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Exploring Potential Opportunities for the Fire Equipment Maintenance Program

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**Exploring Potential Opportunities for the
Fire Equipment Maintenance Program**

An Interactive Qualifying Project Report
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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Date: May 2, 2005

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Abstract

This paper presents opportunities for expansion of the Country Fire Authority's (CFA) Fire Equipment Maintenance (FEM) program in Victoria, Australia. These opportunities were identified through interviews of CFA personnel and are intended to enhance community safety and, where possible, increase the revenue of brigades participating in the FEM program. The opportunities were researched and organised into areas of products and services, training, emergency management, and post-incident analysis. These suggestions were then presented to the CFA via a computer program.

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List of Acronyms

AFAC: Australasian Fire Authorities Council

AS: Australian Standards

CFA: Country Fire Authority

FEM: Fire Equipment Maintenance

FEMA: Federal Emergency Management Agency

FPAA: Fire Protection Association of Australia

IQP: Interactive Qualifying Project

NAFED: North American Fire Equipment Distributors

NFPA: National Fire Protection Association

NVFC: National Volunteer Fire Council

OSHA: Occupational Health and Safety Administration

SSL: Secure Socket Layer

VBC: Victorian Building Commission

WPI: Worcester Polytechnic Institute

Executive Summary

The role of a fire department is not limited to heroic response; it also involves emergency prevention and preparedness. Oftentimes, volunteer firefighters assume these responsibilities without any financial reward. Even though local governments support their fire departments financially, additional revenue is often required to enhance community safety. This report focuses on opportunities for volunteer fire companies to expand their involvement in their community to increase safety and possibly increase their department's financial resources.

In the state of Victoria, Australia, the Country Fire Authority (CFA) has more than twelve hundred volunteer-based brigades that are responsible for all fire services outside the metropolis of Melbourne. The volunteers often feel the need to purchase additional equipment with private funds since the brigades are always looking to improve and expand their services. To generate this revenue, some brigades distribute and service first attack fire equipment for small-to-medium sized businesses within their community. The CFA administers this business, which is called the Fire Equipment Maintenance (FEM) program.

Many members of the Country Fire Authority administration have recognized that the FEM program currently focuses on only a small set of services, and believe that there are unmet needs in the market for the FEM program to provide additional offerings. Furthermore, the CFA has the vision of being a leading emergency management organisation in Victoria by the year 2010, and additional FEM services may assist the Authority in reaching this objective. The goal of this project was to provide the Country Fire Authority with insights on how their Fire Equipment Maintenance program could evolve over time in the small-to-medium sized business market to deliver enhancements in community safety and to generate a financial return to the brigades where possible.

To obtain suggestions for the future of the Fire Equipment Maintenance program, we visited fifteen brigades to complete interviews with a diverse group of eleven CFA administrators and thirty-four volunteers throughout the state of Victoria. Through these interviews, we obtained suggestions on activities that the FEM program could use to expand. The four areas we were most interested in were products and services, training programs for businesses, emergency management services, and post-incident analysis opportunities.

Once all of the ideas were gathered, we researched them by exploring available documents from the CFA and online resources to find possible competition, time required from the volunteers, equipment needed, potential pricing for services or products, and any certification requirements. Secondary interviews were conducted to determine potential benefits and volunteers' willingness to carry out specific services. The research was then used to analyse the ideas and compiled into an interactive resource, which is an electronic document that can be used by CFA members to easily browse through all of the opportunities and view analysis on each. The analysis includes ratings on each idea, separated into the following benefits and requirements:

The level of benefit that each idea could produce in terms of:

- Community – The citizens and public structures of the town that the FEM services are conducted in
- Firefighter – The FEM volunteers who carry out the specific tasks

- Workplace – The employees and building structure of the small-to-medium sized businesses that are FEM customers
- Revenue – The gross income of brigades from this service

The level of requirements that each idea might demand in terms of:

- Willingness – The likely motivation of the volunteers to perform the service
- Time – The likely time required to perform the service
- Equipment – The additional equipment required to perform the service
- Training – The additional training of volunteers that may be necessary to perform the service

Following is a subset of ideas for future FEM services generated through interviews. The thirty-three opportunities are included in the full report.

Products and Services

Through our interviews, we obtained many ideas for new fire safety products that brigades could possibly distribute or service. The Victorian Building Commission lists many of these products as *Essential Services*. If a product is listed as an Essential Service and installed in a building, then it must be maintained to the level of operating condition specified in the building surveyor’s permit. The ideal role for the FEM program, in many stakeholders’ views, would be a “one-stop shop” market approach that would involve a brigade being able to inspect all of the products listed as Essential Services. During our interview process the five essential service products suggested were direct line alarms, fire exit signs, exit lighting, smoke alarms, and sprinkler systems. The following is one example of the seven opportunities found in this area:

- ***Fire Warden Kits*** could include a variety of products such as reflective vests, floor layouts, flashlights, and occupancy lists. The intention of these kits is to be a useful tool when emergencies occur.

Training

The training aspect of fire safety is a potential FEM addition that was supported by the majority of the CFA members interviewed. Some brigades are already licensed to train groups of employees from local businesses as a service outside of the FEM program. The specific area of training that was most frequently suggested by our interviewees was training in the usage of fire extinguishers. Following is one of the seven training services that we suggest the FEM program could offer in the future:

- ***Computer Fire Extinguisher Training*** is a potential FEM program training technique that would entail the distribution of CD-ROMs filled with small games and tutorials that can be used to train employees of businesses. Even though it may require specialised computer skills to produce this CD-ROM, this form of training could greatly benefit a business with little time obligation from the volunteers once the CD-ROM is created.

Emergency Management

According to their 2004-2005 plan, the Country Fire Authority “...plans to become a leading emergency management agency in Victoria by 2010” (CFA, 2004). The area of emergency management presents opportunities for the FEM program to

expand in ways that would assist the CFA in reaching its goal. Since this area is fairly new to the volunteers, most of the potential opportunities would require a significant amount of training before being able to provide these types of services. The following is one of the eight possible emergency management services that we suggest the FEM program could offer in the future:

- ***Emergency Management Binders*** could be an FEM program product that would be distributed with the intention to help a small-to-medium sized business be aware of potential emergencies and keep track of the standards that are relevant for the company's building. This binder would be a useful tool that would take very little time for the volunteers to deliver. The most significant requirement for the offering is that it would require a few CFA volunteers or employees to be fully trained in many different emergency situations to be able to create the binder so that the information is accurate and presented in an effective manner.

Post-Incident Analysis

The idea of formally offering post-incident analysis produced mixed opinions from the volunteers and administrators interviewed. Some believed that it would be a good way to increase safety, while others believed that information like this is usually not taken into consideration by businesses. We gathered suggestions on specific methods to convey this analysis for three possible audiences: owners of businesses where an incident has occurred, owners of similar businesses, and the general public. Following is one of the six possible methods for presenting post-incident analysis that we suggest the FEM program could offer in the future:

- Using ***Newsletters*** to publicly distribute important information learned from recent emergency incidents in that particular area could be beneficial for many within a community. The workplaces would also benefit, as they could learn from others' mistakes, especially when a similar business had an incident. This idea might be very easy to implement, since it may only require volunteers to type up a few documents each month.

We recommend that the CFA administrators and volunteer firefighters use this project's interactive resource to consider benefits and requirements of the opportunities to help determine the FEM program's future. Since we were limited in our role as a third party consultant, some final analysis remains for the CFA to complete. We suggest that the Authority conduct an in-depth analysis of the ideas, taking liability into consideration, to create a list of approved options for the brigades active in the FEM program to offer to the small-to-medium sized business sector. These brigades could then have the opportunity to choose and implement the services they believe fit their resources, making sure that the service will not compete with any local providers.

Based on evidence from discussions with brigade members, we are able to make some general recommendations for the future of the Fire Equipment Maintenance program. The topic of e-commerce was addressed in nearly all interviews, and for the most part, the volunteers and administrators supported this potential addition to the current program. We recommend that the CFA more actively assess the possible use of the Internet to sell products, schedule service appointments, and maintain work orders in a database accessible to the administration, brigades, and FEM customers. Brigade members felt e-commerce would help organise and expedite FEM activities. Another general recommendation is for the CFA to establish

some method for sharing information on brigade activities. Many firefighters believed that if they had access to information on activities that brigades in other areas were offering to meet their communities' needs, the volunteers could employ similar services.

After much research and analysis, we have presented possible opportunities that the Fire Equipment Maintenance program could enlist to promote community safety, and where possible, provide a financial return. If the CFA continues to support the expansion of brigade services, the program could solidify its customer base in the small-to-medium size business sector. This possible expansion would assist in sustaining the relationship between brigades and their communities, which could help the CFA maintain their objective of creating safer communities throughout the state of Victoria.

1 Introduction

Fire is an ever-present danger that threatens human lives and community assets. Consequently, fire protection services have been implemented worldwide to mitigate this risk. Every region has its own type of fire services, drawing upon the work of full-time, part-time, and volunteer firefighters. In most rural areas, unpaid volunteers are relied upon for community safety because their local governments cannot afford career firefighters to protect the sparse population. Even though local governments monetarily support volunteer firefighters for necessities such as equipment and firehouses, additional revenue is often needed to supplement brigade funds and broaden the community services offered by brigades.

The Country Fire Authority (CFA) is a government organisation in the state of Victoria, Australia, that is focused on emergency services. The CFA has over twelve hundred rural and urban volunteer brigades that are relied upon to protect communities across the state, excluding metropolitan Melbourne and public land. The volunteer brigades support their rural communities with a variety of duties that range from fighting fires to providing community fire awareness. Since brigades are concerned with improving their community preparedness and emergency response, they often offer additional services to fulfil community needs.

The CFA provides support for brigades by promoting their participation in the Fire Equipment Maintenance (FEM) program, which is a business that is administered by the CFA and executed at the brigade level. Currently, approximately 320 brigades across the state use the FEM business to raise funds by distributing and servicing first attack fire equipment for small-to-medium sized businesses. The products offered include various classes of fire extinguishers, fire blankets, and fire hoses, as well as accessories for these devices. The brigades also maintain and inspect the distributed equipment twice annually in compliance with state regulations. The brigades increase their communities' level of safety with money raised through these services, approximately six million dollars yearly. Brigades may often use this revenue to purchase specialty equipment to improve their firefighting ability and expand their services. These additional services could include responding to emergencies involving hazardous materials, confined space rescues, high angle rescues, and deep woods bushfires. In addition, the FEM business' goal is to promote workplace safety, providing a convenient way for small-to-medium sized businesses to purchase and install fire protective equipment.

The Country Fire Authority administration has acknowledged that the FEM program currently focuses only on a small variety of services. The CFA feels that there are opportunities to expand its FEM program in order to better the safety of the community. These opportunities arise from unmet needs of workplace safety in the small-to-medium sized business sector. In order to meet these needs, the CFA hopes to expand the FEM business with new services targeting local small businesses. Such advancements may allow the FEM program to strengthen its role in community safety through solidifying brigades' customer base for the future.

The goal of our project was to provide insight on how the Country Fire Authority's Fire Equipment Maintenance program could evolve over time in the small-to-medium sized business market to deliver benefits of enhanced community safety, and where possible, generate a financial return to the brigades. We accomplished our goal by interviewing CFA management, career staff, volunteers, and association officers to seek their views on potential expansion opportunities. In this way, we sought to ensure that all ideas generated from this project came from

individuals involved in the program, resulting in a greater possibility for implementation. In an effort to further assist the CFA in determining which opportunities to consider, we provided a simple analysis of the benefits and requirements of each opportunity. This analysis was designed to aid the CFA in choosing which opportunities should be implemented into the program. Such expansions could improve the level of safety in small-to-medium sized businesses and possibly raise more revenue for brigades. Each of these characteristics could lead to a more fire-safe community, and in the end save lives.

2 Background Information

This section contains general information on fire safety products and specific operations of businesses in the fire equipment maintenance industry across the globe. The objective is to provide further information and understanding about topics that directly relate to the Country Fire Authority (CFA), firefighters, and fire equipment businesses. The first portion of the chapter presents the information on the CFA, including the structure of the Authority and how it operates. We then provide some details regarding the CFA's Fire Equipment Maintenance (FEM) program, and the equipment that they distribute and service. Next, information regarding potential areas for expansion of the FEM services including e-commerce is discussed. We conclude this chapter with information about the industry of fire equipment distribution and servicing at both a worldwide level and local to Australia.

2.1 The Country Fire Authority (CFA)

The Country Fire Authority administers many of the fire services in Victoria, Australia. The CFA has over 1200 brigades, mostly comprised of volunteers, that protect the entire state with the exception of public land and metropolitan Melbourne. Within the CFA, exists a business that volunteer brigades use to acquire additional revenue, called the Fire Equipment Maintenance program. This section presents the aspects of volunteer firefighters, the structure of the CFA, and its Fire Equipment Maintenance program.

2.1.1 Volunteer Firefighters

Volunteer firefighters play an essential role in protecting community members from fire and other emergencies throughout the world. Volunteer firefighters risk their lives to save others with no monetary reward. These firefighters commonly serve the more rural communities of the world – areas where populations are lower than 25,000, and fire calls are rare (NFPA, 2002). Due to low call volume, it is not financially feasible for the towns to have career firefighters. Volunteers are effective in these regions because the communities are usually closely-knit, where people are willing to volunteer their time for the benefit of others. In Australia, the number of volunteer firefighters has been decreasing over the past few years. The growing age of firefighters and waning interest in firefighting among younger people has affected the number of volunteers (Hayes, 2005).

2.1.2 Country Fire Authority Structure

The Country Fire Authority is one of the largest volunteer-based emergency response organisations in the world (CFA, 2005). The organisation is responsible for “taking, superintending and enforcing all necessary steps for the prevention and suppression of fires and for the protection of life and property in case of fire” across the state of Victoria, with the exception of the metropolis of Melbourne and public lands (CFA, 2004, p. 3). A staff of roughly 1200 full-time administrators organises and manages more than 58,000 volunteers all over the state. The 1,213 brigades each have their own responsibilities of being the first line defence for both structure and bush fires throughout the state. (CFA, 2004; Baczewski, Callahan, Marineau, & Stafford, 2002).

In an effort to offer the most effective fire services to the communities of Victoria, the CFA measures their offerings in four categories: *Prevention*,

Preparedness, Response, and Recovery (PPRR). Prevention represents all activities which lower the overall risk of a fire occurring in the community. Preparedness includes all activities that provide a state of readiness for possible emergency situations. The response theme is representative of all services that promote the quick and effective response of the CFA brigades, and assist the firefighters in controlling emergency situations. Finally, recovery includes all services that support the victims of emergency situations, as well as the community in which they reside. (CFA, 2004)

The CFA is administered by the Department of Justice in Victoria and in 2004, the CFA received AU\$207 million of revenue, of which 22.5% was from the state government and the rest was from insurance companies (CFA, 2004). Most of the revenue is payment from the insurance industry for the actual firefighting. Even though much of their income is generated by containing and suppressing fires, many brigades receive very few calls. Volunteers supplement their firefighting activities by engaging in the fire safety education of community members. It is these types of interactions within the community that assist the CFA in its goal to be well respected among Victorian communities (CFA, 2004).

2.1.3 The CFA's Fire Equipment Maintenance Program (FEM)

To help brigades develop stronger community relations, the Country Fire Authority supports different programs to increase fire safety, including the Fire Equipment Maintenance (FEM) program which focuses on fire equipment. The brigades participating in the FEM program offer fire extinguishers, fire blankets, hoses, and other accessories to over 2500 clients throughout Victoria. The FEM volunteers also inspect these items semi-annually, and provide maintenance when necessary. Between the sales revenue and maintenance fees for these goods, the FEM program generates revenue of about six million Australian dollars yearly. Six percent of the money raised is used for the administration of the FEM program (Hayes, 2005). The remainder of the funds is given back to the brigades and used for equipment, training opportunities, and firefighter morale-building events (CFA, 2004).

The primary goal of the FEM program is to ensure that all businesses and citizens are well prepared for fire emergencies. A benefit of the program for the brigades who participate is that a portion of the money raised through FEM work is given back to the individual brigade. All volunteers who carry out maintenance on the fire equipment are trained to ensure that all equipment and operations meet state regulations. With their knowledge of the fire equipment, the brigade volunteers may informally train some clients on the proper usage of their products. Currently, community training is neither regulated nor endorsed as part of the FEM program. Nonetheless, educating the public not only increases workplace safety, but also produces income for some of the brigades (CFA, 2004).

Throughout its years in the industry, the FEM program has increased its customer base and is currently interested in the possible opportunity to expand its offerings. Presently, there were 320 brigades participating in the program that have the capability to service most of the small-to-medium sized businesses in Victoria (Hayes, 2005). About 120 of these brigades use private contractors to do the required servicing on the products, while the other brigades rely on their volunteers (Hayes, 2005). The CFA has also purchased software for the possibility of expanding the business through Internet-based sales and service appointments. The Authority hopes that the Internet software could make the business more efficient by opening the door to more types of offerings in the FEM program (CFA, 2004).

In summary, the FEM program is very important to the CFA in several ways. The business brings in revenue for the brigades and provides the brigades with an opportunity to benefit their towns while developing or bettering relationships with citizens and businesses. Also, providing these services and products to the community provides easy access for community members to obtain the fire protective equipment that they should have in their businesses. One of the CFA's most important functions is to prepare for fire emergencies, and the FEM program has a significant impact on fulfilling this duty.

2.2 First Attack Fire Equipment

The CFA's FEM program offers first attack fire equipment to their customers. First attack fire equipment is a term used in Australia to represent fire suppression equipment designed to be used at the onset of an incident, before the firefighters arrives. Different equipment is required to suppress each of the variety types. Fires are divided into Classes A through F, depending on what is fuelling the fire. The first three types of fires are described according to the fourth edition of *Essentials for Firefighting* (1998) and the last three are summarised from the *Underwriters of Canada* reports (2005). Also included are brief statements about how these types of fires are extinguished.

- **Class A** fires involve wood, wood-related materials (e.g., cardboard), or plastic. This type of fire must be extinguished by cooling the burning material below its ignition temperature.
- **Class B** fires contain flammable and combustible liquids. These types of fires must be extinguished by smothering them so that oxygen is cut off.
- **Class C** fires are fueled by flammable gases and are extinguished by the same principle as Class B fires.
- **Class D** fires involve “combustible metals such as magnesium, sodium, or potassium” (Underwriters' Laboratories of Canada, 2005). These are very dangerous fires because of the possible explosions that may result. There is no single extinguishing material because each metal has specific reactions with different extinguishing chemicals.
- **Class E** fires involve any electrical equipment such as circuits, wires, and control boards. The best way to control these fires is to de-energise the circuit and then use the appropriate extinguisher for the material left burning.
- **Class F** fires are fueled by burning fat or cooking oil and are in this specific class that was developed under Class B because of how often it occurs.

It is important that the appropriate fire extinguisher is chosen for each type fire. Below are brief descriptions of the types of extinguishers that the CFA distributes and services, and the classes of fire for which they are intended. The

descriptions are formed from the CFA FEM program website (2005) and the fourth edition of *Essentials for Firefighting* (Hall & Adams, 1998, p. 125-129).

- **Water Extinguishers** are portable extinguishers that are pressurised and usually contain only water. To fight a fire, the operating valve is activated and water is forced out of the hose. The only fires that a water extinguisher is truly effective against are Class A fires.
- **Dry Chemical Extinguishers** are most effective against Class A, B, C and F fires. The agent is designed so that it can be sprayed over a fire and will smother its oxygen supply. Common agents include sodium bicarbonate, potassium bicarbonate, and mono-ammonium phosphate. Dry chemical extinguishers also leave a large amount of residue after use.
- **CO₂ Extinguishers** are used most efficiently in the case of a Class B or E fire. When the pressurised liquid carbon dioxide is released into the atmosphere, it begins to change phase and replaces the oxygen supply to a fire with carbon dioxide.
- **Foam Extinguishers** are used for fighting Class A, B, and F fires. Specifically, they are most effective against fires that are fueled by pools of burning liquid. Compressed air or nitrogen forces out the combination of foam and water, the purpose of which is to smother the fire. The best way to apply a foam extinguisher is not directly, but instead by drizzling foam down onto the fire to force aeration of the foam concentrate, which can then cover more area.
- **Wet Chemical Extinguishers** are used to fight Class A and F fires only; it can be dangerous to expel the agent onto an electrical fire. These extinguishers usually contain a liquid agent that is specifically designed to address fires fueled by flammable cooking liquids.

Using the correct fire extinguisher increases the likelihood that the component, device, or environment in which the fire occurs could survive with the least possible damage. Correct usage also protects the surrounding people from being injured. Some fire extinguishers are only used for certain fire situations because if used incorrectly, may cause more damage to the items on fire than other available fire suppression equipment. In some cases, using the wrong extinguisher may cause the fire to spread, putting people in danger. From a financial perspective, it is also important to choose the correct extinguisher because some extinguishing agents cost more than others.

Fire blankets are described on the CFA's products website as only being applicable to fight Class F fires. The *Fire Prevention Handbook* gives a good description of their usage (James, 1986, p. 59). Fire blankets are made in various sizes, the most common one being six foot square, and are made out of a glass-fibre material. The device should be conveniently hung near cooking appliances so that they can be easily accessed. The flat-packed method allows for quick extraction by pulling down on two tabs. Application of the blanket involves smothering the open

fire by throwing it over the cooking surface. Once the blanket is over the fire, it smothers the flames and cuts off the fire's oxygen supply.

Fire hoses are another important part of the first attack product line. The purpose of a fire hose is to move the water from a fixed pipe to the location of the fire where it can be applied by the user (Hall & Adams, 1998, p. 397). The CFA distributes three different sizes of fire hoses to its clients. Because they are used to transport water, they are most useful for Class A fires. On one end of the hose (or line of hoses) there is a coupling that can connect to other hoses or a water supply connection, and on the other end is a nozzle. The CFA also distributes fog stream nozzles for their hoses – a type that can be adjusted by the operator to change the angle from a straight stream to a fan spray that can be up to eighty degrees wide (Hall & Adams, 1998, p. 494). The CFA also provides hose reels for convenient storage and quick access. This is all the equipment that the CFA offered to its customers at the time of this report; however, there may be other potential devices available.

2.3 General Areas of Growth for the FEM Program

With the assistance of FEM management, we defined four main areas of interest for expansion of the program. In this section, research on successful examples of *products and services*, *workplace training*, and *emergency management services* is summarised. Detailed examples in these three areas can be found in Appendix A. Since *post-incident analysis* was an original idea for the CFA, successful examples were not unavailable; therefore, a description of what the analysis could entail is included in this section. Another idea that the CFA showed interest in gaining insight on was integrating *e-commerce* into the current FEM business.

Training for employees of businesses is a very common service for firefighters and private companies to offer their customers. Examples have been found in the United States, England, Australia, and Canada. The most common types of courses that are offered for businesses are focused on extinguisher training, fire awareness, and fire preparedness. The typical length of these courses is one to two hours and is designed for a group of fifteen to twenty-five employees.

For the most part, services that are offered to a company to assist in emergency management are in the form of training. Typical courses conducted for emergency management are longer than employee fire safety training, since the training is designed for a member of the company who is in charge of fire safety. Other emergency management services that are commonly offered by firefighters or private companies include distribution of manuals or packets, emergency evacuation planning, and evaluation of emergency technique.

Companies that distribute first attack fire equipment sometimes offer more than just extinguishers, blankets, and hoses. Specific examples of different products offered are exit lights, smoke detectors, and sprinklers. Some companies also offer services to products that they do not distribute including fire hydrants, exit doors, and sprinkler systems.

The other suggested area for expanding the Fire Equipment Maintenance program is with post-incident analysis. This area of interest is considered to be presenting pertinent information to business owners after an incident. According to FEM administrators, there is a lack of communication of post-incident analysis between firefighters and incident victims. Effectively communicating this analysis could be useful to prevent similar emergencies from occurring, improve employing response, or compliment successful reactions to fire emergencies.

2.3.1 Introduction of E-Commerce to Businesses

E-Commerce is another avenue by which other fire equipment companies have enlarged their business, both in profit and customer base. E-commerce technology represents a possible improvement for the CFA's distribution and servicing of fire safety equipment, and it could assist brigades in administrating their FEM responsibilities. In this section, we describe a situation in which a fire equipment distributor improved its business by implementing online sales. We also present a description of risk factors for the customer and business, and discuss the issue of customer satisfaction.

Over the past decade, the commercial world has been changing due to the convenience of the World Wide Web. Companies are not always prepared to make the adjustment towards Internet trade; however, the assistance of web development companies can be very helpful. A good example of a web development company working with a private business is illustrated by the example of competitions called *PC Week Shoot-Outs*. During one specific contest, the e-commerce capability of a company called Firetec was examined by five different website design companies. Firetec is a company located in Tunbridge, Vermont that distributes used and new fire equipment. In the Shoot-Out, these five companies that are well known for their development of e-commerce examined Firetec's current website, and each made their own suggestions. The results of the event provided Firetec with some very helpful advice. Firetec was in a similar situation to that currently facing the FEM program; the company's website was effective in conveying product information and prices, but the page was only for the purpose of informing possible customers. The consultants took the website to the next level by re-designing the format to enable customers to order products off Firetec's website using credit cards (Rapoza, 1998, p. 99).

The five web design companies took different approaches, but in the end, the main goal of providing helpful suggestions to Firetec was accomplished in similar ways. The main conclusion that all of the designers reached was that Firetec lacked the resources to host its own web page. The proposed solution was to use an external source to host the site. In order to make updating the web page easy for the company, the consultants suggested a feature that allows employees to make changes from remote locations using password protection. Rapozza (1999) believes that the best addition to the website inspired by the Shoot-Out was a login option for frequent customers. Not only did the login feature provide packaged deals and discounts for clients after many purchases, but the addition benefited the company as well. Management is now able to track the activities of frequent buyers, including what products the customers are looking at.

The type of e-commerce that would be applicable to the FEM program is known as business-to-business online trading. Online trading makes purchasing for customers convenient because they can order at any hour, any day. Not all customers feel comfortable with online transactions because of the concern of potential theft or fraud when valuable information such as credit card numbers provided on the internet. The most common and accepted method to provide a secure site over the Internet is a Secure Sockets Layer (SSL) certificate. SSL is a protocol available for purchase through the Internet that indicates to a customer that a website is authentic. The certificate can also provide an encryption process for credit card payments. An SSL certificate is available in either sixty-four-bit or 128-bit strength, and works by the server creating a key that is only available to the two parties making the transaction. (Gordan & Skibo, 2002). McGarvey (2000) claims that most successful e-commerce

companies also include a frequently asked question section on their website that is developed after a certain amount of customer feedback and is accessible by all users.

Two additional risks that customers can be concerned about are if the product displayed is as good as it seems, and whether they will actually receive the product. In an effort to convince customers that they are going to receive their product, most companies use automated online tracking information. Throughout the world, Federal Express automatically assigns each product a tracking number. The number can be entered at the FedEx website, and details on the shipping status can be viewed by the customer (FedEx Australia FAQ, 2005). The tracking number is helpful after an online shopper has ordered a product, but steps must also be taken to give customers confidence in placing the order. Gordan and Skibo (2002) argue that the best method for creating customer confidence is to use one of two feedback systems. The typical is a rating system, such as zero to five stars, or a scale of one to ten. The advantage of this type of feedback is that the customers do not have to take a lot of time to complete the rating, making it more likely for the business to obtain a lot of input. The other option is a blank template where customers can comment on the ordering process, which has an advantage of much more personal and detailed feedback.

Risk is not only an issue that customers face when using websites; the business running the website may be concerned about the risks of online trading as well. McGarvey (2000) explains the method that most companies use worldwide to ensure that payment will be received for a transaction. Once the purchaser's credit card number and expiration date are obtained, they are automatically sent to the purchaser's bank. The bank's online service approves the information and sends confirmation to the business providing the product. At this point, most companies will distribute the product and then send a request payment form to the bank electronically. The money cannot automatically be transferred between accounts until the electronic form is sent. An Internet merchant can automate all of these operations; these merchant services are available through almost any financial institution.

Once all of the security issues are taken care of, there is still the problem of making the entire process satisfactory to the customer. The process of ordering online will be satisfactory for the customer if it is easy to find products, obtain all the necessary information about them, and then proceed to purchase them easily. Rapozza (1999) believes that an important part of customer satisfaction is to make sure that the server speed is fast and the pages are not overloaded with images, so that there are not potentially long and irritating download times. McGarvey (2000) reports that a lot of companies use online templates that are easily modified to meet the needs of a specific business, and websites created this way have been proven to work well.

2.4 The International Fire Protection Industry

Fire equipment servicing businesses can be found all over the world, and many offer more services than the CFA's FEM program did at the time of this report. In this section, a few worldwide fire equipment corporations are described, specifically Tyco and Chubb, as well as a few smaller, more local businesses such as Ansul and Reliable Fire. Included within their descriptions are a few of the products and services that they offer their customers. The international industry is presented to make comparisons between the current situations in Victoria and those of other areas of the world.

Through our research, it was noted that the United States federal government does not play a large role in the maintenance of fire equipment, with the exception of regulating and checking the businesses that carry out the services. The American

structure is different than that of Victoria, where there are private companies involved in the fire equipment market competing with the government -- supported FEM program.

The majority of large companies that maintain fire equipment in the United States and Europe also service fire suppression and alarm systems. These businesses also bring a sort of one-stop shopping for customers when it comes to fire protection, providing a benefit of convenience for the client. It is also common for these fire-based companies to further expand their services into the security fields by providing burglar alarms. However, there still exist some smaller, more local companies that specialise in fire extinguishers and other fire protection equipment for private use, without having interest in automatic suppression or detection systems.

Reliable Fire (U.S.)

Reliable Fire Equipment Company is a United States business that offers fire equipment to business enterprises nation-wide as well as product service and training for clients' employees. The products offered by Reliable are similar to those offered by other businesses in the industry; however, their website reveals that other products available for purchase are hoses, nozzles, and racks/cabinets (Reliable Fire Equipment Company, 2005). Their training programs consist of on-site video and discussion with a trained instructor. Also available is a more hands-on learning experience where employees are shown the essentials of early firefighting with extinguishers and practice with different types of extinguishers. The Reliable Fire course provides the employees with an opportunity to familiarise themselves with the devices that are available in their workplace to reduce confusion in an emergency. Also available to clients is an even more in-depth training session using the Ansul fire simulator, which is further explained in the *Ansul Fire* section (Reliable Fire Equipment Company, 2005).

National Association of Fire Equipment Distributors (U.S.)

The National Association of Fire Equipment Distributors (NAFED) is an association of over one thousand different fire equipment vendors. The association's website (NAFED, 2005) offers a listing of all the member businesses, along with a quick search tool to find local services. The majority of these members are small local companies, all of which are distributors of fire equipment. A few affiliated companies include Advanced Coast Fire Protection, East Coast Fire and Ventilation, and Ahern Fire Protection. A similar organisation, Fire Equipment Manufacturers Association, is made up of companies that only manufacture the equipment. (NAFED, 2005)

Tyco (Worldwide)

Tyco is one of North America's largest fire and security companies; however, the business oversees businesses in other countries of the world as well. The company is made up of 260,000 employees across the globe who service businesses in over one hundred countries. Many smaller companies operate as subsidiaries of Tyco, such as Ansul Fire, which offers extinguishers, hand-lines, and full suppression systems in the United States. Other Tyco companies include Flag Fire, which caters to the Canadian population, and SimplexGrinnell, which also covers the United States. (Tyco, 2005)

Tyco's largest subsidiary that specialises in fire protection is SimplexGrinnell. According to SimplexGrinnell's company website, it primarily works with large

corporations such as shopping malls and airports. SimplexGrinnell offers many types of extinguishers, such as clean agents and wet chemical extinguishers to their customers. Other products offered by the company include pumping and suppression systems and emergency lighting design. SimplexGrinnell's services include fire detection and alarm systems, suppression systems, healthcare communications, and intercom systems. The company also offers 24-hour service on all of their products. SimplexGrinnell has over eight thousand technicians servicing clients across the country. All of the products and services that SimpleGrinnell provides meet both NFPA (National Fire Protection Agency) and OSHA (Occupational Safety and Health Agency) standards, a requirement for all workplaces in the United States. SimplexGrinnell also offers fire extinguisher training classes to customers who use its products, while having seminars on fire codes, alarms, and suppression systems and how those apply to specific businesses (SimplexGrinnell, 2004).

