AN ENVIRONMENTAL SCANNING PROGRAM FOR
RICHLAND FIRE & EMERGENCY SERVICES AS A
CRITICAL STEP IN STRATEGIC PLANNING

EXECUTIVE DEVELOPMENT

BY: R. Grant Baynes
Richland Fire Department
Richland, Washington

An applied research project submitted to the National Fire
Academy as part of the Executive Fire Officer Program

JULY 2002
ABSTRACT

Traditionally fire departments have focused effort on short-term annual plans, particularly around budget time. Longer term planning, if it was done, relied on a simple extrapolation of present trends based on historical data. Today’s fire departments exist in a much more tumultuous environment. Constant change is the norm. Trends, issues, and events that occur outside the fire department can impose significant threats and opportunities that an unprepared department can only react to. A department whose members actively seek out strategic intelligence from the external environment and carefully analyze the findings can anticipate the forces of change. The department can be positioned to maximize opportunities, minimize threats, and may actively intrude into the environment to influence events. In other words to invent the department's future. The problem was Richland Fire and Emergency Services did not have a systematic process of external environmental scanning.

The purpose of this project was to develop an environmental scanning program for the department. The study utilized the action method of research. The following questions were answered:

1. What is environmental scanning and how does it apply to the fire service?
2. What are the benefits of an environmental scanning program?
3. What are the elements of an environmental scanning program?
4. What factors are important to establish and operate an environmental scanning program?

The procedures involved an extensive literature review with careful analysis of other public and nonprofit organizations that have scanning programs. An Environmental Scanning
Program (ESP) was designed and developed. The results showed that a fire department could expect to effectively use an ESP.

The implementation of the ESP is recommended for Richland Fire and Emergency Services. Further it is recommended that the National Fire Academy include ESP design in its Change Management courses. As other departments implement, evaluate, and refine their programs an industry database of the broader external trends, issues and events could be shared.
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>BACKGROUND AND SIGNIFICANCE</td>
<td>3</td>
</tr>
<tr>
<td>LITERATURE REVIEW</td>
<td>6</td>
</tr>
<tr>
<td>PROCEDURES</td>
<td>11</td>
</tr>
<tr>
<td>RESULTS</td>
<td>16</td>
</tr>
<tr>
<td>DISCUSSION</td>
<td>19</td>
</tr>
<tr>
<td>RECOMMENDATIONS</td>
<td>21</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>23</td>
</tr>
<tr>
<td>APPENDIX A (Environmental Scanning Program)</td>
<td>27</td>
</tr>
</tbody>
</table>
INTRODUCTION

Planning is an iterative activity. Organizations must set strategic direction and develop strategic objectives in an ever changing, turbulent operating environment. Strategy development is necessarily anticipatory requiring a future-oriented approach. The rate and extent of change encountered by an organization is unique even when considering organizations in the same community or in the same industry. Each organization’s experience with strategic development reflects its distinct culture, environment, resources, structure, and management style. It is becoming increasingly difficult to create a realistic vision for an organization and to position for success under the weight of the many external influences a modern organization is subjected to. Strategic positioning is a transition from traditional strategic planning to creating the means to realize the execution of an organizations mission and vision. Strategic planning was pioneered by General Electric in the 1960s and widely adopted in the corporate world in the 1970s (Morrison and Wilson, 1996). In the 1970s when strategic planning was being widely applied, external events were still viewed as relatively stable, and planning was typically retrospective, or, at best, present oriented. Laboriously prepared strategic plans were put on the shelf for the duration of their term. Strategy did not pervade day-to-day operations. (Morrison and Wilson, 1996). Strategic positioning prepares an organization for the future while providing the blueprint for daily activities. Fire Departments are not immune to the effects of change. The ability to recognize the threats and opportunities inherent in change is invaluable.

“For knowing afar off the evils that are brewing they are easily cured. But, when for want of such knowledge, they are allowed to grow until everyone can recognize them, there is no longer any remedy to be found.”

Machiavelli, *The Prince*, 1513
Ashley and Morrison (1996) cited this passage by Machiavelli to emphasize the great advantage of being anticipatory.

Contemporary fire service managers must operate within and adapt to a rapidly changing external environment. Decision-makers have less time to analyze and respond to environmental changes than ever. Traditional strategic planning processes rely on historical data extrapolated to predict needs and direction. The underlying assumption of such models is that any future change is in the direction and rate of present changes among a limited number of social, technological, economic, and political variables (Morrison, 1992). Today leaders need to understand the ever-changing external forces that impact their organization’s planning and decision-making. External environmental scanning serves as an early warning system by alerting decision-makers of potentially significant external developments while in their early stages. Environmental scanning is a critical element of strategic positioning. Strategic positioning places an organization in a mode to be responsive and adaptable to change while executing its mission and vision (Stiffler, personal communication, June 12, 2002).

