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# Building a Profile of the Fire Safety Community in Australia

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Project Number: RXV-AUS7

## **Building a Profile of the Fire Safety Community in Australia**

An Interactive Qualifying Project  
Submitted to the Faculty of  
WORCESTER POLYTECHNIC INSTITUTE  
In partial fulfilment of the requirements for the  
Degree of Bachelor of Science

By:

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## **Abstract**

The Fire Protection Association of Australia seeks to ensure the highest level of fire safety for the Australian community. The goal of this project was to provide recommendations to broaden and strengthen the membership and networking of FPA Australia. To accomplish this, we created a visual web representing the fields of the fire protection community and the networks that exists between them. We then identified specific fields that are not adequately represented and provided strategies for increasing membership and networking in two of these fields.

## **Acknowledgements**

Our group has been very fortunate to have received guidance and assistance from a number of individuals during our work on this project. First, we would like to thank Ross Hodge, the Executive Director of FPA Australia, not only for his guidance and advice on the project, but also for making an effort to make us feel welcome and comfortable as we made the transition to Melbourne. We also extend our utmost thanks to the entire rest of the staff at FPA Australia, and in particular we would like to thank Bob Sutcliffe, Manager of Membership and Sales, as well as Fran Ludgate, Director of Marketing for the great effort they put forth while working with us as our direct contacts to the organisation.

We would like to thank all the individuals who offered their time to be interviewed for this project. We would like to specifically thank Peter Johnson and Rob Llewellyn for giving us time for multiple interviews, and providing us with a plethora of information to work with. We would also like to thank Rob Taylor for giving us a lengthy interview on short notice when we needed consultation from fire services members.

We would also like to thank a number of members of the WPI community for their efforts in providing us with direction and elucidation on the goals of this project. We would like to thank Tom Balistrieri, director of the Student Development and Counselling centre for his presentation on group dynamics, and especially for the time he spent talking personally with our group and helping us improve our team dynamics. We would like to thank Professor Estabrook for the many hours he put into organising ID2050 to help prepare us for the daunting task of writing this report, and also for the constant feedback on our drafts. We would especially like to thank Professor Jonathan Barnett for setting up and coordinating this project with FPA Australia, and for his extensive advice on fire protection issues. Furthermore, we would like to thank him for going above and beyond to provide all the students working with this project site and enjoyable and educational cultural experience. Last, but certainly not least, we would like to thank our advisors, Professor Rick Vaz and Professor Chrys Demetry, for devoting so many hours to overseeing this project. Their detailed feedback and midterm evaluations helped us greatly throughout our fourteen week project.

## **Executive Summary**

Fires are tragically common in Australia, with all states having experienced deadly fires over the years. The economic costs of fires to both the affected communities and the nation have been extremely high, and the environmental damage is often permanent. These dangers led to the creation of the Fire Protection Association of Australia, an organisation created to allow businesses and individuals to communicate and become better educated about fire safety and prevention through networking with the fire protection community. This organisation was created as a private, non-profit organisation that seeks to act as a peak body in fire protection and assist in the creation of fire protection standards. FPA Australia acts as a central source for the dissemination of information to a wide range of contacts, “each of whom has an interest in protecting Australian life, assets and environment, from the ravages of fire” (FPAA).

In the early years of its existence, FPA Australia focused mainly on the industrial aspects of the fire protection community. Therefore, it has a very comprehensive network of businesses whose core interests are directly involved with goods or services in the fire protection industry, such as fire sprinkler installation or fire extinguisher manufacturing. However, the organisation has a limited number of members who do not provide goods or services in the fire protection industry, but who still have an interest in fire protection. As a result, FPA Australia is limited in its ability to make fire safety information available to all those who could potentially benefit from it. FPA Australia is unable to improve upon this limitation because it currently lacks a complete knowledge of the composition of the fire protection community.

The goal of our project was, therefore, to build a profile of the fire protection community and offer recommendations to expand and strengthen the membership and networking of FPA Australia. Our first objective was to build a profile of the fire protection community, including the role of FPA Australia in this community. In order to accomplish this, we first analysed the current composition of membership in FPA Australia, through research into the organisation as well as telephone interviews with members. Then, in order to create a list of all fields in the fire protection community, we analysed similar fire protection organisations in other countries, namely National Fire Protection Association in the United States, and the Fire Protection Association in the United Kingdom. We categorised their current membership into major fields, all of whom had an interest in fire protection. We also conducted telephone interviews with

individuals who had extensive experience with fire protection. In these interviews, we sought to gather information on their networking with other professional fields as well as their knowledge and views of FPA Australia. These three methods gave us the information necessary to build a full profile of the community.

In order to present our findings, we created several visual tools for use by FPA Australia. First, we created a table of the major fire protection fields, with a description of each field's primary interest in fire protection, and any government bodies or professional organisations associated with the field. We also created a visual tool that was used to represent the relationships between the professional fields and the government bodies and professional organisations that influence them. Most importantly, we created a visual representation of the fire protection community that showed not only the fields and FPA Australia, but also provided detailed information on the networking that existed between fields.

After completing the profile of the fire safety community, our second objective was to identify two professional fields that FPA Australia could benefit from increasing communication with, and offer recommendations to increase networking with these fields. To do this, we established criteria to determine how valuable a professional field was to FPA Australia. We determined the criteria based on input from the FPA Australia staff, as well as responses from our telephone interviews. We determined that the value to FPA Australia of networking with a specific field should be dependent on five major issues: current representation, overall size of field (in the community), networking, acquired knowledge and potential to enhance the image of FPA Australia. Using these criteria, we determined fire services and consultant engineers to be two fields on which to focus. We then offered specific strategies for increasing communication with each of these fields.

### **Fire Services**

Fire services, such as the Country Fire Authority and Metropolitan Fire Brigade, represent the largest fire protection field that works in the interest of the public, rather than for profit. Therefore, a public relationship with fire services could change the perception of some individuals whom we interviewed that FPA Australia is an organisation that puts the interests of industry ahead of general fire safety for the community. Further, we recommend that FPA Australia could lead an effort to incorporate the Australasian Fire Authorities Council (AFAC) in the publication of the

*Fire Australia* journal (currently published by FPA Australia). By incorporating AFAC, an organisation that represents over 250,000 members, FPA Australia could greatly increase circulation of *Fire Australia*, thus increasing their ability to disseminate updated technical information to the community. The cooperative effort involved in creating the joint journal could also facilitate an increase in networking and communication with AFAC, which will help FPA Australia improve its networking within the fire protection community. In order to further improve networking with fire services, we recommend that FPA Australia use its industry connections to add technical knowledge to public fire safety education programs, as well as provide discounted or donated products, such as fire alarms for public awareness programs. Finally, we recommend that FPA Australia act as central source for dissemination of fire safety research findings from AFAC to manufacturers and installers of fire protection equipment. One source for the dissemination of this information is through featuring articles from AFAC and AFAC members in *Fire Australia*.

### **Consultant Engineers**

Building consultant engineers are a group with a major interest in fire protection and are strongly connected to, among others, the core fire protection industry, building surveyors and end users of fire protection. They have the potential to contribute a large number of new members and thus new revenue that would enable FPA Australia to further improve and expand. They could provide technical advice on potential new building standards, as they have stronger communications with the building industry than any fields in FPA Australia's core membership. We recommend two strategies to achieve this goal. The first is the creation of a special interest group to provide networking for consultant engineers specialising in fire for direct information exchange between consultants and technical committee members. Second, FPA Australia should market, possibly through the Australian Consulting Engineers Association, the fact that it has information that relates directly to the needs of consultants specialising in fire. This information includes details on products from fire protection manufacturers, fire protection research being conducted by universities as well as private and government facilities, and updates on new building practices and proposed changes to building regulations.

These recommendations supplement the profile of the fire protection community prepared for FPA Australia through the table and visual webs described earlier. It is our intention that the visual webs will be useful long term planning tools for FPA Australia, giving them an idea of what fields are important to the fire protection community and the

long-term interests of FPA Australia. We believe that these tools, along with the recommended steps for expanding their network, can assist FPA Australia in achieving its organisational mission, and greatly improve fire safety in Australia.



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## Authorship Page

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	Executive Summary	Steve	Steve
	Acknowledgements	Steve	All
	Abstract	Mark + Steve	Steve
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2.1.1	History of Fire Protection Services in Australia	Mark + Steve	Mark + Steve
2.1.2	Major Causes of Fire in Australia	Steve	Steve
2.2	Models of Fire Protection Organisations	Steve + Yury	Steve
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2.2.2	Fire Protection Association (United Kingdom)	Yury	Yury
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3.1	Objectives in Data Collection	Steve	Steve
3.1.1	Defining Current Extent and Composition of FPA Member...	All	All
3.1.2	Evaluating Gaps in Current Membership	All	Steve
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3.1.5	Determining Potential Improvements to Member Benefits	Mark	All
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3.2.1	Member Interviews	Steve	All
3.2.2	Fire Protection Expert Interviews	Yury	All
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4.3	Networking within the Fire Protection Community	Steve	Steve

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4.5	Underrepresented Areas in FPA Australia Membership	Steve	Steve
4.6	Interests and Perspectives of Targeted Fields	Yury	Yury
5	Recommendations and Conclusions	Steve	Steve + Mark
Appendix A	Table of Fire Protection Fields	Mark	Mark + Steve
Appendix B	Visual Web of Overseeing Bodies	Mark	Mark + Yury
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Appendix D	Current AFAC Membership	Steve	Steve
Appendix E	NFPA Membership Fields	Yury	All
Appendix F	NFPA Professional Organisations	Yury	Yury
Appendix G	Professional Organisations in Australia	Mark	Mark
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# 1. Introduction

Fires are tragically common in Australia, with all States having experienced deadly fires over the years. The economic costs of fires to both the affected communities and the nation have been extremely high and the long-term environmental damage from bushfires is often permanent. For example, in the infamous “Ash Wednesday” brush fires in 1983, 37,000 buildings were destroyed and 76 people lost their lives as fires raged across much of the country (Natural Disasters, 2003). Due to the extremely low population density in rural areas of Australia, fire fighters are rarely able to respond immediately in the event of a fire emergency. These dangers necessitated the creation of some medium by which businesses and individuals could communicate and become educated on fire safety and prevention.

The Fire Protection Association of Australia (FPA Australia) was created to promote fire safety education through increased networking within the fire protection community. This organisation was created in 1997, as the merger of two smaller national fire safety organisations. Prior to the creation of FPA Australia, fire safety was handled exclusively at the state level. While the Australasian Fire Authorities Council provided a unifying body for fire brigades, corporations and individuals were left without a practical means of networking with each other. To fill this void, FPA Australia was created as a private, non-profit organisation. It relies on donations, and, more importantly, membership dues, to offset operating costs. It further supplements its income with the sale of numerous standards, books, videos and publications. While it lacks the ability to create official standards, FPA Australia distributes safety guidelines, and also plays an important role in Standards Australia, the principle creator of standards used in the Australian building code. FPA Australia acts as a central source for the dissemination of information to a wide range of contacts, “each of whom has an interest in protecting Australian life, assets and environment, from the ravages of fire” (FPAA, About).

Because FPA Australia has a limited number of full-time employees, it relies on a network of contacts with which it can gather and exchange information in order to promote fire safety education within the community. In the early years of its existence, FPA Australia chose to focus mainly on the corporate aspects of the fire safety community. Therefore, it has a very comprehensive network of businesses whose core interests are directly involved with goods or services in the fire protection industry, such as fire sprinkler installation or fire extinguisher manufacturing. However, the

organisation has a limited number of members who do not provide a good or service in the fire protection industry, but who still have an interest in fire protection.

Without complete knowledge of the composition of the fire protection community, FPA Australia is limited in its ability to make fire safety information available to all those who could potentially benefit from it. FPA Australia has been concerned that many of the people who could benefit from communication or membership in the organisation do not know about its existence (as it was just recently formed in 1997). They have also been concerned that those who did know of the organisation did not realise that they could benefit through communication with it. Specifically, it is those who do not provide a fire protection good or service with whom FPA Australia seeks to facilitate communication. FPA Australia was also interested in learning about how their current network compares to those of similar institutions in other countries, but had not had the resources necessary to investigate this issue.

The goal of our project was to provide recommendations to strengthen the membership and network of FPA Australia. We classified the fire protection community by identifying all the professional fields (such as architects and researchers) that have an interest in fire protection and identified specific fields that were not adequately represented. FPA Australia seeks to create mutually beneficial relationships with the members of any field that has the potential to improve the community as a whole. Therefore, another objective of our project was to identify the specific interest each field has in fire protection, and evaluate how these new fields could contribute to FPA Australia. Finally, we analysed the current member benefits, and offered recommendations on new and improved benefits that would make membership in the organisation more appealing. These findings and recommendations will help FPA Australia to approach its primary objective of facilitating the best possible fire safety for the fire protection community of Australia.

## **2. Background Research**

In the first major section of our background research, we present the history of fire protection in Australia. This general history on Australian fire services creates a backdrop for understanding the concerns of a country with completely unique population distribution and fire risks, and a better understanding of how the Australian community as a whole approaches fire safety.

Information is also presented on the National Fire Protection Association in the United States, the largest fire protection organisation in the world. In describing the membership structure of the NFPA, we provide a strong basis for what the make-up of the entire fire protection community entails. We then present similar information on the Fire Protection Association of the United Kingdom, which has a size and scope very similar to FPA Australia. Finally, we describe FPA Australia, including the composition of current membership and organisational structure.

### **2.1 History of the fire protection services in Australia**

Australia does not have a national governing office for fire and emergency; each individual state and territory passes its own legislation and codes of practice. Individual states each have some organisational structure meant to provide fire and emergency services throughout the state. Under the authority of the Australian Constitution, responsibility for emergency response rests with the states and territories. This responsibility includes mitigation of potential emergencies as well as emergency preparedness and response/recovery action. A private company has published a study paid for by the New Zealand government that defines and analyses the fire protection infrastructure utilised by Australian states and territories. This compendium is a thorough source of information that would otherwise need to be drawn from a myriad of independent websites and source documents related to each state's individual fire protection services. This study by Allen and Clarke provided much of the information contained in this chapter, and was used as it was both thorough and recently published (2004).

The state and territorial governments must institute appropriate regulations to ensure they protect life, property and the environment. They have a primary responsibility to provide

emergency services, including fire services, directly to the communities. Other responsibilities include formulating fire safety codes, undertaking fire related research, and developing advice on fire safety to distribute to the public. Australia's states provide several differing fire service structures due to the degrees of separation some states have between urban and rural areas (Allen & Clarke, 14, 2004).

Some jurisdictions have a fully integrated service (e.g., Tasmania has a single fire service operating under a single legislative Act) while others are undertaking a staged process of integration, which may continue to evolve (e.g. Queensland, Western Australia, and South Australia). Some fire services are not in the process of changing their makeup, and their jurisdictions are continuing with separate services for urban and rural areas, but have other mechanisms to encourage cooperation and collaboration at various levels of the fire service (e.g., NSW and Victoria) (Allen & Clarke, 11, 2004).

Urban fire service is a general term used to cover the part of a jurisdiction's fire services that responds to building or structural fires in cities and major urban areas. The term rural fire service covers the service (or part of the fire service) which responds to bush and vegetation fires in rural areas, or fires in areas not designated as urban areas. Inevitably, there is overlap and both services provide fire and non-fire emergency services in both urban and rural areas. It should be noted that fire services in Australia, while dedicating great effort to fire safety and prevention, also put equal emphasis on emergency services (Allen & Clarke, 8, 2004).

In many states, fire protection services are divided in order to ease the burden on any one service. New South Wales, for example, has two separate government departments (one for urban, one for rural) which were instituted under two different legislative acts. Both report to the Minister for Emergency Services. In Victoria the system is similar, with one department for urban fire services (the Metropolitan Fire and Emergency Services Board), and another for rural fire services including responsibility for public lands such as state forests and national parks (the Country Fire Authority). In both Victoria and New South Wales there are other bodies which have the broad role of planning and coordinating between services as well as reviewing fire district boundaries and setting performance standards. South Australia has two services, The Metropolitan Fire Service for urban districts and the Country Fire Service for rural fires. South Australia is currently implementing reform to its fire service arrangements in hopes of becoming



more integrated, while retaining separate organisations for urban and rural fire services (Allen & Clarke, 14, 2004).

Other states, especially those with low populations, organise fire protection services under a single representative body. Tasmania, for example, has one of the most fully integrated fire services, encompassing both urban and rural areas. It is technically part of the health department and reports to the Minister for Health and Human Services and was instated by one all-encompassing act in 1979. Western Australia utilises an umbrella statutory authority which covers urban and rural fire and emergency services and is made up of smaller subset services including the Bush Fire Service, Fire and Rescue Service and the State Emergency Service. Queensland Fire and Rescue Service (QFRS) is a division of the State's Department of Emergency Services, and the Rural Fire Service is a division within QFRS. Queensland services were instituted under one act in 1990. Australian Capital Territory (ACT) fire services are comprised of ACT Fire Brigade and ACT Bush Fire Service. They are both part of the State's Emergency Services Bureau and were instituted under three Acts, from as early as 1936. The Northern Territory has their fire and rescue service ("Northern Territory Fire and Rescue Service") as a branch of the Department of Police, Fire and Emergency Services. They provide both urban and rural fire service and the Chief Fire Officer reports to the Commissioner for Police (Allen & Clarke, 18, 2004).

South Australia has already been mentioned in reference to changing structure, but many other states and territories are aware of drawbacks to their current systems and are in the process of proposing new legislation. Western Australia and Queensland are both undertaking review work in order to evaluate their effectiveness and propose possible changes to their individual systems. Above all, it should be noted that while each state is very different in structure, they all provide close to the same services as dictated by the Australian Constitution and seem to do so effectively even with the separation of urban and rural fire and emergency services (Allen & Clarke, 15, 2004).

While state services are well developed and adapted to suit the fire protection needs of their states, they do not create any cohesion on a national level. Therefore, in order to streamline national fire fighting efforts, the Australian Fire Authorities Council (AFAC) was formed in 1993. It was created as a representative body for fire and emergency services and land management agencies in the Australasian region. It is a non-profit, private organisation that brings together major fire brigades, such as the Country Fire

Authority and Metropolitan Fire Brigades, for the purpose of networking and communication. It also has several international contacts, such as the New Zealand and Singapore Fire Services (AFAC, 2005). A complete listing of AFAC membership can be found in Appendix D.

AFAC strives to achieve a coordination of activities and resources between its members, as well as policy formulation and information sharing. Because member agencies manage a workforce of around 280,000 employees and volunteers, AFAC has the ability to affect a large percentage of fire-related services throughout the Australasian region. By increasing co-ordination and communication between departments, AFAC attempts to reduce duplication throughout fire and emergency services and thereby increase overall service efficiency and deliver monetary and time savings to member agencies.

AFAC strives to achieve national consistency in the development and implementation of policy, standards, and strategies for effective fire prevention and emergency services. It also attempts to assist members by developing and promoting realistic performance indicators, and spreading information on community safety programs (AFAC Strategy Plan, 2004). AFAC also publishes training manuals for fire-fighters across the country, a major change from the previous system, wherein different brigades relied on various foreign training manuals (such as British or American). AFAC also plays a role in land and environment management by developing models and spreading information on best practice in the use of fire in the natural environment. It also attempts to inform community groups and regulators of the role of fire in the natural environment. (AFAC, 2005)

## **2.2 Models of Fire Protection Organisations**

To evaluate the characteristics of various fire protection communities around the world, we analysed fire protection bodies that operate overseas. In this section, we present general structural and operational information about two bodies: the National Fire Protection Association (NFPA) in the United States, and the Fire Protection Association (FPA) in the United Kingdom. We also describe the scope of each of these organisations and offer a description of their current membership.

### **2.2.1 National Fire Protection Association (US)**

The National Fire Protection Association (NFPA) is the largest authority on fire, electrical and building safety in the world. Based in Quincy, Massachusetts in the United States, this non-profit organisation strives to alleviate fire and hazard related problems through education, code establishment, research, and training. The NFPA has emerged as a world leader in fire prevention through the development of internationally recognized codes and standards.

The National Fire Protection Association was founded in 1896 by groups of individuals and organisations with an interest in fire prevention. The technological advances in electricity that boomed at the turn of the 20<sup>th</sup> century created a new safety hazard. To combat this, organisations were formed to write standards for public electricity use (Cavanaugh, 1996). However, the implementation guidelines were not standardised in all areas, as there were five distinct electrical codes that were recognised in the United States (Cavanaugh, 1996). At the same time, technological advances in fire fighting such as the water sprinkler system were being developed. The breakthroughs in fire protection technology were fuelled by the burden of economic loss in an industrial nation. The fire prevention industry was also filled with conflicting codes and guidelines. It was apparent that the codes needed to be standardised into a single entity (Cavanaugh, 1996). It was also beneficial to unite members of fire protection community in order to promote new developments in the fire protection field (Cavanaugh, 1996). This demand inspired the creation of the National Fire Protection Association, a non-profit organisation whose mission is to educate, research, and advocate standards of fire protection (Directory, 2005).

The National Fire Protection Association claims to have a membership consisting of over 77,000 individuals and 80 national trade and professional organisations. The NFPA consists of two main areas: one deals with the development of codes and standards, and the other focuses on the educational aspects of fire protection. (NFPA Directory, 2005)

The members of NFPA are broken down into seven categories. Five member categories have the ability to vote, while two categories do not.