Another Tyco subsidiary is Ansul, whose services range from fire protection products to firefighters' equipment (Tyco, 2005). One major difference between Ansul and its competitors is its fire simulator-training program, which is described in detail on its Internet homepage (Ansul Incorporated, 2004). The training program is a computerised system that provides students with a simulated fire. Students use a simulated extinguisher that discharges compressed air instead of expensive extinguishing agents. When the student uses the "extinguisher" in response to the video of a fire, the video, sounds, and reactions of the "extinguisher" closely mimic those encountered in a real fire emergency. The set-up can also detect when a student is using inappropriate techniques to extinguish the flames. This simulator is used when live-fire training is not available, or safety is a concern for the employees. The use of state of the art technology keeps students safe, while still giving them a very accurate idea of what it is like to use an extinguisher. Ansul also offers a wide variety of different types of extinguishers, described on its website, from dry chemicals to clean agent devices (Ansul Incorporated, 2004).

Chubb (Worldwide)

Chubb is a fire equipment maintenance company that operates in Australia alongside the Country Fire Authority. The relationship between Chubb and the CFA is distinctive; Fire Equipment Maintenance program manager, Terry Hayes, described the two as being more like partners than competitors. Hayes says that the relationship historically is one in which Chubb does not challenge the CFA's fire equipment distribution and servicing market. Oftentimes, FEM volunteers distribute Chubb fire equipment with the CFA label on it to their customers, and when the device needs maintenance, the volunteers may send it to a Chubb facility. Chubb charges the brigades a discounted fee on all these services; therefore, Chubb is able to receive some profit regardless of who is servicing their products. In many cases, Chubb is even contracted by the CFA's brigades to do the work, giving the large business yet another source for profit. The reason Chubb does not challenge the Fire Equipment Maintenance program is likely because it has a financial stake in the FEM program operations and because it appreciates the role that the CFA volunteers have in the community. According to Hayes, Chubb also believes that using the FEM program is an opportunity to use the CFA government logo and reputation to bring its products into the small-scale businesses that would traditionally not be interested in doing business with an international corporation (Hayes, 2005). Chubb began its services in 1896 in Sydney and now is a multi-billion dollar worldwide corporation that has over eleven thousand employees ("A solution to security," 2005). Chubb currently offers

twenty-one classes in fire-related training and offers many services within the fire equipment industry. In addition to offering courses, Chubb both sells and manufactures various types of fire safety equipment.

Chubb makes and sells seven extinguishers for different types of fires along with Class A fire hoses and Class F fire blankets (“Fire Extinguisher,” 2004). With these products comes information regarding correct fire equipment placement and proper usage. Because Chubb recognises the importance of educating its customers, the company offers trained specialists who inspect a business and assist in developing the best possible fire safety plan. A fire safety plan might, for example, suggest appropriate locations for fire extinguishers, fire hoses, and fire blankets.

Chubb offers a wide variety of fire safety training classes that are intended to provide employees of businesses with knowledge that will help protect themselves and the people around them in the event of an emergency. All training classes taught by a Chubb professional are accredited in every state and territory in Australia, as Chubb is licensed by the Australasian Fire Authorities Council (“Training Brochure,” 2004). For the most part, larger businesses are the main customer for Chubb due to the extensiveness of the courses and the cost of the training; however, there are a few Chubb classes that might be applicable to the type of customers that the FEM program services.

A class called “Hazard and Risk Assessment for Confined Space Entry” (2004) is one example of the community training that Chubb offers. This class helps employees of a business identify and assess where a potentially dangerous area might be, in terms of its confinement or the objects that surround it. Such training helps workers carry out procedures necessary to evacuate, which may help reduce the number of fatalities. This course is an example of one of the many community education courses that Chubb offers.

Chubb can also provide workers with the knowledge needed to carry out safe and correct procedures in the event of a fire emergency. The class “General Occupant Training” teaches individuals how to respond to an alarm or the discovery of a fire, and instructs them on evacuation procedures for their particular business (“General Occupant Training,” 2004). These classes are intended to teach a worker in large businesses how to make appropriate judgments that could aid in evacuating co-workers at risk.

The Chubb class that is most germane to the FEM program is “Fire Awareness and Extinguisher Training,” which focuses on teaching students about the different types of fires that can occur and the types of extinguishers that may be used on a particular category of fire. This course also teaches proper techniques for using various types of fire safety equipment, such as fire hose reels. Chubb trainers also explain how fires spread so that employees of a business will know how to create a safe evacuation plan in case of a workplace fire. Chubb currently sells water, wet chemical, foam, powder AB(E), powder B(E), carbon dioxide, and vapourised liquid extinguishers (“Fire Extinguisher,” 2004). Chubb training courses explain the pros and cons of each type of extinguisher, allowing the customers to choose which device is most applicable to their needs.

Another service that Chubb offers is specialty inspections and consultations. Having a company building inspected by a Chubb specialist may have more benefits for the business than just saving money on proper safety equipment. A business that has an optimised fire safety plan may experience reduced insurance rates. Also, in the event of a fire, the damage would be more easily contained if fire extinguishers are in effective locations and employees are properly trained in using the equipment. The

goal of a Chubb specialist is to install the appropriate fire extinguishers in proper locations for a given business environment.

Australasian Fire Authorities Council

Australasian Fire Authorities Council (AFAC) is an agency based out of Victoria that offers training to private businesses. AFAC is the accrediting agency for all fire training courses and influences fire protection standards across the nation. AFAC is a non-government organisation that has the main objective of creating a safe environment by representing fire authorities. With twenty-three full time members and fourteen associate members, AFAC represents all fire services, emergency services, and land management organisations across the country of Australia. Their goal includes coordinating resources and communication between these different agencies.

The Council offers some training directly to private industry. The two categories of training offered are Fire Emergency and Response Training (FERT) and the National Fire Curriculum (NFC). The FERT program consists of topics that are focused toward commercial businesses. These topics include training for groups of employees along with education for the individual in a workplace who is responsible for fire safety or emergency management. The NFC program offers both a basic level certificate for being a firefighter and further certificates leading to an advanced diploma. The Country Fire Authority training facilities are approved by AFAC to offer any course in either Fire Emergency and Response Training or the National Fire Curriculum. The FERT courses are relevant to the Fire Equipment Maintenance program because they are designed for the customer base that brigades already target. Another offering from AFAC is FERT training manuals, which are less costly than actually taking the course, although they do not provide the same personalised education. A detailed list of the training programs offered under FERT, as well as the manuals offered online, can be found in Appendix A (AFAC Products and Services, 2003).

3 Methodology

The goal of this Interactive Qualifying Project was to provide the Country Fire Authority with insight on potential opportunities for its Fire Equipment Maintenance program to assist brigades in enhancing community safety, and, where possible, to examine areas where revenue can be produced. This chapter introduces the procedure we used to identify opportunities for brigades and analyse the activities in terms of benefits and requirements. The first step was obtaining input from the Country Fire Authority personnel on possible directions for the future of their Fire Equipment Maintenance program. The suggestions came from two groups of people: members of brigades and CFA administrators. The potential opportunities obtained through interviews were then researched, analysed, and included in an interactive resource to display our findings.

3.1 Identifying Opportunities for the FEM Program

Our initial step in achieving our goal was to define a set of research questions that could be answered through interviews with two available groups of stakeholders: volunteers and administrators. Volunteers participating in the Fire Equipment Maintenance program were interviewed because they have first-hand knowledge of what services could enhance safety in the small-to-medium sized business sector. Administrators of the program, along with administrators from related CFA departments (e.g., Community Safety) were interviewed to take advantage of the staffs' knowledge of state-wide trends in brigade abilities and the administrative process of the program. The following research questions were developed with the intention to gain an understanding of the current situation and potential of the FEM program:

- Where does the FEM program currently stand in the fire protection market?
We sought to define the boundaries of the current program to determine where there are unmet community needs that brigades could potentially meet.
- Where are the weaknesses when considering the program's position in future markets?
We wanted to understand the limitations of the program, in order to use this information to define areas of interest and in analysing potential opportunities.
- What general and specific areas are available for the FEM program to expand into?
While conducting initial research on other fire equipment businesses around the world and holding discussions with our sponsor liaison, we defined four major areas of new opportunities for the FEM program. Having these four categories in mind while conducting interviews, we were able to provoke the CFA members' thoughts with the intention of getting new opportunities fitting these four categories. In order to not limit the thoughts of firefighters, we also asked for ideas outside these categories.

- Are there differences in opinion between volunteers and administration?
We set out to find any differences in the views of volunteers and administrators, as each group has a different perspective on the program. This information could be useful in explaining the benefits of each opportunity to these particular groups.

As explained in the Background chapter, the CFA was particularly interested in four areas of potential opportunities: new products and services, workplace training, emergency management offerings, and post-incident analysis. The Authority was also interested in obtaining suggestions for general brigade activities outside of these areas. The only specific potential opportunity that the FEM administration asked us to explore was the possibility of the program using e-commerce technology. Administrators believed that e-commerce could assist in streamlining the business and enhancing communication with both the programs' customers and participating brigades.

In order to identify opportunities for the FEM program, we held discussions with the people directly involved in the program. The team, with the assistance of FEM manager Terry Hayes, developed a list of administrative and volunteer members who would be available to participate in interviews on the possibilities for the program. This list included financial administrative officers and volunteer coordinators, along with volunteers who are active in their brigades' FEM program.

Each interview lasted between thirty minutes and several hours, depending on the number and detail of ideas discussed by the interviewee. During interviews, our team members would initiate conversation regarding the four areas for possible expansion that we had initially identified, in order to get specific examples of opportunities that the members felt would be worthwhile for the team to research. After we enquired for suggestions in the four defined areas, we asked for any additional ideas for other opportunities, with the intention to ensure that the interviewees were not being led by the questions. Each interview was concluded with a question asking what other people the interviewee felt could be beneficial for the team to contact regarding our project to assist in gaining new perspectives. The protocol that we used to ask our interview questions can be found at the beginning of Appendix B.

Oftentimes, it was possible for us to travel to the brigades where the volunteers work, which benefited both parties in the interview. The objective was to give volunteers a sense of comfort by having them answer questions in a familiar place. These visits were also intended to give us an accurate account of what type of geographic and social setting the brigade was located in. We sought to understand the volunteer's environment, in order to help us better interpret their views of the CFA and the FEM program. Listed in Table 1 are the nine brigades that we visited to obtain ideas for potential opportunities. The table also contains a brief description of the type of community the brigade covered, where in Victoria it was located, and the rank of the members that were interviewed.

Table 1: CFA Brigades Interviewed to obtain Potential Opportunities

Town	Setting	Interviewees
Hamilton	Medium Sized Rural, Western Inland	Brigade Captain, Volunteer Member and Paid FEM Coordinator
Heywood	Very Small Rural, Western Inland	Two Volunteer Members
Mornington	Medium to Large Sized Urban, Southern - Mornington Peninsula	Brigade FEM Administrator and FEM Contractor (Volunteer)
Mt Martha	Rural, Near Southern - Mornington Peninsula	President of Rural Firefighters Association
Port Fairy	Rural, Tourist Area, Western Coastal	Two Volunteer Members
Romsey	Very Rural, North of Melbourne, Farm Country	FEM Representative, Volunteer Member
Ocean Grove	Rural, Tourist Area, Southern	Community Fire Safety Administrator/Firefighter at Ocean Grove
Scoresby	Larger Urban (Just east of Melbourne), One of largest FEM Brigades in State	FEM Administrator,
Warrnambool	Urban, Large Tourist Area, Western Coastal	Contractor, Volunteer Member/FEM Client, Volunteer Member

3.2 Researching Suggested Opportunities for FEM Expansion

After the initial interviews with CFA members were completed, we began researching the suggestions they provided. This research involved investigating the attributes of each service, product, training course, or other offering that was suggested during interviews. The method used for this research was secondary interviews with volunteer members complemented by Internet research to determine the following attributes of each opportunity:

- *Potential Price* that businesses would be willing to pay for the product or service
- *Market Demand* for the offering in the small-to-medium sized business sector
- *Volunteers' Willingness* to provide the service
- *Time* required from volunteers to provide the service
- *Necessary Volunteer Skills* for providing the service outside the skills that firefighters are already likely to have
- *Necessary Tools* that the CFA would be required to purchase in order to offer the new addition to the program
- *Service and Accessory Opportunities* that may become available as a result of offering the product or service
- *Competitors in the Market* that are possibly already offering the product or service to Victorian communities

- *Successful Examples* of the product or service being offered by a fire organisation from anywhere in the world
- *Prevention, Preparedness, Response, Recovery (PPRR)* category that the service falls into, as described in Chapter Two.

We conducted ten secondary interviews with volunteer firefighters and CFA administrators to obtain feedback from individuals who may be affected by future changes to the program. Potential opportunities were brought up to the CFA member, and a discussion followed that included enquiring for opinions on the attributes described in the previous list. The protocols that we used to conduct secondary interviews are summarised in Appendix C. We asked each interviewee about approximately ten opportunities, divided evenly from each of the four categories. This separation was done to ensure that there could be enough time during the secondary interviews to gain thorough feedback on each opportunity discussed. Listed in Table 2 are the brigades that were visited during the research portion of the project, including a brief description of the type of community the brigade covered, the part of Victoria it is located in, and the rank of the members interviewed.

Table 2: CFA Brigades Interviewed during the Research Process

Cobram	Urban, Northern Border	Two FEM Officers
Currawa	Rural, Agricultural University	Brigade FEM Officer
Dandenong	Urban Brigade in Metropolitan Melbourne, Largest Brigade Visited	Brigade FEM Officer, Full Time Firefighters
Dookie	Rural, Northeast	Brigade Captain, Volunteer Member
Eaglehawk	Urban, Suburb of Bendigo, Mid-State	Brigade FEM Officer
Maiden Gully	Rural, Near Urban Bendigo, Mid-State	Two Volunteer Members

3.3 Analysing Potential Business Opportunities

Using the research obtained for each idea through secondary interviews and Internet research, each suggestion was analysed in terms of benefits and requirements. The results of the interviews were examined to determine common opinions, which were used to rate four benefits that may result from each opportunity and four requirements that would be necessary to implement the idea. We completed the ratings to provide the Country Fire Authority with summarised views on each opportunity. In this section the possible ways that an idea could be beneficial are presented, followed by the potential requirements. After the categories are defined, the process that we used to rate the suggestions is discussed.

Benefits:

For *Workplace*, the rating defines the extent to which the safety of clients' employees may be positively affected by the addition to the FEM program.

For *Community*, the rating defines the extent to which community safety may be affected by the addition to the FEM program. This rating does not refer to the business workplace being serviced but rather to the general public.

For *Firefighters*, the rating defines the extent to which the firefighters may benefit from the possible addition to the FEM program. This includes, but is not limited to, enhancing the personal safety of the volunteer in case of an emergency and acquiring a new skill or certification.

For *Revenue*, the rating defines the extent to which the gross revenue for the brigade is likely to be increased due to the possible addition to the FEM program.

Requirements:

For *Willingness*, the rating defines the level of interest the volunteer firefighters are likely to have in offering the potential opportunity.

For *Time*, the rating defines the length of time that is likely to be required by the volunteer firefighters to carry out the new activity of their brigade. This rating includes, but is not limited to, time to deliver the product, carryout the maintenance, and complete the paperwork required for a successful service.

For *Training*, the rating defines the extent of skill or training that may be necessary for the volunteer firefighters to acquire to carry out the service. This rating does not include skills already possessed by most firefighters; it is only based on further training required beyond normal firefighter training or required certifications.

For *Equipment*, the rating reflects on any equipment that brigades may need to obtain to carryout the additional service in the FEM program.

We developed a system to rate potential opportunities in terms of the benefits and requirements of each. We rated each opportunity as having high, medium, or low benefits and requirements. We also developed a quick-reference system to show these ratings using three colours: green, yellow, and red. The ratings of the benefits and requirements are intended to reflect upon specific aspects of potential opportunities, opposed to presenting an overall rating for each suggestion. A green coloured benefit level indicates that we concluded, using our research, that the potential opportunity will most likely have a high level of benefit. A yellow benefit colour signifies a moderate level, and a red colour indicates little to no benefit in that particular sense. A requirement colouring of green indicates that we concluded, using our research, that the potential opportunity will most likely have a low level of requirements in this area. A yellow colour shows that we believe there could be a moderate level of this requirement, and a red colouring shows that the requirements may be high. The rating scheme is defined and represented in the rubric shown in Figure 1, which is also included in our interactive resource, one of our final deliverables to the CFA.

BENEFITS			
	LOW	MODERATE	HIGH
<u>Community</u>	Very little to no benefits to the Community	Moderate level of benefits to the Community	Very beneficial to the Community
<u>Firefighter</u>	Very little to no benefits to the Firefighters	Moderate level of benefits to the Firefighters	Very beneficial to Firefighters
<u>Revenue</u>	Very low priced or free service	Moderately priced service	Expensive service
<u>Workplace</u>	Very little to no benefits to the Workplace	Moderate level of benefits to the Workplace	Very beneficial to the Workplace

REQUIREMENTS			
	LOW	MODERATE	HIGH
<u>Willingness</u>	Volunteers are excited to offer this service	Volunteers would be willing to offer this service	Volunteers are very unwilling to offer this service
<u>Training</u>	Requires very little to no training for the volunteers	Requires some training for the volunteers	Requires a lot of training for the volunteers
<u>Time</u>	Requires very little to no time from volunteers	Requires some time from volunteers	Requires a lot of time from volunteers
<u>Equipment</u>	Requires very few to no resources for new equipment	Requires a moderate amount of resources on new equipment	Requires a large amount of resources on new equipment

Figure 1: Rating Rubric for Opportunity Analysis

Another objective of the analysis process was to consider factors that are likely to be brigade-specific, as a result of the diverse communities that volunteer firefighters serve. We determined two aspects that might affect the likelihood of implementation: market demand and competition. During research, we obtained a general idea of what fire equipment servicing companies offer to small-to-medium sized businesses in areas of Victoria. These businesses were identified in the analysis so that the Fire Equipment Maintenance brigades can be aware of some of the competitors that may already be in the market. It will be the brigades' responsibility to research their particular community for other, smaller competitors that may not have been found during our research.

We conducted analysis, based on secondary interviews and Internet research, of the market demand for potential opportunities as well. This process was done with the intent to provide FEM administration with our opinion on the potential community need for the service, since we believed it could have a large effect on the likelihood for implementation of the new product or service. If there happened to be no demand in the community that a brigade's FEM program served, then there would be no need to introduce that particular product. Included in this analysis is information on what type of businesses that we believe, based on research, might most benefit from each particular product or service.

Once all ideas were fully analysed, we compiled them into the four different areas of training, new products and services, emergency management, and post-incident analysis. We also compiled other ideas obtained through interviews that did not particularly fit into any of the four topics listed involving the small to medium sized business sector. We included these opportunities because we believe that the CFA may benefit from considering them as well. The final step for completing our deliverable for the CFA involved integrating the potential opportunities, broken down into the respective categories, into our interactive resource. The resource was created with the intent to present the potential opportunities and our analysis into an easy-to-use, attractive format that could be used by the CFA to analyse future options for the FEM program.

4 Potential Opportunities for the FEM Business

This section provides a description of potential opportunities for the Fire Equipment Maintenance program proposed by Country Fire Authority administrators and firefighters during interviews. The format used in this chapter presented the potential ideas found and was designed to assist the CFA by providing insight on how the FEM program could enhance community safety, and where possible, generate a financial return to the brigades.

The potential opportunities are organised into the following four major categories: new products and services, training opportunities, emergency management services, and post-incident analysis. Our research approach also led us to discover a number of other potential activities that were outside the scope of the project. The suggestions have been included in summary form for later consideration. In the next portion of the chapter, we discuss differences between brigades across the state, and how an idea may be very beneficial for one type of brigade, but may be inappropriate for another.

Included for each proposed idea are a description of the business opportunity and the analysis of its potential benefits and drawbacks for brigades. The description provides a basic explanation of what the service would entail, and who would be the intended customer. Also, any local competition is identified, to avoid entering any market where the CFA would be competing directly with private industry. In order to illustrate the potential of a particular product or service, we also included a category that cites successful examples of the product or service being provided. Oftentimes, these successful examples were found within the Country Fire Authority, where brigades took it upon themselves to provide the service. Other examples come from companies around the world and more information on them can be found in Appendix A. Colour charts corresponding to our ratings and benefits are also provided as a quick reference to our analysis, followed by a description of our reasoning behind these ratings.

As outsiders conducting this research for the Country Fire Authority, we needed to learn about the Authority, and more specifically its Fire Equipment Maintenance Program. From this position, we had the ability to give analysis from a point of view that would be difficult for an internal member to provide. Having the ability to look at the research without preconceived notions or being constrained by memories of past practices provided this team with the capacity to provide the CFA with a new look at its program. Being outsiders to the Authority also limited our analytical capacity, however. Since there is always the possibility that we were not fully aware of some aspects of the Authority or the Fire Equipment Maintenance Program, we, unknowingly, may have overlooked a particular aspect of the analysis for some opportunities. For this reason we relied primarily on the knowledge and input of members of the Authority during our research.

4.1 Product and Service Opportunities

A major indicator that there were more products and services available for the program to include in its list of offerings was found during interviews when multiple stakeholders brought up the idea of making the FEM program an all-in-one fire protection business. Many of the CFA volunteers and administrators discussed the potential of the FEM program to expand its fire protection product line in order to compete with other, more diverse, businesses in the market. FEM program volunteers

who were interviewed complained that brigades are currently losing customers to larger companies that can complete inspection for all of a company's fire safety devices, such as fire alarms, emergency lighting, and sprinkler systems. A contractor and volunteer for the Mornington Fire Brigade, Mick Taylor, said, "if CFA doesn't move into such products, [the CFA's FEM program] will vanish in five years" (Taylor, 2005). The CFA should consider the notion of an all-in-one fire protection company while determining which products to endorse as potential offerings to the community.

Another important aspect of the business community's demand for products and services is the code restrictions set forth by the Australian Standards and the Victorian Building Commission (VBC). Buildings, other than houses or outbuildings, have occupancy permits that are created by building surveyors. Occupancy permits identify the required safety equipment, level of performance, and frequency of inspection required by law. The VBC provides a list of "Essential Services" for private industry that mandates the scheduled maintenance for most fire protection products that businesses utilise. If an Essential Service is required, then the building owner is obligated to uphold to these maintenance requirements. If a product is not maintained to the required level of performance, then the town council has the right to fine up to \$10,000 for individuals or \$50,000 for companies. The threat of fines creates a large market demand for these products and services. As for the requirements of firefighters doing the maintenance, the building commission requires that a person be "competent" in that section of the Australian Standards in order to offer services on that equipment. At the time this report was written, there was no specific definition of "competency"; however, a section describing what competency means is due to be added to the Standards in June 2005.

Currently, the Fire Equipment Maintenance program offers to customers the three following products and services to them: fire extinguishers, hoses, and blankets. Although the focus of this project was on improving community safety, many of the opportunities raised have the potential to be carried out for a fee. This section describes six specific opportunities for new fire protection products that the brigades could distribute and/or service.

4.1.1 Direct Line Fire Alarm Servicing

PPRR: Preparedness, Response

Mentioned by: C. King (Volunteer at Dromana Brigade); C. Manson (Senior Dangerous Goods Officer); Hamilton Brigade; K. Williams (Volunteer at Yellingbo Brigade); R. Smith (Fire Safety Officer)

Description: This type of alarm system is often referred to as an Automatic Alarm System. When the system is tripped at either a heat detector or smoke detector in a private building, the fire department is notified immediately via a monitoring station. There are two main categories of systems in use today. With the first system, the alarm sends a signal directly to the local fire department's dispatch centre, for a quick response time. In the second system, a private monitoring station receives the alarm and then notifies the fire department.

Maintenance services on alarm systems would require volunteers or FEM contractors to have extensive training and knowledge of electrical alarm systems. Alarm systems may have a high demand for service outside of scheduled maintenance dates, due to simple malfunctions that must be immediately addressed by a qualified technician. Alarm system work would most likely require the use of contractors since it requires a high level of training and much time to carry out the service. Servicing fire alarms would be beneficial to the CFA because it would assist the FEM program in becoming an all-in-one fire protection business. Section 1851.8 of the Australian Standards contains detailed information on maintenance of automatic fire alarms and also procedures for keeping track of certificate and maintenance records.

Competition: There are many companies across the state that currently install and service fire alarm systems. Most fire protection companies are predominantly located in urban areas, and it is possible that some of the rural areas are not serviced at this time. Some of the large companies offering this service are *ADT Monitoring* and *Chubb*, though locally there may be many more.

Market Demand: "Fire detectors and alarm systems" are an Essential Service. Often times, a smoke detector alone does not provide enough protection as businesses are only occupied during the workday. A direct line fire alarm provides night time monitoring and could potentially save property.

Successful Examples:

Chubb Fire; O'Connell Fire Protection; SimplexGrinnell, ADT Monitoring.

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: These alarms monitor company buildings during hours when no one is there; therefore, they improve fire brigade response time and help prevent large property damage.

Community: The community may only benefit slightly when a single business installs an automatic fire alarm; however, if the entire business-community were to install such systems, patrons would be much safer. This increase in safety could potentially lower the risk of a major, citywide conflagration, since firefighters would be on scene before the fire grew too large.

Firefighters: Early notification of a fire in a private dwelling could result in smaller fires for the firefighters to extinguish, and therefore puts them in less danger. Having working knowledge of alarm systems could help firefighters assist property owners in resetting their systems after false alarms as well.

Revenue: There may be many opportunities for the brigades to gain revenue when entering the field of fire alarm systems. The first is the installation fee as well as mark-up on the components of the system. The second is the monthly fee for monitoring the system.

Requirements

Willingness

Time

Equipment

Training

Willingness: Volunteers could be unwilling to take upon a new product such as fire alarms because the service is tedious and must be done frequently, requiring considerable participation from the volunteer members.

Time: The time commitment for personnel doing the work on these systems could be very large. Offering 24-hr on-scene maintenance service is also common for fire alarm businesses.

Equipment: Brigades may need to purchase electricians' equipment to do maintenance on the systems, and upon installation, would need to purchase the actual system components.

Training: A certification is required to do any work on an alarm system, including installation and maintenance, meaning that FEM workers would need to take a certification course in order to legally maintain the systems. The service may also require a licensed electrician to be on site while any service is being done on the system. All work must be done according to Australian Standard 4418.2 and AS 1670.3, meaning workers must have competency with this standard.

4.1.2 Fire Exit Sign Installation and Maintenance

PPRR: Preparedness

Mentioned by: Warrnambool Fire Brigade; Hamilton Fire Brigade

Description: Service on exit signs and lighting would entail the inspection, installation, and maintenance of fire exit lighting at businesses and could be completed by the volunteers during their regular building inspection. There is a simple procedure used to determine if lights are working properly, and if the lights do not work correctly, then the volunteer would need to correct the problem. The service would take at least ninety minutes, which is the time to drain the battery on the light. A detailed description of what exit lighting inspection should include is in Section 2293.3 of the Australian Standards. Offering service on exit lighting would assist the FEM program in becoming the all-in-one fire equipment business that some believe is necessary in order to keep local customers.

Competition: Chubb currently offers this service to their customers, as do property management companies such as AHA Management.

Market Demand: The Victorian Building Commission defines exit lights as an Essential Service, which means that the owners must have all lights maintained appropriately if installed.

Successful Examples:

Entire Fire Protection in the metropolitan area of Sydney; *Chubb Fire*; *AHA Management*; *Tyco*.

Benefits:

Workplace	Community	Firefighter	Revenue
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Workplace: This service may provide a substantial benefit to the workplace by promoting worker safety and making exiting the building easier in the case of an emergency.

Community: There is little benefit for the general community with the exception of working exit signs in public buildings assisting in evacuation of patrons in the event of an emergency.

Firefighters: The firefighters would benefit, as they will have the peace of mind that if there is a fire, it is less likely that someone will become trapped in the building. Firefighters may also use these lights while working at an emergency in the building.

Revenue: Revenue could be fairly high as exit lighting maintenance takes some time to perform and is required by the building codes.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Brigade members would likely be willing to take on exit lighting service as an FEM responsibility because firefighters may like the fact that they would be able to offer lighting service at the same time they are offering their current services.

Time: The time commitment is moderate, as there is a ninety-minute requirement for each building being serviced; however, the time spent waiting for the batteries to discharge could be used to provide the other services to the business, such as extinguisher maintenance.

Equipment: The equipment required would be basic electrician's tools. In extreme cases, a lift may be required to reach high exit lights.

Training: An uncertified volunteer could do the inspection of this equipment; however, if any malfunctions occurred, a licensed electrician would be required to fix the device.

4.1.3 Fire Exit Maintenance

PPRR: Preparedness, Response

Mentioned by: Warrnambool Fire Brigade

Description: Fire exit maintenance would involve the maintenance of emergency exit doors and stairwells in commercial buildings in the community. The services needed would involve checking to see if alarmed doors still function properly, making sure exit paths are clear, and making sure that emergency stairways seem structurally sound. If the alarm doesn't work, an alarm technician would be needed to fix it. If a stairwell seems unsafe, the building inspector would need to be notified and a private contractor would have to be hired to fix the structure.

Competition: We did not find any competitors for this service during our research; however, the inspection could be included in a service from large companies such as risk analysis consultants.

Market Demand: The Victoria Building Commission refers to the "path of travel to exit" as an Essential Service, meaning exit paths must be maintained to the operating level specified in the building surveyor's permit.

Successful Examples: *Entire Fire Protection*

Benefits	Workplace	Community	Firefighter	Revenue
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Workplace: Ensuring that fire exits are maintained provides a large benefit to the workplace. Knowing that the exits are secure and safe will maintain people's confidence in their evacuation in the case of an emergency.

Community: There would be little benefit to the community for this service.

Firefighters: The benefits to firefighters would be significant, as this service would give them assurance that the exits are safe and that people will be able to efficiently evacuate the premises. Also, firefighters use exit doors to attack fires; having the doors safe and maintained will assist them in suppressing a fire.

Revenue: Community members would not likely be willing to pay very much for this service.

Requirements**Willingness****Time****Equipment****Training**

Willingness: As maintenance on exits could be done while firefighters are servicing the extinguishers and hoses, and since it is such a benefit for their safety, firefighters would likely be very willing to take on this new service.

Time: Egress inspection would take very little time, a simple check that can be done while conducting other work, and if problems are found, the volunteer would most likely have the business owner clean the area around the exit.

Equipment: No new equipment would be necessary to offer this service.

Training: Volunteers would need to understand the Australian Standards with respect to fire doors and the signs of structural fatigue.

4.1.4 Fire Extinguisher Filling

PPRR: Preparedness

Mentioned by: Mornington Brigade

Description: Fire extinguisher filling would be an expansion of the maintenance service already offered by the FEM program. Currently, the majority of brigades send extinguishers that are in need of being refilled back to Chubb or the brigade's contracted business, and wait a week or two before getting the extinguishers back if returned. If brigades were to start filling extinguishers on their own, turn around time for the customer would be reduced, and there would be an increase in revenue for the brigade.

The CFA currently has a few brigades that already offer this service -- for example Mornington Fire Brigade, which only fills dry chemical extinguishers; however, it is not a service that is commonly found elsewhere in the state. Dry chemical extinguishers are relatively simple to fill, but there is some specialized equipment that is needed. For any other type of extinguisher, there would be a large one-time cost to set up the filling station.

Competition: Chubb currently fills extinguishers for the CFA, and their FEM customers. In more rural areas, brigades use local companies to do their filling. Other private extinguisher companies also offer this service.

Market Demand: Any business where fire extinguishers are currently maintained would want this service, especially after an extinguisher has been discharged.

Successful Examples:

Mornington Fire Brigade

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: Local businesses may gain a small benefit from brigades filling their own extinguishers in the form of reduced prices for filling services. By doing the filling in-house, brigades won't have to raise prices in order to make a profit above what Chubb charges.

Community: There would be little benefit to the community.

Firefighters: Firefighters would see very few benefits, except for the possibility of gaining satisfaction from learning a new skill.

Revenue: If brigades were to offer filling service for their customers, the return could be large, but it would depend on the number of extinguishers in the area that need to be filled.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Some brigade members may be willing to do this service since it would decrease profit loss to contracted businesses.

Time: Filling each extinguisher would require about thirty minutes for a single volunteer.

Equipment: Much specialized equipment would be needed in order to introduce fire extinguishing filling to the FEM program, including safety cages, heating bins, compressors, and vacuums.

Training: Some training is required to do this service, mainly regarding the proper use of the equipment and pressurization safety.

