

CHAPTER FOUR

ENVIRONMENTAL SCANNING

4.1 INTRODUCTION

In Chapter Three, the development and importance of communication research received attention. The importance of the use of research for the communication professional was also addressed. The focus is on the relationships in communication. Knowledge management also received attention.

In this chapter environmental scanning and the growing need for scanning are discussed. The various environments that need to be scanned, the levels of scanning and scanning techniques are discussed. Previous research on scanning is also included.

To truly deliver the products and services clients, stakeholders et cetera need, you first have to understand the external forces of the constantly changing world in which they operate. According to Boyers (1997: 26) change has become the essence of management, so to survive and prosper in the future, you and your organisation will have to perfect “outside-in” thinking skills: to relate information about developments in the external world to what is going on internally.

Strategic management is an ongoing process that involves attempts to match the organisation with its changing environment. It includes adapting the organisation itself to fit the external environment. An organisation’s environment affects strategy and performance to a great extent.

In the past the assessment of an organisation’s environment were informal and intuitive. Today it has become one of the most challenging aspects of the strategic management process.

It has repeatedly been emphasised that excellent companies take an *outside-inside* view of their business. They recognise that the environment is constantly spinning out new opportunities and threats. These companies recognise the vital importance of continuously monitoring and adapting to the changing environment.

Too many other companies, unfortunately, fail to think of change as opportunity. They ignore or resist critical changes until it is almost too late. Their strategies, structures, systems and business culture grow increasingly obsolete and dysfunctional.

During the last few decades, changes in the environment threatened many organisations, resulting in restructuring and downsizing for many. Management increasingly realise that it is not optional to understand the organisation's environment and change along with it.

According to Kotler (1994: 151) corporations as mighty as General Motors, IBM and Sears are brought down to their knees for ignoring macro environmental changes too long. They also normally spend more time in the customer and competitor environment. By conducting systematic environmental scanning, marketers are able to revise and adapt marketing strategies to meet new challenges and opportunities in the marketplace.

Without taking into account relevant environmental influences, a company cannot expect to develop its strategy. Environmental scanning is a comparatively new development. Traditionally, corporations evaluated themselves mainly on the basis of financial performance. In general, the environment was studied only for the purpose of making economic forecasts. Other environmental factors were brought in haphazardly, if at all, and intuitively. In recent years, however, most large corporations have started doing systematic work in this area (Jain 1993: 133).

There is thus increasing pressure to make greater investments in personnel and systems gathering environmental information, to reduce some of the uncertainty encountered in strategic decision making.

According to Steyn & Puth (2000: 165), the consequences of environmental changes need not be negative. Whether this is indeed the case, depends almost entirely on:

- The speed, accuracy and interpretation of the information
- The communication regarding the changes
- The rapid internal re-orientation of the organisation.

Scanning systems facilitate the gathering of early signals in a thorough and consistent manner. Scanning can generate information that enables top managements to move beyond reactive adaptation into a more proactive influencing of their environmental conditions.

Environmental scanning can also be regarded as the “first step in the ongoing chain of perceptions and actions leading to an organisation’s adaptation to its environment”. It is a process in which an organisation learns about events and trends in the external environment, establishes relationships between them, and considers the main implications for problem definition and decision making (Steyn & Puth 2000: 166).

Managers and organisations acquire information for two reasons. In the “reactive” mode information is acquired to solve a specific problem. In the “proactive” mode, also referred to as environmental scanning, the purpose of the information acquisition is exploratory, to detect potential problems and opportunities. In other words, moving beyond seeking information in order to choose among alternatives to monitoring the environment for surprises.

Perhaps its greatest benefit is its reinforcement of the need for comprehensive thinking and approaches in defining an organisation's purpose. Strategic planning is directly related to an organisation's environmental scanning capabilities (Burack & Mathys 1989: 82).

Many companies have implemented various processes and procedures and, in some cases, created new organisational units in an effort to recognise and take advantage of changes, advances and trends occurring in the external environment (Maier 1992: 66).

One of the basic processes of any organisation is acquiring data from the external environment to be used in problem definition and decision making. This process is called "environmental scanning." Used in this context, the "environment" consists of all those events, happenings or factors with a present or future influence on the organisation. The reason an organisation scans its environment is to attempt to alter its state-of-affairs, its internal structure or function, or some aspects of its environment (Maier 1992: 66).

Theorists have taken the view that organisations internally specialise in conducting their exchanges with the environment. The individual organisation members responsible for informational and substantive exchanges with the environment have been labeled "boundary spanners" and they have been attributed with certain roles, attitudes, power bases and so on (Hambrick 1981: 299).

According to Daft & Weick (1984: 285), building up interpretations about the environment is a basic requirement of individuals and organisations. Information about the external world must be obtained, filtered and processed into a central nervous system of some sorts, in which choices are made.

Steyn & Puth (2000: 166) states that environmental scanning could therefore be seen as part of the interpretation process in an organisation.

- *Scanning* is the data collection
- *Interpretation* is translating events and developing shared understanding amongst top managers; and
- *Learning* is the process by which knowledge about outcome relationships is developed.

The organisation must find ways to know the environment. Interpretation is a critical element that distinguishes human organisations from lower level human systems.

Environmental scanning - the managerial activity of learning about events and trends in the organisation's environment - is one of the tasks comprising the broader boundary spanning role. Environmental scanning can further be conceived of as the first step in the ongoing chain of perceptions and actions leading to an organisation's adaptation to its environment (Hambrick 1981: 299).

According to Choo (1998: 21) environmental scanning is the acquisition and use of information about events, trends and relationships in an organisation's external environment, the knowledge of which would assist management in planning the organisation's future course of action.

Organisations scan the environment in order to understand external forces of change so that they may develop effective responses that secure or improve their position in the future. To the extent that an organisation's ability to adapt to its outside environment depends on knowing and interpreting the external changes that are taking place, environmental scanning constitutes a primary mode of organisational learning (Choo 1998: 22).

Hambrick (1981:193) describes environmental scanning as an “important process of strategic management because scanning is the first link in the chain of perceptions and actions that enable an organisation to adapt to its environment”.

Snyder (1981: 5) defined environmental scanning as the “monitoring, evaluating, and disseminating of information from the external environment to key managers within their organisations”. Before chief executive officers formulate their organisation’s strategy, they scan the external environment to identify potential opportunities and threats.

For more than a decade, researchers have been interested in how chief executive officers scan their environment and use this information to gain competitive advantage (Jennings & Lumpkin 1992: 79). Although several studies have been conducted on chief executive officers’ environmental scanning activities, little is known about the relationship between these activities and organisational strategy.

Environmental scanning is complementary to, but distinct from, information gathering activities such as competitor intelligence, competitive intelligence and business intelligence.

According to Michael Porter, the objective of competitor intelligence is “to develop a profile of the nature and success of the likely strategy changes each competitor might make, each competitor’s probable response to the range of feasible strategic moves other firms could initiate and each competitor’s probable reaction to the array of industry changes and broader environmental shifts that may occur” (Choo 1998:22).

Competitor intelligence is therefore focused on the actions, behaviours and options of one or more existing or potential competitors.

Competitive intelligence refers to the analysis of competitors as well as competitive conditions in particular industries or regions. The Society of Competitive Intelligence Professionals defines competitive intelligence as the “process of monitoring the competitive environment” that “enables senior managers in companies of all sizes to make informed decisions about everything from marketing, research and development and investing tactics to long-term business strategies” (Choo 1998: 22).

Business intelligence has a similarly broad scope and has been described as “the activity of monitoring the environment external to the firm for information that is relevant for the decision-making process in the company.” In practice, business intelligence often concentrates on current competitors as in competitive intelligence, but may also include areas such as analysis potential acquisitions and mergers and risk assessments for particular countries (Choo 1998: 23).

Environmental scanning casts an even wider net and analyses information about every sector of the external environment that can help management to plan for the organisation’s future. Scanning not only covers competitors, suppliers and customers, but also includes technology, economic conditions, political and regulatory environment and social and demographic trends (Choo 1998: 23).

Scanning, however, is no end in itself. The real value of scanning kicks in when the organisation looks beyond the issues it has identified to visualise the implications for your particular industry or profession. “The more you can involve wider circles in the discussion of the trends and what they mean, the greater the chance that you will institutionalise a way of thinking so that you continuously bring new knowledge to bear on all your decisions”, says Boyers (1997:27). “Then you become long-sighted instead of short-sighted.”

A pioneering study on environmental scanning was done by Francis Aguilar. In his investigation of selected chemical companies in the United States and Europe, he found no systematic approach to environmental scanning. Aguilar's initial 16 types of information about the environment that the companies found interesting have been consolidated in five groups: market tidings, acquisition leads, technical tidings, broad issues, and other tidings. Among these groups, market tidings were found to be the dominant category and were of interest to managers across the board (Jain 1993: 133).

Aguilar (1967) suggested there are two basic methods of scanning: surveillance (monitoring) and search. Surveillance means to observe or watch over the environment with interest for the purpose of providing the scanner with some general knowledge. Surveillance is less directed or more general than search. Search means seeking specific information in the environment to apply to a particular problem. These two methods are not exclusive of each other. It is possible, even likely, that a company will be involved in both methods simultaneously. The level of intensity given to these methods of scanning indicates the intensity of an organisation's environmental scanning activities.

The intensity of the scanning process depends on (1) the nature of the relationship between the organisation and its environment and (2) the nature of the environment (Kefalas & Schoderbek et al 1973). The author suggested the nature of the relationship between the organisation and its environment is determined by the degree to which the organisation depends on its environment for survival. The greater the dependence, the greater the intensity of scanning will be. By "nature of the environment" the author referred to the frequency and magnitude of changes occurring in the external environment.

Kefalas & Schoderbek et al (1973) classified a slowly changing environment as relatively "stable" and a rapidly changing environment as relatively "dynamic". The greater the frequency of change and the greater the magnitude of change

(i.e. the more dynamic the environment), the greater the intensity of scanning will be.

The literature does not explicitly define “intensity of the scanning process” however, scanning intensity can be viewed as the amount of effort an organisation puts into its environmental scanning activity. Determining the level of scanning intensity for a particular organisation is very difficult because the effort an organisation puts into its scanning activity is not directly measurable. Consequently, it is necessary to look for surrogate measures to determine the level of scanning intensity (Maier 1992: 73).

The best measurable determinants of scanning intensity appear to be (1) time – the amount of time dedicated to the scanning process; (2) resources – resources dedicated to the scanning process (e.g. people, budget, organisational unit etc.) and (3) frequency – how often scanning activities are performed.

If an oracle could predict the next forty years with perfect accuracy, what would you do with the information? As the pace of change in the business environment continues to accelerate, confidence in our ability to forecast the future in which we will be operating seems to have gone the way of the fin-tailed cars and poodle skirts of the ‘50s (Schriefer 1998: 26).

Winston Churchill said that the further back you look, the further forward you will see. The environment is changing at a faster rate now than it was in Churchill’s day. Change is often incremental and even profound changes may not be noticeable in a short time frame. To look ahead five years in an industry, it may be necessary to go back ten years to really see the trends. And these trends are likely to have a far broader impact than we might think (Schriefer 1998:26).

The real purpose is not to predict the future, attempting to “get it right”, but to change the mental models of the key-decision makers by broadening their

perceptions and reframing their perspectives. In order to do this successfully, planners must have a clear understanding of what is on the minds of the senior team.

An example of an environmental trend, America's insatiable appetite for eating out, worries food companies like Kraft. In response, Kraft is trying to make cooking as convenient as eating out (e.g. by providing high-quality convenience foods) to win back food dollars (Broom & Dozier 1990: 128).

4.2 MEGATRENDS

The Naisbitt Group has identified 10 megatrends that will deeply affect individuals and businesses.

1. From fixed to responsive systems

Businesses and government agencies are responding to changing consumer and employee needs by showing a new flexible attitude toward a fast-paced and convenience-oriented society. Shared jobs and arranged office hours are examples of a responsive system.

2. From nation state to business state

Business leaders are the politicians of the future. World wide, corporations deal with domestic and international issues once considered the sole purpose of government. The future will also bring a new breed of politician, who runs his or her government like a corporation, heavily promoting advantages for the business.

3. From technological complexity to technological “transparency”

Tomorrow’s technology will be so efficient that we won’t even notice it’s here. This is the trend towards transparency – invisible technology that is so simple to use, it’s taken for granted.

4. From the mass middle to the extremes

Manufacturers, hospitals, shopping malls and magazines – all are profiteers (and victims) of the shift from the mass middle to the extreme. In both business and society, the nation is moving away from middle size, middle quality, and middle price.

5. From a national lifestyle to a global lifestyle

Deep-dish pizza in New Delhi, coffee and bagels in Tokyo and “les shakes” along the Champs-Elysees are all part of the globalisation of lifestyles, an international crisscross of work and leisure trends.

6. From a permissive to an “open square” society

If you think society is sending you mixed signals, you’re right. Today’s society is both “square” and open at the same time. Call it the age of social paradox, a time when seemingly contradictory events and attitudes occur simultaneously.

7. From competition to cooperation

No company is an island. That is what today’s businesses are discovering as more and more of them join forces to overcome operating and advertising costs. But don’t think that the business environment will be any less competitive in the

future. Cooperation will be just another tool savvy businesses use to compete more successfully.

8. From responsibility by institution to responsibility by function

Once upon a time we took for granted that governments would provide public services, mothers would raise children, religious institutions would set moral values and schools would educate. But massive social and economic changes over the last two decades have altered these expectations. This relentless restructuring of societal responsibility will call for a more responsive and flexible style of leadership in all institutions.

9. From central city to polynucleic metropolis

There is a demographic shift away from the central city to sprawling “urban villages” sprouting up in the suburbs outside major metropolitan areas. In scores of places globally, bedroom communities and farmland are being transformed into mega centres, providing less expensive housing, but choking transportation and educational systems. This is a shift that directly influences our quality of life.