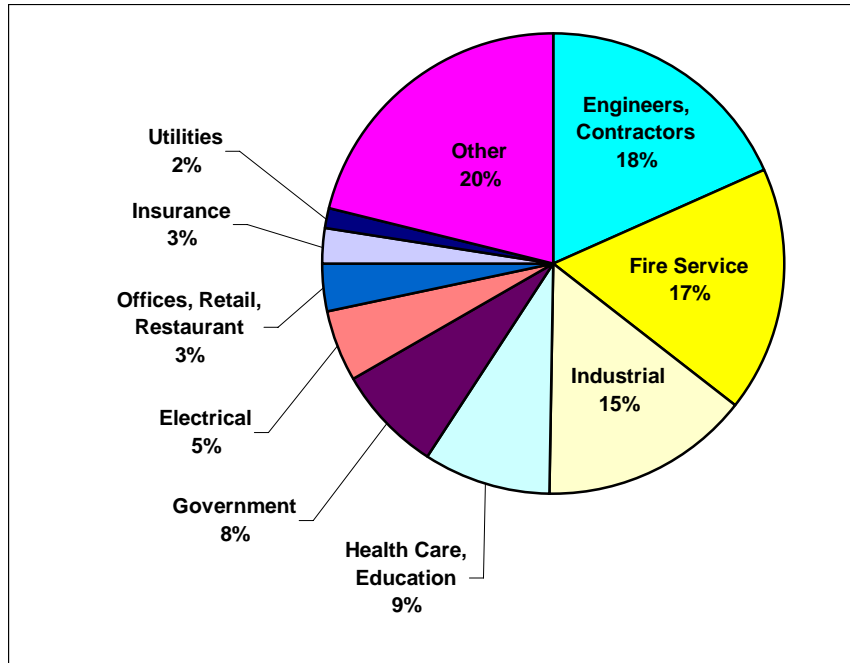
**Voting Members:**

- *A Regular Member* is an individual under 65 years old. This member pays dues set by the board of directors.
- *A Senior Member* is an individual over 65 years old. This member pays membership dues set by the board of directors.
- *A Life Member* is an individual who has been a voting member for 35 continuous years. This member no longer needs to pay membership dues.
- *An Honorary Member* is a member who has made extraordinary contributions to the organisation and is exempt from paying dues.
- *Organisation Members* include institutes, societies, corporations, firms, associations, fire departments, fire service organisations, governmental boards, bureaus, departments, and agencies. All of these organisations with input into the NFPA are able to become Organisation Members. These members are eligible to vote and also pay dues set by the board of directors.

**Non-Voting Members:**

- *An Affiliate Member* is a non-voting individual member with interest in NFPA. This member pays dues set by the board of directors. (Since memberships in this category are most likely reciprocal and do not include voting rights, dues are significantly less than for regular members or free of charge. The dues amount is negotiable and overseen by the board of directors.
- *A Student Member* is a full time student in a fire-related curriculum. This member pays dues according to the bylaws. (NFPA Directory, 2005)

The professional fields of NFPA's members were compiled from data in the National Fire Protection Association's directory publications. The distribution of member fields is shown in Figure 5; a full listing of these professional fields can be found in Appendix E. The largest member field consists of architects, engineers, contractors, and other individuals and firms involved in the process of constructing a building (Association Overview, 2005). This is not surprising, since in the United States, the strict building codes are implemented in building design and construction. Industrial firms make up another large sector; they primarily manufacture and sell products used for fire safety (Association Overview, 2005). An example of a fire protection industry firm is a manufacturer of sprinkler systems, alarms, fire extinguishers, etc. While the biggest sector is the summation of various unidentifiable members, half of NFPA's members belong to fire services, architectural engineering, and fire protection industry (Association Overview, 2005).



**Figure 1. 2005 NFPA Membership Percentages by Professional Fields, NFPA Association Overview**

It is also important to point out other membership fields in NFPA which consist of members who have an interest in fire protection but do not provide a service. Other members range from insurance companies and electrical services, to aviation and wildfire management. It appears that the target audience that NFPA reaches out to is individuals with a necessity for fire protection standards knowledge. This observation is evident from the size of the largest member areas like architects, building engineers, building officials, fire marshals and chiefs, and members representing the fire protection industry.

Further research into the National Fire Protection Association revealed that a major portion of NFPA's membership consists of individuals who are also members of a related professional organisation that has a vested interest in fire protection, or some aspect therein. These individuals often associate with each other by means of an organisation dedicated to their specialty fields that help distribute information, as well as news of current research and practice. Groups like these are common in the professions and offer assistance to both members of their specialty group as well as those still in training for it. Associated discounts and other member benefits are often used to offset the cost of membership, and can come in a variety of forms. These professional organisations offer a great value to an organisation such as the National Fire Protection Association which

associates with a wide range of these organisations. According to NFPA's 2005 member directory, roughly one half of NFPA's organisation members are professional organisations and associations. The network of professional organisations within NFPA provides a system of information exchange on a variety of fire protection topics. Professional organisations offer a representation of their industry field, as well as providing contacts in their membership. Both of these features allow professional organisations to effectively expanding NFPA's networking ability. A complete list of professional organisations and other organisation members that interact with NFPA is located in Appendix F.

In order to develop codes and standards, the NFPA uses input from 6,000 volunteers who sit on 230 committees. This approach gives NFPA the ability to develop standards with contributions and feedback from a wide variety of members throughout their network. These committees are organised into more focused areas such as Public Fire Protection, Electrical Engineering, Life Safety, etc. In the development process, all members are encouraged to contribute opinions to the committees, and all members have a vote on the resulting regulations. The standards and guidelines developed in this process are then applied to local, state, and national legislation through the close relationship between the NFPA and government departments in Washington, D.C.

The NFPA also cooperates with the American National Standards Institute (ANSI), a non-profit organisation that approves standards and certifies them as American national standards "when it is satisfied that its consensus and due process requirements have been met" (By-Laws, 2005). The reason behind this process is to make certain that the standards written by an NFPA committee are a good compromise of viewpoints belonging to all parties involved. The consensus needed to pass a standard is significantly larger than majority, but short of unanimity (Directory, 2005). Furthermore, the guidelines that regulate the operations of a committee are well developed. The Standards Council, a committee that looks over NFPA operations, and the President of the Association have full control over the membership of any committee. The qualifications of being a committee member are specifically defined and the committee membership proposal is approved by the board of directors (By-Laws 2005). Because of NFPA's emphasis on legitimate standards creation based on scientific research, the association has built a strong reputation as a reputable and accurate source of influential guidelines (Association Overview, 2005).

Aside from the creation of codes, NFPA emphasises the education and training of various individuals on the topic of fire protection and fire safety. The purpose of NFPA's educational committee is to reduce the burden of fire by means of fire safety education. To facilitate better education and communication methods, the committee promotes an atmosphere of resource exchange and cooperation. In addition, the committee promotes implementation of education in standards and codes (By-Laws, 2005). The NFPA education sector publishes material to educate members and the general public on fire safety topics. Examples of these contributions vary in style, but convey a similar message. School programs such as the *Learn Not to Burn* program, films, and print materials are an example of successful NFPA education (FEMA, 1986). NFPA claims that 461 people have been saved from fire injury or death because of lessons learned through *Learn Not to Burn* (Directory, 2005).

To accomplish its educational mission, NFPA relies on the distribution of member publications such as journals, buyer's guides, and email newsletters. The NFPA also provides training seminars, certification programs, research programs, and various other methods to increase the knowledge of fire and hazard protection among its members. The educational section of NFPA currently contains more than 800 members, and provides a model of fire protection education that can be applied to and adopted by other organisations.

### **2.2.2 Fire Protection Association (UK)**

Resembling the role of the NFPA, the Fire Protection Association (FPA) is the United Kingdom's national fire safety organisation. Its membership provides insight to the composition of a fire protection community and differences between fire protection organisations.

Founded in 1946, the FPA promotes a fire safety message to industry, commerce, and the public. The FPA aims to educate consumers and businesses by collecting, analysing, and publishing statistics, allowing the organisation to identify trends of fire issues and promote fire protection research. Other than publishing statistics, FPA publishes recommendations on codes of practice. FPA claims to provide "authoritative advice and information on all aspects of fire safety and fire safety management and offer a range of services to business and industry as well as the community at large" (Buyer's Guide 2004). In order to accomplish this goal, FPA collaborates with a variety of members and

other entities such as insurers, local government, central government, and fire services. A unique characteristic of FPA is that it is supported by the Association of British Insurers and Lloyd's, a combination of large insurance firms that represent the views of insurance companies in fire protection.

The Fire Protection Association of UK offers certain benefits to its members. Becoming a member of FPA qualifies an individual to receive discounts on publications as well as discounts on training courses. A significant benefit of being a member is the distribution of the FPA's monthly journal, *Fire Prevention and Fire Engineers*. The journal keeps members up to date on fire protection issues such as legislation, fire risk assessment, training, and fire fighting equipment. Aside from offering benefits to its members, the FPA also offers several services to the general public. Through consulting, the FPA UK is able to offer training and assessment of fire risks and fire safety as well as to conduct large-scale research on an assortment of topics.

The *FPA Buyer's Guide*, an annual publication, provides a list of organisations focusing on industry and commerce members. The list of members is organised alphabetically and, more usefully for analysis, by products and services that are offered by the company. The *Buyer's Guide*, although being a document focused on advertisement of member services, is the only publicly available document that describes the membership of FPA UK. Nevertheless, a breakdown of the listing reveals a grouping of FPA UK's members by professional fields. This grouping allows us to identify member fields with which FPA UK communicates. By analysing the document, we can also conclude that the core of FPA UK's membership focuses on industry. According to the document, fields such as education, investigation, insurance, and publicists also exist in FPA's membership and offer provide a description of how networking the Fire Protection Association of UK networks outside of the usual industry members. A more detailed list of FPA UK's member fields organised by products/services is located in Appendix H.

### **2.3 FPA Australia**

The Fire Protection Association of Australia (FPA Australia) is an organisation dedicated to the creation and implementation of fire safety guidelines across Australia. It operates within a similar scope of FPA UK, in that it seeks to provide the medium for networking between all areas of fire protection, yet lacks the ability to create standards. The NFPA operates on a much larger scale, due mainly to its ability to create standards and the



subsequent revenues these standards produce. However, all three of these organisations have the similar goals of improving fire safety through networking of fire protection communities. As explicitly stated, the purpose of FPA Australia:

“Is to work cooperatively with the community, governments, non-government organisations, and the fire protection industry for the continuous development of quality controls, services and products... FPA Australia aims, through education and representation, to ensure the highest level of protection of life, assets and the Australian environment from fire and related emergencies” (WPI Project Summary, FPAA 2005).

While they lack the ability to create official standards, FPA Australia distributes safety guidelines, and also plays an important role in the creation of standards through Standards Australia. Standards Australia is a non-profit organisation that has become the principle creator of standards used in the Australian performance-based building code. FPA Australia has technical committees that present directly to Standards Australia, and also vote on any fire-related standards passed by Standards Australia. These technical committees are made up of three types of people: industry representatives, fire protection engineers who are primarily employed by the industry, and end-users who actually utilise the end products that are produced. Because of its limited budget and staff size, FPA Australia conducts very little independent research. Therefore, most of the new research that the technical committees work with is brought in through other company ties, from overseas in Europe and the United States. This information is rarely distributed freely, and the content of technical committee meetings is not made publicly available, nor is it readily available to FPA Australia’s membership. Currently, to receive a copy of the minutes, a person must be on the committee itself. Further, no synopsis about what the committee is working on and debating is distributed directly to membership.

Special interest groups differ from technical committees in that they do not present directly to Standards Australia. Rather, these groups meet to network and discuss common issues. Membership in special interest groups is open to all members who are able to demonstrate a professional connection to the work of the particular group (as determined by FPA Australia staff). FPA Australia currently has five special interest groups: aviation, marine, training, workplace emergency response and bushfire planning and design.

### **2.3.1 History and Structure**

FPA Australia was formed from the merging of two other fire protection organisations – The Fire Protection Industry Association Australia (FPIAA) and the Australian Fire Protection Society (AFPS). Prior to this merge, FPIAA had been an industry lobby group, while AFPS attempted to represent the entire fire protection community objectively. These two groups merged in 1997 to combine their resources, which had been growing since the FPIA's creation in 1926 (FPAA).

The structure of FPA Australia relies on simple management structure and a tiered membership. It is a non-profit organisation, governed by a Board of Directors comprised of eight members who meet monthly. Six of these board members are elected by FPA Australia member, with three members elected each year to a two-year term. A seventh board member is elected every two years by the other current board members. The final board member is an Executive Director who manages the day-to-day operations of the Association and keeps other board members updated on the organisation's workings. Including this director, there is a full time national staff of seven employees. FPA Australia has a permanently staffed national office based in Box Hill, Victoria, approximately 30 minutes outside the state's capital, Melbourne (FPAA).

### **2.3.2 Current Membership**

As a recognised fire protection body, FPA Australia, not surprisingly, includes a list of members in a variety of fields. FPA Australia's membership currently includes government, fire and emergency services, insurance, research, engineering, architecture, building, health, education and training, transport, manufacturing, mining, design, manufacture, installation and maintenance of fire protection systems (FPAA Informational Pamphlet). There is no publicly available information on the specific membership in each of these major fields. More information on FPA Australia's current membership will be presented and analysed in the findings section of the report.

Their membership is divided into three major member categories. *Corporate members* are businesses whose core interest is in the business of fire protection. They generally provide a good or service in the fire protection field. Corporate membership is subdivided into four categories:

- Basic - company with no more than two employees
- Silver - Company with either less than three employees or less than \$3 million annual income
- Gold - Company with three or more employees and more than \$3 million annual income
- Platinum - major international corporations

*Organisation members* vary from corporate members in that they do not provide a good or service in the fire protection industry, but still have an interest in fire protection. Finally, *general members* are individuals, independent or belonging to a corporation. There are also member categories for students, honorary life members, retired members, international members, and journal-only subscribers. (FPAA Corporate Membership Application, 2005)

Members of FPA Australia pay dues to support the operating costs of the organisation (which has no government affiliation or subsidies). As members they receive access to a members-only library of fire protection resources as well as numerous other benefits, which vary in part by the type of membership. For example, members have the opportunity to participate in committees and forums which play a role in the development of national training programs covering many aspects of fire safety. Also, *Fire Australia*, Australia's leading journal on fire protection, is distributed four times a year to all members of FPA Australia. In addition, all members receive the FireTalk newsletter, which updates members on a broad range of topical issues as well as general Association news. Finally, both the national office and state divisions hold seminars and forums on a regular basis to bring members together (FPAA Membership Information). The aim of these activities is to provide information on various changes in fire safety or the fire protection industry.

## **3 Methodology**

Our goal was to build a profile of the fire safety community, and provide recommendations to strengthen the membership and networking of FPA Australia. In this chapter we describe the methods we employed to achieve this goal. The first section describes our objectives, the research questions we sought to answer and our approach for answering these questions. The second section describes in detail our data collection techniques, which consisted primarily of interviews that accomplished multiple objectives. We explain the format, sampling population and contact method for all of our interviews.

### **3.1 Objectives for Data Collection**

The key objectives for this project are explained below with descriptions of how each objective was accomplished. This section describes the reasoning behind the methods employed to complete each objective, as well as the key research questions associated with each objective. We present the methods for each of our five major objectives: defining the current composition of FPA Australia, determining the composition of the entire fire protection community, determining networking between fire protection fields, analysing potential contributions of these fields to FPA Australia, and finally determining possible improvements to current member benefits.

#### ***3.1.1 Defining Current Composition of FPA Australia Membership***

Our first major objective was to analyse the current composition of FPA Australia. To accomplish this objective, we categorised FPA Australia's membership into major professional fields. We also sought to determine where these fields fit into the fire protection community by investigating the organisations and government bodies that oversaw these fields. Thus, the research questions we sought to answer in this step were as follows:

- What professional fields do members of FPA Australia belong to?
- What professional organisations or government bodies oversee these fields?
- What other professional fields do members of FPA Australia network with?

In order to discover these fields represented by FPA Australia members, we employed a combination of techniques. First, we obtained and analysed a full member listing database. This database gave us an understanding of fields represented by corporate and individual membership, but offered no information on organisation members. Therefore, we also individually researched each organisation member to determine what professional field each member represented. Our sponsor then provided feedback on how specific these fields should be, and helped us finalise a list of all professional fields currently represented in FPA Australia membership.

In order to determine the professional organisations and government bodies overseeing these professional fields, we relied on member interviews. In these interviews, we asked members what, if any, professional organisations they were members of, and also what government bodies they directly dealt with. We then did additional research to find major overseeing bodies for those fire professional fields we had not contacted through member interviews. We used this information to gain a full understanding of the current composition of FPA Australia membership, in terms of professional fields and overseeing organisations.

### ***3.1.2 Determining Composition of the Fire Protection Community***

Our next objective was to create the actual profile of the entire fire protection community. We created a list of all major fields of fire protection, making each field specific enough to accurately identify groups and varied enough to fully represent all fire protection-related individuals. A comparison of the FPA Australia membership with this list of fire protection fields was used as one of our major means of analysis to find any missing and underrepresented areas of fire protection. The major research questions we sought to answer through interviews with fire protection experts were very similar to those we answered through member interviews, except they applied to different specific fields of fire protection. These research questions were:

- What professional fields have an interest in fire protection?
- What professional organisations or government bodies oversee these fields?

We identified fields of individuals and groups interested in fire protection using a combination of methods that included interviews, research and brainstorming. As described earlier, we also created a full list of the fields represented by current FPA

Australia membership. In order to supplement this list to include the rest of the fire protection community, we also posed these research questions in interviews with fire protection experts. While these research questions are very similar to those we used to define the current composition of membership, these questions were used in interviews with experts in a particular fire protection field, who were often not members of FPA Australia. Therefore, we received new professional fields, and thus new professional organisations and government bodies. To further augment this list, we analysed membership composition in other fire protection organisations. As a main approach, we compared the membership list of FPAA to that of the National Fire Protection Association (NFPA) in the United States, as well as the Fire Protection Association (FPA) in the United Kingdom. As explained in our background information, the memberships of FPA Australia, FPA UK, and NFPA are comprised of individual and organisational members. Due to the fact that FPA UK is an industry-focused organisation, research into its membership yielded mainly a list of industry fields. NFPA, a larger organisation with a broader scope, provided many unique fields outside of industry with an interest in fire protection. Through these methods we created, to the best of our ability, a comprehensive list of fields with an interest in fire protection.

### ***3.1.3 Determining Networking between Professional Fields***

A major aspect of our project was to identify the communication that existed between major fire protection fields. In order to catalogue all major networking that existed, the major research questions we sought to answer were:

- Which professional fields communicate with each other?
- What information, goods or services are exchanged?
- What is the frequency of these communications?
- Which of these fields network with FPA Australia?

In order to determine the networking that exists between professional fields, we relied on two major sources of information. The first was member interviews, in which we asked members about each of these major research questions, helping us determine the nature of the communication between the professional field and the rest of the fire protection community. We then relied on interviews with experts in fire protection fields to determine networking information about their fields. Finally, we used research

into specific fields where necessary to determine relationships one field had with others, and the strength of these relationships.

### ***3.1.4 Analysing Potential Contributions of Professional Fields in the Fire Protection Community***

In order to rank the professional fields that we have identified previously, we sought to identify what contributions these fields could make to FPA Australia. We needed to rank these professional fields because the association only has limited resources and felt it was important to limit the project's scope to provide more detailed recommendations restricted to two fields, instead of more general recommendations for a variety of fields. The contributions that fields could make to FPA Australia assisted us in determining which fields to choose. The major research questions that we sought to answer to identify these contributions were:

- What can peripheral fields of the fire safety community offer to FPA Australia?
- What potential contributions does FPA Australia find valuable?
- What professional fields are the valuable to FPA Australia?

In order to develop the criteria that we used to characterise potential contributions, we did three things. Initially we identified qualities fields might have that would be valuable to FPA Australia through discussions with staff in the national office. After identifying qualities that the management viewed as valuable to the organisation, we then used our interviews with members to attain their perception of FPA Australia and their needs that aren't currently provided for. Finally we used expert interviews in the fire protection community to ascertain their perceptions of the strengths and weaknesses of FPA Australia. This gave us both internal and external views to formulate our criteria with.

After attaining this information we were able to finalise our criteria for characterising a field's potential contributions. We were able to create a feasible system for identifying desirable fields within the fire safety community by using a value analysis matrix to determine which professional fields were most valuable to FPA Australia. The professional fields we identified as part of the fire protection community were evaluated using this value analysis matrix which utilised rating categories based upon the criteria

that we had established. The two fields identified as being both valuable and underrepresented in FPA Australia's membership were then targeted for further research.

### **3.1.5 Determining Potential Improvements to Member Benefits**

After identifying the fields that we choose to focus upon, we proceeded to construct specific recommendations for these targeted fields that provided FPA Australia with a detailed strategy for increasing networking and membership. Doing this completed our final objective of contacting underrepresented fields and providing specific recommendations for them. In order to make these recommendations, a fundamental part of our project was to establish a list of the benefits these targeted fields might find desirable. Non-members in these fields will only want to interact with FPA Australia if they have an interest in the benefits offered by networking opportunities or membership. We hoped discovering these motives and incentives would allow FPA Australia to later encourage non-members of the advantage of joining or interacting with the organisation, which is essential to improve networking and membership. The major research questions that sought to answer for this objective were:

- What are current benefits offered to FPA Australia members?
- What benefits to members find most valuable and utilise most often?
- What new or improved benefits would members find useful?
- What changes in benefits offered by FPA Australia would encourage more individuals in peripheral fields to become members of the organisation?

The primary method for determining the benefits currently offered to FPA Australia members was through background research. We compiled a list of goods and services offered to members through information made available to us through FPA Australia publications. To develop a more detailed list, we asked some questions during interviews with national employees in case there were aspects of membership benefits that were not described in published material. Discussions with the individuals who interact directly with members as well as those who run the organisation were helpful in identifying the gaps in the published material and the actual advantages that the organisation shared with its members.

