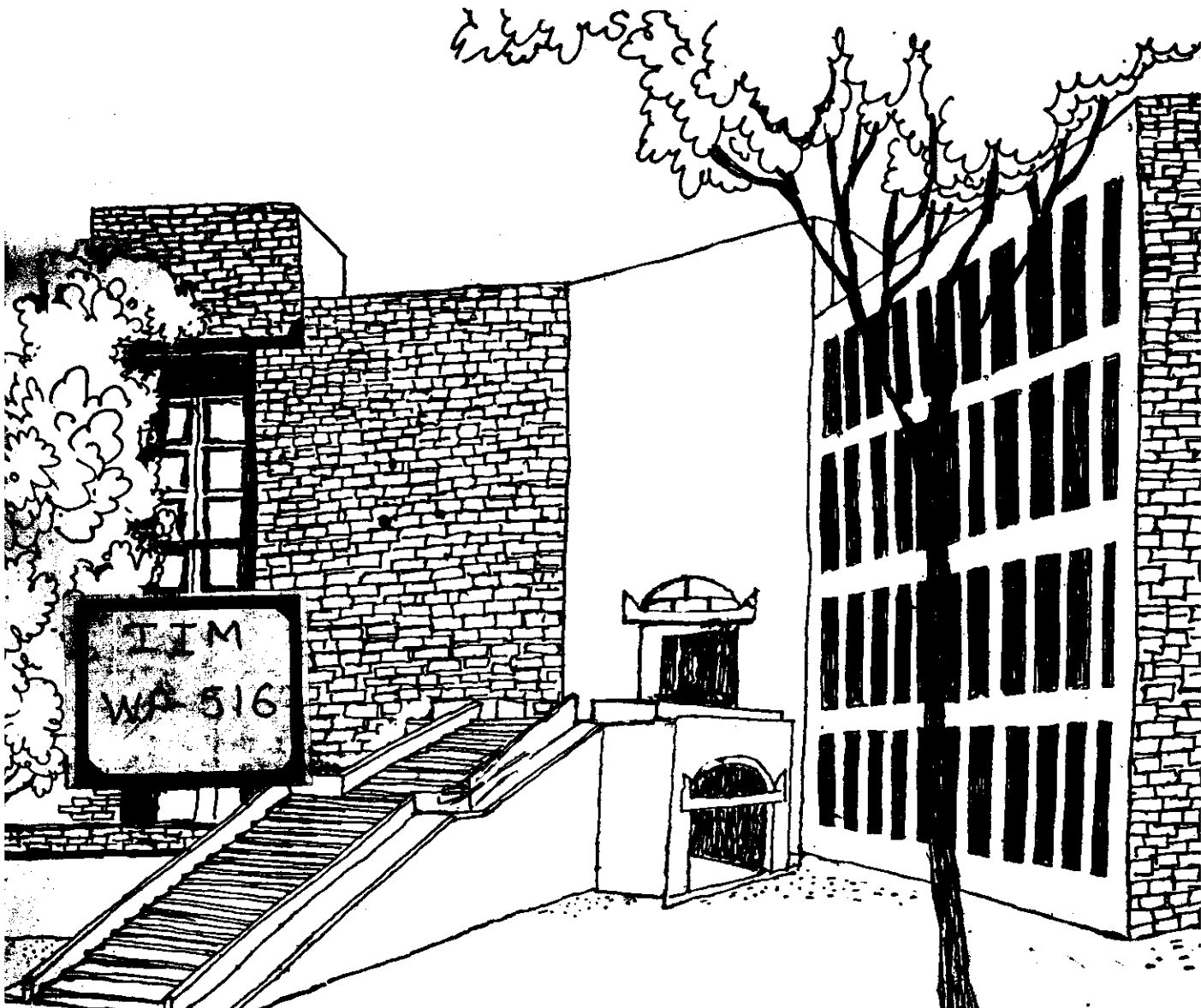




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Working Paper



DEVELOPING AN ENVIRONMENTAL SCANNING AND
REPORTING SYSTEM--A STUDY OF PROCESSES
AND INFLUENCING FACTORS

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DEVELOPING AN ENVIRONMENTAL SCANNING AND REPORTING SYSTEM

- A Study of Processes and Influencing Factors -

* Year long textile strike in Bombay put many dyes and chemical companies in a bad shape.

* Recent reduction in the excise duties on refrigerators enabled their manufacturers to reduce the price and increase the sales by 58% in four months.