10. From complacency to accountability

It’s nearly impossible to get away with anything these days. While we’ve grown more tolerant of people’s foibles, we also demand that individuals and business be held accountable for their actions.

To survive and prosper in the midst of a changing environment, companies must stay at the forefront of changes affecting their industries. Firstly, it must be recognised that all products and processes have performance limits and that the closer one comes to these limits, the more expensive it becomes to squeeze out the next generation of performance improvement (Jain 1993: 131).

Secondly one must take all competition seriously. Normally competitor analyses seem to implicitly assume that the most serious competitors are the ones with the largest resources. This assumption is frequently not adequate (Jain 1993: 131).

Thirdly, if the environmental changes promise potential advantage, one has to attack to win and attack even to play the game. Attack means gaining access to new technology, training people in its use, investing in capacity to use it, devising strategies to protect the position, and holding of on investments in mature lines (Jain 1993: 131).

Fourthly, the attack has to begin early. The substitution of one product or process for another proceeds slowly and then can explode (Jain 1993: 131).

Fifthly, a close tie is needed between the chief executive officer and the operating managers. Facing change means incorporating the environmental shifts in all aspects of the company's strategy (Jain 1993: 131).

The first step is to identify emerging issues before they strike, much like earthquake forecasters scan fault lines for signs of abnormal activity. Because significant issues may emerge from unexpected places, it is important to scan the macro environment for social, technological, economic, environmental, and political developments (Boyers 1997: 27).

Without ongoing research, you cannot update your understanding of the problem. The definition often begins as the result of informal, even unsystematic monitoring of the environment. "Scanning for planning" applies here. Environmental scanning is the detection, exploration, and description of public relations problems through formal and informal research (Broom & Dozier 1990: 24).

Whereas informal and opportunistic scanning of the environment may alert you to a potential problem, you use more formal and systematic observations to explore, confirm and describe the problem.

Aguilar (1967) identified four modes of scanning the environment:

- Undirected viewing: general awareness about the environment, for example reading the daily newspaper
- Conditioned viewing: the scanner is sensitive regarding specific data that might influence his or her work
- Informal search: there is an active search for information, but in a limited and unstructured manner
- Formal search: a deliberate, planned attempt to gather specific information for a specific purpose.

4.3 THE CONCEPT OF ENVIRONMENT

The external environment, consisting of variables that are not typically within the short-run control of management, contains task and societal environments. The task environment includes groups that directly affect the organisation and are affected by it. Examples are governments, local communities, suppliers and labour unions.

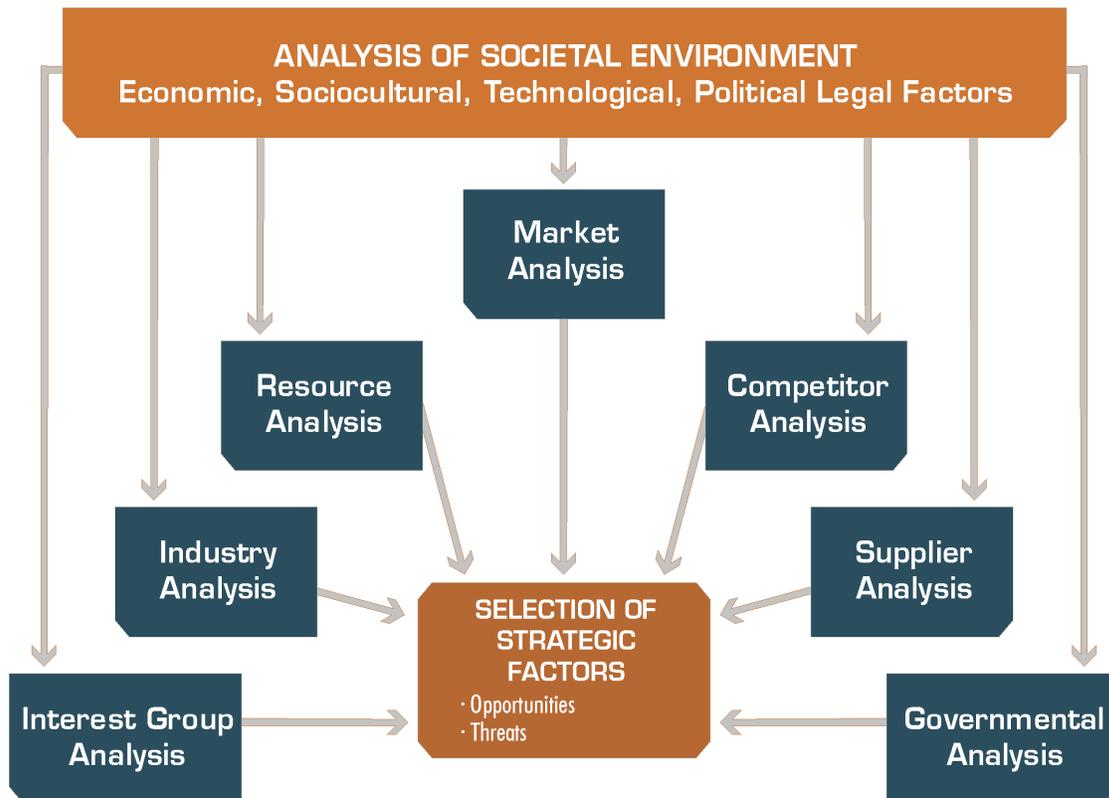
The societal environment includes more general economic, sociocultural, technological, and political-legal forces that do not directly impact the short-run activities of the organisation but often influence the long-run decisions.

Operationally, five different types of environments may be identified – technological, political, economic, social and regulatory – and the environment may be scanned at three different levels in the organisation – corporate, strategic business unit, and product/market level (Jain 1993: 132).

The Hunger & Wheelen process, with their model (Figure 4.1) describes the process as follows:

1. Identification of the strategic factors in the macro-environment that, according to top management, has the largest potential to influence the activities of the organisation
2. Determine the mega-trends with reference to each strategic factor
3. Determine the impact of each strategic factor from a macro and immediate

Figure 4.1 Scanning of the external environment



Source: Hunger & Wheelen (1986)

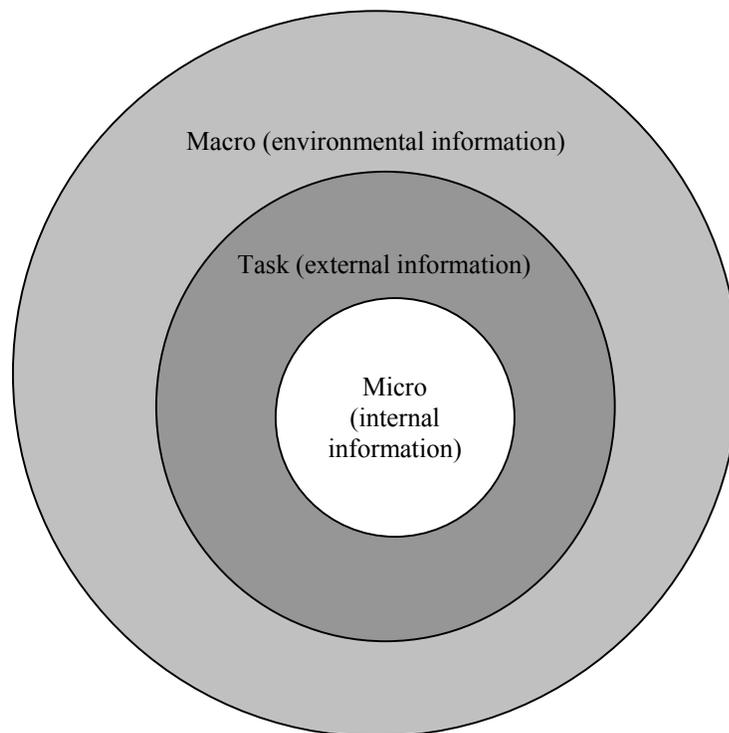
Perspectives of environmental scanning vary from level to level. Corporate scanning broadly examines happenings in different environments and focuses on trends with corporate wide implications.

4.4 TYPES OF ENVIRONMENT

There are three categories of information and information systems of interest to an organisation:

- Internal information - on operations within the organisation
- External information - on factors outside the organisation with which the organisational members interact directly on a regular basis, and
- Environmental information - on factors outside the organisation with which the organisation does not interact directly, but which might affect operations. This broader social, economic or technological climate includes legislative and regulatory trends, pressure groups and technological and demographic trends (Steyn & Puth 2000: 168).

Figure 4.2 Environmental, external and internal information



Source: Steyn & Puth (2000: 169)

Corporations today, more than ever before, are profoundly sensitive to technological, political, economic, social and regulatory changes. Although environmental changes may be felt throughout an organisation, the impact is strongest on strategic perspectives. To cope with a changing and shifting environment, the marketing strategist must find new ways to forecast the shape of things to come and to analyse strategic alternatives and, at the same time, develop greater sensitivity to long-term implications (Jain 1993: 138).

Environmental scanning is considered a simple process by some in that the critical information required to analyse the industry and market environment is often readily available to all competitors. This is taking a narrow view of environmental scanning. It is not sufficient to track only the organisational strategies, structures, and resources employed by an organisation's competitors. Neither is it sufficient to track only the inclinations, products and potential products that customers will want or demand.

Top management should also scan the economic, technical, political, social and ecological forces that work in the global economy, as well as the opinions and behaviour of its stakeholders. This is a far more complex process, since the number of areas that have to be monitored in this case is large (Steyn & Puth 2000: 166).

The relative importance of scanning particular areas changes over time as organisational circumstances change. On the other hand, firms advanced in environmental scans, by definition, pursue all the domains (Burack & Mathys 1989: 84).

4.4.1 TECHNOLOGICAL ENVIRONMENT

The most dramatic force shaping people's lives today is technology. Technology has released such wonders as open-heart surgery; horrors as nerve gas and blessings as the automobile (Kotler 1994: 162).

Three different aspects of technology are category, process, and impetus. Technology itself can be grouped into five categories: energy, materials, transportation, communications and information, and genetic. The original impetus for technological breakthroughs can come from any or all three of the following sources: meeting defense needs, seeking the welfare of the masses, and making a mark commercially (Jain 1993: 142).

The 1990s certainly were a period of technological change and true innovation. One of the areas of greatest impact was communications. Until a few years ago, electronic communication has largely been confined to the traditional definition of voice (telephone), pictures (television) and graphics (computer), distinct kinds of communication devices. Electronics has increasingly produced total communications.

The following trends in technology should be watched.

4.4.1.1 Accelerating pace of technological change

Many of today's common products were not available 30 years ago. John F Kennedy did not know personal computers, digital wristwatches and video recorders. More ideas are being worked on, the time lag between new ideas and their successful implementation is decreasing rapidly (Kotler 1994: 162).

4.4.1.2 Unlimited innovation opportunities

Scientists today are working on a startling range of new technologies that will revolutionize our products and production processes. The challenge is not only technical but also commercial, namely, to develop affordable versions of these products (Kotler 1994: 163).

4.4.1.3 Varying research and development budgets

The United States leads the world in annual research and development expenditures. Increasingly, research directed toward major breakthroughs is being conducted by consortiums of companies rather than by single companies (Kotler 1994: 163).

4.4.1.4 Increased regulation of technological change

As products become more complex, the public needs to be assured of their safety. Consequently, government agencies have expanded their powers to investigate and ban potentially unsafe products (Kotler 1994: 163).

4.4.2 POLITICAL ENVIRONMENT

Political trends have a significant impact on business. The value of the dollar is the perfect illustration of the overwhelming impact that political shocks can have on the world economy. Marketing strategy is deeply affected by political perspectives. For example, government decisions have significantly affected the United States automotive industry. The marketing strategist needs to study both domestic and foreign political happenings, reviewing selected published information to keep in touch with political trends and interpret the information as it relates to the particular company (Jain 1993: 143).

The political/legislative domain includes governmental actions at the city, state and national level as well as legislation and executive orders. It also includes

international developments such as the oil crises in the 1970s (Burack & Mathys 1989: 82).

A discussion of the main political trends and their implications for marketing management follows.

4.4.2.1 Substantial amount of legislation regulating business

Legislation affecting business has steadily increased over the years. It is incumbent upon marketers to have a good working knowledge of the major laws protecting competition, consumers and society (Kotler 1994: 166).

4.4.2.2 Growth of public interest groups

The number and power of public-interest groups have increased during the past three decades. New laws and growing numbers of pressure groups have put more restraints on marketers (Kotler 1994: 166).

4.4.3 ECONOMIC ENVIRONMENT

All companies, small or large, engage in strategic planning and examine the economic environment. Relevant published information is usually gathered, analysed and interpreted for use in planning. Usually the economic environment is analysed with reference to the following key economic indicators: employment, consumer price index, housing starts, auto sales, weekly unemployment claims, real Gross National Product, industrial production, personal income, savings rate, capacity utilisation, productivity, money supply, retail sales, inventories and durable goods orders (Jain 1993: 145).

To illustrate the effect of economic climate on strategy, consider the following trends. Older capitalist countries are becoming saturated much faster than new

markets can take their place. Consumer goods, such as cars, radios and television sets, already outnumber households in North America and many in Western Europe. The slow growth of populations in most of these countries means that the number of households is likely to grow at only about two percent per year and that demand for consumer goods is unlikely to grow any faster (Jain 1993: 145).

The organisation must pay close attention to major trends in income and consumer-spending patterns.

4.4.3.1 Income distribution

Nations vary greatly in the level and distribution of income. A major determinant is the nation's industrial structure. Four types of structures can be distinguished: subsistence economy, raw-material exporting economies, industrialising economies and industrial economies (Kotler 1994: 158).

4.4.3.2 Savings, debt and credit availability

Consumer expenditures are affected by consumer savings, debt and credit availability. Organisations must pay careful attention to any major changes in income, cost of living, interest rates, savings and borrowing patterns because they can have a high impact, especially on companies with high income and price sensitivity (Kotler 1994: 159).