We also interviewed members to collect further data on membership benefits. We believed that in order to understand the motives and incentives for joining FPA Australia,



we needed to do more than just have a list of benefits. We understood that certain benefits would be much more attractive to potential members than others, and that frequently used membership benefits might indicate, by popularity, the usefulness to the member community, as well as the community at large. We asked members about what membership benefits each member used frequently and what benefits encouraged them to join initially. We attempted, through follow-up questions, to establish their motives for joining and why their current needs kept them interacting to an even greater extent with FPA Australia. After getting these member perspectives, we identified possible incentives which could be used by the organisation to encourage interaction between themselves and the target fields. We recognised that there were limitations to this method in that interests of the association's members may still be significantly different than those of underrepresented professional fields. The results of this did, however, provide a good start to create a list that was later used to prompt experts in the professional fields we choose to focus on. This list was used to prompt experts in order to identify specific interests, needs, and other types of benefits that these fields found attractive.

In an attempt to provide practical recommendations to FPA Australia, we gathered feedback from target fields as to the usefulness of potential new benefits. In order to assess those professional fields' needs, and how these potential benefits met them, we interviewed members of professional organisations as well as other knowledgeable individuals in these professional fields. This research was conducted in order to identify benefits utilised by these fields and needs that FPA Australia could fulfil. By prompting individuals with benefits that their areas might utilise, we determined which benefits these targeted fields would find appealing. By gaining an understanding of what these fields found valuable and thought that a fire safety organisation could provide for them enabled us to create a list of potential benefits FPA Australia could offer. Identifying this set of potential benefits was important to our project because it enabled us to represent the needs of these areas and enabled us to tailor our recommendations for FPA Australia based on the actual desires of each area.

### **3.2 Methods of Data Collection**

In order to accomplish all of the objectives described previously, we conducted two phases of data collection. This section describes the data collection methods used and explains the rationale behind using our specific data collection techniques. Furthermore,

the section explains the process for choosing a sample population for each data collection method. Finally, it explains the construction of interview protocols and techniques for conducting our interviews.

### **3.2.1 Member Interviews**

In order to determine the views of current FPA Australia members, we relied on direct contact with a selection of members from a membership list given to us by FPA Australia. We evaluated the pros and cons of both telephone interviews and mail surveys as a method for contacting members. For several reasons, we identified telephone interviews as the suitable choice for our application. First, we wanted to ask open-ended questions, and then allow the members to share their views. Gaining information on open-ended questions is much easier when talking, rather than expecting the members to write small essays on mail survey forms. Also, while reaching a smaller overall sample, the telephone interview method tends to yield higher rate of return than a mail survey (Fowler, 35-36). Finally, we realised that several days of telephone interviews would give us the information we needed to analyse, compared to being required to wait at least two weeks for the return of mail surveys. The greatest limitation of telephone interviews, beyond the smaller sampling size, is the labour-intensive process of spending hours on the telephone. Since this data collection was such an important part of our project, we believed this was time well spent.

In conducting our telephone interviews, we relied on what is known among social science researchers as a “collaborative social research approach” (Berg, 267). This method refers to a common practice in investigative data collection wherein the interviewer asks questions to solve a problem that the interviewees have a vested interest in. The responses are then “reflexively considered both as feedback to craft action and as information to understand a situation, resolve a problem, or satisfy a field experiment” (Berg, 267). Essentially, we used feedback to enhance our understanding of the current state of FPA Australia membership before finally evaluating possible opportunities to strengthen and expand membership.

As described above, telephone interviews have the inherent shortcoming of reaching a smaller population than a mail survey. This limitation necessitated the creation of some sample of the overall membership of FPA Australia small enough to be contacted through telephone interviews, but large enough to give meaningful responses from all areas of the

membership. In order to ensure that all major subgroups of interest were represented in our sample, we settled on a combination of what social science researchers refer to as “stratified sampling” and “purposive sampling” methods (Berg, 36). Stratified sampling refers to breaking a population down into “strata” – groups or individuals with common traits, and then sampled independently of each other. Purposive sampling refers to sampling wherein researchers use their knowledge about some group to select subjects who represent the population, or the subpopulation of interest.

We categorised membership by member type: corporate, individual member, organisation, student, international, honorary life member and retired. We then further subdivided corporate membership by size of the corporation (platinum, gold, silver, or regular) to ensure that all areas were adequately represented. After creating these subgroups, or strata, we then applied different sampling fractions (the fraction of total members to contact) to each stratum based on our assumptions of their potential diversity of knowledge and their relevance to our project. That is, we used our knowledge of the membership of each group to anticipate which groups might have homogenous perspectives, and which groups would give more variable responses. These assumptions were formulated after consulting with FPA Australia staff members. We did not need to apply sampling fractions that were perfectly representative of each group’s percentage of overall membership, because we were evaluating responses from each group independently. The actual members to be contacted within each stratum were chosen using a random number generator to create an ordered contact list. Names were then called from this list until the quota for members in that area was met. This was repeated individually for each membership field. The sampling percentages and total interviews for each area are shown in Table 1.

**Table 1. Member phone interviews by type**

Member Area	Number of Members	Desired Sampling Percent	Desired Number of Interviews
Students, retired, honorary life and international	101	0 %	0
Corporate platinum	6	10 %	1
Corporate gold	31	10%	3
Corporate silver	134	10%	13
Corporate regular	160	10%	16
Individual members	370	5%	18
Organisation members	76	100%	76

We chose to ignore students, retired, honorary life members and international members, because, with the help of FPA Australia staff, we decided they were outside the scope of any area being targeted for membership or networking expansion. Corporate members are the fundamental division of membership, and therefore were deemed able to provide information both on member benefits and on what areas of the peripheral fire community regularly communicate with FPA Australia membership. Individual members are somewhat less important in these respects, but still represent a significant area of the overall fire protection community, and their input was therefore considered useful. Finally, we attempted to contact every organisation member we could. We believed that these members represented our best link to the peripheral community, as organisation members are those who have an interest in fire protection, but do not offer any good or service in the fire protection field. They also had a very large potential diversity of answers, as they represent a broad range of professional fields.

### ***3.2.2 Targeted Expert Interviews***

To complement our data collection from current members of FPA Australia, we conducted auxiliary interviews with knowledgeable individuals who were chosen for their extensive experience in the fire protection industry. Since they were experts in their respective fields, the individuals provided us with more detail on the interests of fire protection fields as well as general insight in to the fire protection community.

Due to the investigative nature of this project, we used a variation of an approach commonly described in statistical literature as the ‘snowball sample’ method to construct the actual sample and find individuals to interview. This technique involves conducting initial interviews with key individuals and asking them to identify valuable referrals that are worth contacting (Berg, 36). The variation of the method consisted of a focus on experts to find information that would otherwise be outside the scope of our member telephone surveys. In our case, the filter for selecting interviewees was their extensive knowledge and experience in various fields of fire protection. This method allowed us to track down leads and build our referral list. Since it is not possible to control the number of referrals that are received when using a snowball sample method, we did not set a targeted number of individuals to contact. Instead, we relied on the experts to provide us with contacts that would benefit our research, and we contacted as many as time constraints would allow.

We began creating the initial contact list by conducting research into leaders of non-profit organisations that have a relationship with fire protection. This list was supplemented through input from the staff of FPA Australia including the Executive Director, Membership Director, and Marketing Director, as well as other personnel knowledgeable in the field of fire protection.

Due to the qualitative nature of the data we sought, the interview protocol was less structured than the member survey and relied on follow-up questions to obtain as much information as possible on the topics established throughout the interview. The referrals obtained from each interview were recorded into a contact tree, a visualization of all individuals in the sample and links to their referrals. In the first wave of interviewing experts, the topic of conversation was more focused on general information and finding contacts in other areas of fire protection. As the contact tree progressed to lower tiers, the topic of conversation tended to be more focused on the interests of specific fields of fire protection and the establishment and feasibility of our recommendations.

## 4. Findings

In this chapter we present the two major outcomes of our data gathering and analysis: a profile of the fire protection community, and strategies for FPA Australia to expand networking with underrepresented fields within this community. In profiling the fire protection community, we present a table of fire protection fields that describes the interests these fields have in fire protection, as well as any overseeing body or professional organisation associated with each field. We then present information on the networking of the fire protection community in a “visual web” that conveys the connections between fire protection fields and the strength of these connections. After completing this profile, we present our analysis of the professional fields in terms of their networking, size, current representation in FPA Australia and their ability to expand the role of FPA Australia. We apply these criteria in order to determine the two professional fields on which to focus, and then finally present our findings related to these specific fields.

### 4.1 The Current Membership of FPA Australia

Analysis of the membership database of FPA Australia provided information about the composition of current membership. The database stores contact information of organisations and individuals, the type of membership held by each member, and partial data concerning fire protection interests. With these data, we were able to identify the different categories of membership and a limited description of their roles in the fire protection community. An understanding of FPA Australia’s membership began with the analysis of the number of members in each category as provided in Table 2.

**Table 2. Member representation within FPA Australia by membership type**

Corporate	331
Individual Members	370
Organisation	79
Students	69
International	8
Retired	3

Analysing the membership database, we found a strong emphasis on corporate membership that comprised primarily of companies providing goods or services in fire protection. According to the database, corporate members comprise 40% of the membership. Since there are only 79 organisational members (9%), when compared to the extent of corporate and individual membership, the focus on corporate providers becomes evident.

By conducting interviews with individual members, we found that 78% of individual members contacted worked in a core industry field closely related to corporate membership. This compares with eleven percent of individual members contacted, who worked with organisations and thus were from non-core professions but still had an interest in fire protection. Additionally, eleven percent were categorized as miscellaneous since they had a remote interest in fire protection but were not closely related to a field that was part of the fire protection community. From these findings, we concluded that most individuals have interests similar to corporate members. As corporate and individual members make up 80% of all active members (excluding categories like 'lifetime honorary' and 'free journal'), this data further illustrates FPA Australia's current focus on corporate providers.

For corporate members, the database contains limited information describing the activities associated with the corporation. This information is gathered from a voluntary code of practice form which corporate members fill out, sign and return upon joining the organisation. Corporate members have a response rate of 95% for this information. Analysis of these data showed that 95% of corporate members that filled out the information are providers of goods and services. We refer to these members as being from 'core' fields of fire protection. We examined the policies of the organisation and found that only corporate members sign this voluntary code of practice. Only corporate members sign this document because it is an agreement to maintain a standard of quality for its goods and services throughout the fire protection industry. Non-corporate members have no need to fill out this document because they do not provide goods or services for which a standard needs to be maintained. For organisational members (non-providers of fire protection goods and services), these records were not available, so information about their interest in fire protection was inferred from the job description of the contact person and outside research into each organisation.

To gain a more accurate perspective on FPA Australia's membership, we conducted interviews with many organisation members that provided information on the types of organisations FPA Australia networks with. Some of the other organisations found were those such as large airlines, banks, property management, the Department of Defence, local councils, etc. The findings from this research allowed us to begin developing the peripheral (non-provider) fields of fire protection in FPA Australia's membership. Additionally, we found that the majority of these members did not have diverse interests, and took advantage of only one or two of the benefits offered by the organisation. Primarily, we found that organisations had a general need to be updated on fire protection news and happenings. For example, a small number of organisation representatives were librarians responsible for providing other co-workers with fire information.

## **4.2 Profiling the Fire Protection Community**

The information that we collected from interviews with members and fire safety experts all contributed to our understanding of the fire protection community. This information included professional fields with an interest in fire safety, as well as what that particular interest was. This enabled us to profile the community, making a list of professional fields that relate to it. We confirmed that the fire protection community is diverse, and complex.

Due to the extensive nature of this list of areas, we have chosen to present only a portion of it in Table 3. To view the remainder of the table, please see Appendix A. The fields in this list are grouped under category headings that describe the nature of the group. The selection shown is from the Building and Structures category. This category consists of a number of different professional fields such as contractors, consultants and building surveyors. These professional fields also have a brief description of how fire relates to that area, which is included in order to better present the importance of fire protection to each of the fields. The description also may qualify what kinds of fields belong to that group. For example, contractors deal with not only those who install active fire systems such as fire sprinkler or alarm systems, but also those who install passive devices such as fire doors and fire resistant walls and ceiling tiles. This description should still only be taken as an example of the most important reason each of these areas belongs to the fire protection community. In many cases there are a variety of other reasons that information on fire protection or assistance from the fire protection community is highly



desirable to these areas in addition to what is mentioned. Relevant related organisations that have influence over these fields have been listed in the final column. Additionally, to aid FPA Australia in the future, a visual web of these influencing associations was also constructed. It can be found in whole in Appendix B. Its content and structure is such that FPA Australia should be able to choose a broad field and determine what overseeing and influential bodies exist that direct that field. This should enable FPA Australia to further interact with these fields in the future by giving them a point to start future expansion from.

**Table 3. Excerpt of professional fields in the fire safety community** (see full table in Appendix A)

<u>Professional Field</u>	<u>Description of Relationship</u>	<u>Related Organisations</u>
<b><i>Buildings and Structures</i></b>		
Architects	Must plan buildings with emergency egress and fire suppression in mind, and also must design them to compensate for the risk and spread of fire.	
Consultants	Include fire risk, fire engineer, and other building consultants that deal with fire related building or emergency procedure with direct need for fire related information.	Standards Australia, State Building Commissions
Contractors	Are builders who install fire protection equipment and systems including passive devices such as fire wall and fire doors, as well as active devices such as fire hoses, alarms, and sprinkler systems.	Department of Housing and Public Works
Building Surveyors / Inspectors	Are directly responsible to assure building code compliance when it comes to safety and liveability. These concerns include fire-related code and fire prevention systems	Local Councils, State Building Commissions, Standards Australia, Department of Housing and Public Works
Special Buildings and Accommodations	Are structures such as jails, hospitals, aged care facilities, stadiums, hotels, high-rise residential and commercial buildings, and other buildings requiring special attention to fire protection and evacuation procedures.	State Building Commissions, Department of Housing and Public Works
Property Managers	Are owners of buildings with high occupancy that have little direct observation of the premises that they rent or manage. These managers have concerns relating to fire protection from a standpoint of prevention readiness and fire suppression system ability, as their tenants' loss is often their loss as well.	Local Councils, Department of Housing and Public Works

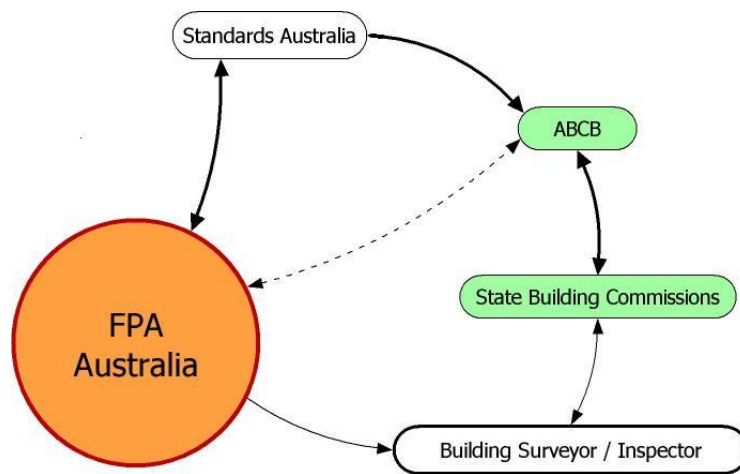
These professional fields were nearly all brought to our attention through our background research into NFPA's membership as well as the member interviews we conducted during our data collection. Because these member interviews must remain confidential, we cannot release the specific information collected from each individual. However, fields that were mentioned during these interviews were verified through expert interviews and then added to the listing. Expert interviews also offered other valuable information on professional fields. Some of these were new to us, and others were merely reconfirmed through these interviews. For example, a representative of the Society of Fire Safety explained the property council's interest in fire protection as well as how contractors are invested in fire safety. While we expected contractors to be mentioned, the property council's interaction with this area was unknown. A representative of the Country Fire Authority in Victoria made clear the importance of fire protection to fields such as the Department of Defence, mining operations, power generation, and the transportation field. Fire safety, suppression and prevention play an important role in the design and construction of tunnels for roads and railways. This particular example shows how professional fields with an interest in fire safety are rather diverse. A representative from a major consulting firm described how design engineers, as well as manufacturing and maintenance industries depend on fire prevention information. Likewise he mentioned fire protection's importance to building owners, emergency training organisations, and insurance companies.

### **4.3 Networking within the Fire Protection Community in Australia**

After compiling a list of fields with an interest in fire protection, we analysed the network that exists between these fields. We looked at relationships between fields, as well as communication each field had with FPA Australia. We used the results from our member surveys as well as our interviews with key fire protection experts to develop an understanding of current networking within the community. In order to present this material, we created a visual web of the fire protection community. This web is a graphical representation of the fields of fire protection and the connections between them, a portion of which is shown in Figure 6. The full web is shown in Appendix B.

The connections on the visual web represent only fundamental links between fire protection fields, and thus not every aspect of communication. The fundamental links

include regular purchases of goods or services or the frequent exchange of information. These limitations were necessary to create some level of simplicity, and thus usability, within the web. We found that fire protection is a highly interconnected community, with many fields having direct yet often only occasional communication with at least a dozen other fields. For example, occasionally specialty building administrators communicate directly with contractors to install sprinkler systems, or other fire protection equipment, but the vast majority of the time they go through consultants. Therefore, we excluded the link between specialty buildings and contractors.



**Figure 2. Portion of the visual web portraying the fire protection community**

In creating the web, we noted the exchange of information, goods or services with two-directional arrows going between fields, and a more one-sided relationship (direct purchase of goods, or dissemination of information from one source to another) was given a one directional arrow, pointing towards the recipient of the good or service. Further, in order to distinguish the strength of the connection, we used three line thicknesses: dotted, normal or bold. While the majority of lines were represented by a normal line, we used a dotted connection to describe an occasional, yet still important networking connection. Conversely, a bold line represents a fundamental relationship through frequent communication. Finally, we colour coded the fields of fire protection into groups: transportation, government, research and education, and core industry.

In Figure 2, a small portion of this web is shown. Included are the connections between FPA Australia and four fields related to construction and building design that have an

interest in fire protection. There is a thick line (showing a particularly strong link) between FPA Australia and Standards Australia (a non-profit organisation that creates numerous standards used in building and safety codes). This represents the fact that FPA Australia technical committees also have representation on committees within Standards Australia, and have a major role in the creation of standards. This line is two-directional because FPA Australia receives information on standards while they are still being created, and the members of FPA Australia become further educated by networking with other members of the Standards Australia committees. There is a strong link between Standards Australia and the Australian Building Codes Board (ABCB), representing the fact that over 70 fire-related standards issued by Standards Australia are referenced in the one building code that is put out annually by the ABCB. It is a one-sided arrow because, according to an interview with an ABCB representative, the ABCB does not significantly contribute to the creation of standards at Standards Australia, and instead only monitors to make sure they are being created fairly, and then references them in their document. The dotted line (weak link) between FPA Australia and the ABCB represents the fact that the ABCB does communicate with FPA Australia when making its building code, but “only uses them as one source” of information, not a definitive authority on fire safety. According to this representative, the ABCB communicates with FPA Australia as the voice for the manufacturing industry when necessary, but does not have a close working relationship with FPA Australia. This arrow is two-sided, because FPA Australia receives its information on current fire safety building codes from the ABCB. Similar justifications are used for the other lines in the visual web, based on data compiled from interviews with members and non-member experts.

With the network connections drawn, this visual web illustrates both the composition of the fire protection community, and also all networking fields. This web can be a useful tool for FPA Australia to plan the allocation of their resources for expanding networking and membership in the future. It also allowed us to see where FPA Australia fits into this community currently, and served as a first step in looking for specific strategies to help FPA Australia broaden and expand.

#### **4.4 Criteria for Assessing Value of Professional Fields**

In order to rate a professional field’s value to FPA Australia, we established criteria based upon our research findings. Through our research we evaluated the qualities

professional fields had that would be valuable to FPA Australia. Doing so helped us identify which professional fields are important for FPA Australia to focus on for future expansion of its network and membership. After analysing the information that we collected, we identified four major criteria which can be used to distinguish how much various fire safety professional fields may contribute to FPA Australia through its membership or increased networking ability.

### **Networking Capability**

The first criterion that we have defined relates directly to FPA Australia's desire to expand its network to as much of the fire protection community as possible. After talking to the Executive Director, as well as the Marketing Director, we concluded that the professional fields on which we focus should have a great deal of networking capability, as many of FPA Australia's goals and objectives rely heavily on the ability to network with the rest of the community. This means that these fields should be connected by frequent interactions to a number of other professional fields. A field with high networking capability could help FPA Australia to increase its information distribution network to new fields or strengthen connections to already represented fields. In addition to having a large number of connections to other fields, the most desirable fields would also need to have diversity among their connections. A field connected in some way to government, research, industry, and end users would be more important than a professional field with the same number of connections to only one of these types of groups.

### **Current Membership Representation**

Another important aspect of each field that greatly affects its importance to FPA Australia is its current representation in membership. If FPA Australia already has many members from a field it will not be as valuable to the organisation as a field with little or no current representation. A large number of members would indicate FPA Australia's understanding of this field, as well as their already close interaction with them. A small number of members would indicate FPA Australia's unfamiliarity in dealing with the field and a lack of close interaction with them. This second criterion was important to keep our list of valuable fields to those which FPA Australia does not already have a large number of members in, and needs assistance in formulating a plan of action for.

### **Field Size**

Thirdly, we found that FPA Australia valued identifying fields with a large opportunity for growth and expansion of its network and membership. We used field size in conjunction with the amount of current representation to determine if there was an opportunity for growth. For example, an organisation that had low current representation but a large overall field size had a greater opportunity for growth than a field that had low current representation but also a small overall field size. Therefore, the numerical size of each field, in number of individuals and number of independent companies, was significant to FPA Australia. Large fields provide the organisation with an improved capability to expand its network. Smaller fields would be less valuable to the organisation because of fewer potential members.

### **Ability to Enhance the Role of FPA Australia in the Community**

In addition to these the criteria just described, there are some other qualities that are valuable to FPA Australia that we found through our interview processes. The criterion to represent this is a bit more complex than the last three, and is made up of two parts. First, we learned that while being “the foremost technical and educational fire safety organisation in Australia” is part of their goal statement, FPA Australia does not gain much knowledge outside of research done by industry to distribute and educate with. Also, we found that FPA Australia does not have strong relations with organisations that work directly for the public good rather than for profit. These are two areas of potential growth for FPA Australia that should be considered in choosing specific fields on which to focus.

