring that operational tasks were completed successfully. Consequently, some fire-fighters perceived that working outside policies and procedures was an inevitable part of their job.

Although some of this behaviour leads to more risk that others, the consequences of risky behaviour is also important and tends to be more prevalent if no negative consequences are incurred and may even become habitual over time. The same may be true for risk averse behaviour. There is evidence from our findings that risk aversion is perceived to be increasing, which may be due to a lack of a strong steer from the individuals organisations. If risk averseness becomes the dominant approach in an organisation, there is the danger that it will drive out other behaviours and start to become the norm and hence habitual. This is further mitigated by the fact that staff felt that they might not receive support from the organisation if things went wrong, despite the fact that there was a perception of needing them to bend the rules to get the job done. This may encourage certain risk averse behaviours. This was felt by some managers at all levels and senior managers feared personal prosecution if things went wrong.

From a frontline perspective, it was reported that a blame culture was not helpful in instilling clear safety parameters and if senior managers did not back the calculated decisions made by operational personnel at incidents, it may be safer for

the individual to do nothing. Where blame might be apportioned, post-incident information was sometimes not shared, which was a lost opportunity for developing learning within an organisation. There was also a difficulty with fire-fighters feeling that their views were being heard but not responded to by the organisation and a transactional culture which meant frontline staff taking all the risks but not being congratulated when things went well and being blamed when things went wrong. This seemingly skews the balance of power in an organisation, which may then result in negative behaviour "against" the power holder, such as ignoring what staff might perceive as poor instructions. This behaviour is a way of staff retaining integrity of skills and expertise. Adherence to health and safety management procedures was considered to play a role in de-skilling fire-fighters and did not give them the opportunity to think for themselves often leading to frustration at prospect of their innovation being stifled. Conversely staff may also become more passive and follow instructions to the letter. Both of these behaviours are not helpful in maintaining a service, which relies on a proactive approach.

As well as on the front-line, these behaviours may manifest themselves at a more senior level in working and agreeing regional approaches to harmonising policies and procedures, where a process may be undermined by inflexible approaches or local "politics". This issue may be endemic at all levels.

In order to achieve a commonly articulated health and safety management culture a common sense approach by the FRS and enforcement bodies should be adopted. However, it was queried as to whether the current health and safety legislation was suitable for the FRS and whether changes needed to be made particularly when attending emergency incidents. Such changes may help improve cohesion in the organisations ability to approach health and safety culture.

Learning lessons

Decision-making behaviour is influenced by how individuals perceive the different options of taking or not taking a particular course of action. Managers had differing views on how flexible they were in looking at areas where safe systems of work had been breached and it was acknowledged that there were inconsistencies in dealing with such breaches. When incidents had achieved a positive outcome, behaviour in relation to health and safety management was not necessarily scrutinised. It was felt there were always lessons that needed to be learned which supported on-going learning and development and implementation even where FRS think they are performing well. The ability to highlight issues and follow them up was considered essential in moving organisations forward to higher levels of occupational safety.

The timeliness of hearing about incidents and learning lessons is important as if they are left too long people forget about the nature of the incidents in the applied setting. Whilst it was recognised by the participants that the legal process of a serious investigation can hold up the ability to obtain the key facts of a failure quickly, the length of time it takes to learn from lessons arising from major incidents such as Galston and Warwickshire were also questioned. It was noted that everyone's approach to risk taking at incidents had changed and an honest debate to help the FRS move forward on the issue was required.

Sharing lessons learnt from incidents and how they were dealt with across a single organisation was patchy - some information was shared informally through case studies, but these tended to be the larger incidents where had been fire-fighter fatalities, this approach again promotes a negative approach of only having the discussion when things went wrong.