4.1.5 Fire Warden Kit

PPRR: Preparedness, Response

Mentioned by: Terry Hayes (FEM manager); Jared Edwards (Executive Director, MFB Community Safety Department)

Description: A fire warden kit would contain materials to assist the fire warden, or other employee in charge of emergency procedures, in the case of a workplace emergency. The packaging method would vary but it would most likely be best to keep the contents in a somewhat small package that is easy to open in the case of an emergency. One option for brigades is to actually offer kits that are assembled for a specific business so that customers are not paying for equipment that is not needed in the workplace. Common things that could be included in a kit are: reflective vests labelled “Fire Warden”, evacuation guidelines/maps, light sticks, heavy duty flashlights, reflective hard hats, gas masks or goggles, emergency water and food, mobile phones, and walkie-talkies. Exactly what is included would depend on the size of the business and the most common emergencies at the workplace. Brigades could also maintain this product, since some of the materials in the kit may need to be replaced after a certain period of time. The product could also be offered as part of the “Training the Trainer” opportunity (see Section 4.2.7), or distributed to a business with an emergency management service.

Competition: Fire warden kits are not likely to be offered by a smaller business in a rural community, but they can be obtained from a distributor such as Seton Australia. The Metropolitan Fire Brigade also offers kits to the greater Melbourne area through their Fire Equipment Services program.

Market Demand: An extensive fire warden kit such as the one offered by Seton Australia would most likely not be needed by a small to medium sized business, but a smaller version that does not cost as much may be useful for the workplace.

Successful Examples:

Seton Australia offers a fire warden kit that contains a vest, megaphone, flashlight and other equipment; *Humanscale Safety Products* out of New York City offers a fire warden vest that contains glow sticks, a gas mask, emergency water, and alerting devices for US \$480.

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: Workplace safety could increase because the fire warden would be better equipped to assist other employees in case of an emergency.

Community: The community would not directly benefit from this product.

Firefighters: The firefighters may benefit from fire warden kits because when employees of a company are safely evacuated, the firefighters can focus more on fighting the fire.

Revenue: Fire warden kits are usually an expensive product for small businesses, most likely somewhere between \$200 and \$500, depending on the contents.

Requirements

Willingness	Time	Equipment	Training
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Willingness: The stakeholders had mixed opinions on distributing this product; some feel that it would be an easy way to make money while others believe it is outside the scope of brigade activities.

Time: The kit may take a moderate amount of time to assemble, especially if it is customised for a specific business.

Equipment: Parts of the kit may be purchased individually resulting in a lot of required equipment.

Training: There could be little to no additional training required to offer the kits because the volunteers would be performing simple tasks such as assembling the contents and distributing it to customers.

4.1.6 Smoke Alarm (Detector) Distribution and Servicing

PPRR: Preparedness, Response

Mentioned by: Bruce Conboy (President of VRFBA); Chris King (Volunteer at Dromana Brigade); Chris Manson (Senior Dangerous Goods Officer); Katie Williams (Volunteer at Yellingbo Brigade); Bob Smith (Fire Safety Officer); Robert MacDonald (Secretary of VRFBA)

Description: Offering smoke alarms and smoke alarm maintenance to small businesses and residences in a community would improve fire safety and could raise money for the brigades. A description of what smoke alarm servicing should include is in Section 1603.7 of the Australian Standards. Currently, many community members visit the local fire brigade asking where they can buy smoke alarms. The brigade then points them to the nearest hardware store. The volunteers feel that they should maintain a supply of smoke alarms to offer to the public when requested and to suggest when firefighters notice that the alarms are not present in a building.

Also possible would be offering a biannual service for the community in which the fire department changes the batteries in citizens' smoke alarms. This service gives the firefighters an opportunity to enter private premises and learn the layouts while ensuring that the smoke alarms are in working order and properly located.

Competition: There are currently no competitors offering service on smoke alarms; however, local retail stores offer the sale of smoke alarms.

Market Demand: Smoke alarms are an Essential Service. The service of changing batteries could also be useful for community elders specifically.

Successful Examples:

Mt. Martha Police & Fire Brigade offer a service to change the batteries in elderly homes for free.

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: The business being serviced will benefit, as smoke detector servicing will help with early detection of a fire in a building. Having properly maintained smoke alarms will help save lives and property.

Community: A community organisation such as the CFA's brigades offering smoke alarms to the public makes the alarms more easily obtained, and servicing them makes sure that the community as a whole promotes safety.

Firefighters: Firefighters would benefit because working smoke alarms help get occupants out of the building immediately, and therefore, there would be less need for dangerous rescue operations. Also, alarms provide early identification of the fire, which leads to quicker response and smaller fires when the brigade arrives.

Revenue: A small financial benefit to brigades offering this service is possible. If necessary, a mark-up on the smoke alarms being sold could be instituted; however, in order to promote community safety, there may be more benefits if the brigade sells them at cost. A fee could also be set for the biannual servicing; however, if this fee just covered the cost of the battery or replacement detector, the service would more effectively promote community safety.

Requirements

Willingness

Time

Equipment

Training

Willingness: Firefighters interviewed felt that smoke detector distribution and maintenance was an effective way to get to know the community they serve. With maintenance services they are given the opportunity to enter private buildings.

Time: The sale of smoke alarms would not require much time from brigades. Brigades could just maintain a stock of alarms and distribute them when needed or requested. The servicing would take a little more time; however, it shouldn't take more than five minutes to test and replace the batteries in each detector.

Equipment: Very little equipment would be needed in servicing alarms, with the exception of a possible can of aerosol smoke for testing yearly. Also, brigades would have to buy a stock of alarms (AU\$10-30 each) to be distributed and batteries (\$3-4 for each detector twice a year) to replace old ones during servicing.

Training: The only training required would involve making sure volunteers know the proper locations for smoke alarms.

4.1.7 Sprinkler System Maintenance

PPRR: Preparedness

Mentioned by: Bob Smith (Fire Safety Officer); Ian Thomson (Chief Officer); Mick Taylor (Joint FEM Committee Member); Hamilton Fire Brigade

Description: Working with sprinkler systems would entail the inspection and maintenance of sprinkler systems for business facilities. These tasks would include things such as testing the control valves and switches. Detailed information on inspection and maintenance is included in Section 1851.3 of the Australian Standards. Another source for information is in the book, National Fire Protection Association's *NFPA 25*, available for purchase on the web.

Competition: Chubb and many other local sprinkler installation companies currently offer sprinkler system maintenance.

Market Demand: The demand for sprinkler systems is growing in numerous communities, especially in the business sector, as the systems reduce insurance rates and provide very effective fire containment in buildings. Sprinklers are also listed as an Essential Service.

Successful Examples:

Chubb, O'Connell Fire Protection, SimplexGrinnell.

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: A well-maintained sprinkler system could increase the workers' safety. Sprinkler systems work well in suppressing fires until firefighters arrive, and containing them so that occupants can evacuate safely.

Community: The community would have moderate benefits if sprinkler system servicing were introduced to the FEM program, mainly based on fire containment in densely populated neighbourhoods.

Firefighters: The firefighters would experience moderate benefits. If they were to regularly maintain the sprinkler system, they would know the floor plan at that location very well. Having knowledge of the building's layout would help firefighters get to any fire or emergency in the building they service quickly. A working sprinkler system would also keep the fire small, and more easily extinguishable by firefighters.

Revenue: The service of maintaining a sprinkler system is currently provided by other businesses for a fee.

Requirements

Willingness

Time

Equipment

Training

Willingness: This task would require inspection around the facility, which may draw more interest from volunteers than simple things such as extinguisher maintenance. The downside is that sprinkler system work is very complex and can sometimes be monotonous. After interviewing members of the CFA, we concluded that most volunteers would be unwilling to do this work, especially in the more rural brigades.

Time: Sprinkler maintenance would be time consuming, although much can be gained from it. Since a sprinkler system is a fixed fire suppression device, all maintenance work would have to be done on-scene, and all at once. If sprinkler system maintenance becomes too time-consuming for volunteers then a contractor could do it.

Equipment: Basic plumbing equipment would be necessary when working with sprinkler systems, as well as some specialty sprinkler system equipment, may be expensive.

Training: In order to become an inspector, volunteers would have to get proper training. Training volunteers appropriately would not only cost the brigade money but it would take a fair amount of time for volunteers to receive the proper certifications.

4.2 Training Opportunities

Another type of opportunity we investigated for the FEM program was offering training in emergency response and general safety. This type of service, whether it were offered free of charge or for a fee, might benefit both the brigade and the community. Better educating the FEM customers about fire safety and reactions to fire emergencies has the potential to save lives and reduce the danger for volunteers. There are two types of training, accredited and non-accredited, both of which are possibilities for the program. In order to offer accredited training, a person must be licensed through an organisation such as AFAC, which qualifies the FEM program workers to provide their clients with certificates upon completion of the training course. For this reason, the main requirement for most of these services would be volunteer training, but time is a factor as well, since some of these offered courses could take up to half a day before completion. In the following section, there are seven potential opportunities in the field of training for businesses that were suggested by CFA members.

4.2.1 Fire Extinguisher Training Software

PPRR: Preparedness

Mentioned by: Warrnambool Fire Brigade

Description: This form of training would most likely be delivered using a CD-ROM filled with instructional software to distribute to businesses. The software could include a few simple games and tutorials relating to fire safety. The training material taught through this product might include proper extinguisher selection, proper extinguisher usage, and preparing to stay calm during a fire. These topics are included in a list of emergency procedures that an employee should be educated in, which can be found in the training chapter of Section 3745 of the Australian Standards. CD-ROM training could be offered as a quick formal lesson or it could be provided for passive viewing. The CD-ROM could be distributed with every fire extinguisher as a giveaway or it could be sold for a nominal price to the business.

Competition: There would be no competition since the clients for this training would already be clients of the FEM program. However, competition might arise if the CD-ROM's are sold.

Market Demand: The need for training is dependant on the education given by each brigade. A way to increase the market demand for training services is to have the firefighters in the brigade promote the services to the community. CD-ROM's are a simple way for volunteers to provide training, without requiring much time from either the volunteer or the customer.

Successful Examples:

Peter Todd, Community Safety Officer in the FEM program for all western brigades, and his department currently have a CD-ROM with a few games and interactive tools for businesses to learn from. The brigade sells their software with their Emergency Management Binder to larger businesses across the state.

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: Businesses could benefit from computer training, because it might motivate their employees take a training course in fire extinguisher usage. An educated workforce prepared to react quickly to a fire could reduce the amount of damage to structures dramatically since employees may know how to use the first attack equipment properly.

Community: The community might not benefit much as CD-ROM training is designed for the businesses. Workers could take the software home and allow their family members and friends to become familiar with the extinguishers, giving the community a small bonus from this idea, or a separate CD-ROM could be created for distribution to residences in the community.

Firefighters: The firefighters might benefit a little, since the use of the CD-ROM software could improve the effectiveness of extinguisher usage, and larger fires could be prevented or controlled easier, decreasing the firefighting workload of the volunteers.

Revenue: The brigade might benefit if the CD-ROMs were sold for a nominal fee, raising some money for the brigade.

Requirements

Willingness

Time

Equipment

Training

Willingness: The firefighters seem very willing to take a few minutes to promote and distribute a CD-ROM that may assist in educating their customers.

Time: The time commitment may be very low for distributing a CD-ROM. Most of the time spent by volunteers might be on the financial and administrative end of the program.

Equipment: The CFA already has computers with CD-ROM burners, so the only equipment needed might be CD-R's, which cost a few cents each. It may be necessary for the CFA to make a one-time investment and either hire personnel or a contractor that can develop the software included in this CD-ROM.

Training: Some volunteers or staff may already have the computer programming knowledge to create a computer-based training CD-ROM; however, if this is not the case, the CFA might contract out the initial design of the software.

4.2.2 Evacuation & Fire Drill Evaluation

PPRR: Preparedness

Mentioned by: Bob Smith (Fire Safety Officer); Bruce Conboy (President of VRFBA); Darren Matthews; Mick Taylor (Joint FEM Committee Member); Wayne Lewis (FEM Officer of Mornington); Katie Williams (Volunteer at Yellingbo Brigade); Chris Manson (Senior Dangerous Goods Officer); Peter Davis (Secretary of the VUFBA)

Description: Evacuation and fire drill evaluation are already offered for most schools in a brigade's district. However, this service could be offered to businesses as well. Guidelines for how to evaluate an evacuation drill can be found in Chapter 3.2 in Section 3745 of the Australian Standards. The fire department volunteers could go to the workplace and trigger an alarm for the building to be evacuated. The volunteers might then analyse the effectiveness of the business workers during the evacuation for orderliness and time. After the practice run, a volunteer may advise employees of the company about what to do in the future for a more effective evacuation.

Competition: There may be some competition, but evacuation drills could be offered more frequently for small to medium sized businesses. There may be some small fire equipment maintenance companies that offer this training in the local town or region.

Market Demand: Many companies may find it reassuring to have an outsider check the quality of their evacuation plans.

Successful Examples:

Some fire brigades throughout the state already offer evacuation drills for little to no charge.

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: There might be many benefits to the workplace as it is valuable to have an outsider's critique of evacuation procedures, and the firefighters have an expertise in the area of emergency response.

Community: The general community may not directly benefit from evacuation drills in businesses.

Firefighters: The firefighters could find organising fire drills reassuring, since they may know that each client will not only have a good evacuation plan, but they will also be able to carry out the plans smoothly; therefore, reducing the need for dangerous rescues during emergencies.

Revenue: Evacuation plan practices could bring in a small amount of revenue since the drills may most likely be offered for a low price.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Volunteers might be willing to offer evacuation drills to their community since the firefighters interviewed felt it was important that the people in their town were prepared for emergencies. Observed practice runs are simple ways to verify the effectiveness of a plan.

Time: The time commitment is most likely very low for fire drills. If the firefighters wish to give a more detailed consultation, then the time requirement may increase.

Equipment: No new equipment is probably required for practicing and evaluating evacuations.

Training: The volunteers checking the capabilities of the company might need to have some basic knowledge in how to properly evacuate buildings in order to ensure that the firefighters are prepared to discuss any issues with the employee of the business after the drill.

4.2.3 Fire Identification Training

PPRR: Preparedness

Mentioned by: Bruce Conboy (President of VRFBA)

Description: Fire identification training might entail educating employees to identify the different classes of fires. Once a fire has been properly identified the employee could then find and use the appropriate extinguisher to mitigate the fire. The service might be most effective if used in conjunction with fire extinguisher training. Training in fire identification may not take very much time and could be fairly interesting for the employees due to the amount of activity involved in the training process. Fire identification is included in a list of topics that an employee should be educated in, which can be found in the training Chapter of Section 3745 of the Australian Standards.

Competition: *Chubb* offers a class to businesses called *Fire Awareness and Extinguisher Training*, which includes fire identification. There may also be smaller, local companies that offer similar courses.

Market Demand: Small-to-medium sized businesses may most likely prefer not to pay the large fees from a larger company like *Chubb* to provide this training, which could create a demand for the service from a smaller business such as the FEM program.

Successful Examples:

The University of Adelaide offers an eight-hour fire safety course for employees of a business that includes fire identification. The course follows Section 3745 of the Australian Standards and is provided at a training venue. Also, *AFAC* and the *London Fire Brigade* offer courses about fire awareness.

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: Individual work environments may benefit since the employees might be more likely to keep a fire suppressed before it gets out of control after having taken this course, and knowing the proper way to suppress the fire.

Community: If more people became aware of the different classes of fires and the equipment that is needed to extinguish the different classes, community safety may possibly increase. Educated citizens might be able to take action if they were near a small fire and possibly suppress the fire before it grew out of control.

Firefighters: Firefighters may have some benefit by having the opportunity to spread their knowledge, and by giving employees the knowledge to put out a fire before the fire brigade arrives.

Revenue: Certain working environments require different types of extinguishers. The more employees are aware of when to use each extinguisher, the more the employees may be willing to not only buy appropriate equipment, but use it too.

Requirements

Willingness

Time

Equipment

Training

Willingness: Many volunteers interviewed believed that employees of businesses were usually not aware of different types of fires, and indicated that they might be willing to provide this knowledge.

Time: Examples of fire awareness class lengths include ninety minutes (University of Adelaide), two hours (Chubb), and three hours (Manchester ICTU). This service could take up a lot of a volunteer's available time, although the brigade could determine how in depth they wanted the course to be.

Equipment: The equipment needed to demonstrate various types of fires depends on the different businesses in that community. However, the various types of extinguishers might be readily available to any brigade participating in FEM.

Training: In order to offer accredited training, a person must be qualified by AFAC. Even if the fire identification course were offered as non-accredited, the FEM worker may still need some training in order to be competent in the Australian Standards.

4.2.4 First Aid Training

PPRR: Preparedness

Mentioned by: C. Wyborn (Scoresby Brigade/Community Safety Admin)

Description: Under the goal of becoming a broader emergency management agency in the future, one opportunity for the CFA could be training the community in general first aid. Topics for first aid training include CPR, reactions to choking, and general injury care that an individual can do while waiting for an ambulance to arrive. The first five minutes of any medical emergency are the most important, and these are the minutes where there are no emergency professionals on scene. Courses on first aid offered to the general community may improve the chances of victims from a variety of emergencies. First aid training could also be offered directly to businesses and given on location at the workplace. Workplaces and community members are more likely to pay for a course if they are going to leave with some form of certification.

Competition: The local ambulance service may already offer first aid training courses. The Australian Red Cross has a strong hold on the market, offering five levels of accredited first aid training to either residents or businesses of communities across Victoria.

Market Demand: Every community benefits from, and could appreciate this type of training, especially those with long response times for ambulances and other emergency professionals.

Successful Examples:

Hamilton Fire Department, Massachusetts, USA; American and Australian Red Cross.

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: There might be large benefits to a business where the first aid training is taking place. Having employees appropriately trained in first aid increases the safety of all the employees.

Community: The community might be affected positively by having residents trained in emergency response. This training could increase the chances of victims' survival when an emergency does occur in the community.

Firefighters: First aid training may not benefit the firefighters, except refreshing their skills.

Revenue: The brigade could charge a modest fee for first aid training. The Australian Red Cross charges from \$55 to \$450 depending on the level of training. Companies appear willing to pay money to have a certified trainer come in and teach their employees what to do in the case of a medical emergency. Also, community members might be willing to pay for the knowledge knowing that the money goes back to the brigade that may be coming to their aid if such an emergency were to occur.

Requirements

Willingness	Time	Equipment	Training
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Willingness: Most firefighters are knowledgeable in first aid and volunteers are usually fairly willing to share their skills with other members of the community.

Time: There might be a time commitment for the firefighters, both spending the time teaching (6-8 hrs) and making lesson plans prior to the training class.

Equipment: Some new equipment may be necessary as the brigade may not have all the medical equipment necessary to train individuals on all aspects of emergency medical care; however, the brigade may have much of the equipment already in stock for the training of its own members.

Training: First aid training might require some additional training for the volunteers. If the course were to be offered as accredited, the Australian Red Cross must certify the training.

4.2.5 Interactive Fire Extinguisher Training

PPRR: Preparedness

Mentioned by: Chris Carson (Community Safety); Chris Wyborn (FEM Officer at Scoresby Brigade); Ian Thomson (Chief Officer)

Description: A brigade might offer local businesses the opportunity to have a hands-on experience with fire extinguishers. With small to medium sized businesses, most or all of the employees could be present at the same time for training. The training could include correct techniques for discharging the extinguisher, the proper extinguishers to use on specific types of fires and possibly ways to cut down on damaging the workplace in the event of a small fire. More detailed information on interactive training can be found in the Fire Procedure Guidelines chapter of Section 3745 of the Australian Standards.

Competition: Many different companies offer interactive extinguisher training across Victoria. The larger ones like Chubb and Ansul are not as much of a concern because they usually do not deal with the small to medium business sector. The CFA would need to look into local businesses that offer fire extinguisher training to see if they have a conflicting customer base.

Market Demand: Small-to-medium sized businesses may not be able to afford fire extinguisher training from a company like Chubb, so there could be a demand for an affordable training course designed for smaller businesses.

Successful Examples:

The *London Fire Brigade*; *Australian Capitol Territory Fire Brigade*; *Kingsfield Brigade*; *Manchester ICTU*; *Ansul Fire's Fire Extinguisher Simulator*.

Benefits	Workplace	Community	Firefighter	Revenue
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Workplace: The safety of a small to medium sized business could improve if all of the employees had experience with using fire extinguishers. This experience can be gained through an interactive course where the individuals are given the opportunity to discharge an extinguisher.

Community: The training of employees of businesses could provide a small benefit to the community. Part of the benefit might be that trainers could take their skills and apply them in situations outside of the workplace.

Firefighters: By personally training members of the community, the firefighters will increase the bond between the brigade and local businesses. This factor, along with gaining experience in teaching and training are firefighter benefits.

Revenue: A typical extinguisher training course costs somewhere between \$50-\$100 per person. For a class teaching ten employees at a small business, this translates to \$500-1000 in raised money.

Requirements

Willingness

Time

Equipment

Training

Willingness: Many of the CFA members we spoke with seemed to be concerned that employees did not know enough about using fire extinguishers, which suggests that firefighters may be willing to offer the service.

Time: If the course were simply extinguisher training, it would most likely last between a half hour and two hours. Interactive extinguisher training would most likely have to take place during business hours, which might conflict with volunteers and their full-time jobs.

Equipment: There would be no new equipment needed for this service. Extinguishers may have to be provided, but the brigades already have easy access to these and the company might pay for the materials used.

Training: For volunteers to offer accredited fire extinguisher training to staff members, they need to acquire a licence from AFAC.

4.2.6 Private Fire Safety Demonstration

PPRR: Preparedness

Mentioned by: Chris Wyborn (FEM Officer of Scoresby)

Description: This service could involve holding private demonstrations of fire suppression or other activities on location at a business. Most likely, these demonstrations would consist of a person (CFA volunteer or contractor) showing members of a business the correct methods of extinguishing a certain type of fire, depending on the targeted customer. An example topic for training could be to show employees of a company what a grease fire looks like, and how to put it out using a foam extinguisher. A demonstration might differ from interactive training because it could be shorter and less expensive, but also targeted to a specific businesses. The idea of a private demonstrations could be expanded upon and included in a brigade's offerings, but could also be a service provided directly from the Country Fire Authority administration with hired representatives travelling around Victoria. A private demonstration could be an effective way to raise money in an urban location because of the concentration of businesses. In a rural community, providing this service may be a good way to improve community relations because it would show the businesses that the brigade is concerned about their safety.

Competition: There are no large businesses that offer this type of service in Victoria.

Market Demand: There is no pressing demand for this service, because not enough businesses think about it. There could possibly be high demand for this service because it would be a fast, inexpensive method to educate employees.

Successful Examples:

The Queensland Fire Service's Travelling Kitchen -- Members of this service take a portable kitchen around and show restaurant owners how a grease fire starts and the correct methods of extinguishing it. A member from the Queensland Fire Service stated that this service is very successful, because the travelling kitchen is a very quick and easy method to give a good visual representation for both fire awareness and fire response.

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: The visual and hands-on aspects of private presentations will directly improve interest of the employees and assist them in learning the information presented.

Community: The general community might receive little to no benefit from private business presentations; the only possibility is that the employees could bring their new knowledge home to their families.

Firefighters: The firefighters could possibly improve the skill set of presenting; otherwise, there may not be any benefits for them.

Revenue: Depending on how long the presentation lasts and the number of local businesses participating, this could raise large amounts of funds for a brigade.

Requirements

Willingness

Time

Equipment

Training

Willingness: The stakeholders that we interviewed believed, for the most part, that volunteers could be interested in offering this service, as it is an innovative way to teach community safety.

Time: The time commitment could be considerable for a volunteer. It may be necessary to contract this service out because of the large time commitment.

Equipment: Much equipment may be required for this service, but a portable kitchen or something similar could probably be constructed for low cost depending on the brigade's skills. Also, these devices could be purchased on a regional level and lent out to the brigades for use. The brigade would most likely pay for the expendables, such as extinguisher refills, because the service could not include allowing employees to use them.

Training: There might be a moderate amount of training required for brigade members to offer private presentations. There are many necessary safety precautions to take when lighting fires so the instructing volunteers must be well trained in the area that they would demonstrate.

4.2.7 Training the Trainer

PPRR: Preparedness

Mentioned by: Hamilton Brigade Volunteers; Bruce Conboy (President of VRFBA); Chris Wyborn (FEM Officer of Scoresby)

Description: The brigade could offer training to a single employee of a local business who has a role in emergency management. The employee would then train the person who makes emergency management decisions, or the rest of the employees. A few examples of topics that may be included in a course for a fire warden or chief of emergency management are fire awareness, extinguisher training, general emergency response, human behaviour in an emergency situation, and typical escape methods. A complete list of topics is included in establishing the ECO Committee and the Plan chapter of Section 3745 of the Australian Standards.

Competition: Large companies like Chubb or AFAC offer this service, but in most cases, the large corporations may not be directing their efforts towards small-to-medium sized businesses.

Market Demand: There could be less of a need in smaller businesses for train the trainer classes because there may not be a person in charge of emergency training. This service could easily be adjusted to be effective for small companies with only a few employees, and could possibly motivate the creation of an emergency management position in small local businesses.

Successful Examples:

The London Fire Brigade; Manchester ICTU; AFAC.

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: Train the trainer could provide a large benefit to workplace safety. Motivating businesses to have an employee in the building who is in charge of emergency management and planning will increase safety because the employee should be able to continuously keep other employees prepared for emergencies.

Community: The community may not benefit from the service as much as the workplace, but in general, this type of training could increase community fire awareness.

Firefighters: The firefighter who carries out this service might benefit by gaining knowledge from the training courses required to receive certification.

Revenue: Fire Warden courses are usually offered at a price of \$50 to \$150, or possibly more depending on the length and detail of the training.

Requirements

Willingness

Time

Equipment

Training

Willingness: From our interviews, it seems that volunteers may rather train a group of employees more than just the one member from the company, but they do agree that the training is something that is important for a company to provide their employees.

Time: The time commitment is fairly large, as most examples of this type of training take at least half of a day; however, employees from multiple businesses can be trained at a single meeting.

Equipment: There may be a small amount of additional equipment needed to complement the training service.

Training: There is a licence that a volunteer might need in order to provide accredited training. AFAC offers the courses to obtain this licence, but getting trained is very time consuming and expensive.

4.3 Emergency Management Opportunities

The possibility of broadening the services of the FEM program from the focus on fire to a more comprehensive emergency service was also considered during this project. The Authority's goal is best stated in its 2004/2005 Annual Plan: "The CFA plans to become a leading emergency management agency in Victoria by 2010" (CFA, 2004). This section presents new opportunities for services that involve non-fire emergencies, such as dangerous goods hazards, evacuation plans, and emergency preparedness consultation. The ideas gathered regarding emergency management all seem to require some type of training, and in many cases demand much time from firefighters. The following section discusses the eight emergency management opportunities that were suggested by Country Fire Authority members.

4.3.1 Bomb Threat Preparedness

PPRR: Preparedness

Mentioned by: Bob Smith (Fire Safety Officer)

Description: This opportunity involves consultation and training for business employees in what to do in the case of a bomb threat. Training includes evacuations, what characteristics to take note of when considering a threat, and the proper authorities to contact in such a situation. A summary of proper techniques is in the Bomb Threat chapter of Section 3745 of the Australian Standards.

Competition: Bomb threat preparedness service would be offered by the brigades to the small to medium sized businesses. Any state-wide companies that offer this service would most likely not be interested in small to medium sized business customers since they are more attracted to larger organisations. The local police departments may also offer this service to prepare their communities for such threatening situations.

Market Demand: Bomb threats are a serious concern in today's society, and many companies, both large and small, may wish to be prepared for such incidents.

Successful Examples:

There are many online resources for bomb threat preparedness including one from the *Australian Labour Party*. <<http://www.vic.alp.org.au/policy/terrorism.html>>

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: The business could benefit from bomb threat preparedness, if it is a target for such acts.

Community: The community would not benefit from bomb threat training.

Firefighters: The firefighters would not benefit from offering bomb threat preparedness classes.

Revenue: The revenue for offering assistance in preparing for bomb threats could be minimal, if a charge were deemed appropriate.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Brigade members interviewed were not very willing to offer this service, feeling it may not be their responsibility or fall within their scope of knowledge. Most of the brigade members interviewed thought it may be the duty of the State Emergency Service (SES), or the Victoria Police.

Time: The time commitment for this consultation work is minimal. An hour discussion or so with the business workers could be enough to educate the clients on the essentials of bomb threat preparedness.

Equipment: There is no equipment required for bomb threat awareness courses.

Training: To offer this service, volunteers would need to be fully trained in bomb threat management. The business owners may be dependent on the firefighter to be their only resource for information about bomb threat situations.

4.3.2 Chemical, Biological, & Radiological Hazard Planning

PPRR: Prevention, Preparedness

Mentioned by: Bob Smith (Fire Safety Officer)

Description: The CFA could become involved in promoting awareness of Chemical, Biological, and Radiological (CBR) hazards and teach the community what to do if there were ever an incident involving such agents. This service would involve provision of a general awareness seminar for those people in workplaces where CBRs are present and a threat to human lives. A description of proper labelling for dangerous goods and storage techniques is included in section 1216 of the Australian Standards. If more training is given to the volunteers, then CBR training could offer a session on the best way to react to an incident involving hazardous materials.

Competition: The CFA's dangerous goods department already works with large businesses containing dangerous goods businesses on these threats, but not with smaller scale companies who may not know the dangers of CBR products.

Market Demand: Any business that works with chemical, biological, and radiological materials would probably be willing to learn the appropriate ways to handle the materials and be cautious around them.

Successful Examples: None

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: Having knowledge of the chemicals and materials that a business works with is important for the safety of all employees.

Community: The community could benefit to some extent as appropriate training in the field of dangerous goods could reduce the risk of an emergency in the community; therefore, this could reduce the effects on other citizens if a dangerous goods disaster were to occur.

Firefighters: This offering could benefit the firefighters by giving them the ability to gain good perception of the location and facilities where these types of materials might be stored; therefore, they would be better prepared in responding to an emergency at that location.

Revenue: The brigade could charge a fee for dangerous goods education; however, they may find it more appropriate to do it free of charge and be sure to distribute such information effectively to all businesses in the community, regardless of cost.

Requirements

Willingness

Time

Equipment

Training

Willingness: Volunteers may be willing to offer dangerous goods awareness seminars because they are getting an opportunity to inspect the facilities.

Time: Dangerous goods education could take some time to deliver to all the businesses in the community, as this training can sometimes be a long process.

Equipment: No further equipment would be necessary for awareness training.

Training: Significant training for all volunteers interested in this service would be required.

4.3.3 Design of Evacuation Plans

PPRR: Preparedness

Mentioned by: Bob Smith (Fire Safety Officer); Bruce Conboy (President of VRFBA); Darren Matthews, Mick Taylor (Joint FEM Committee Member); Wayne Lewis (FEM Officer of Mornington); Katie Williams (Volunteer at Yellingbo Brigade); Chris Manson (Senior Dangerous Goods Officer); Port Fairy Brigade

Description: Every business can benefit from some sort of evacuation plan in the case of an emergency. Management usually draws out the plans with the assistance of hired consultants. With this service, the FEM volunteer would go to a business and assist the company in creating an evacuation plan. It would be best if the firefighters and the building management create it together so that the plan fits the company appropriately with drawn out plans from the assistance of the experienced firefighter. A guideline for evacuation plans can be found in the Fire Procedure Guideline chapter of Section 3745 of the Australian Standards.

Evacuation plan design would include thorough consultation with the business before drawing up the plans using a piece of software with standard labels for exit doors, fire extinguishers, stairs, and other key items found in evacuation plans.

Competition: Jim Crest Emergency Training Company, Chubb.

Market Demand: Volunteers believe that there are many small to medium sized businesses which either do not have an evacuation plan, or do not have one of suitable quality and detail for their employees.

Successful Examples:

Jim Crest Emergency Training, a company owned and operated by a retired member of the Metropolitan Fire Brigade in Melbourne, offers evacuation plans at a cost to any business in Victoria, and offers a personal service to give customers a peace of mind.

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: Having a properly designed evacuation plan is an immense benefit to a company. Not only does the plan create a safer environment in the case of an emergency evacuation, but it may also reduce the stress of the employee in charge of creating the plan.

Community: The community would not benefit from evacuation plan services being offered to businesses.

Firefighters: The firefighters could benefit in the case of an emergency. Not only would the firefighters know that the employees have a safe evacuation route, but the firefighters would also have experience with the floor layout of the business in the event that they needed to enter during a fire.

Revenue: The revenue gained from this service is potentially high, as evacuation plans are important documents to businesses, and it takes some specialised knowledge from the firefighter to carry out the service. Current rates from professional consultation firms for similar services are very high.

Requirements

Willingness

Time

Equipment

Training

Willingness: It seems that brigades with well-educated members are looking for opportunities like evacuation plan designing to use their knowledge and skills. Other brigades may rather perform more hands-on work such as delivering, installing, and maintaining equipment.