### **Knowledge**

FPA Australia faces a unique challenge in distributing authoritative information to the fire protection community without being an authoritative body that sets standards itself. This is because its goal is to promote fire safety through the distribution of educational and technical information. To do this FPA Australia needs information to distribute as well as a means to distribute this information. Currently the organisation lack sources of this information. While FPA Australia has technical committees that have a close link to Standards Australia and the building code creation process, they do not directly contribute information to the organisation. As explained in our background section, no synopsis about what the board is working on and debating is distributed directly to membership. Because of its limited budget and staff size, FPA Australia conducts very little independent research. This means that FPA Australia does not get information that

it can distribute from its technical committees, nor does it conduct its own information gathering. All of the information FPA Australia distributes, especially information new to the fire protection community, must come from sources outside of the organisation. This is not easy for it to do currently because FPA Australia lacks network connections that could provide this information. This need for information makes a professional field with an expansive knowledge base or large number of experts relating to fire protection very valuable to FPA Australia. Networking with these fields would be of great benefit to FPA Australia.

### Image

Another way that some professional fields can contribute to the organisation is by improving FPA Australia's public image as a peak body for fire protection in Australia. Through our interviews, we found that a small but not insignificant number of members of the fire protection community view FPA Australia as more of a fire industry lobby group than as the "foremost technical and educational fire safety organisation in Australia", which is the stated mission and goal of the organisation.

Five of the 86 FPA Australia members that we interviewed stated, without being prompted, that they viewed the organisation primarily as an industry lobby group. These individuals belonged mostly to the organisation (4 members) rather than the corporate (1 member) membership category, and thus for the most part they were from non-core fields<sup>1</sup>. Additionally, during member interviews, 12% of the members surveyed indicated through unprompted commentary that they were concerned with FPA Australia's current strong focus on industry. The majority of the concerns voiced were focused on the influence of large corporations on the organisation and the image associated with that relationship. All of these members came from the organisation or corporate regular membership groups, which are either very small, not related to core industry or both. Some of these responses included the concern that they felt as if they were on the "bottom of the food chain." Similar perspectives were mentioned throughout our telephone interviews with fire protection experts. Many experts viewed FPA Australia as an industry representative, the voice of the industry, not as an objective organisation. Another stated that FPA Australia gives the fire protection industry's perspective and is not, in their opinion, unbiased enough to provide critical and impartial information.

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<sup>1</sup> As Organisation members are by definition from non-core fields, while corporate members are from core industry.

This information from interviews led us to conclude that future networking should be partially focused on enhancing the image of the organisation as a peak body of the fire protection community. This will require FPA Australia to concentrate, in part, on groups and organisations that give back to the fire safety community, as well as to the public in general. By interacting with groups that engage in fire safety education or similar programs appreciated by the public, an improved image of FPA Australia can be expected. The ability to enhance FPA Australia's public image is another criterion that will be given importance in our rating and recommendation process.

#### **4.5 Underrepresented Areas in FPA Australia Membership**

After identifying the criteria on which to analyse the value of professional fields to FPA Australia's network, our next objective was to apply these criteria to provide recommendations as to what fields FPA Australia should focus on increasing its communication with. Because of FPA Australia's limited resources (it has only seven full-time employees) it lacks the abilities to focus on more than two professional fields to expand its networking and membership. Therefore, we applied all of these criteria to determine two "underrepresented" fields in FPA Australia's current membership to target for increased communication.

The term "underrepresented" is not used simply as a measure of the number of current members. We decided that in order to be considered underrepresented, a professional field must have a number of members in FPA Australia that, relative to total membership, is not indicative of their overall importance to the fire protection community. That is, an organisation must play a smaller role in FPA Australia membership than it does in the community as a whole. Therefore, in order to make an accurate decision on the extent to which a given area is underrepresented, networking within the community, the size of the industry, and their potential in enhance the role of FPA Australia were analysed against their current representation in the organisation.

In order to organise our findings, we created a value analysis matrix. The value analysis matrix, shown in Table 4, is a tool that allows items to be rated based on a number of criteria, often qualitative in nature, in order to ease the difficulties associated with comparing the items. We elected to assign values of high, medium or low to represent



our rating of each field with respect to each criterion. This allowed us to use the matrix as a source of comparison and information without assigning quantitative values of questionable accuracy.

In order to ensure consistency within each category, we created a rubric for determining the rankings in each category:

**Network**: This criterion represents the degree to which the area networks with other areas of fire protection about fire issues, using our visual web as primary reference.

*High* - Strong links with many (5+) other fields of fire protection; networking with multiple major areas (research, industry, transportation etc)

*Medium* - Links with several (3-4) other fields of fire protection; networking with at least one major area outside of their own.

*Low* - Involved with no more than one to two other areas of fire protection; has little or no role in the fire protection community outside of their own interests

**Current Representation**: This category indicates the current representation in terms of the overall makeup of FPA Australia. The rankings indicate the raw number of members or networking connections the field has with FPA Australia. A ranking of “low” would be the most favourable rating in determining if the field would be good to focus on.

*High* - Represents a core area of current FPA Australia membership (10% or more of FPA Australia membership) or very strong networking ties with FPA Australia.

*Medium* - Represents an area that has significant representation in FPA Australia (1-10% of current membership), but does not represent a core area of membership.

*Low* - Represents an area that has very little current communication with FPA Australia, including few or no members (not more than 1% of membership), and no close networking with FPA Australia.

**Size**: This category refers to the number of members of each of the fire protection fields. Most of the information was gathered from “Australian Labour Market Statistics April 2005”, published by the Australian Bureau of Statistics. Other figures were gathered through research into the membership of professional organisations in the fields.

*High* - Represents an area with many members (approximately 200,000 or more) or fewer members but an exceptionally large number of smaller companies (and thus more potential members).

*Medium* - Represents an area with approximately 100,000-200,000 members, or fewer members but a large number of smaller companies.

*Low* - Represents an area with less than 100,000 members and lacking a large number of smaller companies.

**Ability to enhance the role of FPA Australia in the community:** This category represents the ability of a field to contribute to the overall knowledge base as well as improve the image of FPA Australia in the community.

*High* - Represents a field that has the potential to bring unique knowledge to FPA Australia and also help improve the image of FPA Australia through an increase in networking or membership in the organisation.

*Medium* - Represents a field that has the potential to either bring unique knowledge or help improve the image of FPA Australia through an increase in networking or membership in the organisation.

*Low* - Represents a field that could neither bring unique knowledge nor help improve the image of FPA Australia.

Table 4 shows the completed value analysis matrix for the major fire protection fields. The *ability to enhance the community role* column recognises the ability of a field to contribute knowledge, improve the image of FPA Australia, or both. Through interviews with experts we found that consultants, design engineers, fire services, research, and manufacturers of fire protection equipment all had the ability to enhance the technical knowledge of FPA Australia through their unique contributions. For example, fire services do research of their own on fire causes and fire suppression systems. The knowledge they gain from this research could help benefit FPA Australia, as they could disseminate this information to their membership. We also found that only research and fire services had the potential to significantly improve the image of FPA Australia, as these two fields attempt to work for the general good of the public, rather than a corporate profit.

Once we had completed the value analysis matrix, we created a set of guidelines to begin to limit the number of potential fields on which to focus. First, we eliminated all professional fields with a “high” rank in the *current membership* category. We did this because that rank corresponds to a core area of current FPA Australia membership, and the goal of our project was to expand into non-core areas. We then eliminated all fields that had more than one “low” ranking in the other three categories. We did so because

we wanted to recommend professional fields that could benefit FPA Australia in more than just a single area, such as networking, in order to be worth focusing on. Feedback from FPA Australia staff supported these decisions, as the staff indicated that it was more important to find areas that had the potential to contribute to FPA Australia in a number of different ways.

**Table 4. Value analysis matrix for determining underrepresented fields**

Fire Protection Field	Network	Current Membership	Ability to enhance community role	Size (#)
Consultants	High	Medium	Medium	Medium
Contractors	High	High	Low	Large
Design Engineering	High	Medium	Medium	Small
Fire Services	High	Low	High	Large
Insurance	Low	Low	Low	Large
Mining	Low	Low	Low	Medium
Power Generation and Management	Low	Low	Low	Small
Research	High	Medium	High	Low
Transportation	Low	Low	Low	Large
Manufacturers of Passive FP	Medium	High	Medium	Small
Manufacturers of Active FP	Medium	High	Medium	Medium

We identified four fields that fit these guidelines: research, fire services, consulting, and design engineering. Due to project time constraints, our sponsor suggested we focus on a smaller number of groups in order to allow time to discuss the feasibility of our recommendations with experts in those fields. Therefore we attempted to apply other criteria that were not reflected in our value matrix. We eliminated design engineering because, unlike the other three categories, there are not many design engineers working independently. They often work for larger companies, and would therefore be difficult to locate and contact. Also, their lack of independent employment would increase difficulties in establishing networking and membership because they would need to get their membership on an individual rather than corporate basis.

We then began research into the other three professional fields, including interviews with experts in these fields, with the intention of discovering what benefits each field would be interested in from FPA Australia. We found that there was very little FPA Australia could offer members of the research field. Outside of research funding, members of the research field we contacted indicated that there were no benefits FPA Australia could

offer to make membership more attractive. Communication with consultants and fire services indicated that there was a much greater compatibility between the desired benefits of their members and the benefits FPA Australia is capable of offering. Therefore we focused on these two areas for further research and communication.

## **4.6 Interests and Perspectives of Targeted Fields**

In this section we present findings from our exploration of strategies for promoting networking and membership growth. These findings are based on member telephone interviews, interviews with experts in professional fields, and research into professional organisations. Specifically, we established two major areas of findings pertinent to our areas of focus: those relating to fire services and those relating to consultant engineers.

### **Interests and Perspectives of Fire Services**

Our research revealed a large number of fire services personnel throughout Australia. However, representation of fire services throughout Australia is very low in the membership of FPA Australia. Research into the membership of Australasian Fire Authorities Council (AFAC), the representative body for fire brigades and fire services, uncovered 37 organisations representing 280,000 fire fighters across Australian region.

According to interviews with fire services personnel, this professional field has an interest in fire protection through extensive experience as end users of equipment and fighting fires. Further, they have strong contacts with the general public. Examination of AFAC's organisational structure reveals several areas of AFAC operation that can benefit from interaction with FPA Australia, including training and community education programs. Since these programs share similar goals with FPA Australia of providing fire protection information to the public, collaboration with AFAC in these processes could expand FPA Australia's network. An AFAC representative expressed that FPA Australia's strong representation of industry could be utilised to provide technical and product knowledge. Through interviews with FPA Australia staff, we found historical evidence of FPA Australia using its relationship with manufacturers to provide free smoke alarms to the public. Local fire brigades also told us that because they are responsible for fire safety education, they find educational materials sold through FPA Australia helpful. Staff also expressed that since educational information often needs to be tailored for its intended audience, material is created locally and FPA Australia's contribution to these materials along with its name and logo would be welcomed.

According to fire services personnel, collaboration of fire services brigades across the country and FPA Australia could bring together ideas and lower cost of publishing through bulk orders. An example a similar successful strategy is the *Learn not to Burn* campaign organised by the NFPA in the United States.

We also found through interviews with AFAC members that the publications put out by AFAC are not developed enough to satisfy the need of information distribution to the brigades under AFAC membership. A fire service representative claims they are able to provide valuable information to industry about issues in the field.

### **Interests and Perspectives of Building Consultant Engineers**

By analysing the network connection of organisations and individuals involved in building, we found a high potential membership growth in the field of consultant engineers. Analysing the membership of FPA Australia, we found 70 providers of fire protection that offer consultancy as a service. However, most of these organisations were not primarily consultant corporations, and only offered consultation in addition to their main services, such as installation or maintenance of fire prevention systems.

Discussions with the Australian Consultant Engineers Association (ACEA) uncovered a number of consultants with an interest in fire protection to verify our data on the under-representation of consultant engineers. Through ACEA we found 31 building consultants that specialise in fire protection in the state of Victoria. Throughout Australia, we found 113 building consultants specialising in fire protection that are registered with the ACEA. Through ACEA we also uncovered consultant engineers with a strong interest in fire protection outside of building engineering, in fields of civil infrastructure and environment consultation focused on hazardous materials.

By analysing the current membership of FPA Australia and consultant community, we found that there was an opportunity for growth in this membership segment. Validation of our data came from interviews with fire protection experts, including consultants. According to a representative of a large consultant company that has a strong knowledge of FPA Australia, the contractors that provide a fire protection service are well represented in FPA's membership, unlike consultants that hire them. Most of the time, consultants hire contractors to do actual installation or manufacturing, making consultants responsible for all technical management of fire safety design and maintenance. Analysing the member interviews with consultants and with experts in the field, we identified possible benefits that would attract consultants into membership.

The main benefits necessary for a building consultant are a need to access codes and standards, news on current and developing products in the industry, and research being conducted on fire protection issues. Further interests also include analysis techniques, insurance aspects, and information on current building practices. By comparing this list with the benefits that FPA Australia provides, we found that FPA Australia already satisfies the main interests of building consultants. Through discussions with consultant engineers, we found that benefits already provided by FPA Australia would satisfy consultants, and that the under representation in FPA Australia's membership is due to a consultants not being targeted for membership.

We found the networks were strong within building surveyors, distributors of goods, building regulators, and fire engineers. All of the consultants interviewed expressed a need for keeping updated on current products, standards, and changes in the field of fire protection. According to feedback received from consultants, one of the most useful benefits that would attract them into membership is the creation of a special interest group (SIG) and a forum for information exchange. Through research and expert interviews, we found that there currently is no body that allows consultant engineers specializing in fire protection to come together for networking and exchange of information. We found given the opportunity, consultants would take advantage of special interest groups.

While special interest groups would provide an environment for information exchange between consultants, networking in SIG's would only include other consultants. Individuals that we contacted expressed an additional interest in communicating with insurers, building surveyors, fire engineers, and manufacturers as well as to provide an influence on standards creation. Consultant engineers proposed a creation of a forum that would allow consultants to relay information to other fields of fire protection with which they communicate.

## **5. Conclusions and Recommendations**

The current composition of membership in FPA Australia is primarily made up of core industry members who provide a good or service to the fire safety community. This leaves gaps in FPA Australia's membership with respect to the fire safety community at large. These gaps play a role in decreasing the organisation's ability to achieve its

mission of ensuring the highest level of protection of life, assets and the Australian environment from fire and related emergencies.

In order to help FPA Australia better categorise the fire protection community in its entirety, we created a series of tools for FPA Australia to use in the future. First, we created a table of the major fire protection fields, with a description of each field's primary interest in fire protection, and any government bodies or professional organisations associated with the field. We then created a visual representation of the fire protection community that showed not only the fields and FPA Australia, but also provided detailed information on the networking that existed between fields. Finally we created an additional visual web that was used to represent the relationships between these professional fields and the government bodies and professional organisations with an interest in fire protection.

After completing the profile of the fire safety community, our second objective was to identify two professional fields that FPA Australia could benefit from increasing communication with, and offer recommendations to increase networking with these fields. To do this, we established criteria to determine how valuable a professional field was to FPA Australia. We determined that the value to FPA Australia of networking with a specific field should be dependent on five major issues: current representation, overall size of field (in the community), networking, acquired knowledge and potential to enhance the image of FPA Australia. After applying these criteria, we are able to provide recommended strategies to FPA Australia to enhance its networking and membership with specific, underrepresented professional fields. These strategies include potential new or improved member benefits that could make membership in FPA Australia more appealing to members of these underrepresented fields. Here, we present the benefits to FPA Australia that increased networking with these two fields will bring, and the specific strategies for implementation of our recommendations.

### **Targeted Recommendations**

**We recommend that FPA Australia focus on enhancing its relationship with fire services.**

*Benefit to FPA Australia:* Our findings suggested that a small but not insignificant number of FPA Australia members as well as other members of the fire protection community whom we interviewed perceive FPA Australia as an organisation that puts the

interests of industry ahead of general fire safety for the community. A public relationship with fire services could improve the image of FPA Australia, and also help achieve the goals set forth in the FPA Australia charter of promoting fire safety for the public. Further, networking with AFAC, an organisation that represents over 250,000 members, could greatly increase circulation of *Fire Australia*, a magazine currently. The advertisement space in this journal is bought by corporate members of FPA Australia who seek to gain name recognition within the fire protection community, and the prices for advertisements are based on total circulation. Therefore an increase in circulation would make advertisement space much more valuable to FPA Australia. A cooperative effort in the creation of the journal will also facilitate an increase in networking and communication with AFAC, as this organisation conducts fire research and has a relationship with, among others, the Australian Building Codes Board and fire safety training organisations. These fields are very important members of the fire protection community, and additional links of communication between them and FPA Australia (through fire services) would continue to strengthen the overall network of FPA Australia.

*Strategy:* In order to achieve this objective, we recommend that FPA Australia offers funding as well as the FPA Australia name and logo to fire safety education campaigns, and have some role in the actual planning of such programs. FPA Australia can use its industry connections to add technical knowledge to these education programs, as well as discounted or donated products, such as fire alarms. We also recommend that FPA Australia should act as central source for dissemination of fire safety research findings from AFAC to manufacturers and installers of fire protection equipment. This can be achieved through more articles from AFAC and AFAC members in *Fire Australia* magazine, and possibly even the creation of a joint publication between the two groups. In order to attract these members, we suggest that FPA Australia offer an increased role in the standards creation process to fire services members, most notably through allowing them more representation in the technical committees that present to Standards Australia.

**We recommend that FPA Australia work toward increasing representation of building consultant engineers in membership.**

*Benefits:* Building consultant engineers are a group with a major interest in fire protection. Consultants are strongly connected to, among others, the core fire protection industry, building surveyors and end users of fire protection. Their networking capability makes consultants a prime field for short-term expansion. They have the



potential to create a large number of new members and thus new revenue that will enable FPA Australia to further improve and expand. Strategies for attracting their membership would require relatively small resource allocation for FPA Australia, making them an even stronger choice. Further, they could provide technical advice on potential new building standards, as they have stronger communications with the building industry than any fields in FPA Australia's core membership.

*Strategy:* We recommend three strategies to increase networking with consultant engineers. The first is the creation of a special interest group to provide networking for consultant engineers specialising in fire. In addition, the creation of a forum for direct information exchange between consultants and technical committee members would be beneficial for both parties. Another aspect of this forum should be interaction with insurance companies and manufacturers to help consultants better understand aspects relating to themselves and these fields. Finally, from our interviews, we have concluded that many consultants specialising in fire are not part of the organisation's membership because it is not well advertised that FPA Australia provides information relevant to these consultants. However, FPA Australia does have information that relates directly to the needs of consultants specialising in fire, including information on products of fire protection manufacturers; fire protection research being conducted by universities as well as private and government facilities; news on new analysis techniques and software, and updates on new building practices and proposed changes to building regulations. One potential way to better advise consultants of the availability of information and resources through FPA Australia membership is through the Australian Consulting Engineers Association (ACEA). The ACEA is a business related professional organisation, and some system of giving recognition to fire specialising members could be discussed as a way of attracting membership or networking.

### **General Recommendations**

Based on comments from member telephone interviews, we believe there are several improvements FPA Australia can make with respect to its communication with members. These recommendations should not require a large expenditure of resources on the part of FPA Australia, and should not be expected to greatly increase membership or external networking. Rather, these recommendations should enable FPA Australia to better communicate with its current members, and in doing so help increase the networking that exists between members. These initiatives may increase overall member satisfaction,

especially among those members who indicated the desire for more opportunities to be involved in networking with the organisation.

- **We recommend that FPA Australia create an online archive of seminar and conference minutes / papers.** This recommendation is due to the responses from members indicating a very high interest in conferences and seminars, as well as comments indicating the inability of many members to attend these meetings. These minutes and papers should be purchasable through a new shopping cart feature being added to the FPA Australia webpage, with a heavy discount for those who paid to go to the conference or seminar, in addition to the base discount offered through membership. We believe that adding these archives would provide a new source of revenue and also give members in remote locations a chance to receive detailed information otherwise unavailable to them.
- **We recommend that FPA Australia compile and distribute a comprehensive calendar of events in the fire protection community.** We suggest FPA Australia create a calendar to be sent to members with updates on major fire protection related conferences and seminars from all major fire protection organisations (such as AFAC), instead of only FPA Australia events. This calendar could be placed in the *Fire Australia* journal, which is sent to all current members. There could also be a periodically updated calendar placed in the members section of the webpage. This initiative may improve both the perception and the effectiveness of FPA Australia as a peak body in the area of fire protection. This calendar will also allow members to stay updated on major events in the fire protection community even if they are not able to attend some FPA Australia events.
- **We recommend that FPA Australia increase targeted information dissemination to members.** Some members interviewed expressed a desire for more knowledge about the organisation and its activities, and a targeted communication technique may be helpful to get members to pay greater attention to distributed information. The utilisation of e-mail mailing lists to target individual fields within membership could greatly improve overall member communication. Separating communications and sending only relevant information to each field will decrease the unrelated items that members must dig through to find items relevant to them. For example, while property managers would have an interest in keeping up-to-date with information on the effects of fire protection equipment on insurance rates, researchers would not.

Specialising communications to each fields' interest will increase overall communication of news and benefits to members as well. It may also help to encourage members to thoroughly read each communication; thereby increasing how informed they are about the organisation and its activities.

- **We recommend that FPA Australia add more details to its member database to allow for easier categorising of members into professional fields.** In order to achieve the targeted information dissemination described earlier, FPA Australia must have a strong understanding of the field to which each member belongs. Currently, only corporate members fill out a questionnaire with their membership that categorises the nature of their business. This form currently allows users to check off multiple fields, thus creating ambiguity over the actual nature of their business. We suggest that all new members should fill out a similar questionnaire that involves a fill-in field for “primary field of business”, which can then be inserted into the database as a quick reference source for each member. Additionally, we believe that a brief survey should be sent to current non-corporate members in an attempt to gain feedback from each of them about what their primary field of operation is. Having more complete information on current members could allow FPA Australia to target specific fields with pertinent information.