* Applications of electronic technology to computing and the consequent development of calculators threw the mechanical computing machine manufacturers out of business.

* Launching of an industrial project like Kudremukh Iron Ore project generated investment opportunities for many construction companies.

Such examples illustrate the impact of environmental factors on the performance and prospects of companies and point to the need for developing capabilities to identify, monitor, anticipate and interpret such developments in the environment. Practically every operation of the company be it production, marketing, purchase or financing is affected by these changes.

Once it is recognised that corporations need to scan these developments systematically and initiate required action to avoid undesirable consequences, then the question is: how can a company acquire this capability and develop a system for scanning and reporting the developments for corporate planning? What are the underlying processes and factors influencing this development?

This paper attempts to answer these questions through an indepth analysis of the process of development of an environmental scanning and reporting system in a large multi product multi unit company. It also discusses the implications of one of the inferences of the analysis for studies in environmental scanning for corporate planning. It is divided into three parts. In the first part we describe how this company developed a system for scanning and reporting the developments in the environment and linked it with corporate planning. In the second part, we analyse the process by identifying the key tasks in developing an environmental scanning and reporting system and the factors that influenced the motivation, speed of development and scope of scanning and reporting. In the third part we discuss the implications of one of the inferences for studies on the relevance and future of environmental scanning for corporate planning.

The sources of information for this study are the published reports of the company, articles by the Chairman and Managing Director of the company and the personal association of the author with the design and implementation of formal planning and scanning systems in this organisation. The author had opportunities to interact with all the senior executives of this company.

Part I

Description

About the Company

With a turnover exceeding Rs.3000 million and manufacturing units spread all over the country Diversified Manufacturing Company Ltd. (DMCL) (a disguised name) is one of the largest manufacturing corporations in India. The company produces a wide range of industrial goods and consumer durables in its portfolio of business. Its exports constitutes nearly 15% of the total sales. It has an independent subsidiary to manage its international operations.

Learning from Early Growth Experience

Encouraging profit performance in the first decade of its operation enabled the company to double its capacity for producing industrial goods and diversify into a consumer durable. The company formulated an ambitious plan of setting one factory a year and financing alternate factory from internal resources. This plan was based on the demand estimates for industrial goods published by the Planning Commission of India. Accordingly, factories were set up in 1964 and 1965 in two different locations. Further implementation of the plan was halted by the onset of recession in the country during 1966-67 to 1968-69. The demand for industrial goods declined and the company suffered a loss for the first time in 1967-68. Such an adverse unexpected economic performance forced the company to review its growth strategy.

Review of the Strategy by Chief Executive

Reviewing the growth strategy, the Chairman and Managing Director of the company bemoaned the absence of commercial intelligence and statistics at the company and stressed the need for taking a disaggregated view of the estimates published by the Planning Commission. According to him the company should have attempted to break down the total demand estimates into those that were relevant for the products produced by it. The company should not have conceived its plan of one factory a year without this exercise. It could have enabled the company to phase the setting up of new units suitably depending on the market and economic conditions.

Early Attempts in Formal Scanning

In 1970-71 the demand for industrial goods picked up and the company recovered from the shock of recession and initiated two activities towards developing a data base for environmental scanning. The Central Industrial Engineering Department of the company was entrusted with the task of collecting and analysing statistical information on the Macro-Economic environment. This department had designed and implemented a Management Information System for collecting and reporting internal information. A Market Planning and Research Department was set up in 1973-74 to develop marketing plans for the company's products, based on demand forecasts, and to conduct market surveys for new products. Three market planning and research officers were recruited in the middle management cadre from the Institutes of Management for this purpose. They were

fresh from the Institute and did not have any working experience before joining the company. Two senior executives from the field were also inducted into this department, one of them was made the Chief of the department. There was no addition to the staff on the Central Industrial Engineering Department. The Chief Industrial Engineer of the company was asked to shoulder the burden. He was sent for a short term management development programme in England.

Creating the Data Base

The Chief Industrial Engineer of the company collected limited macro-economic data on Gross National Product, outlays on various sectors under the Five Year Plans of the country, output of major industries and the revenue and expenditure of the Government of India, from the publications of Central Statistical Organisation of India, Planning Commission of India and Ministry of Finance. The help of an external agency was sought to compile and interpret data on the performance of the corporate sector. The external agency was running an economic monitoring service. It supplied environmental information through its weekly, monthly and annual publications to the subscribers of this service. In addition it also supplied specific information on request. The performance profiles of different companies producing similar products were developed for making interfirm comparisons. The economic journals that published data on the performance of the Indian Economy were identified and subscribed to. Subscriptions were sent to few international magazines also.