Time: The time commitment for evacuation plan design would be dependant on the size of the business. Developing a plan for a small business layout would not require much time, whereas plan for a larger business could take a few days to get the drawings complete.

Equipment: Some sort of computer may be necessary to draw out the professional evacuation plans. Either the brigade volunteers would use brigade-owned computers (many already own computers) or they could use the computer at the business. The software required for evacuation plan design would be dependant on the size of the plans. If the layout is simple enough, the volunteers could just use a common computer application; if it becomes more complicated, they would need to invest in Computer Aided Drafting software.

Training: Evacuation plans require specialised knowledge from the volunteers, which usually involves training beyond that from normal experience as a firefighter. The volunteers would need some experience or training in computer software, especially if they are creating plans for larger medium sized businesses.

4.3.4 Emergency Management Binder Distribution

PPRR: Preparedness

Mentioned by: Chris Carson (Community Safety); Chris Wyborn (Scoresby Brigade); Hamilton Fire Brigade; Warrnambool Fire Brigade

Description: The Department of Human Services (DHS) currently has documents on emergency management that volunteers believe are confusing to business owners. This binder, to be created by someone at CFA, would entail the same information in the DHS documents, but in a more readable and understandable format for the general business public. This binder could be very similar to the one distributed by the community safety department of the CFA and include evacuation and emergency procedures for all different types of scenarios. This binder may be more specific to different types of companies (i.e. large, small, containing hazardous materials, etc) and could include an interactive CD-ROM for extra training. The binder may also be offered in parallel with the emergency management consultant opportunity (See Section 1.3.5). Section 3745 of the Australian Standards contains information that could be useful for this binder.

Competition: Many state-run businesses offer this type of product, but this binder offered by the CFA would provide the customer with more detail about what is needed for their particular business. Also, the binder would include only necessary information for the smaller businesses in the market.

Market Demand: Many small to medium sized companies are not completely prepared for emergencies, and other options are too expensive. The binder would identify the customer's specific needs, and provide simple, and relatively inexpensive assistance in defining an emergency management plan for the business.

Successful Examples:

The *Victorian Government* offers manuals and guidelines for emergency management for situations like earthquakes, floods, and landslides. Some brigades throughout the state also distribute pamphlets and leaflets providing similar simplified information.

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: The workplace could benefit from distribution of an emergency management binder by becoming a safer place in the case of an emergency. The proper people would be trained to know what do if such an incident occurred.

Community: The community would not benefit much from the distribution of an emergency management binder to businesses.

Firefighters: The firefighters could benefit from this binder's distribution slightly. In the case of an incident, the situation would have a better chance to be held under control if the employees were aware of emergency management activities. The firefighters could get right to work as opposed to having to try to organise everything before responding to the emergency.

Revenue: The brigade could benefit monetarily by charging a fee for the binder. Currently, the emergency management binder that the dangerous goods department of the Country Fire Authority offers to larger businesses costs \$100.

Requirements

Willingness	Time	Equipment	Training
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Willingness: Volunteers are likely to be willing to distribute these binders, as they are a very simple product, filled with information that firefighters feel is useful for community members to learn.

Time: Offering this binder would take very little time for the volunteers as they would only have to sell and deliver it.

Equipment: The equipment required for the creation of the binders is simple office supplies like binders and paper.

Training: The CFA would have to hire very well trained and educated people to create the binder in a way that helps regular business owners understand the detailed information. The firefighters themselves may also need to be trained in the contents of the binder in case any questions come about while offering/delivering the product.

4.3.5 Emergency Preparedness Consultation

PPRR: Preparedness

Mentioned by: Warrnambool Brigade; Hamilton Brigade

Description: Volunteers would offer their knowledge of emergency management and planning for emergencies through a variety of different methods to help out local businesses. The volunteers could assist companies in creating and practicing procedures for various emergency situations. The consultant could also help the business understand the various sections of the Australian Standards and Victoria Building Commission to ensure that the company is following all standards, which are sometimes difficult to comprehend.

Competition: There are no known organisations that perform emergency preparedness consultation services for small-to-medium sized businesses in Victoria. There may be some smaller local companies that offer this service, just not on a state-wide level.

Market Demand: Emergency preparedness consultation services would be best for smaller businesses that do not want to pay for the full service from a large company like Chubb.

Successful Examples:

The Office of the Fire Marshall of Ontario offers a two-day course for the member of a business who is in charge of emergency preparedness. Through this course, members of a business learn how to develop individual plans for their building. *RSS Engineering* in the United States offers similar services such as reviewing and developing emergency plans as well as reviewing fire safety plans to make sure that building codes are adhered to.

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: With external consultants such as brigade volunteers working on business' emergency plans, the business workers will not only get a much better understanding of the plans, but they will be able to easily update them. Both of these benefits will directly increase the employee safety in the case of an emergency.

Community: There is no apparent community benefit for offering emergency management consultation services for local businesses.

Firefighters: If the volunteers are responding to an incident, then they will be more confident in the response of the business. Emergency preparedness consultation could also increase the skill set of the volunteers and make their FEM work more appealing.

Revenue: Providing this consultation for businesses could be a respectable money-maker based on input from interviews and focus groups. When Warrnambool and Hamilton volunteers brought up the idea of offering emergency preparedness information, they suggested that there could be a moderate charge for a service like this.

Requirements

Willingness

Time

Equipment

Training

Willingness: The FEM volunteers interviewed thought that most firefighters would be interested in offering this consultation service to their community. Trained volunteers are already familiar with these emergency management guidelines and those spoken with believe that this consultant role could increase workplace safety.

Time: Emergency preparedness consultation could take a lot of the volunteers' time. Activities like going through requirements with personnel, observing for emergency drills, and so forth are very time consuming and would need to be scheduled regularly.

Equipment: There may be some additional equipment required, but this equipment shouldn't be too expensive. This equipment could include software to help keep track of emergency plans.

Training: Volunteers would need a considerable amount of additional training in order to get sufficient background in emergency management so that they could direct a business. The amount of training may be different according to the customer base, but if the customers are all fairly small businesses then there would not be as much training needed for firefighters.

4.3.6 Fairground Inspection

PPRR: Prevention, Preparedness

Mentioned by: Port Fairy Brigade; Hamilton Fire Brigade

Description: There are many fairs and festivals in an area that has a lot of tourism, such as Port Fairy. The fairground inspection service would consist of a general inspection of a fairground, Caravan Park, or a similar facility. Many campers with their caravans stay overnight at these parks and the volunteers could check to make sure each caravan contains the proper extinguishers or other fire equipment. The firefighters could also check on individual booths at the fairgrounds and the overall layout to make sure it is safe.

Competition: If fairground inspections were needed then a larger company like Chubb could offer it through their general safety inspection service, but we found no apparent businesses that advertise inspections specifically for fairgrounds or caravan parks.

Market Demand: There is no regulation that says a fairground must be inspected, so the service would have to be offered to the owners as a way to improve their emergency prevention.

Successful Examples: None

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: The workplace for fairground inspections would be considered to be the fairgrounds or caravan park, which would have improved safety.

Community: Inspecting fairgrounds would be improving community safety, because many times these events draw in a large part of the local town. If fairgrounds are made safer, then the community members in attendance would be at less risk in case of an emergency situation.

Firefighters: A fair or festival sometimes creates a moderate amount of anxiety amongst the firefighters. If a firefighter were to inspect and provide safety improvements, then there would be more peace of mind for the brigade.

Revenue: This service would be offered for a small fee, although the brigades may choose to offer it for free since it has such high community benefits.

Requirements

Willingness

Time

Equipment

Training

Willingness: In a lot of cases, this service may be already carried out informally. Since the inspection would be rather easy, firefighters may be willing to complete this task. The large number of people in such a confined space creates concerns for the brigades, so they would be willing to address the situation.

Time: Depending on how large an event is, it may take quite a while to complete the inspection of the entire premises.

Equipment: There would be little to no additional equipment needed for such inspections.

Training: There may be a licence needed to officially inspect the premises. It is possible that this certification would be the same as the one required to inspect a business for emergency preparedness.

4.3.7 Hostage Situation Preparedness

PPRR: Prevention, Preparedness

Mentioned by: Bob Smith (Fire Safety Officer)

Description: This opportunity would involve firefighters teaching the employees of businesses how to prevent themselves from becoming a hostage, and how to react if they ever do become involved in a situation. The trainers may choose to use role-playing, or solely lecturing strategies to train the employees.

Competition: Preparing businesses for hostage situations may be considered the police department's responsibility; however, it is unclear if they formally offer this service or not.

Market Demand: Being prepared for hostage situations would be beneficial to urban areas more than rural areas as crime is a much larger problem in more populated cities. This service would be most effective for businesses that often have problems with crime, such as banks or convenience stores.

Successful Examples: None

Benefits	Workplace	Community	Firefighter	Revenue
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Workplace: Employees trained in hostage situations would be able to take the proper measures if a situation were to occur in their business area.

Community: There is no direct benefit to the community from hostage awareness, but the information learned at employees' workplace could be used in the general community if a situation ever occurred.

Firefighters: Firefighters do not appear to gain anything from training the community on hostage situations, except the satisfaction of knowing that the people are able to protect themselves until the proper authority arrives.

Revenue: Hostage situation preparedness education would increase revenue depending on what each brigade chooses to charge.

Requirements**Willingness****Time****Equipment****Training**

Willingness: The firefighters interviewed thought that most volunteers would be willing to train the employees, but the firefighter interest is dependent on the individual brigades. The volunteers may be unwilling to train for this type of activity since it seems outside their responsibility and knowledge base.

Time: Hostage situation education would be time consuming and would most likely require some role-playing in order to thoroughly help the employees react in the event of a hostage situation.

Equipment: No special equipment would be needed to educate the business employees aside from necessary paperwork. Equipment used for role-playing should be easy to find from other community organisations.

Training: Additional training of the firefighters would be fairly extensive in order to become certified to offer courses such as AFAC accredited. The brigade could have the option to give informative training, with no official documentation. Either way, it would be best for the volunteer to have some background in hostage situations to provide effective training.

4.3.8 Risk Management Analysis

PPRR: Prevention

Mentioned by: Bruce Conboy (President of VRFBA)

Description: Providing risk management analysis and consultation for businesses has been offered for many years by consultation firms in urban areas. A detailed description of risk management is provided in Section 4360 of the Australian Standards. Usually, corporate business is the primary sector that takes advantage of this consultation opportunity, probably because the cost for the service is so high. It would be possible for the local fire brigade to offer risk management consultation for a much smaller fee. If a brigade were checking a business's risk management plan, they could also advise the company on where their plan is lacking and provide improvements.

Competition: Larger consultation firms are the main provider of this service; however, they usually do not provide services for small, local businesses.

Market Demand: Every business with employees, and especially those that work with dangerous goods, would most likely need this type of service.

Successful Examples: *Chubb* offers fire risk management that focuses on continuously analysing a business; especially if it is common for the company to make changes in workplace conditions.

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: Businesses would benefit from risk management services by ensuring that their risk management plans were designed appropriately.

Community: There would be little benefit to the community if the brigade offered risk management services to local businesses.

Firefighters: The firefighters would be given an opportunity to walk through the location to identify hazards and understand the layout while providing the risk management analysis.

Revenue: The brigade would be able to charge a fee for this service. Since risk management needs to be continuously analysed, this type of consulting may bring in much revenue depending on the situation.

Requirements**Willingness****Time****Equipment****Training**

Willingness: The stakeholders that we interviewed seemed to believe that most volunteers would not be willing to provide this service, mainly due to the detailed service and large time commitment.

Time: The length of time that is required for a proper risk analysis will vary between different businesses. Dangerous goods locations would take longer than the local convenience store because of the increased number of risks associated with dangerous goods. For the most part, the consultation would take a lot of time, as risk management needs to be continuously analysed for a business.

Equipment: No new equipment would be necessary for the brigades to offer risk analysis consultation.

Training: There may be some additional training required in order to certify the analysis; however, the training that every firefighter has would probably be sufficient in simply providing advice for companies on noticeable hazards.

4.4 Post-Incident Analysis Opportunities

Post-incident analysis opportunities are ways that brigade volunteers provide feedback to their community regarding fire safety and information about recent emergencies that they have responded to. Many times, the volunteers notice that an emergency was caused due to a specific risk being overlooked. These volunteers are then in an excellent position to bring this information back to the community and prevent the same risk from being overlooked again. The spread of this information could be effective for multiple reasons. First, the CFA brigade in each community is usually very well respected, and citizens tend to take their word seriously. Secondly, the general public seems to listen more closely when there has been an incident near home, observing that it can happen to them. Finally, having an example of how a risk can cause a disaster tends to provide more motivation for the community to actively do something to prevent it. The following section discusses five ways for the brigade members to distribute fire safety information back to the public for the purposes of fire prevention.

4.4.1 Public Safety Postings

PPRR: Prevention, Preparedness, Recovery

Mentioned by: Katie Williams (Yellingbo Brigade)

Description: Creating billboards, posters, or fliers could be a free service to the community that would allow the local fire brigade to make announcements about recent dangers with the aim of preventing them from occurring again. These postings would entail the brigade making a sign, poster, or billboard to be displayed in highly visible areas. Posters and fliers could be posted at the CFA station if no better location is available. The sign could contain a community safety message that should be colourful and well designed in order to catch the eyes of the public and convey the message. Postings could also be put up in schools, businesses, shops, and any other location where many people would see it.

Competition: There is no competition for public safety postings since it is free of charge.

Market Demand: There is no formal market demand for public safety postings. The activity is not designed for generating revenue, as the sole purpose of these postings is to increase community safety.

Successful Examples:

The “Reefton Spur” is a 20 km section of road in Victoria that is known for its sharp corners and steep terrains. Local motorcyclists are often pushing themselves to the limits on the road, and this often results in injuries or deaths. The town has put up billboards conveying the number of fatalities and injuries in order to prevent speeding on the road.

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: Fliers could be posted in any facility and the business would become much safer if their employees were more aware of fire risks.

Community: The service would provide benefits to the community, since community members will be receiving information about recent dangers that they may not otherwise know about, and it could be done in a way that doesn’t take much of their time or make them uncomfortable.

Firefighters: There would be little benefit to the firefighters, with the exception of a possibly safer community which could result in less emergency calls. Another small benefit from community postings could be improved public relations if the community knows that the firefighters care.

Revenue: There would be no monetary benefit to the brigade when making public postings.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Volunteers may be unwilling to make these posters or to put them on the firehouse; however, as it is a simple and effective way to reach the public, they may be willing to do so.

Time: There would be very little time commitment to the volunteers to post this information.

Equipment: No special equipment would be necessary for posters and fliers, but billboards might require some equipment and money.

Training: No additional training would be necessary for making these postings.

4.4.2 Catered Fire Safety Presentation

PPRR: Prevention, Preparedness, Recovery

Mentioned by: Hamilton Brigade Volunteers

Description: A catered presentation would bring local business members to a dinner or luncheon where the brigade could inform them of threats they may be exposed to with respect to fires and other emergencies. The charge (if any) by the brigade for the people involved would be up to the brigade. Sometimes, this event would be so important to community safety that it would not be necessary to charge a fee. Other times, the event could be more formal and donations could be requested, or a modest price could be charged to the attendees. The people invited to the event would be depending on the exact purpose of the discussion. When the problem being addressed is specific to one company, then all of the employees of that business might benefit from the information. If the problem being addressed were something that affected multiple businesses in the community, then employees from these companies could benefit from the presentation.

Competition: There is no known private organisation that offers catered presentations to small-to-medium sized businesses about fire safety. This is the type of event that the community would look to the local fire brigade to provide.

Market Demand: Some brigade members that were interviewed said there was a demand for a presentation since the employees of some businesses have the responsibility of being up-to-date on fire-related risks.

Successful Examples:

A catered presentation is a specific way that the *Hamilton Brigade* of Victoria is planning to give back to the community. There were a number of incidents when the trash of a restaurant, being kept in a separate shed, was set on fire. The event was a breakfast at the cost of the brigade where firefighters, policemen, and business owners could present and discuss solutions to the problem. *The Dromana Brigade* holds an annual traders night, where they bring in local business members and give a presentation and brief training on fire protective equipment and techniques for protecting their business from fire.

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: The main benefit of a catered presentation would be improvement of workplace safety. After learning about an incident in this manner, it is likely that business employees will address the issue and be more prepared in the future.

Community: The community could benefit from public presentations, since a larger portion of the community would become aware of fire safety.

Firefighters: The individual firefighters and brigades, in general, would see an increase in community relations if an event such as a presentation was offered.

Revenue: It is very unlikely that the brigade would gain money through offering a presentation. If there were a charge, it would be small.

Requirements

Willingness

Time

Equipment

Training

Willingness: Many of the volunteers interviewed saw catered presentations as a beneficial event to provide information to the community as well as increase personal relationships.

Time: The time commitment for such a presentation would not really be an issue for the firefighters. The problem may be getting a time when most people who they hoped would attend could be there.

Equipment: There would be little additional equipment needed for a dinner presentation. Most brigades already have the space and materials necessary for a catered event.

Training: There would be no additional training needed to prepare volunteers to offer this event to their public.

4.4.3 Face-to-Face Incident Debriefing

PPRR: Prevention, Preparedness, Recovery

Mentioned by: Bob Smith (Fire Safety Officer); Bruce Conboy (President of VRFBA); Mick Taylor (Joint FEM Committee Member); Wayne Lewis (FEM Officer of Mornington); Charles King (Volunteer at the Dromana Brigade); Greg Leach (Operations Manager)

Description: A face-to-face debriefing would consist of a short debriefing between a member of a brigade and a business owner directly after an incident. The firefighter could give feedback on what is known about the incident at that time, which could include how the fire started, feedback on the initial reaction, and the brigade's response. Having a conversation directly after the incident may make face-to-face explanations effective because the feedback to the affected business owner will be absorbed well.

Competition: There would no competition for face-to-face debriefing because the Country Fire Authority responded to the incident.

Market Demand: Debriefing information could be valuable for a business owner, especially if it is offered on site at the incident.

Successful Examples:

Most fire departments do some sort of debriefing after an incident; however, it is currently informal in Victoria.

Benefits	Workplace	Community	Firefighter	Revenue
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Workplace: The main benefit of a debriefing is that it could increase workplace safety in the building that was effected, or similar businesses in the community. After an incident such as a fire, a business owner may comprehend the feedback, especially at the site of the incident.

Community: The community may not benefit very much, as the information covered in the debriefing is strictly for the business owner, unless the brigade brought the information to other businesses in the community.

Firefighters: Face-to-face debriefings could increase the firefighters' relationship with members of the community and also help develop good analysis and personal relations skills.

Revenue: A debriefing would most likely be of no charge to the business owner, as the main goal is increased workplace safety.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Many brigades already offer a service similar to face-to-face debriefings that is unofficial. Firefighters would most likely be willing to have it be a requirement after an incident as they feel it is a quick and easy way to decrease the likelihood of a similar emergency occurring in the future.

Time: The time commitment for a debriefing may be relatively low since the firefighter is already onsite.

Equipment: There would be no additional equipment required to offer a debriefing to the affected business owner.

Training: Debriefings would most likely not require a licence since firefighters are trained to recognise causes of a fire.

4.4.4 Fire Incident Reporting System (FIRS) Expansion

PPRR: Prevention, Recovery

Mentioned by: Craig Lapsley (Deputy Chief Officer)

Description: The current Fire Incident Reporting System (FIRS) is a descriptive report that is filled out by a fire investigator and returned to the CFA containing a full description of the brigade reaction, including response time, which members and brigades were there, what equipment was used, and what specific techniques were used to put out the fire. The system also critiques the brigades' response in terms of these criteria. The response by the citizen(s) who first recognized the emergency is not formally included in this document.

The suggestion for expanding this reporting system could be including the following information in the report: how the fire or other emergency happened, how prepared the company was, how effective the evacuation procedure was, how the extinguisher or blanket was used, how other people at risk were notified, how the Authority was notified, and how other typical emergency procedures were conducted. This expansion may include feedback on what aspects of this first response were correct and how they may be improved. This information could now be beneficial not only to the Country Fire Authority, but all members of the community. One thing to consider when conducting this type of analysis is the aspect of confidentiality of emergency victims. The report would have to be carefully written so it does not convey information that could offend people involved.

Competition: Not applicable.

Market Demand: The FIRS expansion could be useful for any size business. Brigades that we interviewed believed that most owners might appreciate a full, official debriefing on response.

Successful Examples: None

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: The FIRS system information would take statistical evidence from across the state and then provide this information to the specific businesses most related to the information. This expansion may improve their workplace safety as they could make specific changes in their workplace in order to prevent similar emergencies from occurring.

Community: The data recorded in the FIRS system will help define at-risk people, products, and structures in the community.

Firefighters: FIRS expansion could increase the brigade-community relationship as well as gain confidence in first response.

Revenue: There would be no fee for the FIRS expansion, as it is already a CFA service, resulting in no new revenue.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Some firefighters who were interviewed believe that an expansion to the FIRS system may be a good way to give back to the community, but others believe it would not be a good use of time because people may not put effort into considering this information.

Time: Some time may be required of volunteers to make the proper analysis and input into the FIRS report. In many cases, this process would go beyond just interviewing people and actually investigating what happened.

Equipment: There may be no equipment needed that a brigade would not already have to expand the system.

Training: Expanding the system would most likely require no additional training for volunteers.

4.4.5 Newsletters

PPRR: Prevention, Preparedness, Recovery

Mentioned by: Bruce Conboy (Mt. Martha Brigade/ Pres VRFBA); Ian Thompson (Chief Officer); Mick Taylor (Joint FEM Committee Member); Chris Manson (Senior Dangerous Goods Officer)

Description: A community newsletter could be created on an annual, quarterly, or even monthly schedule depending on how busy the brigade is, and could be sent to all the property and business owners in the town. Newsletters could include information regarding recent incidents or potential risks in homes, businesses, and the general area of the town, along with ways to reduce these risks. This form of post-incident analysis could also be used to spread information regarding the brigade with fundraising information and rosters. Newsletters are a good way to keep the community knowledgeable and comfortable with the brigade, and keep the community safe. If a brigade doesn't have enough money to spend on the materials and printing of a newsletter, they may be able to get sponsors to pay for it. It may also be possible to distribute a newsletter electronically through e-mail or a brigade's website. Direct mailing ensures that every community member gets one, but it may be more cost effective to send it electronically.

Competition: Since a brigade newsletter would be a free publication, there is no competition.

Market Demand: The general community may desire this information on recent incidents in order to be updated on brigade activities and aware of potential risks.

Successful Examples:

Mt. Martha Fire Brigade currently sends out quarterly newsletters to their communities informing citizens of brigade activities and current fire risks.

Benefits	Workplace	Community	Firefighter	Revenue
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Workplace: Every business that reads the newsletter could gain important knowledge about recent fire risks in their community.

Community: The community would be the main group benefiting from this service. Newsletters will assist them in learning new risks, hazards, and the proper procedures to react to such emergencies. The publication may also give the community members better knowledge regarding their brigade's functionality and help them become more comfortable when they interact with the firefighters.

Firefighters: Newsletters may benefit the firefighters slightly, as they may increase public relations and possibly their level of respect within the community.

Revenue: This opportunity may be a free publication so the brigade would most likely not gain any revenue.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Volunteers may be willing to produce these newsletters; however, one or two volunteers would have to take the time to write it. Sometimes the older or retired members of the brigade may be interested in doing this to keep an active role in the brigade.

Time: A few hours for one or two volunteers to produce each scheduled newsletter; however, this time is dependant on how detailed and informative the newsletter is.

Equipment: No additional equipment would be necessary to produce this publication, and if brigades needed help with printing and mailing costs, they may look for local sponsors.

Training: No training may be required for firefighters to create and distribute this document.

4.5 Other Opportunities

The following section focuses on opportunities for the Fire Equipment Maintenance program to expand services, outside of the initial scope of our project. Specifically, these new opportunities do not necessarily involve new products and services, or are aimed at customers outside of the small to medium sized business market. The following activities have a targeted audience of the general public, including residents, more than specific businesses as our project goal stated. These ideas are general improvements that the interviewees suggested the FEM program look into, mainly about administrative and inter-brigade activities, as well as service opportunities. Some of these suggestions may be implemented by not only the FEM program, but also the Country Fire Authority's general administration. The following are six other suggestions that were made by the Country Fire Authority members for both improvements in the FEM program, and the Country Fire Authority itself.

4.5.1 Bushfire Awareness Training

PPRR: Prevention, Preparedness, Response

Mentioned by: Chris Carson (Community Safety Admin); Ian Thomson (Chief Officer)

Description: Bushfire awareness training may involve those brigades in rural bush towns. In these towns there is a large risk for bushfires, and training the community in both prevention and initial suppression would be vital. General prevention techniques such as keeping water near an open fire, or campfire safety could be helpful topics to cover. Under the category of suppression, firefighters may train their community members on what to do when a bushfire breaks out, focusing on what to do to contain it until the fire brigade arrives. One aspect of training could be about the proper actions for the community when threatened by a bushfire.

Competition: There is no known competition for bushfire training.

Market Demand: Every rural community could benefit from bushfire awareness training, particularly those with high bushfire threats and long response times for brigades.

Successful Examples: *Harper, Somers, and O'Sullivan* of New South Wales offer many bushfire services including training for urban and rural residents.

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: Since the bushfire training course would be offered to the general community, there may be no direct benefits to a particular business.

Community: The community could learn many things from bushfire training, and may be more confident and helpful to volunteers when a bushfire breaks out.

Firefighters: Bushfire training may benefit firefighters because they are informing the community on what is expected of them in a bushfire, and how to attempt to contain it in the time before the brigade arrives. Having residents prepared for bushfire emergencies presents less work for the firefighters, and less of a chance for emergency rescues during long duration fires.

Revenue: The brigade could charge a fee for this training if the community was willing to pay. However, it may be a better to offer service free of charge in order to entice the community to attend and broaden their knowledge.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Volunteers may likely be willing to train people on bushfires because they are interested in spreading their knowledge of firefighting with others and it could, in the event of a bushfire, reduce the amount of work required of them to contain it.

Time: There may be a moderate time commitment for bushfire awareness training, depending on how thoroughly the brigade volunteers wish to train their community.

Equipment: The brigade should have all equipment necessary to carry out this training on their bush response vehicles, or any household items that may be beneficial for use in suppressing a bush fire. It might be useful to create some sort of simple brochure outlining the course for the students.

Training: The brigade volunteers already have the training on bushfires that may be required to give an introductory course on how to react to such an emergency. As long as they remind the community to call the local brigade immediately when a bushfire breaks out, and to keep their personal safety at high regard, there should be no need for further training for the instructors.

4.5.2 E-Commerce

PPRR: Not applicable

Mentioned by: Each interview included a specific question about E-Commerce. This question's goal was to learn the brigade members' general feelings about the practicality of the opportunity.

Description: The current Fire Equipment Maintenance website is a part of the Country Fire Authority site and includes a description of the products and services offered, including a file that displays the pricing in a table. The FEM management expresses a desire to use the Internet more for interactions with customers and was in the process of developing details on how their Internet software could be developed at the time of this report. The implementation of e-commerce may include offering the FEM products online, paying and scheduling service appointments, and general bookkeeping tasks. In general, the idea received positive feedback from the stakeholders that were interviewed since they believe it could increase customer service and general FEM operations. For the most part, they believed that the idea of distributing equipment should run in parallel with current operations since some customers prefer face-to-face contact. The addition of e-commerce may also enable offering fire safety products to homes. There were many suggestions on delivery methods and resources needed including:

- The process should be simple and user friendly, not only for ease of use but also because of slow Internet connections in remote areas.
- One way to provide the equipment is by having a centralised warehouse where products could be sent out to business or homes.
- Another delivery method could consist of CFA receiving the request and then having the nearest FEM brigade deliver the order.

Market Demand: People are generally receptive to the use of computers for business transactions; however, in the state of Victoria, there are still residents without computers. E-Commerce should be used as a tool, not the only way to do business.

Successful Examples:

Chubb and *FireTec* offer fire safety equipment that can be obtained through the Internet with a credit card.

Benefits:

There are many benefits to introducing e-commerce to the FEM program. First, the system could promote standardisation of administrative techniques between brigades and the CFA headquarters. Also, it may help to improve scheduling with customers and may ease and expedite the customer enquiry process.

Drawbacks:

Not every home and brigade in Victoria is currently online, and if this type of administration were adopted, there would still need to be a way for these brigades to remain connected to the system through paper processes.

4.5.3 Fire Safety Demonstrations

PPRR: Prevention, Preparedness

Mentioned by: Bob Smith (Fire Safety Officer)

Description: Brigades could set up a simple, enjoyable, and educational demonstration at public events to show how different types of fires start, how to suppress them, and how to properly escape various situations. These demonstrations could easily be carried out for a private business if a presentation were scheduled; however, based on cost and audience interest, demonstrations may be most effective if provided for the general community.

Competition: Competition is not a concern since this is a nearly free service aimed at the whole community.

Market Demand: Children enjoy such things and parents would probably be very willing to increase their family's fire awareness.

Successful Examples:

Fire District 5, Essex County, Massachusetts, USA – Travelling smoke house; Hamilton Fire Department, MA, USA – JAWS demonstrations.

Benefits

Workplace	Community	Firefighter	Revenue
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Workplace: If this demonstration were provided for a particular business, the benefits may include increased fire safety knowledge of employees.

Community: The community would have much to gain from public fire safety demonstrations especially since it is something that can teach a large amount of people at once.

Firefighters: Firefighters may gain the satisfaction of knowing that many of the community members know how to protect themselves after viewing a demonstration and the proper measures that should be taken in the event of a fire.

Revenue: Unless the brigade chose to charge for the demonstrations, no money would be earned.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Most firefighters might be willing to offer this service because it usually takes place on the weekend. These demonstrations may be interesting for firefighters to present, and many times, volunteers enjoy displaying their skills for the public.

Time: The time commitment needed would be a moderate amount but the duration depends on how long the brigade wishes the demonstration to last.

Equipment: The equipment should be readily available unless the brigade wishes to create or purchase some of the items. For example, a miniature home that can travel easily and simulates a fire by emitting smoke could be fairly pricey.

Training: The only training required for a public fire awareness demonstration might be the mandatory training needed to become a firefighter.

4.5.4 House Numbering

PPRR: Preparedness, Response

Mentioned by: Warrnambool Fire Brigade

Description: House numbering could be a service in which brigades could make sure that private buildings (residences and businesses) have their numbers visible from the street. When the brigade members find a house that does not have a number, they can offer to paint one on the curb for a small fee (~\$6). Although this is not a large amount of money, this type of service may increase response times for all emergency services for both the house being serviced and their neighbours. This service will also help educate the community of the importance of house numbers.

Competition: Local hardware stores often sell house numbers; however, they don't offer to install them.

Market Demand: Any community where there are buildings without visible numbers is in need of a house numbering service.

Successful Examples:

Civic Signs – *Bedford Fire Department*, Nova Scotia, Canada.

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: A house numbering service benefits the business by decreasing the amount of confusion for emergency personnel when trying to locate an emergency at that particular location.

Community: Offering house numbers could be very beneficial to the community, as it might improve response times for emergency personnel when there is an emergency anywhere in their neighbourhood. Often times, firefighters rely on house numbers to pinpoint the location of an emergency.

Firefighters: Proper house numbering in their community could benefit the firefighters because it can give them a sense of confidence that they will be able to find an emergency quickly, and not over shoot a destination because of lack of house markings.

Revenue: The charge for the house numbering service, if any, would be very low.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Firefighters would likely be willing to offer house numbers because the service makes their brigade more visible in the community while also improving the safety of the community. Also, it is not a difficult service to offer.

Time: The time required for each house is minimal, and the inspection could be done on a regular basis while the firefighters are training on driving apparatus, or learning the town.

Equipment: There would be very little equipment required for the house numbers -- mainly paint and stencils for the numbering.

Training: House numbering requires no additional training of the volunteers.

4.5.5 Fire Hydrant Servicing

PPRR: Preparedness, Response

Mentioned by: Hamilton Brigade; Bob Smith (Fire Safety Officer); Mick Taylor (Joint FEM Committee Member)

Description: Offering service on hydrants could entail the inspection and maintenance of fire hydrants throughout a town. Two aspects about the maintenance of hydrants to take into consideration are the mechanism and the structure of the hydrants. The device should be maintained and inspected to verify that there is an available constant water flow in the case of an emergency. The device should also be clearly marked and accessible to be seen and used by the local brigades. A complete description of what this inspection and maintenance should entail is in Section 1851.4 of the Australian Standards.

Currently, the municipal water-board that is in charge of all water main maintenance is responsible for the upkeep of hydrants; however, generally they seem to be having trouble keeping up with the maintenance, which has been noted by many of the firefighters that were interviewed. The firefighters sometimes assume the role, to take on the responsibility of making sure that the hydrants are properly working and marked.