The problem is that Richland Fire and Emergency Services has no systematic process of external environmental scanning for strategic positioning. The purpose of this research is to develop an environmental scanning program for the department. This study utilizes an action method of research. The research questions are:

1. What is environmental scanning and how does it apply to the fire service?
2. What are the benefits of an environmental scanning program?
3. What are the elements of an environmental scanning program?
4. What factors are important to establish and operate an environmental scanning program?
BACKGROUND AND SIGNIFICANCE

The City of Richland, Washington is located in the Columbia Basin near the confluence of the Columbia, Yakima and Snake Rivers. Richland, Kennewick and Pasco, colloquially known as the Tri-Cities, share common boundaries, though the Columbia River separates Kennewick and Richland from Pasco. Richland also shares a common boundary with the Hanford Nuclear Reservation. Hanford became the site of a number of reactors producing plutonium during the Cold War years. Now the Hanford Nuclear Reservation is the scene of a massive federally funded clean up operation administered by the Department of Energy. The economic health of the neighboring communities, particularly Richland, has traditionally been directly related to the status of projects on the reservation. Hanford has been a major influence on Richland over the years. It does mean that organizations in this community have to be more cognizant of federal activities than similar organizations in other communities of like size. The local economy has tended to follow a boom and bust cycle, often out of sync with communities in the rest of the state. Richland Fire and Emergency Services has tended to adhere to some core programs relying on controlling personnel costs in lean economic times and allowing recovery of wages during boom times. The $5,338,723 budgeted for 55 uniform staff and 2.5 civilian support staff (2003) represents 87 percent of the Department’s annual operating budget. Such focus has created a very one dimensional approach to planning more attuned to maintaining current services than evaluating customer needs/expectations, including new service opportunities, use of new technologies, personnel capabilities, operational capabilities, and other financial and societal risks and opportunities. The department is more accustomed to and adept at fighting for resources than ensuring maximum performance and efficiency in service to the community. Reactive behavior patterns by fire departments tend to have far less destructive consequences
than for organizations in the private sector. Failure to anticipate threats and opportunities by a fire department typically do not have the overt consequences seen when a company experiences dramatic lose of market share through failure to heed trends in the market. General Motors lost 30% of its market share in the 60s during the energy crisis and the upsurge in popularity of Japanese made cars. (Ashley and Morrison, 1996) While market share is rarely an issue for a fire department it must compete with other departments in the city for budget share. Budget decisions and funding priorities established by elected public officials will directly affect the department’s ability to attain strategic objectives through the execution of action plans. The City Council establishes a vision and a set of goals for Richland and enacts the policies necessary for city staff to bring these goals to fruition. Richland Fire and Emergency Services is in the beginning phase of escaping the reactive, tradition based style of planning. Our reputation as a future oriented organization that is adaptable and efficient, capable of identifying changes and implementing them will ensure we are positioned to influence policy not react to it, perhaps even beyond the local environment.

The leadership team of the department has committed to making the transition to strategic positioning. Our members have established, in concert with the rest of the city employees, a set of core values: Teamwork, Excellence and Integrity. A team of Values Champions is tasked with helping us to convert those values into behaviors. We expect to retool the work environment to foster initiative, leadership/followership, decision-making, accountability and execution. Forward focus to where we want to be, our vision, is the critical first step to bringing our people with us.

Leadership will always play a key role during those times when a group faces a new problem and must develop new responses to the situation. One of the functions of
leadership is to provide guidance at precisely those times when habitual ways of doing things no longer work, or when dramatic change in the work environment requires new responses.

Edgar H. Schein, 1992

This applied research paper is prepared to meet the National Fire Academy (NFA) Executive Fire Officer Program (EFOP) Executive Development Course Goals 1 and 2. (Lead effectively and efficiently within a dynamic and complex organization by enhancing development of teams and the application of applied research.) (Develop and integrate management and leadership techniques necessary in complex organizations.) Unit Nine, Outside Perspectives: Elected Official and City Manager is also applicable to this project. The terminal objective states that students will be able to place the fire service within the context of the external political environment, and to consider other credible government viewpoints in decision-making. This paper will extend beyond the external political environment to other macroenvironment focuses such as changes in social, technological and economic sectors.

The significance of this research paper for the United States Fire Administration (USFA) is twofold. The applicability and efficacy of environmental scanning as a strategic positioning tool for fire departments will be evaluated. Secondly, a model program for environmental scanning by fire departments will improve their ability to strategically position their organization, thereby enhancing the fire departments delivery of life protecting services in their community. (Operational Objectives one and two, USFA, 2001). Strategic intelligence gathered through the scanning process will enable fire departments to avert threats and capitalize on opportunities thereby contributing to the comprehensive risk reduction plan in the community. (Operational Objective four, USFA, 2001)
LITERATURE REVIEW

The importance of environmental scanning became evident in the mid 1960s as organizations, which maintained an inward focus only, were losing market share to those capable of establishing and maintaining new relationships with the environment. (Cope, 1981; Clark, 1987)

Traditional planning was done at regular intervals, usually on a five-year cycle. The future was seen as an approximation of the present (Bachtler and Brennan, 1995). A most likely forecast was based on incremental change (American Society of Association Executives, 2002). The long-range plan was formulated and implemented as written. In time organizations began to move their focus externally and away from a reliance on historical data. Aguilar (1967) studied the information gathering practices of managers. He is credited with the first use of the term environmental scanning. He used it to describe the systematic collection of external information in order to (1) lessen the randomness of information flowing into the organization and (2) provide early warnings for managers of changing external conditions. Decision-makers attempted to anticipate environmental changes and the impact such change might have on the organization (Cope, 1981). A literature review by Burton Clark (1987) set out to answer two questions. What is environmental scanning and how do you do it? He identified six sources that contained statements that could be construed as definitions of environmental scanning (Clark, 1987. Table 1). He determined that common terminology among these sources indicated that environmental scanning is a dynamic process that involves the identification, collection, assessment and monitoring of information. External factors are evaluated as they pertain to the organizations mission, goals and strategies. Future threats and opportunities are evaluated in order to respond as soon as possible. Environmental scanning is the acquisition and use of
information about events, trends and relationships in an organization's external environment, the knowledge of which would assist management in planning the organization's future course of action (Choo and Auster, 1993). While not everyone in an organization has the authority to make decisions most have the talent and experience to generate ideas and perform analysis. Environmental scanning provides an opportunity for people who truly wish to show initiative to be part of an organization in a proactive way (Simpson, 1996). Correctly done, environmental scanning is more than a research process. It is a learning process (American Society of Association Executives, 2002).