Leadership

Leadership plays another important part in developing the organisational culture and how behaviours and modelled and filter down in the organisation. Research shows that lack of trust, not knowing someone well, not discussing safety matters (Guest, et al 1994) has an influence on how they can successfully lead a FRS team. Fire-fighters want their team leaders to be operationally more aware than them so they can feel confident in taking instruction, but there is some confusion between management and leadership. This may be a result of a more transactional style of leadership, which is often used in the FRS, which stems from the need for staff to follow rules and regulations and also may stem from its military origins. The habitual transactional style means that in order to be followed the leader must also fulfil certain criteria for his or her followers. This was articulated as 'knowing the job" in an operational sense. Senior managers who did not 'know the job" from the bottom-up tended to have other areas of their expertise overlooked in relation to leadership skills. There was a tendency for some fire-fighters to self deploy if they felt they knew better that their leader or did not respect them and this can have negative consequences for health and safety management. This response appears to arise out of a transactional approach where greater experience is displaced by rank. It can also result in

passivity when a fire-fighter waits for instruction if they feel they will be penalised in making the wrong decision, which again puts pressure on senior staff.

The issue of leadership is a contentious one for the FRS. ICS requires a transactional of leadership (autocratic and democratic approach), but there is also the need to operate in a transformational way and these two very different approaches do not seem to sit well together. The national drive towards transformational leadership seems to be at odds with the transactional leadership style often displayed on the fire-ground. An important question for the FRS is how can services better understand and reconcile these two views.

For front-line staff it often appeared that more senior staff were more remote from operational awareness and were unaware of the practicalities of applying policies hence they were inclined to be more risk averse. This made life difficult as they did not understand why fire-fighters sometimes bent the rules or went outside safe systems of work. Misunderstandings such as these might be deeply engrained and might also be symptoms of a general feeling if not being understood and listened to. Moving to a different model of leadership where technical skills are not evident at a senior level can be challenging for some who seem to feel that this in some way devalues the service.

Good leadership was also necessary with consistent messages that flowed upwards and downwards. The difference between confidence and arrogance was explored, confident managers encouraged staff to challenge them as a way of confirming their decisions. From a front line fire-fighters point of view, they felt they needed leadership and mentorship from someone they could trust and who also knew the job and the challenges they faced. However there was a general perception that circumstances had moved from a closed door culture where people were "spoken to quietly" about perceived failings in their conduct, to a much more open means of highlighting failures that often undermined trust between colleagues. Again the perception of adverse consequences can influence behaviour and also transparency about how and why decisions are made.

Team culture

The culture of a team had a very strong influence on the learning of individual members. Proving yourself to your team colleagues to gain respect was traditionally done through operational drills and at incidents. Teams that worked well together as a unit inspired the trust of managers. Again a transactional approach between team members was demonstrated. The culture of the Watch or Station played a crucial role in fire-fighters discharging their duties in accordance with procedures and can add to a strong and cohesive team, however it can also mean that team working can be compromised is someone is perceived as not being as competent in some way.

A good team recognised the skills and deficits in its team members and played to their strengths. Age and experience can influence the safety culture and bring about a sense of confidence to those involved. The role of strong characters in the team and their ability to influence the team should not be underestimated and can influence in a good or less good way. It was reported that in some FRS, teams had deep-seated disagreements due to previous union disputes that had an effect on the teamwork.

However, there is also an onus on the individual to keep up to date with new policies and procedures and data from some indicated that this was challenging. The team culture does not support individualism and responsibility for actions and might lead to complacency by some.

Decision-making

The literature describes that there are a number of factors which influence decision- making, which determines what we attend to and what we ignore. Some are external and come in from outside the organisation, such as public expectations and others are internal from within the organisation, for example- organisational culture and the 'way things are done around here'. Other factors might be viewed to be intrinsic influences, such as personality factors, age and experience. It was interesting to note that the narratives provided by participants focussed very much on fire-fighting and less on other incidents. The roles and identities of staff therefore and very grounded in this particular type of incident, which seems to be compounded by the media portrayal too.

Our research findings showed that at all levels in the organisation, there were influences on decision-making and subsequent behaviours. The identities and values held by the individual fire-fighters were a guiding principle in how they responded to outside influences and in some cases this caused conflict with what they felt was expected of them and how they might be held to account or blamed for this behaviour. The public perception of a fire-fighter was considered

to be a potential problem in that it appeared to have been damaged by the reputation of the FRS as being overly rule bound and not able to adopt common sense approaches.

This clearly conflicts with the underpinning principles, which most fire-fighters have – to save life, property and to render humanitarian services, and resulted in frustration and anxiety in how duties are carried out. Individuals working within the FRS felt they had signed up to take some calculated risks and if those were eliminated, then the organisation and they as individuals, would not be able to perform their duties as the public and tax payers expected.. Particularly if there are lives to be saved, they would expect to take a higher level of risk. Values, which are deeply engrained and enshrined in identity, can underpin actions and behaviours (Schein, 2004).