These recommendations supplement the information given to FPA Australia through tables and visual webs described earlier. It is our intention that the visual webs will be a useful long term planning tool for FPA Australia, giving them an idea of what fields are important to the fire protection community and the long-term interests of FPA Australia, and what organisations or government bodies oversee those fields. We believe that these tools will allow FPA Australia to continue to approach its written goals, and greatly improve fire safety in Australia.

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Protection.* Pages vii-viii, 3-4. Melbourne: TriData

## Appendix A. Professional Fields in the Fire Safety Community

<u>Professional Field</u>	<u>Description of Relationship</u>	<u>Related Organisations</u>
<i>Buildings and Structures</i>		
Architects	Must plan buildings with emergency egress and fire suppression in mind, and also must design them to compensate for the risk and spread of fire.	
Consultants	Include fire risk, fire engineer, and other building consultants that deal with fire related building or emergency procedure with direct need for fire related information.	Standards Australia, State Building Commissions
Contractors	Are builders who install fire protection equipment and systems including passive devices such as fire wall and fire doors, as well as active devices such as fire hoses, alarms, and sprinkler systems.	Department of Housing and Public Works
Building Surveyors / Inspectors	Are directly responsible to assure building code compliance when it comes to safety and liveability. These concerns include fire-related code and fire prevention systems	Local Councils, State Building Commissions, Standards Australia, Department of Housing and Public Works
Special Buildings and Accommodations	Are structures such as jails, hospitals, aged care facilities, stadiums, hotels, high-rise residential and commercial buildings, and other buildings requiring special attention to fire protection and evacuation procedures.	State Building Commissions, Department of Housing and Public Works
Property Managers	Are owners of buildings with high occupancy that have little direct observation of the premises that they rent or manage. These managers have concerns relating to fire protection from a standpoint of prevention readiness and fire suppression system ability, as their tenants' loss is often their loss as well.	Local Councils, Department of Housing and Public Works

***Manufacturer /  
Distribution / Servicing***

Manufacturers  
(Of Active and Passive  
Equipment)

Produce fire protection related equipment and goods. They have a need to maintain up-to-date information of fire standards and developments in regulations dealing with their customer base.

FPAA  
(Fire Protection Association  
of Australia),  
PFPA  
(Passive Fire Protection  
Association),  
Standards Australia

Design Engineers

Create a variety of systems which may either fight fire or must withstand fire emergencies

Maintenance and Servicing

Is the portion of the industry that services and maintains all of the installed fire protection equipment in the built environment.

***Research and Education***

Fire Protection Educational  
Institutes

Work with researchers to develop new technology to understand and combat fire, as well as educate individuals about fire protection so that they might contribute to and work in the field.

SFS  
(Society of Fire Safety),  
IFE  
(Institute of Fire Engineers)

Fire and Emergency Services  
Training

Provide training to the fire and emergency service community, including training for specialised contracted fire brigades and a number of other groups.

IFSTA  
(International Fire Service  
Training Association)

Research Facilities

Are the primary source for new discoveries concerning fire and fire technology. These groups provide necessary and valuable new data on fire and ways to combat it, and provide this data to the community for practical use and application.

CSIRO  
(Commonwealth Scientific  
and Industrial  
Research Organisation)

Testing Laboratories

Are the portion of the fire safety community that verify product claims and specifications. In doing so, some of the data which they collect becomes verification of research.

SSL  
(Scientific Services  
Laboratory)  
[Now part of CSIRO]

***Emergency Service Providers***

Fire Services Have obvious concerns in relation to control and countermeasures for fire emergencies.

AFAC  
(Australasian Fire Authorities Council)

Emergency Services Have concerns relating to large-scale spreading bushfires, and the danger fire poses to human life.

***Other Fields***

Transportation Has fire prevention concerns with road and railway tunnels and fires aboard sea craft and aircraft. This group also has a need for information relating to spills of hazardous materials during transport.

Mining Is an industry in which fire protection and emergency evacuation are important concerns relating to equipment fires and smoke evacuation from deep tunnels.

Agriculture Is related to fire safety due to their need for fire breaks and other deterrents that enable them to save their crops from wildfire.

Fire and Arson Investigation Use fire protection related information to solve arson investigations. Information on material burn rate, fire spread, and other data come into play when solving these cases.

Insurance Companies Require information on the latest building codes, statistical data, and access to information on fire protection equipment abilities. This is because fire is often the cause of build environment destruction in Australia.

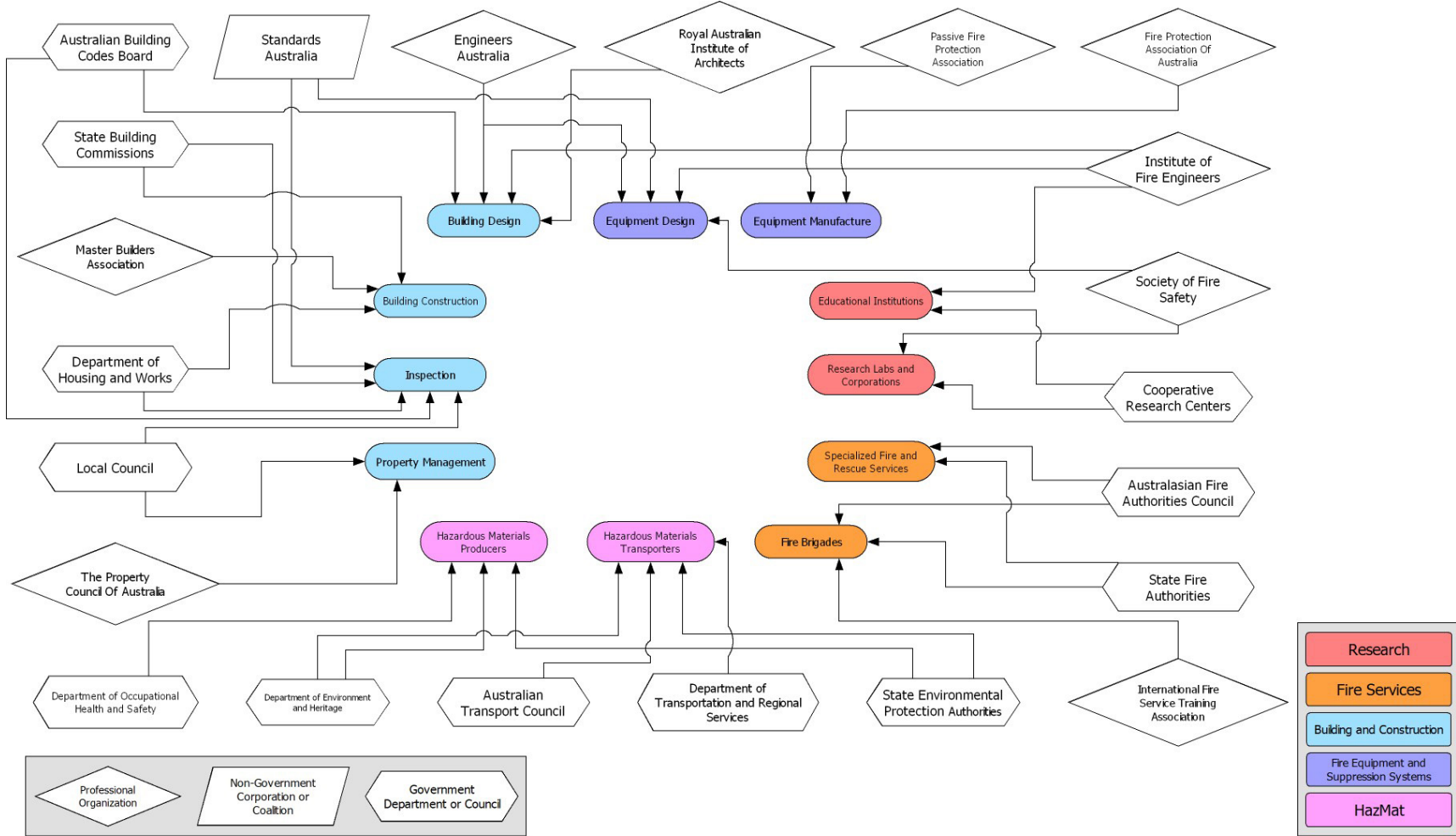
Occupational Health and Safety Is related to fire protection by the unfortunate by-product of human suffering that may be sustained from fire and smoke while in the workplace, even if the workplace is not in a fire protection related industry.

Department of Defence Has concerns relating to fire prevention on military bases along with a variety of other specialised fire protection related issues.



Department of Consumer Affairs	Has a responsibility to maintain high standards in products that can be purchased by the everyday consumer. They have interest in fire prevention in relation to the devices and equipment used for fire detection and prevention that are sold to consumers.	
Bushfire Management	Encompasses a broad range of individuals, but all have specific needs relating to wildfire control and prevention.	National Park Services, Bushfire CRC (Bushfire Cooperative Research Centre)
Hazardous Materials I	Is a category we have given to those who extract, refine, distribute, transport, sell, and dispose of fossil and other hazardous fuels. This field has a direct relation to fire protection. For example, fires on oil rigs at sea require specialised equipment to deal with. Power plants of most types also fall under this category.	
Hazardous Materials II	Is a category we have given to those who manufacture, distribute, transport, sell, and dispose of hazardous materials. With no direct relation to fire protection, they still fall under emergency management and within the realms of Hazmat which FPAA deals with in addition to fire protection.	

## Appendix B. Visual Web of Fire Protection Field Influencing Bodies





## Appendix D. Australasian Fire Authority Council Members

Australian Capital Territory  
Air services Australia  
Australian Capital Territory Emergency  
Services Bureau

Tasmania  
Forestry Tasmania  
Parks & Wildlife Service Tasmania  
Tasmania Fire Service

Queensland  
Department of Primary Industry  
Queensland  
Queensland Fire & Rescue Service  
National Parks & Wildlife Services  
Northern Territory  
Bushfire Council of Northern Territory  
Northern Territory Fire & Rescue  
Service

South Australia  
Country Fire Service  
Department of Environment Heritage &  
Aboriginal Affairs  
South Australian Metropolitan Fire  
Service

New South Wales  
New South Wales Fire Brigades  
New South Wales National Parks &  
Wildlife Service  
New South Wales Rural Fire Service  
State Forests of New South Wales

Victoria  
Country Fire Authority  
Department of Sustainability &  
Environment  
Metropolitan Fire & Emergency  
Services Board

Western Australia  
Department of Conservation & Land  
Management  
Fire & Emergency Service Authority of  
Western Australia

New Zealand  
New Zealand Fire Service

Associate Members  
Army Fire Service  
Australian Capital Territory Bush Fire  
Council  
Australian Capital Territory Fire Brigade  
Australian Council of State Emergency  
Services  
Brisbane City Council  
Bureau of Meteorology  
CSIRO Forestry & Forests Products  
Department of Conservation  
Emergency Management Australia  
Fire and Rescue and Emergency  
Services East Timor  
Public Administration  
Hong Kong Fire Services  
Office of the Emergency Services  
Commissioner, Victoria  
Papua New Guinea Fire Service  
Singapore Civil Defense Force

## Appendix E. NFPA Member Field Listings

Education	Industry Specific (corporate)
Fire Protection curriculum in	Fireworks manufacturer
	Elevators
Higher education.	Fire Prevention System Design
Administrators	Fire Prevention System
Professors	Manufacturing
Students	Fire Prevention System
Research Engineers	Installation/Maintenance/Certification
Professional Organisations	Fire Prevention Systems:
(SFPE)	
Training Schools	Alarm
Insurance Companies	Sprinkler
Public Information Service	
	Halon
Health Services	Smoke Detectors
Hospital Facility	Heat Detectors
	Extinguishers
Engineers/Inspectors	Hoses
Hospital Facility staff	
Medical Service Providers – paramedic	Construction Companies
Medical Products –	
engineers/service/sales	Industry Specific (engineering)
Burn Treatment Centres	Architects
	Engineers
Fire Services – All Active/Retired	Building Design
personnel associated with	Building Code Officials
State	Building Inspectors
County	
Municipality	Contractors
Fire District	
Marshals	Jails
Fire-fighters	
Chiefs	Aviation
	Aircraft Design
Electricity	Airport Design
Installation/Manufacturing/Testing/	Airport Safety Personnel
Selling/Inspecting of fire prevention	Airport Fire/Disaster
systems.	Services
	Pilots
Electricians	
Power Companies	Transportation System
(National grid)	Rail
	Boat

Plane  
Auto  
(Tunnels fill up with smoke)

Government Departments:

Transportation

Disaster Management (Officers of  
National Guard)

Armed Forces

Standards Committee

Fire Protection Magistrates

National Fire Protection Committees

City Planners (Fire Hydrants)

Wildfire/Bush management

Non-Profit Organisations

Disaster Management

Red Cross International

Standards Management

## Appendix F. NFPA Professional Organisations

### Networking Organisations

American Boat and Yacht Council Guy R. Colonna (NFPA staff)

American Forest & Paper Products Association Bonnie Manley (NFPA staff)

American Institute of Chemical Engineers Safety and Health Division, Loss Prevention Programming Committee: Robert P. Benedetti (NFPA staff)

American Institute of Steel Construction AISC Fire Safety Engineering Committee: Robert E. Solomon (NFPA staff)

American Petroleum Institute Safety and Fire Protection Subcommittee: Robert P. Benedetti (NFPA staff)

American Society for Testing and Materials Committee on Halogenated Organic Solvents and Fire Extinguishing Agents (D-26), Subcommittee 09 on Recycled Halon 1301: Mark T. Conroy (NFPA staff); Committee on Hazard Potential of Chemicals (E-27), Subcommittee 01 Terminology: Robert P. Benedetti (NFPA staff); Subcommittee 04 Flammability and Ignitibility: Robert P. Benedetti (NFPA staff); Committee on Fire Standards (E-5): John R. Hall, Jr. (NFPA staff), principal; Vacant (NFPA staff), alternate; Color and Appearance (E12), Robert Solomon (NFPA Staff); Consumer Products

(F15), Robert Solomon (NFPA Staff): Detention & Correction Facilities (F33): Ron Coté (NFPA staff): Committee on Performance of Buildings (E-06), John R. Hall, Jr. (NFPA staff)

American Society of Civil Engineers Structural Engineering Institute, Executive Committee of CSAP: Bonnie E. Manley (NFPA staff); ASCE 7 Main Committee: Bonnie Manley (NFPA staff); ASCE CSAC: Bonnie Manley (NFPA staff)

American Society of Heating, Refrigerating & Air-Conditioning Engineers, Inc. Ventilation Requirements & Infiltration (TC4.3): Mark T. Conroy (NFPA staff); SSPC 90.1 Energy Standard for Buildings Except Low-Rise Residential Buildings Allan Fraser (NFPA staff); SSPC 90.2 Energy Efficient Design of New Low-Rise Residential Buildings: Allan Fraser (NFPA staff); CIS Code Interaction Subcommittee of ASHRAE Standards Committee: Allan Fraser (NFPA staff)

American Society of Mechanical Engineers Elevator & Escalator Code Coordination Committee (A17): Ron Coté and Lee F. Richardson (NFPA staff); Code for Pressure Piping—B31 (NIRG): James D. Lake (NFPA staff); Committee on Powered Industrial Trucks (B56): Richard E. Munson (Hockessin, DE 19707); Committee on Steel

Smoke Stacks: Joseph F. Schulz (Van-Packer Products Co., 6th St. and Bay Avenue, Beach Haven, NJ 08008), Richard L. Stone (alt.) (Wallace Murray Corp., PO Box 137, Belmont, CA 94002); Emergency Operations Committee: Vacant

American Underground Construction Association James D. Lake (NFPA staff)  
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American Water Works Association Committee on Fire Protection: Christian Dubay (NFPA staff), Committee on Cross Connections: Christian Dubay (NFPA staff)

American Welding Society Amy B. Spencer, Theodore C. Lemoff (NFPA staff)

Association for Facilities Engineers Kenneth G. Mastrullo (NFPA staff)

Commission Fire Accreditation International Frank Florence (NFPA Staff)

Congressional Fire Services Institute National Advisory Committee John Biechman (NFPA staff), Working Group, John Biechman (NFPA Staff)

Council on Tall Buildings and Urban Habitat Robert E. Solomon (NFPA staff)

Electrical Safety Foundation International Board of Directors: James M. Shannon (NFPA staff)

Fire Detection Institute Mark Earley (NFPA staff)

Healthcare Interpretations Task Force Robert Solomon, Greg Harrington

Intertec Testing Services/ETL Testing Laboratories Safety Council: Mark W. Earley (NFPA staff)

Institute of Electrical & Electronics Engineers, Inc. Metric Practice Committee: Casey C. Grant (NFPA staff), Arc Flash Task Group: Kenneth G. Mastrullo (NFPA Staff)

International Association of Electrical Inspectors Global Affairs Committee: Mark W. Earley (NFPA Staff)

InterAgency Board Selective Equipment List Bruce Teele (NFPA staff)

International Association of Electrical Inspectors Global Affairs Committee Mark W. Earley (NFPA Staff)

International Association of Fire Chiefs Operation Life Safety Advisory Committee: John Biechman (NFPA staff)

International Association of Plumbing and Mechanical Officials Theodore C. Lemoff, Guy R. Colonna (NFPA staff)  
International Code Council Industry Advisory Committee: Robert J. Vondrasek (NFPA staff)

International Fire Code Institute Gregory E. Harrington (NFPA staff)



International Fire Service Training  
Association Frank E. Florence  
(NFPA staff)

International Tunneling Association  
James D. Lake (NFPA staff)

Joint Commission on Accreditation of  
Health Care Organisations,  
Committee on Health Care Safety  
Robert E. Solomon, Gregory E.  
Harrington (NFPA staff)

Mechanical Contractors Association of  
America Theodore C. Lemoff  
(NFPA staff)

National Association of Plumbing–  
Heating–Cooling Contractors  
Theodore C. Lemoff (NFPA staff)

National Conference of States on  
Building Codes and Standards  
James M. Shannon, Arthur E. Cote,  
John C. Biechman, Robert J.  
Vondrasek, Gary S. Keith, Robert E.  
Solomon, Ray Bizal, Nancy McNabb,  
Renee Spiegel (NFPA staff)

National Consumers League Home Fire  
Safe Project John Biechman  
(NFPA staff)

National Fire Academy Board of  
Visitors: Gary O. Tokle (NFPA staff)

National Fire Information Council Carl  
E. Peterson, Marty Ahrens  
(NFPA staff)

National Institute of Building Sciences  
James M. Shannon, Arthur E.  
Cote, John C. Biechman, Gary S.  
Keith, Robert J. Vondrasek,; Building  
Seismic Safety Council National  
Earthquake Hazards Reduction

Program (NEHRP) Christian Dubay,  
Bonnie Manley, Theodore  
Lemoff (NFPA staff); Multihazard  
Mitigation Council: Gregory E.  
Harrington, John C. Biechman (NFPA  
staff); MMC Committee on  
Building Official Guidebook: Allan  
Fraser (NFPA staff)

National Petroleum Refiners Association  
Fire and Accident Prevention  
Committee Robert P. Benedetti (NFPA  
staff)

National Propane Gas Association  
Safety Committee Theodore C.  
Lemoff, Carl Rivkin (NFPA staff);  
Technology and Standards Committee:  
Theodore C. Lemoff (NFPA staff)

National Safe Boating Council Guy R.  
Colonna (NFPA staff)

National SAFE KIDS Campaign Judy  
Comoletti (NFPA staff)  
National Safety Council Marine Section  
Guy R. Colonna, Lawrence  
B. Russell (NFPA staff)  
National Volunteer Fire Council Gary O.  
Tokle (NFPA staff);

National Wildfire Coordinating Group  
James M. Shannon (NFPA  
staff)  
North American Fire Training Directors  
Frank Florence (NFPA staff)

Public/Private Fire Safety Council  
Sharon Gamache, John R. Hall,  
Jr. (NFPA staff)

Society of Fire Protection Engineers  
Arthur E. Cote (NFPA staff);  
Licensing Committee, Milosh  
Puchovsky (NFPA staff)

Standards Engineering Society Director of Membership: Leona Attenasio Nisbet

The Infrastructure Security Partnership (TISP) Bonnie Manley, Robert Solomon (NFPA staff)

Underwriters Laboratories, Inc. Appeals Panel: Leona Attenasio Nisbet (NFPA Staff); Corporate Member: Arthur E. Cote (NFPA staff); Electrical Council: Mark W. Earley (NFPA staff); Fire Council: Robert E. Solomon (NFPA staff); Industrial Advisory Group for Smoke Detection on Recreational Boats: Guy R. Colonna (NFPA staff); Standards Technical Panels: STP 80, Steel Tanks for Oiler Burner Fuel: Robert P. Benedetti (NFPA staff); STP 924 Ron Coté (NFPA staff); STP 580 Bonnie Manley (NFPA staff); STP 1275, Flammable Liquids Storage Cabinets Robert P. Benedetti (NFPA staff); STP 4, 5, 6, 13, 20, 22, 248, 250, 310, 489, 498, 514A, 514B, 514C, 515, 551, 647, 913, 1002, 1004, 1005, 1017, 1018, 1020, 1026, 1028, 1030, 1042, 1047, 1053, 1054, 1059, 1007, 1081, 1086, 1092, 1123, 1203, 1206, 1411, 1412, 1413, 1414, 1416, 1418, 1419, 1429, 1431, 1434, 1441, 1446, 1563, 1565, 1573, 1574, 1594, 1598, 1636, 1640, 1642, 1647, 1682, 1693, 1795, 2279, 3101, 3111, 6500 Jeffrey S. Sargent (NFPA staff); STP 48, 50, 62, 83, 153, 174, 183, 347, 355, 410, 414, 458, 508, 508A, 508C, 651, 719, 763, 1699, 1703, 1740, 1741 Joseph V. Sheehan (NFPA staff); STP 103, 197, 558 James D. Lake (NFPA staff); STP 199 Christopher Dubay (NFPA staff); STP 205, 205A, 674, 687, 2044