Scanning the general environment for trends that affect the organization's mission is essential to developing an effective strategic plan (Bourgeois, 1980). The private sector organizations are some 15 years ahead of the public sector in the use of environmental scanning (Boucher, 1988). There has been significant adoption of the scanning process by tertiary education institutions since the mid 1980s (Morrison, 1985, 1992; Van Muse, 2002). A number of schools have been successfully employing scanning programs for several years. The University of Georgia’s Center for Continuing Education began an environmental scanning program in 1985. It has become an integral part of the Georgia Center organization. “Environmental scanning is a futures research technique that has been adopted as a component of strategic planning. It’s a way to engage facility and staff in grappling with external trends and issues that could bring threats and opportunities to the organization” (McGinty, 1996). Auburn University has the Auburn Horizon, a newsletter for environmental scanning in higher education. One long-term goal of the newsletter is to facilitate the practice of environmental scanning in every department and sector of the University (Van Muse, 2002). Review of contemporary writings on the subject indicates that the trend has now spread to school districts, libraries,
environmental groups, and incorporated cities. Bryson *Strategic Planning for Public and Nonprofit Organizations* (1995) identifies a ten step strategic planning process as follows:

1. Initiate and agree upon a strategic planning process.
2. Identify organizational mandates.
3. Clarify organizational mission and values.
4. Assess the organization’s external and internal environments to identify strengths, weaknesses, opportunities and threats.
5. Identify the strategic issues facing the organization.
6. Formulate strategies to manage these issues.
7. Review and adopt the strategic plan or plans.
8. Establish an effective organizational vision.
9. Develop an effective implementation process.
10. Reassess strategies and the strategic planning process.

Bryson believes that the process is applicable to public and non-profit organizations. The only general requirement is a dominant coalition to sponsor and champion the process. (Bryson, 1995; Thompson, 1967) He illustrates the key points of this planning process with the experiences of three public organizations and a non-profit organization. They are a suburban school district, a public library, a federal program and a large central city church. Like these public institutions a fire department is subjected to many external forces that impact the execution of its vision. Master planning is concerned with evaluating and changing the fire protection system to meet the needs of a changing environment (Coleman and Granito, 1988). The United States Fire Administration (USFA) recognized the paramount importance the changing environment has on the future of the fire service and introduced courses to help leaders
to manage the pace of change they now encounter. The curriculum for the USFA course

*Managing in a Changing Environment* focuses on four major areas having an impact on the future of the fire service. Economic, social, political, and technological influences on the world, nation, and community in which the fire service operates will be identified, and their impacts on the fire service will be discussed (USFA, National Fire Academy, 1995). The fourth enabling objective in Module Two of Executive Skills Series: Managing and Leading Change reads; recognize external forces and their impact on change management (technological developments, economic factors, social factors, political/legal factors) (USFA, National Fire Academy, 1997).

Forces or trends are typically broken down into four sectors: social, technological, economic, and political (Bryson, 1995; Morrison and Wilson, 1996). This basic taxonomy can be further divided into sub groups, for example, social may be divided into community demographics such as population growth and density trends. Economic may be further divided into wage and salary forecasting, changing revenue sources for a community and so on.

Environmental scanning involves both looking at information (viewing) and looking for information (searching). (Aguilar, 1967) identified four types of scanning. Undirected viewing involved indiscriminate reading with no specific purpose but to be better informed. Conditioned viewing involved assessing the importance of the information to the organization. Searching could be informal and unstructured or formal with specific methodologies. Morrison, Renfro and Boucher (1984) simplified this model to active and passive scanning. Choo (2001) reworked the original Aguilar model into four components: undirected viewing, directed viewing, enacting and searching. The information gathering method employed by an organization is dependent on the extent to which the organization believes the environment to be analyzable and the extent the organization can actively intrude into the environment in order to influence events and outcomes.
If an organization feels that its environment is unanalyzable and it could have little influence on outcomes then information gathering will be undirected with out intrusion into the environment to understand it. Searching takes place when an organization perceives the environment to be analyzable and it actively intrudes into the environment to collect an accurate set of facts about the environment. Searching is broader in scope than conditioned viewing. The information sought is often quantitative data to produce market forecasts, modeling, and trend analysis, that is, strategic intelligence. The searching method of environmental scanning fosters proactive intervention by an organization to influence developments to their advantage when the environment is in a great state of flux. Both the level of analyzability and the level of intrusiveness can be raised. Searching brings staff closer to the important actors in their environment and creates channels to interact and communicate better internally and externally (Choo, 2001).