The issue of trying to give fire-fighters greater clarity on when there are exceptional circumstances, where they might take risks - "Striking the Balance" presented the concept of heroics. However, despite agreeing with some of the principles, both managers and fire-fighters felt that this further complicated the difficult issues which the FRS faced in relation to health and safety guidelines and were uncomfortable with how it might be manifested in practice. This again confused their social accountability to the public and society, with the accountability to their organisation and the rules and regulations laid down in their role.

Pressure from the public was acknowledged as playing a significant role and that the media also tended to highlight negative issues to make headlines made fire-fighters feel socially accountable. The media also tended to be less interested in the things that the FRS did well. This influenced the behaviour of fire-fighters when the media or the public were present, resulting in actions which are expected from them rather than things which are necessary. This may also possibly involve breaching guidance for the greater good particularly in preventing the public from rash behaviour or to preserve their reputation.

The public's view of the service may be out-dated in terms of advances in training and technology as well as being influenced by television and the media. Conversely they viewed fighting fires as a high-risk occupation when in fact it may be less risky as the fire-fighters had received training and carried sophisticated equipment. Local surveys had also indicated that the public perceived that the FRS attended many more fires that they actually did. Unrealistic expectations from the public stemming from a misconception of the way fire-fighters approach incidents may lead to conflicts and misunderstandings particularly around issues of health and safety management. Fire-fighters are unhappy about being portrayed as rule-bound in relation to health and safety as it erodes the identity of a practical, innovative and problem-solving professional.

Context

Evidence from the literature review showed that pressure of a limited time to evaluate decisions has an impact on decision-making. Having a time-pressured environment with a dynamic situation unfolding means that decision thresholds are reduced and there is limited time to evaluate all decision possibilities as the evidence presented. This increases the propensity for greater risk taking as decisions are time critical and most key decisions have been taken in the first few minutes of attending an incident.

All staff emphasised that "cold" reviewing of decisions and hindsight meant that they might have suggested different decisions in future, but the context and information at the time of an incident which often drives decision-making in a dynamic operational situation, demonstrated that a full evaluative position might not be taken. Time pressure also increases cognitive demands in terms of processing information from multiple sources quickly. Frontline staff reported that they felt constrained by constantly thinking about procedural compliance in addition to the dynamic situation. Additional factors to consider will inevitably slow decision-making, particularly in unfamiliar situations.

In addition to this the frame and consequences of decisions will inform decision–making. Many staff indicate that when lives were at stake, they were willing and expected to take more personal risk.

Most incidents have a good outcome but it does not mean that they have been as safe as they could be and the role of luck was reported as playing a part in the positive outcomes of some incidents. From the front-line there was a perception that decision-making was predominantly the domain of those who were first on the scene and this was perceived to be a double-edged sword that placed the fire-fighter under a lot of pressure - some preferred a senior manager to arrive and take responsibility.

It has been suggested elsewhere (Sibert, 2012) that the true ability to carry out an informed dynamic risk assessment is being diluted due to an erosion of technical skills and the knowledge of the risk; knowledge of the potential gain from their actions; sufficient training/experience to select the most appropriate course of action; and sufficient resources to implement their selected course of action are compromised. This ability to understand the key components of a

situation, leads to a miscalculation of possible risks and gains from particular courses of action.

Technology and Equipment

Technology can enhance decision-making if well integrated, but it can also act as a double-edged sword. Knowledge management which supports decision-making and allows staff to access a web of information which is supportive to their work and efficient and easy to use, could be hugely beneficial. Difficulties seem to occur when there are multiple means of communication from multiple sources, which results in an overload, and staff do not know what is key to attend to first. The danger is that either the wrong things are looked at, or nothing at all or experience is relied on alone. Also there may be an over-reliance on technology which can be problematic if other health and safety management issues are neglected.