The services of consultants were hired in 1974 to help the company identify the quantitative relationship between the economic and technological developments in the external environment and the indicators of company's performance.

The market planning cell on the other hand was creating a data base for gauging the environment affecting the future of industrial products. It was recognised by them that the demand for the industrial products produced by the company was a derived demand and the prospects of this industry depended on the user industries like automobiles, two wheelers, railways, defence, industrial machinery and metal working industries. The data bank set up under the supervision of Marketing Information Officer collected data on the performance and prospects of these industries. It made an attempt to collect comprehensive information on the letters of intent and licences issued to various companies, projects launched by the state and central government and the progress of these projects.

The senior executives of the company visited national and international exhibitions of industrial products and kept the top management informed of the latest design and technological developments through tour reports.

To disseminate the information so collected, the data bank started publishing inhouse fortnightly called 'Marketing News' in 1975. It attempted a limited analysis of the information collected by it.

Thus, the initial efforts were limited largely to identification of the information requirements, and collecting the information. The analysis of the information was preliminary. The reporting was informal. Some news paper cuttings and abstracts of the resources allocated for this activity was meagre. To know the reasons for this we need to know how the formal planning system developed in the company.

Efforts in Introducing Formal Planning System:

Before 1974-75, the company had a system of annual budgeting and production planning. While the former was a financial exercise, the latter an engineering one. Between 1970-71 and 1974-75, the company diversified into agricultural machinery and another consumer durable. These diversification moves were contemplated on the basis of the feel of the market rather than on a systematic exploration and evaluation of alternatives. The main objective of these moves was to utilise the excess capacity existing in various units of the company. With every diversification move, a kind of discomfort developed with the present way of formulating growth strategies. The company's management faced questions like which way the company was moving? What new strengths were intended to be acquired? What was their contribution to exploiting the strengths of the company and overcoming its weaknesses. Answers to these questions pointed to the need for introducing a formal corporate planning system that enabled the company to define its business objectives, goals and future direction of growth. The help of an outside consultant

was taken to determine the skills and knowledge required. The stress was on analytical and communication skills. They expected the staff to possess knowledge of the sources of environmental information, tools and techniques of planning and industry practice.

Accordingly, the system was introduced in 1975-76 by recruiting a Corporate Planning Officer at the corporate office and Unit Planning Officers, all in the middle management cadre, at the manufacturing units. Two of the senior officers of the company were sent for a training programme abroad and a training programme on corporate planning was organised to educate all the senior executives of the company - on the concepts and techniques of corporate planning and environmental scanning.

Having set up the Planning Department, the company embarked on an exercise in defining its mission, objective and goals. The goals were fixed at ten per cent growth in sales and a return on investment of 16.5 per cent. These goals were based on the past performance of the company and the performance of other companies. A three year plan was prepared to achieve these goals. Very limited environmental information was requisitioned by the Planning Department in preparing this plan. The new product ideas incorporated in the plan were based on armchair thinking. However, the plan document contained a chapter on macro-economic forecasts. This three year planning exercise helped the company to prepare the ground for more systematic exercises. It brought to surface the problems in generating the

requisite internal data and implementing the formal planning system. Even by 1978, not all units had formed a complete unit planning cell. The corporate planners from the corporate office had to fly down to the manufacturing unit and stay there for months to enable the units to formulate their plan. Appropriate formats had to be designed to link the planning, performance budgeting and reporting system.

Based on this experience the three year plan was extended to cover a period of five years.

Strengthening the Formal Scanning and Reporting System

Setting the stage for a systematic scanning and planning exercise, the Chairman wrote "We are living in an age of exponential growth. The types of fundamental changes which used to take place over centuries are now telescoped within decades. In this context naturally a company like ours should do some systematic longrange thinking to identify the new challenges and the tasks it would face in the next two to three decades". (Annual Report, 1975-76).

Two staff experts, one in 1976 and the other in 1977 were recruited at the Corporate Office for monitoring interpreting and reporting the developments in the economic and technological environment. One of them held a Ph.D. in Economics from a well known Institute. He was a fresher. The other held a Post-Graduate Diploma in Industrial Engineering, also from a reputed Institute. He had five years work experience. Initially both of them reported to the Chief Industrial Engineer. Later they were transferred to the Corporate Planning Department.

