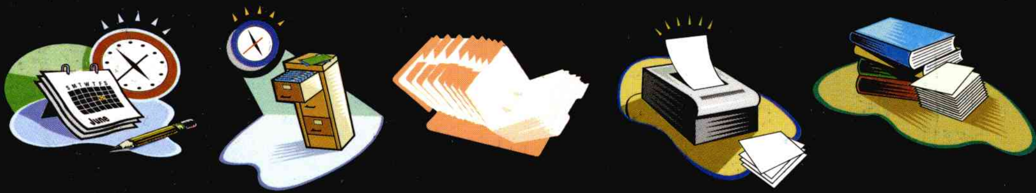

Marketing Information Products and Services

A Primer for Librarians and Information Professionals

Editors
Abhinandan K Jain
Ashok Jambhekar
T P Rama Rao
S Sreenivas Rao

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Foreword

Recognizing the importance of information in the process of development, Canada's International Development Research Centre (IDRC) has over the years supported a large number of projects aimed at developing information systems and services in support of research and development activities. An important objective related to the development of such projects was to ensure that the systems and services developed could be sustained over the long term. A crucial element in the sustainability of information systems and services is effective marketing. It presents avenues to generate revenue and reduce the financial constraints that many information services are facing in developing countries. This has long been recognized by IDRC, and the development of marketing plans has been introduced in several information projects to study how this could be achieved.

A literature review conducted in 1993 revealed that marketing of information was a relatively new issue in developing countries and that most of the literature on the subject originates in the North. The review concluded that marketing potential is underestimated by libraries and information services and that information professionals were generally reluctant to embrace the marketing concept. Information professionals need a better understanding of marketing concepts and approaches to be able to introduce them into their services and to recover the costs of the information services and products that they provide.

In this framework, leaders of a number of IDRC-supported information projects were brought together with a team of specialists in marketing of information at a meeting held at the Indian Institute of Management in Ahmedabad (IIMA), India, in February 1994. The discussion at this meeting focussed on how institutions in developing countries could be assisted in evolving relevant marketing strategies. The meeting recommended the preparation of marketing guidelines and case studies that would help information specialists to design proper marketing strategies and marketing plans. Participants at the meeting prepared an outline for a manual that would respond to this need, and IIMA indicated its interest in coordinating the arduous work of compiling the manuscript. In October 1994, IDRC agreed to finance the activity.

This book is the result of IIMA's work. IDRC hopes that the guidelines and approaches proposed to introduce marketing activities within information services and systems will assist information professionals in developing countries with the development of sound marketing strategies. IDRC is proud to have contributed to this work—a collaborative effort of several information and development specialists from around the world.

RENALD LAFOND
Senior Information Specialist
International Development Research Centre
Ottawa, Canada

Preface

The information era is here. Even at the beginning of the last decade, John Naisbitt in *Megatrends* (1982) indicated that over 60 per cent of the people worked with information. He pointed out that between six and seven thousand scientific articles were being written each day, scientific and technical information was increasing by 13 per cent per year, and the rate would soon jump to perhaps 40 per cent per year.

On one hand, computers and networking have tremendously enhanced information storage, retrieval and dissemination capabilities. However, the new facilities require significant investments, which many libraries and information centres, particularly in the developing world, cannot afford.

On the other hand, economic reforms, globalization and privatization trends in the developing world lay emphasis on private enterprise and competitiveness. Consequently, government funding of libraries and information centres has been declining, and librarians and information managers have been forced to generate revenues not only for acquiring state-of-the-art facilities but also for their own survival.

Information is power, and more so in a competitive environment. Businesses, governments and individuals are collecting and storing more data than any previous generation in history (Alvin Toffler, *Powershift*, 1990). Moreover, information is being recognized as a critical resource for socio-economic development. As a result, libraries and information centres have an opportunity to tap.

This marketing guide, therefore, introduces librarians and information professionals to marketing concepts and approaches, helps them to adopt a marketing orientation, and provides them with a step-by-step approach to developing marketing strategies and plans for their libraries or information centres.

The guide contains nine chapters and two cases studies.

- ***Chapter 1:*** Prof. Sreenivas Rao highlights the need for adopting a marketing approach by librarians and information managers.
- ***Chapter 2:*** Drawing upon an earlier research on assessment of needs of management information, Prof. Jain and Prof. Rama Rao explain concepts of marketing management and how they are useful and relevant to libraries and information centres.
- ***Chapter 3:*** Ms. Gumbs describes the marketing plan developed by the Technology Information Centre at the Argus Institute of Technology and, through this example provides guidelines for developing a marketing plan.
- ***Chapter 4:*** Prof. Koshy explains the meaning of products and services in the context of libraries and information centres, and provides guidelines for planning a portfolio of products and services.
- ***Chapter 5:*** Mr Vespry, Ms. Vespry and Ms. Avery discuss price—one of the four important marketing decisions. With the example of National Information Centre on Management (NICMAN) at IIMA, they explain the various considerations in taking pricing decisions.
- ***Chapter 6:*** Prof. Sreenivas Rao discusses another of the four marketing decisions, promotion, with examples of various libraries and information centres, such as INSDOC, ICRISAT, and CEIS; and provides guidelines for making promotion decisions.
- ***Chapter 7:*** Prof. Koshy deals with the rationale, procedure and steps of conceiving, designing and introducing new information products and services.
- ***Chapter 8:*** Mr. Chin and Prof. Jain discuss the what, why, and how of marketing research along with brief descrip-

tions, illustrations, and guidelines for planning and executing selected marketing research designs.

- ***Chapter 9:*** Dominique Beaulieu describes how the Centre de recherche industrielle du Québec switched from free service to charged service and brought about changes in the outlook, attitude and structure of the organization to achieve a marketing orientation.

Towards the end of the guide, two case studies have been included.

- **(A) "Caribbean Energy Information System"** by Ms. Whyte and Prof. Sreenivas Rao and
- **(B) "Asian CD-ROM on Health and Environment"** by Mr. Chin and Prof. Jain.

CEIS was set up to enhance the capabilities of the Caribbean countries in energy information collection, storage and utilization for optimum conservation and utilization of the region's energy resources. The other case presents the market research conducted for assessing suitability and utility of CD-ROM publishing, a modern information technology, and the process of developing suitable marketing plans for the same in developing countries.

This guide can be used as

- a *text* to understand marketing concepts, tools and techniques relevant to a library/information centre,
- a *reference book* to draw up marketing strategies and plans, and
- a *training manual* in educational and training programmes for librarians and information managers.

EDITORS

Acknowledgements

This guide is an outcome of a workshop held at the Indian Institute of Management, Ahmedabad in February 1994, where project leaders of the International Development Research Centre, Canada, expressed the need for a marketing manual for librarians and information professionals. IDRC entrusted the job to the Indian Institute of Management, Ahmedabad. Mr. Renald Lafond, Senior Programme Officer, IDRC, gave us valuable guidance through-out the project. We are very grateful to him and to IDRC.

In August 1996, authors of the guide and other professionals discussed the draft threadbare. We are thankful to the following for their contributions to the guide by

- Ms. Swati Bhattacharya, Librarian, Indian Institute of Management, Calcutta;
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- Dr. Roshan Raina, Librarian, Indian Institute of Management, Lucknow,
- Ms. Rumma Sharma, Librarian, All India Management Association, New Delhi.
- Dr. N.K. Gopalakrishna, Librarian, Administrative Staff College of India, Hyderabad;
- Dr. I.K. Ravichander Rao, Professor, Documentation Research and Training Centre, Bangalore;
- Mr. V.W. Karnik, Librarian, British Library, Ahmedabad; and
- Mr. P.C. Shah, Manager, National Information Centre on Textiles and Allied Subjects, Ahmedabad.

We received enthusiastic cooperation and guidance in preparing the Asian CD-ROM case study from Ms. Maria Ng Lee Hoon, International Development Research Centre, Singapore, and Dr. G.P. Phondke, National Institute of Science Communication, New Delhi, and in preparing the CEIS case study from CEIS project staff. Our special thanks to all of them.

At IIMA, Mr Ravi Acharya, DTP Coordinator, put the manual into shape. Mr PS Seshadri, Editorial Associate, edited the manuscript. Ms Shakuntala, Ms Heena Shah and Ms Sunitha P. Naidu assisted us at various stages of the project. Ms Sarala Nair and Mr R. Mahadeva Iyer shared the major responsibility of typing the manuscript. The staff of the Vikram Sarabhai Library helped us at all stages of the project. They all deserve our thanks.

Many more have directly or indirectly contributed to this work. We are grateful to all.

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Contents

Foreword *v*
Preface *vii*
Acknowledgements *xi*
Contributors *xiii*

1. Introduction to Marketing of Information Products and Services **1**

Challenges of Today and Tomorrow *1*
Relevance of Marketing for Librarians and Information Managers *5*
What is Marketing? *7*
The Marketing Approach *8*
What Inhibits from being Marketing Oriented? *11*
The Four Barriers to Marketing *13*
Status of the Use of Marketing Concept in Libraries and Information Centres *14*
Need for Strategic Intervention *16*
References *19*

2. Key Concepts in Marketing of Information Products and Services **20**

Introduction *20*
What is Marketing Management? *21*
Key Purposes of Marketing *23*
Organizational Orientations Towards Marketing *28*
Factors Affecting Achievement of Objectives *33*
Marketing Management *41*

Summary and Conclusions *48*
References *48*

3. How to Develop a Marketing Plan **49**

Introduction *49*
Measure the Performance *53*
Conduct Marketing Audit *54*
Summarize Findings of Marketing Audit *63*
Select Strategic Direction *67*
Develop a Marketing Plan *77*
Implementation and Control *80*
Summary *91*
References *106*

4. How to Plan Information Products and Services Policy **108**

Introduction *108*
Key Concepts in Managing Products and Services *115*
Steps in Planning Product/Service Policy *126*
Summary and Guidelines for Product/Service Policy *143*
References *151*

5. How to Price Information Products and Services **152**

Introduction *152*
Considerations in Pricing *153*
Select a Base Price *170*
Adapting the Base Price *188*
Revising Prices *196*
Summary and Conclusions *198*
References *199*

6. How to Promote Information Products and Services **202**

Promotion—The Fourth 'P' *202*
Promotion Methods *203*
Promotion Activities *204*
How to Develop a Communication Programme *205*
Conclusion *218*
Guidelines for Promotion *220*

How to Develop a Communication Programme (An Example) *221*
References *225*

7. How to Conceive, Design and Introduce New Information Products and Services **226**

Introduction *226*
Specifying Strategic Objectives of New Products/Services *232*
Generating New Product/Service Ideas *233*
Screening New Product/Service Ideas *234*
Developing Product/Service Concept (Offer Development) *238*
Refining and Testing Product/Service Concept *241*
Designing the Product/Service *247*
Product Testing *251*
Analysis of Commercial Feasibility *255*
Developing Marketing Strategy and Plan *256*
Test Marketing *259*
Commercializing the Product/Service *262*
Summary *263*
References *266*

8. How to Conduct Marketing Research for Marketing of Information Products and Services **267**

Introduction *267*
Preparing the Research Brief *271*
Developing a Research Plan *284*
Short Descriptions of Selected Research Designs *293*
Summary and Conclusions *325*
References *326*

9. Preparing the Organization for Marketing of Information Products and Services **328**

Background *328*
Assessing/Auditing an Organization's Service Quality *330*
Preparing People for Change *336*
Strategies for Making Changes in Staff *339*
Strategies for Changing the Organization's Systems *342*
Marketing *345*

The Impact of the Sale of Information Services on the Overall Organization *347*
Conclusion *349*
References *351*

Case Study A
Marketing Research for Asian CD-ROM on Health and Environment

Part I—Selection of a Research Agency **355**
Information Environment *355*
IDRC: South-East and East Asian Office *357*
Choice of Technology *358*
Developments So Far *359*
Questions for Discussion *361*

Part II—Finalizing Research Plan **370**
Background *370*
Research/BriefObjective *372*
Methods *373*
Research Design *374*
Literature Review *374*
Postal Survey *375*
The Mailing List *376*
The Questionnaire *377*
Data Collection *377*
Focus Group Discussions *378*
Consultation with Database Owners *379*
Interviews with CD-ROM Distributors *380*
Questions for Discussion *380*
References *380*

Part III—Research Findings on Feasibility **392**
Respondent Profile *392*
Questions for Discussion *400*

Part IV—Recommendations on the Marketing Plan **401**
Buyers and Users *402*
Positions and Occupations of Interested Respondents *402*
The Product *405*
Place *407*

Price *410*
Promotion *410*
Questions for Discussion *415*

Case Study B
Caribbean Energy Information System

Part I—Origin (1984–87) **419**
Workshop *419*
Missions *423*
Sponsor *427*
CEIS *428*
Questions for Discussion *429*

Part II—Getting Established (1987–93) **430**
Strengths *431*
Products and Services Introduced *431*
Market *432*
Pilot Surveys *432*
CEIS *435*
User Needs Survey in 1993 *435*
Questions for Discussion *447*

Part III—After the Survey (1993–95) **448**
Development of Specialized Services for Targeted Users *448*
Development of a Special Interest Group *449*
Creation of Energy Models *450*
Revamping of Products *450*
Petstats *452*
Promotion Policies *453*
Promotion Implementation *454*
Pricing *457*
Distribution *459*
Role of NFPs *460*
Results and Conclusion *460*
What Next? (1996–99) *461*
Questions for Discussion *462*

CHAPTER 1

Introduction to Marketing of Information Products and Services

■ *S. Sreenivas Rao*

CHALLENGES OF TODAY AND TOMORROW

In the last decade, significant changes have taken place all over the world, and they have been posing challenges to various professions and professionals.

First, the information revolution, triggered by personal computers and networking, has been one major change, which brought about a revolution in the information profession. Libraries, as we know of as buildings with stacks of books and periodicals and signs of 'silence' all around, may become extinct in the coming decades. One may not run to the library or a librarian for information, but to one's own computer. Information would be at finger tips rather than in stacks. As the boundaries and utility of information, and the speed and quantity of handling it expand, the initial costs of hardware and software will increase dramatically. New economies of scale would have to be discovered to make this investment economical.

Second, the winds of globalization, marketization, and privatization have been sweeping away the long-held political and economic beliefs. Governments and social sponsors have been propagating that social institutions—be they hospitals, schools, colleges, and libraries—become self-sufficient if they are to purposefully work and demonstrate their relevance and competence to their clients. Institutional excellence will now have to be achieved through competition, that too worldwide, rather than through rules, regulations and controls. The age-old generosity for the socially desirable institutions is drying up, because of the change in the political outlook and the economic squeeze that the governments, donors, and sponsors are facing. Librarians and information managers, therefore, are being asked to generate revenue to become self-sustaining as much as possible.

Third, countries are clamouring for immediate fulfillment of ever-rising social and economic expectations, and are therefore asking what information can do for the overall national development. Developing countries are no longer interested in information for the sake of information, knowledge for the sake of knowledge, or education for the sake of education. The new thought wave is that information is power only if you use it, not if you store it. Information appears to be the 'life saver' for the developing world. This point is well brought out in 'The case of CEIS' given in the section 'Case Studies' towards the end of this guidebook.

As a consequence of the radical changes in the last decade—information revolution, globalization, marketization, privatization, and using information for development—the clientele interested in information services and products has been on the increase. Till now, librarians and information managers have been happy in catering to the limited clientele of the school, college, university, research organization, government department, or public organization that has sponsored them. Increasingly, clients outside these limited groups are equally interested in information, for instance, practitioners of any profession and planners at national and organizational levels. Business and commercial organizations have become conscious of information as a resource. The information age has truly arrived. So far, libraries and librarians existed in islands. Whatever little networking existed was through the exchange of books and periodicals—that too at the minimum level. But today's computer and information technology allows for, not only, a huge possibility for networking among information centres, but also for making information available to a larger clientele than the existing one. Moreover, the new technology will allow creation of newer information products and services, and make them available quickly. Constraints of the print medium no longer exist.

As a result, librarians and information managers are facing a four-pronged challenge:

- Increase in clientele, their variety, their demands, and their expectations.
- Increase in the initial or capital cost of information and information technology, and the need to leverage the technology and find new levels of economies of scale to serve the increasing potential clientele.
- Drying up of the public sponsorship and subsidy and the need to find alternate sources of revenue.
- Complexity in ways of identifying clients and their requirements, and servicing them.

Librarians and information managers are, therefore, called upon to show their initiative and entrepreneurship. Time has come to rethink, shed many old beliefs, and find new ways of doing things. The traditional concept of a library or an information centre as a social service for knowledge, for the sake of knowledge, and library, for the sake of library, has outlived its need. The warehouse and custodian perspective of librarians and information managers needs a change. Preparing information products and services only when asked for, has to give in to a more systematic anticipation and research of the future requirements of different clients, leading to the preparation of appropriate products and services and making these available to the clients. Membership-patronage-subsidy comfort has ended.

Duncan Smith of CARL Corporation writes about libraries, librarians, and their role:

> Each generation of librarians must define for itself and its users what the library is and how it will add value to the information exchanges of its community. Libraries and librarians have traditionally added value to these exchanges in three major ways. They have provided physical access to information, they have organized this information for use, and they have provided assistance in locating and utilizing this information. . .

In this context, Mary C. Bushing of the Collection Development, Montana State University Libraries, raises the following questions:

> . . . What will this library look like? What services, programmes, and materials will be offered? How can we find answers to important questions about such things as: the relationship of access to ownership; the appropriate content and extent of collections; the right mix of services for a specific community of potential clients; and sources of adequate support for library activities? In order to address these concerns, we must first determine what the role of the library is to be. What is the business of the library? It is the answer to this question which is the crucial first step in defining the future.

Renald Lafond, Senior Programme Officer, International Development Research Centre, Canada, explains the changing scenario from the IDRC's experience of supporting over 700 information projects all over the world:

> In the early years, ISSD (Information Sciences and Systems Division of the IDRC) concentrated on the development of the basic capacities of information and documentation centres to produce bibliographies, abstracts, and later to computerize these systems. Relatively little attention was paid to issues such as the use of information and sustainability of information systems and services, and impact of information on development. A large proportion of the projects aimed at serving researchers in research organizations, and the information products were mainly bibliographies, newsletters, and similar products.
>
> During the last decade, more attention was given to the identification of user needs and the promotion of information products and services. At the same time, information projects

evolved to target decision-makers at government level, local communities, small scale industries, and other groups of users. Bibliographies did not meet their needs. Therefore, user needs surveys were required in these user communities to determine their specific needs, and new approaches in information delivery had to be adopted. More recently, information products in electronic format, such as CD-ROM, appeared.

The cost increases in accessing information through on-line databases, purchasing databases on diskettes or CD-ROM, and acquiring journals, and the need to purchase and update information technology, such as computer equipment, to provide appropriate information services are forcing information and documentation centres and libraries to charge for some information services to recover, at least in part, the cost of providing information and to re-inject the funds generated for updating information or equipment. Such measures were initiated several years ago with charges for photocopy services, on-line access, and subscriptions to newsletter and other publications.

In short, the time has come to get at the *sine qua non* of information. Libraries and information centres need to ask, what business are they in? Is it information sorting, storage, securing, and retrieving it if someone wants it? Or is it something beyond it—to look for needs, wants, and demands of various clients, innovate products, and reach out to the client rather than wait for the client to come. What role would information managers like to play in this transition from an industrial to an information society?

Lafond indicates the present status as follows:

> In its new strategy, which was implemented some three years ago, the ISSD decided to give importance to the use of information, the long-term sustainability of information services and systems, the impact of information on development, and therefore marketing of information products and services.

RELEVANCE OF MARKETING FOR LIBRARIANS AND INFORMATION MANAGERS

In the early conceptualization of a library's and information centre's business, Dr S R Ranganathan had the concept of customer orientation embedded into it.

He described a library as:

> . . . public institution or establishment charged with the care of a collection of books, the duty of making them accessible to those who require the use of them and the task of converting every person in its neighbourhood into a habitual library goer and reader of books. (Kumar)

Moreover, Dr Ranganathan's concept of the Five Laws of Library Science had the marketing concept at their core. The five laws were:

- *First law*: 'Books are for use.' (Maximize the use of books.)
- *Second law*: 'Every reader his book.' (Reader is the prime factor and his/her need must be satisfied.)
- *Third law*: 'Every book its reader.' (Find a reader for every book.)
- *Fourth law*: 'Save the time of the reader.' (Organize information in such a way that the reader finds the wanted information promptly.)
- *Fifth law*: 'A library is a growing organism.' (Emphasis is on comprehensive and evolutionary growth.)

A focus on customer needs (second law) and wants through saving of time (fourth law) is clearly emphasized in these laws, as far back as 1931. Also, the third law relates to finding a reader, probably implying that the library should reach out to the customers. A closer examination indicates that modifications are needed in the interpretation of the laws. Firstly the definition of a customer, only as a reader, needs to be widened to include the purpose of reading and ways of using the information. Secondly, in today's context the process of use of information (like use of computers/information technology (IT) to process the information obtained from the library/information centre) may give rise to totally new needs and wants (like getting information through e-mail which can be used directly on the personal computer (PC). Thirdly, given the usefulness of information in one library/centre to customers in different and far off locations, reaching out to customers is becoming far more important. Thus, though customer focus has long been advocated in the library profession, it may be refined to suit the current context of the market.

WHAT IS MARKETING

Smith writes:

> Marketing is a stance and an attitude that focuses on meeting the needs of users. Marketing is a means of ensuring that libraries, librarians, and librarianship are integrated into both today's and tomorrow's emerging global culture. Marketing is not separate from good practice. It is good practice.

Peter Drucker, the management guru, defines Marketing as follows:

> It (marketing) is the whole business seen from the point of view of its final result, that is, from the customer's point of view. . . Business success is not determined by the producer but by the customer. (Kotler)

Philip Kotler, the marketing guru, calls *Marketing* 'a social and managerial process by which individuals and groups obtain what they need and want through creating, offering, and exchanging products of value with others.'

Further, Kotler defines *Marketing Management* as 'the process of planning and executing the conception, pricing, promotion, and distribution of goods, services, and ideas to create exchanges with target groups that satisfy customer and organizational objectives.'

Finally, Kotler defines *marketing concept* as follows:

> The marketing concept holds that the key to achieving organizational goals consists in determining the needs and wants of target market and delivering the desired satisfactions more effectively and efficiently than competitors. . . . The marketing concept rests on four main pillars, namely target market, customer needs, coordinated marketing, and profitability.

Most organizations in general, and those involved in information and development areas in particular, may not have profit as their sole objective. The fourth pillar of the marketing concept may need to be changed to 'achievement of organizational objective(s).'

Bushing explains:

> Marketing offers both a theory and a process by which libraries can link products, results, and roles. Marketing can assist libraries in determining their future and in identifying quality products—services, programs, and materials. A marketing audit and the resulting plan can contribute to a library's ability to find a niche in the present as well as in the future and to fill that niche by an optimal allocation of resources. A marketing orientation can assist libraries in defining their role and in guaranteeing their future. Marketing provides a theoretical framework within which to address the specific library and information science questions facing public, school, special, and academic libraries in both the public and private sectors. What the library will look like and what it will offer as products can be determined through the use of modern marketing theory and practice.

THE MARKETING APPROACH

The marketing approach in managing a library or an information centre, therefore, involves the process of asking questions and seeking information on the following four-fold dimensions to evolve an organizational strategy:

- *Market*
  - What is the target public or audience and what are their needs, wants, and demands? What adds value to whatever they are trying to achieve or perform?
  - What is the competition? How should the product/library/centre be viewed by the target public in relation to competition?
- *External Marketing*
  - What is the product/service and what should it be? Should there be an introduction of a new product/service? And what kind of support could be provided to the client in using the information effectively?

- How should it be priced so that the client can pay his/her fair share and it can still generate the required revenues?
- How should it be promoted to selected customers to communicate the desired position?
- How should it be delivered to the place where the user needs it, when he/she needs it, and the way he/she needs it?
- What should be the organizational image, and how should it be projected to support the product image?

- *Interactive Marketing*
  - How should the requirements of the target audience be assessed and value delivered to the customers? What kind of customer contact personnel and systems should be employed to assess the requirements?
  - What should be the mechanism to constantly update systems and recruit, train, and motivate customer contact personnel so as to assess and deliver the requirements of target customers?
- *Internal Marketing*
  - How should the internal organization be oriented to serve the external target segments and how should customer contact personnel assess, produce and deliver the required products and services?
  - What kind of planning, control and organizational mechanism should be set up to achieve all the above steps?

In short, the marketing approach provides a manager the mental map to think systematically about:

- Target audience, competition and own distinctive offer.
- Design of four Ps (i.e. product, price, place, promotion).
- Systems to interface with target audience.
- Production and delivery systems.
- Planning, organization and control of all the above.

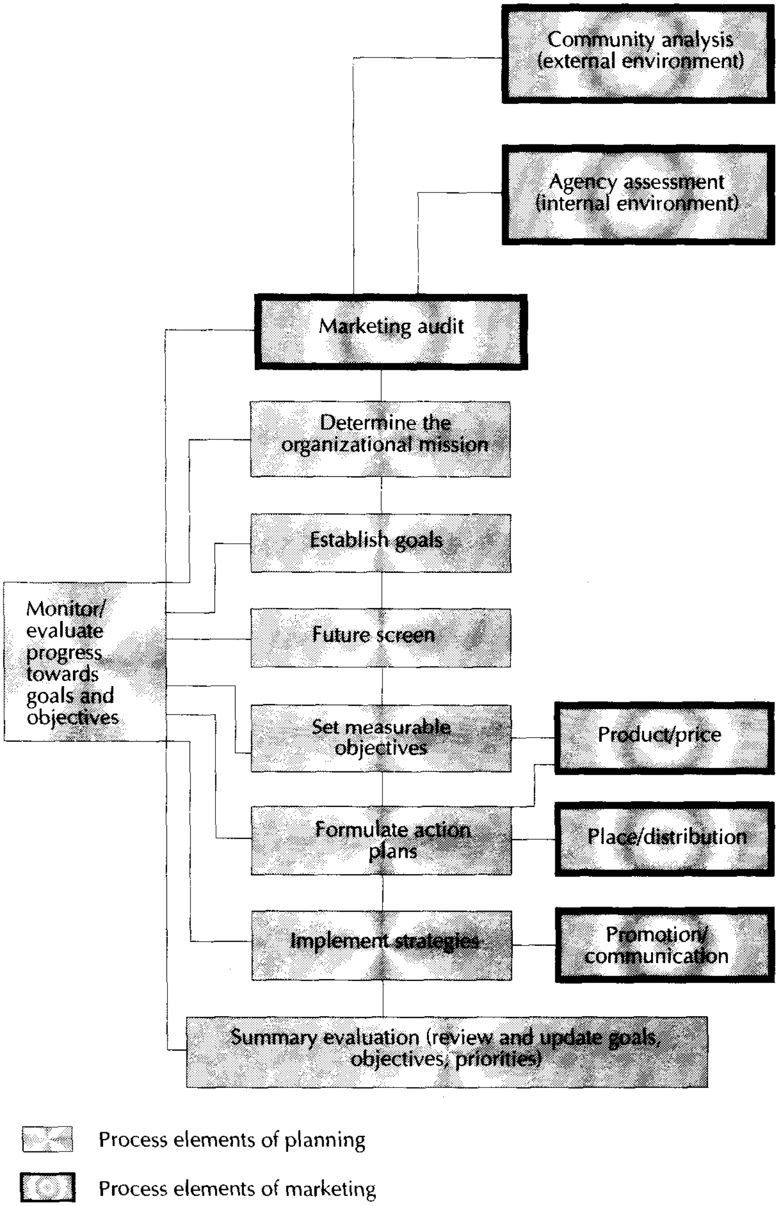

Fig. 1.1 *Fusion of planning and marketing processes*

The marketing approach can be used to make the existing planning process of a library or an information centre more rigorous. Darlene E. Weingand of the University of Wisconsin, Madison, (see Fig. 1.1) indicates the fusion of planning and marketing processes.

Once this fusion of planning and marketing takes place, a time would come when the annual reports of libraries and information centres would look like that of any business organization indicating the targets set at the beginning of the year and the performance achieved rather than, a mere indication of how many books have been acquired, how many have been catalogued, and how many new members came into the fold. Moreover, organizational planning and performance evaluation will lead to individual staff planning and performance evaluation which, in turn, would lead to the much needed vitality in the information profession and management.

The fusion of planning and marketing and its positive aftereffects would lead to the organic and dynamic sustenance, and growth, of libraries and information centres. At least, a map of the organizational functioning would be available to guide the information managers to monitor and intervene as and when needed.

WHAT INHIBITS FROM BEING MARKETING-ORIENTED

What inhibits the librarians and information managers from adopting the marketing approach? The same reasons which inhibit any other social organization or profession. Kotler writes:

> The resistance is especially strong in (service) industries where marketing is being introduced for the first time, for instance, in law offices, colleges, hospitals, or government agencies. Colleges have to face the hostility of professors, and hospitals have to face the hostility of doctors, because each group thinks that marketing their service would be degrading.

Bushing writes:

> Librarians . . . may have failed to adopt marketing theory and practices for a variety of reasons. It may be because they misunderstand marketing and believe it to be simply another term for public relations and publicity. At another level it may be because of a real or perceived lack of resources to devote to marketing processes and the coordination of a marketing approach even when many of these processes, if not the organizational orientation, are already part of their organizational culture and operation. Lastly, libraries may not have adopted marketing because of a concern with the basic tenet of marketing theory that moves the locus of control from the librarian-expert to the clients . . . A societal-marketing orientation as described by Kotler (1982) and interpreted by Baker (1993) provides for both the satisfaction of immediate client needs and the long-term needs of society which might be identified by experts or, in this case, librarians.

Lafond indicates:

> Because most librarians and documentalists have not been trained with the concept of 'marketing,' the introduction of marketing to information services has not always been easy. There is also some reluctance to market because many documentalists and librarians still feel information should be free. In most cases, because of lack of expertise in marketing, documentation and information centres have difficulty in introducing the marketing concept which starts by the identification of the potential users to fulfil the mandate of the service, the identification of their needs, etc.
>
> I visited some documentation centres in Vietnam . . . where the generation of revenues from information services is slowly starting. But there are information and documentation centres having difficulties in promoting their information services and products even when they are free. The project leaders confirmed that they have a lot of difficulty in developing strategies, not only to generate revenues, but simply to reach their target users. I saw the same situation in Africa at the end of last year.