4.4.4 SOCIAL ENVIRONMENT

The ultimate test of a business is its social relevance. This is particularly true in a society where survival needs are already being met. It therefore behooves the strategic planner to be familiar with emerging trends and concerns. The

relevance of the social environment to a particular business will of course vary depending on the nature of the business.

Social developments include dual-career couples, quality of work life and growing interest in work as a source of career gratification. Kotler (1994: 154) calls the social environment the demographic environment.

Values mainly revolve around a number of fundamental concerns regarding orientation towards time, quality, health, environment, home, personal finance, and diversity of lifestyles.

Orientation toward time: Convenience became a critical source of differential advantage, particularly in foods and services. McDonalds might be the best example in this regard.

Quality: Consumers have developed a new set of expectations regarding quality, hence they assign high priorities to those offerings that provide optimal price/quality.

Health: A large and growing segment of the American population has become increasingly preoccupied with health. Health concerns are a function of both an aging population and changing predispositions.

Environment: Many people now consider themselves “environmentalists” and this decade might become the “earth decade”.

Home: In a more domesticated society, the many technological innovations will make staying at home more fun.

Personal finance: Most experts on consumer behaviour expect that in the decade ahead, people will be more frugal.

Diversity of lifestyles: The predominance of diverse lifestyles is reflected by the significant increase in the number and the stature of women in the labour market (Jain 1993: 148).

4.4.5 REGULATORY ENVIRONMENT

Even in a capitalist society like the United States, government influence on business appears to be increasing. Government in recent years has changed its emphasis from regulating specific industries to focusing on problem areas of national interest (Jain 1993: 153).

One of the most striking findings of research conducted in the above regard, is the lack of formal information systems on the macro environment. Information on the political and economic sectors is the most incomplete. Organisations do collect substantial amounts of information on the task environment, such as industry trends, as well as competitor, customer and market share data. However, this information is still poorer quality than information regarding the internal environment, which is the best. Internal data are primarily based on financial reporting and capital appropriation systems (Steyn & Puth 2000: 169).

Elements of the external environment of organisations have been classified into two primary sectors based on their proximity to the organisation. The *task* environment is the most proximate environment of the firm and is composed of elements that have a direct influence on the organisation, and in turn are influenced by the activities of the firm. The task environment is typically composed of the customer, competitor and supplier sectors.

The *remote* environment is composed of those sectors of the environment that have indirect influence on the organisation, such as the government, economic conditions, technology and socio-cultural sectors.

Environmental scanning research has examined the level of importance that decision makers ascribe to different sectors of the environment, as based on the amount of resources spent on collecting external strategic information from each sector. The task environment sectors, owing to their proximity to the organisation and greater relevance to strategy analysis have been shown to receive greater scanning attention.

Aguilar (1967) and Kefalas & Schoderbek (1973) found that the market sector, composed of both customer and competitive factors, received the greatest scanning attention.

The purpose of environmental scanning is to enable a firm to improve strategic decision making. As a result, there should be a positive relationship between scanning frequency and organisational performance. Daft et al. (1988) found differences in the scanning behaviour of executives in higher versus lower performing firms. The decision makers in higher performing firms are characterised by a greater scanning frequency and a broader scanning base than their counterparts in lower performing firms.

Managers and organisations acquire information for two reasons. In the “reactive” mode (El Sawy & Pauchant 1988: 455) information is acquired to solve a specific problem. In the “proactive” mode (El Sawy & Pauchant 1988: 455) also referred to as environmental scanning or surveillance (Aguilar 1967) the purpose of the information acquisition is exploratory, to detect potential problems and opportunities.

In the case of problemistic information search although the information acquired can vary with individual biases, particularly for unstructured decisions, the overall scope of the information search is largely bounded by the problem. In the case of proactive environmental scanning, however, an organisation must choose how

to allocate its scanning resources among the overwhelming number of potential information sources in the environment (El-Sawy & Pauchant 1988:456).

It has been suggested that managers use three strategies to limit the scope of environmental scanning (El-Sawy & Pauchant 1988:456): limiting the consulted information sources to a handful of key sources; limiting the types of signals by just monitoring key trends, and limiting the number of emerging issues being tracked.

According to Choudhury & Sampler (1997: 25) previous research in environmental scanning is largely descriptive and offers little help for organisations and managers trying to decide how much effort to spend on each potential source of information in the environment.

4.6 WHAT SCANNING CAN ACCOMPLISH

Scanning improves an organisation's abilities to deal with a rapidly changing environment in a number of ways:

1. It helps an organisation capitalise on early opportunities rather than lose these to competitors.
2. It provides an early signal of impending problems, which can be defused if recognised well in advance.
3. It sensitises an organisation to the changing needs and wishes of its customers.
4. It provides a base of objective qualitative information about the environment that strategists can utilise.
5. It provides intellectual stimulation to strategists in their decision making.
6. It improves the image of the organisation with its publics by showing that it is sensitive to its environment and responsive to it.

7. It is a means of continuing broad-based education for executives, especially for strategy developers (Jain 1993: 132).

To be successful, an organisation's environmental scanning process must be able to identify and differentiate among a variety of external issues if the company's strategic responses are to be focused and effective; and predict in which direction the environment may be moving (i.e. identify trends) (Maier: 1992: 68).

The importance of an effective, successful environmental scanning process is best expressed by Jain (1990: 137). According to him, to survive and prosper in the midst of a changing environment, a company must stay at the forefront of changes affecting their industries. To do this, a company must do three things. Firstly, it must recognise that all products and processes have a limited existence. Secondly, it must take all competition seriously. Thirdly, if the environmental change has the potential for creating a competitive advantage for organisations within the industry, an organisation must exploit the technology to improve or even maintain its current competitive position.

Used here, "exploit" means gaining access to the new technology, training people in its use, and investing in the capacity to use it. Each of these three "musts" links directly to environmental scanning. For example, recognising and accepting that products and processes have a limited existence should serve as a forceful motivator for scanning the environment to find replacements that support strategy and enhance competitive position (Jain 1990: 137).

Taking all competition seriously dictates that a knowledge of each competitor be developed. Since it is highly unlikely that competitors would voluntarily and willingly disclose their position, this knowledge can be gained only by scanning the external environment to learn of the competition's activities (Maier 1992: 69).

4.7 ALLOCATING ENVIRONMENTAL SCANNING RESOURCES

Given the almost infinite number of potential sources of information in the environment, organisations must decide how they are going to allocate their limited scanning resources. Surveillance strategies may range from the continuous monitoring associated with a process control system, to weekly visits to selected customers, to monthly meetings with key employees (Choudhury & Sampler 1997: 25).

Or a firm may adopt a research strategy, where a source is never monitored proactively, only reactively in response to a specific need for information. The key decision, therefore, is the frequency with which an organisation chooses to monitor proactively each potential source of environmental information.

In previous research on environmental scanning, the typical approach has been to divide the environment into multiple sectors and ask executives how much of their time they spend monitoring each sector. For instance, Kefalas & Schoderbek (1973: 63) include five sectors: market sector, technology sector, external growth sector, government sector and other sectors.

Most previous studies have reported that executives spend the majority of their time scanning the market sector. No clear explanation is offered for these findings. A possible reason may be that the market sector is the one likely to yield the most highly time-specific information.

4.8 ALLOCATING RESPONSIBILITY FOR ENVIRONMENTAL SCANNING

Despite its critical, costly nature, available evidence suggests that environmental scanning is not necessarily a formal task assigned specifically to certain executives. According to Hambrick (1981: 299) scanning is conducted on largely an ad hoc basis by all middle- and top executives in organisations.

Available evidence suggests that there may not be a strong relationship between hierarchical level and scanning activities. For example, researchers generally have observed no greater overall scanning activity by top-level executives than by middle-level executives as the primary links to the environment has not been supported (Hambrick 1981: 300).

As noted, organisations must make two choices in this regard: when to outsource the task of acquiring environmental information and when to retain the responsibility internally, and in the latter case, where in the organisation to locate the responsibility for acquiring the information. Production costs or transactional costs are relevant here (Choudhury & Sampler 1997: 25).

Early researchers viewed environmental scanning primarily as an informal, unstructured activity with individual managers acquiring information in the course of their daily activities. Later research has suggested, however, that for large corporations, scanning is often formally organised and coordinated (Choudhury & Sampler 1997: 25).

The purpose and roles of scanning are important side issues in the discussion on which unit should conduct the scanning. The following distinctions can be made:

- When the scanning is *policy-oriented*, the unit is situated at corporate level with direct access to top management. The focus is on early detection of broad strategic issues in the macro environment that are likely to result in public policy impact on the organisation as a whole.

- When the scanning has integration of *strategy formulation and strategic planning* as its aim, the unit may be at either corporate level or reporting to planning staff. This is a specific role in the strategy formulation process, usually including the preparation of environmental forecasts at the beginning of the strategy formulation cycle, as well as more detailed information later. Analysis is at both macro and task environmental levels (Engledow & Lenz 1985: 93).
- When the scanning is *function-oriented*, the unit is attached to a particular function at either corporate or business level, and linked to the planning process via the function's usual reporting paths (Engledow & Lenz 1985: 93).

Environmental scanning can also be viewed from the perspective of how it varies from level to level.

- Corporate scanning broadly examines trends or issues in the macro environment, focusing on those with corporate-wide implications
- Emphasis at the business level is placed on those changes that may influence the future direction of the organisation
- At the operational level, scanning is limited to day-to-day aspects (Jain 1993).

A company can now purchase an array of competitor analysis services, thus an organisation must decide when to retain the responsibility for scanning in-house and when to outsource it. Secondly, many organisations have a central environmental scanning unit consisting of professional boundary spanners. Thus, for those sources it monitors internally, an organisation must decide which ones will be assigned to a central unit and which ones will be the responsibility of the line units (Choudhury & Sampler 1997: 25).

Previous research offers little guidance to managers and organisations on making these choices.

The value of information is based largely on its ability to affect decisions, although in the case of proactive scanning the problem has not been identified yet. Knowledge and time are both important influences on the way information is acquired and used in the context of decision making (Choudhury & Sampler 1997: 25).

Corporations organise scanning activity in three different ways: (a) line managers undertake environmental scanning in addition to their other work, (b) scanning is made a part of the strategic planner's job, (c) scanning responsibility is instituted in a new office of environmental scanning (Jain 1993: 161).

Most companies use a combination of the first two types of arrangements. The strategic planner may scan the corporate wide environment while line managers concentrate on the product/market environment. In some companies, a new office of environmental scanning has been established with a responsibility for all types of scanning. The scanning office undertakes scanning both regularly and on an ad hoc basis (Jain 1993: 162).

Advocates of environmental scanning have often recommended that a corporate-level environmental scanning unit be established. The personnel in this unit are to be charged with the responsibility to monitor and interpret trends in demographic, social, cultural, political-regulatory, technological and other patterns (Stubbart 1982: 139).

The purposes that informal environmental scanning units are meant to serve, are important. The most significant purpose is to arm decision makers with accurate forecasts of significant trends in competition, regulation and politics, technology and culture, energy, demographic and population factors. This information differs

from industry or competitive analysis in two important respects; it is broad in scope and it is future-directed (Stubbart 1982: 139.)

A second vital task for the environmental scanning unit is to provide assumptions for the long-range planning system (Stubbart 1982: 139).

Whoever is assigned to scan the environment should undertake the following six tasks:

1. Trend monitoring – systematically and continuously monitoring trends in the external environments of the company and studying the impact upon the firm and its various constituencies.
2. Forecast preparation – periodically developing alternative scenarios, forecasts, and other analyses that serve as inputs to various types of planning and issue management functions in the organisation.
3. Internal consulting – providing a consulting resource on long-term environmental matters and conducting special futures research studies as needed to support decision-making and planning activities.
4. Information centre – providing a centre to which intelligence and forecasts about the external environment from all over the organisation can be sent for interpretation, analysis and storage on long-range environmental matters.
5. Communications – communicating information on the external environment to interested decision makers through a variety of media, including newsletters, reports etc.
6. Process improvement – continually improving the process of environmental analysis by developing new tools and techniques, designing forecasting systems, applying methodologies developed elsewhere, and engaging in a continuing process of self-evaluation and self-correction (Jain 1993: 163).

Successful implementation of these tasks should provide increased awareness and understanding of long-term environments and improve the strategic planning capabilities of the firm. More specifically, environmental inputs are helpful in product design, formulation of marketing strategies etc (Jain 1993: 163).

Within an organisation, the responsibility for acquiring information may remain with the user (decision maker), or it may be delegated, either to a subordinate in the same organisational unit, or to a central environmental scanning unit. The advantage of delegation is a reduction in the surveillance costs, both to the individual user, and to the organisation as well.

In some organisations some scanning is conducted on a formal basis through planning offices, market research staff and so on. However, the weight of evidence indicates that the call for such formality drastically exceeds its existence.

If we accept that scanning generally is conducted informally, then the question of who actually assumes scanning responsibilities in organisations is of legitimate concern.

Sources of strategic information have generally been classified into two broad categories, external and internal, and further subdivided into personal and impersonal (Aguilar 1967). External sources of information are those originating outside the organisation while internal sources originate from within the organisation.

Personal sources of information originate from personal contacts with people inside and outside the organisation while impersonal sources originate from non-personal sources such as documents et cetera (Aguilar 1967). There appears to be a general agreement in the literature on the importance of personal and impersonal sources in obtaining strategic information (Aguilar 1967).

According to Boyers (1997: 27), the primary objective of engaging in environmental scanning is that it can improve the overall perspective of leaders so that they can make today's decisions better. Because of the rapid pace of change present in today's business environment, scanning can build a better framework for conducting the strategic thinking of your organisation.