Fire hydrant maintenance may be a contract deal where the town or water-board could have the fire brigades provide the service at a charge. Also, opportunities may exist in areas where there are private fire hydrants such as at schools and large industrial plants.

Competition: The municipal water-board could be competition for hydrant servicing, but they may be willing to transfer responsibility to the local brigade.

Market Demand: Any town with public water and hydrants needs these devices to be properly maintained.

Successful Examples:

A-1 Hydrant Services is a small company based out of Ontario, Canada, that replaces, repairs, overhauls, maintains, and inspects over 15,000 fire hydrants across the province.

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: Although a specific business would usually not be in mind when conducting hydrant service, any business near that hydrant could benefit because the service would ensure that the hydrant would be in working order.

Community: The community could benefit, as all hydrants would be maintained on a regular basis. In the case of a fire, the hydrants would likely work and assist in extinguishing the fire.

Firefighters: The firefighters could also know that hydrants have been maintained, and would not have to second-guess the functionality of the hydrants.

Revenue: The revenue for fire hydrant maintenance services could vary depending on the relationship the brigades have with their local water-works department.

Requirements

Willingness

Time

Equipment

Training

Willingness: It seems that many brigades already have volunteers inspecting the hydrants. Volunteers may be willing to offer service on these hydrants, because it will provide them with many benefits on a personal, brigade, and community level.

Time: The time commitment is dependant on the size of the town. Many brigades already service the simple components of the hydrants.

Equipment: The equipment required could be normal equipment that the brigades already own plus, possibly, specialised plumbing tools. It may be necessary to have a supplier for the replaceable parts of the hydrant as well as the hydrant markers.

Training: Hydrant servicing, if approached to completely maintain all aspects of the “above the ground” hydrant, may require a licensed plumber. Some fire brigades already have plumbers volunteering to fight fires, but most would either have to be trained or would have to contract out the service.

4.5.6 Newspaper Postings

PPRR: Prevention, Preparedness, Recovery

Mentioned by: Daren Matthews (Online Services Admin); Bob Smith (Fire Safety Officer); Bruce Conboy (President of VRFBA); Mick Taylor (Joint FEM Committee Members); Wayne Lewis (FEM Officer of Mornington); Charles King (Volunteer at Dromana Brigade)

Description: Newspaper postings are a simple way to reach the public with important information regarding recent emergency incidents. Media postings could be effective as many people from the community read their local newspapers, so the audience could be large. Also, news media is usually very receptive to any information received from the CFA regarding past incidents.

There are two ways the fire brigade can go about getting an article in the paper. Either the volunteers can send in a volunteer-written article to the newspaper, or call out a journalist to interview and write it for them. A brigade written article is probably more effective since the brigade can limit the article to exactly what they would like to see published.

Competition: Since the posting could be a free service, competition is not a concern.

Market Demand: Community members are often interested in emergency events that have happened within their towns. Also, a newspaper article educates employees on the latest fire hazards and how to prevent certain fire-related scenarios from occurring at their business.

Successful Examples: None

Benefits

Workplace

Community

Firefighter

Revenue

Workplace: The only benefit due to a newspaper publication available to the workplace community may be the increase in availability of knowledge regarding fire safety.

Community: There would be large benefit to the community as citizens would be updated to the cause of a local emergency and better prepare themselves to prevent such an emergency from occurring again.

Firefighters: There could be relatively low benefits to firefighters from producing an article.

Revenue: There would probably be no revenue gained from publishing this posting.

Requirements**Willingness****Time****Equipment****Training**

Willingness: Volunteers seem like they might be willing to do this activity because they typically enjoy sharing fire-related knowledge, especially in the interest of saving lives.

Time: The only time requirement is writing the article the brigade wishes to post.

Equipment: No new equipment would be required to publish this document.

Training: Volunteers already have the training that would be required for this type of service.

4.6 Simplification of Administration Techniques

A common recommendation that many of the volunteers made during our interviews involved simplifying the administrative process of the FEM program. Currently, there are multiple levels of verification through which each action within the FEM program must pass. For example, Figure 2 was given by FEM officer Chris Wyborn from Scoresby Brigade to describe his view of the way that the current FEM organisation is managed. Mr. Wyborn's brigade is one of two brigades left in the state that administrate all of their FEM work in house, making this an outsider's educated view on the current administrative system.

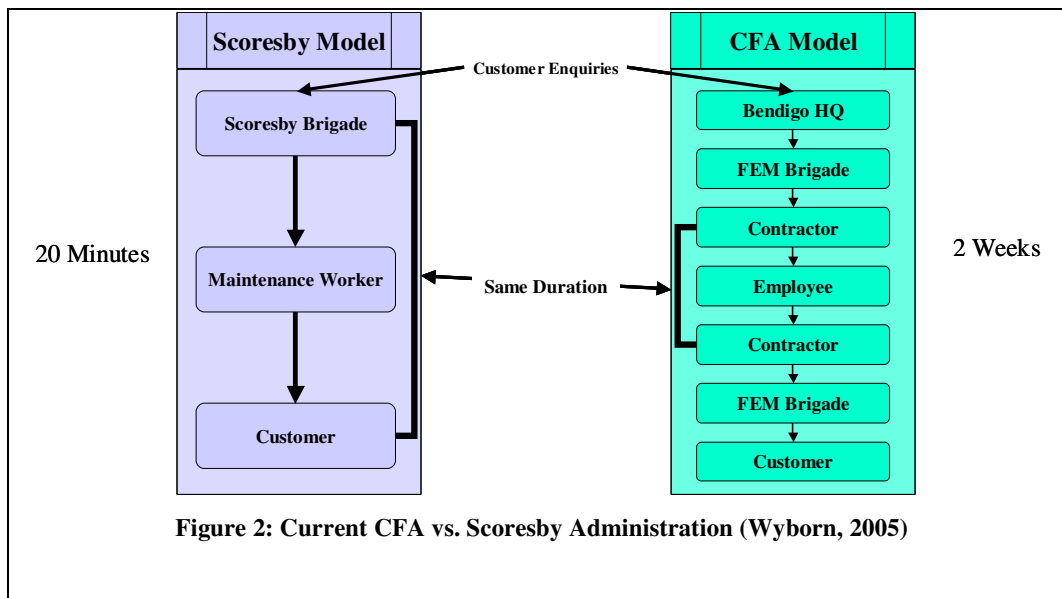


Figure 2: Current CFA vs. Scoresby Administration (Wyborn, 2005)

Figure 2 shows a comparison between the way that Scoresby brigade administrates its FEM program to the way that the CFA FEM headquarters (in Ballarat and Bendigo) operate the program. As shown in the flow chart, if there is a customer complaint or enquiry, the CFA customer is told to call the FEM headquarters. Often times, the enquiry can be resolved there, but sometimes it is necessary for the complaint to trickle down throughout the CFA until it reaches the contractor's employee who did the service to answer the customer's question. Then, the answer to the enquiry must be passed through the administrative ladder until it is sent back to the customer. In order for that question to be answered, communication is necessary between many levels; oftentimes, it takes up to two weeks to respond to the customer's enquiry. While running the brigade in the manner like Scoresby, the enquiry can be answered in about twenty minutes.

Overall, many of the volunteers who were interviewed were concerned with the manner of communication between the headquarters, brigades, and customers. Some firefighters interviewed felt that there were many places where communication was lost or information was transferred incorrectly. It is possible that looking into an opportunity such as E-Commerce could help resolve this issue by simplifying the steps of communication within the Authority.

While conducting interviews, we noted that there were many opportunities for expanding the FEM program that individual brigades had already taken upon themselves to institute; however, many other brigades had no idea of the activity, or

its success. An example is Heywood Fire Brigade, which offers a service to business owners where the volunteers allow the owners or employees to discharge an expired extinguisher that needs servicing (Heywood, 2005). Heywood's fire extinguisher training is very informal, because the CFA does not officially support this type of service. Another example is the Mt. Martha Fire Brigade, which offers a quarterly newsletter to their community updating them on the brigade's activities and community safety notices (Conboy, 2005). These are just a few examples of services that some of the brigades contacted already offered, but other brigades had never considered implementing. Brigade members seemed interested in hearing more about what brigades in other areas of the state were doing; specifically, the services they offer to their community, and how these were successful.

4.7 Different Opportunities for Different Brigades

While researching the different brigades across the state, we noticed that no two brigades were exactly the same. The characteristics of each brigade varied; these included, but are not limited to:

- Differences in the geographical size of the community
- Population
- Brigade roster size
- Call frequency and type (bushfire prone or mainly structural)
- Technology in use
- Skills of volunteers
- Availability of volunteers
- Condition of equipment
- Proximity to other brigades
- Role in the community

When considering the FEM program in particular, there are also many differences:

- Number of clients
- Size of area covered by FEM (often different than that of the brigade)
- Number of volunteers working with the program
- Use of contractors
- Types of services offered
- How often FEM work is done
- Competition in the area

These differences mean that one specific opportunity may not work well for all brigades across the state. Each brigade has its own priorities and interests, so what is not possible for one brigade may be appropriate for another. For example, firefighters in rural brigades tend to have more concern for bushfires and basic fire suppression before they arrive on scene because they often have long response times. More urban brigades tend to be concerned with technological advances in fire detection services because these devices are often found in the larger businesses that are common in city settings.

Specific opportunities can sometimes best fit a particular type of brigade. Fire sprinkler system installation and service would be an inappropriate endeavour for a small rural community, since there may be a very small local market for these systems, if any. At the same time, a brigade in downtown Dandenong may have very little interest in providing a course on brush fire protection for their businesses. This

method provides an opportunity for individual brigades to make decisions using the priorities for their brigade, and choose the best opportunity for them. According to the interviews, all types of brigades seem to feel that training on already distributed equipment may be something that brigades may be willing to offer which could be beneficial to the customers.

After many interviews and weeks spent researching these types of activities, we concluded that the activities listed in this chapter are the most appropriate ones that were recommended to us by the members we interviewed. As shown by our analysis of each activity, there is much diversity between different opportunities. Some of these ideas are best for brigades in rural areas that use their own volunteers to conduct the work, while others are better for the urban brigades who use contractors to do their work. Every brigade may have the opportunity to expand its Fire Equipment Maintenance business by implementing one or more of the ideas we have provided, and ultimately, bettering their communities' safety.

5 Summary and Recommendations

Through our interviews and research, we were able to identify and analyse opportunities the CFA could support to expand Fire Equipment Maintenance brigade activities, enhance community safety, and, where possible, increase brigade revenue. This section summarises the four main areas for the FEM program to expand and describes our recommendations for how the CFA might use our findings to influence the future of the FEM program. We also include a few suggestions regarding the FEM program, which we believe the CFA might find beneficial.

Expanding the Fire Equipment Maintenance program into offering different products and fire equipment services may promote community safety on a small scale, but the main benefit would be an increase in brigade revenue. Through research and interviews, we found that many first attack fire equipment companies offer additional services to businesses beyond extinguishers, hoses, and blankets. The ideal offering, in many stakeholders' views, would be for the FEM program to offer a "one-stop shop" service. This market approach would expand the current program by offering inspection and maintenance on all Essential Services listed by the Victorian Building Commission.

Most of the Country Fire Authority personnel we interviewed felt that employees of a client company would benefit from formal fire safety training offered by brigades. This type of service would significantly support the CFA's objective of improving workplace safety in the small-to-medium sized business sector. The general impression from the brigade visits was that many firefighters already provide training to some extent, which indicates volunteer willingness to offer formal courses for FEM customers. Competition for these services would most likely come from a larger company focused on providing the service to large corporate customers, leaving open a market demand for a less expensive offering designed for smaller businesses. While considering this option, it is important for the CFA to take into account the time and cost of the training for the volunteers to be competent in the relevant section of the Australian Standards.

If the Fire Equipment Maintenance program were to assist the Country Fire Authority in expanding its services to become an emergency management leader, new services would have to be offered. For an urban brigade with a large customer base, these services would have potential to be profitable, as there would likely be a large enough market demand to balance out the time and training required. In rural communities, the amount of training required for volunteers to provide some of these services may be difficult to obtain. Even though this expansion would improve community safety, most FEM program stakeholders interviewed believe that it should not be the responsibility of the program to assist in developing an emergency management role.

One other type of service that may improve community safety through the FEM program is to have the volunteers provide post-incident analysis. This type of offering would be a service through which the volunteers would share their knowledge with the community regarding a past incident to reduce the likelihood of reoccurring emergencies. Post-incident analysis would be a service most likely offered at no charge, given that the main objective would be to promote community safety. The idea of providing this service produced mixed opinions from FEM administrators and volunteers, as some believed it is not an effective use of FEM resources. Others interviewed expressed a strong interest in providing this potentially simple service to increase community safety.

We recommend that the CFA administrators and volunteer firefighters use this project's interactive resource to consider benefits and requirements of the gathered options to help determine the FEM program's future. Since we were limited in our role as a third party consultant, some final analysis remains for the CFA to complete. We suggest that the Authority completes an in-depth analysis of the ideas, taking liability into consideration, to create a list of approved options for the brigades active in the FEM program to offer to the small-to-medium sized business sector. These brigades could then have the opportunity to choose and implement the services they believe fit their resources, making sure that the service would not compete with any local providers.

As CFA considers the future of the FEM program, we suggest that it place more emphasis on the possibilities of e-commerce. Most CFA firefighters interviewed, even those in the rural areas, believed that the majority of their FEM clients have access to the Internet. Many FEM administrators and volunteers interviewed were in support of the addition of e-commerce to the current procedures of the business; however, a few were sceptical about implementing the technology due to the worry that it could cause drastic changes in FEM operations. We recommend that as the CFA continues to assess the possible use of the Internet to sell products, schedule service appointments, and maintain work orders in a database accessible to the administration, brigades, and FEM customers.

Based on evidence from discussions with brigade members, we recommend that the Authority establish some method for sharing information on brigade activities, such as newsletters or emails, to enhance services to communities. If brigades had access to more information about what other brigades are doing to meet their communities' needs, volunteer firefighters could enhance the services provided from their own brigade. Also, we recommend that if possible, brigades consider sharing specialty equipment that they may own with other firefighters to improve the services offered over a broad region.

Through research and analysis, we have presented opportunities for services that the Fire Equipment Maintenance program could offer to potentially enhance community safety, and, in some cases, provide a financial return. If the CFA decides to support the expansion of brigade offerings, the program could solidify its customer base in the small-to-medium size business sector. This possible expansion would assist in sustaining the relationship between brigades and their communities, which could help the CFA maintain their objective of creating safer communities. Increased community safety could create a better living environment throughout the state of Victoria.

References

- Ansul Incorporated. (2004). Ansul Home. Retrieved January 22, 2004.
<http://www.ansul.com/>.
- Australasian Fire Authorities Consul. (2003). Products and Services.
<http://www.afac.com.au/products/products.html>
- Baczewski, M., Callahan, J., Marineau, J., & Stafford, K. (2002). Evaluation of CFA's Approach to Bushfire Risk (Interdisciplinary Qualifying Project, Worcester Polytechnic Institute, 2002). *WPI Gordon Library, 03D037I*.
- Bartlett, Robert E. (1997). *Preparing International Proposals* London: Telford Publishing
- Blackwell, Edward. (1998). *How to Prepare a Business Plan (3rd Edition)*. Milford, CT: Kogan Page, Limited.
- Chubb. A solution to security, fire and safety risks. Retrieved Feb 4 2005.
<http://www.chubb.com.au/profile.asp>.
- Chubb. Fire Extinguisher Colour Codes & Fire Prevention. Retrieved Feb 4 2005.
http://www.chubb.com.au/fire_whichExtinguisher.asp
- Chubb. General Occupant Training. Retrieved Feb 4 2005. <http://www.chubb.com.au/downloads/fire/General%20Occupant%20Training.pdf>.
- Chubb. Hazard & Risk Assessment for Confined Space Entry. Retrieved Feb 4 2005.
<http://www.chubb.com.au/downloads/fire/Hazard%20&%20Risk%20Assessment%20for%20CSE.pdf>.
- Chubb. Training Brochure. Retrieved Feb 4 2005. <http://www.chubb.com.au/downloads/pdfs/Training%20Brochure%20Final%20Proof.pdf>.
- Country Fire Authority. (2004). *Annual Report 2004*. Victoria, Australia: Author.
- FedEx Australia Frequently Asked Questions. (2005). <http://www.fedex.com/au/services/faq.html>
- FEMA: United States Fire Administration. (2004) *Funding Alternatives for the Fire and Emergency Services*.
- Gordon, Dave & Skibo, James. (2002). *Reality vs. Plan: How Organizational E-commerce Strategies Evolve*. Hershey, PN: Idea Group.
- Hall, Richard and Adams, Barbara. (1998). *Essentials of Fire Fighting: Fourth Edition*. Stillwater, OK: Fire Protection Publications.
- Helgeson, Donald V. (1997). *Engineers and Managers Guide to Winning Proposals*. Norwood, MA: Artech House, Inc.

- James, Derek. (1986). *Fire Prevention Handbook*. Cambridge, England: University Press.
- McGarvey, Robert. (2000). *How to Dotcom (A Step by Step Guide to E-commerce)*. Irvine, CA: Entrepreneur Press.
- NAFED. (2005). National Association of Fire Equipment Distributors. Retrieved January 22, 2004. <http://www.nafed.org/>.
- National Volunteer Fire Council. (2005). National Volunteer Fire Council Homepage. Retrieved January 22, 2005. <http://www.nvfc.org/>.
- National Volunteer Fire Council. (2000). NVFC E-Update. Retrieved Feb 4 2005. <http://www.nvfc.org/legup/20000519.html>.
- NFPA. (2005). NFPA. Retrieved January 20, 2005. <http://www.nfpa.org/>.
- Rapoza, Jim. (1998). PC Week Shoot-Out Helps Firetec Apparatus Brokers Add Electric Commerce Capabilities to its Web Site. *PC Week*, 15, 99.
- Reliable Fire Equipment Company. (2005). Fire Protection Systems and Equipment. Retrieved January 22, 2005. <http://www.reliablefire.com/>.
- SimplexGrinnell LP. (2004). SimplexGrinnell. Retrieved January 20, 2005. <http://www.simplexgrinnell.com/>.
- Shannon, James M. *NFPA President Testifies in support of SAFER act*. June 4, 2003. Viewable: <http://www.nfpa.org/itemDetail.asp?categoryID=651&itemID=18999&URL=Research%20&%20Reports/Fact%20sheets/Homeland%20Security/FPA%20testimony>
- Standards Australia. *Standards On-line Subscription Service*. 2002. Viewable: <http://online.standards.com.au/online/>.
- Tyco International, Ltd. (2004). Tyco. Retrieved January 20, 2005. <http://www.tyco.com/>.
- Underwriters' Laboratories of Canada. Fire Extinguishers. Retrieved Feb 4, 2005. http://www.ulc.ca/consumer/fire_extinguishers.asp.
- Washington State Office of the Attorney General. (1998). AG Cracks Down On Firefighter Fund-Raiser. Retrieved Feb 4 2005. http://www.atg.wa.gov/releases/rel_gehl_012298.html.

Appendix A – Successful Examples of Potential Opportunities

The purpose of this appendix is to provide detailed descriptions of examples of certain potential opportunities that are referenced in the interactive resource and the final report. In the potential opportunities slides of the interactive resource and the findings section of the report a one-sentence description and reference are included, but in case a more detailed description is desired then that information is available in this section. Research is presented on offerings provided by fire organisations from different areas of the world in the fields of workplace training, emergency management services, fire safety product distribution and servicing, and other opportunities. There are no successful examples of post-incident analysis offerings presented, as none were found in our research. The organisations used to show successful examples are provided in alphabetic order, including a brief description of the company along with categorised services offered by these organisations that may be related to potential opportunities presented in the Findings section.

A-1 Hydrant Services

A-1 is a company based out of Ontario, Canada that has a staff of 19. They offer services across the province of Ontario to both government and private hydrants.

New Products and Services

The following is a list of the detailed hydrant services that they offer to their customers, which can be found at their website.

Inspection Services.

- Replacement of Hydrants.
- Repair of Fire Hydrants damaged by wear, abuse or collision.
- Grade adjustments -- raising or lowering of hydrants to grade without digging.
- Preventative maintenance -- overhauls and upgrades.
- Conversion of internal parts and upgrades to upper barrels.
- Repacking and "O" ring conversion kits.
- Storz port conversions.

Pressure Testing Services

- Pipeline/Main testing up to 500 PSI or to suit.
- Portable pumping equipment (up to 750 USGPM) to fill large pipelines efficiently.
- Hoses, adaptors, tools, fittings and fixtures to suit any application.
- Metered feeds and inductors for Chlorination or Chlor-A-Dyne'.
- Leakage measurement and location.

Flow Testing

- Single hydrant flow tests, measuring discharge only.
- Single-pair hydrant tests, measuring flow with a corresponding residual.

- Group flow testing, in accordance with NFPA standards for colour coding of hydrants.
- C-factor analysis and hydraulic calculations.
- Flow curve generation, for pipelines.

Source: <http://www.owpinc.com/A1/home1.html>.

Australasian Fire Authorities Council (AFAC)

In Australia, The Australasian Fire Authorities Council (AFAC) is the accrediting agency for all fire training courses and influences fire protection standards across the nation. AFAC is a non-government organisation that has the main objective of creating a safe environment by representing fire authorities. With 23 full time members and 14 associate members, AFAC represents all fire services, emergency services, and land management organisations across the country of Australia. Their goal includes coordinating resources and communication between these different agencies.

Training

The Council offers some training directly to private industry. The two categories of training offered are Fire Emergency and Response Training (FERT) and the National Fire Curriculum (NFC). The FERT program consists of topics that are focused toward commercial businesses. These topics include training for groups of employees along with education for the individual in a workplace who is responsible for fire safety or emergency management. The NFC program offers both a basic level certificate for being a firefighter and further certificates leading to an advanced diploma. The Country Fire Authority training facilities are approved by AFAC to offer any course in either Fire Emergency and Response Training or the National Fire Curriculum. The FERT courses are relevant to the Fire Equipment Maintenance program because they are designed for the customer base that brigades already target. Another offering from AFAC is FERT training manuals, which are less costly than actually taking the course, although they do not provide the same personalised education. The following list displays the training course topics that are offered by AFAC under the category of Fire Emergency and Response Training.

- Preventing Fires and Emergencies
- Use of Extinguishers, Hose-reels and Fire Blankets
- Reacting to Fires and Emergencies
- Workplace Emergency Control Organisation and Procedures
- Controlling Small Fires and Emergencies
- Safeguarding People during Workplace Emergencies
- Fire/Emergency Response Team Operations
- Workplace Fire/Emergency Prevention
- Coordinating the Emergency Control Organisation
- Fire/Emergency Response Team Leadership
- Coordinating Workplace Fire/Emergency Prevention

Source: <http://www.afac.com.au/products/courses.html>

AHA Management

AHA management is an engineering firm based out of Hornsby, New South Wales that offers services of facilities, energy and project management to clients all over Eastern Australia. The firm provides “Essential Services Maintenance”, which is a service that ensures a company all of their Essential Services are being upheld to the proper standards. A brief presentation of the relevant codes for a building can be provided for a business owner through this engineering firm as well.

New Products and Services

AHA provides a service that is titled “Maintenance of Emergency and Exit Lighting Installation”. The firm advertises that although this maintenance seems simple in nature, many contractors do not carry out the necessary steps to ensure that the lighting is upheld in proper condition. AHA provides a service that they propose on the company’s website provides all the work necessary to comply with the Australian Standards, but more importantly keeps the occupants of the building safe.

Source: <http://www.aha.com.au/serv03.htm>

Entire Fire Protection

Entire is a company based out of Melbourne that is involved with large businesses fire protection. Their current customers are large buildings in Melbourne and Sydney, such as the Crown Casino and Melbourne Cricket Grounds.

New Products and Services:

The following is a list of fire safety equipment that Entire distributes and/or services for customers.

- Hydrants
- Portable fire extinguishers
- Fire Blankets
- Emergency and Exit Lights
- Fire Doors
- Fire Detection and alarm systems
- Sprinkler Systems
- Special Hazards Systems
- Safety Signage
- Passive fire services

Source: <http://www.entire.com.au/fire-equipment.htm>

Hamilton Fire Department

Hamilton Fire Department is a firehouse in Massachusetts, USA who uses predominantly paid-call firefighters to protect the community. There are four fulltime members who work regular working hours during the week, but the main force is the call members. This department uses fundraising to gain money for their private firefighters association, which is then used for death and injury benefits for its firefighters.

Training

Hamilton firefighters offer a variety of courses involving first aid training including: Cardio Pulmonary Resuscitation, basic first aid, and spinal injury management. These courses are offered in accordance with the American Red Cross, often lasting a few hours. Some times, employees from local businesses are in attendance at the training sessions.

Other Opportunities:

The firefighters offer demonstrations on the Jaws of Life, a tool used to extricate trapped individuals in car crashes. These demonstrations are given as a community service in order to give the community members a good idea of what happens when a car accident occurs.

Source: Interview with Dan Parsons (2005)

Harper's, Somers and O'Sullivan

Harper's, Somers and O'Sullivan is an environmental engineering firm based out of Broadmeadow, New South Wales that focuses on land management consultation in Eastern Australia. The services of the firm include many forms of land surveying, ecology assessments, training, business planning, and project development.

Other Opportunities

The engineering firm offers a wide range of bushfire-related services. Particular services include training individuals to be aware of the threat of bushfire and also assisting companies in constructing buildings in bushfire-prone areas. The work done is advertised as being in compliance with section 3959 of the Australian Standards, and the firm also claims to make regular contact with the local fire service to improve services.

Source:

<http://www.hso.com.au/index.php?option=content&task=view&id=31&Itemid=92>

Humanscale

Humanscale is a company that conducts international business from New York, London, Prague and China. The main focus of the organisation is to provide ergonomic products to businesses with the intention of increasing employee comfort and decrease the likelihood of long-term injuries. The products offered, anything from keyboards to safety kits, are available for purchase through the Internet.

New Products and Services

Humanscale offers a fire warden vest that contains eight light sticks, emergency water, alerting devices, three smoke hoods and a flashlight. This vest cost US\$480.

Source: http://ergonmicedge.com/specs/FireWardenVest_Info_Sheet.pdf

Kingsfield Fire Station

Kingsland has a fire station in East-London England that covers about 4 square kilometres by a group of paid firefighters that, on average, receive 4-5 calls per day.

Emergency Management

The department has created a leaflet for emergency evacuation plans. The document, which is available in 18 different languages, includes information on how to create an evacuation plan because in case of a fire it is difficult to navigate through smoky areas. The plan also has suggestions on where to keep phones or other communication devices for help in an emergency situation.

Source: http://mysite.wanadoo-members.co.uk/Kingsland_Fire

London Fire Brigade

London brigade is the third largest fire service in the world that supports 112 stations around the metropolis. The staff includes are around 5,700 paid firefighters and another 1000 people working administrative support. This is a fire service that is constantly focused on improving fire awareness and emergency management.

Training

The brigade offers four different training courses for businesses run by the Commercial Training Unit. The following are descriptions of the course that were found on the website.

The “Fire Awareness Course” lasts 3 hours and is £80/person, taking place at the Brigade Training Centre. The objectives of the course are:

- Explain the principles of combustion, fire spread and fire prevention
- Identify and report on generic hazards and deficiencies in the workplace environment
- Recognise the importance of workplace fire drills and effective response
- State what actions to take on discovering a fire
- React correctly to an alarm of fire being raised

The “Fire Awareness Course With Extinguisher Training” is designed for a group of employees from the same business. It is a half-day course that costs £1,080 per session. Everything from the Fire Awareness Course is included with additional training intended to teach proper fire extinguisher usage. The company is in charge of the venue.

The “Fire Warden Course” is designed for a member of the company that is in charge of workplace fire safety. The full day course is £180 per person and takes place at the London Brigade Training Centre. The objectives displayed on the website are:

- Explain the principles of combustion, fire spread and fire prevention
- Identify and report on generic fire related hazards and deficiencies in the workplace environment

- Explain the principle of means of escape and recognise the importance of workplace fire drills and evacuation
- State what actions to be taken on discovering a fire
- Understand basic human behaviour in a fire situation and know how to react correctly to an alarm of fire being raised
- Explain the role of the fire warden in relation to workplace fire safety and current legislation
- Select and use a range of portable fire extinguishers

The “Fire Security Course” is a full day course offered to security staff of companies who are in charge of fire safety. The course is £180 per person and is held at the London Brigade Training Centre. The objectives are:

- Explain the principles of combustion, fire spread and fire prevention
- Identify and report on generic fire related hazards and deficiencies in the workplace environment
- Explain the principle of means of escape and recognise the importance of workplace fire drills and evacuation
- State what actions should be taken on discovering a fire
- Understand basic human behaviour in a fire situation and know how to react correctly to an alarm of fire being raised
- Identify and correctly select a range of portable fire-fighting equipment

Source: http://www.london-fire.gov.uk/about_us/who_we_are.asp

Manchester Fire Service Industrial and Commercial Training Unit (ICTU)

ICTU is a training unit that is based at the Greater Manchester Fire Service Training Centre. There are training courses for both local businesses and also some for firefighters.

Training

The training unit is mostly focused on training employees of local companies in fire safety education. The following is a list of the course offered including the title of the course, how long it takes to complete and the number of people the course is designed for.

- Fire Extinguisher, 1 hour, 20 employees
- Fire Marshal, 1 day, 1 employee
- Fire Safety, 3 days, 1 employee
- Fire Awareness, 3 hours, 20 employees
- Fire Team, 1 day, 1 employee
- Breathing Apparatus Industrial Basic, 1 day, 1 employee
- Breathing Apparatus Fire Team, 3 days, 1 employee
- Petroleum training, 1 day, 1 employee
- Immediate trauma care, 1 or 2 days, 1 employee
- Ladder handling, 3 hours, group of 10
- Advanced ladders, 2 days, 1 employee

Source: <http://www.firerescue.homestead.com/ICTU.html>

Office of the Fire Marshall Ontario (OFM)

The OFM supports fire stations across the state of Ontario by offering various services. They also play a large role in the fire safety codes by advising the Ontario government.

Training

The Fire Marshall offers a two-day seminar for members of industrial businesses who are in charge of workplace fire safety. The course includes information on how to express the seriousness of fire to employees by describing how easily it is started and spreads, as well as the potential damage that can result. This type of training is different from training employees, because the course prepares a person of the company to teach fellow employees instead of the firefighters.

Source:

<http://www.ofm.gov.on.ca/english/Education/Firecollege/IndustrialandEmergencyPlanning.asp>

RRS Engineering

RRS is an engineering firm based out of Houston, Texas with many locations across the American Midwest. They offer many services that are based around risk management.

Emergency Management

The firm offers many services that help maintain safe work practices as well as the reaction to an emergency. The following is a bulleted list of these services that are provided to industrial companies across the US.

- “Construction Observation” - periodic on-site visitation to verify work progress, address installation issues and inspect fire protection systems installation for general compliance with contract documents.
- “Drawing Review” - analysis of drawings to determine compliance with provisions of applicable specifications as well as laws, codes and standards.
- “Emergency Preparedness Planning” - development and/or review of emergency response plans for the facilities, training programs and systems; equipment operations and maintenance plans.
- “Fire Protection Design Criteria” - development and/or review of the fire safety program, which addresses applicable codes, specific requirements of the project and alternative approaches to code compliance and design objectives.
- “Inspection/Testing” - inspection, performance testing and evaluation of systems, review of final submittals and record drawings for verification of project completion and acceptance by authorities having jurisdiction.
- “Negotiation” - communication with the authority having jurisdiction to explain, clarify and interpret the design intent of the project and review the applicable code requirements.
- “Specification Development/Cost Estimating” - development of cost-effective, performance-based, multiple supplier specifications and preparation of cost estimates for recommended systems.

- “System Review/Evaluation” - review of system drawings and/or actual installations, evaluation and recommendations for improvement of fire protection systems including fire alarm, fire detection, fire suppression, and water supply.
- “Water Supply/Surge Analysis” - computer analysis of available water supplies, water distribution systems, and surge pressures in piping systems to determine system operating pressures that are within the limitations of new or installed systems.

New Products and Services

The firm offers many fire related services that are very modern and innovative techniques for maintaining first attack equipment. The following is a bulleted list from the RSS website explaining these services.