Help of an outside consultant was taken to select them. The Chief Industrial Engineer was associated with him to decide the skills and the knowledge possessed by them.

In their attempt to develop a comprehensive formal scanning system, the staff experts identified the indicators of general economic, technological and product related environment that had to be scanned to spot the opportunities and threats and the sources of information on these indicators. A study of theoretical literature on environmental scanning and discussions with senior executives of the company and the consultant were the principal ways of identifying these factors. The senior executives of the company were required to narrate their experience in solving problems faced by the company and the incidents involving interaction with the environment.

Strengthening the Data Base

Though the services of an external agency that supplied macro-economic data on weekly, monthly and annual basis were retained, efforts were made to collect additional data by increasing the number of journals subscribed by the Planning Department. It was recognised by the staff experts that environmental scanning was a multilevel activity that pervaded through out the company, and that its effectiveness would increase if those who were better informed about and came frequently in contact with a given type of environment, say, marketing or technological, collected and reported the information to those who needed it. These departments were identified. Efforts

were also made to integrate the environmental scanning efforts being carried out by them. Unnecessary duplication of efforts was avoided.

The data bank of the Marketing Planning and Research Department was strengthened by the recruitment of a data analyst, who was assigned the task of analysing the data collected and reporting the implications of the developments in the environment to the Marketing Planning Team. The data analyst so recruited was promoted from inside. He was earlier working with the systems department of one of the manufacturing units of the company.

Overtime, the scope of the data bank was expanded to cover data on other products of the company as well.

Reporting the Environmental Developments and their Analysis

To report the developments in the environment to the management the Corporate Planning Cell brought out two in-house journals, namely the Monthly Review of Indian Economy and Corporate Planner. The Monthly Review recorded events and policy developments in the Indian economy during the previous month. Its objective was to draw the attention of the planners to significant developments in the economy and their impact on the performance of the company.

Corporate Planner, a quarterly, reported in detail the developments in the economic and technological environment, their implications for the future of the Company, new planning tools and techniques and the studies published by renowned futurologists in its sections on Economic Environment, New Products and Processes, Management World

and Future. Its Feedback Section provided a forum for an exchange of views, information and opinions among the planners of the company located in various units.

With the increase in the flow of information on technological trends and systematization of the process of collecting and analysing the same, a need was felt to report this separately. So, in 1980, the Corporate Planning Cell brought out a bi-monthly called, Science and Technology Review.

Special Studies

Besides the aforementioned mode of communicating the developments in the environment, the staff experts undertook special studies to analyse in depth the implications of selected environmental developments. For example, after the oil price hike in 1978, a study was carried out to review the developments in the energy scene and identify the threats and opportunities. The study entitled, "Oil Sheikhs and the Price Shock", presented a historical perspective of the oil crisis, and the attempts to develop alternative sources of energy. It analysed the likely effects of these on the expansion plans of the Company's major customers and stated that there was not an immediate threat of an adverse business situation, but the years 1983-84 and 1984-85 were the critical years. It also made a point that it was imperative for the Company to be associated with alternative energy development programmes. The report was sent to all the senior executives and planners of the Company. Such event-based special studies

came to centre around the launching of the Five Year Plans of the Central and State Governments and the announcements of the Central budget and key economic policies of the Government of India.

A separate cell was set up in the international subsidiary of the Company to monitor and report the development in the global environment. Similar reports were published by other departments that monitored the environmental developments. The title, content, objectives and target audience of these reports are given in Annexure I.

These reports are primarily descriptive in nature. Vary limited use of statistical tools and techniques is made in analysing the data. The corporate planning cell has contemplated to develop an econometric model to explain the casual linkages between the operations of the company and the environmental factors.

Developments in the Planning System

Changes in the planning system took place along with the increasing systematization of the environmental scanning and reporting system. Planning Cells in each of the manufacturing units were fully constituted in 1978. These cells were advised by the Corporate Office to initiate studies to evaluate their respective units environment, strengths and weaknesses, and identify the gap that needed to be bridged. Interaction between the planners at the Corporate Office and units was facilitated through mutual consultation and joint studies. The Corporate Office published a Corporate Planning Guidelines series to explain to the unit planners the concepts, tools and techniques of

Corporate Planning and the role of individual functions like Finance, Marketing and Production in Corporate Planning. Data formats were developed to facilitate consolidation and comparison across units. The formats required the units to mention the growth from old and new products separately.