The lack of use of marketing concepts and tools in libraries and information centres, according to Seetharama may be attributable to the following reasons:

- Confusion at the conceptual level among librarians and information scientists that marketing is nothing but promotion and sales.
- Lack of a definite marketing policy—end user policy, product policy, distribution policy, tariff policy, services policy—either at the national or at the local level.
- User Needs Assessment Studies are inadequate due to methodological deficiencies and due to the fact that they are not carried out on a continuing basis.
- Lack of proper market research and segmentation studies.
- Product development and targeting leaves much to be desired due to the absence of market research and segmentation.
- Reluctance on the part of the users to pay for information services resulting in the adoption of economy measures. As a consequence, the physical quality and get-up of products are adversely affected.
- Evaluation of information services and products is conspicuous by its absence (Gopalkrishnan, 1988).
- Marketing concepts are either not taught or least emphasized in library schools. In most cases, it does not form part of the curriculum.
- Information is a low priority item of users, and the motivation to share is even lower.
- Information consolidation activities/products, especially, value-added products which are very useful to users are not generated to the extent needed.

THE FOUR BARRIERS TO MARKETING

In short, the four barriers to the adoption of the marketing approach are:

- Attitudinal
- Structural
- Systemic
- Environmental

Attitudewise, information professionals, like many other professionals, have been inward looking—happy with satisfying a limited clientele, that too when asked for, and happy with jealously guarding their importance. To be outward looking, from the client's point of view would require them to make a 180 degrees turnaround.

Structurewise, the staff which comes into contact with the public or clients are the counter clerks and less frequently, the reference librarian and the librarian. As a result, there is no staff to reach out and capture the point of view of the client. To introduce any such layer would be resisted from the existing staff and the turf holders. Moreover, the libraries and information centres are a part of a large organization which does not follow the marketing approach as well. Also, traditional security of the job, common to public institutions, and lack of involvement of professionals in the management of the library or the information centre, in developing countries, is conducive to a no-change syndrome.

Systemwise, libraries and information centres, so far, have been more storage, security, and audit conscious. They do not allow the client or the client's point of view inside the system. Guarding or protecting the information is more important than utilizing it for the satisfaction of its clientele. Therefore, any changes in the system to make it more client or service oriented, would be to ask for both attitudinal as well as structural changes.

Environmentwise, the culture, especially in the developing countries, still believes that information should be free and should be sought by clients themselves. Dependence on government and private largesse in many areas is taken for granted. There is no attempt at seeking out clients. Marketing and payment for a variety of services, like education or information, is considered infra-dig both for the giver and the taker.

STATUS OF THE USE OF MARKETING CONCEPT IN LIBRARIES AND INFORMATION CENTRES

A library is a social and service institution providing information to its members. Its traditional functions include selection, acquisition, storage, processing, circulation, and reference. Over a period of time, due to change in the nature of demands by the clients, libraries have expanded their functions to include documentation and document delivery systems.

The activities and services/products of libraries and information centres, as Seetharama indicates, is enumerated in Table 1.1.

Translation, editing, publishing, and reprographic services have been lately added to the traditional services mentioned in the table.

The size of the unit and the activities undertaken, govern the design of the organization of a library/information centre into various sections like acquisition, circulation, etc. It may be noted that many functions in a library/information centre are back office functions. Only limited members of the staff interact with customers and that too, mostly at the initiative of the customers themselves. There would be hardly any library/information centre where there is a function/section called marketing.

The five laws of library science (Ranganathan) did imply a sharp focus on customer. However, a closer examination of the laws reveals that the focus is on a customer who came to the library rather than, the library reaching out to the customer. Marketing concept, as presented above (Kotler) has hardly been used in libraries/information centres in developing countries. Seetharama points out:

> The concept of marketing of information services and products in India can be said to be still in infancy. This is in spite of the fact that the doyen of Library Science, Dr S R Ranganathan had focussed on the need for marketing (though, perhaps, he did not use the term) when he enunciated the Five Laws of Library Science in 1930. As a matter of fact, the Five Laws can be used as a basis for the development of marketing principles in the context of libraries and information centres.

Seetharama further points out the need for strategic intervention to adopt the marketing approach, for improvement in providing service to customers:

TABLE 1.1 Activities and services of libraries and information centres

Activities	*Services/Products*
Selection and collection of documents	Bibliographies, current awareness.
Indexing and abstracting	Indexed bibliographies, abstracting bulletins, custom searches.
Extraction	Digest extracts, descriptive reviews/ state-of-the-art report/trend report, compilations (unevaluated).
Evaluation	Critical review of area, critical compilation of data, criteria for experimentation, recommendations, solutions to (immediate) problems, correlation of data, prediction of properties.
Other activities	Translation, editing, publishing, and reprographic services.

Increasingly, in recent times, R&D efforts have been mainly focussed on problems which require access to information that cuts across many disciplines. As an immediate response, new services and products were designed and developed. Ironically, however, the users felt that they were not being served adequately and appropriately. This led to an in-depth analysis which revealed, surprisingly, that the services were not user oriented largely because of the non-involvement of users (in their design) and also that the extent of use made of these services was unknown to the generators of the information services. In other words, libraries and information centres instead of being 'responsive' tended to become unresponsive organizations. This, perhaps, is true of many a library and information centre in this sub-continent. Probably, by designing and developing an appropriate marketing strategy, the situation could be altered and improved upon.

NEED FOR STRATEGIC INTERVENTION

Therefore, any change in approach would have to be thought through, planned for, and implemented over a long period. Staff, managers, and professionals would have to be reoriented and trained to start thinking afresh. The target client and his/her needs, wants and demands become the *raison d'etre* of the organization and the focal point of its strategy, structure, and systems. Along with external marketing, internal marketing and alliances are equally important, i.e. the library needs to be marketed to the internal people who matter for the library, or take decisions regarding it, in the sponsoring organization. Moreover, information is a commodity which requires constant interaction and interpretation in its use. Hence interactive marketing, i.e. interaction with the client on a one-to-one basis, will become very essential in understanding the client as well as, to help him/her use the information in the best possible manner. Therefore, the total preparation—preparation of the library, its sponsoring organization, and its clientele—is very important for the changeover.

In this process of external, interactive, and internal marketing, the following strategic needs have to be kept in focus:

- Reaching financial viability. In information, as in education, broadcasting, or print media, it will become difficult to achieve total financial self-sufficiency through the generation of revenue from the immediate user, alone, in the near future. The client cannot afford all the costs really involved even with the processing of information, leave alone generation of information. Therefore, it would become essential to decide, in each case, what should be the contribution of the client, the library or the information centre, and the society.
- Increasing the clientele and the reach to them. Unless information is used, the question of impact of information on the development of the individual, organization, and country does not arise. And the use of information has become essential for the survival and progress of nations.
- Innovating products and preparing flexible products to suit various clients becomes important because of the nature of the product, i.e. information. Dr Yoneji Masuda identified four unique qualities of information:

  Information is inconsumable, untransferable, indivisible, and accumulative. Goods disappear through use, informa-

> tion is used but not consumed. Goods are moved from A to B. When information is moved, it stays at A as well as moving to B. Goods can be divided and used, but information, as opposed to data, can only be used as a set. Goods are accumulated by not being used, information accumulates through use. (Vespry)

Hence, packaging and repackaging of information becomes important to suit various client needs, wants and demands.

- Moreover, a library or an information centre is a service organization. Therefore, innovating and providing new services is as important as the innovation and providing of new products.
- Orienting, acculturizing, and training the staff. Services are not tangible. Therefore, they require personal interaction. Some libraries and information centres who have become conscious of the need for marketing the information products and services, have acquired a marketing department or a marketing manager to perform the task of external marketing. But this is not enough. The personnel who interact with the client system also need to be oriented. The attitudinal change would have to come across the total management and staff of the immediate and the parent organization, and not merely the marketing department or marketing personnel. Without this overall change, the marketing department or marketing manager may not be able to achieve much.
- Seizing the opportunity provided by the computer and information technology, Dr Masuda added: "Information technology adds four more properties to information: concentration, dispersion, circulation, and feedback." (Vespry) How best can one use these characteristics to improve the information product?
- Measuring the impact of information on development. Only by demonstrating the need to use information for and its impact on development, libraries and information centres would be able to persuade the organization and the community to bear part of the costs of information.

In essence, marketing provides conceptual and analytical tools to plan and manage the information organization for achieving the financial viability or balance, as well as other objectives, germane to the business and profession of libraries and information centres. Therefore, marketing is not merely a tool to achieve economic results but to achieve total information results. Information professionals have been accustomed to utilizing user studies. The five laws of library science inculcate the customer perspective. Now, only a jump is needed for the librarians and information managers to use marketing effectively so as to meet the challenges facing them.

REFERENCES

1. Bushing, Mary C., 'The Library's Product and Excellence', *Library Trends*, Vol. 43, Issue 3, 1995.
2. Kotler, Philip, *Marketing Management: Analysis, Planning, Implementation, and Control*, Prentice-Hall of India, New Delhi, 1994.
3. Kumar, Krishna, *Library Manual*, Vikas Publishing House, New Delhi, 1985.
4. Lafond, Renald, 'Information Products and Services: Marketing—The New Thrust Area,' in Abhinandan K. Jain et al., *Marketing of Information Products and Services*, Indian Institute of Management, Ahmedabad, 1995.
5. Ranganathan, S.R., *Five Laws of Library Science*, Madras Library Association, 1931.
6. Seetharama, S., *Guidelines for Planning of Libraries and Information Centres*, IASLIC, Calcutta, 1990.
7. Smith, Duncan, 'Practice as a Marketing Tool: Four Case Studies', *Library Trends*, Vol. 43, Issue 3, 1995.
8. Vespry, Arthur H., 'Marketing of Information and Generation of Income: The LRDC Experience,' in Abhinandan K. Jain et al., *Marketing of Information Products and Services*, Indian Institute of Management, Ahmedabad, 1995.
9. Weingand, Darlene E., 'Preparing for the New Millennium: The Case for Using Marketing Strategies', *Library Trends*, Vol. 43, Issue 3, 1995.

CHAPTER 2

Key Concepts in Marketing of Information Products and Services

■ *T. P. Rama Rao and Abhinandan K. Jain*

INTRODUCTION

Marketing, as discussed in the previous chapter, is a process that can help managers of libraries and information centres in achieving their objectives of improving access to their clientele, increasing the satisfaction of their clients and reaching financial self-sufficiency. The marketing process, in case of libraries and information centres, implies that these objectives be achieved by offering improved and competitive information products and services. As already discussed in the previous chapter, the importance of understanding customer requirements has long been felt by the library profession. However, creating and offering information products and services to satisfy customer requirements, has not been very effective. An improvement in the management of this process is likely to yield impressive dividends. Thus, marketing the process of creating, offering, and exchanging products and services which meet organizational objectives, as well as customer requirements has great relevance for libraries and information centres. This chapter deals with the process of marketing management as well as the underlying key concepts therein.

WHAT IS MARKETING MANAGEMENT

Marketing Management is defined as (definition adopted by American Marketing Association in 1985, as reported in Kotler, 1995):

> Marketing (Management) is the process of planning and executing the conception, pricing, promotion, and distribution of goods, services, and ideas to create exchanges with target groups that satisfy customer and organizational objectives.

This definition has several terms which need to be understood. To begin with, it is essential to understand the two key purposes of the process of marketing. The first purpose relates to achieving organizational objectives and the second purpose relates to achieving customer satisfaction. Both these purposes need to be achieved simultaneously.

The second element of the definition relates to preparing and executing a marketing plan. This process consists of 'analysing marketing opportunities, researching and selecting target markets, designing marketing strategies (positioning), planning marketing programmes, and organising, implementing and controlling the marketing effort' (Kotler 1995). Each of the terms of this definition (i.e. marketing opportunity, target market, positioning, marketing programme, and organising, implementing and controlling), need to be understood along with the underlying concepts. For example, concepts of consumer behaviour and macro environment are crucial to understand the nature and size of the available market opportunity, both in the present and in the future. The size of a specific opportunity over time is hypothesized to follow a pattern called market life cycle. Also, the demand for specific types of products and services, catering to a specific market opportunity follows another similar pattern called product life cycle. The competition for the identified opportunities is influenced by the stage of market life cycle and the stage of the product life cycle. Competition also influences the design of successful marketing programmes. Planning and implementation of marketing programmes for products and services, are significantly influenced by which stage of the market life cycle they are positioned. Thus, the concepts of buyer behaviour, market life cycles, and macro environment are critical for preparing and executing a better marketing plan. A specific product or service offered by a library or information centre would compete with other similar products or services to satisfy the requirements of target customers. Thus, the concepts of assessing and predicting competition would be useful to arrive at better strategies and plans for the products and services.

Planning and executing a marketing plan is not a mechanical exercise, but should be based on a philosophy or an orientation towards the market. Six orientations have been identified in marketing literature which guide marketing efforts. These are production orientation, product orientation, selling orientation, marketing orientation, and societal marketing orientation. An understanding of these orientations would help to make an appropriate assessment of the market, from the point of view of an organization. However, the marketing orientation seems to be, by far, the most promising one for achieving organizational objectives.

Marketing orientation, particularly in the marketing of services, implies three types of marketing programmes. One is for the external customers, called external marketing, and consists of product, price, promotion, and distribution elements. The second is for the internal clients (library staff) called internal marketing and which consists of appropriate programmes and mechanisms to prepare the intended organization, including staff, to deliver the marketing programme to the external market. The third is to manage the interface between the service provider (staff) and the customer—interactive marketing—and is more crucial for the marketing of services.

KEY PURPOSES OF MARKETING

The two key purposes of marketing are achieving objectives/ goals of the organization and satisfying customer needs and wants.

Organizational Objectives

The objectives/goals of an organization are derived from its mission statement and they determine the direction of its business. Managers of libraries and information centres must clearly set the overall objectives/goals as well as the functional and divisional goals for their units. These must be in conformity with the missions and goals of the parent organization. Goals must also be set from a strategic or long-term point of view, as well as from operational or short-term point of view, for drawing up a relevant direction for the organization. Specific marketing goals must be set up for achieving the purpose of customer satisfaction. Similarly, financial goals must be set up for achieving financial self-sufficiency. In addition, specific objectives may, if necessary, include goals related to the development of resources, organization, processes, and technologies.

Overall Goals

The overall goals of a library/information centre, may be set in terms of satisfying specific customer groups, development and sales of products and services that are to be provided, and acquisition and efficient utilization of resources for delivering the products and services. On similar lines, goals may be set for each subunit and/or products/services or functions in the library/information centre like acquisition (subunit), book selection (function), and listing of recent acquisitions (product/service).

Marketing Goals

Marketing goals may be set in terms of sales, market share, customer share, etc.

Sales	: Number of copies of Index of Management Literature subscribed by target customers.
Market share	: Number of copies of the IML subscriptions as a percentage of the total number of subscriptions of indices of management literature.
Position	: The high quality position of the IML among the professional Indian manager.
Customer share	: Purchase of the IML as a percentage of the total purchase of indices by an organization.

Financial Goals

Financial goals of an organization could be to earn more revenue, obtain better return on investment, and achieve certain cash flow levels, etc.

Most organizations have more than one goal. For deriving appropriate directions, the goals should be consistent with each other, have a hierarchy among themselves, be realistic to achieve and, as far as possible, be quantitative for measuring the achievements.

As most libraries/information centres are structured on functional lines, they should set goals for specific functions such as:

- Selection of documents and sources of data/information
- Acquisition of documents and data/information
- Processing of documents and data/information
- Storage of documents and data/information
- Retrieval of documents and data/information
- Publication or reproduction of documents and data/information

The goals for the above functions should be consistent with and subordinate to the overall goals of the library. Specific timebound long-term and short-term goals should be set up for each function/division.

BOX 2.1

Goals of Vikram Sarabhai Library, Indian Institute of Management, Ahmedabad

Indian Institute of Management, Ahmedabad is a premier national institute for education, training, and research in the field of management. The objectives of IIMA are:

1. Train young men and women for careers in management, and related fields, in any form of organization.
2. Improve the decision-making skills and administrative competence of practising managers.
3. Develop teachers and researchers in different management fields.
4. Create knowledge through research, both applied and conceptual, relevant to management and its underlying disciplines, and disseminate such knowledge through publications.
5. Assist organizations in solving their management problems by providing consulting services.
6. Participate in, and contribute to, the formulation of public policy.
7. Collaborate with other institutions in India and abroad to further their objectives, and, as necessary, to assist in institution building.

The mission of Vikram Sarabhai Library at IIMA is to provide support to teaching, research, training, and consulting activities at IIMA and establish a network to serve the management and business literature needs of management institutions, businesses and industry. Specific objectives of the VSL are as follows:

1. Serve the information needs of management students, teachers and researchers, and managers in organizations.
2. Prepare information products and services, including value-added ones, and cases.
3. Strengthen the resource base, and provide organizations an access to international data bases for management information.
4. Collect, process and disseminate information on various sectors of the economy and conduct industry and sector studies.
5. Establish a network of management and other allied libraries to strengthen the resource base.
6. Use appropriate IT for internal management, networking and marketing.
7. Develop and conduct training/teaching programmes for professionals of library/information centres in organizing, designing, developing and marketing of information products and services.

The above objectives provide only broad direction. Each of the above dimensions may be quantified so as to help formulation, implementation, and evaluation of both long-term and short-term goals, say 3–5 years and 1 year, respectively.

Needs, Wants and Customer Satisfaction

While libraries and information centres would like to achieve their objectives, they must first understand their customers' requirements. This would help them to offer the products which satisfy the customers' requirements, better than their competitors. The key concepts which are central to the understanding of customers' requirements are: need, want, and demand and customer value, cost, and satisfaction.

Need, Want and Demand

The starting point for any marketing activity is the assessment of customer **need**. A need arises whenever a customer feels that some of his basic requirements, are not being met. For example, a manager may feel that he requires (needs) information to improve his knowledge. The customer may have a number of options for satisfying his need. A preferred option is called a **want**. Wants, therefore, are desired specific satisfiers of 'needs'. In case of managers whose need is information, several options like journals, magazines, books, etc. may exist which provide the required information. One of the preferred options, like a journal, would be termed his want. A **demand** for a product or service (wanted by a customer) would arise if the customer is able to acquire and utilize the same. Thus, wants become demands when supported by purchasing power, ability and infrastructure needed to buy and use them.

Traditionally, librarians assess customer requirements through personal interactions with by customers and by conducting surveys. Both these methodologies are quite useful for assessing needs, wants, and demands. In these assessments, an attempt is made to understand the need, as well as the degree to which they are not satisfied by the existing products or services. Wants for specific options, are estimated through an assessment of the degree of preference, for the options under consideration. Demand for a specific option is assessed by measuring the buying intentions at different price levels.

BOX 2.2

Information Needs, Wants and Demands of Managers

In a market research on information products and services conducted at IIM, Ahmedabad (Jain, Rao and Jambhekar, 1995), it was found that managers **need** (require) conceptual and theoretical information for effective decision making. Non-availability of such information may lead to poor performance, less chance of advancement in career, or a feeling that he is not able to perform at his best. Such information is available in books and in articles in journals.

To identify the relevant books/articles, managers used alternative sources such as, recommendations by experts in the field and indexes, current contents and abstracts of management literature. The latter were used because of ease of access to them. It was however found that these products were not preferred because of lack of timely availability of the original articles. A new product 'Index of Management Literature' (IML) (one each in each of the different functional areas) was designed and tested in the research. This product was based on the literature available in the libraries of premier management institutions in India. The original articles could, therefore, be provided at a short notice. Analysis of the research data revealed that the managers preferred the new product over the existing ones. Therefore, the managers **wanted** the new product.

In the research conducted, a significant proportion of the managers had expressed an intention to subscribe to hard copy form of the product, IML, at a price of Rs 1500 per year per functional area. Through the research, their paying ability could also be assessed by knowing their budget for acquiring such products. The number of managers who had expressed an inclination to buy, and who also had adequate budgetary provisions for buying such products, constituted the **demand** for the IML.

While the electronic form of the IML is another feasible product, the demand for it would be restricted to those managers whose organizations had good computing and communications infrastructure. Those who did not have such infrastructure would not be able to use the product and so may not constitute **demand**.

Satisfaction, Value and Cost

A customer would like to accept/continue using a product (offer) if the offer satisfies him. One of the ways in which a customer could feel satisfied is that the net derived value (net customer value) of the offer is positive. The net customer value can be defined as the difference between the total customer value and the total customer cost (Kotler, 1995).

Total customer value is defined as the sum of the benefits the customer expects/receives from a given offer. The components of customer value are typically: product value, service value, personnel value, and image value. The **total customer cost** is the cost incurred by the customer in acquiring the product /service. Typical components are monetary price, time cost, energy cost, and psychic cost.

BOX 2.3

The Net Customer Value

Let us assume that the offer of IML by IIM Ahmedabad, a premier institute of management in India, is being marketed by its alumni. By using this product a manager would derive the functional value of access to management literature (product value), additional value if it is delivered within the promised time (service value), value of using a product from a premier institute (image value) and the value of interacting with the alumni of the institute (personnel value). Thus, the total value derived by the customer would be the sum of these four types of values derived by him, by using IML.

In the case of the above offer, the total cost would consist of Rs 1500—as price cost, the cost of time spent in ordering (would vary from customer to customer), the cost of energy/travel spent to book the order and, psychic cost incurred in deciding whether to buy IML or not.

ORGANIZATIONAL ORIENTATIONS TOWARDS MARKETING

Any organization needs to develop its own way of looking at its market. The marketing literature has identified the following ways of looking at the market (market orientations): Production orientation, Product orientation, Selling orientation, Competitive orientation, Marketing orientation, and Societal Marketing orientation. However, in large number of developing countries where competition is growing, the dominant and most important orientation which is suitable, and which is being advocated in marketing literature (including literature on marketing of information products and services), is the marketing orientation. This section first describes the various organizational orientations and then provides an understanding of customer orientation.

Organizational Orientations

Production Orientation

In this approach, the orientation of the organization is to produce more, and gain efficiencies in production and distribution. The assumption behind such an orientation is that the consumers are interested in the availability of the given product. The market may be expanded significantly by offering the product at a lower price. For the organization to offer the product at a lower price, it adopts strategies to lower its costs. This approach is quite suitable in a situation where the demand of a given product outstrips the supply. At the same time, in a market where the supply is more than the demand, a mere cut in prices by reducing costs, may or may not be of any help.

Product Orientation

The focus in product orientation is on evolving improved/new products through the use of technology. This orientation is adopted when the company believes that buyers admire and buy technologically superior and well made products. Product oriented companies often work with the assumption that the company can always design, and offer, better products even without seeking customer inputs. Such organizations are, therefore, likely to be technology oriented. This orientation would be beneficial as long as technology improvements are significant. These improve ents can be used in designing technologically superior products which would then offer significant value addition to customers. In case the technological changes are less pronounced and/or the ability of the organization to design products is not good enough, the orientation would not deliver the desired results.

Selling Orientation

In this orientation, the organization believes that customers would ordinarily not buy their products, and there is a need for aggressive promotion to increase the sales, so as to generate adequate returns on the capacities setup. An organization may choose sales orientation if it observes that consumers do not choose their company's products, if left alone. Therefore, aggressive selling and promotional efforts are required for improving sales performance. Managers of selling-oriented organizations undertake an aggressive selling and promotion effort. The efficiency of this effort is always questionable, particularly if compared to the customer orientation. It is, therefore, desirable to avoid this orientation.

Competitor Orientation

In this, the organization focusses primarily on identifying competitors, understanding their strategy, their objectives, their strengths and weaknesses, etc., for developing a superior strategy to market its own products. Basically, the organization closely tracks its competitors' moves and then decides its own, on the basis of these. Obviously, this would be helpful if the new strategy is also satisfying the customers' requirements.

Marketing Orientation

Market oriented organizations aim at achieving their goals by determining the needs and wants of target customers (markets), and by delivering the satisfactions more effectively and efficiently than their competitors. This is a highly desirable orientation in the present context of (relatively) free and increasing competition.

Societal Marketing Orientation

Excessive emphasis on market orientation has been found to be detrimental to the society at large. For example, use of personalized transport in major urban towns results in noise and air pollution, which is detrimental to society and environment. Thus, an orientation which encompasses customer orientation and which also preserves or enhances the consumer's and society's wellbeing, is termed as societal orientation.

Each of the above orientations have their pros and cons. On the whole, in a shortage situation, a production orientation may be better; in a rapidly changing technological situation, a product orientation may be better; or in a situation where customer orientation is leading to social ills, a societal orientation may be more suitable. The next section further expands the concepts relating to customer orientation.

The Marketing Concept

Kotler (1995) summarizes the marketing concept as follows:

> The marketing concept holds that the key to achieving organizational goals consists in determining the need and wants of target markets and delivering the desired satisfactions more effectively and efficiently than competitors.

There are four key elements of the marketing concept: target market, satisfying needs and wants, co-ordinated marketing, and organizational goals.

Target Market

The marketing concept emphasizes the need to focus, explicitly, on the selection of the market(s) to be served by the organization. This makes sense in, at least, two important ways. Firstly, no organization is going to have large enough resources to cater to the needs of the total market. Careful selection of the target market customers thus helps in an efficient allocation/utilization of scarce organizational resources. Secondly, the concept of focussing on some markets/segments is quite alien to service organizations where everybody is treated on par. There is a greater need for libraries/information centres to be selective in their choice of clientele and/or to prioritize among the selected target segments.

Satisfying Needs and Wants

Even for commercial organizations, it is quite difficult to assess the nature of needs and wants which customers would like satisfied. For libraries/information centres, this problem is compounded by the fact that the specific nature, and quantum of requirements of their clients, are not known at a point in time, and there can be a great deal of variation across time. For most of their clients, the broad information requirement may be generally known. The specific needs can be quite variable and may be assessed through interactions with the customer (called interactive marketing—defined later). Through such interaction, important needs, specific to a customer at a particular time and situation, could be identified. As explained earlier, satisfaction can be judged through assessing the difference between the total customer value and the total customer cost. A sharp focus on understanding the needs and wants of target customers, may help the library in enhancing the total customer value, by providing the needed information in time thereby, reducing the energy, time, and psychic costs.

Co-ordinated Marketing

In most organizations, the marketing function is supposed to be performed by the marketing staff. However, it is a known fact that unless the production department supplies goods of acceptable quality in time, marketing cannot take place. This is more so in libraries where the marketing department, itself, may not exist. Therefore, for delivering satisfaction, three levels of co-ordination may be needed. The first is among the marketing functions themselves. The second is across all the functions of the organization. Thirdly and finally, with any other organization—be it the supplier, distributor, or any other participant in the external marketing environment. The task is to put together a programme/ package so as to satisfy the requirements of the customer better than anybody else.

Achieving Organizational Goals

Organizational goals have already been dealt with earlier in the chapter. It is sufficient to mention here, that one of the important goals of libraries is to become increasingly self-supportive. This goal can be better satisfied if customers with higher sales and profit potential are selected, and if higher value needs of such customers are targeted. This would lead to higher net revenues (i.e. revenue less costs). However, one must realize that higher net revenue is an outcome of the better satisfaction of needs (of better paying customers) and is not an end in itself. Further, other goals of the organization, like, in case of a library in an educational institution, serving the students of the institute (where and for whom the library was set up) though less resource generating, may be an important goal and may need to be pursued with vigour. Thus, clarity of organizational goals and their prioritization would go a long way in correctly allocating scarce organizational resources.

FACTORS AFFECTING ACHIEVEMENT OF OBJECTIVES

The achievement of the objectives of the library/information centre, and the satisfaction of customer's requirements, could be significantly influenced by three types of factors/forces. These are consumer/customer behaviour, competitive behaviour and macro-environment. In fact, these three forces also influence the evolution of markets. This section deals with understanding these four aspects: consumer/customer behaviour, competitive behaviour, macro-environment and evolution of markets.

Consumer Behaviour

For achieving the objective of consumer satisfaction, it is critical to understand this behaviour. Understanding of consumer behaviour can help in defining who the consumers are, who the competitors are, what influences consumers, and how to approach them. Some of the key questions in understanding consumer behaviour and its implications for marketing, are provided below.

- *Who are the customers?* This question helps in defining the customers who have needs, similar to the ones that the library/

BOX 2.4

Orientations of Libraries
Vikram Sarabhai Library at IIM, Ahmedabad

The Library was set up in 1962 to support the Institute's activities of teaching, research, and consulting in the field of management. The Library started building its collection of books and journals primarily, to cater to the requirements of internal clients like students, researchers and faculty. As the time progressed, the Library also started acquiring micro-documents (like microfilms) made possible by the developments in technology of document production and storage. In the late sixties, the Library started referencing and bibliographic services to facilitate location and access of management literature through internal as well as external (inter-library loan, etc.) sources, to its internal clients. The Library also prepared theme based bibliographies which, in the judgement of the staff met the requirements of their internal customers. However, no explicit assessment of client requirements was attempted through systematic research.

In the late 1980s and early 1990s, the library started to use computers and information technology, in a small way, by computerizing the processes of circulation, acquisition of periodicals, cataloguing, bibliography and indexing. This was primarily triggered by technological developments, and availability of funds for computerization, from the Government and donor organizations.

By the mid-nineties, a local area network was set up in the Library, along with several other local area networks at the Institute. CD-ROM based data bases, and floppy based data banks were added to the resources of the Library. Inter-connectivity of networks, facilitated access to library resources for internal clients in various office locations on campus. Facility to access national and international data bases was provided, by setting up an Internet terminal in the library itself.

With the beginning of economic reforms in India, funds from the Government, the major source for the Library, were getting squeezed. At the same time, business and industrial organizations started feeling the need for management literature. This was assessed through informal interactions with managers, attending short term management development programmes at IIMA. Confirmation of the same was done through a national survey of managers and academics. The Library has thus, embarked on the path of assessing requirements of both internal and external customers more systematically.

It may be noted that in the beginning the Library was essentially in the *production orientation phase* (more and more acquisition). This was followed by the *product orientation phase* where technology and staff were used to produce improved products and services. The Library has not demonstrated selling or competitive orientation.

The Library has started efforts to understand customer requirements, and is targeting IT products and services to specific clients, for achieving the purposes of augmenting financial resources and providing needed information to academics, business and industry. This effort demonstrates the beginning of marketing orientation in VSL.

information centre is trying to satisfy. It may be useful to identify both current and potential customers, their location, etc.

➤ *What do they buy?* This question can help in identifying the current products, services, and mechanisms used by customers to satisfy their needs/requirements. In other words, it helps to identify which of the current competing products and services are chosen, for satisfying the specific (set of) need(s).

➤ *How do they use the produce/service?* Answer to this question may help in identifying current and/or potential products, services, and mechanisms which could fit into the customer's use process better.

➤ *Why do they buy?* This could throw significant light on the motivation of customers to buy, as well as be an assessment of the current products/services being used. A deeper probe into the motivations may reflect the relative importance of price and non-price factors in deciding the purchase. Specific advantages and disadvantages of currently used products/services could be assessed, to find, if there is any dissatisfaction, for which improved/new products/services could be designed. Also the information could be used for deciding how to promote the products/services.