Richard P. Bielen (NFPA staff); STP 217, 833, 834, 840, 2034, 2085, 2157, 2161, 2231 Lee Richardson (NFPA staff); STP 488 David R. Hague (NFPA staff); STP 464, 466, 1863 Richard J. Roux (NFPA staff); STP 486E, 486A-B, 486C, 486D, 745, 746E, 746, 749, 751, 758, 845, 858, 859, 863, 1559 Kenneth Mastrullo (NFPA staff); STP 499, 506 Donald Shields (NFPA staff); STP 605,60950 Mark T. Conroy (NFPA staff) U.S. Department of Defense Equal Partners Implementation Committee John Biechman (NFPA staff)

U.S. Department of Energy Technical Standards Richard P. Bielen (NFPA staff)

U.S. Department of Housing & Urban Development “Path” Project: Allan B. Fraser (NFPA staff); Federal Advisory Committee for Manufactured Housing: Robert E. Solomon (NFPA staff), Kirsten M. Paoletti (NFPA staff)

U.S. Department of Transportation Chemical Transportation Advisory Committee Amy B. Spencer, Lawrence B. Russell (NFPA staff)

U.S. Department of Transportation Technical Pipeline Safety Standards Committee Theodore C. Lemoff (NFPA staff)

U.S. Edison Electric Institute Fire Protection Committee Advisory

Task Force Group Richard P. Bielen (NFPA staff)

U.S. World Standards Day Tonya Gipson, Leona Attenasio Nisbet (NFPA staff)

Urban Wildland Interface Project James C. Smalley (NFPA staff)

Western Fire Chiefs Association Gregory E. Harrington, David Nuss (NFPA staff)

Worcester Polytechnic Institute Fire Safety Board of Advisors Casey C. Grant (NFPA staff)

### **International Activities**

Canadian Gas Association Standards Steering Committee on Gas Appliances and Related Accessories Theodore C. Lemoff (NFPA staff)  
Canadian Standards Association  
Canadian Electrical Code Committee (Part 1) Mark W. Earley (NFPA staff);  
Oil Burning Equipment:  
Robert P. Benedetti (NFPA staff)

Conference of Fire Protection Associations-I (CFPA-I) Chair, George D. Miller, Christine Ellis (NFPA staff)

Inter-Jurisdictional Regulatory Collaboration Committee (IRCC)  
Milosh Puchovsky (NFPA staff)

International Association for Fire Safety Science John R. Hall, Jr. (NFPA staff)

International Council for Research and Innovation in Building and Construction (CIB) Task Group 37, Performance-Based Building Regulatory Systems; Milosh Puchovsky (NFPA staff); Working Group

14, Fire: John R. Hall, Jr. (NFPA staff);  
Task Group 50, Tall Buildings  
Robert Solomon (NFPA staff)

International Electrotechnical Commission U.S. National Committee to IEC, Mark W. Earley (NFPA staff); (IEC/TC44) Safety of Machinery, Joseph Sheehan (NFPA staff); (IEC/TC64) Electrical Installations of Buildings, Mark W. Earley (NFPA staff); (IEC/TC79) Alarm Systems, Lee Richardson (NFPA staff)

### **International Standardization**

Organisation U.S. Technical Advisory Group (ISO/TC21) James D. Lake (NFPA staff); (ISO/TC21/SC5) Sprinkler and Water Spray Extinguishing Systems, James D. Lake, Secretariat (NFPA staff); (ISO/TC92/SC4) Fire Safety Engineering  
Rita Fahy, Assigned Expert, WG11 (NFPA staff), John R. Hall, Jr., Convenor, WG10 (NFPA staff); (ISO/TC94/SC13) Personnel Safety-Protective Clothing and Equipment, Bruce Teele (NFPA staff); (ISO/TC223) Civil Defense, Martha Curtis (NFPA staff)

International Technical Committee for the Prevention and Extinction of Fire (CTIF) Russell E. Sanders, Gary O. Tokle (NFPA staff)

Pacific Area Standards Congress Mark W. Earley (NFPA staff)

U.S. National Committee Mark W. Earley, Joseph V. Sheehan (NFPA staff)

U.S.N.C. Council Mark W. Earley  
(NFPA staff)

Miller; Secretary/Treasurer, Robert  
Solomon; Christine Ellis (NFPA staff)

World Organisation of Building  
Officials President, George D.

## **Appendix G: Professional Associations in Australia**

### **Housing Industry Association (HIA)**

The voice of Australia's home building industry, HIA is unique, as the only national industry association for all building professionals. HIA represents the interests of the whole housing industry - from trade contractors, builders, and suppliers through to product manufacturers.

### **Marina Association of Australia**

The Marina Association of Australia (MAA) is the peak industry body in Australia for the Owners, Managers and Operators of Marinas, Slipways, Boatyards, Berthing, Mooring and other marine Storage Facilities and Sailing and Cruising Boating Clubs.

### **Institution of Engineers, Australia**

The professional body for Engineering (in general) in Australia

### **The Sydney University Chemical Engineering Association (SUCEA)**

SUCEA is a body representing the graduates of the Department of Chemical Engineering. Established in the 1950s, it is one of the oldest alumni associations at the University of Sydney. With 1326 members living in over 20 countries around the world, it is also one of the largest.

### **The Institution of Chemical Engineers**

This is an alternative organisation for Chemical Engineering students. It is an international organisation with 10% of its membership from Australia.

### **Association of Consulting Engineers Australia (ACEA)**

The Association of Consulting Engineers Australia (ACEA) is a business organisation that represents and provides assistance to Australian consulting engineering firms rather than individual engineers. ACEA represents firms of all sizes nationwide - small, medium, and large firms, as well as sole practitioners.

### **Association of Professional Engineers, Scientists and Managers Australia (APESMA)**

APESMA is an association for professionals with interest in maximizing salary and career choice in a technical field in Australia.

### **Master Builders Australia Inc**

Master Builders is the major Australian building and construction industry association. Its primary role is to promote the viewpoints and interests of the building and construction industry and to provide services to members in a broad range of areas including training, legal services, industrial relations, building codes and standards, industry economics and international relations.

### **National Electrical and Communications Association (NECA)**

NECA is the national voice of the electro-technical contracting industry. NECA is the only association that represents the interests of electrical and communications contractors, from employers and business people to technicians. More than 6000 businesses enjoy the benefits of NECA membership. With offices in every state, NECA actively works on behalf of contractors in dealings with all levels of government and industry and ensures members are fully informed on the important issues happening in the marketplace.

### **Australian Liquefied Petroleum Gas Assoc.**

Promotes the development, growth and work safety of the LP gas industry.

### **Information Handling Services Australia (IHS Australia)**

For more than 40 years IHS Australia has been providing quality information to industry and government. IHS Australia is a division of Information Handling Services Group Inc. and is part of a worldwide network of related information companies servicing customers in more than 90 countries around the globe.

### **The Australian Institute of Refrigeration Air Conditioning and Heating**

AIRAH is the official Australian secretariat of the International Institute of Refrigeration (IIR), is affiliated with the International Institute of Ammonia Refrigeration (IIR) and collaborates closely with the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE). AIRAH is also an inaugural member of the Green Building Council of Australia.

### **The Australian Underground Construction and Tunnelling Association (AUCTA)**

The AUCTA was formed in 1972 and is jointly sponsored by Engineers Australia and the Australasian Institute for Mining and Metallurgy. It is a non profit organisation uniting members of the engineering and scientific professions, tunnellers, miners and suppliers in its membership with the aim of providing programs of activities, technical conferences, symposia and meetings designed to stimulate, educate and inform those with an interest in the field both nationally and through the local Chapters in Brisbane, Sydney and Melbourne.

### **The National Association of Testing Authorities (NATA)**

NATA is Australia's government-endorsed provider of accreditation for laboratories and similar testing facilities. They are the peak authority in Australia for the accreditation of inspection bodies. They pride themselves in being the largest association of accredited laboratories in the world, and are the world's oldest comprehensive laboratory accreditation provider. They are supported by thousands of volunteer technical experts who assist with NATA's various technical committees and the evaluation of laboratories.

### **Lift Engineering Society of Australia**

The members look to LESA to keep them informed of changes to codes, industry requirements, occupational health and safety issues and any other relevant information, which may affect the industry.

### **Australian Petroleum Agents and Distributors Association (APADA)**

APADA is a national employer organisation registered under the Workplace Relations Act of 1996, representing the interests of its members with the oil companies, governments, various regulatory authorities, the unions, and the media.

### **The Australian Water Association**

The Australian Water Association is a professional membership organisation formed in 1962 to promote the responsible management of water and its related resources. It has approximately 4,000 members across Australia and abroad, including both organisations and individuals. Its members come from a broad range of disciplines, including engineers, resource managers and public health professionals.

### **The Australian and International Pilots Association**

It is a professional association and a federally registered organisation representing pilots and flight engineers employed by Qantas Airways Limited (Qantas) in airline operations within Australia and around the world.

### **Australia Owners and Pilots Association (AOPA)**

AOPA Australia is Australia's largest independent non-profit recreational aviation organisation. AOPA Australia is a member of the International Council of Aircraft Owners and Pilots Associations (IAOPA), who represent over 400,000 pilots globally.

### **The Building Designers' Association of Queensland (BDAQ)**

BDAQ represents an active group of building designers who strive to uphold their responsibilities to the consumer and to the profession. They promote the dignity and reputation of the profession with perseverance, tact and impartiality while maintaining the highest standards for the community.

### **The Regional Airlines Association of Australia**

Was formed in 1980 to protect, represent and promote the combined interests of its members and regional aviation throughout Australia. The Association changed its name in July 2001 to the Regional Aviation Association of Australia and widened its charter to include a broader range of membership.

### **Air Conditioning and Mechanical Contractors' Association of Australia**

AMCA is an organisation of air conditioning and mechanical services companies who have come together to represent and promote the industry along with the well being of the companies. Since its inception in the early 1960's, AMCA's objectives have been to promote and protect the interests and welfare of the air conditioning and mechanical services industry, its members, and the public they serve.

There are a number of volunteer fire fighters associations throughout Australia, though all are regional by state, none are national organisations. See AFAC

## Appendix H. FPA UK Member Fields

### Product

Access Control Systems (1)  
Air Monitoring Equipment (1)  
Alarms, Fire (12)  
Alarms, Security (3)  
Architectural Ironmongery (1)  
Aspirating Systems (3)  
Beacons (1)  
Break Glass Call Points (1)  
Breathing Apparatus/Related Equipment (1)  
Business Continuity (4)  
Cables, Accessories (1)  
Cabling, Fire-Resistant (1)  
Carbon Dioxide Extinguishing Systems (2)  
Carbon Monoxide Detectors/Alarms (3)  
Cavity Fire Barriers (1)  
CCTV Equipment/Systems (3)  
Communications Systems/Equipment (2)  
Composite Wall Linings (2)  
Consultancy (53)  
Contingency Planning (4)  
Control/Indicating Equipment (1)  
Covering Materials (1)  
Diesel Engines (1)  
Disaster Planning (3)  
Diving Equipment (1)  
Drencher Systems (1)  
Ductwork and Fittings (1)  
Education (4)  
Emergency Lighting (11)  
Explosion Investigation (1)  
Explosion Protection (3)  
Extinguisher Training (16)  
Extinguishers, portable (24)  
Extinguishing Systems (11)  
Fire Alarm Systems (18)  
Fire Appliances (4)  
Fire Blankets (7)  
Fire Dampers (2)  
Fire Detection/Alarm Sys (28)  
Fire Doors/Shutters (1)  
Fire Equipment Testing (1)  
Fire Investigation (6)  
Fire Protection Engineers (18)  
Fire Retardant Materials (5)  
Fire Risk Assessment (28)  
Fire Suppression Equipment (6)  
Fire-fighting Products (3)  
Fire-fighting/Intervention Vehicles (1)  
First Aid Equipment (3)  
Flame Detectors (2)  
Flame Retardant Fabrics (2)  
Foam Extinguishing Systems (6)  
Fogging Systems (1)  
Gas Detection Systems/Equipment (6)  
Gas Extinguishing/Systems (9)  
Generators, Auxiliary (1)  
Glazing, Fire-Resistant/Toughened (2)  
Halon Systems/Equipment (2)  
Health and Safety Systems (4)  
Heat Detectors/Alarms (3)  
Hoses/Hose Fittings/Hose Reels (2)  
Hydrants/Fittings (2)  
Inert Gas Systems (3)  
Inspection Services (2)  
Insulation Materials/Products (3)  
Insurance (3)  
Insurance Valuers (1)  
Intumescent Coatings/Seals (4)  
Kitchen Fire Safety Equipment (4)  
Ladders (1)  
Loudhailers (2)  
Loudspeakers (2)  
Passive Fire Protection (9)  
Penetration Seals (1)  
Personal Protective Equipment (1)  
Pipework and Fittings (1)  
Portable Appliance Testing Equipment (1)  
Professional Bodies/Associations (2)  
Project Management (3)  
Public Address Systems (2)  
Publications (2)  
Pumps (3)  
Rescue Equipment (1)



Research (2)	Steel Cladding (4)
Risk Assessment (14)	Structural Fire Protection (4)
Safety Equipment (4)	Structural Steelwork, Protection Of (1)
Sealants (1)	Technical Authors (1)
Security Doors and Shutters (1)	Testing/Certification Work (3)
Service Maintenance:	Trade Associations (1)
Alarm/Detection Systems (17)	Trade Supplies (1)
Extinguishers (12)	Training (44)
General (28)	Training Equipment (1)
Passive Systems (3)	Valves (2)
Sprinkler Systems (13)	Ventilation Systems/Equipment (2)
Signs/Notices, Fire/Safety (5)	Visual/Vibrating Warning Devices (2)
Smoke Curtains (1)	Voice Alarm Systems (2)
Smoke Dampers (2)	Wall and Ceiling Panels (2)
Smoke Detectors/Alarms (6)	Water Mist Systems/Equipment (5)
Smoke Extractors (1)	Water Spray Systems/Equipment (3)
Smoke Generators (1)	Welding/Cutting Equipment/Ancillaries (1)
Spark Detection Systems (1)	
Sprinkler Systems (20)	

# Appendix I. Member Telephone Interview Protocols

## Corporate Member Interview Protocol

### Interviewer Info:

Name:

Time:

Organisation being contacted:

### Interviewee Info:

Name (of person):

Phone Number:

ID Number:

*[Roman numerals represent follow up questions – to be asked if applicable and not already answered]*

#### 1. Introduction:

Good day Mr/s. \_\_\_\_, my name is \_\_\_\_ and I'm calling on behalf of the Fire Protection Association of Australia regarding our project on building a profile of the fire safety community. We sent out an e-mail last week about contacting members to gain some feedback. Do you have time to talk for a few minutes about your membership in FPA Australia as well as current and possible future member benefits?

#### 2. Zone 1 – General information:

- a. Could you briefly describe the nature of your business?
  - i. What industry or market do you work in?
  - ii. What interest does your business have in fire protection?
- b. Are you a member of any other professional or trade organisation?
  - i. What benefits led you to join this organisation?

#### 3. Zone 2 – Interaction with members and non-members:

- a. How often do you interact or share information with other FPA Australia members-frequently, rarely or almost never?
  - i. Could you briefly describe the nature of these interactions?
- b. Do you often interact with other fire service providers about fire related issues or activities?
  - i. If so, who?
  - ii. What about any government agencies?
  - iii. Could you briefly describe the nature of these interactions?

#### 4. Zone 3 – Membership Benefits: (say something about last few questions)

- a. What member benefits of FPA Australia do you take advantage of most frequently?
- b. Were there any other benefits that induced you to join FPA Australia?
- c. What, if any, benefits would you like to see offered that are not currently?

#### 5. Closing:

Ok, well I think that answers all the questions I had. I'd really like to thank you for all your help; I really appreciate all the time that you've taken to speak with me. I hope you have a great day.

### OTHER COMMENTS:

## **Organisational Member Interview Protocol:**

**Interviewer Info:**

Name:

Time:

Organisation being contacted:

**Interviewee Info:**

Name (of person):

Phone Number:

ID Number:

*[Roman numerals represent follow up questions – to be asked if applicable and not already answered]*

**6. Introduction:**

Good day Mr/s. \_\_\_\_, my name is \_\_\_\_ and I'm calling on behalf of the Fire Protection Association of Australia regarding our project on building a profile of the fire safety community. We sent out an e-mail last week about contacting members to gain some feedback. Do you have time to talk for a few minutes about your membership in FPA Australia as well as current and possible future member benefits?

**7. Zone 1 – General information:**

- a. Could you briefly describe the nature of your business?
  - i. What industry or market do you work in?

**8. Zone 2 – Interaction with members and non-members:**

- a. How often do you interact or share information with other FPA Australia members-frequently, rarely or almost never?
  - i. Could you briefly describe the nature of these interactions?
- b. Do you often interact with other fire service providers about fire related issues or activities?
  - i. If so, who?
  - ii. What about any government agencies?
  - iii. Could you briefly describe the nature of these interactions?

**9. Zone 3 – Membership Benefits:**

- a. Are you a member of any other professional or trade organisation?
  - i. What benefits led you to join this organisation?
- b. What member benefits of FPA Australia do you take advantage of most frequently?
- c. Were there any other benefits that induced you to join FPA Australia?
- d. What, if any, benefits would you like to see offered that are not currently?

**10. Closing:**

Ok, well I think that answers all the questions I had. I'd really like to thank you for all your help; I really appreciate all the time that you've taken to speak with me. I hope you have a great day.

**OTHER COMMENTS:**

## Individual Member Interview Protocol:

### Interviewer Info:

Name:

Time:

Organisation being contacted:

*[Roman numerals represent follow up questions – to be asked if applicable and not already answered]*

### Interviewee Info:

Name (of person):

Phone Number:

ID Number:

#### 11. Introduction:

Good day Mr/s. \_\_\_\_, my name is \_\_\_\_ and I'm calling on behalf of the Fire Protection Association of Australia regarding our project on building a profile of the fire safety community. We sent out an e-mail last week about contacting members to gain some feedback. Do you have time to talk for a few minutes about your membership in FPA Australia as well as current and possible future member benefits?

#### 12. Zone 1 – General information:

- a. What is your profession / employer?
- b. Are you affiliated with any other organisation with an interest in fire protection?
  - i. What organisation?
- c. Are you a member of a professional or trade organisation?
  - i. What benefits led you to join this organisation?

#### 13. Zone 2 – Interaction with members and non-members:

- a. How often do you interact or share information with other FPA Australia members-frequently, rarely or almost never?
  - i. Could you briefly describe the nature of these interactions?
- b. What types of organisations do you interact with about fire related issues or activities?
  - i. What about any government agencies?
  - ii. What about education, building, fire services , etc
  - iii. Could you briefly describe the nature of these interactions?

#### 14. Zone 3 – Membership Benefits:

- a. What member benefits of FPA Australia do you take advantage of most frequently?
- b. Were there any other benefits that induced you to join FPA Australia?
- c. What, if any, benefits would you like to see offered that are not currently?

#### 15. Closing:

Well I would really like to thank you for all your help; I really appreciate all the time that you've taken to speak with me. I hope you have a great day.

### COMMENTS

## **Appendix J. Compiled Member Interview Data**

This appendix contains results gathered from our member telephone interviews. The responses that follow have been categorised by the major research questions that they answer. Within each of these sections, responses are grouped by membership type, though their names have been removed. It should be noted that only responses directly relating to these research questions is catalogued here, and responses and comments made on an open-ended and individual basis have been left out.

### ***1. Professional Organisations with an Interest in Fire Protection:***

#### **Corporate**

- Training (and Consultation) – Australian Ski Patrol.
- Fire Engineering Safety and Design – Fire Engineers Association, aka IFE.
- Inspection (and Consultation) – Regular information from Building Surveyors Org.
- Importer and Distributor (Equipment) – Industrial Fire Protection
- Training Organisation – Safety Institute of Australia, Emergency Control Association
- Equipment and Training – Chamber of Commerce

#### **Corporate gold**

- Manufacture and Import (Passive only) – Master Builders Association, Society of Fire Protection, Alliance of Fire and Smoke Containment Industries?
- Manufacture (pumps) – Air Conditioning Association, Pump Industry Association?

#### **Organisation Members**

- Insurance (Property and Liability) – ICA, Australian and New Zealand Institute for Insurers
- Manufacturer (Adhesives and Rubber Products) – Plastics and Chemicals Association of Australia (PACAA), Australian Industrial Group (AIG).
- Inspection and Audits (fire safety only) – IFE
- Electricity Distribution – National Safety Council
- High-Rise Office Building Owner (Property Manager) – No.
- Bank – Institute of Security, Corporate Risk (our of Sydney)
- Manufacturer (Plastics) – IFE
- Refiner/Distributor (petrochemical) – Australian Corrosion Association, Standards Australia

- Building Surveyor – Australian Institute of Building Surveyors
- Manufacturer (Automotive Equipment) – Emergency Services of Australia (TAZ), Electric “something or other” Association
- Building Planning and Approval (Govt.) – ADP\_
- Fire Protection Contractor – Chamber of Commerce (local)
- Inspection/Approval (Govt.) – Australian Institute of Building Surveyors
- Contractor (Sprinkler Systems) – Institute of Engineers Association
- Risk Control Manager – Standards Australia, FPA UK (for publications)
- Property Management Officer –Yes, sciences, economic and bio, not fire
- Wood and paper sales - AFPA
- Librarian – Library related only, used to talk to other libraries
- Military base fire services – Institute of Fire Engineers, for exam and qualification programs
- Airline – IAFPA, NFPA technical committees, gets publications from both
- Building Systems Engineer – Aust. Inst. of Engineers
- Research/Information Librarian (CSIRO) – InFire, Aiust. Libraries Association, Alies group, Society of Fire Protection Engineering.
- Council Fire Control Centre – Health and fire Protection Associations, Public Service Associations, NSW Teachers Federation.
- Harbour Building Manager for Shore Authority – ERA, Property Council of Aust.
- Master Plumbers Trade Organisation – Chamers, Peak Industry Bodies.