Linking the Planning and Scanning Systems - The Corporate Plan 1981-82 to 1985-86

The first attempt towards linking the planning and scanning systems effectively was made when it was decided by the Corporate Planning Cell in 1980-81 to project the environmental developments in the next five years from 1981-82 to 1985-86. This study was sent to the unit planning cells for analysis and appreciation. To enable them to analyse the implications of the forecasts, product-industry matrices, giving information on which product of the unit was demanded by which industry and what was the importance of each industry to the unit in terms of order inflow were developed jointly by the corporate and unit planning cells. A chapter on the analysis of the environment was to be a part of the plan document to be prepared by the unit.

It attempted to project the trends in the environment by studying the past performance and programmes and projects that could be taken up during 1981-82 to 1985-86. Use was made of a macro-econometric model and data contained in the draft Five Year Plan 1978-83, published by the Planning Commission, Government of India. The scenario emerging from this exercise was divided into two parts.

The first part presented the forecast of general macro-economic factors such as the availability of key inputs, prices and costs, industrial relations, public sector performance and international trade. The sections were devoted to socio-cultural, political, and technological environment focussed on the growth of electronic technology, and the inroads it was expected to make in the business lines of the Company. The need for acquiring capabilities in applied electronics and systems was stressed.

The guidelines for formulating the Corporate Plan 1981-82 to 1985-86 and the study of the environment were discussed in a conference of the general managers of all the units and an approach to the plan was finalised. In the context of this approach, the units formulated their objectives, set up goals, forecasted their sales and costs to check whether the goals could be achieved, identified new products looking at the opportunities discussed in the study of the environment, if the present products could not achieve the goals. The assistance of the Marketing Planning Department was taken by them to conduct a survey and obtain more information on the likely acceptable price, likely demand, type of technology and the existing and potential manufacturers of these products in India and abroad. Only those products that enabled the units to achieve their goals were included in the final plan of the unit. The unit plans were consolidated into a corporate plan after checking for the achievement of the corporate goals and introduction of new business lines to bridge the gap. Thus, in this exercise the environmental input was well integrated into the planning process.

Looking Beyond 1985 - A Brainstorming Session

While formulating the corporate plan for the period for 1981-82 to 1985-86, it was realised by the management that the products and projects included in the plan would keep the resources of the Company utilised optimally till 1985-86 and that thinking on products after 1985 should start in 1981 if the Company did not want to be caught in a vacuum. With this in mind, the Corporate Planning Department organised a brainstorming session for generating new product ideas. The session was participated by the young executives of the company who were expected to have a stake into future. A document on the future of the Indian economy by 2000 A.D. was prepared as a basis for analysing the future environment and generating new ideas. This was another way of integrating environmental scanning exercise into long range perspective planning.

Thus by 1981-82 the company had developed a formal environmental scanning and reporting with the following features.

- * Scanning and reporting activities manned by trained specialists.
- * Formal reporting of developments in the environment and their implications for the company's performance and prespects through periodicals and special studies brought out by both the corporate planning and other functional cells in the company.
- * Organised collection of selectively identified information through own effort and an external agency.

* Intention to develop an econometric model to explain the casual relationship between the developments in the environment and the performance of the company.

* Environmental scanning system linked effectively with the planning system.

Part II

An Analysis of Processes and Influencing Factors

It can be noted that it took nearly a decade for this company to develop a comprehensive environmental scanning and reporting system, and integrate it closely with corporate planning. The process was slow and the time taken was long. This could be attributed to the cautious and incremental mode of developing the system opted for by the company. To start with the resources allocated were limited. They were gradually increased as the company acquired familiarity with the task.

The company did not open all the fronts simultaneously. It started with scanning primarily for one activity, namely, marketing planning for industrial products and extended it to other products and company wide planning as it gained experience.

Key Phases

Based on the description, it is possible to conceptualise the process of developing the scanning and reporting system as consisting of three key phases, namely, acquisition of skills and knowledge, creation of data base for analysis, and development of reporting system. This is shown in figure 1.