Environmental scanning is explicitly recognised as a starting point and a vital phase in the strategic management process. It is also considered the principal vehicle that puts into motion the organisational adaptation process (Daft & Weick 1984: 284).

According to Miller & Toulouse (1986: 231), scanning refers to the scope and intensity of the environmental monitoring activities conducted by a firm and its managers. It ranges from informal efforts at gathering opinions from clients, to explicitly tracking the practices of competitors, to conducting special market research studies and forecasts.

Scanning typically entails looking at trade or professional journals, mainstream newspapers, books, and magazines, and of course the Internet – to identify specific issues, trends, and external factors that might impact your business and about which you want to know more.

The pace of change in the external environment has moved scanning from an element of good citizenship to a professional requirement – from a low level personal interest satisfied by passive scanning to a high-level professional responsibility requiring active scanning (Morrison & Renfro 1984: 49).

In general, scanning involves bringing together a group of people from within or across organisations to serve as the core. Active scanning would involve developing a list of newspapers, journals, reports, broadcast media, and so on

that the group would divide up and regularly review. Reports are prepared by committee members on any trends of relevance to the institution. Quarterly meetings would involve discussion of the reports and evaluation of those trends with the most significant potential impacts.

4.9 ENVIRONMENTAL SCANNING AND EVALUATION RESEARCH

Researchers distinguish between environmental scanning and evaluation research as was pointed out in Chapter Three. A key distinction first must be drawn between research conducted to detect problems and assess the status quo, on the one hand, and research designed to evaluate the planning, implementation, and impact of public relations programmes on the other.

The first kind of public relations research, called *environmental monitoring* or *environmental scanning*, is part of the problem defining stage of public relations planning (Dozier 1986). Broom and Dozier (1990) said that environmental scanning moves through the three phases of problem detection, exploration and description.

The second kind of research, evaluation research is designed to determine how well public relations programmes work. This kind of research picks up the research function when scanning is complete, using problem description from the scanning phase as baseline for programmes evaluation (Dozier 1986).

Most organisations try to rely on their management information systems (MIS) to obtain strategic information. Management Information Systems are mostly exclusively concerned with the past, with the control function applied to the operational activities of the organisation. They do not necessarily focus on providing information relevant to strategy formulation, the latter involving strategic decisions critical to the organisation's future (Steyn & Puth 2000: 35).

The information top management need for strategy formulation should be separately collected and processed, and should follow separate pathways from information required for operations. What is required is a strategic information system (SIS), designed to support the organisation's competitive strategies. The SIS should provide for "scanning" the business and stakeholder environment to pick up new signals, and for "monitoring" to track previously identified trends singled out as important to the organisation (Steyn & Puth 2000: 35).

Environmental scanning – also known as environmental analysis, environmental monitoring or issues analysis is conceptually different from evaluation research. It entails monitoring the organisation's environment to analyse and evaluate opportunities and threats as they arise out of the interaction and relationships with other organisations, social groupings or individuals (stakeholders or publics or activists).

This is the kind of research that helps to determine "**what the problem is**" it is fact finding par excellence, showing a sensitivity to "**what is going on out there**" by identifying new trends and issues crucial to the organisation's strategic planning process (Steyn 1998: 22).

One reason why boundary-spanning practitioners are not included in decision making is related to the manager-technician distinction. *Environmental scanning*, especially informal environmental scanning can be viewed as a largely technical activity.

A public relations practitioner might define environmental scanning as reading the popular and industry press and clipping articles about the organisation and issues important to the organisation. This technical approach to scanning-as-clipping typically is subcontracted to clipping services (Dozier & White 1992: 101).

Such technical monitoring of the media is only a first step, however, in the management function of environmental scanning. The communication boundaries that help define the organisation's boundaries are created by the interaction of idiosyncratic language/coding schemes and by the development of local conceptual frameworks (Dozier & White 1992: 101).

Environmental scanning and programme research is relatively innovative practices in public relations. Yet the role of information gatherer and processor is key to the communication manager's participation in management decision making. Many practitioners are not included in management decision making, in part because they play the technical role predominantly and because they do not engage in environmental scanning (Dozier & White 1992: 103).

Environmental scanning consists of both formal (scientific) and informal information gathering about changes and trends in the organisation's environment. Practitioners use qualitative and quantitative research techniques – as well as informal, journalistic information gathering – to make their participation valuable to organisational decision makers. By collecting and controlling intelligence about the environment, practitioners become useful participants in strategic planning and decision making. This is one source of power that practitioners can use to redefine the public relations function and alter its vertical and horizontal structure (Dozier; Grunig & Grunig 1995: 412).

Research on organisational adaptation continues to grow. The general thrust of conceptual and empirical work during the last two decades is that successful organisations tailor their strategies and structures to fit environmental conditions.

Organisational environments have been characterised in terms of their components, which include customers, competitors, and suppliers and their attributes, such as instability, munificence, complexity, and also in terms of

industry characteristics, such as concentration of market power, entry barriers, changes in demand and changes in product characteristics (Sutcliffe 1994:1).

4.10 IRREGULAR, PERIODIC AND CONTINUOUS SYSTEMS

Organisational scanning refers to the acquisition of information about an environment by organisation members and the subsequent communication of relevant information. Fahey & King (1977) characterised scanning systems as either **irregular, periodic, or continuous**, categories reflecting the increasing formalisation, intensity and complexity of a system. Fundamental to these perspectives is the idea that more intense and frequent scanning, enhances the recognition of environmental changes, threats, and opportunities (Sutcliffe 1994: 2).

4.10.1 Irregular systems

Irregular systems are characterised by the reactive nature of planning as well as environmental scanning. These systems respond to environmentally generated crises. Such systems are not really systematic. Their focus is on specific problems that tend to be short term in nature. Methodologically these systems rely on simplistic tools that primarily utilise information from the past.

According to Steyn & Puth (2000: 172) irregular scanning is a general exposure to information with no specific purpose in mind. It is characterised as reactive, specific, driven by crises, and performed by existing staff.

The organisations that use these systems generally have not created a “strategic planning culture”. More importantly, however these systems attempt to reduce uncertainty in the current and near-term future environment and in doing so, they generally fail to detect opportunities to facilitate the creation of radically new solutions to problems (Fahey, King & Narayanan 1981: 33).

4.10.2 Periodic systems

Periodic systems, on the other hand, are more sophisticated and complex. While the focus of these systems is still problem solving, they exhibit greater proactive characteristics. These systems look more toward the future, but they emphasise short-term environmental changes. As a result, while they are forecasting oriented, the forecasts that they produce are limited in their scope and methodologies (Fahey, King & Narayanan 1981: 33).

4.10.3 Continuous systems

Continuous systems are the ideal portrayed in planning literature. Here the focus shifts from mere problem-solving to opportunity-finding and the realisation that planning systems contribute to the growth and survival of the organisations in a pro-active way. These systems attempt to enhance the organisation’s capability to handle environmental uncertainty rather than to reduce perceived uncertainty. The time horizons which are treated are considerably longer –varying from “long” to “futuristic” – and there is a substantial continuing resource allocation to these activities in the organisation (Fahey, King & Narayanan 1981: 33).

Continuous scanning is a deliberate effort to obtain specific information that follows pre-established methods. It is characterised as proactive, broad in scope, part of the organisation’s strategy formulation and planning processes, and performed by a scanning unit (Steyn & Puth 2000: 172).

Sutcliffe (1994) further found that the greater the organisational scanning, the greater the match between environmental instability and manager's perceptions of environmental instability.

Environmental scanning can, for instance, be used for labour supply planning. In this case, the scanning activities will include direct managerial input, best guess, historical ratios, process analysis, scenario analysis and other statistical methods (Ward 1996: 54).

4.11 RESEARCH ON ENVIRONMENTAL SCANNING

Initial studies focused on formal systems for environmental scanning, describing their features and prevalence. Larger organisations were found to be more likely to engage in a formal practice of environmental scanning (Steyn & Puth 2000: 173).

4.11.1 THEORETICAL STUDIES ON ENVIRONMENTAL SCANNING AND STRATEGIC BEHAVIOUR

In the late 1970s the notion held that chief executive officers create their environments through their belief about what is relevant and what should be scanned (Weick 1976).

In the 1980s a theoretical perspective emerged to claim that organisations generally follow different strategies because they require different skills, values and knowledge on the part of the chief executive officer.

Researchers such as Miller & Toulouse (1986), demonstrated that managers employing a differentiation strategy have attributes that are different from their counterparts using cost-leadership. For instance, managers employing differentiation strategy appeared to have greater willingness to take risks, greater

tolerance for ambiguity. They were also more internal in their locus of control than those practising cost-leadership. Thus, researchers conclude that types of strategies and approaches to scanning are linked, because different strategies require different scanning approaches. Managers with certain scanning skills may choose strategies that maximise their skills.

4.11.2 EMPIRICAL STUDIES ON ENVIRONMENTAL SCANNING AND ORGANISATIONS' STRATEGIES

Since Aguilar's (1967) conceptualisation of the scanning process, several studies have investigated various aspects of it. Most of these have focused on how the scanning process is performed. Building on Aguilar, Nanus (1982) also provided a conceptual collaborative approach based on the analysis of industrial trends.

Other studies focused on the relationship between environmental scanning and certain variables of the organisation's strategy such as hierarchical level; speciality level and personality dimensions of executives. Others focused on environmental complexity and rate of change as well as evaluation of information sources and information processing.

Hambrick's (1981) pioneer study empirically examined this relationship on the premise that chief executive officers would scan their organisational environment to build a competitive strategy. Using Miles and Snow's (1978) strategy typologies, Hambrick found no relationship between the environmental scanning activities of chief executive officers and their organisational strategies.

Later studies focused on the informal scanning behaviours of individual managers. People possess a strong motivation to understand their environments, but limitations on their cognitive abilities create biases as they acquire and process information. Managers tend to focus on their own short-

term interests and fail to share information with other managers (Steyn & Puth 2000: 173).

Inadequate scanning of environmental changes might be an important reason for the failure of strategic planning in some organisations. In an analysis of 31 South African organisations, it was found that 28 undertook environmental scanning on an irregular basis and were dependent on published and “informally” collected information. Only two organisations published their analyses and presented them as a starting point for the planning cycle (Steyn & Puth 2000: 169).

Little is known about the relationship between the way an organisation collects environmental information and its strategies to compete. In other words, the relationship between an organisation’s strategic orientation and the kinds of environmental information it obtains to make its strategies successful is a largely unexplored territory. Assessment of the environment is generally accepted to be the first step in the strategic management process. A link between strategy and scanning, thus, will help “match” this vital activity with its purpose.

4.11.3 FIRST STREAM OF RESEARCH: THE MACRO OR INDUSTRIAL VIEW

Earlier research on environmental scanning focussed on which organisational units and systems gathered environmental information, and how it is used.

4.11.3.1 How scanning is used

Management need to study and understand the environment in order to think strategically. It is imperative to include environmental analysis in the strategy formulation processes, in order to ensure that important external changes and information are included in the organisation’s strategic decisions (Fahey, King & Narayanan 1981).

Fahey and King (1977) studied environmental scanning in 12 large organisations. They undertook this research because of a paucity of empirical studies of environmental scanning as a formal activity in organisations. They addressed a variety of questions, hoping to obtain a broad understanding of the motivation, information types and sources, organisational aspects and usefulness of environmental scanning in these organisations.

Analysis of the data revealed:

1. Environmental information was not properly integrated into the planning process.
2. While many respondents asserted that the Political/Regulatory environment was of great importance, efforts to gather useful information of this kind were insufficient, non-existent, or unconnected to long-range planning.
3. The most widespread approach to scanning is the use of corporate staff in conjunction with outside experts.
4. Most scanning activities were said to be best undertaken at the divisional, not the corporate level.
5. Most of the firms in the sample relied on the irregular method, in spite of being aware of the dangers of the method (Fahey & King 1977).

The primary purpose of environmental scanning is to provide an understanding of the constituents of the macro environment. The information gathered by the macro environmental scanning process is broad in scope and future directed. The forces and trends in this category represent the most difficulty for scanners when they try to identify threats and opportunities, for they are the most abstract

and the timing of their development is most difficult to estimate (Steyn & Puth 2000: 174).

4.11.3.2 Which systems are used in structuring environmental scanning?

According to Jain (1984), in studying the actual scanning practices of managers, a pattern was found in the evolution of scanning activity, marked by four phases: primitive, ad hoc, reactive and proactive. As scanning progresses from one phase to the next, the process of information gathering improves as it is related to strategy formulation.

Another finding was that the quality of scanning improves with time. This implies that the scanning activity cannot be transplanted by copying a model from another organisation, but has to be adapted and evolved over time. A prerequisite for achieving a structured system of environmental scanning is the existence of a formalised system of strategy formulation and planning itself. Simply scanning the environment will not provide much mileage unless strategy formulation and planning have been well organised (Jain 1984).

A systematic approach to environmental scanning is therefore needed. The enterprise and corporate strategy must continually be reviewed to incorporate the impact of environmental trends of strategic significance.

According to Hambrick (1981: 299) available evidence suggests that there may not be a strong relationship between hierarchical level and scanning activities. For example, researchers generally have observed no greater overall scanning activity by top-level executives than by middle-level executives. Thus, the traditional conception of top executives as the primary links to the environment has not been supported. Neither Aguilar (1967) nor Kefalas and Schoderbeck

(1973) could identify any clear patterns between hierarchical level and scanning focus among the executives they studied.

4.11.3.3 Principles for effective implementation of environmental scanning

Environmental scanning seems to be even more complex and harder to carry out than originally envisioned. The following are principles regarding effective implementation (Engledow & Lenz 1985: 95).