Similarly, it was acknowledged that despite the enhanced equipment and technology many risks were similar to what they had always been and enhanced equipment might mean that other key indicators at an incident might not be paid attention to. Despite the enhancement of equipment to tackle fires, the FRS had appears to have become more risk averse and operate in a more defensive way. Managers highlighted the importance of their ongoing role in ensuring that equipment was up to date and supported the range of incidents that were needed for. Equipment which was more technical presented resource challenges to train staff and examples were given where equipment was available but could not be used because staff had not been trained to use it.

It was reported that equipment may only be authorised for use under certain conditions and this discouraged fire-fighters from being innovative in their work. Safe systems of work could also put restrictions on the use of such equipment which seemed perverse to some staff. This provides another example which could encourage fire-fighters to be more passive in their approaches in that there may be an over-reliance on technology.

Interpretation and value of the technical role

Interpretation of policies was not always clear and may be symptomatic of wider issues relating to changes in the service. Implementing policies in practice, which are often accompanied by SOPs and guidelines or other documentation may be problematic, particularly in a dynamic situation. Attitudes, beliefs and behaviours along with entrenched views and opinions could all influence the lens through which the fire-fighter perceives policies should be operationalized.

Operational Policies were perceived to be influenced by their authors, who may have drafted them in isolation, be lacking in operational experience or without input from others with the necessary experience. This led to a perception that it was the organisation at the forefront of their mind rather than the fire-fighter. Lack of consultation and also the perceived devaluing of the operational experience in both the development and the articulation of the policy may also lead to it being viewed less favourably.

At an incident, complex ambiguous policies, procedures and guidance led to confusion and a considerable amount of mixed information to evaluate. During incidents, most fire-fighters thought that they were able to apply a common sense approach based on experience and practical 'know-how', to what was required to ensure a safe system of work. Adhering rigorously to policies and procedures indicated as a sign of inexperience and lack of confidence.

However it might also be a way of manifesting the value of experience which may be perceived to be devalued in some way by committing it to paper. Technical experience and the identity of long serving fire-fighters are strongly aligned with operational on the job learning. This results in frustration for both front-line staff perceiving that they are not being understood and managers feeling that policies are not being implemented in the way they should be.

It was reported that there were some policies that did not seem to reflect what was perceived to happen and in some cases fire-fighters followed them even though they felt that it is not the correct thing to do, resulting in a negative impact. Some procedures e.g. those relating to high-rise incidents were highlighted as slowing down the operational response at an incident, frustrating fire-fighters in the process.

Implementing policies and procedures is a complex issue and relies on a number of different factors and the interaction between communication, leadership, skills, experience and the organisational approach and culture.

Experience

As we have mentioned previously, expertise and age, past experiences, attitudes and beliefs influences the lens through which individuals view the world and make decisions. Research demonstrates that good decision-making models can be built through experience, in training and exposure to real-life incidents. This tacit knowledge facilitates increased cognitive capacity in decision-making as it can develop a web of knowledge which the individual can draw on. Fire-fighters hugely value these skills as they are the front-line tools by which operational incidents get resolved. In recent years, recruitment policies have sought to move away from recruiting traditional trades people and more towards graduates, in an attempt to support organisational development and some staff have been fast-tracked into management positions with less operational experience and training than was previously the case. There has been some resistance to this approach in that managers are expected to have a greater operational knowledge than front-line staff and are responsible for decisions and deploying teams. Frontline staff seem uneasy if they feel their superior does not have as much ability in making decisions as they do and this is an anomaly in their view of what the natural 'order' in the service should be. This again is an indication of a deeply engrained culture wedded to a set of rules which govern the status quo. There also seems to be a mismatch between the ability to pass exams and move within the FRS and frontline technical skills where they seem to be viewed as different skill sets rather than being complimentary. This may be a symptom of distress about changes which appear to be valuing different skill sets and leadership models and upsetting the status quo which many adhere to.

The study also demonstrated the concern that staff felt about these issues and that when the next tranche of retirements come into effect, the operational function of the FRS will be put in jeopardy. This knowledge decay or skill fade may or may not be realised.

Research demonstrates that there are several different ways of making decisions – an analytical, logical, deliberative approach which weighs up evidence and might take longer or experiential and intuitive and spontaneous and quick approaches which are more likely to be used by someone with experience who experiences a 'gut' reaction based on having seen similar incidents many times before. The more educated the individual, the slower decisions are made as they review and evaluate (Rake & Nja, 2009). It is best when both or aspects of both approaches can be used, when a measured approach is tempered with experience. Being less experienced does not necessarily mean that the wrong decision will be reached, but it may take longer. Short-cuts can only be taken when there is a mixture of knowing and understanding the risks rather than solely based on experience and there appear to be differing views in the report that experience can be a substitute for keeping up to date and developing knowledge through training and study.