➤ *How do they buy?* Customers use some process of buying which could be identified through this question. Some products/services are known and are being used on an ongoing basis. Orders for such products/services may be placed with a previously selected supplier as soon as the stock is over, or the need is felt. In case of high value products and services with uncertain outcomes, and with which the customer does not have much experience, there may be several stages in buying which are as follows:

- ❑ Recognise the need.
- ❑ Search for information to generate potential alternative products/services which could satisfy the need.
- ❑ Evaluate the alternatives generated for satisfying the need.
- ❑ Decide on purchase of one of the options.

- Assess post-use and post-purchase experiences and feelings.

➤ *Who participates in buying?* Different roles are played by different participants in the buying process. Identification of participants in the buying process (called Decision Making Unit—DMU), and their considerations in deciding in favour of or against a specific option, would go a long way in deciding the person to whom the promotion should be addressed to, in the target segment, and how to promote the product/service.

➤ *What are their sources of information?* The customer and the participants in the buying process, may be using specific sources for collecting information on products/services. Knowledge of these could help in deciding the means/media of promotion.

➤ *Where do they buy?* Answer to this question could lead to identification of agents/suppliers through whom the products/services are bought. This can help in deciding distribution element of the marketing plan.

In case of services, post-purchase and post-use feelings and actions of customers may be quite critical in influencing potential customers. This is because benefits of most services, particularly electronic information products and services, become obvious only after use. A satisfied customer would spread a good word and lead to improved demand from other customers.

Competition

Concepts related to competition are probably the second most important ones (the topmost importance goes to concepts related to customer and organization). This is because, most librarians do not see any competition to their services and, therefore, may not even be aware of concepts of competition. The steps which are helpful in understanding competition are: identifying competitors, and assessing reaction patterns of competitors.

Identifying Competitors

Increasingly, more external clients are making use of libraries. Most libraries/information centres provide services to a limited set of clients (mostly internal to the parent organization) who may not have access to other libraries, etc. Competition, therefore, is an alien concept to the libraries. Librarians need to realize that their clients, particularly external clients would have an increasing access to alternative products and services. One level of competition faced by libraries, therefore, is from similar products and services (termed as **brand level** competition) from similar institutions. These similar products and services are marketed not only by libraries of management institutions, but also by commercial establishments (termed as **industry level** competition). For external clients, the competition could be for their resources, say money, which they allocate for buying information products/ services vis-a-vis employing a librarian who could go around libraries and collect information (termed as **form level** competition).

Assessing Reaction Patterns of Competitors

For effectively competing in the market place, the librarian should be able to assess competitor's objectives, their strategies, and their reaction patterns. Four types of competitors are noted in marketing literature (Kotler, 1995): laid back, selective, tiger, and stochastic. A **laid back** competitor does not react quickly. It is important to understand the reasons for such behaviour, before concluding on his reaction. A **selective competitor** reacts to only certain types of competing moves, and not to others. This provides a clue to probably avoid certain way(s) of competing. A **tiger competitor** reacts quickly and strongly to any competing move. The **stochastic competitor** is unpredictable and needs to be studied more carefully.

An understanding of competition and its reaction patterns can help in designing more efficient and effective competitive strategies.

Macro Environment

Macro environment of an organization consists of the following: demographic, economic, natural, technological, political and legal, and cultural. In the context of information products and services, the four forces which seem to be particularly important are: technological, legal, economic, and cultural (Jain, Rao, Jambhekar, 1995).

Technological Environment

Probably, the greatest environmental change affecting information products and services (or for that matter any business) is the technological environment. Changes in the technological environment have made it possible to store, analyze, and transfer information with great convenience and speed. Use of information technology (IT) by a larger proportion of customers would obviate the need to even go to the library/information centre. Totally new organizations, with familiarity and knowledge of IT, are entering the market and competing with libraries. Developments in IT need to be tracked closely, and utilized, for offering better products/services. This would help, not only, in satisfying the customers, but also in fighting the emerging competitors effectively,

However, this does not come free. Investments required in IT could be enormous. Also, with the increasing use of IT, the cost structure of libraries/information centres would change significantly. Therefore, one should keep a tab on the developments in IT as they influence (i) how customers get and use the information, (ii) number of competitors and nature of competition, (iii) how libraries and information centres could compete better, (iv) how could they serve the client better, (v) the cost of providing the products and services, and (vi) the investments needed in using IT.

Political and Legal Environment

The major elements in the political and legal environment affecting information market are:

- The patents and copyright laws meant to safeguard intellectual property rights.
- Import restrictions on electronic data transfer.

- Import duties on equipments and software, as IT is a global industry.
- Government policies in relation to ownership and funding of higher education and research institutions.

In short, legal and political developments on a global, regional, and national level, may need to be monitored, to assess their impact on the availability of information products and services in the market (through imports etc.), as well as on the technology which can be used, by clients and libraries both, to satisfy their information requirements.

Economic Environment

Economic environment influences the purchasing power of customers and organizations and hence, is an important determinant of demand for any type of products and services. In case of information products and services, their demand is influenced not only by the change in the income of customers, but also by changes in the requirement of different types of information, under different economic situations. Also, differential developments in different sectors of economy would give rise to different levels and types of information needs, wants, and demands. This element of the environment also influences the import duties and hence, has significant impact on the prices of IT products and other internationally traded products and services. It is, therefore, suggested that key indicators of economic environment like national income, per capita income, index of prices, income of different industries (of relevance to IT), exchange rate, etc. be monitored on a continuous basis, and their impact on information industry be assessed periodically.

Socio-Cultural Environment

Culture has many dimensions. The ones which seem to be important from the point of view of impact on information products and services are level of education, concern for time, concern for convenience, concern for accuracy, and computer/IT literacy/use. A constant check may be kept on these and any other aspect of the socio-cultural environment that influences marketing of information products and services.

The above concepts of macro environment are only illustrative. The main message is that the manager of the information centre/librarian should keep a tab on key developments in the above areas. He, in fact, is best placed to do so, given that he is in charge of information itself.

Evolution of Markets

A manager of a library or information centre should keep track of how new markets are evolving. This would help in preparing the library/information centre to design and market those product and services which meet the requirements of the customers better. Customer requirements (needs) as explained above, are influenced by macroenvironmental forces. However, in the beginning, nobody knows how to satisfy these requirements. This stage of market evolution is called the **emergence stage**. In this stage, customers need something different but don't know what. As such there is no market. A librarian/information centre manager should understand information and other related requirements of its clients. This would help in thinking about the type of products and services that could be designed to tap the new requirements of customers. Ultimately, such products and services could be designed to serve the emerging market according to resources and capabilities. In most developing countries, the market for IT based information products and services is probably in the emergence stage.

If sales of newly introduced products and services continue growing, the emergence stage turns into the **growth stage**. In this stage, a large number of competitors would try and enter the market as the prospects seem to be bright. The growth of a market takes place because the product may be beneficial to customers, and more and more customers may be gaining the knowledge about the product. This may also be aided by improved and targeted promotion, by designing and marketing of products which are fitting the customer requirements better, and by lower-ing prices to meet increased competition. In some developing countries, the market for information products and services has entered this phase. Many information brokers, using IT and its access to large databases around the world, are entering the growing market for information products and services. They are also helping in increasing the growth rate by their own efforts of assessing precise customer requirements and designing suitable products and services.

Having crossed the growth stage, markets enter the **maturity** and then the **decline** phases. For example, information products and services offered through traditional means (i.e., paper copies of products and providing services only through manual support —as opposed to use of IT) by librarians, have definitely reached the maturity phase, where the market is stagnant if it has not already entered the decline phase. In these two phases, the purpose of any marketer like, library or information centre, should be to identify emerging needs and/or the emerging technologies, which could satisfy the existing needs better.

Having understood the phenomenon of market evolution, the library/information centre should classify the markets of each of the current products and services into the four stages of market evolution. This would help in designing effective and efficient marketing plans for the products and services.

Product life cycle (PLC) is also concerned with the development of markets but from the point of view of a producer. This concept would be discussed in Chapter 4. It is sufficient to mention here, that each stage of the PLC requires a distinct marketing strategy to succeed in the marketplace.

MARKETING MANAGEMENT

Marketing management is the process of planning and executing the conception, pricing, promotion, and distribution of products and services to create exchanges with target groups that satisfy customer and organizational objectives. Libraries and information centres deal with both products and services. There are several differences in products and services which have implications for their management, including marketing management.

For Products and Services

A **product** can be physically seen and felt and its performance measured. The task of assessing customer requirements and the testing of product acceptability, etc., can be assigned to specialised staff like those in market research (agency). Having obtained the customer requirements, the same could be turned over to the product designers for product design. Specialised personnel in engineering and manufacturing then design the production process, and produce the required volume of the product. Marketing personnel prepare a marketing programme and market the product to satisfy customers. Besides some adjustments in the after-sales service, much change in the product may not be required.

In case of **services**, the benefits accruing to the customer cannot be realised till it is experienced by the customer. Further, different customers may have specific requirements which need modifications in the basic service. These specific requirements may be guaged only through close interaction between the supplier and the customer. Many times, the customer participates in designing and producing a service like generating a specialised reference list. The delivery of appropriate customised service requires that the person who senses the customer requirements, also uses the resources of the service organization to produce and deliver the service. In other words, the customer contact person has to be skilled in sensing customer requirements, working with the customer, as well as with the production system to put together the required service. For the customer contact person to perform well, it may be necessary that the internal staff and systems are geared to meet the requirements of the ultimate customers by fulfilling the needs of the customer contact personnel.

The task of marketing, therefore, includes marketing to external customers, called *external marketing*, in case of both products and services. However, in case of services, the marketing task also includes marketing to customer contact personnel, called *interactive marketing*, and to other personnel, called *internal marketing*, so as to prepare the organization for delivering the promised benefits to external customers. The theme of preparing the organization with marketing orientation constitutes the subject matter of Chapter 9 in this publication.

Marketing management to external customers, as would be discussed in this section, has three broad concepts: selection of market opportunity, design of marketing plan for tapping the opportunity, and implementation and control.

Selecting Opportunities

Organizations need to first identify alternative opportunities in terms of alternate markets, and within markets alternate segments whose requirements it wishes to satisfy. Next, on the basis of viability of each opportunity to satisfy organizational goals, target market and segment need to be selected. The organization might like to occupy a unique position, called positioning, in the selected segments. Thus, the three key decisions are selection of target market, target segment, and position to be occupied in the minds of target segments.

Product Market

The product market is a set of customers with similar needs which are satisfied through similar products/services. For example, one of the product markets for IML in hard copy form would be the managers in the industry who wish to know about the availability of management literature, through the use of index or abstracts on paper.

Target Segment

Any product market may be composed of one or more groups of customers, wherein each group has customers, who are similar to each other, or customers in any two different groups, who are different, with respect to some key aspect of behaviour towards the product offering. Segmentation is the process of dividing the market into major parts called market segments, which are mutually exclusive and collectively exhaustive. The objective of segmentation may be to evaluate and then select those market segments that the organization can best serve.

For example, managers in the industry who are grouped/segmented to reflect the extent of use of such information, may be more among managers having certain characteristics, say those who hold a professional degree and those who work in large organizations. This could constitute one segment. And the rest could be another group/segment. The library offering the IML might like to target this 'professional managers in large organizations' segment on the basis of its size and growth, and the library's ability to tap them vis-a-vis the competitors.

Positioning

Positioning a product or an organization is to create a specific image in the minds of the selected segment of customers. The image selected by the organization should be such that it is distinct from that of competitors, that it can be created by the organization (given its resources), and it provides the expected satisfaction to customers. For example, the IIMs may like to position their IML as one which offers good professional treatment (indexing and classifying) of the current management literature which is highly valuable to the professional managers.

For selecting appropriate opportunities, the organization might like to analyze the environmental trends, so as to assess the current, and predict the future nature and size of each opportunity. Also, the analysis of competitors would help in assessing whether specific opportunities can be tapped by the organization, better than the competitors.

Developing Marketing Programme/Marketing Mix

Libraries and information centres have to choose appropriate programmes relating to product, price, promotion and distribution (also called marketing mix) to tap the selected opportunity.

Product/Service Management

Product or service management involves addressing the customer needs and wants through appropriate products and services. This includes decisions relating to product variety, quality, design, features, brand name, packaging, sizes, services, warranties, returns, etc. It also includes managing the process of new product/service introduction from conception to launch, as well as management of products over the life cycle of products.

Price Management

Price management involves setting the price for different types of customers, at different points of time, at different places, under differing marketing situations and over the life cycle of the product. Price includes price of the product, of memberships, of subscriptions at list price or with discounts, allowances, payment period, credit norms, etc.

Promotion Management

Promotion management includes selection of appropriate promotion tools such as, direct marketing, sales promotion, advertising, personal selling and public relations. It also includes decisions on budget, objectives, message, specific media, and methods of evaluation of the promotional programme.

Distribution Management

Distribution management deals with organizing the distribution of products and services. This involves developing a dealer network, distribution channels, warehouses, transportation, etc., and managing them efficiently.

Organization, Implementation, and Control

In addition to selecting good market opportunities and devising appropriate marketing programmes, an organization needs to have an appropriate structure, systems, style, staff, skills, and shared values. The marketing programme must be co-ordinated by integrated effort from the marketing department, rest of the internal organization, and wherever necessary, collaborating organizations. The concept of co-ordinated marketing has already been explained earlier. Here, we will deal with the concepts of internal and interactive marketing, the processes of delivering customer satisfaction, and monitoring and control of programmes.

Implementation

For achieving co-ordinated marketing effort, it is necessary to devise effective internal marketing and interactive marketing programmes and systems for delivering customer value.

Internal Marketing Internal marketing is the task of preparing an organization to undertake a product/service marketing activity to satisfy the customers. Thus, internal marketing is a task of successfully hiring, training, and motivating able employees who want to serve the customers well. Certain organizational and technological changes may be necessary, to enable the employees to contribute fully to the activity.

For example, to be able to offer products like CC and IML on electronic media, librarians have to undertake an internal marketing effort of upgrading the library's computer systems, provide training programmes on product development and use of software systems, etc. Without such equipment, hiring of skilled staff and their training, it may not be possible to deliver the products.

Interactive Marketing Interactive marketing reflects the effort put in by the employees of the company while interacting with the customers for either assessing their requirements and/or providing the service to satisfy them. This involves interaction of employees with customers. For example, if the generic product like CC developed by the library, is customized for a specific client in the chemical industry through interactive sessions by the library professionals, the effort may be termed interactive marketing.

Value Delivery Processes Value to the customer arises from a variety of processes used by the organization. These in case of service marketing are: New Product Introduction Process, Order-Remittance Process, and Customer Service Process.

An organization needs to devise appropriate systems to effectively and efficiently manage the processes for delivering customer value.

Control

All the activities associated with the business will have to be properly monitored to ensure timely corrections and optimal use of resources. Systems have to be evolved to collect such information that ensure control of the business activities. Examples of such systems are production control, supply control, payables control, receivables control, client servicing systems, etc. Two major tools of monitoring and control are marketing research and feedback system.

Marketing Research Marketing research may be used not only for identifying and selecting opportunities and devising marketing programmes, but also for monitoring the achievement of programme objectives in the marketplace. For example, percentage of target customers trying the product, intending to try the product, favourably disposed towards the product, etc. could be assessed through market research.

Feedback Systems It is necessary to set up an internal system for providing a **feedback** on critical parameters of customer satisfaction. For example, the 'case based product' of IIMs having good professional treatment (abstracting and classifying) of the current business information may be monitored through a regular feedback mechanism which evaluates currency of information content, quality of abstracting and quality of classifying the cases. The mechanism would consist of, may be, a check on records about the promised and actual currency of information, continuous checks by an expert on the classification of cases and periodic checks by a subject expert on the quality of abstracting.

SUMMARY AND CONCLUSIONS

This chapter has described important decisions and concepts of marketing management. These are:

- *Purpose of Marketing* Objectives of organization and satisfaction of customers.
- *Orientations of Organizations* Production, Product, Selling, Competition, Marketing, and Social Marketing.
- *Factors influencing Achievement of Objectives* Consumer Behaviour, Competition, Macro Environment, and evolution of Market Life Cycle.
- *Marketing Management* Differences in managing of products and services, Internal Marketing, Interactive Marketing, and External Marketing.

REFERENCES

1. Bateson, John E., *Managing Services Marketing: Text and Readings* Dryden Press, Hinsdale, IL, 1989.
2. Berry, Leonard L. and Parasuraman, A., *Marketing Services: Competing through Quality,* The Free Press, New York, 1991.
3. Lovelock, Christopher, H., *Services Marketing,* Englewood Cliffs, Prentice-Hall, NJ: 1984.
4. Coote, Helen, 'How to Market your Library Service Effectively' , *The Aslib Know How Series,* Ed. Sylvia P. Webb, The Association for Information Management, 1994.
5. Jain, Abhinandan K. et al., Ed, "Marketing of Information Products and Services", *Proceedings of the IIMA/IDRC workshop,* Feb 14–17, 1994, Indian Institute of Management, Ahmedabad, 1995.
6. Kotler, Philip, *Marketing Management: Analysis, Planning, Implementation and Control,* Prentice-Hall, 1994.

CHAPTER 3

How to Develop a Marketing Plan

■ *Barbara Gumbs*

INTRODUCTION

What is a Marketing Plan

A marketing plan provides the information manager with a blue print for identifying and targeting opportunities and client groups (target segments) and for the cost-effective supply of specific information products/services to the identified client groups. Marketing plan may be prepared for specific product(s) or service(s) as well as for the library/information centre as a whole. The plan helps the librarian/information manager to answer the following broad questions:

1. What is the current situation regarding the library/information centre, the product or the service?
2. Where should the information centre/product/service be in the next year? ...2 years? ...5 years?
3. How does the information centre/product/service get there to realize specific targets?
4. To assess whether the information centre, product or service realized the goals and targets set?

To obtain answers to the above questions, the staff of the information centre must be prepared to go through several steps and processes. These steps require current information about the information centre, objectivity in approach and a vision for the future. To explain these steps, this chapter draws primarily on the experiences of the Technology Information Centre (TIC) at ARGUS Institute of Technology (AIT).

Benefits of a Marketing Plan

An information manager (like any other manager) is responsible for the most efficient use of resources at his/her disposal. In order to discharge this responsibility, he/she needs to set appropriate objectives for the centre. The limited physical, human and financial resources at his disposal need to be so deployed, that they are utilized in the best possible manner to achieve the objectives set. The actual deployment of resources and monitoring the achievement of objectives are also important functions/tasks of librarian/information manager.

Historically, most libraries/information centres were supported and set up by governments, universities, or other parent bodies for serving a limited set of clients, mostly internal to the parent body, having specialized information requirements. At first glance, one may be tempted to think that there is no need for these centres to market their services. However, the recent trends indicate that the information available in such centres may be of significant use to outside clients. Also, the internal clients need information from outside sources, which is multi-speciality as well as general. This is leading to a much wider potential client base for each of the information centres. While the technologies for storing as well as making the information available to a wider clientele are developing continuously, they are quite costly to acquire. For utilizing the existing information resources, centres must provide for and upgrade their services to meet the increasingly diversified and complex needs of emerging and different user groups. They would need resources to do so. The budgets and grants of the centres are either getting frozen at old levels or, in fact, being cut. Under such situations, a centre would need to set specific objectives to be achieved, client groups to be served, their priority, as well as financial targets in consultation with the management of the parent organization. Besides, the information centre would have to prepare and implement specific plans to achieve the objectives. Thus, preparation, implementation and monitoring of marketing plans by information managers has become a critical activity for the very survival of an information centre/a library.

The development and implementation of a marketing plan can be beneficial in several ways:

- Identification of objectives in line with parent organization's goals and information centre's requirements.
- Identification and selection of target client groups to be served by the centre.
- Increase in the demand for existing products and services.
- Development of new and viable products and services, which have a sound client base.
- Collection and analysis of relevant data and the monitoring of marketing targets enable the information centre to become more objective in decision making.
- Execution of preparatory analysis assists staff in developing a customer oriented outlook.
- Preparation of the plan and the implementation of activities encourage and motivate information staff to develop a proactive stance in the target market.
- Development of the marketing plan brings the information centre into focus within the organization—through its contribution to the marketing objectives of the parent organization.

How to Develop a Marketing Plan

This chapter will cover the steps, which an information centre should follow, in preparing a marketing plan for a product or service, or for the information centre as an entity. The **first step** in developing a marketing plan is to **analyze the current per-**

formance of the information centre. Having understood the current situation, the **next step** is to conduct a **marketing audit**. This step helps in: (i) identification of marketing goals of the parent organization; (ii) analysis of the market and customer behaviour; (iii) analysis of the macro environmental forces and business climate; (iv) analysis of competition; and (v) analysis of the internal environment, i.e. systems and procedures of, products and services offered by, and resources available to the information centre.

The findings of the marketing audit are used in the **third step** to decide the **strategic direction** for the information unit. Development of a **marketing strategy** follows as the **fourth step**. A **detailed marketing plan** is then prepared (**fifth step**) followed by the **last step (sixth)** of **implementation and control**. In addition, the marketing plan should be presented effectively.

A better understanding of these steps will be attained, if we examine them in the context of one information centre/library. The information centre chosen is one, which serves an industrial clientele—the Technology Information Centre (TIC) at the ARGUS Institute of Technology (AIT). Background information on TIC is presented in Box 3.1. The steps, in developing a marketing plan, are applicable to all library and information centres—whether or not the centre is fully supported or partially supported by government funding. Similarly, these steps are applicable where the clients being served are academics, industrialists or members of the general public. Depending on the particular environment in which the centre functions, marketing objectives may include increasing the size of the clientele or user group, expanding the information services offered and/or recovering full or partial costs for operational expenses.

This chapter will follow TIC through the steps taken in the preparation of its marketing plan, and each step in the marketing planning process will be identified. For each stage, first the step would be described/explained. This will be followed by an account of TIC's experience in dealing with the particular step. At

BOX 3.1

TIC's Background

TIC was one of six divisions comprising the AIT. One of the mandates of the AIT was to promote the technological development of Small and Medium Enterprises (SME).

TIC served staff members from other divisions as well as external clients from any organization or group which required information. The absence of major competitors contributed to a constant flow of clients during the early period of TIC's existence. In the past, no attempt was made to market TIC's services—although several promotional programmes were presented to various clients. The time had come for TIC to become more marketing oriented, if it was to fulfill a new mandate given to its parent organization.

AIT conducted a strategic planning exercise, the output of which required TIC to:

- Recover at least 50 per cent of its operating expenses from the services it provided. In the previous year, TIC recovered only 45 per cent of its operating costs.
- Achieve a 30 per cent increase of SME exporters in TIC's regular clientele base.
- Achieve a 25 per cent increase in demand for TIC's services from staff in the Bio-technology and Material Technology Divisions in AIT.

Therefore, TIC had to develop a marketing plan to achieve the above targets.

the end, a summary of how to executive the step would be provided.

MEASURE THE PERFORMANCE

Ideally, the performance of any organization should be measured vis-a-vis the objectives or the targets set. For a large proportion of libraries and information centres, the specific objectives and targets may not be set. However, it is critical to develop specific targets/goals so as to not only measure the performance of the information centre but also deploy the available resources in the best possible manner.

Performance should be measured for the centre as a whole. The performance of the centre would ultimately depend on the performance of its products and services in specific targeted markets/segments. Specific parameters need to be identified for measuring the performance of the centre and its products and services in the specific markets and segments.

The parameters, used for evaluating performance of any library/information centre as a whole or of its products and services in specific markets/segments, could be:

- Number/proportion of total clients served.
- Number of units of product/service sold.
- Total revenue generated.
- Total revenue generated, net of costs.
- Image of the centre and its products in target segments.

The targets of performance on the above types of dimensions could be in (i) absolute terms, and/or (ii) relative to the competitors. For example, the clients served could be measured in absolute numbers or as percentage of total number of clients in the target market (market share).

CONDUCT MARKETING AUDIT

Marketing audit is a critical assessment of the external and the internal environment of the information centre. It provides significant insights into the opportunities and the threats facing the centre, and its strengths and weaknesses vis-a-vis competition. Marketing audit must be carried out within the context of contributing to the parent organization's goals. These goals, therefore, must be identified first. The *market* and the *customers* of the information centre must be analyzed to understand the current opportunities in the market. Macro-environment forces or business climate must be analyzed to assess future opportunities and

BOX 3.2

TIC: Measurement of Performance

For measuring the performance of TIC, no specific goals or targets were set. It was decided to measure the performance in terms of service to its clients, as well as in terms of the percentage of expenditure covered by the revenue generated by the centre. Performance of TIC was measured in absolute terms, i.e. number of percentage, but not in comparison to any competitor.

- Analysis of records in AIT's Clientele Management Database (CMD) provided the information that TIC served 200 external clients and processed 400 requests from internal clients.
- Of the 200 external clients, 80 per cent were from industrial estates in close proximity to AIT and 15 per cent from the western and southern regions.
- Of the external clients, 54 per cent of users (i.e., 108 companies) were from the industrial sector, 24 per cent were university students working on course assignments, 11 per cent were from Government Ministries and 11 per cent were from engineering consultancy services.
- The Two major industrial sectors utilizing TIC's services were the food processing and the chemicals sectors—50 per cent (54 companies) were from the food processing sector and 25 per cent (27 companies) were from the industrial chemicals sector.
- Among the internal clients, the Food Technology, the Chemical Engineering, and the Mechanical Engineering Divisions together, generated 86 per cent of the requests (i.e. 344). Only 5 per cent (20 requests) were received from staff in the Mineralogy Division and 4 per cent (16 requests) were received from members of the Bio-technology Division.
- TIC recorded 45 per cent of its operating expenses in the current year.

future trends in the market. (Analysis of competitors and internal environment of the information centre is critical for assessing its strengths and weaknesses.)

Identify Organizational Goals

The first important step in conducting the marketing audit is to determine the marketing goals and policy of the parent organization. The information centre is but one of several units, which comprise the parent organization. The information centre's programmes must therefore conform to the overall policy and direction of the parent organization. Specifically, the following information needs to be assessed:

- The targeted sectors for the institution and the information unit.
- The corporate image which the organization is seeking to build.
- The corresponding actions which will lead to the development of the image, e.g. promotional mechanisms, pricing strategies.
- The goals which should be attainable within a given time-frame.

The organization's strategic plan and its marketing policy are two documents/statements which provide a framework for the marketing planning process.

Analyze Market and Customers

The major purpose of market and customer analysis is to ultimately decide on (i) which set of markets/segments to focus on, and (ii) which set of products/services to offer to them. The output of this analysis is a two-by-two grid or table where one dimension represents the different groups of customers, the other dimension represents the different sets of products and services and the entries in the cell represent the size and nature of market opportunity available in each cell.

Customer Analysis

The objective of customer analysis is to identify characteristics by which the customers can be divided into groups (markets/segments) with similar needs and requirements.

The key questions asked for analyzing customers are:

- Who is the customer?
- What does he/she need/want/buy?

BOX 3.3

TIC: Identifying Organizational Goals

The first step, in the process for the formulation of TIC's marketing plan, was to seek relevant information from the following documents:

- AIT's strategic plan incorporating its marketing plan.
- TIC's strategic plan.

After perusal of these documents, the information manager identified the following relevant parameters:

AIT's Strategic Plan (excerpts relevant to the marketing plan)

- The focus of AIT's major work programmes, for the next three years, was on environment, food and chemicals.
- AIT had to develop the capability of being a leader in the transfer of technology to SMEs.
- Sixty per cent of professional time had to be spent in income earning activities.

AIT's Marketing Policy (excerpts)

- The major target groups of AIT's marketing programme, for the next three-year period, had to be (SMEs) oriented towards the export market.
- The AIT had to be guided by a competitive pricing policy for its services.
- AIT's image had to be one of credibility and confidence.
- Personal contact and visibility had to become major elements in AIT's marketing strategy.

TIC's Strategic Plan (excerpts relevant to the marketing plan)

- The portfolio of technology information products and services had to be realigned to support export oriented SMEs.
- A product or service with a focus on the environment had to be introduced—based on the positive findings of a market opportunity study and on AIT's focus.
- Information support for the work programmes of the Bio-technology and Mineralogy divisions needed to be strengthened.

- Why does he/she buy what he/she buys?
- How does he/she buy?
- Where does he/she buy?
- When does he/she buy?

Answers to the first three questions primarily help in classifying customers into groups/segments. Along with the analysis of competitors and internal environment, the manager will be able to decide which markets/segments to focus on.

Further, analysis of the last four questions helps in devising appropriate marketing strategies, promotional programmes and differentiated information services/products for each group, where it is economically feasible to do so. This analysis consists of identifying the purposes of buying (why), the process of buying by the customer (how), where does he buy (where), and when does he buy (when) so as to think through the four elements of marketing mix (4 P's) for each group of customers.

Market Analysis

The objective of market analysis is to identify *specific* groups of products/services, that are/could be available in the market to satisfy the requirements of the customers (markets/segments) identified above. The groups are so made, that each group of products/services: (i) satisfies the broad requirements of a customer, and (ii) requires a distinct set of skills/resources to design and offer them to the clients.

For example, marketing managers, may be interested in knowing about marketing literature. For this purpose, separate products like indices, abstracts and digests of marketing literature, etc. may be offered by different libraries/information centres. Quite clearly the three sets of products satisfy the board requirement of marketing literature and also require different skills and resources (indexing/abstracting/digest preparation) to prepare.

Assessment of Market Size and Characteristics

Market size should be assessed for the total market, for each of the sub-market/segment, for each of the group of products and services, as well as for each combination of specific sets of customers and of products/services. For this purpose, first a two-by-two grid/table should be prepared. In this table one axis, say vertical, represents the distinct products/services as identified

BOX 3.4

TIC: Market Size and Customer Analysis

An analysis of returns from a user survey provided TIC with a profile of their clientele. The profile included information about clients' information needs, the sources they used, an indication of what they were willing to pay for information, factors which they regarded as important in the provision of information services and the level at which decisions were made in client organizations.

Market Analysis

TIC had two board categories of clients whose information needs and use requirements were significantly different. These were the internal clients (of AIT) and the external clients.

The internal clients of TIC were the six other divisions of the AIT. The analysis of their broad requirements revealed that they mostly needed the services of the staff, rather than any product. The survey of external clientele revealed both the current and potential clients industrywise and according to their geographic distribution.

For understanding the external clients, TIC visited the Statistical Bureau to obtain a list of SMEs in various industrial sectors. TIC also consulted the directory of the Manufacturers' Association and the directory of the Exporters' Association to identify registered exporters and the items which they exported. TIC focused on the companies in the food sector and in the chemical processing sector where there was need to reduce waste generation. These sectors were those identified in AIT's Strategic Plan.