There is no strong relationship between the hierarchical position in an organization and scanning activities (Van Vuuren, 2001). Involvement of personnel throughout the organization has the added benefit of providing regular, structured face-to-face discussions on planning issues. McGinty (2002) concluded that scanning increased communication among all staff and provided greater employee involvement in the decision making process at the Georgia Center for Continuing Education. The Lincoln Futures Program in New Zealand was based on the underlying assumption that involving the intellectual powers of the stakeholders to identify the signals of change, analyze the implications of the signals and design and implement creative plans and that the plans would have the active support of the majority of stakeholders, and, thereby, transform the organizational culture (Morrison, Sargison and Francis, 1997).
In summary, the literature review was a principal component of this research project. It provided the definition of environmental scanning, the framework with which to build a scanning process at Richland Fire and Emergency Services and some insight into the possible outcomes that will serve to motivate and commit stakeholders to the process. It is clear that while the process of environmental scanning has been around for over 35 years and has more recently been recognized as relevant to public sector organizations it has not been practically applied to fire service organizations to date.

**PROCEDURES**

Dr. Burton A. Clark was interviewed at the National Fire Academy (NFA) in Emmitsburg, MD. Our discussion was initially centered on the interaction between a fire department and elected government officials. Dr. Clark introduced me to the concept of environmental scanning. He referred me to a paper he wrote in 1987 on the subject.

Dr. Clark’s paper was part of a literature review undertaken to prepare this research paper. The review process continued at the NFA Learning Resource Center in March 2002 with a search of books, journals, and past Executive Fire Officer Program students applied research projects. The review was completed through electronic searches and use of the library resources in the City of Richland, Washington.

The literature was evaluated to determine whether an environmental scanning program that identifies external trends and forces on an organization is applicable to Richland Fire and Emergency Services. Papers that discussed the conceptual and technical elements of environmental scanning were reviewed in order to determine the methodology to be employed in the Environmental Scanning Program (ESP). Environmental scanning programs that have been employed by tertiary education institutions were reviewed as public sector and non-profit
organizations more closely resemble fire service organizations. While it is clear that fire service organizations have recognized the need to consider the external environment in the planning process there is no evidence of a specific methodology to do so.

Richland Fire and Emergency Services Department leaders recognized the need for a more proactive, dynamic strategic planning process. The Richland Fire and Emergency Services Department followed the ten step described by John M. Bryson in *Strategic Planning for Public and Nonprofit Organizations* (1995) for the core structure with some modifications based on key issues within our organization.

**Situational Analysis**

Before an ESP could be initiated the first three steps of the process had to be addressed. A solid commitment to strategic planning was evidenced when the department leaders contracted with consultant Phil Stiffler of AspireOn to begin the process of strategically positioning the leadership team and the department for success in a values based organization. Beginning 2002 the city embarked on an effort to move from a rules to a values based organization. Departmental, interdepartmental, management, and political leader focus groups met and eventually three core values were established: Integrity, Teamwork and Excellence. A group of Values Champions is helping translate these values into behaviors. This and other mandates, formal and informal, were identified.

The Department’s mission statement has been in place for a number of years and the department fulfills that mission effectively in the eyes of the community. The biannual citizen survey was conducted in 2002. 401 citizens responded out of 1,253 surveys sent out with monthly utility bills. The responses indicate a high level of satisfaction with both the fire and emergency medical service provided by the department. Survey questions specific to the
department were limited and it was clear that a more extensive survey instrument would be helpful.

The results of a City-employee survey conducted in 2001 were reviewed. 446 employees of the City of Richland responded to the survey. 48 members of the fire department took part in the survey. Lack of communication and clear direction for the department was the most prominent concern expressed. There is some concern over the construction of the survey instrument and it is proposed that a survey of department personnel be conducted next year with a different survey instrument. There was clearly a need to improve the communication of a direction and vision for the department internally. It was also felt that exhibiting a well-defined direction and vision to key resource controllers, such as citizens and elected officials would position the department better to access information and to positively intrude into the environment. That is, to achieve a higher level of analyzability of the environment and to have some influence in outcomes.

The Fire Department has adopted a set of axioms and expectations that embrace the three values of the city employees. (see Appendix A.) At the same time the senior officers of the Fire Department were defining a vision for the Department. A simple, attainable vision statement was written. (see Appendix A.) The leadership team has been tasked with providing the environment that supports ownership of and adherence to the standards and vision for the department. To that end the Organization Manual presently composed of two binders of Policy is being replaced with Values Statements or Standards and a series of Practices and Guides to assist individual decision making. The department is now positioned to take the next step of implementing an ESP.
Environmental Scanning Program

Establishing a continuous scanning system to create strategic intelligence requires effort and resources (Simpson, McGinty, and Morrison, 1990). Large organizations have the financial resources to employ dedicated staff to their ESP. Even a small school like Lincoln University had a Futures Analyst assigned to the project (Morrison, Sargison and Francis, 1997). Others like the Georgia Center were forced to rely on existing staff to establish a scanning team (McGinty, 1990). Richland Fire and Emergency Services is most like the Georgia Center. We will have to rely heavily on our 55 staff members. We hope to extend the range of the team by teaching and then involving others in our community, city government, city management, and the fire service. In the meantime the responsibility will remain with the members. The department is organized into five divisions: administration, medical, suppression, prevention, and training. A manager leads each division. These managers have specific functional area supervisory responsibilities in addition to their regular duties. (see Appendix A) The primary benefit of this organizational structure is the creation of an interdivisional matrix that broadens the perspective of members and shares the workload. This structure forms the basis of the scanning focus. Members’ primary focus in the scanning process is directed in the area of their assignment. The Chief and Deputy Chief have broader points of reference. The Chief is primarily focused outside the department and the Deputy Chief is internally focused with supervision of the division managers.