### **Individual Member**

- Fire Safety Engineer Consultant – Inst. of Engineers Australia
- Drywall Manufacturer – PFPA handles most of their needs
- Building Surveyor – Australian Institute of Building Surveyors, SFS (joined for networking, talk with them regularly)
- Risk Engineer for Complex – Society of Fire Protection Engineers, Society of Fire Safety, Sydney Risk Management

### **Corporate silver**

- Facilities Management/Maintenance – Facilities Management Australia
- Installation Services – National Fire Industry Association (for negotiations and industry feedback)
- Fire Response for Steel Manufacturer – NFPA
- Maritime Safety Equipment – Australian Ship Builder Association. Australian Industry Group, Australian Ship Suppliers Association.
- Equipment Supply/Evac Training – Business SA
- Passive Fire Manufacture/Install/Maintain – Fire Contractors Registration Board. Master Builders Association. Monitored by Queensland Gov. Liscence.
- Wholesale Fire Equipment – ASIAO, Security Industry Associatoin

## **2. Interaction with other members:**

### **Corporate**

- Training (and Consultation) – Fire Rescue Australia, “Safegaurds” most connections through mutual relations, not direct from FPAA.
- Fire Engineering Safety and Design – no, mostly just Tyco.
- Consultation and Engineering – increasingly once a month or better, views on compliance issues, rulings on standards, interaction and advice on projects.
- Importer and Distributor (Equipment) – Only TC/2 and TC/4 committees.
- Fire installation Contractor – never, because the only members worth contacting are other contractors, and they’re competition
- Equipment and Training – Suppliers, Contacts for information networking.

### **Corporate gold**

- Design and Installation – A few associates in Sydney
- Manufacture and Import (Passive only) – Committee TC/18
- Manufacture (pumps) – Yes, mostly on topics of a technical nature, some social work.

### **Organisation Members**

- Electricity Distribution – FPAA’s Work Safety Committee (special interest group?)
- Manufacturer (Plastics) – Certification through FPAA for mobile fire equipment use. Is on a NSW committee
- Manufacturer (Steel) – No, various suppliers that may be members, but probably not
- Refiner/Distributor (petrochemical) – No, various suppliers that may be members, but probably not
- Building Surveyor – Master Builders Association
- Manufacturer (Automotive Equipment) – FPAA special interest groups for workplace safety
- Fire Protection Contractor – On rare occasions for hardware purchase from manufacturers
- Inspection/Approval (Govt.) – Not really, but some service contractors. Occasionally use networking through FPAA for specific problem solving
- Contractor (Sprinkler Systems) – 2-3 times a week to solve design related problems for their systems
- Department Manger of Industrial Services - Involved with training special interest group
- Airlines – Standards and equipment, compliance for emergency evaluation protocols
- Risk Control Manager – Attend seminars in area, other than that not much, contractors on an “as needed” basis

- Property Management Officer –Never, no conferences or anything
- Fire safety manager at housing consultancy firm – Meets with suppliers and other consultants
- Fire safety supervisor of manufacturing plant – Talks to suppliers, FPA themselves
- Airport Public Safety Manager – Attend annual conference, keep in touch with colleagues
- Military base fire services – Specific technical support questions for other fire chiefs
- Fire Services Coordinator for University – deal with FPA Contractors, attend seminars and conferences

### **Individual Member**

- Development and Planning (South Winshire Council) – Committee/Special Interest Group for Bush Fire
- Building Certifier – 6-8 times a year or a month depending on what projects they have
- Consultancy (Fire Engineer) – Not very often
- Fire Safety Engineer Consultant – Networking, Industry friends
- Fire Installer – Recently joined, but has communicated with other installers
- Building Surveyor – Talks to other fire engineers, building surveyors
- Risk Engineer for Complex – State Committee, Training Programs

### **Corporate silver**

- Facilities Management/Maintenance – Contractors (Asset Services)
- Fire Response for Steel Manufacturer – Rarely – Library, Meetings, Seminars
- Fire Protection Systems Installer – Rarely at seminars. They are competitors.
- Consulting/Service/Installation – Consulting reports for other consulting companies. Frequently shares information with suppliers. Independent reports for companies.
- Equipment Supply/Evac Training – Contacting for jobs/meetings.
- Wholesale Fire Equipment – Customer base: Contractors who install. TC2 committee.

### **3. Interactions between areas of the fire safety community:**

#### **Corporate**

- Training (and Consultation) – National Parks Service, Active fire fighters, other individuals in need of fire safety training.
- Fire Engineering Safety and Design – Not as such, individuals especially in relation to bushfire, Local council.
- Inspection (and Consultation) – Inspectors, manufacturers of active equipment, Telestra.



- Consultation and Engineering – Society of Fire Protection Engineers, Building Surveyors, Goods distributors/sellers, Dept. Housing and Works, Dept. of Health.
- Importer and Distributor (Equipment) – not really, CSIRO.
- Training Organisation – Talk w/ other training organisations, occupational health services, purchase equipment from industry providers
- Fire installation Contractor – only providers of the equipment to be installed, people in same field are competition

## **Corporate gold**

- Design and Installation – Suppliers for parts
- Manufacture and Import (Passive only) – Fire safety Engineers, Architects, Builders, Building sub-contractors, Test Labs, Distributors/Marketing, Local Fire services, Local council.
- Manufacture (pumps) – Contractors, Consultants, Direct to market
- assistants, Department of Housing Construction

## **Organisation Members**

- Insurance (Property and Liability) – Training, Qualification, and Certification companies and organisations, Surveyors, Builders, Consultants, Other Insurers, “David Jones”, Insurers Council of Australia, Government minimally for standards and requirements.
- Installation (Naval Piping) – Not really, Australian Submarine Assoc., Materials manufacturers/distributors, Halon systems parts distributors.
- Manufacturer (Adhesives and Rubber Products) – Fire Brigades, Work Safety Department (state), Environmental Protection Association (EPA), Healthcare and Insurance providers
- Inspection and Audits (fire safety only) – Victorian Municipal Surveyors Group, Building contractors
- Electricity Distribution – Government committees for OH&S, NSW Fire Brigade (For training)
- High-Rise Office Building Owner (Property Manager) – other consultant deals with that
- Bank – Through Consultants; Building regulators, Fire engineers.
- Manufacturer (Plastics) – Lots of suppliers, Chubb, Angus, Fire Response (govt.) EPA, “WorkCover” (NSW), Local Council
- Manufacturer (Steel) – Servicing providers, Contracted Fire Brigade onsite, DIPNR, Vietnam Fire Police, Fire Equipment Providers
- Refiner/Distributor (petrochemical) – Govt for acts and regulations dealing with dangerous goods, Contracted Fire Brigade for onsite protection, EPA, Emergency Services (QL), Off site training centre in Brisbane with the QL Fire Brigade

- Building Surveyor – Fire Engineers, Architects, Building Designers, Civil Engineers, Building Officials (govt.)
- Manufacturer (Automotive Equipment) – Emergency Service Providers, Auditors/Inspectors, Training Companies
- Building Planning and Approval (Govt.) – Architects and Builders
- Fire Protection Contractor – Builders and Suppliers, Fire Authority (state, federal and local)
- Inspection/Approval (Govt.) – Fire protection Engineers, Fire Brigades, Consultants
- Department Manger of Industrial Services – Assessing fire curriculum through office of tertiary education, as well as Victorian Qualifications (VQA), also meet with other institutions such as Belerat which have fire protection programs
- Airline – Fire services, consultants, equipment providers, also regulators, Local council, standards and building permits
- Town Council building inspector – CFA, building surveyors, architects, builders and engineers with knowledge of bushfires when building new structures
- Risk Control Manager – Insurance industry (has insurance surveyors group monthly meeting w/ other subcontractors)
- Property Management Officer – Talk with tyco, service providers, but that’s it...Government owned organisation, but government doesn’t get involved with the fire protection area
- Fire safety manager at housing consultancy firm – on committees with brigades, as they manage over 100,000 properties
- Wood and paper sales – Local fire service providers...fire control guy for shire – burn offs and rural fire control require permits
- Librarian – Interaction with fire brigades because it is a fire brigade library, passes on information to other brigades
- Airport Public Safety Manager - Consulting firm (Warrington Fire Research)...Fire protection strategy originally designed by CSIRO
- Health Services – Get services and maintenance from service providers
- Military base fire services – speaks to Federal Emergency Services Association, rural fire brigades (as needed, because they employ fire fighters), also service providers, such as manufacturers and installers
- Fire Services Coordinator for University – All types of facilities managers, part of a Tertiary education association that incorporates Universities across the country
- Australian Defence – Communicates with local fire authority / fire fighters, and also personal contractors.... Also Standards Australia to get codes....
- Building Systems Engineer –Engineering Community (info sharing, problem solving, code committees, fire testing), CSIRO (test/appraisal/assessment of fire systems), Warrington Fire Research, Vic University, (Research Based Developing System)
- Research/Information Librarian (CSIRO) – CSIRO people wanting information, Insurance people. Emerg. Services, Institute of Criminology/Arsen, Terrorism fighting groups.

- Council Fire Control Centre – Fire services, National Park Fire Services, Police, Ambulances, State Emergency Services (SES) and volunteers. Council, Forest, State Rail, State Transport. Health Department. Defence Department.
- Master Plumbers Trade Organisation – Relations w/ Standards for fire systems. Training. Emergency Codes. Carmel Coate and SFS. Plumbers who work on hydrants and hose reels. Regulatory bodies. Plumbing Industry Commission. Regulated by building act. Building commission, Plumbing commission.

## **Individual Member**

- Development and Planning (South Winshire Council) – Applicants, Developers, Builders, Bush Fire Council, Other Local councils, Rural Fire Services, Department of Education, “Landcom”
- Building Certifier – Builders, Building Designers, Consultants, Fire Brigades, Local Government (QL), Building Services (QL)
- Consultancy (Fire Engineer) – Building Certifiers, Architects
- Drywall Manufacturer – Communicates with passive fire protection community, installers of passive fire protection
- Fire Installer Provider – Speaks with manufacturing people regularly, hired by consultants
- Fire Training and Risk Assessment – Talks with emergency services, CFA, etc
- Building Surveyor – Architects, other design people like fire services designers... Government (Building Commission, codes board) talk about regulatory issues
- Fire Safety Engineer Consultant – Clients (Building services), Rural Fire Brigade, DIPNR (Dep. Of Infrastructure Planning...)
- Risk Engineer for Complex – Society of Fire Safety, Institute of Fire Engineers, Risk Managers, Give updates to Fire Services, ABCD (building code technical input), Standards Aust., QLD Building Authority, Chair for Insurance Council of Aust. (Provide property insurance)

## **Corporate silver**

- Facilities Management/Maintenance – Engineering Companies, Undertake Fire Safety Survey
- Fire Response for Steel Manufacturer – Country Fire Authority, Gov: Local Municipalities/Fire Services (support local service in case of emergency)
- Fire Protection Systems Installer – Architects, Consultants, Clients, Customer Base. Building control commission.
- Consulting/Service/Installation – Professional Indemnity through QBE Insurance. Also other Fire Consultants, other Fire Companies, Building Regulation Consultants Council. Local Councils, Department of Defence. Building Fire Services.
- Maritime Safety Equipment – AIG, Safety businesses, Ship Services, Regulatory, National Maritime Safety Authority, Dep. Of Defense. Consult for them.
- Equipment Supply/Evac Training – Customers, Suppliers. DIAS. Fire Services.

- Passive Fire Manufacture/Install/Maintain – Courses, Training, Fire Brigade, Property Owners, People who install, Couple Universities for Research Purposes, BSA (Building Service Authority).
- Wholesale Fire Equipment – Some Electrical. Get gear specified. Building Owners/End Users.

#### **4. Benefits Being Used:**

##### **Corporate**

- Training (and Consultation) – Journal for information and news on standards. Conferences on occasion.
- Fire Engineering Safety and Design – Bushfire Conferences, Journal, and networking
- Inspection (and Consultation) – Interest group, credibility, networking
- Consultation and Engineering – Australian standards rulings via Journal/Newsletter, Standards boards, conferences, information and networking.
- Importer and Distributor (Equipment) – “Fireshow?”, Conferences.
- Training Organisation – Mainly technical support, calling FPA Australia for help
- Fire installation Contractor – may start taking courses, read the journal
- Equipment and Training – Training, Information for employees, Newsletter, Journal, Logo, Part of national organisation.

##### **Corporate gold**

- Design and Installation – Journal, problem solving through networking, credibility
- Manufacture and Import (Passive only) – Networking, Conferences (is a sponsor)
- Manufacture (pumps) – Technical Committee TC/4, Journals for “case studies” (excitement about case studies), Logo

##### **Organisation Members**

- Insurance (Property and Liability) – Literature, aka Journal / Newsletter
- Installation (Naval Piping) – Journal, Licensing
- Manufacturer (Adhesives and Rubber Products) – Journal / Newsletter for signals of change in legislature, other information on safety regulations
- Inspection and Audits (fire safety only) – Journals, Conferences, Information on technical matters and practices
- Electricity Distribution – (minor) for information and news via Journal, mainly a member to support and be involved in the industry
- High-Rise Office Building Owner (Property Manager) – Journal, as an info source
- Bank – Information, and up-to-date standards.

- Manufacturer (Plastics) – Conferences (and HazMat), Handouts/Training, Website (as often as 1 time a week), Networking, Credibility
- Manufacturer (Steel) – Journal, Networking, Published information on Investigations/Research, Updates on Regulatory Information
- Refiner/Distributor (petrochemical) – Credibility, Information via Journal
- Building Surveyor – Mainly Literature, Journals and newsletters
- Manufacturer (Automotive Equipment) – Conferences, Journal, Online for guidelines/recs. and affiliates for networking.
- Building Planning and Approval (Govt.) – Regulations Updates through Journal
- Fire Protection Contractor – Information via Journal/ Newsletter, Conferences
- 9415 – Inspection/Approval (Govt.) – Journal for Current standards, Passive fire conferences, credibility
- Contractor (Sprinkler Systems) – Codes, networking and information distribution
- Department Manger of Industrial Services – Member network and staff knowledge of industry, use network for work place of student, also involved with training goup
- Airlines – Discounts on publications, conferences
- Town Council building inspector – Library, resources, contact abilities, and also plans on attending conference and seminars relating to bushfires
- University Librarian – Gets publications only
- Australian Defence – Information, updates on new technologies...
- Military base fire services – Publications, training special interest group, and also news about passive fire protection, as they do their own maintenance
- Fire Services Coordinator for University – Seminars and newsletters
- Risk Control Manager – information, seminars, answers to technical questions
- Property Management Officer –The magazine is really the only thing, we just had a safety officer enrol us in all organisations that could help write safety procedures
- Fire safety manager at housing consultancy firm – Conference, networking
- Wood and paper sales – Journals used to keep up to date, also did training
- Fire safety supervisor of manufacturing plant – website (to get contact names), conferences and seminars, committees, Standards Australia
- Librarian – Publications and newsletters only
- Airport Public Safety Manager – Aviation special interest group! Fire society meetings, originally needed information on training and evacuation codes
- Health Services – Publications only
- Building Systems Engineer – CREDIBILITY, Journals, Keeping up-to-date, Committees, Networking/Information source, PASSIVE FIRE, links to engineering community.
- Research/Information Librarian (CSIRO) – Journal, Information Exchange, Conference
- Council Fire Control Centre – Journal, Conferences
- Harbour Building Manager for Shore Authority – Information Exchange.
- Master Plumbers Trade Organisation – Standards Committees.

## **Individual Member**

- Ex-Fire engineer, currently a “Youth Officer, basically retired – Journal
- Development and Planning (South Winshire Council) – Networking (for bushfire consultants particularly), Insurance (but they don’t use it yet, getting there though), Bush Fire special interest group, Accreditation for bushfire consultants (coming soon, as they are working on it themselves though the special interest group
- Building Certifier – Seminars and Training, Journal, Networking away from certification (his specialty field)
- Consultancy (Fire Engineer) – Conferences, Standards (fairly often though Bob)
- Drywall Manufacturer – Mostly just information for own personal benefit...reading journal
- Fire Installer Provider –Mostly publications, looking to network more
- Building Surveyor – Publications, didn’t get a chance to go to conference but would like to... Just generally stay informed
- Fire Training and Risk Assessment – Keeping up with information, have been to conference when held in home state, seminars, passive stuff, more interested in passive than reactive stuff like building sprinklers
- Fire Safety Engineer Consultant – Discount on Publications, Information on Seminars
- Risk Engineer for Complex –NFPA Code, Society of Fire Protection Handbook, Access to people and tech. information.

## **Corporate silver**

- Facilities Management/Maintenance – Logo, Training extensively, Networking
- Fire Response for Steel Manufacturer – Publications, Policy/Legislation Change, Seminars, Newsletter, What is going on in industry.
- Fire Protection Systems Installer – Logo, Gov Requirements, Journal, Seminar
- Consulting/Service/Installation – Keeping abreast of current products, standards, changes. Credibility of being part of professional organisation.
- Maritime Safety Equipment – Excluded from business unless member.
- Equipment Supply/Evac Training – Code of Practice
- Passive Fire Manufacture/Install/Maintain – Credibility
- Wholesale Fire Equipment – Technical Committee, Credibility, Logo

## **5. Potential New Benefits:**

### **Corporate**

- Training (and Consultation) – more support for training sector.
- Consultation and Engineering – Registered arbitrators
- Training Organisation – Revise “recognized provider” program, fee exorbitant, and how is FPA Australia qualified to rate competence of others?

- Fire installation Contractor – Improve communication, and let members know about potential benefits, also make it easier to call and get good information
- Equipment and Training – More contacts from FPA relations officer. Call members to check up on them and offer opportunities to get involved.

### **Corporate gold**

- Design and Installation – Assistance to employers for guarantee of payment and arbitration. More frequent technical seminars
- Manufacture (pumps) – Social activities that could promote networking

### **Organisation Members**

- Insurance (Property and Liability) – Training or Literature for Training for insurance related fields
- Manufacturer (Adhesives and Rubber Products) – Fire-ground Training? Probably Impossible
- Inspection and Audits (fire safety only) – Minutes/Summaries for Seminars and Conferences so that those who can't attend can still benefit. More Frequent Conferences and Seminars. Make Training available for all aspects
- Electricity Distribution – Further Increasing Electronic Distribution of updates and information
- High-Rise Office Building Owner (Property Manager) – More/Any information on building evacuation topics would be nice to see
- Manufacturer (Plastics) – More Conferences/Seminars, More on the website
- Refiner/Distributor (petrochemical) – More on PetroChem in Journals and Seminar focus, Risk Management information/assistance
- Building Surveyor – Videoconferencing or some other convenient way to make Conferences/Seminars available to those who can't attend.
- Manufacturer (Automotive Equipment) – Website and members section updates, ease of navigation, Opportunities/Assistance for Training of operational fire fighters in the workplace.
- Inspection/Approval (Govt.) – More technical seminars, on safety measures and standards. Increased opportunity to network at these seminars
- Contractor (Sprinkler Systems) – Smaller seminars are better than large, LONG conferences, perhaps more with a variety of topics rather than a conference with a variety of topics, to allow those with time restriction the opportunity to pick and choose, and not waste their time.
- Risk Control Manager – More opportunities for networking maybe, currently only hear from FPA for seminars and publications
- Property Management Officer – None, quite happy not inputting information
- Fire safety manager at housing consultancy firm - Would like to get some sort of notice board of events around the community... Would like to get word out about their work, get out information about their tenders
- Fire safety supervisor of manufacturing plant – Promote themselves better

- Airport Public Safety Manager - Warden training program
- Health Services – Maybe have cheaper, second tier membership
- Australian Defence – Seminars are tough to get to (maybe unavoidable though, due to the rural location of company)
- Military base fire services –Tough to get to conferences / seminars, very isolated
- Town Council building inspector – More bushfire information to keep up to date, and also regulation updates for building codes while still in the creation process
- Building Systems Engineer – Passive Fire Area! FPA is focused in Active area and not passive.
- Research/Information Librarian (CSIRO) – Discount on purchasing of publications.
- Council Fire Control Centre – Not a fan of discount purchagins. Too much promotion. Would like more education. Journals include information for keeping up to date with fire protection around the world.
- Harbour Building Manager for Shore Authority – Very Time Restrained. Organizing training and conference @ the members facility to save time for members.
- Master Plumbers Trade Organisation – Wish we had an active relationship: Benefits to both sides. Would get greater response to participate in activies.

### **Individual Member**

- Consultancy (Fire Engineer) – Professional Indemnity, didn't work for them as it was \$1000 less expensive (plus not having to pay for corp membership) to go to other insurer.
- Drywall Manufacturer – Really like special interest groups, would recommend more
- Fire Training and Risk Assessment – More networking would be nice, on the training side, not interested in seeing standards for training, those are set federally...Maybe have hand out of ALL major seminars / conferences, not just FPA Australia, i.e. marine fire safety

### **Corporate silver**

- Facilities Management/Maintenance – Services and opportunities not well known. Offer more communication with members.
- Consulting/Service/Installation – Access practitioners in the industry. Associations license their own practitioners. There needs to be assessment of abilities.
- Maritime Safety Equipment – Big players Dominate. Angry about @ Big companies taking control over organisations such as FPAA. Needs regulation by Gov. Would like good info about networking abilities.
- Passive Fire Manufacture/Install/Maintain – Add more focus on passive fire. We are on the bottom of the food chain.
- Wholesale Fire Equipment – Insurance. Much more emphasis on credibility. More stringent Acceptance in organisation. Registry of Competent people.