It was established that there were 100 SMEs registered as exporters in the food sector. Only 50 of these SMEs utilized TIC's enquiry services. Of these, 30 used the service more than once in the last year and the other 20 SMEs used the service only once. TIC identified this latter group as a potential group of clients—this group needed to be converted to becoming regular clients. Therefore, the potential client base in the food sector was 70 companies (50 which never used the service and 20 which still had to become regular users).

In the chemicals sector there were 50 exporters. Only 13 of these companies utilized the enquiry service; all of them were repeat users. Therefore, there were 37 companies which could be considered as a potential client base.

(*Contd*)

Customer Analysis

TIC carried out an analysis of its customers in terms of a number of buyer behaviour dimensions. Below are the findings of the analysis.

1. *Customer Segments*

   TIC grouped customers on the basis of willingness to pay.

   Group A One hundred companies/customers.
   Willing to pay fees up to NU 1,000 per request.

   Group B Fifty companies.
   Willing to pay between NU 5,000 and 10,000 per information contract.

   Group C Ten companies.
   Willing to pay between NU 10,000 and 20,000 per information contract.

2. *Decision Makers*

   Technical managers were identified as the ones responsible for managing their own allocated budgets and for decisions on purchases in companies belonging to Group C above. In Group B, the professional and technical staff were responsible for making recommendations to the financial manager for purchasing services. In Group A, the final decision to buy services was made by the owner-manager.

3. *Purchasing Criteria*

   Price, accessibility of the service, timeliness of delivery, accuracy of information, confidentiality and up-to-date or current information.

4. *Information Sources Utilized*

   Vendors of raw material, colleagues, newsletters and seminars.

TABLE 3.1 **Example of Competitor Analysis Matrix for an Information Centre**

Product/Marketing Characteristics	*Competitors*		
	TIC	*Company A*	*University B*
1. Product or Services Offered			
2. Resources Available			
Professional Expertise Available			
Collection Strength			
Operational Budget			
3. Regions Served			
4. Target Group Sub-Segments			
5. Delivery Strategies			
6. Pricing Strategies			
7. Promotional Strategies			
8. Future Plans			
Products			
Clientele			

above. The other axis, say horizontal, represents the distinct markets/segments, also identified above. Individual cells in the table are called product markets. For each cell in the grid/table, number of potential customers as well as their current and likely expenditures would help in assessing the size of potential demand. Also, a study of their characteristics would help in deriving appropriate marketing programmes.

Analyze Competitors

Competitor behaviour profoundly influences any marketing plan. Consequently, it is strategic to determine the following types of information about competitors:

- Who are they?
- What services do they offer?
- Who are their clients?
- What new products or services do they plan to introduce?

The competitor analysis helps the information unit to assess its own strengths and weaknesses against those of the competing products/services. As a result, the information unit will be in a better position to devise appropriate marketing objectives and strategies and identify possible opportunities which may be explored. Information on competitors should include, the types of products/services being offered, the level of fees being asked, the location of these services, customer access to them, major target groups for these products/services, the mechanisms used in the promotion of these services and any perceived strengths which the competitors possess. Table 3.1 illustrates the kind of information that should be collected.

It may be advisable for the information unit to compare its performance vis-a-vis the performance of competitors on the key criteria used by the customers to evaluate competing offers. Table 3.2 is an illustration of this type of analysis.

Analyze Business Climate

An analysis of the business climate must take into consideration those factors which together, create and influence the level of

BOX 3.5

TIC: Competitor Analysis

The staff at TIC identified competitors for on-line services, technical enquiries and economic information analysis.

Among TIC's competitors was the banking community who served the needs of their corporate clients—both in terms of on-line access and intelligence gathering for trade and market opportunities. At another level, was a consortium of businessmen with direct links to international sources of economic and technical information; their focus was on the preparation of feasibility studies and bankable proposals. Another competitor was the University Library which offered on-line search services and a special provision for use of the library by the business community. Other competitors included special libraries in government ministries.

The media used by the competitors for the promotion of services included:

- Closed seminars, television slots and advertisements in local newspapers (banking community).
- Seminars and breakfast sessions (consortium of businessmen).
- Distribution of brochures and open-house days (university library).

The competitor analysis helped TIC to identify two of its strengths. The first was its accessibility to in-house technical professionals and technology based services. This could assist the information staff to provide an in-depth technology information service for SMEs. The second was the scope of the technical holdings of the information unit, particularly on local raw materials and food processes.

investment by clients, by the parent organization itself and by competitors. These include socio-economic, cultural, regulatory and technological factors. In some instances political factors also have a strong influence. At all times, these factor should be examined only in terms of the influence they can exert on the marketing of information products/ services. This analysis can provide an initial indication of possible opportunities for the development of new products and services and threats for which the centre must adopt a proactive stance.

TABLE 3.2 **Example of Matrix for Assessment of Customer Criteria for Purchasing Information Services**

Criteria Identified by Customer	*TIC*					*Company A*					*University B*				
	1	*2*	*3*	*4*	*5*	*1*	*2*	*3*	*4*	*5*	*1*	*2*	*3*	*4*	*5*
Accessibility			□	•					•	□		□		•	
Price			•	□		□		•					•		
Delivery				•				□	•			□		•	
Accuracy					•					•					•
Timelines				□	•				□	•		□			•
Confidentiality				•				□		•			□		•

Key: 1: Low rating; 5: High rating •: Market Request; □: Current Status
Adapted from Marketing Orientation of Natural Research and Development Centre by Dr Karl J. Deulsch, A-T Kearney Gmbtt Management Consultants

Analysis of Internal Environment

An analysis of the internal environment requires an objective review of the systems and procedures used to support the marketing initiative, examination of the performance of products/services and an assessment of the availability of resources to the unit. This assessment must be done taking into consideration the characteristics of the external environment and the resources and strategies in use by the centre's competitors. Table 3.3 is an illustration of the kind of information used and analysis conducted for this purpose.

SUMMARIZE FINDINGS OF MARKETING AUDIT

Findings of the marketing audit exercise can be summarized broadly in terms of SWOT, i.e., Strengths, Weaknesses, Opportunities and Threats. The SWOT analysis is based on the information gleaned from an examination of the external and internal operational environment. This analysis is normally made within the context of major assumptions about the external environment. Any major change in the external environment is likely to influence the opportunities and threats in the SWOT analysis.

TABLE 3.3 Summary Assessment of Resources

Some Criteria for Assessment of Resources	*Performance* 1	2	3	4	5	*Remarks*
Physical Resources						
(a) Latest Edition of Reference Sources.			■			Updates requested.
(b) Strong in Sectors Served.				■		Deficient in patent collection.
(c) Accessible to Internal Clients.		■				Physical access only. Need to extend access points.
(d) Communication Materials.			■			Updated material required.
(e) Access to Data Networks.				■		Extend LAN to other divisions.
Financial Resources						
Recovery of 50% of operating expenses.			■			Marketing plans required for individual products and services.
Human Resources						
(a) Skilled and Experienced.				■		Strong in information sourcing and information analysis.
(b) Marketing Oriented.			■			Training required.
(c) Supplementary Expertise.					■	Multidisciplinary support available inhouse.

Key: 1—Low rating; 5—High rating

Table 3.4 illustrates a SWOT analysis for TIC. The assumptions were as follows:

(a) Government's policy towards the development of SMEs would continue to facilitate the growth of this sector.
(b) The environmental focus would continue to be a major factor in sustainable development programmes at the national, regional and international levels.

Separate summaries should be made of the following analysis:

- Product-markets, their sizes and characteristics.
- Segments (within product-markets), their sizes and characteristics.
- Strengths and weaknesses of key competitors on the whole and in each product-market/segment.

BOX 3.6

TIC: Analysis of Business Climate

Several variables, within the general business climate, influenced the operation of TIC. These included socio-economic factors, government regulations and fiscal measures and technological developments. The findings of the analysis of the business climate in which TIC operated are listed below.

Socio-economic Factors

- Restructuring of companies, within the industrial sector, resulted in the reduction of staff numbers and the contracting of services, from sources outside the company.
- The contraction of the job market resulted in the availability of an experienced labour force, which was forced into seeking self-employment as small and medium entrepreneurs.
- Trade liberalization measures which were enforced under GATT resulted in the opening of domestic markets to foreign competitors. Consequently, to survive in the international market, local exporters needed to conform to international quality standards and to aggressively develop export markets for locally manufactured products. In addition, regulations instituted by some trading partners required proof that products for export were manufactured using processes which safeguarded the environment.
- There was diversification of the traditional banking operations into export trade facilitation services, e.g. identification of export market opportunities and provision of corresponding information support.

Implementation of Government Regulations and Fiscal Measures

- Government established new programmes to support the development of small entrepreneurs. One aspect of this programme was the establishment of a 'shop front' walk-in programme, which provided business, managerial and basic technical information, free of charge to micro-entrepreneurs.
- The enactment of environmental legislation required industry to establish in-house programmes and to select environment friendly technologies, which could lead to the minimization of waste. Each company was responsible for recycling its waste, in accordance with the law.
- Provisions were made with financial institutions to provide credit guarantees to small and medium entrepreneurs.
- Government was encouraging small and medium entrepreneurs to use the services provided by science and technology institutions. Those entrepreneurs who used these services could qualify for a refund of 25 per cent of the fees paid for such services.

(*Contd*)

Technological Factors

- The banking community became advocates of the application of information technology. One such application was the development of on-line searching capabilities.
- Improved telecommunications facilities allowed direct connection to foreign databases and other information sources worldwide via the Internet. Such access was available to anyone, who had the skill and the equipment to search these databases.
- Regional and internationally funded programmes had resulted in the development of environment-friendly technologies, which could be applicable to local industry.
- The government industrial programme included the establishment of two new industrial estates in the western and eastern regions of the country. These industrial estates had a provision for common service facilities including small reference libraries.

BOX 3.7

TIC: Analysis of Internal Environment

An examination of TIC's internal environment revealed the following situation:

- There were weak control mechanisms and reporting procedures in respect of marketing programmes.
- Low user awareness of TIC's services, by the staff in three divisions of AIT, largely accounted for their minimal requests.
- There was a need for better promotional materials (e.g., brochures, video tapes and computer presentation packages) to enable TIC to make presentations to different groups within the targeted sectors.
- Promotional programmes were not sustained over any period of time; consideration had to be given to the assignment of dedicated staff in the field.
- TIC's major strength was in its access to multidisciplinary expertise available in other units within AIT.
- Additional training was required for an effective marketing programme.
- Reference tools had to be upgraded.
- There was a decline in demand for the Building Construction Fact Sheets—due to a slump in the construction industry.
- It was necessary to review the scope and range of services and a portfolio analysis was recommended.
- Additional access points for TIC's service had to be arranged.

TABLE 3.4 **Example of SWOT Analysis**

Strengths	*Weaknesses*
1. Reliable access to telecommunications network. 2. Information management expertise. 3. Adherence to client's respect for confidentiality. 4. Access to professionals with subject knowledge.	1. Lack of defined marketing strategy. 2. Old editions of directories and handbooks for the food sector. 3. Dated promotional aids for services offered. 4. Low user awareness of 3 divisions within AIT.
Opportunities	***Threats***
1. National, regional and international emphasis on sustainable development. 2. Manufacturers; focus on export markets. 3. Emphasis on strategic alliance with other organizations. 4. Government loan guarantee programme for SME development. 5. The need for intelligence services by external and internal clients.	1. Provision of corporate profiles by banking sector. 2. New publications on environmental news available free of charge. 3. Establishment of common services including basic information service on industrial estates.

- What would it take for the information centre to successfully tap each of the product-markets/segments?

SELECT STRATEGIC DIRECTION

The previous two sections dealt with the marketing audit and the performance analysis of the information centre. This section deals with the selection of a strategic direction for an information centre. The steps involved are:

- Develop objectives.
- Develop strategic options.
- Select strategies for achieving the objectives set.
- Identify Critical Success Factors for achieving the objectives through the selected strategies.

Please note that the above steps are *not* sequential. It is necessary to go through more than one iteration to achieve a balance between the four elements. Ultimately, the objectives are set, specific strategies decided and critical success factors identified (which can be managed by the information centre) and stated.

Set Marketing Objectives

Marketing objectives give direction for the formulation of marketing strategies and the marketing plan. According to Macdonald, marketing objectives are simply about one or more of the following:

- Existing products in existing markets.
- New products for existing markets.
- Existing products for new markets.
- New products for new markets.

Objectives, for the information unit, must be set in a realistic manner. Besides setting specific objectives, the critical success factors (CSFs) for achieving the objectives must also be specified. CSFs, essentially, specify the obstacles to be taken care of by the information unit and/or the organization as a whole. For setting realistic objectives, it should be ensured that the resources and the capabilities of the organization are able to take care of the CSFs.

Marketing objectives for the information unit must be determined with reference to the marketing objectives of the parent organization, the SWOT analysis and the opportunities assessed. In formulating objectives, the manager needs to think of the future—as to what products and services should be provided to which market and in what time-frame. In addition to setting marketing objectives for the information unit as a whole, objectives must also be set for each product and/or service in turn.

To establish accountability, marketing objectives must be stated in such terms, that a quantifiable comparison can be made based on the original objectives and actual implementation.

Therefore, marketing objectives must be expressed in terms which express quantities, i.e. numbers, percentages and money (National Units, e.g. dollars, pesos, rupees or any other currency). Objectives should be clearly stated to allow staff members to know what returns are expected from them.

Generate Strategic Options

Portfolio Analysis is a useful tool to generate strategic options for any organization and its products and services. Portfolio analysis is an examination of the group of products and services offered by the information unit. Each product or service must stand objective scrutiny to determine its performance against competing products.

BOX 3.8

TIC: Setting Marketing Objectives

Since the focus of marketing objectives are on products and target markets, TIC (a) consulted its portfolio analysis for its revised range of products and services and (b) examined relevant documents, which could provide organizational direction in terms of target groups, segments and income to be earned.

TIC's marketing objectives for the next year were to:

- Recover 50 percent of operating expenses (an increase of 5 percent over the previous year).
- Develop a 30 percent increase in the regular client base of SME exporters over that achieved in the previous year.
- Achieve 25 per cent increase in demand for TIC's services from the Bio-technology and Mineralogy Divisions, within AIT, over the previous year.

A portfolio analysis usually results in a revision of the 'basket' of services and products provided, when there are volatile changes either within the organization itself or in the external environment. In this analysis, each product/service of the organization is depicted in a table, like Table 3.5. One of the dimensions, say horizontal, of the table depicts the level of opportunity existing for the product/service as high, moderate or low. The second dimension represents the current level of performance of the product or service, say as strong, middling or weak. Refer to Table 3.5 for the meaning and the interpretation of the levels on the two dimensions. The data for identifying the current position of any product or service on the table is obtained from the market and customer analysis (including user services) and competitor analysis. The specific position of the product/service in the table automatically suggests suitable possible options (see Table 3.6). For example, if the current performance of your product is strong (making good papers) and its market opportunity high (expansion of demand indicated), then you need to invest in building the product further. On the other hand, if the current stakes of your product is weak (product is not competitive) and the market opportunity is low (dwindling market size), then you might like to withdraw the product. All possible strategies for products/services

TABLE 3.5 **Summary Portfolio Analysis of Existing Products**

Current Status of the Product in the Market	*Opportunities in the Market*		
	High	*Moderate*	*Low*
Strong		SDI	Editorial Services
Middling	Technical Enquiry Services		
Weak		Company Profiles	Building Construction Fact Sheet

Key:
Status
Strong: The product is making good progress in the market.
Middling: There is a favourable comparison with competitor's product, while the product/service is differentiated from those of the competitors.
Weak: The product is not competitive.
Opportunity
High: Analysis point to an expansion in demand for the product/service.
Moderate: Indications are that there is potential for growth, but developments are expected to be at a slow steady pace.
Low: Opportunities are dwindling and the market is in decline.
Adapted from an example used by the Centre de researche industrielle du Québec (CRIQ), Canada.

in different positions on the portfolio are provided in a summary form in Table 3.6. The write-up on TIC provides further insights into how to conduct portfolio analysis and what possible options need to be considered.

The strategic options suggested through the portfolio analysis need to be cross checked with ground level realities. These would include answers to the following types of questions:

- Is it possible to increase clientele/sales/profit with the current offering?
- Is it possible to provide better customer satisfaction and/or increase clientele/sales/profit by modifying the offer?
- Does the library/information centre or product/service have a competitive advantage vis-a-vis customer requirements?

TABLE 3.6 **Example of Possible/Portfolio Analysis**

Current Status of the Product in the Market	*Opportunities in the Market*		
	High	*Moderate*	*Low*
Strong	Invest in new markets.	Extend the range of services offered (Product Development).	Penetrate new markets. Maintain status quo.
Moderate	Improve the position of the service in the market.	Improve the position of the service in the market. Penetrate new markets. Maintain status quo.	Penetrate new markets. Withdraw the service.
Weak	Improve the position in the existing market.	Improve the position of the service in the existing market. Withdraw the service.	Withdraw the service.

Adapted from an example used by the Centre de researche industrielle du Quebec (CRIQ), Canada.

- Is the advantage substantial and of value to customers?
- Does the centre have or can the centre acquire base resources, human resources, etc. which are required to implement the strategic direction suggested?
- Would investment into resources be worthwhile from the point of view of objectives of the library/information centre as well as customer satisfaction?

Identify Critical Success Factors

The process of identifying CSFs assists the head of the library/information centre and their staff in defining inputs, which are critical to the achievement of marketing objectives. To obtain a better grasp of CSFs, it will be useful to look at some definitions which were captured by Josef Herget.

Each of the following definitions presents a different but complementary perspective of CSFs:

(a) "The limited number of areas in which results, if they are satisfactory, will insure successful competitive performance for the organization. They are the few key areas where, 'things must go right for the business to flourish' " (Rockart, 1979).

(b) "Key success factors are those variables which management can influence through its decisions that can affect significantly the overall competitive positions of the various firms in an industry" (Hofer and Schendel, 1978).

(c) "Critical success factors ... therefore represent those managerial or enterprise areas that must be given special and continual attention to bring about high performance. CSFs include issues vital to an organization's current operating activities and to its future success" (Boynton and Zmud, 1984).

Within the context of a marketing plan, CSFs can therefore be defined as resources which have a direct influence on the successful implementation of the plan. The CSFs could be different for each strategic option generated for every product/service/market of the library/information service. These could be in the

BOX 3.9

TIC: Generating Strategic Options

TIC's portfolio of services included a Technical Enquiry Service (TES), Selective Dissemination of Information (SDI), provision of Company Profiles, Editorial Services and publication of Building Construction Fact Sheets. An analysis of the use of each product/service was done, based on data obtained from TIC's client management database, from a survey of users and from TIC's statement of income and expenses for the previous two years—year A and year B. The summary of the portfolio analysis is presented as an example in Table 3.5. The vertical axis indicates the current performance of a product or service, while the horizontal axis indicates the level of opportunity perceived in the market for the product.

The analysis of the internal operating environment of TIC recommended a review of the range and scope of the services offered. Possible marketing options for each product were guided by the options presented in Table 3.6.

Technical Enquiry Service—Maintain the Differentiation

The technical enquiry service, offered by TIC, was in a satisfactory position when compared with those offered by competitors. There was still a strong demand for this type of service in the market. The TIC team asked themselves the question 'where do we want to go with this product?' The consensus of opinion—based on the analysis—was that the product should move into a stronger position vis-a-vis competitors. To do this, the product had to be differentiated from its competitors. Differentiation could be accomplished either by implementing a new pricing structure, by changing the depth of the service, by targeting a special segment or by creating a new image for the service.

TIC decided that with the resources available, the technical enquiry service in its **present form** could be maintained for those clients, who were willing to pay not more than NU 1000 per request, i.e. Group A. At the same time, the background and experience of three professional staff members in the unit—economist, chemist and food technologist—could be utilized to prepare a more in-depth and professional research report for clients in Group B, who indicated a willingness to pay between NU 5000–10,000 for each information contract and those in Group C, who specified an amount ranging from NU 10,000–20,000. These reports could be presented in the form of technology dossiers, which were identified as needed by a group of users.

In this way the technical enquiry service was differentiated in terms of depth of information provided, the pricing structure and the target group to be served.

areas of base resources, technology resources, human resources, systems and processes of generating products/services, delivery, as well as specific elements of marketing plan (like product, price, promotion and distribution).

Select Marketing Strategies

Marketing strategy can be defined as the means of achieving the marketing objectives. It must be within the broad strategic direction determined, while ensuring that the CSFs are taken care of by the organization. The strategy can be devised for both, the information unit as a whole and for each product or service.

While a marketing strategy document may summarize the key means of achieving the objectives, two important decision areas in marketing strategy formulation are market targeting and positioning.

BOX 3.10

TIC: Critical Success Factors

For TIC to achieve its marketing objectives, the staff was required to identify CSFs which could influence the success of its programmes. The following were identified:

- Access to current sources of information on environment-friendly technology and on environmental regulations and conventions.
- Purchase of updated editions of reference tools and directories for the food sector.
- Availability of human resources—information specialists and technologists.
- Capacity building to enable staff to become proficient in:

  —sourcing information on the Internet;

  —marketing of information services.
- Preparation of a mix of promotional materials.
- Mounting of programmes to increase TIC's visibility to target groups.

BOX 3.11

SDI Services—Invest and Extend the Range of Services Offered

The SDI service was one for which TIC had developed a strong presence among competitors and the market was expected to grow. The needs assessment indicated, that managers required monitoring services on environmental regulations and technology, which would affect industrial development and their export programme. The work programme of AIT also included environmental technology. The market opportunity study indicated that 'environmental services' was a growth area.

Taking the above factors into consideration, the SDI service was one which could be upgraded into an upper-end product, i.e., environmental intelligence; this product could be packaged to respond to the needs of chief executive officers and managing directors. There was still a demand for the SDI service by middle managers and technicians. In this exercise, the basis SDI service was segmented, extended and upgraded to serve needs in the market.

Company Profiles—Withdrawal of Investment

On examining Tables 3.4 and 3.5 with reference to TIC, a slow steady growth is expected for the provision of company profiles, given the export thrust of the government (determined from the analysis of the external environment). However, TIC's product is not competitive. One will recall that the competitor analysis carried out for TIC indicated that the banking sector was a major competitor for this product. According to Kotler, one can basically make one of three decisions concerning the product: invest, withdraw or maintain. TIC can either make a decision based on the expected growth in the market or withdraw the provision of this service. Based on the strong capabilities of the banking sector as compared with those of TIC, a decision was made to withdraw this product. Similarly, the demand for the product Building Construction Fact Sheets had declined and it was no longer feasible to provide this service; therefore, withdrawal was the logical decision to make at this time.

Editorial Services—Maintain the Status Quo

Editorial services were provided by TIC as an obligatory service to AIT in its quality control programme. There was no favourable market for this product beyond that of AIT itself. TIC had no choice but to maintain the status quo of this service.

TIC's revised portfolio

	Service	*Target Group*
(a)	Technical enquiry service.	Group A (NU 1000); AIT
(b)	Technology dossiers/reports.	Group B (NU 5,000-10,000); Group C (NU 10,000-20,000); AIT
(c)	Environmental intelligence service.	Group B; Group C; AIT
(d)	SDI	Group B; Group C; AIT
(e)	Editorial services.	AIT

Market Targeting

No library/information centre is likely to have unlimited resources to satisfy the requirements of all customers, Therefore, the important element of marketing strategy is the targeting/choice of specific customer groups, called segments. For taking this decision, the market needs to be segmented first and then a choice of specific segments should be made.

Segmentation is the process of dividing the market into groups (segments), so that customers in any one group are similar to each other and are different from those customers, who are in any other group. An understanding of the characteristics of the product-market would indicate whether it needs to be segmented. Markets with similar characteristics need not be segmented, whereas those with different characteristics may have to be segmented.

The information centre needs to decide whether to target one/few segments or all segments. Further, which segment(s) should be catered to through what kind of offer/product/service would depend on the size and characteristics of the segment, the competitive situation, the resource position and objectives of the information unit. The size of opportunity in the market should be large enough to tap. Also, the information centre must have or be able to acquire resources to effectively meet the competition in the market segment and get a reasonable share to achieve its objectives.

Positioning

The information centre must decide as to what kind of position (image) it wants to have for itself/its product (service) in the minds of target customers. The position/image really represents the key as to why the target customers favour your product/service vis-a-vis those offered by competitors. Obviously, such a decision should be based on a thorough assessment of:

- What criteria do the customers use for making a choice of product/service/information centre?
- How important are each of those criteria in making the choice between competing offers?

- On which criterion/dimension are (is) you (your product/ service) superior compared to competitors?
- Whether the criterion/dimension is communicable to customers and profitable for you to build?
- Do you have/can you build resources and systems, to promise and deliver the intended position?

Rest of the decisions of marketing strategy are critically dependent on these two.

Key Elements of Strategy

The strategy document would summarize the following:

- Product market to be focused on, segments/customers targeted, and position to be achieved in the targeted segment.
- Product, pricing, promotion and distribution strategies to be deployed for achieving the position in the target segment of the product-market.
- Information resources, hardware and software needed, and human resources to be acquired/upgraded/trained.
- Marketing research and feedback systems for planning and controlling all elements of the strategy.

The first element ultimately depends on the ability of the library/information unit to take care of CSFs for catering to the targeted segments and for achieving a specific position. In other words, the strategy adopted should be both feasible from the point of view of availability of resources and desirable from the point of view of achieving organizational objectives.

DEVELOP A MARKETING PLAN

A marketing plan is a comprehensive document detailing the marketing opportunities to be tapped, marketing objectives to be achieved and specific decisions about each element of the marketing strategy.

BOX 3.12

TIC: Developing Marketing Strategies

Strategy statements for TIC's marketing objectives are provided in Table 3.7.

For the Technical Enquiry Service in its present form, TIC decided to focus on customers in group A (those who were willing to pay not more than NU 1000 per request). This group/segment was selected for focus from among the three external segments. The other two needed more in-depth reports and were willing to pay much higher charges for them.

TIC also decided to strengthen the position of the enquiry service. The options identified were either by changing the pricing structure, by changing the depth of service, by targeting a special segment or by creating a new image. The decision ultimately taken was a mix of the options. The purpose was to improve the image in the market as a whole. To achieve this, the customers belonging to segment B and segment C were to be provided with more in-depth and professional reports for prices between NU 5000–NU 10,000 and NU 10,000–NU 20,000 per contract. Before making this decision, it was made sure that TIC had professionals to deliver such reports.

TABLE 3.7 **TIC's Marketing Strategies**

Marketing Objective —Three Year Period	*Strategy Statement*
1. Recover 50% of costs during Year 1.	1. Pursue the development of products which are differentiated from those of TIC's competitors.
2. Expand the regular client base by 30% in target areas.	2.a Develop new marketing outlets in collaboration with marketing officers in the field.
	b Develop new alliances with industry associations.
3. Generate a 50% increase in demand from the Bio-technology and Mineralogy Divisions of AIT.	3. Develop a programme leading to increased visibility of TIC's services in the target divisions.

A marketing plan must be prepared for each product/service. After a review of the situational analysis, objectives for the product/service need to be set and a marketing plan developed. It is important that the target customers and the position to be achieved by the product/service in the minds of the targeted customers, is clearly specified. It is particularly important that the product is defined very clearly. The marketing plan should contain details, which will allow it to become a blueprint for launching the product/service in its niche market, i.e. the position to be achieved in the specific target groups, for which it was prepared. Therefore, the marketing plan should not contain information only about the product, price, plac and promotion. More details should be given on other elements, e.g. specific clientele for the product, the benefits or unique attributes of the product, competitors and their perceived advantages/disadvantages, marketing strategy for positioning the product within the target group and criteria for evaluating results.

The marketing plan should include the following:

Executive Summary A short summary of goals and the main recommendations meant for providing a quick grasp of the plan.

Current Marketing Situation This section would provide background information on the market situation; product, price, distribution, and promotion situation; competitive situation; external environmental situation, etc., which affect other elements of the marketing plan.

SWOT Analysis Briefly describes the output of the analysis of strengths/weaknesses of the organization vis-a-vis competition and opportunities/threats in the environment vis-a-vis customers. The section concludes by posing the important issues to be resolved by the information unit/specific products/services.

Marketing Objectives Statement of objectives in terms of both financial and marketing objectives to be achieved in a year/ shorter time span.

Description of Market, Product and Promotional Options Provides (i) description of the target market aimed at and position to be achieved in the mind of target customers, (ii) description of specific product/features, price, promotion tools, distribution channels and marketing research to be conducted, and (iii) support needed from other parts of the information unit/ parent organization.

Action Plan Brief description of organizational arrangements for implementing the plan with specific and time bound activities.

Revenue and Expense Statement Describes the resources and costs with their relevant elements along with a cash flow statement.

Controls Describes the means of monitoring the progress of the plan and setting out time bound goals and budgets for important elements. It also outlines a contingency plan consisting of steps needed to be taken in case of unforseen developments in the environment or on the competitive front.

IMPLEMENTATION AND CONTROL

After the marketing mix and the promotional mix have been defined, it will be necessary to:

- Prepare operational budgets—projected income and cash flow statements for each product or service and for the unit as an entity.
- Prepare action plans to accomplish targets.
- Develop measures for evaluating performance.

Prepare Operational Budgets

Budgeting is a process in which plans are made for the future and expressed in the form of income and cash flow statements. Operational budgets provide advance information on goals for income and the costs or expenses which must be incurred to attain these goals. These operational goals, in themselves, provide a yardstick against which actual performance can be compared and where necessary, remedial action taken.

BOX 3.13

TIC: Developing a Marketing Plan

Marketing plans were developed for the following products and services:

— Technical Enquiry Service.
— Technology Dossiers.
— Environmental Intelligence Service.

The rationale for the selection of these products/services by TIC has been covered in the earlier sections. A marketing plan for the Technical Enquiry Service is presented below, as an illustration of a plan for a service offered by the information centre. A marketing plan for TIC as a whole has also been presented.

Marketing Plan for the Technical Enquiry Service

Situation Analysis and SWOT

Competitors: There are two competitors—Company A and University B.

Competitive Advantages – Industrial extension visits to factory sites.
– Access to expertise with prior industrial experience.

Competitive Disadvantages – Walk-in access by clients is not encouraged.

Options available to the target group
– Use of the company's in-house library.
– Contracting the services of consultants.

Objectives

Year 1: Market penetration of:

- 10 per cent of the potential client base (70 companies) in the food sector—Group A.
- 15 per cent of the potential client base (37 companies) in the industrial chemicals sector in Group A.

Target Segment

Actual Clientele

30 companies in the food sector (SMEs) and 13 companies in the industrial chemicals sector (SMEs)—a total of 43 companies.