This is the point Richland Fire and Emergency Services has reached in the establishment of an ESP. The remainder of the procedures is necessarily in the future tense. The scanning teams will use four sectors to break down forces and trends: social, technological, economic, and political (Bryson, 1995; Clark, 1987). These sectors may be further broken down into subsections for example, population and workforce demographics in the social sector. Specific
information resources are to be identified in the sectors that pertain to each functional area. In the first instance a greater reliance on existing information resources is to be expected. These will include literature, organizations, experts, and databases. In time the scanning procedures will expand to be consistent with the searching method of scanning described by Choo (2001). The teams will gain confidence in the analyzability of their environment and will be better prepared to intrude into their environment in order to collect accurate intelligence. Decision-making can then be based on logical, rational procedures, including systems analysis and quantitative techniques (Choo, 2001).

Scanners will establish a formal and continuous cycle of scanning in order to identify emerging trends and issues important to their functional area. Once identified these must be evaluated for their importance to the department. Does the trend or issue present a threat or an opportunity? What is the probability that the issue will go critical? What is the probability that it will affect the department? Can the department influence the issue? Should the department try to influence the issue (Ashley and Morrison, 1997)? Depending on the answer to these questions the follow up analysis may be carried out by an individual, a standing Work Group, or pushed up to a group put together to evaluate a critical issue. A series of “what if” scenarios will be developed along the lines of the Developing Incident Situation Analysis (DISA) that the fire service uses for a major incident. A brief is to be written on the trend or issue and this is to be posted to the electronic database housed on a department drive on the city network. The Battalion Chief supervising the planning and research functional areas will manage the clearinghouse for the ESP database. Form e-mail notices will be sent to members to draw their attention to a scan brief that may be relevant to their functional area. The brief will form the basis of an Action Plan that is formulated as a specific institutional objective (Morrison and
Held, 1989). The action plans are then incorporated into the annual Department Action Plan (DAP) through the planning cycle.

Limitations

Two limitations affected this research project. The time allowed to complete this research project for the National Fire Academy Executive Fire Officer Program is six months. This does not allow sufficient time to design an ESP, implement it, and evaluate it. Some of the procedures described are necessarily in the future tense. The Richland Fire and Emergency Services Department was still in the process of completing some of the prerequisite steps leading up to the external scan at the end of the six-month timeframe for the project.

The department is also experiencing the transition pains of the move from an autocratic rules bound system to values based with appropriate decision making authority at every level of the organization. Change processes are slow and require communication above and beyond normal levels to garner support for new direction. The level of sophistication we will be able to achieve will be simple in the early years.

RESULTS

1. What is environmental scanning and how does it apply to the fire service?

The literature review provided a clear and consistent definition of the process of environmental scanning, its outputs and potential outcomes. The concept has been utilized for over three decades in the private sector and is being used more and more by public and non-profit organizations of varying sizes from United Way of America to school districts to single colleges. Environmental scanning is a system designed to be an anticipatory tool in order to turn emerging trends into opportunities (Ashley and Morrison, 1997). The essence of this concept is captured in the words of Wayne Gretsky “I skate to where I think the puck will be.” While he
plays with a game plan he is able to weigh a mass of inputs as he moves across the ice. He evaluates the strengths and weaknesses of the other players, the way the play is developing, and what might happen next.

The fire service must also learn to skate to where the puck will be. Our environment is not immune to change and external trends and issues have a profound effect on the service we are able to deliver. A department that is able to analyze its environment, externally and internally, and is prepared to intrude into that environment to influence outcomes is positioned to execute goals and fulfil its vision. The Richland Fire and Emergency Services Department is perhaps more vulnerable than some due to the city’s close proximity to a major federal project, shared boundaries with three other cities, and an economically vulnerable economy.

2. **What are the benefits of an environmental scanning program?**

The literature review and commentary by those who have implemented an ESP provide the principal benefits of the program. At the most quintessential level it allows an organization to “shape its future”. It is a mechanism to gather strategic intelligence to break away from reactionary planning to anticipatory planning. Action plans are better aligned with real conditions and are likely to produce more positive outcomes. There is an assumption that an organization can also influence the future (Morrison and Held, 1989).

An ESP also provides an opportunity for people in the organization to show initiative and be intimately involved in the future direction of the organization (Simpson, 1996). He also believes that it improves communication in the organization, critical thinking, and the powers of persuasion. The members of the Richland Fire and Emergency Services Department identified communication and clear direction as critical issues in the 2001 staff survey. An ESP requires attention to both of these issues. The department needs to create communication channels
internally and with external stakeholders. To increase environmental analyzability, the department needs to keep in close touch with key stakeholders, make information readily available to all parties, and encourage staff to be interested in and to discuss and to collectively make sense of external developments (Choo, 2001).

3. **What are the elements of an environmental scanning program?**

   Conceptually, the environment may be subdivided into three components: the task environment, the industry environment, and the macroenvironment (Morrison, 1992). The task environment is the customer set of an organization. For a fire department it is the community that it serves. The industry environment is all things to do with the particular type of organization. A fire department is part of the fire service. The macroenvironment is the broadest level where changes in the Social, Technological, Economic and Political (STEP) sectors affect an organization directly and indirectly (Morrison, 1992).