Organisational changes

In addition to the changes in the recruitment and roles in the FRS, there are also changes, which require a focus on prevention and community safety. For many, this is another move away from the identity of a fire-fighter which is uncomfortable and signifies a shift away from operational focus although it is essential for the FRS to develop and be operationally ready. This is manifested in a strongly articulated view of past working practices as being better and fairer, when clearly the FRS has made organisational changes which have been hugely beneficial and led to the prevention of many deaths of fire-fighters and the public. Previous research commissioned by the Communities and Local Government, Fire Resilience Directorate (2008) reported that the processes for identifying, maintaining and developing the knowledge, skills and understanding necessary to ensure that FRS personnel are able to deliver an efficient, effective and safe service at operational incidents, are reviewed. In particular the review should determine the knowledge, skill and understanding required by all those FRS personnel who:

• are directly involved on the incident ground

• who provide training or guidance for those who will be involved on the

• incident ground

• who provide advice, guidance or statutory approval for those buildings

• or processes that will be the incident grounds of the future.

As far as we are aware, this assessment was never consolidated as a national exercise, but as the issue is becoming more pressing, and is clearly an issue which is prevalent in our research, it might be usefully addressed at both local and national levels.

A reduced number of fire incidents attended meant that fire-fighters had less experiences of such incidents resulting in shortfalls in incident risk decision-making; however experience of other incidents may have risen meaning that staff had

to be aware of a wider range of policies and procedures. Developing and understanding of risks in newer areas (such as water incidents) where the clear ownership of risk is not fully agreed is a challenge for the FRS. This was also highlighted in a report by the HSE in 2010. Also there is a growing competency in these newer areas which may be increasing and/or growing and the area of fire, where incidents are decreasing.

There was also the issue of how cuts in the FRS spend may impact on health and safety management at the front line. It was acknowledged that the FRS was changing, particularly with regards to the current funding crisis. Demonstrating value for money alongside a need to fund ongoing developments such as the introduction of new technologies was challenging.

Another issue that signified a shift away from technical skills and the integrity of the profession is the demise of the old exam system. The exam was felt it set a technical knowledge benchmark as well as giving those that passed a sense of pride. This was seen as part of firemanship (sic) and a well recognised rite of passage to moving up the ladder in rank. It was perceived that the current assessment process did not give the level of detail that may be perceived to be useful in the FRS. The lack of managers passing this exam adds to their lack of credibility and confidence from teams? Training, experience and development was vital in giving fire-fighters these skills to maintain safe systems of work, but this seems to becoming eroded through fewer incidents, less rigorous assessment, a cohort of soon to be retired experienced staff and organisational refocus.

Responses to retained and part-time front line staff, were again related to perceived technical ability, although this issue is also true of whole-time staff. Some teams were perceived to be excellent and others less so. This was not only due to their training (although the time they had to do this played a fairly big role) but also their experience both in the service and also in their non-FRS lives. Semi-skilled staff were perceived to have more acumen as a practical fire-fighters. In 2005 a report for the Office of the Deputy Prime Minister indicated that the FRS had failed to take ownership of the issues or to fully integrate whole-time and retained duty system personnel into a single workforce. Recommendations indicated that the FRS must change the internal culture to ensure the RDS is properly valued as part of the Integrated Risk Management Planning process and adopt approach to maximise training and development.

This research demonstrates a degree of miscommunication between managers and operational staff, clearly this needs to be addressed so that decisions are clear.

Conclusion

The thread that runs through this research is the relationship between the changing FRS and the needs of the FRS and the technical skills and abilities of staff to make the necessary decisions at the right time to achieve the right outcome. Health and safety management policies and the need for a structured approach, has crystallised these issues, which may have been in existence for many years before. The seems to be an ongoing issue with mixed messages about implementation policies and procedures, which will need to be resolved in order to move forward with developing a progressive health and safety management culture in the FRS.