Figure 1

DEVELOPMENT OF ENVIRONMENTAL SCANNING AND REPORTING SYSTEM

Key Phases	Means of Accomplishment						
<p>1. Identification and Acquisition of Skills and Knowledge</p>	<p>1.A For Identification - Company's Own Knowledge - Outside help</p> <p>1.B For Acquisition - Training Internal People - Inhouse - Recruitment of Trained Specialists - Outside - Consultants</p>						
<p>2. Creation and Updating of Data Base for Analysis</p> <p>2.1 Identification - Factors - Sources - Published of Data - Unpublished</p> <p>2.2 Collection - Formats - Frequency</p>	<p>2.A Inhouse Search - Interviews with Senior People</p> <p>2.B Literature Study - An Economic Monitoring Service</p> <p>2.C Outside Help - A Consultant</p>						
<p>3. Development of Reporting System</p> <p>Form Content Frequency Target Audience</p>	<p>3.A Regular Publication</p> <p>3.B Event Based Studies</p> <p>3.C Meetings</p>						
<p style="text-align: center;"><u>Influencing Factors</u></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Economic Performance</td> <td style="width: 50%;">Trained Specialists</td> </tr> <tr> <td>Company's Strengths and Weaknesses</td> <td>Involvement of Company Executives</td> </tr> <tr> <td>Management Support</td> <td>Stage of Development of Planning System</td> </tr> </table>		Economic Performance	Trained Specialists	Company's Strengths and Weaknesses	Involvement of Company Executives	Management Support	Stage of Development of Planning System
Economic Performance	Trained Specialists						
Company's Strengths and Weaknesses	Involvement of Company Executives						
Management Support	Stage of Development of Planning System						

Identification and Acquisition of Skills and Knowledge

This could be considered to be an overriding task which would determine the efficiency and effectiveness of the execution of other two tasks. What skills and knowledge to acquire and how to acquire are the questions faced by a company in this phase. The means for answering these questions could be:

For identification -

- a) Company's own knowledge
- b) Consultant's help

For acquisition -

- a) Training of internal people
- b) Recruitment
- c) Outside help

We can note from the experience narrated above that the company opted for a mix of all the options.

Having decided this, the company chose the midpath approach of ensuring a mix of internal people and newcomers. Internal people were sent for training outside. An inhouse training programme was also organised. The choice of the new recruits was also balanced. A qualified economist supplemented the skills and knowledge of an industrial engineer in the Corporate Office. Similarly, the new recruits from the business schools supplemented the experience of the executives from the field in the Marketing Planning Department.

The mid path chosen by the company avoided the tensions likely to be created by the team of new recruits only, and also the absence of new thinking, likely to result from a team of old executives. The tensions were also avoided by placing the old executives hierarchically above the new recruits.

Creation of a Data Base

Having acquired the skills and knowledge, the next phase is the creation of data base for analysis. The two associated tasks are (i) identification of factors to be scanned and sources of data on these factors and (2) collection of data.

These tasks could be accomplished through interviews with senior executives, literature study and outside help. Here also the company opted for a mix. Starting with an informal exploration the company identified the factors and sources with formal inhouse search, outside help and literature. The data were collected from both inside and outside sources and from published and unpublished sources.

The approach adopted by the company can be recommended to other companies as well. The staff did not depend on theoretical knowledge alone. They had discussions with senior executives who narrated their past experience and helped them to identify the environmental factors to be scanned. This approach not only developed an awareness among the senior executives of this activity but also contributed to the use of the information made available to them subsequently.

The recognition that environmental scanning is a companywide activity and all those who came in contact with the environment in their activities should participate in the scanning and reporting activity was a significant step in developing the scanning system. By identifying these internal sources the team not only ensured effective scanning but also avoided duplication of efforts. The members did not assume an all powerful role and do everything themselves.

The decision regarding the continued use of an external agency for supplying data on routine and as when requested basis was like the make or buy decision-guided by the economics of the choice. The choice of the company was in favour of exploiting the start up synergy provided by this agency and supplementing their efforts. There by they could spend their energies on analysis and interpretation of the information.

Development of Reporting System

This task could be the most significant one in influencing the ultimate use of the information collected and analysed by the scanning staff. How do we report the developments and their implications? What should be the frequency of reporting? Who should receive it and in what form? These are the questions that would arise in this context.

Starting with the circulation of newspaper cuttings for keeping the management informed, the company developed a regular system of collected information/through weekly, fortnightly, monthly and quarterly

publications. The audience varied from strictly top management to senior executives of the company.

These publications were in response to the need to disseminate the information systematically. The decisions regarding the form, content, frequency and periodicity of reporting was based on the timing of availability of information and the concern for avoiding crowding of information disseminated. Like if all were made monthly publications, they would not have been read by the target audience.