- Environmental scanning must be linked, conceptually and practically, to current strategy formulation, planning and operations.
- Systems for environmental analysis must fit the culture and decision-making styles of the organisation.
- Continuing support from internal champions, such as the chief executive officers or others, is required to sustain the scanning over time. Environmental analysis is a relatively new, poorly defined activity that does not have a historical role in the strategy formulation process, and is always in danger of being smothered.
- The scanning domain must be defined as broadly as possible.
- Standards for the definition of events and trends must be set.
- As many internal and external sources as possible must be used.
- A strict schedule for review and analysis must be established.
- Identified threats and/or opportunities must be reviewed with regard to their impact on the organisation.

An interesting finding of the above research study was a complete lack of attention to defining the environment that had to be scanned, although that was actually the task at hand. There was no consensus in the research on how to approach the problem of describing the organisation's environment and delimiting the domain for search. It is clear that there is a need for direct

attention to the question of how to conceptualise an organisation's environment (Engledow & Lenz 1985: 96).

4.11.4 SECOND STREAM OF RESEARCH: THE MICRO LEVEL

More recent research, produced in the nineties, focuses on individual perceptions of the environment, i.e. how individual managers get information about their environment. When organisations make decisions, they do so based on a set of shared perceptions of the organisation and its environment (Steyn & Puth 2000: 178).

4.11.4.1 Information gathering activities

Top management learns about the environment by means of environmental scanning. There are numerous studies that centre on their information-gathering activities, also referred to as boundary-spanning activities.

Whereas chief executive officers are considered to be responsible for organisational and/or environmental alignment, they do not do all the scanning. However, they are responsible for bringing specialised information together from various sources. It is their job to interpret the environment, to make sense of all the information, to be aware of external events, and to create meaning from this. They must define the environment for other organisational members (Steyn & Puth 2000: 178).

Senior managers have limited time and capacity, and they must choose among scanning alternatives. A complex environment would seem to call for the increased use of sophisticated scanning systems, yet most information at top levels is gained through *ad hoc*, human sources. Knowledge of long-term trends possibly affecting the whole organisation is usually lacking. Furthermore, top

management scanning tends to be irregular rather than systematic (Steyn & Puth 2000: 179).

Upper-level executives do not display a consistent, concentrated tendency to scan according to their organisations' strategies, neither is their scanning target-oriented. Rather, it is largely individual and directed to person-specific interests with a general tendency to scan according to own functional interests. In analysing the sources of information that exists within the organisation (newspapers, magazines, periodicals, business press, newsletters, patent filings, reports of fairs, conferences), it was found that in general, only short-term and topical developments in sectors of special interest to a single person are being monitored. Research suggests that although environmental analyses may have objective aims, the interpretation of these analyses is influenced by the individual judgements and perceptions of the managers involved (Steyn & Puth 2000: 179).

4.11.4.2 Personal information-gathering attributes

There are two separate approaches to understanding the information-processing capability of individuals: personal or contextual attributes.

4.11.4.2 (a) Personal attributes approach

This approach assists in identifying personal characteristics that can be used to predict individuals' information-processing capability:

- *Cognitive complex* top managers are likely to attend to and search for a broader range of information from various environmental segments and are able to analyse the implications of complicated information better.
- *Familiarity with* the information received, influences their ability to recognise the relevance and importance of this information. Managers with an interdisciplinary background are therefore ideal candidates for performing

scanning and interpretation tasks in a turbulent environment where the scope of the relevant information is broad.

- *Mental model of success (frame of reference)*: People become so used to that way in which success is achieved, that they fail to notice (or choose to ignore) important changes taking place. Long-standing strategies are maintained because of subservience to traditionally important managers, customers and suppliers. Meanwhile the really influential critical contingencies are changing. Thus, organisation members pretend that reality is “safe”, while in effect the environmental reality is becoming increasingly dangerous (Puth & Steyn 2000: 180).

4.11.4.2 (b) Contextual attributes approach

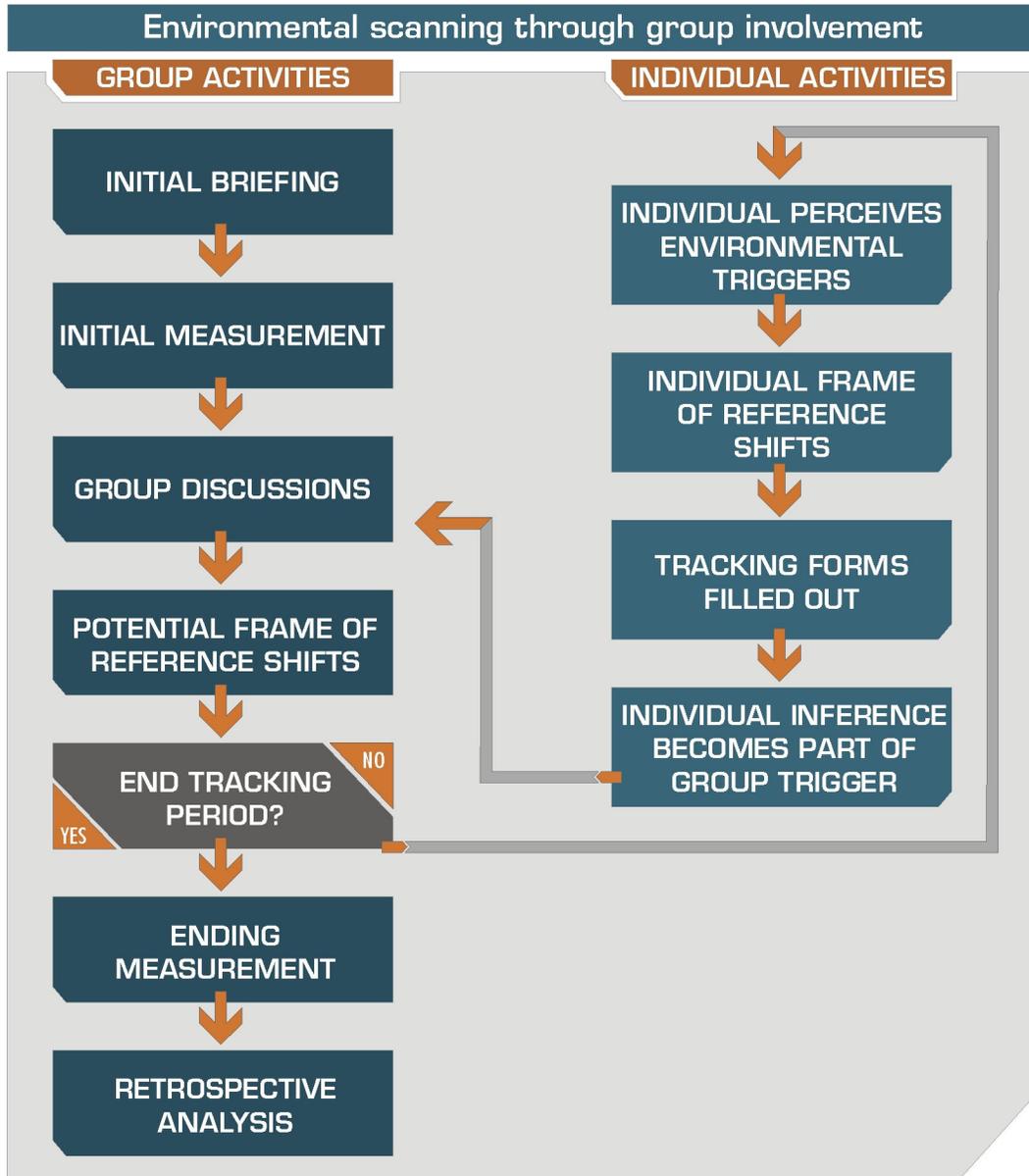
The above approach does not explain why individuals with similar personal characteristics exhibit different information-processing behaviours when functioning in different organisations. The contextual attributes approach, in contrast, contributes to the understanding of the types of situational attributes that may either facilitate or damage the information-processing behaviours of managers (Steyn & Puth 2000: 180).

4.12 MODELS OF ENVIRONMENTAL SCANNING

Some researchers went beyond scanning, and developed models that included analysis.

El Sawy & Pauchant (1988: 455) developed a model for environmental scanning by using the group involvement process, as can be seen below.

Figure 4.3 Environmental scanning through group involvement



Source: El Sawy & Pauchant (1988)

Ansoff (1975) designed a model for detecting and responding to “weak signals” in the environment, thus managing to cope with surprises.

Bates (1985) found a gap in existing models: understanding the present environment and its effects on the organisation is not enough. His MAPping model introduced the stage of prediction to bridge the gap between the understanding of the present environment and developing strategy for the future.

4.12.1 QUEST

Nanus (1982: 39) developed an approach called QUEST – Quick Environmental Scanning Technique. QUEST may be defined as a futures research process designed to permit executives and planners in an organisation to share their views about trends and events in future external environments that have critical implications for the organisation's strategies and policies. It is a systematic, intensive and relatively inexpensive way to develop a shared understanding of high priority issues and to focus management's attention quickly on strategic areas for which more detailed planning and analysis would be beneficial (Nanus 1982: 39).

QUEST was developed by Nanus and Enzer in the early 1980s and has been used successfully in numerous corporations, educational institutions and government departments. It is a futures research technique designed to permit executives and planners in an organisation to work together in examining external future trends and events that have critical implications for the organisation's internal strategies and policies (Du Toit 1991: 154).

The basic assumption of the QUEST technique is that each member of the top management team of a corporation already has a view of the dynamics of the changing environment of the organisation. In the aggregate, these assumptions represent the organisation's understanding of its environment.

Although extremely important for strategic planning, this understanding is rarely articulated and shared. In some cases, these collective views of the environment

may be fairly accurate since each manager is in touch with a variety of constituencies and bring years of experience to bear upon the interpretation of the significance of external events for the organisation. However, this may not necessarily be the case, as conventional wisdom may limit perceptions of change. Thus, it becomes important to spell out assumptions about the environment in a systematic framework so that they can be aggregated, examined and put up to use for strategic purposes (Nanus 1982: 40).

To collect these views, it is useful to engage in a process of divergent thinking in which the full dimensions of the environment are explored by the executives in a structured inquiry. Then, after analysis of the results of the divergent thinking, it is possible to converge on issues and strategic options that are worthy of further exploration. In broad outline, the QUEST process accomplishes these tasks by means of four phases.

4.12.1.1 Preparation

In this phase, a group of 12 to 15 executives is chosen for participation in an intensive 1-day exercise. A notebook is prepared containing information on the major environmental trends and events in the industry. This information is drawn from readily available trade associations, governmental, and other standard sources.

4.12.1.2 Divergent planning session

At the 1-day retreat, the participants proceed through a carefully structured series of discussions. Starting with a definition of the business, its performance indicators and major constituencies, the discussion proceeds to critical events and trends. The day is spent in wideranging speculation on important issues that might affect the future of the firm. An attempt is made to scan the horizon broadly and comprehensively.

4.12.1.3 Scenario Development

Based upon the data gathered at the retreat, the QUEST director, who may be an outside consultant or resident analyst, prepares a report summarising the major issues and their implications. The report also synthesises three to five scenarios incorporating the major themes of discussion. The report is distributed to the participants prior to a second half-day meeting.

4.12.1.4 Strategic Options Identification

At the half-day meeting, the report is reviewed, strengths and weaknesses of the firm are discussed, and then the group identifies feasible strategic options to deal with the evolving external environments. The last step is the rank ordering of the strategic options, and the formation of planning teams to further develop each of the high priority strategies (Nanus 1982: 41).

To stay in equilibrium with the changing environment requires changes in management. This calls for a greater environmental awareness by management, changes in management approaches and the application of new management techniques to cope with the new century.

The major advantage of the QUEST process is its low cost, rapid implementation and ability to focus the considerable expertise of top management on the external environment of the organisation. Managers who participate often develop a new sense of commitment to their organisation's strategic planning activities and report a clarification of their own thinking about the future (Du Toit 1991: 159).

The most important result of a QUEST exercise is a new sense of shared understanding of the possible directions of the firm's environments. Participants often remark upon how the exercise clarified their own thinking about the future.

In no sense does a QUEST exercise substitute for a more complete, objective and detailed analysis of the external environment which should accompany major resource allocation decisions. The results will only be as good as the participants themselves.

4.13 SCANNING FOR FORECASTING

Environmental scanning also creates the foundation for forecasts. Information obtained during scanning is used to form scenarios, which are predictions of future outcomes. Two popular future outcomes for which management is likely to seek forecasts are future revenues and new technological breakthroughs (Steyn & Puth 2000: 172).

A variety of techniques – trend impact analysis, cross-impact analysis, cross-impact simulation, Delphi technique, scenario building, econometric models and other simulation models - have been adapted for use in environmental scanning. According to Steyn & Puth (2000: 172), the Delphi technique - a systematic solicitation of expert opinion - was found to be the most popular.

The process of environmental scanning, where strategic intelligence is gathered from the internal and external environment, is of particular importance as a research method for public relations managers. This includes techniques such as cyber bridging, media scanning, networking, trend analysis, econometric models, Delphi technique, scenario analysis, brainstorming etc (Stroh & Leonard 2000).

Traditionally, environmental scanning has been implemented mainly with the use of conventional methods including marketing research, economic indicators, demand forecasting, and industry studies. But the use of such conventional techniques for environmental scanning is not without pitfalls. Discussed below

are a variety of techniques that have been adapted for use in environmental scanning.

4.13.1 Extrapolation procedures

These procedures require the use of information from the past to explore the future. Obviously their use assumes that the future is some function of the past. There are a variety of extrapolation procedures that range from a simple estimate of the future (based on past information) to regression analysis (Jain 1993: 167).

4.13.2 Historical analogy

Where past data cannot be used to scan an environmental phenomenon, the phenomenon may be studied by establishing historical parallels with other phenomena. Turning points in the progression of these phenomena become guideposts for predicting the behaviour of the phenomenon under study (Jain 1993: 167).

4.13.3 Intuitive reasoning

This technique bases the future on the “rational feel” of the scanner. Intuitive reasoning requires free thinking unconstrained by past experience and personal biases. This technique, therefore, may provide better results when used by freelance think tanks than when used by managers on the job (Jain 1993: 167).