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Appendix 1

Interview Questions

Arrange a time for the interview

Introductory comments

- thanks for agreeing to participate;

- review the purpose of the study;

- discuss time required for interview (30 mins – 1 hour);

- explain how interviewee was chosen (a sample with a range of experience and at different level);

- review procedures to maintain confidentiality and underline that the participant may withdraw at any time of choose not to answer particular questions;

- ask if there is any questions.

Notes regarding interview questions

Semi structured interviews may be reordered and be followed by follow-up questions depending on the responses given by the participant. Questions are designed to include the themes found in the literature and from the purpose of the study (decision-making, risk, etc). Answers will be probed as required to get a good depth of response.

- to examine how operational and health and safety duties in the FRS co-exist with organisational policies and procedures and the requirements of the Health and Safety Executive (HSE);

- perceptions of health and safety management and it's impact on their role in the FRS;

- barriers between organizational health and safety policies and operational involvement;

- how are decisions made in the course of a fire-fighter's work;

- how do fire-fighters perceive and manage risk.

Interview questions (60 mins)

Tell me a little about yourself and your career with the FRS

What are the key challenges you face and how do you deal with them?

Organisational operational

Tell me how health and safety management works in your FRS?

- why is it like this?

- how has it changed?

- how do you personally feel about how it works in practice?

- are there any challenges in how it works in practice?

- do you feel it constrains your response to situations at all?

- if you had to make some changes what would they be?

How do operational health and safety policies work in practice?

- can you give me an example of this?

- what was your personal opinion about this?

- what do you feel your accountability/obligations are to adhering to these policies? (might use definition of heroism as an example of where there could be deviation from health and safety requirements might be broken)

What do you think about senior management/frontline staffs' approach to health and safety management?

- do health and safety policies and legislation inhibit/exacerbate risks? Why?

- do you think people operate outside health and safety policies and procedures?

- if so, when particularly might this happen?

- can you give any examples? What was the outcome?
- is this generally known and accepted throughout the organisation?

Personal experience

Tell me about a time when you or a colleague were hurt or nearly hurt?

- how did it happen?
- what was the outcome?
- what steps were taken?
- how does the service improve safety?

Tell me about a time when you had to deal with an emergency(ies) at an incident where there was potential for a person to be hurt or injured?

- what were you feeling?
- what decisions did you have to make?
- why did you make the decisions you did?
- do you think other firefighters would have done things differently?
- what was the outcome?
- what did you think with hindsight?
- were there any policies or procedures that guided your behavior?
- do you behave differently when policies and procedures don't exist?

Decision Making

How do you and colleagues make decisions?

What is the influence of learning

- experience;
- age;
- rank;
- the team;
- leadership;
- part-time/full-time.

Risks

What do you think about risks in your job? Does it depend on the situation? For example would you behave differently at a fire if you knew someone may be trapped?

- property;
- members of the public;
- personnel;
- how has it changed since you started as a fire-fighter?
- when if ever would you put yourself at risk?

Has you approach to risk changed since you started in the FRS?

- why has this happened?
- what has influenced this?

Experience

- equipment;
- organisation;

- personal.

Appendix 2

Fire and Rescue Service, Risk Perception and Decision Making Research

Information for Participants

Why have I been asked to take part in this research?

You have been selected at random. Your FRS gave a list of names to the research team and you have been approached to see if you will take part.

Why are we doing this research?

The FRS believes that this is an important time to look at the views of firefighters and officers to examine how risk and decision-making is perceived. Five FRS' are taking part in this work.

Who is funding the research?

Each of the four fire services taking part are contributing to the funding. The FPA has also contributed to the work.

Who are the researchers?

The researchers are an independent team working with Belvidere Consulting Ltd who will interview you and help analyse the data. The research team is skilled in research methods.

Is the information I give confidential?

Yes, the interview that you give will be tape recorded and transcribed. Your interview will be allocated a reference number and only the research team will know who you are. The data will be analysed and some quotations used to illustrate key points. You will only be identified by your role.

Who is taking part in the research?

There are five FRS taking part. We will interview about 35-40 people – and there will be 8-10 from each FRS.

What will the outcome of the research be?

The research team will analyse the data and compile a report that will be given to each participating fire service. A series of recommendations will be made based on the results of the research.