- “Fire Protection Water Supply Systems” - electric motor and diesel engine driven fire pumps, water storage tanks, underground water mains and hydrants.
- “Automatic Sprinkler Systems” - wet pipe, dry pipe, and pre-action.
- “Water Mist Systems” - for enclosed equipment compartments or protection of computer room sub-flooring.
- “Gaseous Extinguishing Systems” - carbon dioxide, Halon and/or Halon replacement agents for computer rooms, telecommunication facilities, dip tanks and specialized industrial applications.
- “Foam Systems” - protein and fluoro protein, AFFF, FFFP and high expansion type systems for aircraft hangars, flammable liquid storage tanks/areas and loading racks.
- “Fire Detection and Alarm Systems” - smoke, heat, flame and flammable vapour detectors, audible and visual signalling appliances, firefighter telephone, enunciator panels, fan status indication, smoke control and voice communications.

Source: http://www.rrseng.com/s_fire.php

Seton Australia

Seton Australia is a distribution company that is based out of New South Wales and uses online trading as the primary form of business. The company sells over 11,000 products to businesses of Australia including anything from presentation materials to fire safety equipment.

New Products and Services

A fire warden kit is available to purchase off the Internet, which contains; a reflective vest, a megaphone, a high-powered flashlight, a hard hat, white light sticks and 5 reflective bands.

Source: http://www.seton.net.au/product_detail.cfm?Masterno=A15395W

Victoria Government

Emergency Management

Through the National Government of Australia, the Victorian Government offers brochures on the following topics:

- Disaster Education Resources for Schools
- Earthquake & Tsunami Awareness
- Emergency don't be scared by prepared
- Floods: Warning preparedness & Safety
- Landslide Awareness
- Managing Animals in Disasters
- Protecting Caravans & Light Structures
- Severe Thunderstorms: Facts, Warnings & Protection
- Surviving Cyclones

Source:

<http://www.ema.gov.au/agd/EMA/emaInternet.nsf/Page/RWP95670B6D96D7C5E1CA256F4D00042E6F>

The Department of Human Services, which is a division of the Victorian government, offers a set of guidelines for business to help plan for emergency planning and recovery. This is a very long and detailed document including such things as awareness for certain emergencies, preparing for recovery, and what should actually be included in the recovery process.

Source: <http://www.dhs.vic.gov.au/emergency/infores/guidelines.htm>

Appendix B – Primary Interviews

Interview Questions

“Just before we get started, are you all set with us taking notes during this interview? We will keep your name confidential if you would prefer.”

We are students from the United States working with FEM manager Terry Hayes on a project with the community safety sector of the CFA to look into ways to broaden the business of the FEM program. Currently the program seems to be one-dimensional and single streamed only offering three products with services limited to these products. The CFA administration sees possible opportunities to develop the program, which could improve emergency preparedness. Our goal is to explore possible areas that the FEM business could move into based on input from various people involved in the program. To accomplish this goal we will be completing a series of interviews in the next few weeks and then analysing suggestions. Our final product will be a presentation and formal paper for CFA in early May.

How familiar are you with the CFA/FEM program?

Have you had a formal role in FEM program? If so, could you explain?

One area that we are interested in researching is new products and services that could be introduced to the FEM program that may support the objective of promoting community safety and may possibly raise funds for volunteers. Do you agree that this is worthwhile research of interest?

YES:

Products

What type of products do you think could be considered?

Why might this work well?

Services

Do you have any ideas for equipment services that should be considered?

Why might this work well?

NO: Why not?

When people consider other roles for FEM they often think about workplace education.

Are there any topics that you believe employees of a light industrial or commercial business would benefit from training in?

Do you have any suggestions on specifics such as possible leave-behinds and what time of day this training should occur?

Do you think an audience would be receptive enough to make the training beneficial to the company?

CFA has expressed a desire to have a broader role as an emergency management organisation by 2010.

What things should we be considering with this topic to support the CFA in meeting this objective?

Example if needed

An example of this would be helping business owners by preparing evacuation plans.

Volunteers learn many things from turning out to emergencies.

How best could this information be shared to business owners in order to reduce the likelihood of a similar incident occurring in the future?

What are general differences that you would like to see in the FEM program in the future?

Putting the FEM program aside, are there any ideas that you have for brigades to help the commercial sector to improve community safety while building a strong reputation with light industrial and commercial businesses?

One specific idea that has been suggested and has been used for similar services is the implementation of e-commerce. This could include such things as ordering products off the Internet as well as keeping clients informed about servicing appointments.

Do you think that something along these lines would improve the FEM operations?

Do you think that it is something that would be supported by customers?

What other activities do you think this electronic form of communication could assist when thinking about this commercial sector?

Based on your understanding of our project scope, is there any more information you have to offer that will help us meet our goal?

Do you have any contacts that would be helpful for our project?

Interview Responses

Chris Carson
Community Safety Administrator
March 24, 2005

Carson, C. (March 24, 2005). [Interview with M. Ochs and W. Culver, Community Safety Administrator].

No formal Role

“No function what so ever”

Community Relations

Emergency Management Role

CFA needs to think about services and products

Non-operational manuals need improvement

No point in having well maintained products if no one knows how to use them

Need to know the behaviour of usage rather than simple usage skills

People get the Emergency Management Manual but don't know how to use it

“How do we integrate FEM with business continuity?”

How will businesses inform their employees if there is an electrical failure?

There needs to be a plan for this

Interactive Training

There's no set way to do this

Theory-based training

Have a clarified objective for the FEM

FEM is seen as a business issue (internally; within the CFA)

No integration of FEM in the CFA

“FEM has a role to play more broadly”

Create a community awareness of emergency management

It helps large industrial communities

Yes, this is a good idea.

Needs to be more community awareness

Push people to make kits

Push people to become more prepared

Have products available through FEM

Offer them in stores for home usage

Offer wildfire products

Metal buckets

Massive Market in wildfire products

“Absolutely.”

It will establish more ownership in the field

Community emergency management planning for their specific needs

Some communities have chloride tanks but don't know what to do if

something goes wrong with it

Bruce Conboy
Volunteer at Mt. Martha Brigade with FEM (VISITED BRIGADE)
President of VRFBA
March 30, 2005

Conboy, B. (March 30, 2005). [Interview with M. Ochs and A. Ellison, Volunteer].

One contractor

- 30 Places (customers)
- Preschools, schools, shops

Brigade is active in FEM

Smoke alarms

- Replace battery for the forgetful, disabled, and elderly
- Deliver a message of fire awareness

Risk Management

- Have a fire warden and fire drills
- Emergency management planning
- Prepare children (fire drills)
- “The best way to get through to the community is through the kids.”

Identify the risk issues

- Identification of:

- Fire
- Mitigation
- Fire fighting
- Recovery

- Cliff rescues
- Tree falling
- Cats in trees

Sit down with them and debrief

- Newsletters (refer to newsletter that he gave us for an example)
- Build up some respect so people will listen

It runs smoothly

- “It runs itself here.”

More fire awareness for factories

- Being CFA gives you a foot in the door
- How to use an extinguisher
 - Most employees probably don't know
- Train in fire identification and what equipment is needed

9. “I don't have a problem there as long as it's backed up with a good system.”
 - Need sufficient training with the software or whatever is used
 - Most customers would use an internet

Certain that if you went for a good quality system with proper training, it would work well

Peter Davis
Volunteer Patterson Lakes Brigade
VUFBA Secretary
March 31, 2005

Davis, P. (March 31, 2005). [Interview with T. Schott and W. Culver, VUFBA Secretary].

Peter is the Secretary of the Urban Association and he knows of the FEM program through meetings, but has no hands on experience.

N/A

Things such as hydrant maintenance are too complicated for the volunteers and they should be keeping to the simpler things, like what they have now. The FEM program should think about getting a bulk contract with one of the larger organizations like Tyco or Chubb and offer everything such as emergency lights, sprinkler systems, etc, and just have the contractors do the detailed skilled things. FEM should think about offering some sort of evacuation procedure training and then oversee a mock exercise to confirm that the business has learned the proper techniques. They (Volunteers) should provide basic extinguisher training, like which one to use what situations and the basic skills of putting out fires. This way the workers can put out the fires with the hose reels and save a lot of fire damage. Peter would like to see CFA reach its goal by having SES (State Emergency Services) under the umbrella organisation of CFA. SES currently does the search and rescue and helping with rooves on houses, which CFA volunteers could support. Road accident rescue calls are currently shared by many CFA brigades, so this would not be a big change. So at the end of the day CFA already is an emergency management organisation, and by merging SES, this would add about 5-6000 volunteers to the organisation. This would help greatly when it comes to political power in the state.

It is the corporate responsibility to do the post-incident analysis. If there is a trend, then FIRS will pick it up. Maybe some sort of special comment on the reports would be nice for specific cases. I should not be the brigades responsibility to report back any trends, etc as they already have a good relationship with their communities. Media personnel may be what you are enquiring about and there is not enough action or incidents to report to have such a position at most of the brigades.

N/A

Door knocks with fire prevention pamphlets work well, we just should do more of them. CFA also does letterbox drops which go over well. I don't think we can impose anything more on the brigades as the volunteers are doing enough as it stands.

E-Commerce sounds like a great idea both corporately and commercially. To have a computerized system in Ballarat would save a lot of time and headaches. Offering products online for consumers to purchase would also be beneficial for the consumer. One important thing is that the brigades still get revenue for online orders. The last thing we want to do is take business away from the brigades.

Hamilton Fire Brigade (VISITED BRIGADE)

Bruce Snell - Brigade Captain

Bill - 45 years FF, 11 years FEM

Mark Duffy - Paid coordinator

March 22, 2005

Snell, B.; Duffy, M. (March 22, 2005). [Interview with T. Schott and W. Culver, Volunteer Brigade Members].

As the brigade we are very familiar as we have been participating in it for many years.

Yes all of us actively engage in it. Bill does it as his sole volunteer duty.

Yes there are many other things all found under Building Code 11.

Fire plugs – they already check them because they use them. Booster points.

Fixed hydrants, but you need a licensed plumber to be qualified. No longer the canvas hoses. Hose reels and extinguishers for new buildings to make sure that it is fire compliant “certificate of occupancy.” Most replacement hoses, exits, alarms, sprinklers, ground ball hydrants (local water authority responsibility). Marking of hydrants.

Currently do fire extinguisher training. We train for emergency management plan. There you could train the trainers or go into the company to train the users for the extinguishers. It takes a number 4 certificate to train the trainer.

As stated above, emergency management plan. We currently offer a binder for 110 dollars. We currently offer evacuation plans for philanthropy groups for free. There are three important steps; plan, practice and evaluate. So you need to train, make sure that it is effective and if needed change the plan. All of this is evaluated by a person outside of the emergency plan.

Last year there were several incidents with dumpsters being adjacent. They were set on fire and the brigade is planning on having a “street corner” like meeting to get together with others and discuss ways for improvement with help from the police station. These included; clean up your rubbish more often, have an extra collection day or have a sensor light for protection. This possible breakfast will be to no charge to the community as it is a sense of prevention.

Seemed inappropriate

Inspection for fair grounds. We already do this in a sense by visiting and doing a moderate check and making sure someone is always on call for peace of mind for the organization running the fair. Major functions at the fire house including offering the space for training as it rarely used. At a minimal charge for good community relations.

E-Commerce certainly couldn't hurt. It is important that brigades always maintain personal, face-to-face contact with customers when supplying extinguishers. The other thing is that most customers already have fire equipment but just need servicing. Also a lot of business is companies coming to the brigade and it is important to have extinguishers ready to sell. This may also be difficult getting it out to people that we are offering products on the web. Currently the advertisement consists of a section in classified every week and also a listing in the yellow pages.

Heywood Fire Brigade (VISITED BRIGADE)

“Popeye”

“Zeke”

March 23, 2005

“Popeye”; “Zeke”. (March 23, 2005). [Interview with T. Schott and W. Culver, Brigade Volunteers].

I work 6 days a week and spend 9 hours on my day off doing FEM

We are the only two members of the brigade qualified to carry out FEM.

There is not really a lot of time for other products. We already inspect hydrants to make sure they are correctly located but the town water supply does the maintenance and testing. We would need a lot of money to obtain the equipment necessary for this type of service.

The only training I do is when an extinguisher needs to be discharged because it is expired, I ask an employee of the company if they would like to step out back and get a feel for it because they may have not ever discharged one. You know, I've done it a hundred times so I might as well let someone else do it. We are not exactly qualified for training customers we could be sued if they believed we had officially trained them.

Not off the top of my head.

That is the work of the Fire Investigators.

It seems to be a pretty good operation right now. Servicing the extinguishers and hoses is enough business for us and we seem to make a good amount of money with it.

No we like what we do now.

Yea that would be helpful to customers. The only thing is that most customers already have the products but they just need to be serviced. It still would be important to have personal relations.

Not at this time.

Charles King
Administrator
Volunteer at Dromana Brigade
April 1, 2005

King, C. (April 1, 2005). [Interview with M. Ochs and A. Ellison, Volunteer].

FEM Experience:

Few years ago: Treasurer of his Brigade, dealt with finances and administration of their brigade's FEM Program
FEM is an opportunity for Firefighters to do risk assessment in their community

Sub-goal is the financial benefits of the program

Problem is that the core people in each brigade doing the FEM work is very small

Brigades begin to fall behind (happened to Dromana)

Choice of going to contractors or selling to another FEM brigade

Contractor rate somewhere around 60% contractor, 40% brigade

When the brigade isn't local, often they lose sight of the community aspect and fall behind. Service turnaround times increase

All national FEM companies going to full fire business including:

Detection

Alarm systems

Sprinkler Systems

Monitoring

There is a rule for brigades who give up the FEM program officially:

Must wait 5 to 7 years (one or the other) before they can start doing FEM work again

Proactive contractors are beneficial:

Getting customers as well as helping those already present

Using a brigade member as a contractor is very beneficial

because they know how important the FEM program is to their Brigade, as well as are less apt to promote work not through FEM

Community accepts Volunteer brigade members entering their premises a lot easier than other random contractors

It would be beneficial to the program if the fact that the money spent on this service of the products sold goes back into the community fire brigade, more community members would be willing to take on the service.

There is a general respect for the CFA logo, and that both brings in and retains customers.

FEM problems:

Brigade restrictions on what they can and cannot do creates a problem

Can't compete with local hardware stores/other larger FEM

businesses in the area when they only offer half of the necessary services

The time and availability of brigade volunteers to do the work

Current trend seems to be looking to private contractors to do the work for the FEM brigade and receive a small portion of the profit

In rural areas the FEM Program is the Life-Blood of brigades financially
Training of volunteers is important influences the capacity of the volunteers to carry out the work

Using the older volunteers who still want to be active in the brigade but no longer are able to turn out to calls is also a good way to keep them involved without putting too much stress on them or putting them in danger

The most effective set up for brigades doing the FEM program is running it like a business and using brigade volunteers as paid contractors to do the service.

A new product or service may be too much for many brigades to handle as some are already falling behind on their schedules and are overstressed
There are also a plethora of private FEM companies in the market now
Things to look into

Can the FEM program compete with the prices set by the private industry now?

These prices are determined by the community that is being served...Prices vary state-wide

Community Education:

Good to educate the public about fire awareness and their response to emergencies

Some companies don't do it; however, it seems that it should be necessary for there to be some training of the members of the business being serviced

There is no point in putting a fire extinguisher into a building if no one is going to know how to use it in the case of a fire

AN EVENT THAT HIS BRIGADE DOES

Trader's Night:

Bring in community business owners and managers.

Go over what this extinguisher is designed for

This is how you use the extinguisher

The community comes to the Firehouse

It is very effective if you are able to actually demonstrate the use of the extinguishers, let them set them off

It is important to look into the current capacity of CFA resources in order to determine if an idea is possible

What is the capacity of the volunteers in the diverse brigades?

Do companies expect to get this kind of service for free, or would they be willing to pay for it

Is there some sort of legal or physical leave-behind that the brigades can leave with the community members as proof that this service has been completed?

What about proof for insurance discounts?

When people are charged money for a service they expect some sort of guarantee with it

Smoke Detectors:

Currently work with the elderly in the community offering to come into their apartments and houses to change their batteries twice a year

- gives the firefighters an idea of where the elderly (at risk) members of the community live
- makes sure the detectors are in working order
- makes sure the detectors are in the correct place
- Free of charge for elderly

Community Development:

- Maybe worthwhile to look into residential industry as community?
- Bring people to the firehouse: open houses
- All boils down to the availability of resources
- Older people are good with PR

Post-Incident Analysis:

- Getting information back to the community
- All judgments spread back to the community must be qualified
- One on One discussions with businesses are most effective
- Determine demographic characteristics of the group that needs to consider this new information

E-Commerce:

- Most people are starting to accept and embrace new technology
- There are still a fair number of people who don't have computers or the internet in the more rural areas of the state
- Use e-commerce as a tool, not the answer to all problems
- Brigades Online: 10,000 people registered out of 60,000 members
- Look into the use of SMS text messaging notifications as well

Final thoughts:

- Administration is very important to the success of this program
- Administrators will make or break the program.

Craig Lapsley
Deputy Chief Officer
March 21, 2005

Lapsley, C. (March 21, 2005). [Interview with T. Schott, W. Culver, M. Ochs, A. Ellison, Deputy Chief Officer].

- 1.
- 2.

The most important thing I see that the program could offer is some sort of quality assurance to its customers. Have products, initiatives, and standards to make sure that Australian Standards are achieved. CFA/FEM could offer an approved list of products by testing them etc. This would not only make sure that the products satisfy the Australian Standards (which are generic, and not best), but it would make sure that the customers would get the best products Victoria has to offer. Overall, the quality of products and services that CFA offers has to be proven to be great.

FEM could offer simple training (take ½ of the working day for employees) to show how to use the fire extinguishers and hose reels. This needs to be practical training, and CFA will need to spend money to make the money. This could be something similar to Queensland's F&R caravan kitchen fire training. Here, customers learn a great amount of content in just a few minutes. It is very interesting in an actual situation. Currently, CFA may only offer restricted training such as a rubbish bin fire. Again, CFA has yet to really spend a decent amount of money to set up a good training program. The hands on training may not be scientific, but overtime, it is very effective. With training offerings, CFA would have to have surveys throughout the year to see how long the training sets in for before more training is necessary. Would they need more training every year? Would they need NEW training every year? In Australia, there is currently a rule where companies must spend a certain percent of money on training for their employees, and CFA/FEM offering something would open a great opportunity for many.

CFA is already an Emergency Management Organisation. They currently respond to floods, storms, fires, car accidents, etc. They want to be "the lead emergency management organization." Now with the risk management approach, for a fire/flood the CFA legislation states that CFA is present for fire prevention and suppression (20) and has the right to be involved in other things (20a). To plan ahead, CFA must keep fire as their corps business. They need to make sure to keep a combat role for fires, and a support like role in floods, making sure to get their priorities straight, using resources wisely.

CFA currently has their FIRS system set up. This is a fire report answering about 100 questions which the firefighters fill out after an incident. Chris Cawley is the manager to this program. The busiest 50-80 brigades email their reports, and the others call them in via telephone. The use of extinguishers or anything else prior to the appearance of the brigade is not reported through this system. If it were to be collected, then there would be a lot to collect from most incidents. You would be able to find out if the extinguishers are ever effective, if the person that used the extinguisher was trained, etc. The system is there, just not being used for that purpose. The FIRS system is used only for internal use. Nicole Harvey knows all about the fire investigations. She sends in one of many investigators when

needed. If it turns out that the fire was started from an electronic device, which is a repeat offence, then a warning will go out etc. Sometimes there will be a design change, like the incidents at fast food restaurants w/ their garbage bins being too close to the restaurant with no fire wall, etc. Most minor impacts are not reported. The method to do this would be quite simple. Have an electronic, seamless email sent to CFA. If there is a significant issue, then the client will be spoken to face to face. Making customers pay for this would be a tough issue, as it may be charging them twice, as they pay levies through their insurance companies. (Sect #87 funding regime)

I would like to see consistency in the FEM program. The qualities of the products all have different standards. It would be nice if the program offered other products which some of the brigades would be able to offer. When servicing extinguishers, the volunteers need to communicate well w/ the input of the planning. As extinguishers move, it needs to be implemented into the plans. CFA needs to be corporately committed to the FEM program. They need to either outsource everything, or not...make the decision. They need to be committed to expansion, and doing it properly. This needs to be a long term outlook, and not change from CEO to CEO. Lots of questions to be answered like why is CFA doing this program, and should the volunteers be doing this, etc? CFA/FEM is going into industries more and more, and they must be successful. The program should grow and mature, then possibly be ready to sell.

Not necessary

E-Commerce would make the process very efficient. The process of the systems would need to be based around a new business model. This is all held back. Jeff Brown is the Chief Information Officer, and he completed a 3-5yr IT strategy and I'm assuming that FEM is not included in that plan and not getting any attention. What are the barriers for this program? The internet is widely used by all. Take Summerville, Victoria for example. The dairy industry is all now electronic. They will need a fire brigade connection, and it could be done smoothly, Deb would be the person to talk to regarding that. A good FEM website would be very beneficial, as it would impact the 300+ brigades involved in the FEM program. Now, it should be just informative, then in 12 months or so, it could be ready for business transactions. An important factor would be, once again, quality assurance. Some brigades are not receiving all of their orders, and if they were all issued electronically, than maybe this would be less of an issue. A data system with 2 way communication for the brigades and the customers would be very beneficial for all. The brigades would know what they have to service, and the customers would know when to expect the service. Again, CFA may need to invest to get the other brigades/customers online. This would be a change in legislation policy for CFA.

Greg Leach
Operations Manager
April 6, 2005

Leach, G. (April 6, 2005). [Interview with T. Schott and W. Culver, Operations Manager].

N/A

Through his previous role as operations manager, in charge of region 15, in Ballarat he saw many who were involved in the FEM program. He has no day to day hands on experience w. FEM, but he has experience with the financial records and them being audited, etc.

FEM has had a long history and it can be broken into two different “businesses.” One is to make money and the other is to be able to get around to look at the risks. The program should be broadened out to include Emergency Management Planning. Currently, the program is looked at very in a narrow minded manner. CFA should either get out of the business, or get more into it. According to Section 20 of legislation, CFA is present to prevent fires from occurring. This program seems to do that. Big corporations like Chubb and Angus fire work with the large business, and CFA works with the smaller ones. Section 11 of the building codes is concerned as do they (the town’s businesses) have the capacity to receive the training. A few brigades should think about getting together to pool up people to offer services.

Emergency Management Training like Evacuation drills may work. Does not think that First Aid would fit the business.

There is no doubt that FEM could assist CFA’s goal for 2010. CFA is currently putting a lot of work on the “Prevention and Response”, and sometimes forgetting about the “Preparedness and Recovery.” When a small business burns down, why not assist them in recovering with advise for temporary facilities, etc.

CFA could absolutely look into the post-incident analysis. Currently, firefighters get in and get out when a fire occurs. They have the opportunity to do a full range of things at the scene. The brigade could also provide feedback such as newsletters or letters, even like if there were a new product being offered or something like that. Face to Face explanations about fires always works well. The volunteers would be able to pass on the information first hand, and the “client” would absorb the information much better that way. A dinner would also work for sure. There is a database for all the local businesses, and this would bring them all together.

In the future, I would like to see FEM more integrated w/ other businesses in CFA. When he was in Ballarat, he could talk to Peter Tod on a daily basis to learn all about FEM and what it had to offer. A lot of business could be offered from different programs at once opposed to two or more trips. Even stuff like training could be synced up.

N/A

E-Commerce would enable information to be shared much more quickly. People would be able to load and regulate accounts. Having products sold online would be huge to the industry, as the products have CFA’s name on it. There is a lot that we are missing out on at the moment w/out using the current technology being offered.

Bob MacDonald (VISITED OFFICE)
VRFBFA Secretary
April 1, 2005

MacDonald, R. (April 1, 2005). [Interview with M. Ochs and A. Ellison, VRFBFA Secretary].

Bob is the Secretary of the Rural Association and has no formal involvement in the FEM program.

N/A

Smoke detector seem to be a growing trend and a growing need for them to be serviced. The hydrants are an interesting issue. There are two acts: CFA Act and the Water Act giving the responsibility of the municipality to the water board. Exit lights would be something to look into, but may require contractors, and smaller brigades may not have the time to get into them.

Educating the workplace would definitely be in the company's best interest. Fire extinguisher use, fire warden systems, and maintenance of hoses would be thing to look into. One individual could go around doing the training for a few towns at a cost, or a brigade administrative officer could do the same, but for many brigades.

You would want to tailor the area to the workload.

FEM should have nothing to do with CFA becoming an emergency management organisation by 2010. Maybe some support at a shopping centre could be provided, but this would be an informal thing.

Post-incident analysis would be something that would come under the duties of the fire investigator. We already do something like that now. To detect the 1st attack records, it would all depend of the knowledge or capacity of the brigades. In some cases, we are not qualified to offer the services. CFA needs to be more professional and more efficient and consistent with the FEM program. Both in trading and purchasing terms and having a good legal and commercial background. There are currently two types of FEM businesses being offered right now; one being commercial and the other being community service. The larger suburbs and cities are creating and operating a commercial business while the small rural "shack" brigades are doing a few hundred dollars worth of business a year, basically just as a service to their community.

N/A

I don't really know how I feel about E-commerce. FEM would have to be careful and can't be too aggressive. They have to watch out for the fair trading issues as the volunteers are a lot cheaper than the commercial industry. CFA has the 3rd most recognised logo, and we cannot abuse that honour.

You should be trying to contact outside contractors....and don't forget, whatever you come up with MUST be an OPTION and not forced into their already heavy workload.

Chris Manson
Community Safety
Senior Dangerous Goods Officer
March 29, 2005

Manson, C. (March 29, 2005). [Interview with A. Ellison and M. Ochs, Senior Dangerous Goods Officer].

FEM Role:

Used to be a part of Community Safety with FEM before Terry Hayes. When the manager at the time was on leave, he would administrate the program.

Products and Services:

Fire Detection – Smoke detectors and Alarm Systems
Suppression Systems – Extinguishing chemicals, Sprinklers
Specialized Systems – Dangerous Goods systems
Problem would be ability to train the volunteers in these areas.

Workplace Education:

Experts should be the only people training the public. Maybe CFA headquarters could hire experts and rotate them around the state to do the community training.
Does not believe that the current level of training of the volunteers would be adequate

Emergency Management:

Evacuation Plans – Not very well covered now by any area of the CFA. Currently the most prominent division would be Dangerous Goods. Would be necessary to define a section of the CFA who is responsible for the Non-emergency response areas of CFA (IE planning)
Doesn't believe that FEM is the most logical place for EM planning to fall. Believes that the CFA in general should start helping the community with that tho
More into prevention, and less focus on Emergency Response; however, this would be a shock for many members of CFA, particularly Operations based members.

Green Book offered by the Dangerous Goods department on Site

Emergency Management Plans:

What is CFA's current plan for the application and distribution of a book like this?

Possibly selling this developed tool to other states in the commonwealth

Needs to be revised often (yearly) so that it remains relevant
New versions of the book focused on specific businesses (IE: dangerous goods for industry, high fire load for book stores, kitchen area for restaurants)

FEM could take this book and distribute it; however, it would have to be revised to include more information regarding Equipment management on a site, and as much information regarding people management.

Post-Incident Analysis

CFA doesn't currently bring that information back to the community; however, they do report most findings to AFAC and FPAA and they distribute it back to the business community through codes and newsletter updates.

CFA could use their community outreach abilities to more effectively distribute this to the brigade's particular communities; however, and also would be more effective in stressing the importance of it.

Example: Restaurants using LPG for their stoves. AFAC doesn't have the ability to speak directly to the public and those at risk. They can just indirectly spread the information through documents and newsletters. Because the CFA has so much knowledge about Wild fire and much less on structural than other brigades such as MFB, the CFA would have an effective knowledge base to make its way towards a leadership in Wildfire prevention and awareness.

General Differences in the FEM program:

It's a good program the way that it is running now.

Any massive changes to its structure wouldn't be warranted

It needs to make sure that it stays true to its name

Focus more on perfecting the Fire Equipment Maintenance services

Spend less time focused on expanding into Emergency Management services

E-commerce

Be aware that jumping right into the field may have adverse effects especially when taking into account the necessity of training many computer illiterate brigades how to use it

Easing into the system would, in the long run, benefit the business. Almost essential in today's world to have some sort of Internet based trading.

People are more willing to buy from an expert in the field, and having a larger business with a website will assist in giving that image.

Post-incident again:

Would be difficult for volunteers to have the time to go to all the businesses in a community and educate them about the fire or emergency they responded to.

Paid members of the FEM program could have the time if they specialized in this kind of service

Go to different businesses across the state and spread knowledge about the dangers in their business

General Changes

Very happy with the current program

Possibly look into the Detection and Protection Systems

Make sure everything isn't over-engineered and overpriced. Give the customer what they need, nothing more, nothing less

Try and get the big chains to use FEM again, that brings in a lot of revenue

Darren Mathews
Online Services Administrator
March 22, 2005

Mathews, D. (March 22, 2005). [Interview with A. Ellison and M. Ochs, Online Services Administrator].

No formal role

- Online services for websites
- Deliver FEM to community
- Go into schools and teach kids

Yes

- Massive demand for emergency management especially with first attack fire equipment training

- Nobel Park, Mornington – industrial, commercial brigades
- Emergency management planning for businesses and schools
 - Educate why you need it
 - Develop a plan
 - Help create and execute evacuation plans
 - Limitation because they can't do the actual training

Extinguisher training

- Training in actual emergency management planning
- Do they know their evacuation plan?

Depends on what level

Wasn't a volunteer, but worked with them

- Happens best through the media
- It's a question of how should CFA package it
 - Use online services to share the information
 - It's easy to do and doesn't cost a lot of money

Get a standard service

- How it's delivered
- What is delivered

- There's no systems to direct brigade administration
- Who went where and when

Brigades should have this

Education

- They give the equipment but don't really train the customers
- Extinguishers are useless if no customers know how to use them
- Brigades won't use the extinguisher because they'll spray water hoses
- So, they extinguisher is useless and not worth the money

Education

The average CFA person has a limited knowledge of technology

- Not everyone has access to the internet

- Customers will like it

- Brigades will have big problems

- It's the way to go

- Maybe give brigades sufficient computer training

FEM is a pretty competitive industry

- People are trying to win contracts

Brigades worry about keeping customers because some are nearly entirely dependent on FEM revenue

Brigades can take other FEM territories as long as the local brigades allow it

Problems

Time constraint

Can jeopardize contracts

Deb Parkins
Finance and Administration Manager
April 4, 2005

Parkins, D. (April 4, 2005). [Interview with M. Ochs and W. Culver, Finance and Administration Manager].

Very

Finance and Administration Manager of Midlands Woodlands Area
No direct role with FEM

Not a business CFA should be in

Too much of a workload on the volunteers

Burden to rural areas

Not CFA's core business

Competitive Neutrality Act threatens FEM with huge liability issues

Services should be free through the CFA

No

"it will pull us backwards"

Need to look at our core business

Improving emergency management recording (the paperwork)

Define pre-planning because

Brigades like a lot of detail

CFA keeps things broad and general

Really important

Make a formalized way

Can we develop tool to analyse the fire

CFA gathers all the information

Problems analysing it

Should put practice to it

Use resources in the community

Hesitant to put this in a business like FEM

Reduces intimacy of brigades-community relationships

Get rid of FEM

Has not worked

Number of times brigades put money into it to keep it afloat

Competitive Neutrality

If brigades can't keep their basic books why have them run a business

"Just because they can buy a new truck doesn't mean they need a new truck."

Millions of dollars in tax debt because clients aren't paying their bills

Separate it from CFA; make it its own business

9. Huge technology problem

Too many issues to solve before hand

Don Kelly in Ballarat (5331 7966)

Oppose to FEM

If you explain liability to the brigades then they might make better decisions or even disregard FEM

Bernie Pearson (VRFBA President) (VISITED BRIGADE)
Peter Moore (Volunteer - Romsey)
April 1, 2005

Pearson, B.; Moore, P. (April 1, 2005). [Interview with W. Culver and T. Schott, VRFBA President; Brigade Volunteer].

Peter: Volunteer FF and member of Rural Association of Volunteers

Bernie: Volunteer FF, member of Rural Association and FEM representative

Not as familiar as I feel I should be as a representative, but familiar with the FEM operations.

I think fire exit lighting is a good one. A lot of liability can come with this type of servicing though. We could move into something like alarm systems but it might help to have an alliance with a company like Tyco for something like that. We have to somehow keep these private companies at bay. It would be easy to move into some of the other products on section 11 because we have an insider trading advantage. There is a huge network out there that already have referrals in. If one brigade couldn't offer the service then another one may still be able to. Car and house extinguishers could be a good idea though it may cause conflict with local companies. It would be easy to move into other areas because volunteers could recommend. All of this does not have to strictly be FEM though.