4.13.4 Scenario building

This technique calls for developing a time-ordered sequence of events bearing a logical cause- and effect relationship to one another. The ultimate forecast is based on multiple contingencies, each with its respective probability of occurrence (Jain 1993: 167).

4.13.5 Cross-Impact matrices

When two different trends in the environment point toward conflicting futures, this technique may be used to study these trends simultaneously for their effect. As the name implies, this technique uses a two-dimensional matrix, arraying one trend along the rows and the other along the columns.

Some of the features of cross-impact analyses that make them attractive for strategic planning are (a) they can accommodate all types of eventualities (social or technological, quantitative or qualitative, and binary events or continuous functions), (b) they rapidly discriminate important from unimportant sequences of developments, and (c) their underlying rationale is fully retraceable from the analysis (Jain 1993: 167).

4.13.6 Morphological analysis

This technique requires identification of all possible ways to achieve an objective. For example, the technique can be employed to anticipate innovations and to develop optimum configurations for a particular mission or task (Jain 1993: 167).

4.13.7 Network Methods

There are two types of network methods: contingency trees and relevance trees. A contingency tree is simply a graphical display of logical relationships among environmental trends that focuses on branch-points where several alternative outcomes are possible. A relevance tree is a logical network similar to a contingency tree but is drawn in a way that assigns a degree of importance to various environmental trends with reference to an outcome (Jain 1993:168).

4.13.8 Missing-link approach

The missing-link approach combines morphological analyses and the network method. Many developments and innovations that appear promising and marketable may be held back because something is missing. Under these circumstances, this technique may be used to scan new trends to see if they provide answers to any missing links (Jain 1993: 168).

4.13.9 Model-building

This technique emphasises the construction of models following deductive or inductive procedures. Two types of models may be constructed: phenomenological models identify trends as a basis for prediction but make no attempt to explain underlying causes. Analytic models seek to identify underlying causes of change so that future developments may be forecast on the basis of a knowledge of their causes (Jain 1993: 168).

4.13.10 Delphi technique

The **delphi technique**, named after Apollo's oracle at Delphi, is a method of making forecasts based on expert opinion. Traditionally, expert opinions were pooled in committee. The delphi technique was developed to overcome the weaknesses of the committee method (Jain 1993: 331).

The delphi technique is the systematic solicitation of expert opinion. Based on reiteration and feedback, this technique gathers opinions of a panel of experts on happenings in the environment (Jain 1993: 168).

4.13.11 Trend-impact analysis

Trend-impact analysis is a technique for projecting future trends from information gathered on past behaviour. The uniqueness of this method, which was designed by the consulting firm, the Futures Group, lies in its combination of statistical method and human judgement (Jain 1993: 338).

4.13.12 Scenario analysis

The environmental scanning process involves monitoring emerging trends, changes and issues and evaluating how they will impact corporate decisions. Scanning also involves dividing the environment into meaningful sectors, collecting data, and forecasting changes in key variables in those sectors (Preble, Rau & Reichel 1988: 4).

4.14 SCANNING FOR BENCHMARKING

Another type of environmental scanning is benchmarking, a search amongst competitors or non-competitors for the best practices that have lead to their superior performance.

Benchmarking focuses scanning by tracking the best business process in the global political economy and in the industry-market and adjusting the internal value chain to them. The basic idea is that management can improve quality by analysing and then copying and improving the methods (Steyn & Puth 2000: 173).

Environmental scanning frequency did not appear to affect organisational performance as measured by profit margin and return on equity. There was a preference for internal over external sources of information, but there was no difference in the use of personal and impersonal sources.

What may be gleaned from the research that has examined environmental scanning? An information-seeking framework summarises important findings. These findings fall into the following categories:

- Situational dimensions
- Organisational strategy and scanning strategy
- Information needs, seeking and use
- Managerial traits.

Situational dimensions: the effect of perceived environmental uncertainty. Managers who perceive the environment to be more uncertain will tend to scan more. According to Choo (1998: 23) several studies have found that perceived environmental uncertainty is a good predictor of the amount and intensity of scanning. Perceived environmental uncertainty is a function of the perceived complexity (number of factors, number of causal relationships) and perceived dynamism (rate of change) of the external environment. Furthermore, if the perceived importance of the environment is included in a measure of perceived strategic uncertainty, the association between environmental uncertainty and scanning is even stronger.

Organisational strategy and scanning strategy: an organisation's overall business strategy is related to the sophistication, scope and intensity of its environmental scanning. An organisation that follows a particular strategy, such as a product differentiation, cost leadership or focus strategy, or adopts a certain strategic stance, is likely to operate a scanning mode that provides the required information and information processing capabilities to pursue its desired strategy (Choo 1998:24).

Information needs, seeking and use: business organisations focus their scanning on market-related sectors of the environment. Information about customers, competitors and suppliers is seen to be the most important. In industries where other sectors of the environment, such as technology or

demographics, are perceived to be having a large impact, these sectors would also be considered high scanning priorities (Choo 1998: 24).

Although managers scan with a wide range of sources, they prefer live information from personal sources when seeking information about market-related environmental sectors that are highly fluid and equivocal. There is some evidence to indicate that source selection for scanning is influenced by the perceived quality of the source and not just its perceived accessibility (Choo 1998: 23).

Information derived from environmental scanning is increasingly being used to drive the strategic planning process in business and public-sector organisation. Research suggests that environmental scanning is linked with improved organisation performance. However, the practice of scanning by itself is insufficient to assure performance – scanning must be integrated with strategy and scanning information must be effectively employed in the planning process. An important effect of scanning is to increase and enhance communication and discussion about future oriented issues by people in the organisation. Coupled with the availability of information on external change, scanning can promote generative organisational learning (Choo 1998: 23).

Managerial traits: the effect of a manager's job-related and cognitive traits on scanning is an area in need of further research. There is evidence to suggest that managers scan widely, covering not just their functional specialities but also other areas, and that upper-level managers scan more and more broadly than lower-level managers do (Choo 1998: 24).

Little is known about the relationship between the way an organisation collects environmental information (environmental scanning) and its strategies to compete. In other words, the relationship between an organisation's strategic orientation and the kinds of environmental information it obtains to make it's

strategies successful is a largely unexplored territory (Fernandes, Harper & Subramanian 1993: 315).

Ever since Aguilar (1967) established the importance of environmental scanning, a number of studies have been done in this area. The general trend of these studies has been to suggest theoretical models of scanning as well as to provide periodic perspectives on the state-of-the-art in scanning practices.

Fahey & King (1977) assessed the existing practices in corporate environmental scanning. Using a small sample of twelve US firms, the authors classified the scanning models in use along a continuum into three types: irregular, regular and continuous (this is discussed earlier in this chapter). Only two of the twelve firms studied had scanning systems that could be termed “continuous,” while six firms had only rudimentary scanning systems that could be called “irregular”.

Jain’s (1984) study of corporate environmental scanning practices was conducted on a much larger sample than those of Fahey & King (1977). Questionnaire data from 186 Fortune 500 firms provided support for Fahey & King’s (1977) contention that most US corporations do not use advanced models for environmental scanning. Jain (1984) also classified scanning models on a continuum, but used terminology that was different from Fahey & King (1977).

Jain’s models progress in phases: phase one is the primitive model, phase two the ad hoc model, phase three the reactive and phase four the proactive model. Only 14 of the 186 companies (7.5 percent) that Jain (1984) surveyed, had a proactive scanning system in use. One hundred and twenty eight firms in the sample (nearly 70 percent) used either the primitive or the ad hoc models.

Aguilar (1967) and Kefalas and Schoderbek (1973) examined the relationship between environmental scanning and certain organisational factors such as size,

hierarchical levels, and functional area orientation of managers. Neither study yielded significant linkages.

Daft, Parks & Sormunen (1988) compared the scanning practices of chief executives in high-performing and low-performing organisations. Using return on Assets (ROA) as the performance measure, the researchers concluded that chief executives of high-performing organisations scanned the environment more frequently and more broadly than their counterparts in low-performing organisations.

An empirical study of four Canadian industries conducted by Miller & Toulouse (1998: 230) revealed that environmental uncertainty and environmental scanning are both negatively related to simplicity. This supports a functional rationale that more comprehensive strategies are demanded by uncertain environments and that scanning helps managers design such strategies.

It also supports a cognitive rationale that uncertainty and scanning help combat tunnel vision and broaden managerial mental models. However, uncertainty and scanning were also found to interact negatively in their impact on simplicity. Paradoxically, scanning is especially likely to reduce simplicity if the environment is stable, and uncertainty is especially likely to reduce simplicity in the absence of scanning. This finding is difficult to interpret using a functional rationale (Miller & Toulouse 1998: 231).

Functional effects of scanning on simplicity. Companies that broadly scan and assiduously monitor the incidents and trends in their environments will be most likely to devise strategies that reflect important external developments. According to Aguilar (1967) and Miller (1993), they will discover more real challenges and opportunities and thus be able to develop a relevant and comprehensive set of competitive methods and competencies.

Cognitive effects of scanning on simplicity. Companies that do not gather much information from their environment are more likely to have managers whose perspectives are insular – who are driven by personal biases and superstitions rather than objective conditions or challenges (Miller & Toulouse 1998: 231).

Daft & Weick (1984: 285) has four specific assumptions that underlie the model developed in their research and clarify the logic and rationale on which the interpretation system approach is based.

The most basic assumption is that organisations are open social systems that process information from the environment. The environment contains some level of uncertainty, so the organisation must seek information and then base organisational action on that information. Organisations must develop information processing mechanisms capable of detecting trends, events, competitors, markets and technological developments relevant to their survival (Daft & Weick 1984: 285).

The second assumption concerns individual versus organisational interpretations. Individuals send and receive information and in many ways carry out the interpretation process. Organisation theorists realise that organisations do not have mechanisms separate from individuals to set goals, process information or perceive the environment. People do these things (Daft & Weick 1984: 285).

Individuals come and go, but organisations preserve knowledge, behaviours, mental maps, norms and values over time. The distinctive feature of organisational level information activity is sharing.

The third assumption is that strategic-level managers formulate the organisation's interpretation. When one speaks of organisational interpretation

one really means interpretation by a relatively small group at the top of the organisational hierarchy. A large number of people may span the boundary with the external environment and this information is channeled into the organisation. Organisations can be conceptualised as a series of nested systems, and each subsystem may deal with a different external sector. Upper managers bring together and interpret information for the system as a whole (Daft & Weick 1984: 285).

Many participants may play some part in scanning or data processing, but the point at which information converges and is interpreted for organisation level action is assumed to be at the top manager level. This assumption is consistent with Aguilar's (1967) observation that below the vice presidential level, participants are not informed on issues pertaining to the organisation as a whole (Daft & Weick 1984: 285).

The fourth assumption is that organisations differ systematically in the mode or process by which they interpret the environment. Organisations develop specific ways to get to know the environment. Interpretation processes are not random. Systematic variations occur based on organisation and environmental characteristics, and the interpretation process may in turn influence organisational outcomes such as strategy, structure and decision making (Daft & Weick 1984: 286).

4.15 DEFINITION OF INTERPRETATION

Organisations must make interpretations. Managers literally must wade into the ocean of events that surround the organisation and actively try to make sense of them. Organisation participants physically act on these events, attending to some of them, ignoring most of them and talking to other people to see what they are doing (Braybrooke 1964).

4.15.1 Toward a model of organisational interpretation

Two key dimensions are used here to explain organisational differences. They are: management's belief about the analysability of the external environment and the extent to which the organisation intrudes into the environment to understand it. The proposed model provides a way to describe and explain the diverse ways organisations may obtain knowledge about the environment (Daft & Weick 1984).

4.15.1.1 Assumptions about the environment

When an organisation assumes that the external environment is unanalysable, an entirely different strategy will apply. The organisation to some extent may create the external environment. The key is to construct, coerce or enact a reasonable interpretation that makes previous action sensible and suggests some next steps (Daft & Weick 1984: 287).

What factors explain differences in organisational beliefs about the environment? The answer is hypothesised to be characteristics of the environment combined with management's previous interpretation experience. When the environment is subjective, difficult to penetrate or change, managers will see it as less analysable (Daft & Weick 1984: 287).

4.15.1.2 Organisational Intrusiveness

The second major difference among interpretation systems is the extent to which organisations actively intrude into the environment. Some organisations actively search the environment for an answer. They allocate resources to each activity. They hire technically oriented MBA's; build planning, forecasting, or special research departments; or even subscribe to monitoring services.

Passive organisations accept whatever information the environment gives them. These organisations do not engage in trial and error. They do not actively search for the answer in the environment. Research evidence suggests that many organisations are informal and unsystematic in their interpretations of the environment. These organisations tend to accept the environment as given and respond actively only when a crisis occurs (Daft & Weick 1984: 288).

One explanation of differential intrusion into the environment is conflict between organisation and environment. When the environment is perceived as hostile or threatening, or when the organisation depends heavily on the environment, more resources are allocated to the intelligence gathering function. Organisations attempt to develop multiple lines of inquiry into the environment (Daft & Weick 1984: 288).

4.15.1.3 The Model

Based on the idea that organisations may vary in their beliefs about the environment and in their intrusiveness into the environment, organisations can be categorised according to interpretation modes. The two underlying dimensions are used as the basis of an interpretation system model.

The *enacting* model reflects both an active, intrusive strategy and the assumption that the environment is unanalysable. These organisations construct their own environments. They gather information by trying new behaviours and seeing what happens (Daft & Weick 1984: 289).

The *discovering* model also represents an intrusive organisation, but the emphasis is on detecting the correct answer already in an analysable environment rather than on shaping the answer (Daft & Weick 1984: 289).

Organisations characterised by *conditioned viewing* (Aguilar 1967) assume an analysable environment and are not intrusive. They tend to rely on established data collection procedures, and the interpretations are developed within the traditional boundaries.