   There are four modes of scanning: undirected viewing, conditioned viewing, enacting, and searching (Choo, 2001). The searching mode is the most proactive but requires the greatest effort to raise the level of environmental analyzability and the level of intrusiveness. Richland Fire and Emergency Services has adopted this method of scanning. The extra effort to form close communication ties with key players in our environment to exchange information and the interest it spurs in the outside environment in our members is a step this department is ready to take.

   When a scanner working within a functional area identifies an issue or trend it will be analyzed and a brief prepared on the potential opportunity or threat that it poses. An action plan is then drafted to address the response the department will make on the matter. Planners will post briefs electronically to share the information for future use.
4. **What factors are important to establish and operate an environmental scanning program?**

The organization must make a commitment to implementing the strategic plan (Bryson, 1995). Though it is possible to start almost anywhere in the process when an organization is new to strategic planning that involves a broad range of the members it is important to establish a vision of the expected outcome. Involvement brings with it buy-in and broadened horizons. To give some focus to the use of the searching mode of scanning members are given functional area responsibilities. Formal and systematic scanning aims at establishing objective facts of what is happening in the external environment (Choo, 2001). Higher level supervisors will maintain the broadest perspective on the external environment.

The Planning Battalion Chief will manage the electronic database of briefs. He will review briefs and notify other members and work groups of briefs he believes they need to examine as they work on the plans for projects and programs to be integrated into the annual Department Action Plan.

The Richland Fire and Emergency Services Environmental Scanning Program is found in Appendix A.

**DISCUSSION**

The result of this research project is a proposed Environmental Scanning Program for Richland Fire and Emergency Services. Contemporary fire service publications stress the importance of strategic planning (Coleman & Granito, 1988; Bachtler & Brennan, 1995). National Fire Academy courses have been developed to assist leaders to manage in today’s climate of rapid and sometimes erratic change (NFA, 1995). Some of the elements of environmental scanning have been alluded to. The four sectors to break down trends and issues
for analysis (Clark, 1987) are noted and the need to look at influences from the local to global environment (Aguilar, 1967). How to position a department to conduct an environmental scan, the process to apply and the methods to utilize the findings into a manageable system has not been published. As the application of ESPs in organizations, particularly in the public sector (Bryson, 1995), has grown researchers have been able to further refine the science of the process (Choo, 2001). The benefits of implementing an ESP are well documented (Morrison, 1992). The benefit to Richland Fire and Emergency Services is speculative at this point but the prognoses are good if the members embrace the program and are committed to participating to the fullest (ASAE, 2002). As noted in the limitations it is expected that the full benefits of the program will take time to eventuate but that even in its infancy the program will enhance the sense of the direction and participation for the members (Simpson, 1996). Members will have to improve their communication skills internally to share information (Van Muse, 2002; McGinty, 2002) and to develop the “what if” scenarios for analysis (Morrison, Sargison & Francis, 1997). As we refine our searching methods we will also take a stronger position in the external environment (Choo, 2001). Taking the organization to the community enhances our ability to inform and therefore influence key stakeholders about our department (Morrison, Sargison & Francis, 1997). The department can demonstrate its commitment to the community and its dedication to meeting its needs. Strategic planning that takes into account the dynamic nature of a modern community requires careful and deliberate positioning by organizations particularly those that are dependent on public moneys for funding (Bryson, 1995). Action plans that are out of synch with goals and objectives of the governing body, influential stakeholders and the people they serve will quickly erode the department credibility (Stiffler, 2002). Failed effort and missteps will also quickly
begin to impact the morale and willingness to participate within the organization. This effect will soon spiral.

Proactive, deliberative action plans developed by careful analysis of the threats and opportunities of the external environment and the strengths and weaknesses of the internal environment will position the department to invent its own future (Stiffler, 2002). Reactionary planning is usually a day late and always a dollar short (Cope, 1981). The members of Richland Fire and Emergency Services want to know where they are going and to have a hand in its future. Others have demonstrated the efficacy of institutionalizing an ESP (Ashley and Morrison, 1997). Richland Fire and Emergency Services is positioned ready to enjoy the benefits too both as an organization and for individual members. An ESP provides an impetus for team building (Simpson, 1996) and realization (Morrison and Held, 1989).

**RECOMMENDATIONS**

The benefits to an organization are evident but there is some preparatory work for Richland Fire and Emergency Services to do. The efforts to date have positioned the department structurally and functionally for implementation of the ESP. Members resistance can be expected to the new program if it is introduced immediately. Other projects that are started need to be completed to build the confidence of the members. Therefore it is recommended that implementation begin in 2003. After the function area supervisors have been briefed on the ESP, training sessions with the shifts need to be given to introduce them to the process. It is critical that communication and clear direction become integral parts of the on-going ESP every step of the way.

The literature review gave very little insight into the efforts of other small organizations like Richland Fire and Emergency Services. The corporate studies and the programs described in
some detail by the tertiary schools are representative of organizations with resources far exceeding those of the fire department. The literature review does give sufficient technical guidance to support the establishment of an ESP by an organization of almost any size. The key to success is the commitment of members to full participation in a well-defined process. Simplicity does not diminish the likelihood of success.