Potential Clientele

Food sector—70 companies; Chemicals sector—37 companies

Targeted Clientele

Actual clients in both sectors: A total of 43 companies

New clients: Food processing sector : 7 new (10 per cent of the 70 potential clients).
Industrial chemicals sector: 6 new (15 per cent of the 37 potential clients).

(*Contd*)

Position

Positioning Strategy

The Technical Enquiry Service will be projected as a service, which results in saving time and cost for the customer by timely delivery of information and access to practical advice when necessary.

Benefits of the Service to the Target Group

- The Technical Enquiry Service will assist the client to perform more effectively and efficiently, through the application of information to manufacturing problems.
- The Technical Enquiry Service can become an extension of the corporation's service facility without accompanying overhead costs.

Service

Definition of the Service

The Technical Enquiry Service sources data and information to address operational problems encountered by exporters in the Food Processing Sector and the Industrial Chemicals Sector.

Features of the Service

- An industrial extension service, in which experienced liaison officers assist in the definition of operational and managerial problems on the factory sites of companies in the defined segments.
- Sourcing of information and collation of responses from relevant national, regional and international information sources in response to technical enquiries from target groups.

Distribution

- Liaison visits to client sites.
- Telephone and facsimile and common service facilities on industrial estates.

Pricing

- Based on an hourly rate, direct costs for database searches and photocopying and an assessment of rates charged by other competitors.
- A minimum charge of NU 800 per request was decided.

Partners

- Common services bureaux on industrial estates.
- Small Business Development Banks.

Promotion

Target Group: Owner-managers, professionals and technical staff.
Promotional Mix: Visits to industry, open days and brochures.

Positioning

Projected as a service, which results in saving time and cost for the customer by timely delivery of information and access to practical advice, where necessary (this concept influenced the design of all promotional material and oral presentations).

(*Contd*)

Evaluation

- Evaluation will be based on the attainment of goals for the increase of the regular client base in Year.
- No decrease in the regular client base which existed prior to the implementation of the marketing plan.

Projected Income

Nu 120, 000, based on approximately 150 contracts with a minimum charge of Nu 800 per request. A total of 56 companies will be approached to earn this income.

BOX 3.14

Marketing Plan for TIC

The description here consists of only the product, price, promotion and distribution. Other elements have been summarized earlier.

Product/Services

(a) Technical Enquiry Service (TES) to Group A (those willing to spend up to a maximum of NU 1,000 per enquiry). This service was not marketed to AIT staff. A policy decision was taken that AIT staff would utilize tools in TIC to find information for themselves. Assistance from TIC staff would be sought only when complex information was required from external sources. This approach allowed TIC staff additional time to develop income earning services.

Despite the inability of the TES to recover 45 per cent of its operating costs in the previous two years, TIC decided to continue the provision of this service. This decision was made because the service was identified, in a recent analysis as an entry point for other AIT services—not only for TIC. The TES was therefore accepted as a loss leader in TIC's portfolio. This means that the service was provided at less than economic return rates with an aim to recover the losses from the higher value products—technology dossiers and environmental intelligence services.

(b) Technology dossier to Group B (those willing to spend between NU 5,000 and. NU 10,000 per contract) and Group C (those willing to spend between NU 10,000 and NU 20,000 per contract) and AIT staff.

(c) Environmental intelligence service to Groups B and C and staff at AIT.

TIC's choice in investing in (b) and (c) was influenced in the higher cost/benefit ratio which these products could bring to the customer and to TIC (see the benefits identified for customers of each product.) In terms of benefits to TIC, technology dossiers and environmental intelligence services were products which fulfilled the mandate of TIC—support to SMEs in their export thrust.

(*Contd*)

(d) Editorial services to divisions in AIT; this was a mandatory service based on the skills of the staff in TIC.

Pricing Strategy

(a) *Technical enquiry service*: Although based on an hourly rate and direct costs, a competitive strategy was adopted in relation to other providers in order to introduce clients to other AIT and TIC services.

(b) *Technology dossier and environmental intelligence service*: These products were presented as a quality product; since they were new products from TIC, an infiltration pricing strategy needed to be implemented in order to gain a market share.

(c) *Editorial services*: A mandatory service provided to AIT staff with charges based on an hourly rate established by AIT.

Place

Several channels were used to reach CEOs, technical managers and professional staff. These included:
- TIC's premises
- Industrial estates
- Small Business Agencies
- Clients' premises
- Electronic mail

The channels marked with an asterisk(*) were selected on the basis of the increased exposure which they provided.

Promotion

In the case of TIC, the corporate marketing strategy specified that personal contact and visibility had to be major factors in planning promotional programmes. Furthermore, the image which had to be created in the market was one of credibility and confidence. The communications specialists, graphic artists, advertising managers and public relations officers needed this type of information to develop the concepts of their promotional programmes.

Each product or service required its specific promotional mix depending on the desired positioning strategy and the target group of clients. The following promotional mix was decided for TIC:
- Presentations at seminars.
- Participation in Trade Association Meetings.
- Visits to plant sites.
- Home pages on the worldwide web.

These promotional mechanisms brought TIC staff into contact with clients. One should recall that visibility and personal contact were major elements in AIT's marketing strategy.

Together the above elements in the marketing mix were aimed to:
- Respond to the needs to TIC's industrial clientele.
- Support AIT's thrust in being perceived to be a leader in the transfer of technology to SMEs.
- Support the development of the SME export sector.

One of the tools found to be useful in determining sales goals is the Cost–Volume–Profit analysis. The CVP analysis is based on the income statement, which is divided into fixed costs and variable costs. The CVP analysis is useful as a guide only where economic conditions are fairly stable. The following assumptions are made when using CVP (Coltman):

- The costs associated with the present level of sales can be fairly accurately broken down into fixed and variable costs.
- Fixed cost will remain fixed during the period affected by the decision being made.
- Variable cost vary directly with sales during the period affected by the decision being made.

The CVP equation is expressed as follows:

$$\text{Sales level} = \frac{\text{Fixed costs} + \text{Profit desired}}{\text{Contribution margin}}$$

The contribution margin per cent is derived from the income statement.

The operational budget must relate to market targets and provision must be made in the budget to accomplish associated activities. Costs for staff time, materials and equipment, promotional programmes, accommodation and utilities must be taken into consideration.

It is usual to prepare income and cash flow statements on an annual basis. In addition to this annual statement, a monthly projection should be prepared to facilitate better control of actual performance.

In some organizations, the information centre is required to achieve a break-even point in its operations or for a specific product or service, i.e. the level at which income earned is neither a profit nor a loss. In this case one will need to determine the level of income at which this situation will occur. The cost–volume–profit analysis is a useful tool to determine the break-even point.

An income statement for Product X is given below:

Income Statement

		NU
Projected income		200,000
Variable costs	17,000	
Fixed costs	180,000	197,000
Profit		3,000

In CVP analysis the income statement is often expressed as a contribution statement.

Contribution Statement

Projected income	200,000
Variable costs	17,000
Contribution to fixed costs	183,000
Fixed costs	180,000
	3,000

The next step is to calculate the variable cost as a per cent of income:

$$\frac{17{,}000}{200{,}000} \times 100 = 8.5\%$$

The contribution margin per cent is worked out as

$$100\% - 8.5\% = 91.5\% \text{ or } 0.92$$

The contribution margin per cent can also be calculated by dividing the contribution to fixed costs by the income, i.e.

$$\frac{183{,}000}{200{,}000} \times 100 = 92\% \text{ V } 0.92$$

The CVP equation reads as follows:

$$\text{Sales level} = \frac{\text{Fixed costs (i.e., 180,000) + 0 (no profit)}}{\text{Contribution margin (0.92)}}$$

Therefore, the sales/income level for a break-even on Product X is NU 198,000.

Prepare Implementation Plan

Each product or service will require an implementation plan, which must take into account each step which is necessary for realization of the marketing targets. The more details expressed in the plan, the smoother the implementation process will be—both in terms of staff performance and management expectations.

Prepare Evaluation and Control Plan

The implementation of the marketing plan must be evaluated and adjusted as necessary, in order to achieve the objectives previously set. Consequently, before the plan is put into effect the information team must look at each objective and determine:

BOX 3.15

TIC: Preparing Operational Budgets

The following are pro forma income and cash flow statements for Technical Enquiry Service for Year 1. For each succeeding year, the budget will have to be adjusted according to the performance of the product.

Projected income	NU
56 Companies at a minimum rate of NU 800 per request	120,000
Expenses	
Subscriptions	25,000
Promotional Brochures	35,000
Telephone calls and fax messages	17,000
Database searches	20,000
930 hours professional time @ 150/hour	139,500
Accommodation	9,000
Electricity	8,000
Local travel	7,000
Stationery	15,000
Reprographic services	275,500

It should be noted that income from this service is contributing only 44% of the costs incurred.

BOX 3.16

TIC: Preparing Implementation Plan

Before implementing the plan, it was advisable to determine how many initial contacts needed to be made before potential clients commit to becoming regular clients of the information unit, i.e., a client who used the product or service more than once during the year. The data on the clientele management database revealed that:

— After the second visit to the client, a contract for a technical enquiry was usually secured.

— Attendance at each professional and trade meeting provided, on an average, four openings to follow-up meetings with CEOs and technical managers.

This information provided three very important inputs to the implementation of the marketing plan:

— The Technical Enquiry Service was a good entry point to reach potential clients. Therefore, the other services offered by TIC and AIT were also publicized during visits to plant sites.

— A goal of 13 new clients for the Technical Enquiry Service (7 in the food sector and 6 in the chemicals sector), therefore, required 26 visits in order to secure new clients.

— The information centre had to have representation at each of the five annual professional and trade association meetings, to assist in securing 20 follow-up contacts with senior management staff (CEOs and technical managers)—the ones who usually made decisions to purchase products such as the technology dossiers and the environmental intelligence service.

An example of an implementation plan is illustrated below. It serves to illustrate the type of details which must be included without attempting to be comprehensive.

A. Identification of companies in the food processing and chemical sectors which are exporting or are planning to export their products.

Objective

To contact these companies for creating an awareness and ultimately motivating them to purchase or subscribe to TIC's services.

Persons Responsible

Mr Brown and Ms Jack

(*Contd*)

TIC: Preparing Implementation Plan

Actions to be Taken

1. Consult export manufacturer's directories to identify and update names of companies which export products made from tropical fruits and vegetables.
2. Assort and print the names of companies which have used TIC's technical enquiry services within the last two years.
3. Identify the names of managers and technicians working in the companies in Group A—the target group for the technical enquiry service.
4. Identify the names of Chief Executive Officers, technical managers and professional staff in Group B and Group C—target companies for technology dossiers and environmental intelligence services.
5. Find out what their areas of responsibilities are.
6. Find out the decision structure for buying-in services, e.g., who should TIC focus on within the company? Who has influence on what is purchased and from whom?

Output:

A list providing the names and full addresses of companies in each sector; the names and designations of CEOs, directors, middle managers and technicians with their major areas of responsibilities; the names of persons within the company who exert and influence on the buying-in of products and services.

Time Frame: Two weeks

B. Preparation for Monitoring a Promotional Programme (sample only)

1. Identify industrial exhibitions being planned for the food processing and chemicals sectors.
2. Identify professional conferences and trade meetings; monitor announcements for five of these meetings to prepare staff for the presentation of papers.
3. Prepare posters, slides and audio-visual material for mounting on stands at exhibitions.
4. Advertise TIC's services in the Food Services Directory of the Manufacturers' Association.
5. Prepare copy for inclusion in AIT's internal newsletter.
6. Define the content of the promotional brochures with the help of the communications specialists.
7. Identify clients with fax numbers and e-mail addresses.

Objective

To sensitize the target groups to TIC's services in order to increase market penetration.

(*Contd*)

Persons Responsible

Ms Jones, Mr Wright and Mr Gordon

Output and Time Frame

Exhibition material—August 10th

List of exhibitions and dates—June 15th

Advertisement in the Food Services Directory—March 5th

Publication of article in AIT's Newsletter—April 9th

Artwork for brochures—July 28th

- Indicators which can be used to assess the degree of success of the plan.
- The frequency with which this data will be collected and reviewed.
- Mechanisms which will be used to collect this data.

Three illustrative forms to monitor and control a plan are given as Exhibits 3.1, 3.2 and 3.3. Exhibit 3.1 is for evaluating inputs. Exhibit 3.2 is for evaluating a product/service by a client. Exhibit 3.3 is a format for a quarterly report for a product/service.

Presentation of the Plan

When the marketing plan is completed, an executive summary should be prepared. If the marketing plan is for an individual product or service, e.g. environmental intelligence service, the executive summary should contain brief essential information about:

- The target group to be reached.
- Financial target, market penetration target.
- Names of major competitors.
- The marketing mix.
- Strategies which will be adopted to achieve the marketing objectives.
- The indicators for assessment.

The executive summary of the marketing plan for the information centre will follow the same approach, paying attention to the corporate targets set for the information centre, the strategies

Exhibit 3.1

Evaluation Input Form

Report for the month: ______________________________

Name: ______________________________

No. of companies visited: ______________________________

Follow-up activity: ______________________________

____

____

No. of presentations made: ______________________________

Follow-up plan: ______________________________

____

No. of contact calls made: ______________________________

Contacts processed:

New ______________________________

Ongoing ______________________________

Completed ______________________________

Work plan for period ____________ to _______

(a) ______________________________

(b) ______________________________

(c) ______________________________

Signature: ____________

Information Manager: ____________

for achieving them and the evaluation mechanisms for assessing performance.

To complete the presentation, prepare a table of contents which should include each of the major headings and sub-headings covered in this chapter. Include forms and charts which will be used in the implementation and the monitoring of the plan. The packaging, presentation and content of the plan are the components which will convey an image of the information centre's efficiency to top management.

SUMMARY

The contents of this chapter are summarized in this section. It is presented as a guideline for information managers, who intend

Exhibit 3.2

Client Evaluation Form-002
Technology Dossier

1. Was the technology dossier delivered on or before the required deadline?

Yes No

2. Please assess the oral presentation of the report.

Very Good Good Satisfactory

Please provide your comments on the dossier in the space below:

____

____

____

Would you recommend this service to your colleague?

Yes No Do Not Know

State Reasons: ______________________________

____

____

Name: __________________ Position: ____________

Company: __________________________________

Exhibit 3.3

Quarterly Report: Technology of Dossier A

Period Ending: ______________________________
No. of Completed Contracts for Dossiers: ________________

Names of Clients	New	Repeat		
		1st	2nd	3rd

Income earned NU ______________________________

Income projected for next period NU ____________________

BOX 3.17

TIC: Preparing Evaluation and Control

In the case of TIC, there were three objective to be met:

(a) Recovery of 50 per cent of operating expenses (Financial Target).

(b) A 30 per cent increase of the regular client base in the food and chemicals sector (Market Penetration).

(c) A 25 per cent increase in demand for TIC's services from the Biotechnology and Mineralogy Divisions in AIT (Market Penetration).

Specific criteria were developed for monitoring financial targets and market penetration:

(a) *Finanical Targets*
For the centre as a whole, a review of actual income earned was compared with the projected income and the operating expenses incurred. The strategy statements were also reviewed. The performance of each product was reviewed based on projected income and operating expenses.

(b) *Market Penetration*
Evaluation of the percentage increase in regular clients for products and services in specific sectors, required a comparison of actual performance with projected targets and plans. Criteria for evaluation for each product assisted the TIC information manager and operational staff to assess performance.

to develop a marketing plan for the information products and services which they offer. These products may include acquisition lists, referral services, newsletters, journals or any other information product or service, which is required by their clientele. The principles of developing a marketing plan can be adopted by information managers in academic, industrial, public sector institutions or non-governmental organizations. The guidelines pertain to the key topics covered in this chapter, i.e., assessing current performance, conducting a marketing audit, selecting strategic direction, developing a marketing plan and developing an implementation and control plan.

BOX 3.18

Guidelines for Preparing a Marketing Plan

1. Guidelines for Performance Analysis

1. Decide whether to measure performance of the centre as a whole and/or for specific products/services and in which segments.
2. Identify important parameters for evaluating the performance of the centre/product/service in the total market and in different segments. Usually these would be available from the marketing plan for the current year/past year. If not, generate relevant ones.
3. Measure the performance on the specific parameters vis-a-vis specific target values set and/or the trend over the past few years.
4. Make an overall judgement about the need for improving performance on specific parameters in the light of the above analysis.

2. Guidelines for Conducting Marketing Audit

Guidelines have been provided for identifying organizational goals, conducting customer analysis, conducting market analysis, conducting competitor analysis, analyzing business climate and internal analysis.

2.1 Guidelines for Identifying Organizational Goals

1. The head of the library/information centre should pepare draft guidelines for the information centre's marketing programmes, by studying the formal strategic plan and/or marketing policy documents of the parent organization.
2. In case the parent organization (depending on their size and culture) does not have a formal strategic plan or a marketing policy, the head of the library/information centre will need to use alternative mechanisms to evolve a corporate consensus for guiding the information centre's marketing programmes. In this case, the information manager should consult:
   - The document (Act or other legal instrument) which describes the organization's responsibilities and its broad target groups.
   - Annual reports.
   - The most recently approved short term, medium term and long term development plans and budgets.
   - Key managers of others divisions to find out about their planned work programmes.
3. It is strongly advised that the draft guidelines be discussed with and have the approval of the top management of the parent organization. Without firm commitment from the top management, the marketing effort of the information centre will never succeed.

2.2 Guidelines for Customer Analysis

1. Develop and maintain an in-house database of actual and potential clients within the targeted sectors. Such a database can be used to

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capture data on services provided to customers. An analysis of such data can provide insight into opportunities for new information products and services.

2. Having identified customers, their behaviour needs to be understood in terms of what they buy? why they buy? who actually buys? how they buy? and when and where they buy?
3. It is quite likely that desk research will need to be supplemented by a field survey or user study. Following is a sample of questions, answers to which will assist in customer analysis:
   - *Location of customers:* Where are the current and potential customers located—by region, by industrial sector, by industrial estate?
   - *Actual customers:* What department or which manager influences the decision to subscribe to or purcahse a service/product?
   - *Products purchased:* What products/services are they currently purchasing?
   - *Perceived benefits:* What benefits are these customers really purchasing—convenience of location, timeliness, quality of service?
   - *Value of purchase:* What price do they pay for specific products/services? What is their information budget?
   - *Purchasing pattern:* Do they buy-in information services? If so, what are they? What is their preferred method of payment for services—by cash, invoicing or the setting up of special accounts? What type of suppliers do they use to buy information?
   - *Attitude towards information:* What is the customer's attitude towards information products/services? Try to determine the frequency with which information services/products are used by key persons in the organization.

2.3 Guidelines for Market Size and Market Analysis

1. Identify customers having a specific type of information requirement being (going to be) provided by the centre.
2. Classify customers into broad classes (markets/segments), like internal/external, on such a basis so that the requirements of information or manner of use or any other significant parameters of consumer behaviour differ significantly across groups and is similar within a group.
3. Identify types of products/services which are currently being used by all types of customers wanting to meet the information requirement.
4. Identify and understand new trends in environment which could not only influence the products/services offered by the library/information centre but also its clientele. For this, conduct desk research using sources like newspapers, government documents, publication of

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trade/professional associations, etc. This research is for sharply assessing:
- Changes in mix of clientele.
- Changes in their requirements.
- Changes in information technology.
- Changes in government policies.

5. Finalize the classification of products/services and customers and prepare a grid of markets by types of products/services.
6. Assess the current and potential size of demand in each cell (product-market combination) in terms of volume (say number of copies required) and monetary value.
7. Assess any trends in products/services, prices, distribution, promotion, broad changes in customer requirements, etc. for the product-market as a whole as well as for each of the product-markets identified in the grid. If necessary, conduct primary research for collecting such information.
8. Monitor the application of information technology for communicating with prospective clients. Such developments can assist in expanding the unit's clientele.
9. Try to encourage all staff members to participate in the analysis of the market and of the customer base. Maintain an internal intelligence service which routinely monitors events which can have an impact on the services offered by the information unit.

2.4 Guidelines for Competitor Analysis

1. Identify the various types of organizations which offer information services. Local directories and various in-house databases are useful starting points for identifying such organizations. This list should also include those organizations which provide an in-house service for their staff members.
2. Select the most representative organizations and the ones which are most likely to provide competition to the information centre and/or its products/services.
3. Compile a detailed list of pertinent information which you will need to know about each competing service. This information will relate primarily to the information services offered by them and can include:
   - Target groups served.
   - Strength of the collection.
   - Access to databases and other sources of information.
   - Technical expertise available to the information centre.
   - Number of staff assigned to the information centre.

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- Strengths and weaknesses of the source/product for each important target group served.
- Price structure, and fixed and variable costs for each product/service.
- Importance of a particular product/service to the competitor to assess his likely reaction.
- Try and predict likely reaction to specific type of moves by your library/information centre.

If this type of information is not in your internal files, then it may become necessary to visit these competing centres to find out the information required. Brochures and newspaper clippings are additional sources.

4. Prepare a matrix showing competitors on the horizontal axis and the parameters being assessed on the vertical axis (Table 3.1).
5. Conduct a preliminary assessment to identify the major competitors of the information centre.
6. Identify the criteria used by existing and potential customers for selecting information services. Compare the criteria with the capability of your information centre and with the estimated capabilities of its major competitors (Table 3.2).

2.5 Guidelines for Analyzing Business Climate

1. The analysis of the business climate of the information centre can be done by the staff of the centre or alternatively, one can contract the services of a consultant. However if the latter route is followed, the consultant should obtain a full understanding and appreciation of the goals of the centre and its current operations. It is strongly recommended that a senior staff of the centre should participate in this process.
2. Identify and collect all current economic measures, national, regional and international regulations and technological developments, particularly in information technology, which can influence the demand for information products and services.
3. Collect, internally, the information about external influences on the information centre.
4. To obtain the information on business climate affecting both internal and external clients, consult all available sources including published ones.
5. Arrange for interviews with the heads of the concerned organizations, institutions, and associations of clients. Alternatively, senior information staff can arrange to be invited to attend annual general meetings of these organizations, at which a review of past performance and a prognosis of the (investment) climate is usually on the agenda.

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6. Senior information staff should review the data and information collected. Findings which can negatively and/or positively affect the current services or strategic plans of the information centre should be noted. These findings, together with the results of the market analysis and the competitor analysis, will assist in determining opportunities and threats to the information centre.

2.6 Guidelines for Internal Environment Analysis

This exercise should involve all members of the information centre. The analysis should be objective since this analysis results in the identification of the information centre's strengths and weaknesses. The following is a checklist, which can be used as a guide in conducting this exercise:

1. Compatibility with Parent Organization
   — What is the marketing philosophy of the parent organization?
   — Is the information centre's marketing programme projecting the marketing philosophy of the parent organization?
2. Marketing Philosophy of the Information Centre
   — Is this philosophy formalized in a written document?
   — Have staff bought-in to the execution of this philosophy in the unit's marketing programmes?
   — Who participates in determining the philosophy?
3. Marketing Mix
   — Are the objectives and roles of each component in the marketing mix clearly specified?
4. Structure of the Information Centre
   — Is the marketing function responsibility of a senior member of staff?
   — Has responsibility been assigned for marketing the services of the information centre to the staff of the parent organization?
5. Support Systems
   — Is there central administration support systems for the marketing function or does the information centre need to implement its own?
   — What systems and procedures are in place for the information centre to measure the impact of its marketing programme?
   — Are staff members aware of the monthly, quarterly reporting procedures required?
   — Are there quality control systems in place to monitor the products/services delivered?
6. Products/Services Portfolio
   — What products/services are offered by the information centre?
   — Do any of these products/services overlap or duplicate others being offered by the parent organization?
   — What are the major difficulties in offering these products/services?

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— Is there a decline in demand for any of the products/services offered? If so, for each product specify reasons.

— Should any of the products/services be phased out, replaced or upgraded?

To answer the last two questions, we must take into consideration the performance of the products/services offered by competitors and an assessment of the opportunities in the market.

7. Delivery of Services
   — Which geographical regions are served by the information centre?
   — How easy is it for target groups to contact the information centre—by telephone, by visits?
   — In terms of best return on resources and established priority of needs, are users in other regions being adequately served?
   — When can users access the service? Do hours of access need to be revised in keeping with varying needs of user groups?
8. Promotional Programmes
   — What promotional media are being used and on what basis are they selected?
   — What follow-up mechanisms are in place to respond to requests arising from promotional programmes?
   — Are there sustained promotional programmes or is there sporadic promotional activity?
   — Are promotional programmes targeted to different categories of users?
   — Are there clear objectives for each element in the promotional mix? (e.g., advertising, personal selling, promotion and public relations)?
   — What rationale is used to decide which product/service is in need to promotion and which customer should be targeted?
   — How does the unit measure the effectiveness of its various promotional programmes?
9. Pricing for services
   — Does the unit's pricing objectives reflect the pricing policy of the parent organization?
   — What is the reaction of clients to the fees charged?
   — Are pricing policies reviewed as the products/services gain acceptance in the market, or as the demand drops?
10. Human Resources
   — Is there an adequate number of staff assigned to the marketing programme?
   — Do staff require training in marketing techniques?
   — Do all staff make inputs in planning the marketing programme and in feedback discussions on the programme?

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In executing an analysis for the internal environment, it will be useful to set up criteria for each of the parameters identified. Establish a rating for each one and capture succinctly, what needs to be done to improve the internal environment so that it supports the marketing thrust. Table 3.3 (using some of the parameters) provides an example of how the summary assessment of the internal environment can be set out.

2.7 Guidelines for Summarizing Findings of Marketing Audit

1. For your library/information centre as a whole as well as for each of the products/services, summarize items 2 to 5.
2. State the nature and size of opportunities for each product/service.
3. State the threats from business environment and new entrants to each product/service.
4. State your strengths vis-a-vis competitors.
5. State your weaknesses vis-a-vis competitors.
6. Clearly state the assumptions about external forces which you have made while conducting SWOT.

3. Guidelines for Selecting Strategic Direction

Setting strategic directions involves the steps of (i) setting marketing objectives; (ii) conducting analysis of the portfolio of current products and services; (iii) identifying critical success factors, and (iv) selecting appropriate strategies. These steps are not sequential. They must, however, fit each other and be in balance before moving on to the development of the marketing plan.

3.1 Guidelines for Setting Marketing Objectives

1. Examine the strategic plan and marketing policy of the parent organization to determine the sectors to be targeted, the customer groups to be served and goals to be achieved.
2. Examine the summary of the SWOT analysis to identify opportunities which may be explored either alone or in collaboration with other divisions in the parent organization.
3. Determine the products and services to be offered for which the unit has the capability and the resources—based on the results of the customer analysis, including user survey and the SWOT analysis.
4. Examine the operational plan of the information centre to determine goals—financial goals or developmental goals which have been assigned.
5. Review reports and analyses of services provided for the previous year to determine variances from, and the reason for non-achievement of goals.

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6. Take these variances into consideration when setting new objectives to avoid unrealistic expectations.
7. Assess physical, financial and human resources available for the achievement of objectives.
8. Set realistic objectives based on resources available/likely to be available.

3.2 Guidelines for Conducting Portfolio Analysis

1. Assess the potential market opportunity for each product/service offered by the library/information centre. Classify it as high, moderate, or low.
2. Assess the current performance of the product/service and classify it as strong, moderate or weak.
3. Generate strategic options including introduction of new products/services for each product/service-market (see Table 3.6).
4. Cross check feasible options for ability to take care of Critical Success Factors (CSFs).

3.3 Guidelines for Identifying Critical Success Factors

1. Involve all groups responsible for the development and marketing of identified products/services.
2. In a discussion session, review marketing objectives which have been set for the information centre.
3. Ask each group to identify specific resource items which must be available, or specific tasks which must be done, to meet objectives or goals.
4. In a group session, review the items or tasks to confirm and agree on the degree of importance attached to them, i.e., how critical is the item or task to the achievement of the group's marketing goals.
5. Eliminate duplicate CSFs identified by groups and merge the remaining items and tasks to produce CSFs for the information centre as an entity.

3.4 Guidelines for Selecting Marketing Strategy

1. Examine the information centre's broad marketing objectives.
2. Determine for each marketing objective, the major direction in which it is most likely to succeed—given the resources available.
3. Involve all staff responsible for product/services; this should not be a top-down process.
4. Understand the characteristics of the customers in the market.
5. If customers differ significantly on key characteristics, segment the market. Refer to the section on buyer characteristics for an illustrative list of characteristics.
6. Choose segment(s) which are (i) of significant size, (ii) growing, (iii) not having severe competition, and (iv) consistent with the information centre's resources for achieving the objectives set.

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7. For the market (or chosen segments as the case may be) identify the key criteria which customers use/could use for making a choice between competing offers.
8. Identify those criteria/dimensions which are important to customer for making the choice and on which your offer is superior to competitors.
9. Further narrow down the criteria/dimensions on the basis of whether you can communicate the same to the customers, effectively.
10. Choose one/more of the dimensions identified to position your product depending on cost vs. benefit offered.
11. Check whether the CSFs can be taken care of by the currently available resources or by acquiring new resources.
12. The objectives, the positioning, the CSFs and the resources of the library/information unit should match with each other.

The process of formulating marketing strategies is an important one. Subsequent actions arising from the strategy can lead to the success or failure of the entire marketing plan. The outcome of the strategy planning process should be clear and unambiguous for implementation. Cross check the above steps.

4. Guidelines for Preparing Marketing Plan

4.1 Marketing Plan for a Specific Product/Service

1. All the analyses which were completed in the afore-mentioned sections provide guidance for the development of a marketing mix for each product and service.
2. The product or service should be defined as clearly as possible to allow marketing staff, clients or the CEO or Director of the organization to identify and understand what is being provided.
3. Identification of distinguishing features, when compared with similar services offered by competitors, will assist
   — the communications specialist in preparing suitable promotional material, and
   — the marketing staff in convincing clients to use the service.
4. Segment clientele according to homogeneous characteristics. These characteristics may depend on the broad target group being served by the information centre. For example
   — In an academic environment, characteristics may include course offerings, degree programmes (undergraduate, graduate, etc.), campus location (if there are several campuses) in different geographical areas.
   — In an industrial environment, characteristics may include economic goals (e.g., exporters), geographical location (e.g., industrial estates), work responsibility (e.g., CEO's middle managers).
   — In public service sector environment, one may want to segment clientele according to age groups (e.g., adult, children, young adults) or income groups.