Undirected viewing (Aguilar 1967) reflects a similar passive approach, but these organisations do not rely on hard, objective data because the environment is assumed to be unanalysable. Managers act on limited, soft information to create their perceived environment.

4.15.2 Other organisational characteristics

Scanning characteristics pertain to the nature and acquisition of data for top management about the environment. The data may vary by source and acquisition, depending on the interpretation mode of the organisation (Daft & Weick 1984: 289).

4.15.2.1 Data sources

Data about the environment can come to managers from external or internal sources, and from personal or impersonal sources (Aguilar 1967). Sources are external when managers have direct contact with information outside the organisation. Internal sources pertain to data collected about the environment by other people in the organisation and then provided to managers through internal channels (Daft & Weick 1984: 290).

4.15.2.2 Data Acquisition

Organisational mechanisms for acquiring information and the regularity of acquisition are other distinguishing characteristics of organisational scanning.

Undirected viewing organisations will make little use of formal management information. Data will tend to be irregular and casual (Daft & Weick 290).

4.15.2.3 Interpretation process

Interpretation pertains to the process by which managers translate data into knowledge and understanding about the environment. This process will vary according to the means for equivocality reduction and the assembly rules that govern information processing behaviour among managers (Daft & Weick 1984: 291).

Equivocality is the extent to which data are unclear and suggest multiple interpretations about the environment.

Assembly rules are the procedures or guides that organisations use to process data into a collective interpretation. The content of these rules and the extent to which they are enforced depend on the organisation.

4.16 ENVIRONMENTAL SCANNING PROCEDURE

Like any other new programme, the scanning activity in a corporation evolves over time. There is no way to introduce a foolproof system from the beginning. If conditions are favourable and if there is an established system of strategic planning in place and the chief executive officer is interested in a structured effort of scanning the evolutionary period shortens (Jain 1993: 153).

Behavioural and organisational constraints require that things be done over a period of time. The level and type of scanning that a corporation undertakes should be custom designed and a customised system takes time to emerge into a viable system.

4.17 ENVIRONMENTAL SCANNING IN STRATEGY FORMULATION

It can be said that strategic management should consist of four components,

- comprehensive environmental analysis;
- goal formulation;
- strategy formulation; and
- strategy implementation.

In the environmental scanning process, data is acquired from the external environment to be used in problem definition and strategic decision making. In the role of gatekeeper or liaison and boundary spanner, the corporate communication manager or function provides top management with the critical information needed to formulate strategy. In this role, corporate communication makes the biggest contribution to organisational effectiveness, and therefore the bottom line (Steyn & Puth 2000: 166).

Most companies are able to provide ongoing business information. Where many fall short is in providing information to stimulate thinking about potentially important considerations that are further out in the future or that fall outside the normal purview.

Organisations should be encouraged to consider events beyond the near future and the familiar. Some companies do this by bringing in experts to address such issues with management. Industry associations and outside board membership are other possible sources for such stimulation (Aguilar 1992: 59).

One of the most effective ways of focusing on the future is for managers at all levels to discuss future considerations with each other. For example, senior managers can encourage the constructive exchange of information by using task teams comprising members from different business units, different geographical

regions and different functional backgrounds for strategic analysis and decision making (Aguilar 1992: 59).

The organisational process of people interacting to generate, interpret, and use business intelligence becomes more difficult when expert inputs are required. Part of the difficulty is integrating the expert input in the decision-making process (getting the expert to address the relevant business issues and to communicate these issues clearly to decision makers who are not experts on the subject) (Aguilar 1992: 59).

Business communicators mostly have education and expertise in the traditional methods of communicating an organisation's message. Yet they are working for and in organisation's that are being revolutionised. Even what we call an organisation in the future may be different. Stepping through the electronic doorway, the communicator finds himself or herself in the virtual corporation and the glass house of transparent communication. Past experience in the field has not fully prepared the communicator for these challenges.

Forces acting on communicators are those that shape the lives of professionals everywhere. These are social, demographic, business and organisation-related, global, technological, educational, scientific, government and personal.

Communicators are in a special situation as knowledge workers. Organisations are gradually realising the importance of creating and building intellectual capital. A key factor in successful global business and economic development is the effective use of knowledge and information in business practices. Communicators are one of the keys to that effective use. They must make sure that, through their own skills, knowledge and expertise, their organisations know their value.

One strategy is for them to work themselves into a more prominent strategic position in the organisation. To do so, they need a stronger business background and deeper insight into their organisation's information and communication needs. Changes, for instance globalisation, must be turned into opportunities.

Many people are plagued with too much information and not enough time to process it. Communicators (should) have the expertise to become information brokers by helping to sort out the important from the unimportant.

Corporate communication practitioners use formal and informal activities to learn what is going on in the organisation's environment. In systems language, environmental scanning is the detection of environmental turbulence or change likely to affect the homeostasis of the system (Steyn & Puth 2000: 166).

A system of environmental scanning or monitoring calls for the selection and collection of specified categories of information. The cornerstone for building such a system is an understanding of the information needs of the organisation's executives. Based on these needs, information categories are established that serve as the basis for selecting information in the scanning process (Steyn & Puth 2000: 167).

If collected data is to be of value to the organisation, it must be interpreted and used in the formulation of corporate strategy to initiate, confirm or modify management decisions and to aid in the design of communication programmes. When issues are identified and interpreted, corporate priorities can be set, programmes can be decided upon, and responsibility can be assigned.

There are two distinct approaches to environmental scanning: the "outside-in" or macro-approach, and the "inside-out" or micro approach. Successful organisations plan from the outside in and not from the inside out, because the

environment shapes the future of the organisation. An organisation can influence changes in internal trends, and manage them. However, external issues and trends are far less amenable to management control.

4.18 STEPS THAT EXPLAIN THE RELATIONSHIP BETWEEN ENVIRONMENTAL SCANNING AND THE COMMUNICATION STRATEGY

1. Keep a tab on broad trends appearing in the environment

Once the scope of environmental scanning is determined, broad trends in chosen areas may be reviewed from time to time.

2. Determine the relevance of an environmental trend

Not everything happening in the environment might be relevant to the company. An attempt must be made to select those things that are significant to the company.

3. Study the impact of an environmental trend on a product/market

An environmental trend can pose either a threat or an opportunity for a company's product or market. This impact must be studied.

4. Forecast the direction of an environmental trend into the future

If an environmental trend does appear to have significance for a product or market, it is desirable to determine the course that the trend is likely to adopt. In other words, attempts must be made at environmental forecasting.

5. Analyse the momentum of the product/market business in the face of the environmental trend

Assuming that the company takes no action, what will be the shape of the product/market performance in the midst of the environmental trend and its future direction?

6. Study the new opportunities that an environmental trend appears to provide

An environmental trend may not be relevant for a company's current product/market, but it may indicate promising new business opportunities.

7. Relate the outcome of an environmental trend to corporate strategy

Based on environmental trends and their impacts, a company needs to review its strategy on two counts: changes that may be introduced in current products/markets and feasible opportunities that the company may embrace for action (Jain 1993: 159).

4.19 MODES OF ENVIRONMENTAL SCANNING

Scanning is not a monolithic activity. Environmental scanning includes both looking at information (viewing) and looking for information (searching). Research in organisation science suggests that it might be helpful to distinguish between four modes of organisational scanning: undirected viewing, conditioned viewing, informal search and formal search (Choo 1998: 23).

In undirected viewing, the individual is exposed to information with no specific informational need in mind. The goal is to scan broadly in order to detect signals of change early. Many and varied sources of information are used, and large

amounts of information are screened. The granularity of information is coarse, but large chunks of information are quickly dropped from attention. As a result of undirected viewing, the individual becomes sensitive to selected areas or issues (Choo 1998: 24).

In conditioned viewing, the individual directs viewing of information about selected topics or to certain types of information. The goal is to evaluate the significance of the impact on the organisation. The individual wishes to do this assessment in a cost-effective manner, without having to dedicate substantial time and effort in a formal search. If the impact is assessed to be sufficiently significant, the scanning mode changes from scanning to searching (Choo 1998: 25).

During informal search, the individual actively looks for information to deepen the knowledge and understanding of a specific issue. It is informal in that it involves a relatively limited and unstructured effort. The goal is to gather information to elaborate an issue so as to determine the need for action by the organisation. If a need for a decision or response is perceived, the individual dedicates more time and resources to the search (Choo 1998: 25).

During formal search, the individual makes a deliberate or planned effort to obtain specific information about a specific issue. Search is formal because it is structured according to some pre-established procedure or methodology. The granularity of information is fine, as search is relatively focused to find detailed information (Choo 1998: 25).

The goal is to systematically retrieve information relevant to an issue in order to provide a basis for developing a decision or course of action. Formal searches could be a part of competitor intelligence gathering, patents searching, market analysis or issues management among other activities. Formal searches prefer information from sources that are perceived to be knowledgeable or from

information services that make efforts to ensure data quality and accuracy (Choo 1998: 25).

In order to be effective, environmental scanning needs to engage all four modes of viewing and searching. Undirected viewing helps the organisation to scan broadly and develop peripheral vision so that it can see and think “outside the box”. Conditioned viewing track trends and gives the organisation early warning about emerging issues. Informal search draws a profile of an issue or development, allowing the organisation to identify its main features and assess its potential impact. Formal search systematically gathers all relevant information about an issue to enable intelligent decision making (Choo 1998: 25).

4.20 TIME HORIZON OF SCANNING

Scanning may be short or long term. Short-term scanning is useful for programming various operations, and the term may last up to two years. Long term scanning is needed for strategic planning, and the term may vary from three to twenty-five years. Rarely does the term of scanning go beyond twenty-five years. The actual time horizon is determined by the nature of the product (Jain 1993: 163).

4.21 PROBLEMS FACING ENVIRONMENTAL SCANNING

Discussed below is the major problems companies face in the context of environmental scanning.

Many of these problems are, in fact, dilemmas that may be attributed to a lack of theoretical frameworks on the subject.

1. The environment per se is too broad to be tracked by an organisation, thus, it is necessary to separate the relevant from the irrelevant environment.

2. Another problem is concerned with determining the impact of an environmental trend and determining its meaning for business.
3. Even if the relevance of a trend and its impact are determined, making forecasts of the trend poses another problem.
4. A variety of organisational problems hinder environmental scanning. Presumably managers are the company's ears and eyes and therefore should be in a good position to perceive, study, and channel information. But, managers are also usually so tied up mentally and physically in their specific roles that they simply ignore happenings in the environment.
5. Environmental scanning requires "blue sky" thinking and "ivory tower" working patterns to encourage creativity, but such work perspectives are often not justifiable in the midst of corporate culture.
6. Frequently, top managers, because of their own values, consider dabbling in the future a waste of resources, therefore they adopt unkind attitudes toward such projects.
7. Many companies, as a matter of corporate strategy, like to wait and see, therefore, they let industry leaders, the ones who want to be first in the field, act on their behalf.
8. Lack of normative approaches on environmental scanning is another problem.
9. Often a change is too out of the way. It may be perceived, but its relationship to the company is not conceivable.
10. It is also problematic to decide what department of the organisation should be responsible for scanning. Should marketing research undertake environmental scanning? How about the strategic planning office? Who else should participate?
11. Often information is gathered that is overlapping, leading to a waste of resources. Frequently there are informational gaps that require duplication of effort (Jain 1993: 164).

4.21.1 Learning from Best Practices

Surveys of effective scanning practices in organisations appear to converge on a set of common best practice principles.

4.21.1.1 Plan and manage scanning as a strategic activity

As an engine of organisational learning, scanning should be managed as a strategic activity. In many ways, the scanning function is like a research and development programme, where the investment is for the longer term, but the payoff may be spectacular. Like research and development, scanning needs to be given a critical mass of talent and resources in order for it to take off, and it needs time to develop its knowledge and expertise. Successful programmes take three to five years to mature and the most effective scanning departments were at least five years old (Choo 1998: 25).

4.21.1.2 Implement scanning as a formal system

A formal scanning system is one that is planned, sustained and coordinated. Planning ensures that information gathering is based on the organisation's goals and critical information needs. Continuous monitoring enables the organisation to detect deviations from the norm and sense early warning signals. Sustained monitoring also allows the system to grow its information networks and build up its knowledge base. Coordination minimises duplication and maximises the scope and efficiency of information gathering (Choo 1998: 25).

Information must be managed as the core of the scanning function. Information management is a network of six interrelated processes: identifying information needs, acquiring information, organising and storing information, developing information products or services, disseminating information and using information. In identifying information needs, key groups of information users are

clearly identified and the situation in which they will use the scanning information carefully understood. Information acquisition is a widely distributed organisational activity, in which virtually everyone participates.

Communication managers perform a boundary role, functioning as a link between the organisation and its internal and external publics. Therefore, communication managers become systems managers who are knowledgeable about and able to deal with the complex relationship inherent in the organisation (Claasen & Verwey 1998: 76).

It is, however, this strategic management role of public relations that is more than often neglected. As management's communication arm, the communication manager has a role to play in acquiring information of relevance from outside and analysing and interpreting it. Without the communication manager's input of information about trends and developments in the environment no meaningful strategies can be constructed. The communication manager must help to define the target audiences to be reached by the organisation, and devise and implement plans to reach those audiences.

According to Claasen & Verwey (1998: 76) communication management in the South African business environment to a degree still suffers the consequences of traditional interpretations of the function - that of mainly media liaison and event management. Organisations have not yet fully made the transition in the perception of the function from a basically technical function to a more strategic function. Therefore, communication management is not always acknowledged for the contribution it can make to the organisation's survival in a dynamic global environment.

Although top managers are not the only sources of environmental information, they do play a significant role in gathering external intelligence. Research has shown that executives can spend as much as one quarter of their time monitoring

the environment (Hambrick 1981; Kefalas & Schoderbek 1973). And yet, environments can be diffuse, complex, dynamic and elusive. The magnitude of the scanning task can be daunting to any individual's information processing capabilities.