Executive Fire Officers need to consider the value of implementing an environmental scanning program in their organization even if they feel they have an established strategic planning process. The challenge of creating the future of your department rather than simply reacting to future events as they occur is compelling. The means to position your department is well described in the literature. The importance of anticipating change is well understood. How to go out into the external environment and gather strategic intelligence, to utilize it in action planning and effectively influence the future had not been practically described for fire departments. This paper is an effort to address this gap in the knowledge of the leaders in our department. Very positive results are expected and if such a program were to be introduced in other fire departments then our ability to further develop and refine the process would be enhanced. The NFA has introduced the elements of an environmental scanning program. Exposure of fire service leaders to a developed program would provide valuable peer review of the processes and introduce it as a critical strategic planning tool.
REFERENCES


According to the document, campuses are preparing for the knowledge age, as presented in the publication "New Directions in Institutional Research," San Francisco, CA: Jossey-Bass.


http://horizon.unc.edu/courses/papers/Mang.asp


APPENDIX A

Environmental Scanning Program.
Environmental Scanning Program

August, 2002
The Richland Fire & Emergency Services Department is dedicated to the preservation of public safety and quality of life by providing quality emergency and non-emergency services.

Expectations are based upon the following axioms:

- Members are trustworthy
- Members are professionals with professional qualities, behaviors and skills
- Members embrace flexibility
- Members desire authority to exercise independent judgment
- Members accept responsibility and accountability for actions and outcomes

All personnel are expected to:

1. Strive for excellence
2. Obey the law; follow appropriate directives and rules
3. Protect the public at all times
4. Consider the public as consumers and provide a customer oriented service
5. Reflect a positive image for the organization
6. Work competently to make all Department programs operate effectively
7. Create good order inside the department
8. Keep informed
9. Protect each other’s welfare
10. Use good judgment and promote safety at all times
11. Protect and care for fire department equipment and property
12. Maintain proficiency in job related knowledge and skills
13. Strive to maintain a high degree of physical fitness
14. Be organized, manage time wisely
15. Help each other succeed; utilize experience and knowledge in a positive way
16. Treat coworkers equitably and consistently
17. Assist in problem solving
18. Be pro-active
19. Be bold decision-makers
20. Communicate honestly and completely
21. Carry out decisions in a positive manner
22. Exhibit behaviors which reflect organizational expectations; be positive role models
23. Speak positively of the organization and its members
24. Document all pertinent and/or unusual incidents
25. Report promptly and work all scheduled hours
26. Handle items at the lowest level

Officers are further expected to:

27. Be mentors and trainers; recognize good performance, assist upwardly mobile members
28. Be personal advocates for decisions
29. Meet regularly with personnel; provide information; address rumors with facts; be active listeners
30. Be positive effective leaders, lead by example; maintain discipline, be good followers
31. Review special or unusual incidents with personnel
32. Empower employees, assist as needed, take charge when appropriate; be managers and manage
33. Be participants; when possible strive for consensus
34. Be strong incident commanders; take command; be command

Chief Officers are further expected to:

35. Be involved in the community, promoting the Department and the City
36. Create alliances and partnerships in the public and private sector
37. Relate effectively with other departments in the City
38. Seek creative alternatives to the way business is done
39. Develop self, while assisting in the development of subordinates
Richland Fire and Emergency Services

Mission

Richland Fire and Emergency Services is dedicated to the preservation of public safety and quality of life by providing quality emergency and non-emergency services.

Vision

We will be a respected organization continually positioning ourselves as a model fire department.

Success factors for the Future

We have the ability to Invent our Future.

- We will seize opportunities.
- We will be proactive not reactive.
- Collaboration and Action.
- Positioning and Execution.
Program Objectives:

- To enable the Department to systematically identify emerging trends and issues in the external environment.
- To analyze the trends and issues to determine whether they pose a threat to or provide an opportunity for the Department.
- To determine the likely extent of the impact.
- To determine if the Department can influence the outcome of the threat or opportunity.
- To develop Action Plans in order to maximize benefit, minimize adverse impacts, and to influence the course of the trend, issue, or event.
- To adjust the Department’s strategic plan to account for the identified trends, issues and events.
Members of the Department will participate in the Environmental Scanning Program (ESP) within their functional area assignment.

- Safety
- Training
- Professional Development
- Equipment
- Technology
- Facilities
- Internal Communications
- Special Operations
- Planning
- Research
- Customer Service
- Prevention
- Public Relations
- Medical Services
- Operations
- Labor Relations
- Finance
- Personnel

Supervisors of these functional areas will organize members into scanning groups to narrow their focus when applicable.

The hierarchical position of the member will determine the breadth of scanning focus. This is a guide for scanning focus. If any member identifies a trend, issue, or event during their scan, irrespective of its relation to their field of interest, they must bring it forward.
Table 1. Personnel assigned to Supervise Specific Functional Areas.

The functional areas described below may have a number of subgroups, for example, Captain Jones manages the uniform and clothing program as a subgroup of the Equipment Supervisor, BC Brown. There may also be one or more Work Groups associated with the supervisor, for example, BC Green and the Facilities Work Group.