Another factor to be noted in this process is the concern for keeping the reading matter in any publication within readable limits, like when more and more information on science and technological developments became available a decision was taken to start a bimonthly called Science and Technology Review instead of increasing the reading matter in Corporate Planner.

As different subsystems in the company were bringing out their own publications co-ordination of this activity to avoid overlapping and dissonance was a paramount need. This was achieved through discussion with these executives and agreeing on the content and periodicity of the publication.

Special studies could be considered to be an effective way of reporting the implications of significant events in the environment. This provided flexibility to the system of reporting.

These phases were not strictly sequential there was a considerable degree of overlapping and mutual feedback in the process.

Influencing factors

Adverse economic performance of the company was the principal factor in drawing the attention of the management to the need for scanning the developments in the environment and formulating plans accordingly. The management was prompt in recognising this and initiating efforts towards developing inhouse expertise in this activity. It also recognised that it should be a continuous and not one shot activity. This realisation ensured the continued support of the top management which was necessary for nurturing an activity of this kind which could get side tracked in the hub bub of routine operations. The speech of the Chairman laid a sound foundation for this activity.

The choice of options in various phases of the development was determined by the strengths and weaknesses acquired through past operations. It may be noted that the company started the activity in the middle of its career and therefore had already acquired certain strengths and weaknesses.

Outside consultants played an important role in the initial phase of development. The activity picked up momentum with the recruitment of trained specialists in both Corporate Office and Marketing Planning Department. They broadened the scope of the activity, developed reporting systems and helped to link it with the planning system.

Involvement of executives already working in the company in both scanning and reporting of environmental developments provided start up synergy to the activity.

The other factor which could be identified to have influenced the development and scope of this activity is the stage of development of the planning system itself. The planning system passed from an irregular mode to a comprehensive mode as the company gained experience and finalised the process of planning. In the initial analysis the company tended to focus more on internal analysis and setting the planning system in order. The planning cells had to be constituted at the various units, the company executives had to be trained and formats had to be designed. During this period the company made an adhoc or less formal use of the information on environmental developments. Environmental information was gathered more for keeping the management informed and for performance review is to answer what went wrong kind of questions. A detailed analysis of the environment for identifying opportunities and threats gained importance only when the planning system was fully established. In other words, the demand for systematic and comprehensive information on the developments in the environment increased as the planning progressed from one phase to the other.

It may also be noted that the analysis of the environmental information also became more refined as the planning system was well established.

Thus, economic performance of the company, strengths and weaknesses acquired from past operations, continued support of the management, trained specialists, involvement of the company executives and the stage of development of the planning system could be considered to be the key influencing factors determining the speed of development and scope of environmental scanning for corporate planning.

Part III

Implications of the Inference

The inference, that the stage of development of planning is an influencing factor, has a significant implication for studies on environmental scanning for corporate planning. Based on the data collected from indepth interviews with vice-presidents of planning, managers of corporate planning and individuals who possessed specific responsibility for environmental scanning or analysis in 12 large companies belonging to eight different industries, Fahey and King (2, 1977) contend that there is no evidence to warrant a conclusion that environmental scanning would become a regular element of Corporate Planning. They reiterate their stand in a subsequent article with Narayanan (3, 1981). This time they collected data not only from indepth interviews but also from questionnaires mailed to the members of World Future Society. Their data showed that despite its perceived utility, environmental scanning/forecasting was not regarded so important as to necessitate a major deployment of resources.

As a kind of rejoinder Thomas (6, 1980) presents a composite picture of environmental scanning practices of nine largest corporations of the World. Based on his data, collected from published information, he contends that there is every reason to believe that systematic and omnidirectional scanning for planning is on the threshold of rapid growth and development. Charles Stubbort (4, 1982), revisited the 12 corporations studied by Fahey and King after three years to find out whether the sample of companies had tended towards greater use of resources in scanning and more continuous scanning methods. His data based on indepth interviews with the planning executives, who in seven out of twelve cases were the same persons interviewed by King and Fahey, reinforced their contention. Five out of the twelve corporations had not changed their mode of scanning from irregular to continuous. Movement towards continuous scanning had occurred in three others. In the remaining four corporations there was a movement in the reverse direction from regular scanning to an irregular one. According to him, the factors that favoured regular scanning were favourable attitudes of academic and business media, demonstrated success and selection of right people. While changes in top management, decentralised organisations, budget cuts, troublesome information areas, stable business, surprise and availability of external information from external agencies pushed the firms away from continuous scanning.