Most rural brigades have administrators that already do this. It would be easier for brigades closer to Melbourne where it is more populated. This is a good fundraiser and improves fire safety quite a bit for companies. The further out from Melbourne though the harder it would be to do since it is so much more spread out. Some sort of interface would be needed between brigades for this though. Extinguisher training is the obvious one but there be need for more. Some administrators are limited though in how much training they can legally do. For example Peter is allowed to do an emergency management presentation in a rural area but he can't closer to Melbourne because of his former job. Currently there is not much training though and if a company wants it from CFA then someone like Peter Todd will come out and take care of it. If the brigade were to offer a very formal service then it could be for a charge. Currently the only charge is for the materials used such as extinguishers. Local businesses such as the grocery store or the service station would probably be willing to pay a few dollars for this training. However if the brigade wants to do it more as a community safety thing then they could do that too. It is always important to stress that safety will be improved because sometimes people will be reluctant to pay for these types of services. One way to do it is just ask for a donation or just charge for the materials like what is already informally done.

Yea, the CFA hope to be the leading emergency management organization by 2010. The brigades would need more administrative support if they were to do something like this. Realistically they could provide support for more roles like this. The infrastructure is already there and the volunteers are already trained. If it were an emergency plan, the best method would be to support or facilitate the plan instead of making it. This is so the person who develops it is more familiar

with the plan. I let some businesses borrow the binder for a week or so, the full version for a 100 dollars is not worth it to buy. However a contractor can come in and charge like 500-2000 dollars for developing a plan. Brigades could customize this binder for companies or just create more defined versions for specific types of businesses.

It would not be applicable for some of the very rural brigades because out there by the time you get to a fire, there is nothing left but ashes. If it is visible, a lot of times no one wants to take the responsibility. When I was a volunteer in Sunbury, we used to visit the customer after a fire and discuss circumstances, brigade performance and what went wrong. Then they would write an article for the paper where they explain what happened in their own words. I've always said you never hear about a good firefighter, you only hear about the bad ones.

Hmm, general differences. The global view is that we will always need money for equipment and to do this we need to keep competition at bay. FEM currently can't go in and do a building assessment. If a customer needs one then they have to call someone else in. We could possibly expand into an area like this. The current operation has to change somehow for future stability.

Yea, I think e-commerce could be good for brigades; there is too much paperwork right now. The new generation wants things now, they are not able to sit and wait for something. I don't think it would be too much of a cost to CFA to enable this. It would have to be simple; I know the Ramsey website takes way too long to load for some of the slower internet connections. The CFA has been improving their intranet though, which is a big plus. The internet service is like a ripple through Victoria. Picture is like a pond and a pebble was dropped at Melbourne and the ripples were sent outwards. It could work even out there though because in rural communities the larger farming enterprises are all online. The download times can be pretty slow, you can get broadband if you are within 5 or 6 kilometres from a large town or city. It would help to because a lot of people would like to do that kind of work after hours.

Port Fairy Brigade (VISITED BRIGADE)
Kevin and Peter
March 23, 2005

Kevin and Peter. (March 23, 2005). [Interview with T. Schott and W. Culver, Senior Dangerous Goods Officer].

I have doing it for 40 years and have seen a lot of changes throughout the years. We both actively engage in the program and contract work out as we have over a 1000 units to maintain with an approximately 50 thousand dollar turnover.

Manning gates at the festivals. Testing things at festivals. We do a letter drop which raises four to five thousand. The juniors have there barbeques and raffles. The paid staff trains employees but the volunteers don't. I think it could be incorporated into the FEM program.

We do draw out evacuation plans but we do this for brigade benefit and not for money. The building inspector is the person who says where things should go. In the future a certified evacuation plan may be mandated.

Not enough time or resources.

We don't think that it is running too bad, but the new communication system is overlapping with the old, but it will be adjusted. Expanding the FEM program would definitely be a benefit though.

Already brought up.

Internet is the way to go. You just need a very simple program.

Servicing of fire hydrants should be looked into. This would include cleaning, marking and testing them. This is currently the water board's responsibility.

Mark Potter
Volunteer - Frankston Brigade with FEM Program
CFA Administrator – Structural Fire Safety
April 4, 2005

Potter, M. (April 4, 2005). [Interview with A. Ellison and M. Ochs, CFA Administrator, Volunteer].

Been with the CFA as an administrator for 6 years. Worked for 6 months as the FEM program Business Manager (Terry's Position) 3 years ago.

New Products and Services:

Currently feels that the program is limited with the focus on just the 3 services. Feels that the FEM program should strive to become an all-in-one fire equipment maintenance program in order to better compete in the market.

Either offer all the services that a business needs, or partner with a company that can compliment the services that the CFA can offer.

The program needs to ensure that it always appeals to the remote, rural businesses that other, more expensive fire equipment businesses don't want. (there's less money in these businesses, but they are the current customer base.

Workplace Training:

The original reason that the CFA began offering the FEM program to businesses was that there were no competitors offering the service.

Training opportunities bring in legal risks and exposures that could create problems for the business.

Managing the training part of the business from a central core of administrators may help alleviate the legal risk

Peter and Noel currently offer these services, but they would be unable to keep up with the work at the kind of scale that every brigade offering the service would be at.

Emergency Management:

More Legal issues

Other organizations already offer services in a lot of these fields

Worried that, currently, one sector of the CFA business is checking and inspecting another portion of the organization. This means that there is a strong opportunity for legal issues regarding conflicts of interest. Good example is FEM program and fire brigades inspecting the equipment that they service.

If brigades enter into these markets, competitors could start a campaign against the CFA and the FEM program specifically because it would be a government agency competing in the private market, which is against Australian law.

No set standards for fire equipment businesses, how do you know that the work you are doing is appropriate or competent?

Post-Incident Analysis:

CFA currently has trouble learning from the emergencies that they attend.

It is not a question of whether the volunteers should report to their community what they have been doing, or what emergencies are prevalent; however, it is a question of how to do it/

How do you collect this data? FIRS reports? AFAC currently does some of this reporting for the whole country of Australia.

General Differences in the Future of the FEM Program:

Offer all the services that a business needs with regard to fire protection or contract the rest out to other private business.

The CFA has to somehow offer this full suite of services for the community

Use the CFA logo as a marketing tool, promote the FEM program in the community using the CFA logo.

Basic logistics of offering these services need to be perfected

Volunteers can not be doing the inspection of these services if they are also the ones conducting the work.

E-Commerce:

Definitely get involved. “Absolutely” “No Doubt we should”

Offer Fire extinguishers, and smoke alarms for every residence in the state.

The ability to check information efficiently using the program is very important, and is currently not the case.

More:

If you guys have time, try and attend different customers and see what types of work they would like to see offered to them by the brigades.

Bob Smith (VISITED OFFICE)
Fire Safety Officer
March 30,2005

Smith, R. (March 30, 2005). [Interview with A. Ellison and M. Ochs, Community Safety Officer].

Current title is Building Fire Safety

Similar to Peter Knight's job from 1980-1996
Manager of Geelong FEM

Fire alarm

Simple – brigades can do

Complex – contractors

Sprinklers

These days bigger clients want a wider variety (a “full suite of services”)

Hydrant

Service every 6 months

Pressure test

Fire awareness

Extinguisher training

Emergency management training

Have a plan for when you need it

Evacuation planning

Bomb threats

Hostage situation

Chemical, Biological, and Radiological (CBR) bombs

Volunteers need to keep a better record of events and prevention of scenarios

Through contact with people

Events during festivals

Newspaper

Broadening products

Increase community education

9. Good idea

Benefits smaller communities because it would be easier rather than

calling or commuting

No

Mathew Geerings (tell him Bob Smith referred him)

04 0855 2857

Lives in Ocean Grove

Works in Springvale

Mornington Fire Brigade (VISITED BRIGADE)

Mick Taylor - Joint FEM Committee Member

Wayne Lewis - FEM Officer of Mornington

March 30, 2005

Taylor, M.; Lewis, W. (March 30, 2005). [Interview with A. Ellison and M. Ochs, FEM Brigade personnel].

On Joint FEM Committee

Contractor and Volunteer

Ex-Captain (1973-1980)

All captains are elected for 2 years

This brigade is unique because they have their own internal contractor

* Peace Working – working for a set price for each item

Taylor is a peace worker

Brigades make better money with internal contractors

Morning makes AU\$20,000 to \$30,000

570 Clients

Morning revenue breakdown

1/3rd goes to parts

1/3rd goes to contractor (Taylor)

1/3rd goes to the brigade

Brigades can't impose or take business from other brigades

Hydrant Servicing

Sprinklers

Alarms

Anything related to FEM because CFA will be phased out

Not doing these services makes brigades lose business

It's not difficult because you just get a contractor

“If CFA doesn't move into such products they'll vanish in 5 years”

Could service direct line alarms

Otis (National Company) does more fire equipment items recently

Warmald Brothers are a threat too

VERST (Victoria) is growing – Mt Eliza, Morwal

Fire extinguisher filling

***** Wayne Enters Interview *****

T – We do it

Show how to use extinguishers

Doesn't formally train them though

T – Need to formally train extinguisher usage

T – “We need to be in it properly or we're not going to be in it at all.”

W – “We do preplanning while we're doing it [servicing].”

W – Evacuation skills

T – Accredited people to recommend the right extinguisher (and in the right place) according to their work environment

T – Brigades need the power to recommend Extinguishers

- T – Don't need to be in it
 - T – Volunteers do enough
 - T – Do it through their [CFA's] staff
 - T – Too many brigades lose too many members because of the workload
 - T – CFA workload is too much
 - T – Modules are too time consuming
 - T – Volunteers want to fight fires not complete modules

- W – Local newspaper
 - T – Face-to-face explanation
 - T – Mantaliza (Newsletter that is issued every 6 months)
 - W – If specific appliances are problematic they issue a warning

- W – Abolish hoses
 - T – Need to have better ability and access to the computer system
 - T – Computer system is still making mistakes which need to be fixed

- 9. T – Great idea but we still need the paper
 - T – Good for the bigger place

- 10. T – Better publicity because fire equipment maintenance is becoming competitive

- T – People don't know that this is a volunteer organization

- 11. John Parra – FPAA Packet

Ian Thomson
Sunbury Brigade
March 23, 2005

Thomson, I. (March 23, 2005). [Interview with A. Ellison and M. Ochs, Sunbury Brigade].

Haven't done FEM in a long time

3. Automatic sprinkler systems
 - Maintenance
 - Installation

How to use a fire extinguisher

How to use a fire hose

People learn a lot from general work training

Prevention

Community education

Education on bushfires

People try to out run bush fires in a car but that's the worse place to be

Get the people more involved in emergency management planning

TV

Show actual situations

Technology

Travel time

E-Commerce is already in existence

Education

Advertising

To make them realize what their environmental dangers are

11. No

Warrnambool Fire Brigade (VISITED BRIGADE)
Mick, Brian and Paul
March 23, 2005

Brian, Mick, and Paul. (March 23, 2005). [Interview with T. Schott and W. Culver, Brigade Volunteers].

Yes we are all very familiar with it.

Brian: I try to help out with the program but am also a teacher at the local school which is a customer of FEMS so I have a few from both perspectives.

Paul: I am in charge of all of the contracting for this brigade. This is a rather large job because we have 600 clients and are still expanding.

Mick: I have been part of FEMS for 20 years until lately when most of the work is taken care of by contractors.

We already take care of exit sign maintenance, though it is not formally part of the program. This is another thing that is located under AU standards. It can be a complicated task in the larger buildings because some lights are high and you need a work lift. Small buildings are pretty simple though. Sometimes this is a 90 minute test so it would be useful for the customers if there were other things going on at this time since they are paying for 90 minutes no matter what. There are many other things under chapter 11 that I think we could be inspecting. A couple examples are doorways and paths to exit. The ideal situation would be a one-stop shop service that took care of all these requirements. The problem is that these people need to be well trained. There is also the security issue of getting on-site at a place such as a bank.

There is a lot of training that already takes place but it is usually free of charge. The brigade sees this more as a community service instead of a commercial aspect. It is used as a safety measure by career staff, which also makes employees more willing to participate. One idea is an interactive CD that could be offered to customers for a small charge, say 10 dollars. This would include a game that would actually have some information before it and the game would allow you to fight different fires using different extinguishers. This would be a really good idea between the hands on training and the distribution of the extinguisher. There could also be something like a quiz at the end of this. There is already something like this called "Freddy". I really think this would be a good money-maker and also a good way to improve work place education.

At our school we receive an emergency management package that makes sure all of the various parts of the emergency plan are checked out in accordance with chapter 11. This is a really thick binder that is very confusing to a lot of people. It may be a good service to have a consultant from the brigade come in and clear up some of these issues as I'm sure other companies are also a little confused with the binder. A consultant role here would probably be really helpful because another thing is that all of this information is documented in a somewhat confusing database. Another idea that is sort of unrelated is the testing of electrical cords. We recently had someone come in and test all of our cords for

about 7 thousand dollars. It may not be practical to actually do this but maybe to train someone from the school staff to do it so we don't have to spend so much money on it. I know that some larger companies already do this.

No usually information doesn't get back to the client but I don't think it would be a huge help. People will usually not care about this information until it happens again and when they find the cause they will already take it upon themselves to make sure that it doesn't happen. We do have a confidential process that involves dealing with kids who have been known to start fires.

General differences? I would really like to see expansion into more products that are under chapter 11. I think that some stuff would be useful to larger brigades like us and some would be more useful to smaller brigades.

We do some stuff called "Firewatch". We also sell calendars and candy and stuff like that for fundraising. We already check hydrants even though it is not our responsibility. We take the cap off and clean them up, which is part of our preparedness. We also put down markers for them. I know we're not really involved with smoke detectors but I think we could be servicing and checking them. This could be better for smaller brigades to stay in touch with their local communities. I know that someone was in charge of putting house numbers on the curb and they got 6 dollars a piece. This also would be a service for smaller communities. We also gave a type of calendars in a cd case that included a lot of safety information.

E-commerce would be good for selling stuff online. Nobody is currently doing it and we would like to but we don't think CFA would approve. Someone could run a type of warehouse operation and I think it could be more than just extinguishers; it could be like first aid kits, or safety calendars. It is also important to keep the personal relations with customers. As it is harder and harder to find auxiliaries for brigades because people are staying at home more and more; e-commerce could be a good thing for people who want to stay connected with their brigade but may not have a lot of time to be there.

Katie Williams
Online Services Administrator
Volunteer at Yellingbo Brigade
March 31, 2005

Williams, K. (March 31, 2005). [Interview with A. Ellison and W. Culver, Online Administrator, Volunteer].

FEM Role:

- Web Content and online services at headquarters
- Volunteer in brigade who doesn't do FEM

Products and Services:

- Smoke alarms
 - People don't have a grasp on their importance at all
 - Teach them what to do when one goes off
 - Evacuation Plans are very important
 - Education – do people know how to use these fire extinguishers?

Methods to do the training:

- Volunteer brigades would be able to charge a fee, as the money would be going back to the community and the audience would be willing to pay it.
- It should be done on the premises

Emergency Management

- State Emergency Service (SES) Make sure you aren't stepping on their toes. Seems like they would be the Emergency Management Service
- Make sure focus is on the first 5 minutes of any incident, before any authority gets on scene.

Post-incident analysis

- As a volunteer she would be interested in doing it. Volunteers are very passionate about what it is that they do, and love telling stories about it. This would be an excellent way to allow them to do this, and help the community out as well.
- Specific things to cover: What could you as a property owner or employee do better if it happens again or to you.
- Billboard or posters about fire safety awareness around the city, specifically on the side or front of firehouses.
- The overall goal would revolve around learning from others mistakes

General ideas for community relations with the business sector:

- Take into account Brigade Diversity
 - Rural vs. Urban
 - Large vs. Small
 - Busy vs. Dull
- Look into some sort of incentive to do the FEM program for volunteers
 - Personal incentive

E-commerce

- Definitely improve the FEM Accessibility
- If they've never used an e-commerce type system before volunteers are going to have to be trained to use it
- More publicizing for the program
 - Availability of FEM to businesses

That money from FEM goes back to the brigades
Importance of FEM

Contacts:

Paul Denim from the Urban FF assoc. Swingborn University Instructor.
Very opinionated.
John McCloud. Same information as Paul.

Chris Wyborn
Scoresby Brigade FEM Manager (VISITED BRIGADE)
Community Safety Administrator
March 29, 2005

Wyborn, C. (March 29, 2005). [Interview with A. Ellison and M. Ochs, Community Safety Administrator, Volunteer].

- 20 years experience with FEM
 - In the last 10 years he has ran FEM at Scoresby brigade
 - The largest FEM brigade in Victoria
 - One of 2 to have its own administration
 - 1st Lieutenant at Scoresby

- One of a handful of brigades that runs like a business
 - Most run it like a fundraiser
 - People are more prone to use CFA for education than Chubb
 - CFA is a name that people trust
 - CFA can use FEM to promote Safety

- Autonomous work from brigades
 - Deliver services even though they aren't supposed to
 - Industry training
 - Essential service maintenance (a product that does it)
 - Something that logs all the maintaining and servicing
 - Look at home owners (extinguisher use)
 - Home fire safety kit (extinguishers, fire alarms, blankets)
 - CFA branded extinguishers in stores (like K-Mart)

- Emergency management planning
 - Training
 - Extinguisher training
 - Australian Standards says they should train
 - Training is under regulated at the moment CFA could set a precedent
 - Train wardens to know what to do
 - Development plan
 - Emergency Management Manual
 - Pay AU\$99, read it, and then make your own emergency management plan
 - Assist them in making an emergency management plan
 - Liability is an issue
 - Be a consultant rather than a developer to avoid liability
 - Topics for Training (besides extinguisher training)
 - First Aid training
 - Occupation Health & Safety training
 - CFA could train them or contract it out (be the middle man)

- Local clubs or something will call in a brigade to do some public training
 - Professional trainers who have their own truck and tour around
 - Little structure in public relation stuff
 - Poorly done

Example: no script for describing car cut ups

More business focus

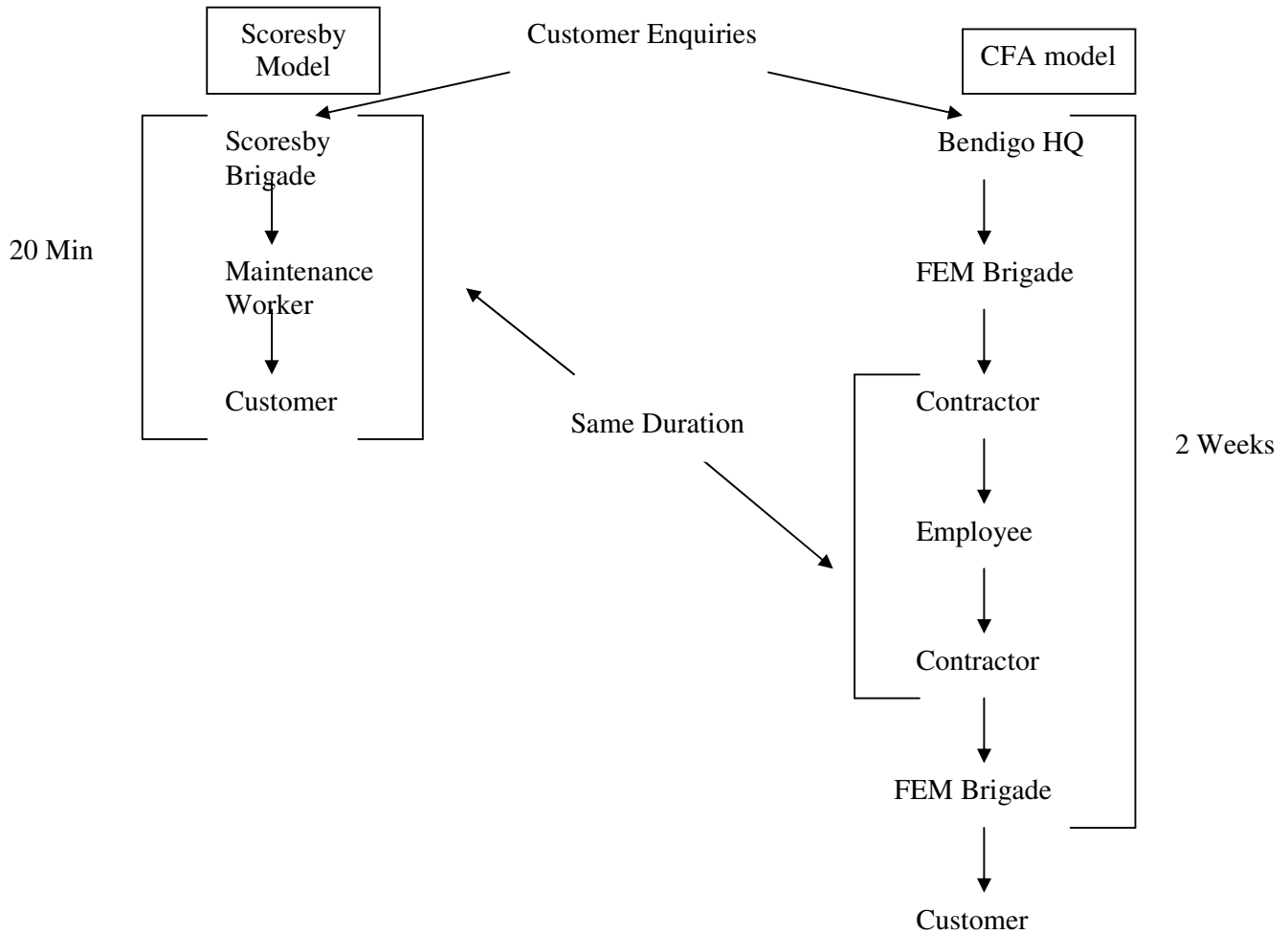
- What the business wants not what CFA wants
- Be more like Chubb, who's sole goal is to make money
- Create CFA's own training method
- AED's
 - Don't think ambulance industry is pushing AED's
 - If CFA went down that path, CFA should do the broader aspect
- Equipment should be packaged and sold through CFA not just brigades

CFA does nothing for commercial and industrial safety

- CFA focuses on wildfires and home safety
- Employ people who's sole purpose was to travel and promote safety

Absolutely should go into e-commerce

- Benefits
 - Reduce strain on administration
 - Bendigo and Ballarat
 - Customers could find out what they are spending their money on



10. Employ FEM servicers

This way all the profit would stay within CFA
Contractors take too much profit from FEM

11. FEM brigades that had problems

Montros

Ex-Captain Robert Earney (04 1756 1698; 9728 2016)

Owns a butcher shop

Has business background

Appendix C – Secondary Interviews

Interview Questions

These are some of the opportunities that we have come across. We are interested in your opinion on these possibilities for the FEM program.

(Provide 10 opportunities one at a time for the interviewee to give a response to based on the following questions)

Questions:

Is there potential for revenue here? Would the community be receptive to this service?

Would you, as a volunteer be willing to take on this service? Why/Why not?

Do you think this opportunity would take too much time for a volunteer?

Any further possibilities you think we may have overlooked?

Interview Responses

Mick Bramwell

Volunteer

Cobram Brigade (VISITED BRIGADE)

April 13, 2005

Bramwell, M. (April 13, 2005). [Interview with A. Ellison and M. Ochs, Volunteer].

Products & Services

Direct Line Alarms

Not willing

Exit Signs

Yes, willing

Especially if they're inspecting something else while they're there

Filling Extinguishers

Would rather send them out than do it themselves

Training

Bushfire

Yes, willing

Would be good for a twice-a-week teaching event

Evacuations & Fire Drills

Yes, willing

"Anything you can do with the community is a bonus."

Fire Identification

Reckon they would be willing

Emergency Management

Emergency Management Consultant

Moderate willingness

Fair Ground Inspection

Reckon they would

No worries

Bomb Threats

Leave it to the police

Post-Incident Analysis

Billboards & Posters

Willing

It would be an advantage for the firefighters

Face-to-Face

“I’d be willing to look; no worries.”

FIRS Expansion
Sounds good

E-Commerce
Not a bad thing
Phone work too

New Ideas?
Nope.

Darrel Feldtmann
Captain
Dookie Brigade(VISITED BRIGADE)
April 13, 2005

Feldtmann, D. (April 13, 2005). [Interview with A. Ellison and M. Ochs, Volunteer].

Products & Services

Direct Line Alarms
Wouldn't like it
More work for the volunteers
Too much of a time constraint

Exit Signs
Would be able
No dramas
No problem

Filling Extinguishers
Wouldn't be beneficial for Dookie

Training
Bushfire
We do that
We teach kids at schools
Show them the trucks
We teach them what to do

Evacuations & Fire Drills
Firefighters would be willing
Volunteers would do it
It's a good idea

Fire Identification
Beneficial
Willing to do it
Wouldn't agree with charging for the service

Emergency Management
Emergency Management Consultant
Not for our brigade
Too much time

Fair Ground Inspection
Dookie doesn't do it
If they see something when they're there they might say something
Probably not willing

Bomb Threats

Not really willing but would do it
Definitely should be involved

Post-Incident Analysis
Billboards & Posters
Yes, effective
Couldn't see why it wouldn't work
Willing

Face-to-Face
Time consuming
If it was a big danger then it's important

FIRS Expansion
Doesn't apply to Dookie
No drama for other firefighters
Easily handled

E-Commerce
Would not use it in Dookie
No advantage for Dookie

New Ideas?
No
Doesn't want to expand too much

Mick Hilder
Volunteer
Cobram Brigade (VISITED BRIGADE)
April 13, 2005

Hilder, M. (April 13, 2005). [Interview with A. Ellison and M. Ochs, Volunteer].

Products & Services

Sprinkler System
Lot of plumbing
Don't have the knowledge
"Out of our reach"
If they contracted it, maybe

FEM in Cobram is all done by volunteers with no help from contractors

Fire Exit Maintenance
They tell people if there is a problem

Training
Computer Fire Extinguisher Training
Agree 100% that it should be done
Too many people don't know how to use extinguishers

Interactive Fire Extinguisher Training
Yes, willing
Time is a problem so do it in groups
Weekend groups and such

Train the Trainer
Too much time required

Emergency Management
Emergency Management Binder
Could if they have the time

Hostage Situation
Wouldn't be willing
Feels it's out of their scope

Post-Incident Analysis
Public Demonstrations
We use the news paper

Catered Presentation
Moderate willingness

E-Commerce
Brigades would use it if properly trained
Public would too

New Ideas?
Not Really, no

Maiden Gully (VISITED BRIGADE)

Andrew Howlett - Captain

David Mustey – Volunteer

April 14, 2005

Howlett, A.; Mustey, D. (April 14, 2005). [Interview with A. Ellison and M. Ochs, Volunteers].

Products & Services

Direct Line Alarms

A – No major business

A – Not difficult

A – “It’s doable.”

Exit Signs

A – “I don’t see a problem with that.”

Filling Extinguishers

D – “It’s stretching it beyond the volunteer role.”

A – Too much equipment would be needed

A – If a region brigade did it, they could get them more business by sending off to them rather than their current contractor, Chubb

Training

Bushfire

A – “We do it.”

A – They do it as a free service

Evacuations & Fire Drills

A – They do it for schools

A – Writing out their emergency management plan is out of the firefighters’ scope

Post-Incident Analysis

Billboards & Posters

A – “We have a brigade website.”

A – If got about 600 hits in the first 3 weeks

A – We draw people to look at the site

A – We do newsletters

Goes into their mailbox

FIRS Expansion

A – “Yeah, for sure, for sure.”

A – It’s not hard

E-Commerce

A – “It’s only a skip above where we are now.”

A – It would make things easier to transfer things by e-mail rather than doing the paperwork

New Ideas?

A – “I don’t think so.”

D – No.

A – Pressure testing of hydrants

Noel – Schools are in charge of hydrant maintenance

They get government grants for it

CJC Maintenance contracts something...

They are clients of the CFA

Look into it

John Kennedy
Volunteer – Loch
Joint FEM Committee Member
April 18, 2005

Kennedy, J. (April 18, 2005). [Interview with A. Ellison and W. Ochs, Volunteer].

Sprinkler Systems:

Some brigades may be willing to do this, however often times it would be too technical and too much liability for volunteers to take on.

Exit Lighting:

Not a problem, Fairly Easy to accomplish

Particularly common in businesses big enough to have many extinguishers, so service could be done at the same time as providing service to the extinguishers.

Smoke Detectors:

Possibility. FEM is concerned more with Business sector than with the Residential Services

Currently Loch's FEM program works with nearly 300 fire extinguishers, only two or three are in private homes.

Private Alarm Systems:

CFA is just getting out of that service, Used to have a heat and smoke detector alarm system that went direct to the brigades dispatch centre. Sold the business off to Tyco. Firefighters didn't do the service on this equipment, they just provided the monitoring facilities.

Extinguisher Training:

CFA already does this, to an extent with people who train individuals at field fire grounds to use extinguishers

It would be possible for individuals in brigades to offer it if they had an area where it would be ok to use an extinguisher

Depends on the availability of people.

CD-ROM:

Computer training would not be a problem as it is cheap, and required very little activity by the brigades.

Fire Identification:

Good Idea

Train the trainer:

Fire Warden's in bigger premises have these

It would be a help and believes that it would work having brigades do it.

Emergency Management Binder:

Provide it to the customers: it can't do any harm. Probably should be doing it for these businesses and giving them this information helps them to develop their own

plan and that way they get a feeling of ownership of the plan, and are therefore more willing to follow it.

Bomb Threats:

Firefighters don't really want to deal with this type of activity

FIRS Expansion:

Should be fairly receptive to it.

Catered Presentation:

Beneficial, but its questionable whether FFs would be willing to do this, or if you could get businesses in the community to come.

Be good to highlight what was done right at the incident not just what was done wrong.

Make sure not to lay blame on anyone

Newsletter from Brigades:

Less time consuming, and you would reach more of the community.

E-Commerce:

Very good idea. There was a plan to use palm pilot type products to assist the brigades, but I am unsure where that is now.

I am personally unclear about what it would take to use online services, don't own a computer and don't know anything about them.

More:

Remember that manpower is always an issue when considering these services.

Retirees are good to use when offering most services because they have the time and are looking for things to do. Also, often times they are very good at working with other people.

Jeff McEachern
Volunteer
Wodonga Brigade
April 15, 2005

McEachern, J. (April 15, 2005). [Interview with M. Ochs and W. Culver, Volunteer].

Direct Line Alarms: This is something that seems to be outside of FEM guidelines, you would have to have a contractor offer the service. A lot of companies want an entire package which would include this and other things like exit lighting. The board says that FEM is staying, and to keep its customer base, they need to offer some of these services. I am very supportive of FEM, it is a better way of making money other than something like raffles. It is also saving CFA a lot of money.

Exit Sign Maintenance: Yea, I would say that this is an opportunity that needs investigating. I don't know if the firefighters would be willing, but it doesn't really matter because it is more likely to be a contracted service. Our brigade actually makes more money through a contractor than they would if the volunteers solely provided the service. It would have to be the brigades choice to offer though.

Fire Extinguisher Filling: I don't think volunteers would be capable of providing this service. There is a lot of equipment required for this and it would take specialised staff to implement. It is probably outside the scope of FEM. Chubb already provides this service of CFA's behalf; it would be a big step to change that. I really don't think brigades are capable.

Bush Fire Training: There is certainly a need for it, but its not really in the FEM scope, it should be a different part of brigades. This is certainly important in rural areas, as there is not a fire truck for every house in the country.

Evacuation and Fire Drills Training: This already happens to a fair extent, depending on the amount of time brigades have. It is a typical service for schools and place like that. We have paid staff that provides this service, volunteers are not really involved.

Fire Identification: This too probably happens a lot, we go to industry and provide training for staff when it is required, through our paid firefighters.

Emergency Preparedness Consultant: That's some specialised stuff that would seem to require a lot of training. It certainly couldn't be provided across the board. I suppose it is something that we have to get into though, probably outside of FEM. I seem to understand the program as just offering fire products and services to them.

Fair Ground Inspection: This is probably a concern. The service is actually provided in Wodonga by a building surveyor. It's a possibility to look at the evacuation and fire sides of it. The surveyor looks at stuff like the road, so it could be work in conjunction with his services.

Billboards or Posters: Communication is certainly a problem, and has been identified. It doesn't happen well especially between the CFA and the field. The best place to start with is kids, the Authority should address them at a younger age because they remember better. I can't see volunteers providing this service though, it should be a CFA thing.

Face-to-Face: Yea maybe they should provide this service. I'm sure that it already happens in some cases but maybe it should be a requirement from someone who was involved in the fire.

E-Commerce: Good communication should already exist in the CF through paperwork. There shouldn't exist any communication gaps.

Kevin Murley
Volunteer
Eaglehawk Brigade (VISITED BRIGADE)
April 14, 2005

Murley, K. (April 14, 2005). [Interview with A. Ellison and M. Ochs, Volunteer].