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5. Establish benefits to enable the marketing staff, the information specialists and the communication specialists to portray or sell the service, based on these benefits, to the clients in different segments.
6. Determine the competitive advantages and disadvantages of the service in comparison with major competitors.
7. In some cases it will be advantageous to market the service jointly with identified partners. For example, in an industrial information centre, this could be done by jointly establishing a presence with other government agencies on an industrial estate.
8. Where information services are not provided free of charge to clients, pricing is an important consideration. There are several issues which warrant consideration; these are identified as follows:
   - — The desired image which should be portrayed, e.g. leader in the field, quality, knowledgeable in sourcing information.
   - — The type of incentive policy for motivating clients to buy specific services, e.g. introductory rates for new products.
   - — Strategy in relation to competitors, e.g. setting your prices lower than those of competitors, establishing the centre as a leader in quality for which a price, higher than that of the closest competitor may be in order.
   - — Possible reactions from competitors, e.g. price war, heavy programme of advertising.
9. In addition to the above elements, the following strategies are usually taken into consideration when making a decision on the level of fees for services:
   - — Costs (including marketing costs) for providing the service.
   - — The market demand.
   - — Competitor's products and services on the market.
10. A promotional mix is necessary for each product and if the target groups are distinctly different, a promotional mix will be necessary for each target group as well. The promotional mix, which is implemented, should be based on the results of past experiences, e.g. which promotional and advertising programmes achieved the targets which were set. If there is no experience on which to build, then there would be no guarantees that the promotional mix will yield specific results. This information will have to be compiled and monitored on an ongoing basis by the information centre. Although there may be established guidelines used by advertising companies, these may not be applicable to the specific information product and target group.

In some cases marketing policies will provide guidelines on pricing, as in the case of TIC. In others, it will be necessary to explore pricing mechanisms within the organization, based on information contained in the marketing audit. Approval on the approach will need to be obtained from the top management in the establishment of institutional standards.

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4.2 Marketing Plan for a Library/Information Centre

1. Consult the parent organization's policy documents.
2. Consult the unit's SWOT analysis.
3. Examine marketing objectives for the information centre.
4. Examine the centre's marketing strategy statements.
5. Examine the costs of the centre.
6. Obtain inputs from staff and leaders responsible for the development and marketing of each product/service.
7. Examine objectives, strategies, CSFs and resources of the centre for fittingness and complimentarity with each other.

5. Guidelines for Implementation and Control

5.1 Guidelines for Preparing Budget

1. Involve senior staff in the preparation of the centre's budget. This approach builds commitment from staff and contributes to the attainment of targets.
2. Preparation of the budget requires the manager to forecast income and expenses for the year ahead. The manager will need to take into account the performance of previous years and any external or internal factors, which can affect performance in the coming year. Therefore, proper records and a system for monitoring the operating environment are essential. The creation and management of a clientele management database is useful for maintaining records of interactions with clients, e.g. contracts, proposals and visits.
3. Managers of new information centres will not have established a series of records for use in the budgeting process. In such cases, two sources can provide useful input—the feasibility study for the establishment of the service and other information managers in similar parent organizations.
4. Conduct cost-volume-profit analysis to establish sales/income goals. These can be used for preparing expenditure budgets.

From a management standpoint, it will be extremely useful for the information manager to prepare monthly income statements (using the annual budget as a base). In this way, actual performance can be compared with the projected monthly income statement and remedial measures adopted before a crisis develops.

5.2 Guidelines for Preparing Implementation Plan

1. Consult the following information:
   — Critical success factors.
   — Marketing strategies to accomplish each objective.
   — Marketing mix and promotional mix for each product or service.
   — Cost–Volume–Profit analysis.

   In many ways cross-checking of these elements, at each stage, ensures that the resulting marketing plan is a cohesive one.

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2. In the promotional mix, carefully plan and sustain efforts over a period of time. Advertising research has indicated that, generally, one needs to make approximately six impressions on potential clients before 60% of them are likely to be aware of who you are and what you do; they are then in a better position to make a decision to buy the service.
3. Prepare the promotional mix plan on the basis of costs and benefits of each activity. If the information centre has an already established marketing programme, the following data should be available: Costs of previous marketing activities and the benefits yielded by various promotional mechanisms. This information could be used to determine which promotional mechanism will yield the desired results in the particular environment and, therefore, influence the promotional mix, and hence the cost. If there is no such data, the formulation of the budget will have to depend on best estimates and be readjusted as the results are monitored for each promotional programme.
4. An action plan must be prepared for each product or service and for the information centre as well. This action plan should also include the responsibilities for each staff member in the marketing process.

5.3 Guidelines for Preparing Evaluation and Control Plan

1. To closely monitor progress, it will be necessary to set a monthly reporting schedule on income earned, contracts committed and proposals prepared. The information centre, as part of the organization, will need to follow the format and reporting procedures within the organization. However, to meet these organizational requirements the information centre may need to establish its internal control systems, to monitor progress. For example, if the organization requires a quarterly reporting schedule, it will be desirable for the information manager to build in a monthly reporting system among staff members. This step will allow the manager to make adjustments before the quarterly report is due.
2. Every effort should be made to encourage users to complete response cards as an assessment of the product or service provided. It may necessitate several telephone calls and promotional programmes but each client feedback is essential.

6. Guidelines for Preparation of the Plan

1. Prepare an executive summary.
2. Prepare a table of contents which should include the following headings:
    - Situational Analysis and SWOT
    - Objectives
    - Target Segment
    - Position

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Service/Product
Pricing
Promotion
Distribution
Partners
Criteria for Evaluation
Projected Income

3. Include forms and charts which will be used by the information centre in the implementation and monitoring of the plan.
4. Prepare a cover, the layout of which will clearly identify the product or service and the information centre. In some cases, the organization will already have a standard format for the packaging of such corporate documents.

REFERENCES

1. Coltman, Michael M., *Understanding and Managing Financial Matters: The Non-Financial Manager's Guide*, Self-Counsel Business Series, 1993.
2. Galvin, Carol, Keiser, Barbie, 'A Market-Driven Approach for the Library/Information Centre, *FID Bulletin*, Vol. 44, Issue 1, January 1994.
3. Gerson, Richard F., *Writing and Implementing a Marketing Plan*, Crisp Publication, Los Altos, California, 1991.
4. Gumbs, Barbara, 'Information Management for Marketing a Consulting R&D Organisation: The Role of the Technology Information Service', *Consultancy on Strategic Information Planning*, Edited by Zdravka Pejova and Forest W. Horton, International Centre for Public Enterprise in Developing Countries, Ljubljana, 1993.
5. Gumbs, Barbora, 'Understanding the Target Market: A CARIRI Case Study,' Prepared for a Workshop on Marketing of Information held at the Indian Institute of Management, Ahmedabad, India. February 14-17, 1994.
6. Herget, Josef, 'Concepts of Success Factor Based Consulting Tools for Information Management', *Consultancy on Strategic Information Planning*, Edited by Zdravka Pejova and Forest W. Horton, International Centre for Public Enterprises in Developing Countries, Ljubljana, 1993.

7. Johnston, Karen, Withers, Jean, 'Selling Strategies for Service Businesses: How to Sell What You Can't See, Taste or Touch', *Self-Counsel Business Services*, International Self-Counsel Press Limited, British Columbia, 1989.
8. Kotler, Philip, Andreasen, Alan, *Strategic Marketing for Non-Profit Organisations*, 4th Edition, Prentice-Hall, Englewood Cliffs, NJ, 1991.
9. McDonald, Malcolm H B, *Marketing Plans: How to Prepare Them: How to Use Them*.
10. Neelameghan, A., *Information Systems and Services for Small and Medium Scale Industries in Developing Countries*, Edited by B. Gumbs, UNESCO, Port of Spain, 1994.
11. Shaw, Robert, Stone, Merlin, *Database Marketing*, Hants, England: Gower, 1988.
12. Sterngold, Arthur, 'Marketing for Special Libraries and Information Centres: The Positioning Process,' *Special Libraries*, Vol. 73, Issue 4, October 1982.
13. UNESCO, *Regional Workshop on Marketing of Information Services*, Proceedings edited by Bryan Yates, Held in Canberra, Melbourne, Ruskin Press, 1983.
14. Wood, Douglas, 'Improving Your Image: How to Promote a Library or Information Service,' *Aslib Proceedings*, Vol. 36, Issue 10, October 1984.

CHAPTER 4

How to Plan Information Products and Services Policy

■ *Abraham Koshy*

INTRODUCTION

One of the most critical activities of any organization is to carefully plan its 'offer' to consumers. For an organization like a library or an information centre, different services (like referencing, lending of books and periodicals) constitute the fundamental part of the 'offer'. If we do not plan this basic part of the offer properly, then no amount of effort in planning other elements of the offer such as pricing, distribution systems and promotion can help in satisfying the needs of the target customers. In this chapter, we discuss the process of planning products and services policy. But, before we elaborate the steps involved in planning product/services, we need to understand the meaning of a product in the context of marketing.

What is a Product

The term product refers to a tangible or physical product (e.g. a car, toilet soap, CD-ROM containing information) as well as an intangible service (e.g. insurance, bank deposit schemes). However, from a marketing point of view, we need to see products from a different perspective. Kotler (1994) has defined product as 'anything that can be offered to a market for attention, acquisition, use or consumption that might satisfy a want or a need.' Levitt (1991) notes, 'To a potential buyer, a product is a complex cluster of value satisfactions.... Customers attach value to a product in proportion to its perceived ability to help solve their problems or meet their needs.'

From a managerial point of view, a product consists of the following three components (Kotler, 1988):

- ***Attributes that the Product or Service Contains***
  These are basic characteristics of a product/service which include features, styling, quality levels, brand name, packaging, size variants, etc. For information products, aspects like content, number of journals covered, extensiveness and exhaustiveness of information provided, are examples of product attributes. For a 'lending service' offered by a library, the number of books that a client can borrow, the period for renewing the book, the penalty for exceeding the renewal date, etc. are the attributes of the service.

- ***Benefits that the Product or Service Offers***
  These are what consumers derive from the product. Each of the elements mentioned as a product attribute, by itself, does not have a meaning unless it either individually or collectively, offers some benefits to the customers. For example, in the context of an information product, say, a reference periodical, attributes such as the method or type of categories followed for indexing of the articles covered, number of journals scanned for the periodical, and nature of technology used—CD-ROM vs. print vs. on-line—together provide the benefit of easy and quick reference of the latest research in that particular field. Therefore, product attributes, though independent, are inter-woven with product benefits. Sometimes, very intangible features, like brand image, by themselves can provide benefits of prestige or exclusivity to consumers.

- ***Marketing Support Services***
  These include delivery, guarantees, after sales service, etc. In fact, no product is complete without support services, although its level may vary depending on the nature of the product/service. For example, a product like an automobile or a consumer durable will require a strong after sales service, whereas, a product like toilet soap does not require any after sales service. In the context of information products, for example supplying the full text of an article which is requested on the perusal of an index of articles (product) could be a major support service to the product.

In summary, product is an object of exchange for delivering value satisfaction to a customer by providing a bundle of benefits through physical and non-physical attributes and other marketing support elements. Although we use the term product to connote both a physical product (a CD-ROM based reference source) as well as services (lending service, photocopying service), we need to understand the difference between them to better appreciate, the method of planning products and services. In Appendix 4.1 given at the end of this chapter, we describe the major differences between products and services and outline the marketing implications of the characteristics of services.

Why Plan Products and Services

All of us know that planning is an important managerial function. However, beyond the well accepted conceptual notion of planning, from a practical point of view, the need for product planning arises due to the following reasons:

- ***Changes in Customer Needs***
  Customer needs and requirements can undergo changes over a period of time. Consider, for example, an information product which provides abstracts of research publications indexed according to specific sub-topics made available in print form. Over a period of time, the type of categories followed for indexing abstracts may become

somewhat irrelevant due to the nature of research work being carried in that particular field. Or, the number and type of journals used by the target customers for their purposes may change. Or, the clients may like to change the periodicity of the publication from say, a quarterly publication to a monthly publication and so on. In other words, changes in customer requirements may necessitate that appropriate changes be made in our offer to the customers.

- ***Changes in Customer Profile***

  Sometimes, due to various external factors like education levels, type of courses offered to the student community, etc. the profile of customers who have been using our products and services may undergo a change. For example, due to a higher exposure to management education, interest in research publications is no more confined to the academic community. Many practising managers take an active interest in keeping themselves abreast with the latest developments in the various fields of management. Therefore, if we have an information product primarily targeted at the academic community, and if there is a shift in the composition of our customer group towards practising managers, then we need to verify and confirm as to what changes or modifications are needed in our product to suit the requirements of the new client group.

- ***Changes in Competitors Products/Services***

  Improved products and services offered by competitors can render our product less attractive to our client group.

- ***Changes in Technology***

  Technological changes can have a significant impact on the relevance of many existing information products. Due to a major explosion of electronic media, several traditional information products in non-electronic format have become outdated. For example, a publication which contains abstract of important articles, in a particular field, may be preferred more in electronic format than in print media, provided the user has access to read the same using computers. Again, such changes in technology need to be absorbed by our products through a proper planning system.

In summary, changes in customer requirements, customer profile, competitive offerings and technology force us to plan our products and services in a systematic manner. In this chapter, we discuss the process and steps involved in planning product and service policy. We begin the discussion on these aspects by specifying the unit of planning in the context of product and services and then by describing two key concepts relating to their management, namely product life cycle and product positioning. Subsequently, we describe three steps in product planning, i.e. review and diagnosis of the current situation, deciding on objectives and formulating product/service policy.

Unit of Planning

There are four levels of aggregation of product for which planning can be done. These are product item, brand, product line, and product mix. We describe each of these terms.

Product item refers to the individual products that an organisation offers to customers. For example, a monthly magazine for HRD professionals entitled '*HRD Communique*' published by Infuse Inc. is a product item (Vijayavargiya, 1995). This product contains a list of articles and papers, along with their abstracts, dealing with topics which are interesting and useful for HRD practices and is published in print form. Hence, a product item delivers need satisfaction (concepts/information/tips useful for HRD practices) through a specific technology (print publication) for a sharply defined group of customers (HRD professionals).

Brand is the specific, identifiable name of the product item. In the above illustration, 'HRD Communique' is the brand name of the product.

Product line can be viewed as an aggregation of different product items that are similar. The problem arises with regard to the definition of what is similar. One author's definition product line is 'a broad group of products intended for essentially similar use and possessing reasonably similar physical characteristics, constitute a product line' (Stanton et al, 1991). Another author has defined product line as 'a group of products closely related because they function in a similar manner, are sold to the same customer group, are marketed through the same type of outlets, or fall within the same price range' (Kotler, 1994).

The above definitions view a product line to be an aggregation of products which are similar due to commonality of physical characteristics, distribution system, usage function, technology or customer group served. Although conceptualization of product line in this manner is useful for a broad understanding, it has limitations when we address issues relating to product planning. From a marketing management point of view, therefore, we need to view product lines as an *aggregation of individual product items addressing similar needs of a defined target group of customers.* Thus, when individual product items address specific needs of a more narrowly defined target group of customers, a product line addresses a broader, but similar need of a more broadly defined target group. Consider for example, the various product items of an information marketing company described by Vijayavargiya (1995). This company markets information products such as HRD Communique, Organization Communique, Organization Communique Thematic Package, etc. All these individual product items address specific needs of a well defined and specific target group of customers. But at the same time, all the products are targeted at managers whose need is to obtain relevant and useful information on management practices in a summarized form. It may be noted, that some of the products in this illustration are in electronic format and others in print format. All these products together constitute the product line which addresses the information needs of managers.

In summary, a product line is constituted by different product items of the organization, which collectively address a need arena of a defined set of customers. Commonality of product form, technology or distribution channel may be important, but they are less critical while carrying out product planning and for deciding strategies. The marketing view of product line is the customer angle. All other aspects like technology or distribution system are only means of achieving customer need satisfaction.

Product Mix refers to the aggregate of product lines and product items of an organization. An organization can have more than one product line (information products for managers, information products for researchers in management, information products for scientists, etc.) and each product line can have more than one product item. The combination of product lines and items constitutes the product mix. In a more technical sense, product mix indicates the choice of markets to serve and the means of serving these chosen markets by the firm.

In order to understand all the terms, let us consider a hypothetical example. Let us assume (for the sake of simplicity) that an information centre attached to a management institute has two product lines. The first line consists of quarterly publications targeted at practising managers in functional areas such as marketing, manufacturing, finance, human resources and general management. Each of these publications contain abstracts of articles which gives tips, suggestions and innovative practices useful for practitioners in their respective fields. Brand names of these publications are '*Digest for Marketing Managers*', '*Digest for Finance Managers*', and so on and the line is called 'Digest Series for Practising Managers'. The second product line is called 'Abstract Series for Management Researchers'. This line consists of five quarterly publications targeted at researchers in functional areas like marketing, finance, etc. mentioned above. Each of these publications contain abstracts of research papers which emphasize the research methodology and findings, classified into sub topics, relevant for respective fields. Therefore, abstracts of articles in marketing, useful for the marketing manager, is a *product item*, 'Digest for Marketing Manager' is the *brand* and it forms part of the digest series for practising managers—the *product line.* All the ten products put together, constitute *product mix* of this organisation.

KEY CONCEPTS IN MANAGING PRODUCTS AND SERVICES

There are two key concepts which are very important for the purpose of planning products and services. They are (a) Product Life Cycle (PLC) and (b) Product Positioning. These two concepts provide vital inputs for planning because they capture the dynamics of market competition and consumer needs. We discuss these concepts in this section.

Product Life Cycle (PLC)

Why Analyse PLC?

Analysis of Product Life Cycle is an important step in the product planning process. This is because, the information manager has to take several decisions with respect to the various products/ services. Some of these important decisions include the following:

- Should we enter this market? For example, should we enter the market for information products, say abstract series in management in CD-ROM form?
- Should we invest in developing capabilities to produce, market, and develop a sufficiently large customer base now, or should we wait? For example, developing a CD-ROM in multimedia format needs considerable expertise and equipments. Moreover, potential customers need to be contacted and awareness needs to be created. Those who have facilities to read CD-ROM records should be motivated to try our product and buy it repeatedly. All these require considerable efforts and costs.
- Should we invest time and effort in conducting research to find out what modifications are required in the product and later, implement the modifications? For example, if a product, say, index series in management, is not doing well, then should we find out from the customers (present, past) as to what changes should be made in the product and later, carry out these changes?

- What should be the thrust of our strategy? Should we say, spend money and effort in popularising the product more, or quietly withdraw the product? Should we differentiate our product or service more sharply from the competing offers?

The above decisions can benefit a great deal by inputs from product life cycle analysis.

What is PLC

Product Life Cycle (PLC) concept suggests that the history of demand of a product or a service, over a long period of time, can be divided into four distinct stages. These distinct stages are introductory stage, growth stage, maturity stage and decline stage. The PLC is shaped by changes in customer preferences, technological changes and competition. During each of these stages, market characteristics will vary. The thrust of the strategy would depend on the stage of PLC. The concept of Product Life Cycle should not be confused with 'shelf life' of a product. Shelf life connotes the perishability of the product whereas product life cycle refers to the variations in the customer preference for a product or service, in relation to alternative or substitute products and services. We will explain the concept of PLC later with an illustration.

Stages of PLC

Assume that an information centre has decided to launch an information capsule in a floppy disc format, useful for small and medium enterprise managers (SME). This publication is to be on a quarterly basis. Let us assess various stages in PLC of this product.

- ***Introductory Phase***

  Assuming that no other competing publication, in floppy form, is available for SME during this phase, consumers satisfy their needs through other means like printed publications. Competition during this stage is not directly with another floppy based product and is called generic competition. Customers are likely to be unaware of the product which has been introduced. Considerable efforts would be needed in publicising the product among managers of SME for creating awareness and trial of the product, as well as for its distribution. The objective, therefore, is to create awareness and induce trial about the new product/service. Costs of both producing and marketing will be high. Subscription will be low compared to the efforts. Profits or surplus, therefore, will be negative or negligible.

- ***Growth Stage***

  During this stage, subscription level starts increasing rapidly. More number of SME managers become aware and interested in the publication. Average per unit cost of the product declines as volume increases and hence, profits or surplus too increase. This is the time when competitors start offering either me-too products or marginally differentiated ones. The objective at this stage is to maximise the market share because it is easy to gain this in the growth phase and this translates into an advantage at later stages. There is a need to add new attributes/features to the product, reduce price, build an extensive distribution network, and continue with publicity and promotional efforts to sustain growth. Hence, the surpluses generated may be needed for re-investing in the growth of the product by building both the production and marketing capabilities.

- ***Maturity Phase***

  Subscription level attains a peak during this phase. Most of the potential customers use any one of the competing publications offering similar benefits. This is also the phase which generates net surplus, not only because average cost per unit is low as the volumes are high, but also because we don't need to spend large amounts of money to increase sales. Increasing sales or market share during this phase can be possible only by taking this share from the competitors because the market itself will not be growing.

The objective here will be to maximise profits without sacrificing sales volume or market share. It is during this phase that clients start feeling the need for more 'customised' products which address their special needs more sharply. Therefore, more market opportunities arise for introducing product variants as well as new products. For example, publication containing information on import trends of specific industries in various countries useful for export managers, giving a detailed coverage of policy of various countries regarding import and export, etc. will be more preferred than a general information product for small and medium enterprise managers. Highly differentiated products emerge during this phase as a response to sharper recognition of needs by clients. Price of our products should match competitors' products during this phase. Efforts in publicity and promotion should be to stress our products differential advantages, and to motivate clients to switch from competitors publications to our publications.

- ***Decline Phase***

  This is the phase where the total demand for the product or services that offer similar benefits in similar form, like the floppy format of the specific information capsule for SMEs, decline. This decline is hastened by technological innovation. In our example, when the same information that we are providing through our publication in floppy disc format is made available on on-line basis and a larger number of clients prefer information on on-line, then the demand for our product reduces. Likewise when a larger number of customers prefer 'customised' information rather than general information, the demand for the product declines. Thus, factors like technological changes and changes in customer preferences induce decline in demand for a product or a service.

Although during decline phase, the cost per unit of the product reduces, total profits decline as a result of reduced sales/demand. Broadly, the strategic thrust during this phase is to reduce expenses and maximise profits. Prices may need to be cut during this phase and expenses on publicity and promotion reduced, to meet the competition. Alternatively, serious thought may have to be given to drop the products which cannot provide adequate financial returns to the organization and/or services to the customers. The organization will have to seriously work towards introducing new products and adjusting existing offers to suit the changing market conditions.

Factors underlying PLC

It should be noted that Product Life Cycle does not refer to the growth pattern of individual brands (e.g., brands like 'HRD communique' in print form). This is because the demand pattern for individual brands is greatly influenced by our own actions. For example, if the brand is designed badly, or if there is insufficient publicity and promotional thrust, then sales will decline irrespective of whether there is a need for such a product or not.

PLC, therefore, always refer to the changing pattern of the need of a specified customer group being met by a specific application of technology, or means of satisfying the need. In other words, a 'product' for life cycle analysis consists of the following:

- *A defined group of customers* whose need we are referring to in the context of PLC. For example, managers of export oriented small and medium enterprises is a defined customer segment.
- *The specific need* we are addressing with respect to the defined customer segment. For example, need for information on export opportunities and policies relevant for small and medium enterprises would be the definition of need in this context.
- *Means of satisfying the need* for the defined group. For example, how is this need for information on export opportunities and policies of SME managers met? Is it through a quarterly print publication on market conditions and policies of various countries? Or is it through a publication in electronic format containing the same information? Or is it through an on-line supply of

information in electronic format? Or is it through customised supply of information relevant for a particular industry, say, leather, chemical, textiles and so on? In other words, the technology or means used to address the need of a defined customer group is another relevant factor influencing PLC.

When we analyze PLC, we need to recognize these three key factors which influence PLC pattern, namely, customer group, their need and the means of addressing the need.

The pattern of PLC that we discussed tends to get influenced by changes in any one, or all, of these three factors. For example, instead of small and medium enterprises, large companies too may become keen to obtain similar information, resulting in the expansion of customer group definition. Or, increasing number of clients will demand customized on-line availability of information. Or, more number of customers will become interested in information relating only to their specific industries. It is, therefore, important for us to keep a close watch on these three key factors, which have short-term as well as long-term implications for our decisions concerning product/services.

Implications of Stages of PLC for Marketing Strategy

As noted earlier, the strategic thrust depends on the current stage of product/service in PLC. The following guidelines will be useful in deciding when to enter a new market, and what should be the marketing strategies in different stages of the PLC.

- ***Entering a market through new product/service introduction***

  Introductory phase or growth phase are the ideal points to enter a market. But we should introduce a product in the introductory phase of PLC only if we have resources to build a market. For example, should we enter the information product-market with a CD-ROM based information product now, or should we wait for some more time? This is because it will take some time before such a product gets accepted in the market. Sufficiently large number of customers need to have equipments to read CD-ROMs. If we do not have sufficient resources, then it is better to wait till some others develop market before we introduce our product.

It is easy to enter and succeed in a growth market with a new product, provided our product is sufficiently superior and attractive. During maturity phase, we need to be cautious to enter the market with a new product or service, because the size of the market will be limited. In a mature market, we should be prepared to play a 'niche marketing game'; that is, find out a specialised need segment and offer a specialised product or service. For example, information on export marketing opportunities and policies for textile industry, will be a narrow specialised segment (niche). Volume of subscription may be limited in such markets, but margins may be attractive. Do not enter a market which is declining, because we may not get sufficient sales on a sustained basis.

- ***Decide on strategic direction based on PLC analysis***

  Guidelines for marketing plans in different stages of PLC are as follows:

- *Introductory Phase:* Create awareness about the product or service we are offering and induce trial. Closely monitor the quality of product/service as assessed by the customers.
- *Growth Phase:* Maximise volumes and market share. Price the product or service to obtain maximum penetration in the market. Promote and publicise to generate interest among a larger number of customers, to subscribe to the product/service. Monitor competitors products or services closely and assess what improvements our product/service should have.
- *Maturity Phase:* Maximise profit. Spend efforts in promotion and publicity only to maintain a subscription base or market share. Monitor customer requirements closely and carefully assess opportunities for product/service modifications and new product/service introductions.
- *Decline Phase:* Try to generate as much surplus as possible. Withhold all additional investments on this product. Identify profitable niches in the market to continue for some more time. Decide which products/service lines need to be withdrawn based on profitability analysis.

How to Use PLC

For effectively using the concept of PLC for product and service policy, it is necessary to follow a systematic procedure. To begin with, you should define the product-market for the product/ sevice under consideration. This, as explained earlier, could be done by identifying the three dimensions of the product-market namely, customer group whose needs are to be satisfied, the needs to be satisfied and the means of satisfying the needs. Next, you should assess the past and current total demand for the particular product-market. This should be followed by an assessment of the total potential demand. This demand would be reached fully, or partially, through the creation of actual demand. Thus, the next step is to assess the pattern of future demand. For assessing this, it would be useful to understand the likely changes in the three parameters of product-market. Also, keep a close watch not only in the pattern of sales of our product/services and product lines, but also on the trend in the 'industry' for a particular product form which addresses specific requirements of a defined customer group. For example, what is the trend in demand for a print publication containing abstracts of research articles useful to managers? The net customer value of your product form compared to that of a competing product form, would determine the extent of realisable potential.

For collecting the information to analyse PLC, discussions with customers through in-depth interviews, or focus groups, are a very important means of obtaining information on needs and the technological preferences of customers. Information on usage pattern, discussed in the section on review of current situation, is a very useful diagnostic input to understand these changes and preferences.

The output of the above exercise would be an assessment of the present and future pattern of demand. A graphical depiction of the pattern of demand would instantly reveal the stage of the product-market in the PLC. This is an important information for our decisions. Is the product life cycle in the introductory stage or growth or maturity stage?

For example, CD-ROM based information packages are clearly in the initial phase of the introductory stage in India. Information package in floppy disc format is in-between the introductory and the growth phase in India. Information package, especially abstracts or listing of articles, in print form is in maturity or even in decline phase in many countries.

PLC analysis provide valuable inputs for product planning. Based on the analysis, review and diagnosis of the current situation, we need to decide on the action points.

Positioning Products and Services

What Is Positioning

The next important concept useful for product planning is 'Positioning'. From a marketing perspective, as we discussed in the beginning of this chapter, a product is not a set of physical characteristics or the technology applied to produce it. On the contrary, a product is what the customer perceives it to be. This perception of the product, or a brand, by customers with respect to other competing brands/products and with respect to their needs is what is termed as product position. For example, a toilet soap which is green in colour and has lime fragrance can be positioned as a 'freshness' soap. The same toilet soap can be positioned as a 'deodorant' or a 'complexion' soap. Likewise, an information product containing information on 'endangered species of animals' can be positioned as an 'infortainment product for children' or it can be positioned as an 'information product' for adults.

Positioning of a product or a service, therefore, implies (a) deciding which segments of the market should our product or service appeal to (b) what key benefits or attributes do we want to highlight in our product or service and (c) how are the benefits/attributes that our product or service offers different from, or similar to, other competing offers. It may be noted that the organization (library or an information centre) which markets the product or a service, communicates the position it has to occupy in the minds of the clients through various marketing mix elements such as design of product/service, price/subscription rate, mode of delivery of the product and advertisements or other forms of communication to the clients.

A product has the option of being positioned in more than one way. Let us elaborate this point with an illustration taken from the chapter on 'How to Prepare a Marketing Plan'. In this chapter, a hypothetical example of a marketing plan of the Technology Information Centre (TIC) is illustrated. One of the three products for which a marketing plan was illustrated relates to a service termed as the Technical Enquiry Service (TES) (see Box 4.1). As would be obvious from the illustration, product position is constituted by the following three elements:

- *Target group definition*—Positioning is always with respect to a specified target group. Therefore define the target group.
- *Define what the product or service does for the customer*—Here we need to highlight what specific benefit or benefits we want to highlight. A product may provide several benefits to customers and may have several characteristics or attributes. But for positioning, we would like to highlight only some unique strengths of our product or service.
- *Discern how the unique benefits of our product or services make it similar, or different, from other competing products or services.* Customers always compare the benefits or attributes of our offer vis-a-vis other competing offers. For example, if an information product is available in electronic format and even if there are no other competing brands which are similar, customers will compare this new product against other products/services which address the same need like indices and abstracts in print media.

There are three major issues that we need to clarify in positioning or re-positioning decisions. They are:

- Should we position our product/service? What are the advantages?
- What are the different positioning options available?
- How do we decide on positioning or re-positioning?

BOX 4.1

Example on Product Positioning

The Technical Enquiry Service (TES), whose marketing plan was described in Chapter 3, is defined as 'providing data and information to address operational problems encountered by exporters in food processing and industrial chemical sector'.

The positioning statement of this service is as follows:

> TES will be projected as a service which results in saving time and cost for the customer by timely delivery of information and access to practical advice when necessary.