## Appendix K. Expert Interview Summaries

### Summarized Transcript for Interview with Mr. Lucht

Where: Boynton Hall

When: 3:00 PM EST Thursday, 02-10-2005

Who: Associate Vice President of University Relations/Fire Protection  
Expert David Lucht

#### *What is the benefit of being a member of NFPA?*

Follow the \$. A lot of members are there for financial reasons. NFPA writes standards that are implemented by laws. A company with member status and a voice may influence that a standard requires 2 smoke alarms instead of 1.

NFPA publishes a Buyer's Guide with products from their members. There is a product reason for being there.

NFPA members get to vote on standards.

#### *How do companies like NFPA support themselves financially?*

Well in NFPA, every member pays dues. Their number one funds generator is the fact that they sell documents and standards to all agencies that enforce them. If you enforce a code you have to buy it. If you need to follow a code, you need to buy a copy too.

#### *Are there any other benefits in being a member in NFPA?*

There are a lot of educational benefits. NFPA hosts seminars, facilitates training, and sends out publications.

#### *Are there any organizations that are similar in nature?*

Look into the ICC – International Code Council. They are also a membership vote council. In the US, it's mostly building codes that generate demand for NFPA's products. Maybe in Australia, you should look into who does the building codes and identify the relationship to FPAA.

There maybe even new markets for FPAA to identify. For example, in educational sector there is Electrical Training.

NFPA runs a very extensive educational program. They publish and sell books. NFPA contains libraries. They host Fire Prevention Week in which they provide Books, Publication materials, (Coloring books for kids, posters). They do a lot of public education as well.

*How does the government so easily adopt NFPA standards?*

It may seem like the government advocates for the industry. However, the NFPA is a private non-profit corporation. Its sole purpose is making the international community safer from fires and hazards. Because NFPA is a value to society, they are exempt from taxes and government sees them as a reputable source which develops standards through scientific research.

There are rules in place for the NFPA committees to make sure that it is safe from corruption. They use a consensus process, and follow all ANSI (American National Standards Institute) guidelines.

NFPA is unique in the fact that it allows non officials to be voting members. The ICC membership only includes officials.

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Summarized Transcript for Interview with Building Consultant

When: 10:00 AM Friday 6-3-05

Who: Building Consultant

Conducted by: Yury Alkhazov and Steve O'Dea

*What consultant engineers need:*

Access to codes and standards

News on current and developing products from the industry

Access to research being done at universities and research organisations

News on new analysis techniques and software

Information on Insurance aspects relating to consultants

Information on current building practices

Information on current business trends

(Trends in architecture and design, aesthetics and functionality)

Codes and Standards are important and consultants do have something to contribute. Fire engineering consultants want to and are being asked to be.

*Important links:*

Institute of architecture

ABCB

Government (for accreditation)

*Definitions*

Fire Safety Engineers – Fire system strategy

Fire Services Engineers – Fire system design (and small companies may do “safety” too)

*Reasons for lack of membership:*

Lack of advertising

SFS + IFE competing for members

(They set standards and promote professional registration)

(Like the SFPE in the US)

Could use better distribution of technical research and current events as well as interaction with that research. (Careful of CSIRO, lobby for funds for them)

*Could use interaction with:*

Insurers

AIBS

IFE

AFAC

Standards Australia

Perhaps could use interaction with Board of References (building approval) as well

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Summarized Transcript for Interview with Melbourne Fire Brigade

When: 10:00 AM Friday 6-3-05

Who: Melbourne Fire Brigade Representative

Conducted by: Yury Alkhazov and Steve O’Dea

They compete on the open market for training (mostly for the industry)

Already have a close link with the technical committees and structural fire section has links to fire protection engineers that may have membership in FPA Australia

*Problem:* there is a clash of issues with the change your clock, change your battery campaign, and a closer coordination between the organisations would be appropriate.  
*Improvements in communication are very necessary to continue a healthy relationship*

Coordinating a community strategy that has been going strong for 12-14 years  
Currently coming to a “spike” where alarms need to be replaced  
FPAA is included in this process  
They need a finger on the pulse on fire service issues. Really need to be on top of research. AFAC is funding a 3 year project with CISRO and perhaps FPAA should have co-funded or completely funded that particular project.

**Expand merchandise (Australian, not foreign) for Fire Service use.**

Perhaps by going around and picking up all the best “tools” fire services have developed and distribute to all, including programs. Fire services are very independent and by partnering with FPAA these tools may be able to be produced by FPAA and distributed widely to assist all fire services.

Need to start to ‘service’ the fire services

All are concerned with fire safety in buildings, but FPAA needs to look at this from the other side. An engineering perspective is great, but they tend to forget about the people. Fire Services understand the “peoples” positions

AFAC has NOT effectively standardised equipment throughout the services.

**Finally, they really need to clarify their positions in relation to other organisations.**

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Summarized Transcript for Interview with CSIRO Director

When: 10:00 AM Friday 6-3-05

Who: CSIRO Director

Conducted by: Yury Alkhazov and Steve O’Dea

Building a profile of the fire safety community in Australia

- Trying to establish comprehensive listing of fields in fire protection
- Currently only focused on industry and corporations
- We’re trying to identify other, underrepresented areas

- As someone who has very extensive experience with fire protection, do you think you can you give us some ideas of how we could gather this information or who we could talk to provide more information?

*What do you do?*

Related to fire safety not fire protection. Victoria University in which we do research involved with fire safety, we run two graduate courses centred on fire safety engineering. We also have a number of master and PH. D. students. Fire protection is the American term, while Fire Safety is Australia. Fire safety refers to the safety of the people, the materials, and whatever other objectives you include in that.

*Research?*

We conduct a lot of fire safety research that revolves around fire protection in buildings. We look at the subsystems that make up fire safety, as well as the whole system. We specialize in human behaviour, the behaviour of fire in enclosures, behaviour of smoke, etc. We have some capability in all areas.

*What are your primary sources of information on fire protection?*

Fire engineering literature, text books. Also journals, etc. From all the other published sources. Also from our own experience and research.

*What are your primary sources of funding?*

There is practically no university funding; most of our funding comes from government and industry.

*Do you choose your own research projects, or do you essential contract out to industry?*

Both.

*Do you have any communication or networking with FPA Australia?*

We are members, we get their publications. We get invited to their functions. If FPA was interested in funding research projects, that'd be neat. We do have networking with some FPA members, we use FPA bookshop to get textbooks for our students. If we thought that people in FPA Australia had particular expertise on a theoretical and practical level we might contact them.

*What type of benefits could FPA Australia offer you, as a researcher/educator in the fire protection field?*

- *Special Interest Group*

*Do you currently have strong networking with other areas of fire safety education, or do you think a special interest group would benefit you?*

- We have quite strong links already, they could always be strengthened. I don't see a huge advantage of doing it through FPA Australia. Many of our links are international. I don't know if FPA could really help with that?
- *Material we could provide?*
  - o This would be useful but it needs to be NOT promotional, needs to be well written, well established engineering material.
- *Networking opportunities?*
  - o There are always some benefits, but I don't think we're currently lacking.
- *Job placement opportunities for students?*
  - o Definitely not a problem. All of our students are already employed and get jobs very quickly.

*Do you envision using FPA Australia to help publish research material?*

FPA can't help us publish material. We have no problem doing that. One thing they could do – we would be more interested in being involved in their conferences if those conferences included refereed papers in it. We get benefits for things that are refereed. That's how the grant system works in FPA Australia.

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## Summarized Transcript for Interview with Consultant Engineer

When: 4:30-5:30 PM Friday 1-4-05

Who: Consultant Engineer

Conducted by: Yury Alkhazov and Steve O'Dea

### *Introduction, Description of Problem.*

Building a profile of the fire safety community in Australia

Trying to establish comprehensive listing of fields in fire protection

Currently only focused on industry and corporations whose core focus is within fire protection

We're trying to identify other areas with an interest in fire protection

*As someone who has very extensive experience with fire protection, do you think you can give us some ideas of how we could gather this information or who we could talk to provide more data?*

The first person I would direct you to would be Universities. They have a fire protection program there and do a lot of networking with areas of fire protection. As far as information on areas of the fire protection community I would start with:

Manufacturers and Installers

Maintenance

Training Organisations

Building Owners

Department of Consumer Affairs

Architects and the Design Engineering Community

Passive Manufacturers

Building Surveyors

- building approvals can be issued by these surveyors directly

Property Council

Body Corporate Managers

- These are individuals who oversee blocks of condominiums etc.

I don't think there is a real value in getting, for example, hospital owners involved in the fire protection community. This is because the technical management of fire safety design and maintenance is handed over to building consultants and fire engineers. These consultants then hire contractors to do the actual installation/ manufacturing. These contractors are well represented but the consultants seem to be underrepresented.

Insurance is another area – companies, brokers and even surveyors who could have an interest in fire protection.

Another possible area of attraction would be Fire Safety Journal advertisements

Health Care Industry – Federal Department of Health and Aging (national)

- Department of Human Services Victoria (State)

For any potential new area, you will need to attract enough interest to be able to form a special interest group, which is what attracts many members.

The education department is a federal department representing education

The property council is a federal department representing commercial buildings

Talk to the head of a large building consultant engineer.

The Department of Infrastructure is a federal department representing the rail industry

- DOTARS is the overseeing body – Department of Transport and Regional Services

Most implementation exists at a local level. For example, the Maritime Industry. They fall under the scope of DOTARS, but there is a separate Port of Melbourne Authority that handles affairs in Melbourne city.

To understand market sizes, you should go to the DHA – this will give you the value of construction in the industry.

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## Summarized Transcript for Interview with ABCB

When: 10:00 AM Monday 11-4-05

Who: Australian Building Codes Board Representative

Conducted by: Yury Alkhazov and Steve O’Dea

### *Introduction:*

Building a profile of the fire safety community in Australia

Trying to establish comprehensive listing of all fields in fire protection

Currently only focused on industry and corporations, we’re trying to identify other areas that have an interest in fire protection but don’t provide a good or service in the fire protection area.

### *Opening Question:*

*One of the areas we’re looking at is building codes. We’re trying to identify the links that the building codes creation and distribution industry has with fire protection. We were hoping you could give us information on the major areas you deal with-*

*Other government organisations, corporations, nonprofits etc*

Well of course, at the highest level you have government. Government considers that there is a need for certain regulations in areas. They consider regulations as a last choice. One such area is building codes. One major concern is the protection of assets. The biggest person who has an interest in protecting assets is the department of defence. The government must also be concerned about keeping their personal assets in the event of a fire.

Private organisations have an interest that is two-fold. They have an interest in protecting their assets, and also an obligation to meet regulations.

### *What about building standards?*

They are set at a minimum level of acceptance. They are put into place where there is seen to be a market failure. Performance based building codes – set a mandatory level of



performance, you can use whatever methods you choose to reach a given level of performance. Market will determine majority of issues without help. Energy efficiency regulations into the building codes.

*Where do you get information on Fire Protection to include in your standards?*

Say for example that we have a particular issue on fire safety. We would undertake a research initiative. This starts with an international review of how to deal with the issue. We create a regulation issue document and get public feedback on it.

Steering Committee – Government officials, industry, some of professions. We choose them by looking at the engineers, national body of engineers, national body of architects, and national body of building surveyors. We are a national body so we communicate with national bodies.

*Who do you outsource your research to?*

We have a limited research budget, and we have a list of organisations who bid for the work when we need a research project completed. CSIRO bids just like anyone else. The organisations it covers include CSIRO, Arup fire, Warrington, Brahn, etc. You might be able to find a full listing on our website but we also collaborate with other industries, domestic and abroad. If FPA Australia was willing to provide their services in consulting that would be interesting.

*What is your relationship with Standards Australia?*

We have a very good working relationship, standards are very important to the ABCB. Over 100 standards are referenced by ABCB. One of our officers sits on each committee in Standards Australia.

*Are your building codes BASED on standards from Standards Australia?*

Well we only produce ONE building code. We use reference documents as things to follow; most of these are Standards Australia. If you think of the one document hanging there, hanging off of them are reference documents.

*What interaction do you currently have with FPA Australia?*

They're not part of our building codes committee. They are, however, involved in particular projects. FPA Australia is seen as industry association of fire protection industry. Wherever they are considered to be involved they are invited to sit on that committee, such as the committee designed to measure the effectiveness of fire sprinklers.

*How can FPA Australia increase its networking with the building codes board?*

It's very important because the fire protection aspect of the ABCB is very important. I guess the only difficulty is that to be frank they would like to see more fire protection in building codes, because it would give them more business. What we would like would be to do is gain from their knowledge, and try and reach a balance between spending too much money and getting enough fire protection. We call upon the Fire Engineering Society as a more objective source of knowledge in the fire protection industry.

FPA definitely has a lot of knowledge, but they're really just a lobbying organisation. There are many organisations that lobby, and currently that's how they're viewed.

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### Summarized Transcript for Interview with Society of Fire Safety

When: 10:00 AM Thursday 31-3-05

Who: Society of Fire Safety Representative

Conducted by: Yury Alkhazov and Steve O'Dea

#### *Introduction, Description of Problem.*

Building a profile of the fire safety community in Australia

Trying to establish comprehensive listing of fields in fire protection

Currently only focused on industry and corporations whose core focus is within fire protection

We're trying to identify other areas with an interest in fire protection

*As someone who has very extensive experience with fire protection, do you think you can you give us some ideas of how we could gather this information or who we could talk to provide more data?*

- Often underrepresented areas are hard to determine because they don't want to be represented. For example, you might have 20 plumbing companies who are members, and 500 who are not. But those who aren't don't want to be represented in FPA Australia because they don't consider themselves members of the fire protection community.
- FPA handles mostly the technical and licensing areas of the fire protection community.

- NFIA – handles mostly industrial requirements and occupational health and safety standards. They link to trade organisations, such as air conditioning, mechanical engineers, plumbing, electricians and wall and ceiling designers, etc.
- SFS deals with fire engineering concepts, closely tied to the institute of engineers. We work with mechanical engineers, civil engineers etc.

*Any advice on potential contacts that may have information on what fields could potentially be included in the fire safety community?*

- Well it can be difficult to decide who belongs in the fire safety community. Plumbers, for example, install drenching systems in buildings but don't consider themselves fire companies, and likely wouldn't have an interest in joining FPA Australia.
- One area that could be potentially very useful would be to contact the Property Council Of Australia
- Property council membership includes major leaders of building projects. Often times they view fire protection as an irritant that makes it tougher to build cheaply and economically. These projects often include large public buildings such as hospitals
- Another potential contact would be certain building consultants.
- You could also consider talking to ARO – the Air and refrigeration organisation, or the elevator association, depending on how detailed you want these listing of fields to be.

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## Summarized Transcript for Interview with CFA Representative

When: 11:45 AM Tuesday 12-4-05

Who: Representative of Country Fire Authority in Victoria

Conducted by: Yury Alkhazov and Steve O'Dea

### *Introduction:*

Building a profile of the fire safety community in Australia

Trying to establish comprehensive listing of all fields in fire protection

Currently only focused on industry and corporations, we're trying to identify other areas that have an interest in fire protection but don't provide a good or service in the fire protection area.



Rural Market: Farmers use a traditional approach to combating fire that is not environmentally friendly. Getting advice to isolated farmers in rural areas would be worth looking into.

Research: Government agency is called Department of Fire Technology.

CRC Website

CSIRO is crucial, without them there is an inability to move research into view.

*Do you have any contacts you can refer us to in these areas?*

Contacts:

Individuals in CSIRO

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## Summarized Transcript for Interview with Building Commission Representative

When: 11:45 AM Tuesday 12-4-05

Who: Victoria Building Commission Representative

Conducted by: Yury Alkhazov and Steve O'Dea

### *Introduction:*

Building a profile of the fire safety community in Australia

Trying to establish comprehensive listing of all fields in fire protection

Currently only focused on industry and corporations, we're trying to identify other areas that have an interest in fire protection but don't provide a good or service in the fire protection area.

### *Opening Question:*

*One of the areas we're looking at is building codes. We're trying to identify the links that the building codes creation and distribution industry has with fire protection. We were hoping you could give us information on the major areas you deal with-*

*Other government organisations, corporations, nonprofits etc*

Set up under 1993 building act, established the building regulations advisory committee, to prep building regulations and advise minister. Should have names of areas of

interaction (web? Or directory?) – section 210 of building act 1993. (1958 MFB and CFA, one person is nominated on the board) Country fire authority is in as an observer if metro is the nominated individual or the other way around.

Associations also sit in: architect, engineers, master builders, housing industry assoc, property council, building surveyors, municipal associates, legal practitioner, consumer rep, public works, and Melbourne city council

*What relationship do you have with Australian Building Codes Board?*

Integral part of it (ABCB formed 1994). ABCB code is adopted by all states. Australasian fire authorities' council a close tie. Building codes committee in ABCB AFAC Standards Australia sit in ABCB as well. ABCB is national.

*Where do you get information on Fire Protection?*

Fire brigades for relevant information from then, at the committee meetings. Fire engineers,

*What kind of research do you do? Who do you outsource your research to?*

Not really much of it. Fire matters are limited, but any would be through ABCB, they don't see the need to do the research needed nationally rather than only in state

*What is your relationship with Standards Australia?*

They don't sit on our standard's committees. They are represented through ABCB, which sits on all of the standards boards.

*What interaction do you currently have with FPA Australia?*

Just know that they are there. Not much in recent times

*How can FPA Australia increase its networking with the building codes board?*

Unless there are specific interests in Victoria... The reason part of ABCB is there is to prevent redundancy, thus we leave as much as possible to ABCB.

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Summarized Transcript for Interview with AFAC Representative

When: 11:45 AM Tuesday 12-4-05

Who: Representative of AFAC with extensive knowledge of FPA Australia

Conducted by: Yury Alkhazov and Steve O'Dea

*Introduction:*

Building a profile of the fire safety community in Australia

Trying to establish comprehensive listing of all fields in fire protection

Currently only focused on industry and corporations, we're trying to identify other areas that have an interest in fire protection but don't provide a good or service in the fire protection area.

*Opening Question:*

*One of the areas we're looking at is building codes. We're trying to identify the links that the building codes creation and distribution industry has with fire protection. We were hoping you could give us information on the major areas you deal with- Other government organisations, corporations, nonprofits etc*

Membership of FPA Australia is made up of individuals.

There's a PowerPoint presentation by Ross that has membership information. Certain levels have different privileges and benefits.

Some FPA Australia members: Individuals, Organisations, Fire Services, CSIRO, Councils, Volunteers, Members, and Corporate

Current membership of FPA Australia:

Monetary:

Members bring in 31,000

Org. 23,000

Corp Reg 36,000

Corp Silver 64,000

Corp Gold 44,000

Corp Plat 68,000

In Theory, no one is without interest in fire protection.

Bureau of Statistics can provide a listing of general industries in Australia.

The ones that are likely to become partners of FPA Australia are Architects and End-Users.

Would these organisations/workgroups benefit from joining FPAA? No.

Architects won't get any benefits out of joining as of right now.

Expansion of membership should expand through professional organisations.

Building Surveyors are harder to find.

The top end of members is saturated. The potential for growth is not in the Platinum or Gold corporate membership. It is in the Organisations.

Some professional organisations to look into:

Aust. Building Services

Body Corporate Managers

Architect Association

NFPA offers their members a strong voice on standards creation? How can FPA

Australia appeal to potential members?

The benefits currently offered are not good enough to persuade these potential members.

There is a problem comparing NFPA to FPAA. NFPA consists of individual members for a voting committee.

The best place to begin is a list of professional organisations.

There is a list somewhere in the Federal Government Structure.

For example:

State Emergency Services.

Aust. Association of Arson + Fire Investigators

Do you have any contacts or know of anyone we can contact for further information into professional organisations?

No.

Do an online search for profession/industry associations.

Online Business Resource Center

Aust. Security + Investment Commission

Talk to the executive director. There are meetings specifically for Exec Directors of Associations

ACCC

[www.accc.gov.au](http://www.accc.gov.au)



Australian Building Codes Board

Look at their links. The Productivity Commission - building fire safety review. Has an investment in building and fire.

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## Summarized Transcript for Interview with CSIRO Representative

When: 9:45 AM Tuesday 17-4-05

Who: CSIRO Representative

Conducted by: Yury Alkhazov and Steve O'Dea

### *Introduction:*

Building a profile of the fire safety community in Australia

Trying to establish comprehensive listing of all fields in fire protection

Currently focused on industry and corporations, we're trying to identify other areas that have an interest in fire protection but don't provide a good or service in the fire protection area.

### *Opening Question:*

*One of the areas we're looking at is research. We're trying to identify the links that the research currently has with fire protection, and more specifically FPA Australia.*

*What kind of research do you do? Who do you get your funding from?*

We have a fire science team. Parallel to this we have a commercial arm. We have a fire engineering section as well as a fire systems section looking at detectors and sprinklers and the like. I am on the research side any testing or consulting we do has to be done with full cost recovery so we aren't "competitive neutrality"... Funded 100% for whatever client working for. Clients vary, building designers and engineering firms, also product manufacturers. Fire systems group – people who manufacture sprinklers and extinguishers. SSL – scientific services laboratory. In the fire service team, there are three major project areas. Material flammability, bushfire research, and Fire Growth.

*What kind of relationship do you currently have with FPA Australia?*

We are a corporate member but not active member. We are in constant contact with them. I have done a speaking tour on their behalf.

*Is there any way you can think of to improve that relationship?*

*Fire science industry is quite small. We meet each other in many forums. It may be that the fire testing and fire systems people would have more interest in those areas. We have advertised in Fire Australia before.*

As a member of the society of fire safety, there is some competition. If FPA is shifting its ground, it needs discussions with other bodies. Very little research on fire protection currently. If FPA were to be saying “we need more research on these areas”, that would be of assistance to us in getting more funding.

*How do you feel FPA Australia could improve networking with the research industry?*

*Should be looking at areas that are currently under funded. No one else does materials flammability testing. Universities look at fires, but none look at material flammability. We get 38% of funding from industry, and 62 % govt.*