What is missing in these studies is a discussion of the stage of development of the planning system in the various organisations studied by the authors. The studies of King and Fahey, King, Fahey and Narayan, and Charles Stubbort do not provide any information on the practice of planning in the sample organisations. Thomas' study provides very limited data on the state of planning in the organisations studied by him. Only in the case of IBM and General Electric, we have information on both the planning and scanning systems. Both are of continuous and comprehensive type. The relation between the two is explicitly stated as being "an integral part of the planning process" in IBM and the first step in planning process" in General Electric.

We have noted from the case presented here that the development of the scanning system is dependent on that of the planning system. In view of this dependence, any judgement on the future of environmental scanning based on an analysis of data on the practice of environmental scanning without relating it with the practice of planning prevalent in the sample organisations is questionable. There is a need for viewing the two in totality.

Concluding Comment

In the absence of comparative data on how other companies acquired capabilities to scan and report the developments in the environment and developed a system to support it, we refrain from developing a prescriptive model for developing an environmental

scanning and reporting system. However, this study has helped us to identify a certain set of key tasks, approaches and influencing factors in developing an environmental scanning and reporting system. This knowledge can guide other companies to plan the development of an environmental scanning and reporting system and continuous and link it effectively with corporate planning.

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HOUSE PUBLICATIONS REPORTING DEVELOPMENTS IN THE ENVIRONMENT

ANNEXURE - I

Reports	Circulated by	Contents	Periodicity	Objective	Circulated Among
1. Abstract of Important Articles Published in professional journals, in Economics, Management Science & Technology.	Corporate Planning Department, Centre for Manpower Development and Research	Important Conclusions of the Articles	As and when deemed appropriate.	To keep the top management informed of the various articles appearing in the professional journals.	Top Management
2. Corporate Planner	Corporate Planning Department.	Topics relating to all the aspects of the environment	Quarterly	To keep the Planners abstract of the development in the environment and provide a forum for the exchange of views among the Planners	Top Management and executives attached to the various planning cells of the Company.
3. Executive Brief	Technical Information Centre.	National International Developments in Machine Tool Industry.	Fortnightly	To disseminate information on the national and international developments in Machine Tool Industry.	Senior Executives of the Company
4. Machine Tool Engineer.	Technical Information Centre.	Developments in the machine tool industry (This is a priced technical journal the contributions of authors other than the company executives are also included).	Quarterly	To provide a forum for discussing the developments in the Machine Tool Industry.	Engineers and Engineering Students.

INHOUSE PUBLICATIONS REPORTING DEVELOPMENTS IN THE ENVIRONMENT

ANNEXURE - I

Reports	Circulated by	Contents	Periodicity	Objective	Circulated Among
5. Marketing News	Marketing Planning Department	Issue of Licence, letters of intent, launching of major projects and key developments in the corporate sector.	Monthly	To keep the Marketing executives abreast of the developments in the economy.	Top Management and marketing executives
6. Monthly Review of Indian Economy.	Corporate Planning Department.	Major developments in the Indian Economy during the previous month.	Monthly	To report the developments in the Indian Economy during the previous month and analyse the implications of the same for the performance of the company.	Top Management and Executives attached to the various planning cells of the company.
7. Reports of visits to exhibition and participation in Conferences delegations and seminars.	The visiting teams or individuals.	Relevant Observations.	As and when visited.	To share the Experience and developments with Company executives.	Company Executives
8. Science and Technology and Review.	Corporate Planning Department.	Major products and processes developed in the world.	Bi-Monthly	To report the major products developed in the world and identify the opportunities open to OMC Limited.	Top Management and executives attached to the various planning cells of the company.

INHOUSE PUBLICATIONS REPORTING DEVELOPMENTS IN THE ENVIRONMENT

ANNEXURE - I

Reports	Circulated by	Contents	Periodicity	Objective	Circulated Among
9. Special Studies	Corporate Planning Department.	A detailed analysis of the impact of major developments in the environment on the performance and future of the company.	As and when deemed appropriate	To study the impact of major developments in the environment on the performance and future of the company and suggest alternative course of action.	Top Management and executives attached to the various planning cells of the company.
10. Weekly Information Bulletin.	Centre for Manpower Development and Research.	Topics relating to all the aspects of Management.	Weekly	To disseminate information on the developments in the field of managements in capsule form.	Senior and Middle Executives of the company.

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