We can note from the above description that the service product of TES is defined in terms of what it 'offers' to customers, namely, data and information to address operational problems of exporters in two specified industries. On the other hand, the positioning statement is defined in terms of what this service does for the customer, namely, saving in time and cost and providing better solutions to operational problems. This positioning statement also implies how this service will be different from other competing products or services (quick access to service, advice service). The same service product can also be positioned as 'an advisory service to operational problems of exporters in food processing and chemical service industries'. Here, we are highlighting only the advisory service which inevitably includes providing data and information. But at the same time, since the service will be perceived as an 'advisory' service, there is a possibility that it may appeal to potential entrepreneurs who are planning to enter these fields as well.

We will address the first two issues now. The third issue, namely, how to decide on positioning/repositioning is discussed in the section on steps in product/service planning.

What are the Advantages of Positioning Product/Service

It is important that we take a conscious decision of positioning because, if we do not consciously position our product or service, then customers, based on their own use experience and perceptions, will position the product in their minds. If this is the case, they might position it wrongly and then we would not have any control over it. Therefore, it is always better to decide on the position that our product/service is going to occupy in the mind of the customer and provide suggestive cues in the form of product or service design, packaging, branding, price, and other communication messages. More specifically, positioning offers the following benefits:

- Positioning helps in differentiating our products/services from those offered by competitors and in creating a separate identity for them.
- Positioning enables us to choose the type of customers we want to serve.
- Positioning helps in focusing more sharply on customer needs.
- Positioning offers opportunities to employ value pricing and thereby, generate more profits/surplus.

What are the Different Positioning Options Available

There are various approaches to positioning a product or a service. In Box 4.2, we describe the broad types of positioning options. Although various positioning options exist, it does not imply that we use only one option. Sometimes, we can combine two or three options as in the case of TES discussed earlier, where three options namely, attribute, benefit, and category positioning options were combined. However, the point to be emphasized is that positioning should be relevant from the customers' point of view and it should provide us with a better competitive advantage.

STEPS IN PLANNING PRODUCT/SERVICE POLICY

Having explained the key concepts in product/service planning in the earlier sections, we now discern the steps in planning product/service policy. Three major steps are discussed, namely, review and diagnosis of current situation, deciding on objectives and formulating and implementing strategy.

BOX 4.2

Different Positioning Options

Based on an analysis of various positioning strategies, seven positioning options have been identified (Aaker and Shanby, 1982). They are:

- *Attribute positioning*: This approach highlights specific attributes or characteristics of the product. For example, Technical Enquiry Service can be positioned as a service which provides data/information on the export opportunities and policies of various countries.
- *Benefit positioning*: Here we highlight the unique benefits that our product or services offer. For example, TES can be positioned by highlighting it as a quick and cheaper information service.
- *Use/Application positioning*: In this option, we are highlighting the specific application or use of our product/service. For example, TES can be positioned as a service to solve operational problems of exporters.
- *User positioning*: Here we are defining positioning through a user category. For example, TES can be positioned as a service for exporters pursuing an aggressive growth strategy.
- *Product category positioning*: Under this option, we can position a product/service with respect to a product class. For example, TES can be positioned as an 'information service' or an 'advisory service'.
- *Quality/Price positioning*: Here the product/service is positioned with respect to the value it offers to customers. For example, TES can be positioned as a 'cost saving' information service.
- *Competitor positioning*: Product service can be positioned against a competitor by highlighting superiority or uniqueness of our product/service vis-a-vis competing offers. For example, TES can be positioned as a service which provides the most comprehensive information on export opportunities than any competing services.

Review and Diagnosis of the Current Situation of Product/Service

The first step in product planning is to review the current situation with respect to each product or service, product line and overall product mix. The basic purpose of the review process is to assess the current performance and to identify specific aspects that require improvements. This process of review, therefore, is a diagnostic exercise.

There are two issues that we need to understand in the review process. The first question relates to the dimensions on which review can be done and the second question relates to the sources and methods of obtaining data for review purposes.

Parameters for Review

Review of products/services starts with an evaluation of the individual product items. This evaluation can be on the following parameters.

Performance Indicators This refers to the end results of our efforts and are measured by the two key parameters, i.e. volume of business generated and profitability, and any other set for the product/product line/product mix in line with overall objectives.

- Volume of 'Business' generated:
  - What are the number of clients using the product/ service, or number of copies of the publication sold?
  - Do the number of clients using the service, or revenue generated, meet the objectives we have set for this product?
  - What is the total revenue generated/subscription for this product (in monetary terms)?
  - What is the percentage of revenue or subscription from this product/service in the total revenue generated by the library/information centre?
- Profitability:
  - What is the total cost of offering the product/service?
  - What is the gross contribution/surplus we have generated?
  - What is the net surplus after all the expenses relating to this product/service have been deducted?
  - What is the proportion of surplus generated by this product/service in the total surplus of the library/ information centre?
  - Does the surplus generated meet the objectives we have set for ourselves?

It may be noted that some of the parameters mentioned above may not be relevant for all libraries or information centres. If our initial objective of a particular product or service was not necessarily profits or surplus, then cost and contribution figures will be sufficient to understand as to how well we are performing. This decision, that is, what specific parameters from the list are to be used needs to be decided in the context of a specific organization.

Evaluation of the Product/Service (Offer) Here we are reviewing performance from the 'input' side, that is, what we are offering to the customers/clients. This assessment is made from the point of view of the customers/clients and, therefore, the following aspects are important in this regard.

- How does the client system view the quality of our product or service?
- Does our product/service meet our customers' expectations?
- What is the evaluation of the physical attributes (size, appearance, packaging, etc.) of the product by the customers? If a service, then what is the assessment of the service (time taken for servicing, convenience, other relevant parameters of service) by the clients?
- How is the delivery system? Is the delivery system user friendly? Do the clients have difficulty in obtaining copies of our publication?
- Evaluation of price (value) of our product/service.

Aspects relating to inputs, as mentioned above, provide us with adequate information to diagnose the major problems/deficiencies which lead to poor output performance, say in terms of client usage, subscription level, level of revenue, etc.

Evaluation of Customer Needs The third dimension which we can review is the customer needs. Here we are making an assessment (or re-assessment) of customers' requirements. This includes aspects such as specific requirements of clients, their current acquisition and usage pattern with respect to our product/service as well as competitors' offers, other related products or service used by them for different purposes, and other products or services of interested customers.

Assessment of Competition The fourth important dimension to be assessed is the competition. It is here that the concept of Product Life Cycle (PLC) and Positioning become useful. For each product item as well as line, we need to assess the stage of PLC based on the guidelines discussed earlier. The stage of PLC will suggest the major type of competition faced. For example, during introductory stage, competition will be mainly generic in nature whereas during growth stage, competition will be from other products (product level competition). During maturity phase, competition will be from other brands and finally during decline stage, competition will again be generic in nature. Similarly, positioning analysis will indicate how customers perceive our offer vis-a-vis competing products and brands. Therefore, a review of the current situation should capture the competitive forces affecting our existing products and services. This will help us decide on the means of improving our existing offers as well as indicate directions for introducing new products and services.

Reviewing Performance of Product Line and Product Mix It may be noted that we have discussed up till now the review and diagnosis of current situation with respect to individual product or service item. We also need to carry out a similar exercise with respect to each product/service line and product/service mix as well. For this purpose, we can follow some of the dimensions for evaluation outlined earlier in the context of individual product/service items. However, we need to make appropriate modifications in the specific parameters because product/service line as well as product/service mix are higher levels of aggregation than individual product/service items. In Table 4.1, we have given specific parameters which are useful when we are evaluating the performance of product item, product line and product mix.

The parameters of evaluation explained in Table 4.1 provide inputs for diagnosis of current situation. The questions that are relevant at this juncture are: what are the sources of information

TABLE 4.1 **Specific Parameters for Reviewing Product Performance**

Individual Product Item level	*Product Line level*	*Product Mix level*
I *Performance Indicators*		
(a) Volume of business generated in units (No. of clients/subscribers) (b) Subscription revenue from membership fee (c) Growth in subscription/ membership (d) Proportion of subscription revenue or profits to total sales as well as to total business from the line	(a) Volume of business generated by the line (b) Growth in subscription revenue/fee from line (c) Total surplus or contribution generated by the product/service line	(a) Total volume of business generated by all products/services (b) Return on investment (that is surplus by investment)
II *Evaluation of Customer Needs*		
(a) Purchase/usage pattern (do customers purchase/use our product or service? If not, why?) (b) What needs/additional requirements have to be met by the same product or service? (c) Is there a need to "customise" the product or service?	(a) Are all the sub-segments within the broad segment covered by the product/service line? (b) What need/gaps exist within the line? What new products/ services can fill the need/ gap?	(a) Do the different product/service lines cover various segments? Is there any segment left uncovered? (b) Is there a need to delete a product/ service line? (c) Is there a need to add another line?
III *Evaluation of Competition*		
(a) What is the stage of PLC for the product? Who are the major competitors? (b) What is our customers' perception of our offer vis-a-vis that of competitors?	(a) Who are the competitors at product line level? (b) Do competitors have more products in different lines?	(a) Do we have adequate products to cover various segments when compared with competitors?

(Contd)

(c) Which are the aspects of our current offer that are weak vis-a-vis competitors?			
IV *Evaluation of Offer*			
(a) Evaluation of quality of the product/service	—		—
(b) Evaluation of physical attributes (packaging, appearance, service facilities, etc.)	—		—
(c) Evaluation of delivery system/price	—		—
(d) Do customers want the product to be in any other form (e.g. from print media to electronic media)? Do they want modifications in the service?		(a) Do the individual products or services meet the requirements of various segments?	—

to carry out evaluation of current performance and what is the methodology appropriate to gather relevant information.

Sources and Methods of Information

Information and inputs for evaluating the current situation come from primary as well as secondary sources. Table 4.2 gives the information requirements, the sources from where data can be obtained and the methodology for data collection.

From Table 4.2, we can observe that in addition to records maintained by the information centre (list of subscribers/members, etc.), customers are a major source of information regarding current performance. There are broadly two ways to collect information from customers. One is through informal discussions and detailed interviews (technically called depth interviews). Another approach relevant under this method is focus group discussions. (For details, refer the chapter on 'How to Conduct Marketing Research'). The second method of collecting information from the customers is through a survey.

How does one decide as to which method of data collection is appropriate? When we require factual information like opinions of customers or clients and where a majority opinion is important from the point of view of decision making (for example, number of people who use/do not use our service), then survey is the appropriate method of data collection. When we require information which emanates from feelings, thought process and such other deeper psychological processes and where statistically significant numbers are not important, depth interviews, informal discussions and focus groups will be relevant approaches for data collection. The various methods of information collection are dealt with in Chapter 8.

Diagnosis from Review of Current Situation

The basic purpose of conducting review of the current performance is to identify areas relating to products or services that require improvements. Therefore, the analysis we have suggested earlier should lead to a proper diagnosis and then to remedial action. For this purpose, we need to ask a series of questions based on the results of the review. In Table 4.3, we give a suggestive list of questions which can lead to identification of issues/aspects which need remedial action.

A series of questions similar to those suggested in Table 4.3 can be asked for a proper diagnosis of the current situation. As noted earlier, the quality of our diagnosis, that is, ability to pinpoint the 'causes' from the 'symptoms', depends on the analytical questions we ask. (For example, low subscription/membership, low surpluses, low growth, etc. could be symptoms caused by either low customer acceptance of our offer, high costs or low prices, etc.).

The review of the current situation and the diagnosis of problems that flow from it, lead to decisions concerning (a) existing products and services: that is, what changes/improvements/modifications should we carry out with respect to existing products and services and (b) introduction of new products/services: that is, what new products/services should we introduce. (Details of

TABLE 4.2 Sources of Information for Review of Current Situation

Information Requirement	*Sources*	*Methodology*
(a) Total membership/ subscription, profitability contribution of product/ service items, line and mix	Records kept in the organization	Analysis of historical data
(b) Evaluation of product or service and price	Customers	(a) Detailed in-depth interview with selected customers (b) Survey of customers (larger sample than above)
(c) Evaluation of delivery system	Customers, intermediaries (like distributors), if any	(a) Interviews with selected customers/ intermediaries (b) Customer survey
(d) Evaluation of customer needs	Customers	(a) In-depth interviews (b) Focus group discussions
(e) Evaluation of competition	Customers	(a) Customers' perception of products/services through survey
	Records kept in the organization and industry level data from secondary sources	(b) PLC analysis (c) Industry experts

new product/service introduction is discussed in Chapter 8.) The process of deciding strategies with respect to existing, as well as new products/services starts with the decision concerning objectives.

Deciding on Objectives

The second major step in product/services planning is to decide the objectives to be achieved for each product item and service line. The decision on product related objectives must be based on the overall marketing objectives of the organization (Refer

TABLE 4.3 **Diagnosis of Current Situation**

Evaluation	*Relevant diagnostic questions*
Subscription/ Membership Low	(a) Is the size of the segment we are targeting through product/service small? (b) Are potential customers aware of our products and services? (c) If customers have tried our product/service, and if they are not repeat buying, then, what are the deficiencies of our offer?
Surplus/ Contribution Low	(a) Are the costs high? (b) Is price right? (c) Is the revenue generated or the size of membership low?
Reach of the delivery system inadequate	(a) Are limitations in the delivery system the cause for low subscription? (b) What are the other methods for reaching out to the customers?
Product/Service features not meeting customer requirements	(a) What modifications are needed in the product or service (b) Should packaging/physical appearance/other tangible elements of service change?
Customer's usage of product/service is low	(a) Should the design of the product/service change? (For example,method used for listing articles, details/ content of the publication, etc.) (b) Should product form change? (For example, changing product from print medium to electronic medium) (c) Should the service package be modified?
There are unmet needs of consumers	(a) How can the unmet needs of customers be satisfied? Can it be met by new products/services? By introducing variants of the same product or service? (e.g., some product in print medium and some on on-line basis?)
Growth in subscription rate of product, and membership rate of services is unsatisfactory	(a) Should we drop the product/service line? (b) Does service line need modernization? (c) Should any product or service be added to the line?
Surplus generated from product/ service low	(a) Are the costs of maintaining product/service line high? (b) Should we revise price of all products and services across the line or only some need price revision? (c) Should some products/services be dropped?
Segment coverage inadequate	(a) What product/service lines should we introduce? (b) What new technology should be used to deliver customer value (e.g., customize products using electronic medium).

chapter on 'How to Develop a Marketing Plan' for details on marketing objectives). But we should recognise that there are two types of product/service related objectives, namely operational objectives and strategic objectives.

Operational objectives refer to what specific performance level should the product or service achieve in terms of membership size, subscription base, surplus, and contribution margin. These are directly quantifiable and measurable.

Strategic objectives have a long-term implication for product/service related policies and refer to the specific function or role that the product or service has to perform. This can be explained by TIC's case described in the chapter on 'How to Develop a Marketing Plan'.

The purpose of deciding objectives is to provide a direction for action. Most managerial decisions from the point of view of product entail investments and, therefore, we need to analyze whether the products or services for which we are taking investment decisions are likely to survive in the future or not. This is done through product life cycle analysis discussed earlier.

Formulating Strategy

The purpose of previous analyses, namely, review and diagnosis of current situation and product life cycle analysis, is to decide on a strategy action plan with respect to product/service items and product lines. This action plan should meet the objectives, both operational and strategic, that we have specified. Broadly, the action plan can be classified into two sets of decision; the first relates to decisions on existing products and services and the second to decisions on new products and services.

Decisions with regard to Existing Products and Services

The major decisions concerning existing products are:

- Positioning/re-positioning products and services.
- Modifying/improving products and services.
- Branding decisions.

BOX 4.3

TIC's Marketing Objectives

TIC's marketing objectives mentioned in Chapter 3 were as follows:

(a) Recover 50 per cent of operating expenses.

(b) Develop a 30 per cent increase over the previous year in the regular client base of SME exporters.

(c) Achieve 25 per cent increase over the previous years in demand for TIC's services from biotechnology and mineralogy divisions.

If we analyze the above objectives, the following inferences emerge.

(1) Objective (a) implies that either all products/services of TIC should be so priced that part of the costs are recovered, or that some products should generate profits/surpluses, so that costs of other products can be covered. From product point of view, this means that in order for some products/services to generate surplus, the volumes and/or revenue generated should be of a certain level.

(2) Objective (b) implies that TIC should have specific products targeted at small and medium enterprise exporters and since the objective is to increase the client base, products or services should be such that they cater to various sub-segments of SME exporter clients.

(3) Objective (c) implies that TIC's products/services line should also be targeted at potential clients of biotechnology and mineralogy divisions.

Given the above requirements, TIC's products/services related objectives can be as follows:

Operational Objectives:

- For each product/service item, as well as product lines, targets are specified for subscription volume, revenue and surplus such that, at least 50 per cent of operating expenses are recovered.

Strategic Objectives:

- Some products or product/service line should play a strategic role of surplus generation.
- Some products or product/service line should play a strategic role of increasing 'traffic' to TIC, even if, only a limited part of the cost is recovered/ incurs losses (loss leader product).
- Some products/services should build image of TIC's strengths in specific subject areas (such as biotechnology/microbiology information specialist).

The above list of objectives suggest two important tips for heads of libraries or information centres.

First, quantifiable and specific operational objectives (size of client base, profits, etc.) are important performance parameters, and this should be specified for each product/service item as well as product/service lines.

Second, we should also decide the specific strategic role a product or a service item or a product/service line should play. Operational objectives provide a direction for planning for obtaining subscription, distribution, promotion and product or service improvements/ adaptation. Strategic objectives provide direction for overall design and development of products and services and more importantly, anchor for opportunity analysis for new products and services.

- Packaging decisions.
- Deleting products/services and or product/service lines.

We discuss each of these decisions in the following section.

Decision 1: Positioning/Re-positioning Products/Services

One of the key decisions relating to product/services is on positioning or re-positioning. If our product or service is not positioned sharply in the minds of the clients and if we do not provide sufficient cues and communicate the intended position to our clients, then there are good chances that they will wrongly position our offer in their minds. Likewise, if we do not change the position of our offer according to changes in consumer needs and competitive offers, then there could be problems of acceptance of our products/services by clients in the future. Hence, we need to position our products sharply, if we have not done it so far or re-position our products/services if market dynamics suggest so.

Deciding positioning or re-positioning strategy requires a three-step approach as discussed below:

- We have to assess how customers perceive our product/service vis-a-vis competitors and in relation to their needs. This can be achieved by:
  (a) Assessing the dimensions used by customers to compare products in the need category. For example, for TES discussed earlier, do customers compare the service provided by us on timely information, comprehensiveness of information or cost of information or do they use all these dimensions? This can be found out by discussions with customers.
  (b) Assessing how customers rate our services vis-a-vis other similar services along these dimensions. This can be obtained by using a rating scale ranging from very good to very inadequate/poor on each dimension.
- We have to determine as to which dimensions we should improve or modify in our offer. This can be achieved

either by changing the product or service, or by modifying other marketing mix elements (like price or distribution) or by changing the perception of our services. Changing perceptions will be important if we find that there is no basic problem with our offer and the problem is only with the perception of it. If this be the case, then proper communication is a major vehicle to achieve that change in perception.

- We have to implement the positioning strategy that we have decided. This is achieved through total marketing mix such as product (features, content, aesthetics, brand name, packaging), price, distribution and communication. The important point to note is that all the marketing mix elements, together, help in achieving the chosen position; but some elements, may be more critical in some situations than others. For example, appearance of service delivery point and behaviour of service personnel may be more critical than the knowledge of service personnel in achieving the desired position.

Decision 2: Modifying/Improving Products and Services

The second set of decisions in product planning, concerns modifying/improving existing products and services. These decisions are based on inputs from the review and diagnostic exercise, PLC analysis and positioning analysis that we discussed earlier. Modifications or changes in existing products include the following:

- *Improvements/changes in quality of the products or services.* For example, for an information product, aspects like comprehensiveness of information, better methods of classification and presentation of data and information, more user friendly cross-reference indicators, larger and more recent data, etc. would constitute modifications or changes in the quality of existing products. Better facilities at the service delivery point, more client friendly service delivery system, etc. constitute improvements in services.

- *Product item and line modernisation decisions.*
  Changes or improvements in competing products, over the passage of time, can render products obsolete. This is avoided by continuously improving technology thereby, updating the product. Modernization need not be confined to a product or service item alone; but it should include the product/service line as well. For example, if a product line on say, abstracts of research is available in print media, the same can be modernized by converting it into electronic media. Or sometimes, even print media publications can be updated by changing the reprographic technology used to duplicate copies.
- *Improvements/changes in physical appearance of products.*
  This aspect deals essentially with the aesthetic part of the product. Although from a functional point of view, appearance does not have a significant value, aesthetics play a crucial role in creating images, and in positioning the product by customers.

Any change that we make with regard to the existing products should be in alignment with the objectives we have set, and in the light of PLC analysis and the positioning decision. It should also be noted that any major change which has risk attached to it (for example, uncertainty in customer acceptance) should be initially tested with a select group of customers.

Decision 3: Branding Decisions

Branding is a major decision in product planning. For developing a brand, considerable effort and investment is needed, because it requires standardizing the product; investing in creating brand awareness, identity and image; and by maintaining consistent quality standards. From a long-term point of view, branding leads to appropriate positioning, and improves continued patronage by customers.

A brand, according to one author, is essentially a promise to consistently deliver a specific set of features, benefits and services to the customers (Kotler, 1994).

Specific decisions in branding include the following:

- Whether to brand the product or not?

  Decision to brand a product has long-term implications. Therefore, unless there is a commitment to 'stick it out', one should refrain from branding a product.

- What brand name strategy should we follow?

  There are four options to follow in brand name strategy (Kotler, 1994). They are:

  - *Individual brand names*: Each product will have separate names. For example, in the TIC's case (Chapter 2, Barbara Gums), the three services for which marketing strategies were to be developed had separate individual brand names such as Technical Enquiry Service, Technology Dossiers, Environmental Intelligence Service.
  - *Blanket family name for all products*: All products under this option will have a family name. For example, a family name like 'communique' could connote a family of products for, say, professionals and each individual product can be called by a different prefix/postfix like 'HRD communique' or 'Management Communique', etc.
  - *Separate family names for all products*: We can brand say, a data base product in print format as 'Database' and in electronic format as 'Database E' wherein, a separate family name is given for separate product lines.
  - *Company name with individual brand names*: For example, VSL Database or VSL Indexlist, etc. are individual brand names with company names.

- What specific brand name should be given?

  There are no specific rules regarding the choice of specific brand names. However, one author has given the following guidelines which should be kept in mind while deciding a brand name (Robertson, 1989).

- It should suggest something about the product's benefits.
- It should suggest quality of product or service.
- It should be easy to pronounce, recognise and remember.
- It should be distinctive.
- It should not have a derogatory meaning in other countries and languages.

The extent of branding effort should be in line with the objectives to be achieved and with the resources assigned for the purpose.

Decision 4: Packaging Decisions

Most physical products require packaging. Traditionally, packaging has been confined to the role of providing physical protection to the product. However, marketers have recognised that packaging can play a crucial role in creating image, contributing to increased recognition and in motivating customers to try out the product. In other words, promotional value of the packaging is a well accepted notion now.

Information that we generate during the initial phase of product planning, namely review and diagnosis, PLC analysis and positioning analysis, provides the inputs to decide the role of packaging as far as a specific product is concerned. If it is found that packaging is an important element, then the process of designing packaging should be initiated by taking into account the functional requirements, aesthetic requirements and cost.

Decision 5: Deleting Products and Product Lines

Dropping product/service and product/service lines, is as crucial a decision as introducing products and product lines. Review of performance (i.e., subscription levels, membership size, and surplus) and analysis of customer preferences will indicate which are the product and product lines which have to be dropped.

The most crucial reason for dropping a product is when it has lost its meaning—when the market does not need such a product.

Subscription levels, membership size, and surplus are indicators of performance, but the important input is the assessment from consumers. The second reason for dropping a product or a product line is cost. When the cost of sustaining the product is higher than the revenue it generates, in absence of a cross subsidising mechanism, a product or a product line is dropped. Resource constraints play an important role in 'drop' decisions.

Decision 6: Decisions on Introducing New Products and Services

Another strategically critical decision we need to take in product planning is regarding new products. Three major questions that we need to answer here are:

- Where are the new product opportunities?
- What objectives should new products achieve?
- How do we translate market opportunities into products?

In the chapter on 'Conceive, Design and Introduce New Information Products and Services', we discuss the process of new product introduction in detail.

SUMMARY AND GUIDELINES FOR PRODUCT/SERVICE POLICY

Summary

In this chapter, we discussed the concepts and procedure to plan product and service policy. After providing an overview of the meaning of product and need for planning products and services, we elaborated two key concepts relevant to product/service planning, namely, product life cycle and product positioning. Product life cycle indicates the dynamics of the market due to changes in the preferences of the customers, technology improvements and competition. This insight is useful to decide whether, or not, to invest in our offer, whether to enter or withdraw from a market and to decide specific operational objectives. Positioning analysis indicates how our offer is perceived by our clients vis-a-vis competitors, offers. These two concepts provide the backdrop for our diagnosis, carried out through a review of current performance, and the decision on the direction for product policy. Steps in product planning begin with a review and diagnosis of current situation using various performance indicators and market parameters. This analysis may be conducted for a product item, a product line or the product mix. Based on the diagnosis of current situation, we decide the objectives, both strategic and operational, that we need to achieve through our products/services. After deciding the objectives, formulation of policies involves two sets of decisions, namely, policies relating to current products/services, and policies relating to new products/services. Policies with respect to existing products consist of positioning/re-positioning products/services, modifying and improving offers, branding and packaging decisions and decisions on deleting products/services. Decisions on new products/services are discussed in a separate chapter in this guide book, which deals with the issues, concept and steps involved in introducing new products and services in detail.

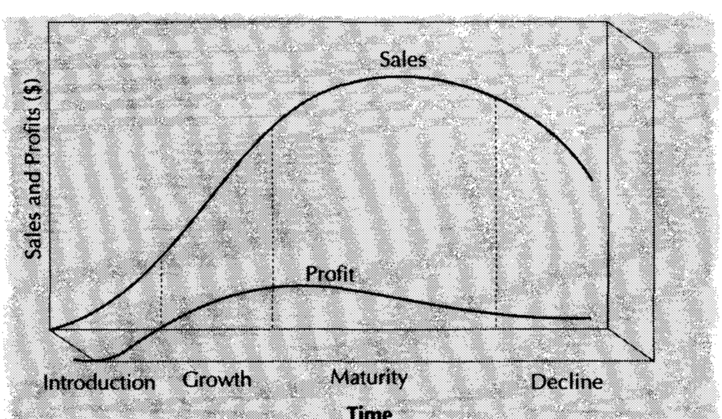


Fig. 4.1 *Sales and Profit Life Cycles*

BOX 4.4

Guidelines for Planning Information Product and Service Policy

1. Assess the Stages in the Product Life Cycle

1. Define the product/service market in terms of the *need(s)* of the group of *customers* [who have the need(s)] and the *class of product* (technology) used to satisfy the need.
2. Assess the total sales of the class of product identified in step 1 above, over the years to date, by aggregating sales of all brands/products in the product market.
3. Assess the total sales of all other competing products satisfying the same/similar needs of same/similar customers over the years to date.
4. Assess the current and future potential of the (set of) need(s) of the group of customers in volume and value terms by studying the factors influencing volume and value and predicting the same.
5. Of the total potential assessed in step 4, predict the share of your class of products by understanding the relative net customer value of competing products.
6. Plot the past sales of your product class and the predicted demand for the same. The shape of the curve at the current time can be used to determine the current stage of the PLC.

2. Evaluate the Position of the Product/Service

1. Identify the target customer segment for your product.
2. Identify the factors/dimensions on which the customers evaluate the competing offers in the product/service market.
3. Assess the position of your product/service vis-a-vis competitors on the important dimensions.
4. Assess the uniqueness/sharpness of the position of your product/service and the segment of customers who prefer the position most, next most, etc. This would help in prioritizing the segments for the current position.
5. Given the current and likely strengths/weaknesses and resources of your library/information centre, identify the alternative positions you could aim at.
6. Assess the segments and their potential demand for each of the alternative position identified.
7. Conduct research, based on mainly primary data, to study the above.

3. Review Performance and Diagnose Situation

1. Decide parameters for performance review and diagnosis: volume and (net)revenue/profit, characteristics of product/service offer, customer needs, and competition (See Table 4.1 for a list of parameters).

(Contd)

2. Use secondary data from both internal and external sources and from primary sources like customers, intermediaries, knowledgeable persons/experts, etc. to assess the performance on the parameters. See Table 4.2 for sources of data and research methodology to be used for collecting information.
3. Assess whether the performance on the whole, and on specific parameters, is good, ok, or bad.
4. Ask a series of questions about product/service, customer's needs and their assessments of the product/service, strengths/weaknesses vis-a-vis competition, etc. to diagnose the current overall performance and performance on specific parameters. See Table 4.3 for an illustrative way of diagnosing the situation.
5. Assess if there is scope for improving the performance of the current product/service. Which improvements/changes (like changed segment(s), position, product/service characteristics, etc.) would lead to what level of performance on specific parameters like customer satisfaction, sales volume, profit/surplus, etc.

4. Decide Objectives

1. Review objectives of parent organization and library/information unit. Prioritise the same.
2. Review the stages in product life cycle and draw specific implications for objectives and strategy for the product/service.
3. Assess current position of your product/service vis-a-vis competition and the possible positioning options, along with the likely performance on specific parameters.
4. Assess which objective(s) of the library/information unit and of the parent organization could be met, to what extent, by the specific product/service.
5. Assess the resources and investments required to achieve the different levels of objectives by a specific product/service.
6. Conduct the above analysis for each product/service and for the centre as a whole.
7. Decide the overall objectives of the library and the objective for the specific product/service which are consistent with each other, and with available human, technological and financial resources.

5. Formulate Product/Service Policy

1. Depending on the diagnosis, decide which are the options for each product/service:
   - position/reposition
   - modify product/service
   - modify packaging, delivery
   - modify branding activities
   - delete product/service

(*Contd*)

2. Assess which of the options is likely to achieve specific objectives set for the product/service and what resources would it require.
3. Assess whether all products/services of the library/information unit would be able to meet the objectives, given the resources (likely to be) available.

6. Overall Assessment

1. Check consistency of objectives of parent organization with the objectives of the library/information centre.
2. Check whether the objectives of individual product/service put together achieve the overall objectives.
3. Check whether the overall resource requirements of all products/services are within the means of the library/information centre and the parent organization.