Some studies have found that businesses which seek out external information have reported significantly better sales, profitability, and productivity than those who do not (Daft et al. 1988: 123). Frederickson & Mitchell (1984: 399) however, found that the cost and time required for external information search did not always pay off for organisations in volatile environments.

Strategic planning is an important contributor to a firm's long-term growth and viability. Generally, firms that plan effectively outperform their non-planning counterparts. Scanning and environmental analysis in turn play a crucial role in supporting the planning process.

Industry structure models of strategy (e.g. Porter, 1999) have proposed the development of formal scanning units to collect strategic information about environmental sectors. However, relatively few firms have departments or individuals dedicated to environmental scanning. Consequently, scanning in most firms is done informally by senior management (Jain 1984).

Aguilar (1967) argued that executives will evaluate several factors before deciding to monitor a specific issue, including its scope and urgency, relationship to long-term plans, potential significance as a "problem" area, and whether the issue and its information needs are readily definable.

Chief executives of high performing firms have been found to scan the environment more broadly and more regularly (Daft et al. 1988) and devote more analysis to key environmental factors, than their counterparts in low performing firms.

Three sub scales to measure environmental scanning are utilised: frequency of scanning, interest in scanning, and number of hours spent scanning. Frequency refers to how often a firm scans its environment and is associated with the timeliness, relevancy and amount of information that firms are able to obtain about various sectors (for example customers, suppliers and competitors) of their task environment (Daft et al. 1988).

Scope indicates the number of different environmental sectors monitored by a firm. Scanning environmental sectors informs a firm of events and trends affecting its survival and prosperity. For example, rivals' competitive actions (new product introductions, price changes), customer demands, desires and buying habits, technological advances, and economic developments all require adaptive responses by the firm (Fahr et al 1984).

The scope and frequency of environmental scanning will affect the firm's ability to align its competitive strategy with its environment. Frequent scanning of environmental sectors provides the firm with current information and allows it to verify the accuracy of the information and to adapt to changing environmental conditions more rapidly than does infrequent scanning. Frequent scanning also positions the firm to stay abreast of environmental events and trends that threaten its existence or offer opportunities to exploit. Small firms are particularly vulnerable to rapidly developing major threats because they often lack the financial resources to withstand them (Beal 2000: 27).

Beal (2000: 27) concluded that frequent scanning of the environment will be positively related to environment/competitive strategy alignment. Experience shows that opportunities and threats can arise from many different sources. Thus, obtaining information about several different sectors furnishes the chief executive officers with more relevant information in aligning the firm's competitive strategy with environmental conditions.

Fahr et al. (1984) has verified the reliability and validity of these sub scales and found frequency and interest to be reliable. The third sub scale - number of hours spent scanning - was found to contain excessive measurement errors and was dropped as a result.

Jain's model progresses in four phases: primitive scanning, ad hoc scanning, reactive scanning and proactive scanning. The following descriptions of environmental scanning systems are based on Jain's (1984) study.

Phase one (primitive) depicts a situation where environment is taken as something inevitable and random, for which nothing can be done other than accept each impact as it occurs. Management is exposed to information, both strategic and non-strategic, without making any effort to distinguish the difference. No discrimination is used to discern strategic information and the information rarely is related to strategic decision making. In essence, scanning takes place without management devoting any effort to it (Jain 1984).

Phase two (ad hoc) is an improvement over phase one in that management identifies a few areas that need to be watched carefully. However, no formal system exists for scanning and no initiative is taken to scan the environment (Jain 1984).

In Phase three (reactive) environmental scanning begins to be rated important and efforts are made to monitor the environment to seek information in different areas. In other words, the management fully recognises the significance of the environment and dabbles in scanning, but in an unplanned, unstructured fashion (Jain 1984).

The Phase four (proactive) firm practices environmental scanning with vigour and zeal, employing a structured effort. Careful screening focuses the scanning effort on specific areas considered crucial. Time is taken to establish a proper

methodology to scan the environment, disseminate the scanned information and to incorporate it into the strategy (Jain 1984).

Prior studies have indicated that accessibility and availability of information increased its usage. Jain's (1984) study reinforces this fact since daily newspapers were identified as the most important source of scanning information.

Today, we live in an information intensive age. There is a tremendous amount of information available and waiting to be tapped by users. Apart from availability and accessibility, the cost/benefit evaluation is an important factor in the source selection process. Although newspapers provide the most current information, a considerable amount of time needs to be invested to obtain specific and relevant information from them (Jain 1984).

Environmental scanning is a form of system inputs – organisations gather intelligence about stakeholders/publics and environmental forces. According to Broom & Dozier (1990) environmental scanning moves through three stages: problem detection, exploration and description.

When these inputs are collected systematically, it forms part of environmental scanning.

The strategic function of scanning is early detection of emerging problems as well as quantification of existing or known problems in the environment. This kind of research is conceptually and methodologically distinct from programme evaluation – the latter being designed to evaluate the planning, implementation and impact of communication programmes (Dozier 1986).

Environmental scanning is generally viewed by strategic management as a prerequisite for the formulation of effective business strategies. Moreover,

effective scanning of the environment is seen as necessary to the successful alignment of competitive strategies with environmental requirements and the achievement of outstanding performance (Beal 2000: 27).

Superior firm performance is a major objective of all the stakeholders of a firm. Strategists and strategic management scholars generally agree that both large and small firms that align their competitive strategies with the requirements of their environment outperform firms that fail to achieve such alignment (Beal 2000: 27).

Environmental scanning is widely viewed as the first step in the process linking strategy and environment. The underlying premise is that scanning the task environment and the general environment allows a firm to learn about opportunities that may be positioned to take advantage of. Conditions or events that threaten its performance or survival can be identified, thus enabling the firm to formulate a competitive strategy congruent with critical environmental conditions (Beal 2000:27).

Although research on environment-strategy alignment is extensive, tests of the hypothesis remain inconclusive due to several theoretical and methodological issues. Moreover, only a few empirical studies have examined relationships between Porter's (1980) generic competitive strategies and environmental scanning.

According to Broom's (Broom & Dozier 1986) open-systems model of public relations, scanning research is a form of system inputs. Organisations gather intelligence about publics and environmental forces. When these inputs are collected systematically by an organisation, the activities are forms of environmental scanning. These activities are conceptually distinct from performance control feedback, programme adjustment feedback and organisational adaptation feedback (Broom & Dozier 1990).

These feedback loops are conceptual representations in an open-systems model of the three types of programme evaluation that practitioners use to measure the preparation, implementation, and impact of public relations programmes. Scanning research is different.

Dozier (1986) argued that scanning research is methodologically distinct from evaluation research. Scanning research is inherently open-ended. Such research is exploratory in nature and vulnerable to premature closure. That is, scanning research is vulnerable to examining problems already known to either the practitioner or management. This is a weakness, because the strategic function of scanning is early detection of emerging problems as well as quantification of existing or known problems in the environment.

For these reasons, scanning research is ideally suited for a number of qualitative research techniques, including focus-group studies. In addition, questionnaires of specific publics or a broad cross section of many publics are also useful. These types of surveys, however, differ in many important respects from the highly structured field experimental designs of evaluation research (Dozier et al 1995).

The corporate strategy must continually be reviewed to incorporate the impact of environmental trends of strategic significance – a systematic approach to environmental scanning is therefore needed.

To make sense of chaos in today's world, decisions should be based on the maximum amount of information. The only way to secure information is to actively request it. In the case of key relationships with stakeholders this means regular conversations, focus groups and opinion surveys. It also means that the organisation must organise itself to be receptive to inputs of opinion.

In 1998 The American Society of Associations Executives (ASAE) undertook an extensive Environmental Scan – the most extensive effort to prepare associations for the future. To gather the kinds of information that associations can act on to align themselves with a fast-paced future, the foundation is centering its research round four concepts: anticipate, explore, experiment and collaborate (Rhea 1999: 90).

The ASAE Foundation will engage in a comprehensive environmental scan every two years. This research project engages a cross-section of the association community in a dynamic dialogue about the trends that will shape its challenges and possibilities for the next two to three years (Rhea 1999: 90).

The ASAE Foundation uses the environmental scan, its annual Think Tank conference and other research tools to identify critical research questions to explore. By framing these key issues, the foundation is able to develop the deeper understanding required to produce research results that can transform what associations do (Rhea 1999: 91).

In these research projects, associations will be asked to experiment with new ideas and strategies. They will work under the direction and protocols of the foundation's researcher (Rhea 1999: 91).

The Foundation is determined that its research projects not be reports from some remote observation point but that they can be grounded in the interests and sweat equity of associations and their business and academic partners (Rhea 1999: 91).

4.22 PUBLIC RELATIONS AUDITING

Falling under the umbrella of environmental scanning is a research technique called public relations auditing. This is research to define stakeholders/publics

and to determine how they perceive and evaluate the organisation. It determines the consequences the organisation has had on its stakeholders and the extent to which the organisation must correct those consequences. The primary purpose is to examine, catalogue, systemise and measure the organisation's performance as a corporate citizen (Steyn 2000: 10).

There are two basic types of public relations audits – stakeholder identification and corporate image studies (Steyn 2000: 10).

If the organisation has already done a communication audit, it may be time for an information system analysis (ISA), closely related to environmental scanning. Information system analysis involves an expert review of the process, systems, tools and templates that are used to exchange information in the organisation (Gayeski 2000).

The principal output of an information system analysis is a set of recommendations that influence performance. An information system analysis has several components:

- A meeting with executives to determine the overall goals and culture of the organisation.
- A systematic content analysis of print, audiovisual and online information to determine consistency of message and “voice,” and the relevance of the data to actual performance.
- Behavior-setting analyses of key staff at their work places to determine and observe how they use information and communication tools.
- An audit of communication “tools” (the media available such as newsletters, intranet, videoconferencing) and “rules” (the templates or standards used to produce the information).
- Focus groups or small group interviews to determine the needs and issues of key employee groups (Gayeski 2000).

The analyses use both quantitative and qualitative research methods, and the tools are numerous. An information system analysis can assess a company's "rules and tools" and improve bottom-line performance. It can also assist the communication professional in becoming an architect of communication instead of only being a wordsmith (Gayeski 2000).

Although many organisations recognise the importance of environmental scanning, past studies indicate that very few organisations have adopted a systematic and structured approach to this task (Fahey, King and Narayanan 1981: 32).

Difficulties in implementation have been cited as the cause of failure to adopt these systems. Implementing effective scanning systems, not only entails establishing appropriate environmental monitoring procedures to collect relevant and timely information, but also involves the dissemination of this information to the appropriate user (Fahey, King and Narayanan 1981: 32).

The "explosion" of available information, and the complexity and dynamism of the current environment will force organisations that want to use information as a competitive tool, to adopt more systematic and structured methods for their scanning task (Fahey, King and Narayanan 1981: 32).

4.22.1. Stakeholder identification

- Identifies relevant stakeholders/publics (does the organisation have an effect on them or do they affect the organisation);
- Evaluates the organisation's standing with each relevant stakeholder/public;
- Identifies issues of concern to those stakeholders;
- Measures the power of each stakeholder (Steyn 2000: 10).

4.22.2 Corporate image studies

These are an extension of the public relations audit:

- Determine the familiarity of each stakeholder/public with the organisation;
- Determine their attitudes towards the organisation;
- Determine the personality characteristics each stakeholder associates with the organisation (Steyn 2000: 10).

In the problem identification phase of strategy formulation, these research techniques are of the utmost importance in identifying strategic issues that might impact negatively on the organisation so that they may be addressed. Providing such strategic information to top management represents the public relations manager's participation in corporate strategy formulation (Steyn 2000: 10).

Once top management has formulated the corporate strategy, it is the responsibility of the public relations manager to develop a corporate communication strategy based on the corporate strategy. The corporate communication strategy serves as a framework for, and provides direction to, the activities of the public relations function – what must be communicated to solve organisational problems or capitalise on opportunities (Steyn 2000: 10).

Areas tracked by chief executive officers include demographics, economics, public policy in the United States and abroad, business, technology, education, and special education. Semi-annually, managers prepare updates of each area to share with each other and other staff members.

Others focused on business journals to scan for leadership and management trends. Networking on chief executive officer level, visits with industry chief executive officers association committees and involvement in state government was also mentioned.

Networking and speaking with the association's manufacturer members are ways of identifying trends. Talking with representatives from other industry associations and related groups and reading the industry trade magazines are other sources of information.

According to Truncale (1999: 38) one must start by setting up an ongoing process for monitoring the external environment in which your firm exists. That includes three things: the world around you, your specific customers and markets and both existing and emerging technology.

Nowhere are the changes in the world more radical than in the way people communicate. Fifteen years ago, business communications involved print, the telephone or face to face meetings. Today, many more avenues of communication exist, and they can be layered upon one another – cell phones, beepers, the Internet, email, voice-mail, faxes, et cetera. Part of the communication professional's job is to keep abreast of communication technology (Truncale 1999: 38).

Truncale (1999: 38) suggests a team that monitor news magazines and trade publications, talks with dealers and suppliers, meets with customers and reviews the attendance of customers at trade shows and conferences.

Collect relevant information and share the knowledge on a regular basis. He further suggests the appointment of a chief information officer or a chief technology officer "who can help monitor trends and guide decision-making".

“Today this position is just as important as that of a vice president of manufacturing or a vice president of sales and marketing”.

4.23 CONCLUSION

In Chapter Four, it was determined that environmental scanning is a process that begins with viewing the environment, proceeds with studying how the environment affects the organisation, and concludes with a rough outline of the future state of the environment. It is this prediction of the environment upon which top management should base their strategies for the organisation. However, too often plans are made only with regard to the current environment.

In Chapter Five, the research methodology and research findings will be discussed. Conclusions and recommendations will also be made.