<table>
<thead>
<tr>
<th>Functional Responsibility to Supervise</th>
<th>Battalion Chief A Shift</th>
<th>Battalion Chief B Shift</th>
<th>Battalion Chief C Shift</th>
<th>Training Officer:</th>
<th>Fire Marshal:</th>
<th>Medical Officer:</th>
<th>Deputy Chief:</th>
<th>Fire Chief:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Training/ Professional Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Equipment/ Technology</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilities</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal Communications</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Planning/ Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Customer Service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Prevention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Public Relations</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor Relations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Administration (finance/ personnel)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Labor Relations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
## Staff Time Allocation Model

<table>
<thead>
<tr>
<th>Staff Role</th>
<th>Operating the System</th>
<th>Improving the System</th>
<th>Creating the Future</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frontline</strong></td>
<td>70%</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Battalion Chiefs</strong></td>
<td>25%</td>
<td>50%</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Executive Officers</strong></td>
<td>10%</td>
<td>45%</td>
<td>45%</td>
</tr>
</tbody>
</table>

### Organization Levels

- **Chief**: View primarily external
- **Deputy Chief**: View primarily internal

- **Battalion Chief: A Shift**
- **Battalion Chief: B Shift**
- **Battalion Chief: C Shift**
- **Medical Officer**
- **Battalion Chief: Training**
- **Battalion Chief: Prevention**

- **9 Shift Captains**
- **6 Shift Lieutenants & 30 Firefighters**
What is environmental scanning?

“I skate to where the puck will be.”
Wayne Gretsky

Environmental scanning is an anticipatory tool to position the department to be most effective.

Environmental scanning is a deliberate and systematic effort to gather strategic intelligence from the environment beyond the fire department.

Trends, issues, or events are broken into four sectors that are not mutually exclusive.
- **Social**: demographics such as population trends, unemployment levels, and business closures.
- **Technological**: communication systems, plastics, computers, and other new technology specific to an industry.
- **Economic**: tax initiatives, oil embargoes, major projects, and world recession.
- **Political**: change of political power, emerging interest groups, new legislated mandates, and council goals.

There are 3 components to the environment.
- **Task environment**: the community we serve. (Citizens, council, city government, interest groups, organizations....)
- **Industry environment**: our business – the fire service (Other departments, professional organizations, manufacturers of fire equipment....)
- **Macroenvironment**: the environment beyond the task and industry environment that influences the STEP sectors.
There are four methods of scanning.

- Undirected Viewing: Indiscriminate reading with no specific purpose but to be better informed. Example, regularly reading the industry journals.

- Directed Viewing: focus is on a small number of well-defined concerns based on industry assumptions and norms. There is little doubt the environment is knowable.

- Enacting: Seeking information in order to influence the environment.

- Searching: Broad, open information seeking with a willingness to revise and update existing knowledge.

The method used to scan is dependent on how we perceive our environment.

1. Do we feel that we can enter the environment, gather intelligence, and make sense of it?
2. Do we believe that we can enter the environment and influence the outcome?
Scanners need to view as wide a scope as possible. Reliance on a single source of information will limit the effectiveness of the scan. Dependence on industry journals, diverse as the subject matter is, will lack scientific foundation, as often articles are opinion based. Scanners must look for empirical data where possible.

Scanners must also avoid the imposition of their own personal bias. Partisan attention to emerging trends, issues, and events will result in the loss of vital balance for analysis.

Scanners should consider but not limit themselves to the following sources:
- Professional journals: Industry, Technology.....
- Newspapers: Local, Large metropolitan.....
- Course and conference material: Industry, non-industry.....
- Chambers of Commerce: Local, regional.....
- Federal & State Government: Manifestos, mandates.....
- Union publications: State, national.....
- Local Government: Council meetings, goals and objectives.....
- Finance publications: OFM, magazines, newspapers.....
- Experts: Research papers, personal communication.....
- Other cities: Visit, web sites.....
- Other City departments: Meetings, memos, contact.....
- Interest groups: Lobbying, projects, publications.....

The objective is to identify emerging
- Trends:
- Issues:
- Events:
The Scanning Abstract Form should capture all of the information essential to bringing the TIE to the attention of the department.

- It should be concise enough to allow reviewers to follow up with source material to further research and analyze the TIE.
What is done when a trend, issue, or event is identified?

One, a few, or many reviewers, depending on the complexity of the trend, issue, or event, can analyze the TIE.

Each of the three dimensions are important.

- Probability the TIE will occur (0 to 100%)
- Impact the TIE will have on the Department (None to Profound)
- Time until the TIE occurs (Now to 5 years plus)
Reviewers should estimate the lead-in time until the TIE and then fill in the two-dimensional matrix.

In the example above a group of six reviewers have individually marked their matrix and all of these have been superimposed onto a single document.

The TIE they have reviewed is highly likely to occur and it will have a very high positive impact on the Department.

The third dimension is time. How far out into the future will this TIE occur?

A number of “what if” scenarios must be developed for the TIE.

A TIE Brief will be written and posted

An Action Plan will be developed to address the TIE.
When a Brief is completed it will be sent to the Planning supervisor who will post it to the electronic bulletin board on the “S” drive.

Format for a Brief:

![Scanning Brief Form](image)

A department wide e-mail will be sent out to alert members to the Brief. Supervisors and managers will review the Brief to determine if the TIE has impact into their area.

Members can post additional comments, questions, and insight to the Brief.
The final Brief is stored on the “S” drive and kept updated as the TIE develops, wanes, or disappears.

The Planning supervisor maintains the ESP Brief library.

An impact network may be generated.

Action Plans are integrated into the annual Department Action Plan for execution.