Products & Services

Sprinkler System

“I doubt if my brigade would.”

Fire Exit Maintenance

They’d be willing

Gives greater knowledge of the facility

Training

Computer Fire Extinguisher Training

Anything that improves the system is a plus

Already puts on demos for staff

“If they put something on the computer, that would be nice.”

Interactive Fire Extinguisher Training

“That’s what we try and do.”

“We do have a lot of businesses ask for that.”

Train the Trainer

In most businesses Eaglehawk they send someone out to get trained

Firefighters would be willing to train them

Could run evening classes

Emergency Management

Emergency Management Binder

Yes, willing

“I couldn’t see that as a problem.”

Eaglehawk mentioned that they also administer Evacuations & Fire Drills.

Post-Incident Analysis

Public Demonstrations

They do that

“... every household should have a plan.”

They do a lot of work with the schools

He does not think people take note of pamphlets.

Catered Presentation

They do this

They eat sausages

“We’re doing that now.”

Paul Prater
Currawa Brigade (VISITED BRIGADE)
April 13, 2005

Prater, P. (April 13, 2005). [Interview with A. Ellison and M. Ochs, Volunteer].

Products & Services

House Numbering
Similar activity happens in their brigade
Very willing

Hydrant Maintenance
Probably willing
Their brigade is always asked for the service

Smoke Detector
A bit too much work

Emergency Management
First Aid
Outside of firefighters' role
Not willing

Travelling Kitchen
Noel things CFA has it
Currawa has done it for schools

E-Commerce
Good idea

New Ideas?
No

Bill Rodda
VUFBA Region 9 Executive
Carenbola Brigade
April 15, 2005

Rodda, B. (April 15, 2005). [Interview with W. Culver and T. Schott, Volunteer].

My town has about 2500-3000 people. It is a small bush community. The FEM program has become historical, as it is the main source of external funding for our brigade. We just call it "Doing Extinguishers." I have been servicing extinguishers for thirty-one years with no problems.

Products & Services

Sprinkler System

This idea would not impact smaller brigades as they would not have the larger businesses which have these installed

It is too technical and professional for volunteers and part timers

It may be useful for larger brigades, if they contract out

This is not a service, which has been mentioned by fellow FEM workers

Hydrants

His brigade is not involved with hydrants

Fire Exit Maintenance

This is also a service which Bill has not heard before to be an FEM opportunity

This is a service that would be more of common sense than an official service. While servicing other products, the Firefighters would just tell the clients to clear the doorway, etc

Training

Computer Fire Extinguisher Training

Brigades would support the idea

The difficulty would be in administrating it

This would be good as it is more uniform between brigades

"Bushies" may not have computers

Interactive Fire Extinguisher Training

Bill's brigade informally trains their clients by allowing them to empty old extinguishers when in need of servicing

Important thoughts

How do you administer it?

How do you control it?

Watch out for the small things like different wording while training

If a client asks for formal training, then the brigades should be able to offer it

Right now, the brigade does not solicit the training, as it is hard to find the people to give the training

Train the Trainer

Make sure you have the resources to provide this

Would if adequately trained

Getting around to all the small towns to train all of the volunteers involved would be very difficult

There would be no need, though, to have this service in small towns, with small stores/businesses

Some sort of training needs to happen before something happens, especially for small towns. For some small stores, a firefighter could walk in and see an extinguisher on the ground. After asking the business to hang the extinguisher, the owner may still have it on the ground six months later. They do not know the risks that they are taking. Some sort of motivation for the storeowners is required for anything to change. Things to think about is that larger brigades can afford to have their contractors work all year round, and it would not be hard to offer more services. Smaller brigades may only work on two cycles of two months per year.

Emergency Management

Smaller brigades are not too interested as they are currently struggling to keep the number of their volunteers up. Any more work would be difficult as it would be difficult to do any more training, on top of that required for operational purposes.

Post-Incident Analysis

Public Demonstration

Is it valuable and beneficial, yes.

The biggest question: Is it all worth while-and I am not sure

Catered Presentation

Yes, it is valuable

This should not be considered as part of the FEM program, probably more of a general brigade activity

There are a lot of things that are not good for FEM that you have mentioned. The willingness on most of the activities is going to be high, as it benefits many, but the biggest requirement is time and training. A lot of the rural brigades are comprised of very busy members that have very little extra time, if any, beyond of what they volunteer as a firefighter. One thing to keep in mind about educating the public: "Anytime you talk to the public with education, they have to be realistic."

Ron Schultz
Benalla Brigade
Volunteer, VUFBA
April 15, 2005

Schultz, R. (April 15, 2005). [Interview with A. Ellison and M. Ochs, Volunteer].

Sprinkler Systems:

Requires qualified people so the training for this sort of service would be very tedious
Good for the rural brigades
People may already do this service as their main job, so they would not need to be trained
Be careful not to ask too much of brigades who already feel that they do too much work.

Fire Exit Maintenance:

This fits the all in one service opportunities
Very good idea, Believes that brigades would embrace this opportunity

Fire Extinguisher Training:

Computerized
Would work, easy for brigades to distribute and doesn't require much from them
Interactive
Currently [Mr. Schultz] provides training for his community on general fire safety at a training ground
On site may be more effective

Train-the-Trainer:

Currently the largest companies pay to have their fire wardens trained by CFA staff (Noel and Peter) at the fire grounds
There is a lot of training that would have to go into this service

Emergency Management Binder:

Seems to fit the BASO's job more than the FEM program
Costs about \$100

Public Demonstration or Catered Presentation:

Fire investigation information is a good area to inform the public about
Building codes, often times, change because of past incidents
Taking on specialized roles is a very bad idea

Other Opportunities:

All Essential Services as listed by the VBC

Appendix D – Background Research Interviews

Interview Questions

These are some of the opportunities that we have come across. We are interested in your opinion on these possibilities for the FEM program?

Specifically:

Is there potential for revenue here? Would the community be receptive to this service?

Would you, as a volunteer be willing to take on this service? Why/Why not?

Do you think this opportunity would take too much time for a volunteer?

Any further possibilities you think we may have overlooked?

*** 10 of the following opportunities were chosen for each interview, and even number from each section.

1. Products and Services
 - a. Direct Line Alarms
 - b. Fire Exit Sign Installation and Maintenance
 - c. Fire Exit Maintenance
 - d. Fire Extinguisher Filling
 - e. Smoke Alarms (Detectors)
 - f. Sprinkler Systems
2. Training Opportunities
 - a. Fire Extinguisher Training Software
 - b. Evacuation & Fire Drill Evaluation
 - c. Fire Identification Training
 - d. First Aid Training
 - e. Interactive Fire Extinguisher Training
 - f. Private Fire Safety Demonstration
 - g. Train the Trainer
3. Emergency Management Opportunities
 - a. Bomb Threat Preparedness
 - b. Chemical, Biological, & Radiological Hazard Planning
 - c. Design of Evacuation Plans
 - d. Emergency Management Binder
 - e. Emergency Preparedness Consultation
 - f. Fairground Inspection
 - g. Hostage Situation Preparedness
 - h. Risk Management Analysis
4. Post-Incident Analysis
 - a. Public Safety Postings

- b. Catered Fire Safety Presentation
 - c. Face-to-Face Debriefing
 - d. Fire Incident Reporting System (FIRS) Expansion
 - e. Newsletters
5. Other Opportunities
- a. Bushfire Awareness Training
 - b. E-Commerce
 - c. Fire Safety Demonstrations
 - d. House Numbering
 - e. Hydrant Servicing
 - f. Newspaper Postings

Interview Responses

Steve Feroli
Volunteer – New York, USA
February 10, 2005

Feroli, S. (February 10, 2005). [Interview with C. Schott, New York Volunteer].

Can you please state your name and your position in your Fire Department?

My name is Steve Feroli and I am an interior fire fighter in the “Coldenham” Fire Department

And where is that located?

In Walden, New York

What are the Demographics of your community?

There is a population of about 10,000 people

Is it rural?

Suburban, we are about an hour north of NYC, almost all companies in the area are volunteer, except in the cities, in which they are paid

And volunteer meaning..?

100% Volunteer, no one is paid. Not a single person gets paid in our company

Do the chiefs get any benefits?

Yes, there are benefits for certain positions, our chiefs and first and second assistants get cars, officers get gas paid for.

About how much does your fire company get from your local government?

Our company seems to get quite a bit of money. It all depends on what is in your district. We have an international airport, as well as some major highways. Due to these factors and others, we receive about \$250,000 annually from our local government.

Is that for your town?

Our town is broken into different fire districts, and our fire district is allocated that money.

Is your district fully supported by the government with the \$250,000?

Yes, that is tax payer money.

And how is that money spent?

We usually keep all of our apparatuses up to date, as they are all within a few years old. We just purchased a new engine, which ran from \$350-400,000. We have a ladder truck and two tankers, as we have no hydrant system. If we had hydrants, then we could save a lot of money by not having tanker trucks to haul the water. All that we would need is an engine and a ladder truck. As we are under the circumstance of having no hydrants, we require both engine (pumper) and tanker trucks. As we have a lot of woods in our town, we require a brush truck in case of brush fires. We also have a Haz-Mat trailer, in case of Haz-Mat disasters. So in total, two engines, two tankers, and a tower, opposed to a ladder truck, brush fire truck, and Haz-Mat trailer. These vehicles alone take a lot of money to maintain as there is always something wrong on the trucks, so the local fire truck repair companies are around a lot.

Equipment costs a lot of money for all the new fire fighters. They need full turnout gear, boots, pants, gloves, hood, and a helmet. So that is a lot of money right there.

Is that one of the benefits of becoming a volunteer fire fighter, the training and the equipment?

Yes, but they do not get to take the equipment home. We all have pagers, which also cost money. The 9-1-1 dispatcher calls us on the pagers and tells us about the call. From there, we drive to the firehouse [where our uniforms are located], get in the trucks, and go to the emergency scene.

So nobody goes directly to the fire?

Only chiefs, lieutenants, or captains can go directly to the scene. The Lieutenants and captains usually try to ride the truck as they are the officer in the truck.

We also go to minor medical calls. These calls would be like assisted lifting, assisted breathing, to help someone if they cut themselves, etc. We basically respond as we can usually get to the scene quicker than an Ambulance. We are there pretty much to secure the area and give them basic CPR if needed. Some of our guys are EMS. We

go through New York State First Responder training, which will let us go directly to a medical call. We give them oxygen and settle them down to prepare the ambulance team for their arrival.

Is there a private fund within your district or your company?

The fire district handles the money income from the tax payers to handle the emergency responses and administration costs. For example, my father is Commissioner, and he is paid through the Fire District.

The Fire Company has a different type of account, through fundraising. We have three raffles. Last year we raffled off a four wheeler. We went to different companies and raffled tickets to them as well. Over Christmas, we raffled off \$10,000. They would cost \$100. We would have a dinner for them. And places 1-10 would get their money back.

Candy Machine and soda machine brings in about \$10,000 every year in our fire house.

We also have a lady's auxiliary, which is for wives, or any women in the community who want to help out when there is a big emergency. They bring in food and other helpful items to ease the stress of the situations. Our Company allocated money to them.

Money from our company also goes toward our fife and drum corps. They go to parades. We also march, as with most other companies in our area. So once a week over the summer we do that and money from our company is spent on the parades.

Do you all have dress uniforms for the parades?

Yes, and money is used to purchase the uniforms as well, as we each have uniforms. We do not have enough money to give back into the fire matic funds, and if we did, it would not be enough anyways.

So most all of your company funds are used to go back into the community?

Yes, the company also gives money to widows and flowers to those sick

Is there insurance as a volunteer fire fighter?

Yes, all of that is covered by the Fire District Accounts, from the tax payers.

You are talking about how your company is doing EMS. Have you been doing this for a while?

Actually, we have not. The program has only been in place for the past 12 years or so. This is just because there are volunteer ambulance and paid ambulance, who are both very busy. They can't always get to the local calls fast enough. Most companies offer this service, depending on how far away the nearest ambulance corps is located.

Before we offered this service, we only responded to car accidents, structure fires, brush fires or anything like that.

Is your company planning on offering any other types of services in the future?

We will probably stick with what we have here. Right now, as far as helping other districts, we started up a FAST Team. We started this program within the past year. We go to a structure fire in a local district, and are there in case a fire fighter is down. If such a problem occurs, we go in, and work hard and fast to get that fire fighter out of the fire. For this service, we were trained by the state. We had an incident not too long ago when a firefighter had his leg caught. We went in, got his foot freed, and got him out. It is a cool thing. Our number one priority is the firefighter. We are not getting paid to do this. It [fighting fires in other communities] is not our job.

In your district, do you know if it is the state government or small local companies which supply and inspect fire extinguishers?

I believe Fire Extinguisher inspections are carried out by fire protection companies which are certified by the state. But it is nothing through us, we do not do that.

Do you think there is any other information that you may have that could help our project?

These guys, me and my dad, and a lot of my friends, do not get paid for this. We get a call at 3am, fight fires til 8, get up and go to work. It is a big sacrifice and I think it is pretty neat. It is kind of a brotherhood. The guys who do this really bond well together. I think we get along real well. It is a pretty big part of our lives. We do it because we like helping the town and the people in it. It is something more than just something just needing to get done as it gets down to a personal level. It is pretty intense. I would make sure that you keep something in your project that talks specifically about the firefighters and not just the numbers. It is a pretty cool thing that they do.

Goodbyes.

Terry Hayes
FEM Program Manager
January 30, 2005

Hayes, T. (January 30, 2005).[Telephone interview with W. Culver, A. Ellison, M. Ochs, and C. Schott, FEM Program Manager].

WPI: Before we begin we just want to make sure that your okay with us recording this conversation.

Terry: Yea that's fine

WPI: After reviewing your 2004 Annual Report, we understand that you are currently putting efforts towards your e-commerce, we were wondering exactly what you have started.

Terry: Can I go back a step

WPI: Yea fine

Terry: Did you receive my email I sent Saturday our time

WPI: Yes we did

Terry: Okay just wanted to confirm that. Very limited e-commerce. CFA currently has an information and communication technology strategy that's being run by outside consultants. It's currently with our governing body, the board, for consideration. I expect that there are more important issues that are attracting people's attention at this time. Probably about 4 to 8 months to a year from getting into e-commerce seriously. However, I think that within the FEM business, which is a subset of CFA, this could be put into effect sooner because we have our own finance management system.

WPI: Are you interested in us putting effort into further research in this area.

Terry: Absolutely

WPI: When you said that CFA is beginning to put a plan together, is that what they meant in the 2004 report when they said "Sophisticated client management and accounting software was introduced to FEM to create efficiencies and to open the potential for new ways to communicate on community safety with our client base." Or is that something different?

Terry: No, I think that you could include the concept of e-commerce into those words.

WPI: Okay

Terry: CFA is a part of state government and largely relies on the work of volunteers to get its job done. It's essentially a conservative organization. If FEM was fully privatised, it would be driven by e-commerce today. It's just that when it is brought into the public sector, the decision making processes tends to slow down, people become a little more conservative in thinking. It would expand overnight dramatically with a good e-commerce strategy and good public relations around this. I'm interested in you guys coming up with a compelling argument that I could take to some other people.

WPI: Yea and to show that FEM would definitely improve with a tougher e-commerce strategy.

Terry: Yes; I think it would be good to explore that. You guys in your research may find that there are 10, 12 or more different new products and services that we could take to the marketplace. If we were to bring them to the marketplace using traditional means, then it would take forever to get critical mass to run the business. However, if there was a vigorous e-commerce strategy behind it then we could get to critical mass much quicker. You'll find that in Australia, we are very quick to use information technology. If you saw statistical data on mobile phone use, DVD, digital camera, home entertainment you'll find that Australia use them a lot. Also the use of e-commerce and

online banking is very high per capita. The same goes with business. Most administrative staffs rely on the internet totally to buy small to medium products and services.

WPI: Yes that sounds very similar to the United States. We're a little confused on what you mean by commercial/light industrial companies, do you think you could give us some examples of these customers.

Terry: Sure, at the small end of the market, let's say light industrial, you have automotive workshops. Maybe also a small factory or warehouse with around 5 guys working. We might move up into a fabrication plant of about 30 guys, something like pre-fabricated housing frames. We are not into major automotive manufacturers, petrochemical plants, or major steel production. On the commercial side we are talking about retail and offices.

WPI: One possibility that we we're thinking about to enhance the community safety, and possibly induce some income for the brigades, was to have the CFA provide, maintain, and train the use of portable defibrillators. Does the commercial/light industrial sector use any type of defibrillator? Do you think that this is a topic that we should look deeply into, or does it fall into the Emergency Medical Services?

Terry: It wouldn't get a run in CFA. It's very difficult to get through all of the workman's compensation and insurance issues. That is more of an area where you would find our ambulance services.

WPI: Yea, we read that in your email but weren't sure if defibrillators would fall into EMS services or not.

Terry: Go ahead and continue your research on that topic and I will qualify that it is actually the case.

WPI: Okay, this was just a preliminary idea because we know that it is becoming large in the U.S., a lot of companies are starting to install them.

Terry: Leave it with me, I'll get an email back to you with details. All I know that is in the past we have generated funds through the community and given them defibrillator units but they have never been serviced by the CFA, nor has any staff been trained by CFA to use them. It is currently a local interest issue rather than a corporate issue.

WPI: We were wondering your relationship with Chubb, we know that you buy equipment from them, such as fire extinguishers, but are they also your competitor?

Terry: Yes they are, it is an interesting relationship. We buy equipment from them and in some circumstances they provide us with labour when we're short of volunteers. It is an unusual relationship, but basically Chubb is okay with sharing the market with us. They see CFA as a community relationship and won't compete too hard with us. In fact if they see us aggressive in an area, they will back off. They also deal a lot with Melbourne and the Metropolitan Fire Brigade and the heavy industrial/ large commercial industries there. In terms of portable fire equipment, they are happy that we do as much as we do and in their company profile, they specify that they support CFA and other volunteer services.

WPI: You mentioned the Metropolitan Fire Brigade, does CFA service the rest of Victoria?

Terry: Yes, that's exactly right.

WPI: Do you have any specific topics that we haven't covered that you think are necessary for the project?

Terry: No, but if I can give you an idea of the things that we could be talking about. There is a great need in my view, again talking about small to medium sized businesses

in the commercial area, to provide them direct training; specifically on how to use the extinguishers and combat a fire if one were to occur in their workplace. Too often these businesses have this equipment, but they don't know what the right extinguisher is for the right job. This is a safety issue, but also we have people using very expensive extinguishers to put out a fire that might not need it when they could have just turned the hose on. So there is the issue of getting in there and training people and how to go about doing that. There are legal issues involved dealing with what is training and what is information. If a person is following information from someone, is that person that provided that information legally reliable. Another area of interest could be evacuation. Looking into whether or not these businesses actually have an evacuation plan. Is there a way that they can be developed which could include interviewing some of the staff to make sure that they understand the plan? From our point of view, that dramatically improves community safety. Some people have also talked to me about emergency management kits. Say for a large factory, that might be the size of a couple of your football fields, is there a box somewhere that is already plugged in so that you could break it open and find all the employees names and contacts, maybe has some mobile phone and walkie talkies, a copy of their management plan, maybe it sets off some strobe lighting so that people could see in the event of smoke. That's the sort of thing that people have been talking about lately.

WPI: It seems like the FEM is into the education of the society more than we thought. Initially it seemed to us that it was just products and information on these products. Can you explain a little?

Terry: FEM is basically a service game. We sell stuff and then we service it. My view is that this is far too limited than what FEM should be. Our volunteer brigades are very pivotal to communities. When you are here we will take you to quite a number of small rural towns where it is the fire brigade that actually keeps the community talking to each other. At the same time our volunteer force is undergoing change. We've got a lot more women coming into our volunteer forces and a lot more very well educated young men like yourselves. They don't necessarily want to do mundane things like walk around factories and recharge extinguishers. They have higher level talents which can be employed, such as helping someone make an evacuation plan or training people on how to use certain equipment.

WPI: When you talk about us starting to develop a plan for the brigades to train, to what extent do they already train the community to use their products?

Terry: Very limited. Where it occurs it is uncontrolled and unstructured. That's where I've raised this issue of what's advice, information or training. How do you distinguish between these? Training needs a certain structure and I would argue that there is a contract ahead of that. This could be in accordance of National Australian Standards or building codes. I think that too much of what we already do falls into the category of advice and information. It is good information but not necessarily complete. We haven't necessarily tested the recipient of the information for a level of competency of what they're told. Training implies these sorts of things.

WPI: I have a question about the CFA. Are all of your firefighter's volunteers or are there paid members as well?

Terry: We have a couple hundred paid firefighters that exist in our major urban centres. But there are 1,240 brigades 320 of which are involved in FEM. There are also 750 management and support staff 420 career firefighters and about 59,000 volunteers. There are 15-16 hundred units.

WPI: Should we be looking on expanding the FEM service to more brigades?

Terry: No, I wouldn't worry about that. I'm very interested to know, out of your initial research is how volunteer brigades, whether it be in the Netherlands or some state in the U.S or in Canada or South America, how they generate funds themselves through businesses. Sometimes it may not necessarily be about firefighting, but more about building the community. For example, we have one brigade that takes its trucks around at Christmas time to various business parties to promote the CFA and the brigades get a bit of money of it. I'm very interested to see what is going on around the world. My view is that we have an excellent business that turns over about 6 or 7 million dollars just in FEM, but this could double overnight if we put our minds to it. What are the other things that are currently being done around the world?

WPI: I just know what is going on with the U.S. right now. I'm a firefighter here in Massachusetts. We do things like dinners that bring the community into the firehouse and charge like 10 dollars a plate. It gives the kids a chance to climb on the trucks and stuff. We'll give some demonstrations with the JAWS, which is vehicle extraction stuff. Also, we do thing like handing out fire prevention pamphlets to help educate the public about things like changing smoke detector batteries. That's just what we have so far, what is done in the U.S.

Terry: I think that the idea about the dinner is a very good idea. It is a simple idea and I think some of our brigades do it. What we're talking about here is bringing in a wealth of worldwide information together in one spot. Ideas like that really belong in that group. It can be as simple as that, it doesn't need to be complicated emergency stuff. That is brining the community together; it's promoting the fire service and generating funds at the same time. That's just what we're looking for.

WPI: I had a quick question about the volunteers. You said that there are a lot of educated volunteers entering the business. Obviously, if we provided a new service, then they would need to be educated in regards to this. What is the usual process for this?

Terry: All of the brigades use an Australian standard that explains how fire extinguishers are supposed to be handled and maintained. Any volunteer of CFA that is involved in that servicing needs to be educated according to that standard. Any one that we hire to do labour for us must also be educated to these standards. This may involve hours of training before they are allowed to go out and service an extinguisher. We have to guarantee that they will work the first time, sometimes this is the only time they will be used. Any idea that we try to put on the ground, a part of the strategy would be the training of the teams.

WPI: Are you interested in training in schools or something like that? That is big in the U.S.

Terry: We already have that pretty well covered in other part of CFA

WPI: I have a quick question about the volunteers. Do they get any benefits such as tax breaks or something along those lines?

Terry: No they don't really. In some states of Australia there is a reward for turning out to incidents. Or there may be some level of pay if they happened to be out for a week or two on bushfire. But in Victoria there is now numeration or break whatsoever. The person has to have their own personal arrangements with their employer that allows them to attend an incident. What CFA does provide to the volunteer is that the training is good and people seek that out. Our volunteer firefighters are trained to the exact level as career firefighters, there is no in-between. If you haven't been trained to attend structural incidents as a volunteer, then you're not allowed on the fire grounds whatsoever. They also get personal equipment such as jacket, trousers and boots. They are given this gear to the same extent as a professional firefighter. That is a benefit,

even though it doesn't seem like much sometimes in terms of risk and what they are giving up in their salary. But they are happy with it.

WPI: Does the funding that is brought in by the individual brigades get broken up? Does some of it go to CFA?

Terry: Yes some of it does, but a very small amount. I put a premium on the brigade income and that offsets the costs of managing the accounting system and sending statements to clients. The rest of it, a fixed percent, goes directly to the brigade. They are not in a position to reward volunteers with these funds however. What they might use it for is to run brigade celebrations and events. They might use it for the very strong sporting clubs within CFA, twice a year there are games in which all of the brigades compete against each other. It could be used to make sure that their teams for this are well equipped and look good. They might also use it to give to local organizations, say a hospital or a kindergarten. Could be like this to install smoke alarms and bring more safety to the community.

WPI: Did you have anything else that you would wish to discuss Terry?

Terry: No not really. Do you understand what I meant in my email that I sent earlier? It seems that you do from your questions.

WPI: Yes, we change some of our thinking because of that, it was very helpful.

Terry: Good, I was just talking with Naomi Brown, who you'll meet when you get here. She's the director of community safety and we were both talking about being excited about this project. We think that it's an area that hasn't been tackled before. It's been rather haphazard and no one has really researched the best way to improve our business. We're really about finding a range of activities so that brigades according to their demographics, according to their locations, according to their skills, may pick or choose from a menu of activity that connects them with their community to enhance safety and at the same time generate a return. So we're looking for a blend of things and as we develop them, we would like to also look at the pre-conditions. Training is one of them, another would be that there's not a private supplier in the market that we will undercut. There's a whole range of things and we hope to document the business processes to deliver them. It would be a great piece of work that we could share with other companies in Australia, maybe our friends in New Zealand or anywhere really. We don't expect you guys to do everything but we would like you to kick-start the process.

WPI: We're excited as well, especially to visit rural brigades.

Terry: Yes, you have a car from us we will provide you with many visits. When are you actually getting here?

WPI: We are probably going to be there from about March 4th to late May.

Terry: Great, I look forward to speaking with you soon. If you happen to make a summary of the tape of this conversation, then send me a copy perhaps.

Bob O'Connell
Owner/Manager O'Connell Fire Protection
Deputy Chief – West Boylston Fire Department
February 12, 2005

O'Connell, Bob. (February 12, 2005).[Interview with A. Ellison and W. Culver, West Boylston Fire Department, Owner O'Connell Fire Protection].

Do you mind if I cite you in my report?

Not a problem.

Do you have any commercial or light-industrial customers?

Yes, that is our main-customer base. We have customers including schools, restaurants, and clubs, as well as some industrial factories around the city of Worcester. We currently have about 3500 facilities that we maintain, the majority of which are businesses or industrial facilities.

What products and services do you provide to them?

Fire extinguisher sales and service, Kitchen system sales and service, industrial suppression systems, as well as clean agent systems. We also do testing of sprinkler systems.

How often do you check your fire equipment products for customers?

The NFPA standard for most systems is once a year by a certified technician. It is a requirement for the customer to check their extinguishers monthly, but many times they contract us to do that for them.

How are your employees trained and certified?

All of our employees have a at least a high school education. In the United States, the majority of the training is done "on the job". There is however, a Massachusetts Certificate of Competency that must be held by at least one member on each job site. There is an informal apprenticeship-type operation within most companies to learn the work before applying for the certificate.

Is your company involved in any community safety programs?

No.

Are there any companies locally that are closer to the FEM program that we have described?

Community Fire, and Graves Fire are probably the best ones, however we are the major company in the area.

Are there any products or services that you think your volunteer fire department would be able to carry out involving fire equipment maintenance?

There is too much liability in the United States to have a Volunteer department do this sort of work. Also a concern to me would be the conflict of interest between the firefighters who do the service, and the same people then doing the government inspections.

On your role as a volunteer firefighter

Do you have a private fund within your company?

Yes, we have a fireman's association that is separate from any government funds.

How do you gain money for this fund?

Mainly through donations such as memorial contributions.

Any specific fundraisers? What is this money used for?

Not for this fund. However we do some community solicitation for our general departments funds in order to gain money to buy new equipment such as the JAWS of life and other expensive equipment that the town cannot pay for.

Besides emergency response, does your department provide any other services such as inspections or community education?

Fire Prevention officer does do work with children in schools as well as elderly education on fire safety. Also, sometimes we do classes for the public on Medical safety and emergency medical response such as CPR classes.

Do you know of anything else that could help us out with our project?

Look at the differences between the Fire Protection Agency of Australia and the NFPA. Also take a look into who regulates the volunteers services, and if there is a third party who inspects the volunteers work within their clientele. Also, it would be interesting to see if the NFPA is really a leader in the field, or if the Australian agency is further ahead.

Do you know of anyone else that we would benefit from speaking with regarding this project?

It may be a good idea to talk to someone from OSHA (Occupational Health and Safety Administration) about what standards are required in US businesses.

Thanks we will use your information to help provide volunteer firefighters in Australia.

Please keep me informed on what you guys find, and maybe give me some information when you return from Australia. Your project seems very interesting.

**Daniel Parsons
Deputy Chief
Hamilton Fire Department
February 17, 2005**

Parsons, D. (February 17, 2005). [Interview with A. Ellison, Deputy Chief, Hamilton Fire Department].

Do you mind if we cite you in our report?

No, Not at all.

What are some examples of community relations events that your fire department holds?

Open Houses, Classes at schools, Senior Fire Safety instruction, Hamilton-Wenham Business Council, CPR classes for businesses as well as general public.

Are any of these events used to educate the public about fire safety? How so?

Mostly medical courses for the general public. First Aid/CPR.

Are any of these events used for fundraising purposes?

No, however we do hold some fundraising events for our Private fund. These include a Spaghetti dinner, Road Race, and Direct Mailings.

Any idea of how much money each raises?

Spaghetti – 500-1000 US\$

Road Race – US\$2000

Direct Mailing – US \$17,000? Reaching all 8,000 residents of the town.

What is this money used for?

Death/Injury benefits for firefighters. Firefighter Moral events, Out-of-work benefits of \$75 a week.

What are some education techniques that you are familiar with regarding private fire equipment operations?

“Static Burn Board” – Display of objects that have been destroyed by fire.

Topsfield Fair Fire Prevention Booth – Answer questions, give out education materials. Hit ½ million people in 10 days. Some years give out as much as 10,000 pieces of material.

Health Fairs at Schools. Teaching the young is beneficial to the community.

Important: Find a way to draw people’s interest: Gadgets, Toys, Frisbees, Night-lights, Etc.

Are you familiar with the design of emergency evacuation plans?

For schools mainly, but yes.

What are some techniques that you use when assisting in the design of an effective plan?

Mainly walk the building, come up with routes out from different areas. Teach the occupants to Compartmentize as well as why it is important. Goal time for people to be able to evacuate is 2 ½ minutes.

According to NFPA or OSHA standards, what fire equipment is required to be inspected on a regular basis?

What is this regular basis?

Who does these inspections?

Fire Sprinkler Systems: Tested/ Inspected Annually by a licensed professional

Alarms: Tested/Inspected Annually

Kitchen Extinguishment Systems: Tested/Inspected every 6 months

Extinguishers: 1 year by a licensed professional, every month by property owner

Hydrostatically tested every 6-12 years

Egress Lighting: Annually tested for proper battery operation.

Larger buildings: Specialized Fire Alarm Panel rooms where fire official can control all fire-protection devices in the building

Fire Pumps: Annually.

Who does the maintenance on this type of equipment?

Private companies do maintenance and inspections. FD checks the inspection paperwork, and briefly looks over equipment to make sure there are no gross problems.

NOTE: Look into NFPA 101: Life Safety

Is there any equipment that is not required, however is a good thing to have in place?

Carbon Monoxide Detectors. Also, sounds like this business may be able to distribute smoke detectors for smaller businesses without alarm systems. We have a few Carbon Monoxide detectors Donated by a local hardware store that we give out if we think they are needed.

Is there anything else that you know of that may help us with our project?

Mascot: Teddy Ruckstard? Talking Bear that teaches about fire-safety.

Smokey the Bear, Sparky the fire dog

Get Restaurants involved:

Papa Jinos Gives away 90 pizzas to firehouse open houses during Fire Prevention Week for free as well as education materials

Burger King used to do something

DAN GOUMONT: Started a program where on a Friday or Saturday night a fire engine goes to the local pizza shop, picks a delivery, and delivers the pizza in a fire truck. Company picks up the bill, and if invited in the house will do a brief discussion on fire safety.

Ansul: Fire Extinguisher Simulator: Knows direction and method of fire extinguishment, can tell if you do it wrong.

Ansul: Portable Kitchen fire demonstrations.

Web Site Development: Include a kids section with colourful pamphlets and maybe a simple video game. Kids are into the Digital world, it interests them.

Give out dollar gift certificates to local fast-food chains to kids who make a good fire-related decision.

With the elderly: Practice kitchen fires on an old stove outside. Use out-dated extinguishers that need to be refilled/tested anyway.

Do you know of anyone else that we would benefit from speaking with regarding this project?

Try Dan Goumont from upstate New York about pizza delivery.