Appendix 4.1

Differences between Physical Products and Intangible Services

'Products' can be broadly classified as physical products and intangible services. (Other classification of product include terms such as consumer durables, consumer non-durables, industrial products, convenience products, speciality products, shopping goods, etc). Relevance of each of these categories, however, depends on the purpose for which we need a classification. For the purpose of product planning discussed in this chapter, a broader classification of physical products and intangible services is more appropriate. The basic dimension used in this classification is the physical or tangible element of the product. One author (Shostack, 1977) has argued that all products contain both physical and intangible elements, however, the dominance of tangible and intangible elements vary, depending on the type of product. Therefore, we can view products on a continuum of tangible-intangible dominance as given in Fig. A.1.

The above conceptualization implies that pure physical (tangible) products or pure intangible services are very limited. In this respect, let us examine the nature of two of the typical products/services offered by a library or information centre.

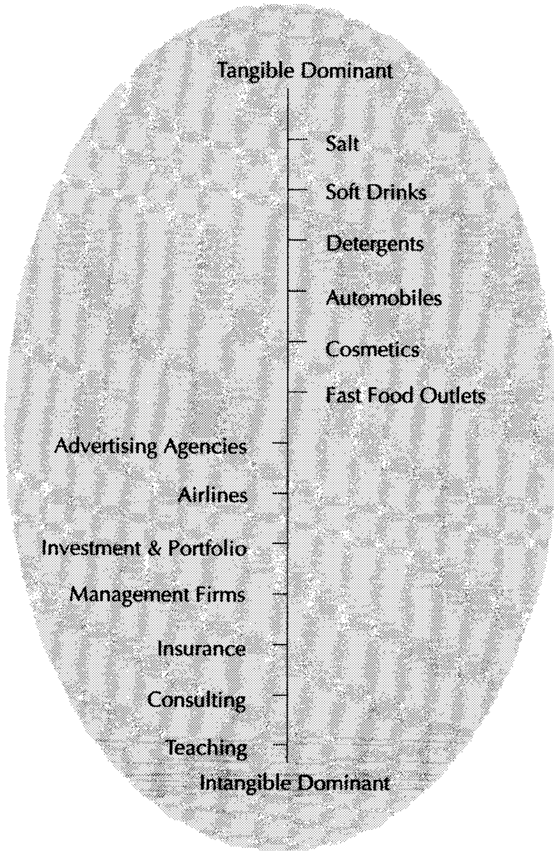


Fig. A.1 *Dominance of Tangible and Intangible Elements in a Product —an Illustration.* (Source: *Modified from Shostack, 1977)*

(a) *Lending of Books and Periodicals*: Here service element is very dominant. Facilitating a member of a library to borrow books is providing a service. However, in order to 'appeal' to members, the library should have a good collection of books and periodicals, stacked, in a convenient manner to enable easy access. Therefore, without a collection of books and periodicals (which are physical products), the service of lending cannot be provided, though lending itself is a pure service.

(b) *Publication on Abstracts of Research Articles*: Here the product has greater dominance of physical or tangible elements. The benefit of providing information on research pertaining to a subject field, is delivered through a physical product (a quarterly publication in print form or in electronic format) although, in fundamental terms, the information centre publishing this periodical is providing a service.

Conceptually, physical products and services can be distinguished based on the following five characteristics:

Intangibility

As noted earlier, services are intangible—they cannot be seen or touched. A physical product, like a toilet soap or a periodical journal, can be seen or touched. This implies that a customer, before buying a physical product, can judge the quality of the product through physical examination (inspecting the picture quality of a television, browsing through a periodical), whereas for a service, the quality cannot be prejudged before buying (or subscribing to) it. It is therefore important for a service provider (organization which is marketing a service) to increase the tangibility of the service, to facilitate customers to assess the likely quality of service before buying (that is, enrolling as a member or subscribing to a service). This can be achieved through proper decor of the library including physical appearance, layout, furniture, lighting, quality of the membership card, and such other physical evidences which indicate the service quality.

Inseparability

In the case of a physical product, a customer uses the product after he buys it. However, in the case of a service, a client 'consumes' the service while it is being produced. For example, the service of lending in a library is 'produced' while the book is exchanged to the client after performing the necessary documentation and the client consumes this service while this process is carried out. In other words, unlike the case of a physical product, the production (or generation) of service cannot be separated from its consumption. The major implication of this characteristic is that a library should have sufficient people, who are well trained, to provide this particular service.

Heterogeneity

A factory can produce a batch of physical products without variations in quality standards of the product. However, since a service is provided by human beings, there can be significant variations in the quality standards of service delivered. One person in the library counter may be very helpful, courteous and efficient whereas another person may not be. In other words, standardization of service is not easy, unlike in a physical product. This implies, therefore that a service organization must emphasise standardization of service quality. This can be achieved through different means. One way is to reduce the role of human beings through mechanization and automization of service delivery wherever possible. Automatic vending machines for beverages and other products, automatic teller machines in Banks, touch-screen reservation and ticket vending machines in railways are some of the examples in this regard. Second method is to define, in specific terms, the behaviour norms. The norm that a telephone should be lifted before the second ring and the standardization of the salutation while answering the phone ('Good Morning, this is so and so company, May I help you') are examples in this regard. A good service organization usually has strict behavioural and procedural norms for a wide variety of situations. A third method is to carefully select and train personnel engaged in providing services.

Perishability

A physical product can be produced and stored whereas a service cannot be. If clients do not visit a library, then the service that would have been available to the clients is lost. If the hotel rooms are vacant and the seats in a theatre are empty, then the service is lost. In other words, service products are highly perishable and, therefore, there is a need to manage demand such that the fluctuations are evened out. Offering off-season discounts and charging a higher tariff during peak season, are examples of using price as a variable to achieve a better match between demand and supply. When there is a heavy rush in the counter, then arranging for more number of people to attend to the clients is another method of managing demand.

Ownership

A physical product, after it has been purchased by a customer, is owned by that person. In the case of a service, customers only have access to the service, but cannot own the service. Given this nature of a service, the organization needs to stress the advantages of access to service and the facilities that their clients can enjoy. Different tariff structure for usage of different services (e.g., 'Gold Card Members', 'Silver Card Members', etc.) is yet another means of overcoming disadvantages of non-ownership of services.

REFERENCES

1. Aaker, David and Shansby, Gray, J., 'Positioning Your Product', *Business Horizon*, May-June, 1982.
2. Kotler, Philip, *Marketing Management—An Analysis, Planning and Control*, 6th Edition, Prentice-Hall, Englewood Cliffs, 1988.
3. Kotler, Philip, *Marketing Management—Analysis, Planning and Control*, Prentice-Hall of India Ltd, 8th edition, 1994.
4. Levitt, Theodore, 'Marketing Success through Differentiation of Anything' *Strategic Marketing Management*, Robert, J. (ed.), Harvard Business School Publication, Boston, 1991.
5. Robertson, Kim, 'Strategically Desirable Brand Name Characteristics,' *Journal of Consumer Marketing*, Fall, 1989.
6. Shostack, Lynn, G., 'Breaking Free from Product Marketing', *Journal of Marketing*, Vol. 47, No. 2, 1997.
7. Vijayavargiya, Ashok, 'Information Packaging and Repackaging at INFUSE Inc.', *Marketing of Information Products and Services*, in Jain A.K. et al. (eds.), Indian Institute of Management, Ahmedabad, 1995.

CHAPTER 5

How to Price Information Products and Services

■ *H. Arthur Vespry, Marianne Vespry and Christa Avery*

INTRODUCTION

What is Price

Price is a means of exchange offered by a buyer for buying the product/service being marketed by a seller/marketer. It is generally expressed in currency units, such as dollars and cents. However, it may also be expressed in services or other goods which the seller and buyer may agree to exchange for the item.

Price (or the value of an offer) goes by many names like (Kinnear and Bernhardt, 1986) tuition, rent, interest, fee, fare, toll, dues, salary, wage or commission depending on what is being exchanged. For information products and services, the relevant terms may be *price* of a physical product like CD-ROM and *fee* of a service or membership of the information centre/ library. We would use the term price to mean all this in this chapter.

For deciding a price, it may be useful to understand its role. Conceptually, as explained in Chapter 2, price is one of the four (P's) the important marketing decisions (the other three decisions are product, promotion, and distribution). Price (along with other P's) helps in appropriately positioning the product/service/information centre in the mind of the target segments vis-a-vis the competitors. The price that can be charged, may depend on the ability of the target segment to pay, as well as the value that the target segment might derive by using the product/service. Further, the value of the product/service varies, depending on the situation and time of availability. Besides, the information centre and/or the management of the parent organization, may view price in a variety of ways, including generation of revenue/profit depending on the situation of the centre/library.

Steps in Pricing

Pricing decisions will vary with the circumstances and aims of the seller, the type of product or service being sold, the seller's costs and profit targets, the seller's knowledge of the customers and estimates of what they will pay, and the competitive situation.

This chapter will cover the steps to be taken by an information centre/library to price its products/services. These consist of understanding of consideration in pricing, deciding on base price of products and services, adapting the base price to the situation, and revising the prices depending on market changes and competitive moves.

CONSIDERATIONS IN PRICING

The Marketer: Who are You

The purpose/ownership of the information centre/library may have an important bearing on the role of price. A centre/library owned by a commercial organization may have to run on commercial lines and not only recover the costs of its operations, but also contribute to its profits. On the other hand, a library or information centre may be supported wholly, or in part, by a private company, municipality, academic institution, organization, government agency or by a donor. Some of these organizations may be tempted, from the most altruistic of motives, to charge only token prices for their products/services. Decision of token pricing should be made carefully, as it has the potential to not only comprise revenue earning capacity, but also damage the image of a quality/centre in the eyes of the customers.

The Product/Service: What are You Marketing

Product characteristics and type of product influence the pricing significantly. Value added products/services have particular influence on price.

Product Characteristics

Important characteristics of information which have influence on pricing are: accuracy, timeliness, fittingness with easy use and reproduction ability. More accurate, timely, and fitting the information, higher would it be valued by the user, and higher it would also cost to collect and provide to the buyer by the marketer. Charging a higher price may encourage reproduction of written (through copying machines) and electronic information (through computers) as these are easy and low cost operations. It introduces a significantly different feature to information, not found in any other product. This aspect is supposed to be taken care of by laws relating to intellectual property rights. Irrespective of the laws, their implementation is always a problem. Information marketer needs to take care of such practices through appropriate mechanisms like price of (additional) copy being unattractive enough to bear the hassles and cost of reproducing. Another mechanism could be written contracts with buyers for non-reproduction or per unit reproduction fee.

Type of Product

Information can be classified into three broad categories: product, service, and value added (product/service). Pricing a product is very different from pricing service, or a value added information.

Value of a physical product, say an issue of current content, may be enhanced by better packaging, faster delivery (speed post, courier vis-a-vis ordinary mail) or making it user friendly. In this sense, the improvement in these characteristics can lead to commanding a better price.

However, in case of a service, none of the above attributes is visible to the buyer before the service is bought. Services are primarily retailing activities, with the seller/provider dealing directly with the intended user. Unlike shopkeepers, service retailers generally cannot turn to a manufacturer to produce the product in bulk and advise on the price.

Customers of most services are unable to assess the price-quality relationship prior to purchase, and often, they cannot assess it, even after purchase and use. Thus they feel vulnerable, and seek ways to reduce the risks inherent in buying a product which has not yet been produced. Customers may use price as an indicator of service quality, specifically, for first time buying. They will, however, frequently return to a supplier whose service has been satisfactory in the past: perceived quality and reliability are more important than price. Also, they expect savings from a supplier who 'knows us, knows our situation and our objectives.' These may not be price savings, but the customers save on the time invested in explaining their needs and circumstances to a consultant or information broker. Costly errors result if the briefing is incomplete or unfocussed, or if the consultant does not recognize or comprehend some vital element.

Value Added Products/Services

New information products and services will be developed through adding value to what is currently available. Increasingly, the scarce resource of customers is time; they will buy products/services which allow them to maximize the return on their most scarce resource. Researchers who want raw data, or want to browse through databases, increasingly have the capability to do so for themselves. On-line access to virtual libraries enables huge quantities of information, but it allows a school-child with a modem or a CD-ROM drive to do the same. Huge quantities of undigested information have no value; indeed, they are a liability. They take up space on hard drives or shelves, and they irritate and threaten those who know they will never have time to look through them, and fear that some vital fact may be hidden therein. The need is for screening, customization and personalization of information. This 'value-added' process includes assistance with management of information overload. The new information technology supports the creation and use of new, more dynamic integrated formats for presenting data, information and knowledge.

If the centres are to market such value-added products/services, they will also have to accept higher responsibility for quality offered and benefits promised to the customers. It is to be expected that customers who purchase value-added information and act upon it, will take legal action against the provider, to recoup any losses resulting from a faulty product, in appropriate mechanisms, involving higher costs leading to higher prices. It may also be necessary, to devise creative pricing structures to assure promised value to the customers, and compensate them in case of any deficiencies/service failure.

Planners, policy makers and managers do not want bibliographies or thick texts. Increasingly, they want policy options neatly set out with pros and cons. They want data, of course, but they want processed data for analyzing, planning and implementing solutions, set out in easy-to-understand tables, or better yet, graphs. They want management tips and strategies that will allow them to solve problems, control costs, and get the job done with the least possible delay, confusion or ill-feeling. They want short, cogently reasoned briefing papers and reports to put before their bosses. They want public information materials to orchestrate public approval for themselves and their projects. This kind of brief, high-quality documents have been produced by staff in some agencies. In most agencies it has hardly been available at all, because manual methods do not suffice to produce it in cycles, short enough to meet the demand, before another crisis shifts attention elsewhere.

Pricing of each type of product/service, therefore, has to be undertaken differently. The nature of product/service along with the type of customer probably would help in understanding how to price the offer.

The Customer: Who is Buying

It is essential to study and know your users before you become involved with the pricing frame. Everyone needs information. However, what price will the customer pay for the information depends on answers to some key questions like: How important is it (how much is it worth to them)? How much can they pay? How much do they expect to pay?

Value of Information

Potential customers are interested in a product or service on the basis of what they expect to gain from it, and/or what they might lose if they did not have it. They also have to calculate/assess any costs associated with using the product/service after they have purchased it (running costs, maintenance costs, insurance, depreciation). Information services and products are often promoted on the basis that they will save time, but they can also be time consuming to use. Information centres should be attentive to this facet, and should build in the maximum 'user-friendliness' to meet the customer's needs, including the time available to the consumer to use the product/service.

Assessment of the value of information to customer(s) is not easy. The buyer has certain hopes and anticipations, but the benefit of the information to be acquired cannot really be judged until after it has been received. For some markets, gain in intangibles, such as prestige, outweigh gains which contribute to more mundane objectives. However, this factor has not been dominant in most sectors of the information market (though there is a great deal of prestige value in knowing the latest news and gossip).

Thus the assessment of value of information for, say, evaluating strategic opportunities, is likely to be made on the basis of the rewards to be reaped from improved decision making and the mistakes and lost profits incurred. The probable gain is then weighed against the costs (in time and money) of acquiring, evaluating and using the information.

Ability to Pay

Even if the value of information to the customer can be ascertained, the ability to pay for the information differs across customers. The differences arise because of variations in the types of customers. In general, these are: (i) whether the customer is located in developed or developing countries, (ii) whether the customer is an individual or an organization, and (iii) the type of customer within each class. The incomes as well as current expenditures of customers in developed economies are much higher as compared to their counterparts in developing economies. Further, organizations can buy one/limited copies of information and make it available to individuals. Income of individuals, usually, are much smaller than the incomes/budgets of organizations. Also, within individual customers, some have lower ability to pay, say students, compared to others say executives in commercial organizations. Among organizations, the budgets/ ability to pay depends on their levels of income and several other factors.

The above factors require adjustments in price to suit the abilities of customers to pay for information. This is usually handled through the mechanism of differential prices to different types of customers.

Willingness to Pay

The actual price that a buyer would pay, would not only depend on the value of information and the ability to pay but also his willingness to pay for information. The willingness to pay seems to be dominantly influenced by the fact that most of the information appears to be free (though on closer examination, it is found that it is generally bartered for information of equivalent interest or value). This free/bartered information includes commercial intelligence passed through clan business networks, research findings exchanged among scientists, and gossip exchanged at the village market. This information is extremely valuable, in that it is closely tailored to the known interests of the recipients, and the recipient can generally assess its quality with ease. Indeed, it is difficult or impossible for information centres to compete with the informal information bartering networks; in most cases they should probably seek rather to supplement them.

The tradition of the 'free public library' and 'free use' of academic libraries also contributes to the reluctance of customers to pay a realistic price for information. Availability of information over the Internet, some of it free, may also reinforce expectations of low or zero prices. Pirating of intellectual property in the third world has been a further factor in depressing price expectations; indeed the concept of intellectual property is not well understood at least in part because it conflicts with the popular belief that information is and should be 'free'.

Customers' sensitivity to risk, or the uncertainty that the information search will be productive, also plays a role in their decisions. The intending end-user is likely to evaluate need, relative cost, likely benefits, and uncertainty about outcome differently from an administrator or purchasing officer. Thus, it is important to determine who makes the decisions within the customer's organization and how they calculate relative benefits against acquisition costs. For example, how they assess the risks of purchasing an information search, the outcome of which cannot be known in advance. It should also be noted that even one favourable experience will weigh heavily in favour of further use.

The Competition: Who/What are You Competing with

Customers weigh their alternatives in deciding whether to buy. Thus, the presence and quality of competing services, and the level of the competitors prices will influence pricing strategy, and may ultimately determine whether your service is viable.

However, it should be noted that pricing alone is seldom the determining factor: quality, delivery dates and after-sales service (a long-term relationship with a reliable supplier) are generally rated as more important than price.

Who is the Competitor

We live in an information intensive age: more and more information is available to and required by decision makers in commerce, academia, research, government, almost every walk of life, and the deadlines attached to those needs grow shorter. Accessing the needed information requires time and skill; hence, we can expect to find ourselves among a growing number of professionals and agencies, who will specialize in obtaining information for others, and/or advising them on their information needs. These include professionals like consultants (information specialists and subject specialists), information brokers, information managers, management information system specialists, telecommunications network managers, etc. and agencies like information centres, libraries, publishers, software and systems specialists, etc.

Any of these are potential competitors, as established presences or as new entrants, seeking backward or forward integration to expand their presence in the marketplace.

Potential competition comes mainly from similar products/ services, or other product/services which serve the same purpose. It may also come from products/services which allow customers to position themselves more advantageously, shifting their purpose. The really dangerous competition for an information service, at any point in time, is probably posed by firms, products and services that did not exist earlier. An information centre should be well prepared to locate and understand current and potential competitors.

The Competitors' Prices

While market demand might set a ceiling, and costs set a floor to pricing, knowledge of competitors' prices (and possible reactions to our offers) help us to establish realistic prices. We must, thus, track the price and quality of competing offers.

If our offer is similar to a major competitor's offer, then we will probably have to price close to the competitor or lose sales. If our offer is inferior, we will probably have to charge less. If our offer is superior (a better fit to the customer's needs and wants), we can charge more than the competitor. However, we must be aware that competitors may change their prices and offers in response to ours.

Other Factors Influencing Competition

Some situations are not open to competition on the basis of what we assume to be the normal factors. Anti-competitive factors may include:

- Some players may be subsidized, such as:
  - A national library or public library (by some level of government).
  - An academic library (by the parent university).
  - An information service which is part of a commercial firm (by the parent firm).
  - Information centres in the third world (by donors).
- Only certain suppliers can be considered, such as:
  - Nationals of a country.
  - Members of the local professional organization, chamber of commerce, etc.
  - Those with the proper family/ clan connections.
  - Supporters of a particular political party.
  - Other members of a combine or cartel.
  - Those who have the favour of a powerful figure in the society (may include politicians, and/or local 'godfathers' and 'dark influences).
- 'Commissions', bribes or 'donations' may be expected or directly solicited.

How are Competitors Likely to React

Having identified the competition and competitors, assessed their prices, and their strengths and weaknesses, it is necessary to predict the reaction of competition to our likely moves/prices. The competitors may use appropriate approaches to price their products, given their situation, including any advantage arising from other factors of competition. We need to visualise their likely moves by putting ourselves in their shoes, i.e. some kind of a role play. External information about their likely moves, through intelligence gathering and marketing research, would help a great deal in this process.

Determine Revenue/Demand: What is the Price-Volume Relationship

Information centres/libraries need to estimate their revenues in each year/quarter/month that would be earned through marketing their products/services. Obviously, the revenue likely to be received from sales of a product/service depends on the price and the demand of the product/service at that price. Also, the demand at different prices is likely to be different. The relationship or curve between demand of a product/service (in a time period) with the price is called a demand schedule. So, the information centre needs to estimate the demand schedule. The first subsection deals with the factors which influence the effect of price on demand. The methods of estimating demand schedule are dealt in the next subsection.

Understand Sensitivity of Demand to Price

The important factors influencing sensitivity of demand to price, in the context of information products/services, can be identified as: attitude to pricing, exclusivity, fittingness to use, risk taking ability and reliability, responsiveness, assurance, and empathy.

In the context of information products and services, attitude of users of information towards pricing seems to be negative, particularly in developing countries. Given this context, chances are that a higher price would affect the demand more adversely, compared to a lower price.

Higher prices may be easily accepted by customer if your product/service is exclusive, in uniqueness, credibility/prestige of source of supply, and/or better quality of the information. This is because it is very difficult to compare one information product/ service with another and the above parameters may be used by the potential customer as indirect measures of quality. A higher price would also be easier to accept if the information fits well in the customers' end-use system, forms a smaller fraction of total expenditure on information buying, and forms a small fraction of the likely benefit arising out of the use of information.

Higher the reliability (ability to perform promised service dependably and accurately), the responsiveness (willingness to help customers and to provide product service), the assurance (knowledge and courtesy of employees and their ability to convey trust), and the empathy (provision of caring and individualized attention) lower the sensitivity of demand to price. This is because the four factors mentioned are the four key dimensions associated with quality of service. And it is well known that higher the quality of a service, less sensitive it would be to price.

Estimating Demand at Different Prices

Historical information on demand for information products and services, particularly in developing countries, is sketchy. This is particularly so in case of specific product/service. In the absence of such information, the methods that can be used for assessing demand are: expert opinion, survey of buyer's intentions, and test marketing.

Experts whose opinion could be elicited include managers (of information centres/libraries), distributors (of information products and services), consultants (in the relevant fields), and important buyers. The information centre could, occasionally, invite a group of experts to exchange views and arrive at a particular figure of demand for a product/service at a price and then assess changes in the estimated demand if the price was to be more or less. Alternatively, several experts could supply their estimates individually, which could be grouped by an analyst at the information centre.

The most prevalent method of generating the demand schedule for a product/service is a survey of buyer intentions (see the case study on Marketing of Asian CD-ROM). In implementing this method, first a range of prices is determined over which the demand needs to be assessed. A sample representing the current and potential buyers is chosen. Each sample respondent is asked to express his intention to buy on a scale (of either buy/not buy or a graded scale from definitely not buy to definitely buy) at the lowest (highest) price. The respondent is asked to state his buying intention at each of the next level of price till the price range is exhausted. These responses can then be summed over all respondents to get the demand at different prices.

The method of test market is ideal for testing the entire marketing strategy for the product/service. Its use merely to assess demand is less efficient. However, it is a possible method. In this method, the entire marketing programme is implemented in a mini market which is representative of the total market (similar to taking a sample of respondents). The demand thus obtained is then projected as demand for the total market. More details of this method are provided in Chapter 7.

Determine Costs: What is the Cost–Volume Relationship

Assessment of costs has become vital to the sustainability of information centres and libraries. The first subsection deals with the basic types of costs useful for decision making. The nature of cost elements in information centres/libraries is described in the second subsection. Process of assessing the product/service costs would be discussed in the third and the total information centre/library costs in the fourth subsection.

Classification of Costs for Decision Making

There are three important classifications of costs which are useful for decision making: fixed costs, variable costs, and relevant costs.

Fixed Costs Fixed costs are costs which are fixed per time period (say month/year) and do not vary with the volume of production of a service or product. For example, wages and salaries of employees in the information centre/library (who are paid on monthly/yearly basis) are fixed costs. This is because whatever may be the output of service/product in a particular month/day/year, these remain same per month.

Variable Costs Variable costs are costs which vary with the volume of production of a product/service. For example, in the case of an issue of a monthly printed publication of Current Content (of say marketing journals), the cost elements of paper, printing, binding, handling, and postage per copy, are examples of variable costs. This is so because even for one additional copy of the issue, these costs would have to be paid/incurred and if this one copy is not produced, the same would be saved.

Relevant Costs Relevant costs are costs which are relevant while deciding between two (or more) alternatives. These could include both fixed and variable costs. For example, if a decision has to be made between undertaking the production and marketing of Current Contents of Marketing, the options/alternatives are producing/do not produce the Current Contents. Costs associated with each decision are:

Produce CC	Cost of acquiring marketing journals + Fixed costs of preparing the master copy + Fixed costs of printing an issue of 'X' pages + Variable cost/copy X number of copies to be produced.
Do not Produce CC	Cost of acquiring marketing journals (which may be acquired for use irrespective of whether CC is produced or not)

Notice that the cost of acquiring journals is common to both options as they need to be acquired for several other purposes. This, therefore, is not a 'relevant' cost to decide between the two options. The other two costs in producing the CC would not be incurred if the CC is not produced. These are relevant costs for deciding whether the CC should be produced or not. Notice that the elements included are of both types, i.e. fixed and variable.

Cost Elements in Information Centres/Libraries

There are two broad headings of cost elements in any information centre/library. One of these belongs to the unit as a whole and cannot be easily traced to any product or service. Let us call these as Centre Costs. The others are such which can be easily traced to a product/service. Most elements of costs belonging to the first set are fixed in nature whereas those belonging to the second set could be, and usually are, both fixed and variable. Let us call these as product/service costs.

Information Centre Costs Information Centre Costs are regarded as 'fixed' because they are difficult to change in the short run. Even if production of products/services stops altogether, the rent and salaries (including your own) have to be paid if the business is to continue. Of course, these costs are variable over the long term: you may move to cheaper or more expensive premises, or employ more or fewer staff members at higher or lower salaries.

For an information centre, centre costs may include the following and should not include those which can be directly traced to a product/service:

- Wages
  - Information centres and libraries may have few or many staff members on their payrolls who are paid on periodic basis.
- Equipment (e.g., telephone, computer hardware, printer, copier, fax), with repair and maintenance charges.
- Software, supplies.
- Communications and transport costs.
- Costs of acquiring information, such as
  - Fees for searching and downloading information.
  - CD-ROMs, subscriptions, books.
  - Fees for using copyright materials.
  - Continuing education of staff.
  - Consultant fees and/or wages paid to others to whom you subcontract portions of your work.

- Marketing, promoting, advertising.
- Premises (investment costs or rental costs)
  - Building with its equipment and furniture.
  - Cleaning and maintenance.
  - May include upkeep of exterior of building, grounds.
- Utilities (heating and/or air-conditioning, electricity, water, sewage/waste disposal).
- Taxes, licences, memberships.
- Interest, insurance, depreciation.

  (These costs can be calculated on a monthly or an annual basis.)

Product/Service Costs *Variable Costs of Product/Service* Product/service costs are the particular costs incurred in producing the product/supplying the service that the customer needs. Each manager's list of cost elements may differ. Production costs can include the following variable costs for each product/service.

- Costs of 'research' of acquiring information needed for that product/service may include:
  - On-line/down-loading costs.
  - Purchase of maps, videos, manuals, etc.
  - Fee for consultant(s), or short-term staff member(s) with expertise you need for the job.
- Data processing costs.
- Cost of producing the package can vary greatly, depending on the nature of the package, the quality level required, the time available for the job, customers changing their minds and the specifications in mid-job, etc. The following are examples of items to be considered in costing various types of jobs:
  - *Written report:* For example, writing, editing, desktop publishing, reproducing, binding.
  - *Video training film:* For example, scripting, story-boarding, shooting, sound recording, music, editing, production.

— *Workshop:* For example, identifying and hiring trainers, updating and reproducing training materials, advertising, renting training room and equipment, refreshments for trainees.
— *Survey:* For example, developing and testing questionnaire, designing sample methodology, identifying and training interviewer(s), wages and expenses of interviewer(s) during the survey, data input and processing, designing the report, producing tables and graphs, writing, editing.

- Handing over costs: costs of any special event, seminar, reception, press conference, graduation ceremony, etc. that marks the completion of the project.
- Follow-up service costs: retainer, etc. is calculated separately, based on your expectations of future work and your experience gained during the project.

Fixed Costs of Product/Service In addition, there may be fixed costs directly associated/incurred to produce the product/service. The librarian/information centre manager can easily identify those cost elements which are fixed in nature (of the type mentioned under Information Centre Costs) and are incurred for the particular product/service. It may also be possible to assign the Information Centre Costs to each of the product/service being produced and marketed by a centre. Thus, in the ultimate analysis, costs of an information centre ideally could be expressed in terms of product/service costs with two components, one fixed and the other variable.

Calculating Costs

General Guidelines Costing is an inclusive exercise; it is precisely those things which we don't know (or tend to overlook) which are likely to hurt us.

- Don't forget anything. Make lists (see items above for suggestions). Keep detailed accounts.
- Remember inflation. Are the inflation data issued by your government realistic for your business, or must you calculate a different inflator?

— For years the prices of journals have been rising at a multiple of the rate of general inflation. Are some parts of your costs rising more rapidly than others?
— Forget the myth that computer equipment is getting rapidly cheaper. Processing speed and storage capability is getting cheaper, there are more bells and whistles, but PC purchase prices for a good standard of equipment have hardly moved over the past five years (what has moved is the 'good standard', from kilobytes/hertz/FLOPS to mega to giga...).
— If your country is going through a period of rapid inflation, it may be simpler to calculate your costs in dollars, SDRs, ECUs, the value of 100 grams of gold, whatever standard you can find that is relatively fixed, and translate into 'today's value' of your national currency whenever needed.

- Review from time to time; new cost elements may have been introduced or old ones dropped out, or the costs of the same elements may have risen or fallen.
- A complete list of costs is of course useful for other management tasks, including cost containment/reduction. Are there any items that should not be on the list? Are any items too expensive, and are cheaper alternatives available which will meet the required standard? Would it be cheaper to contract certain tasks out, or to do them in-house?

Costing Specific Products/Services For each product/service, calculate the variable cost per unit of production, and the fixed costs which would not be incurred if the product/service was not produced. In case of a product, the elements have already been identified. In case of a service, say reference service within the information centre/library, all that the customer seeking the reference service would require is few minutes of the staff working as a reference librarian. In this situation, the only resources of the library utilized are the time of the reference librarian and the ('depreciation') time for which the reference source, say a book, has been used. Both of these are fixed costs for the library/information centre. In this manner, identify the facilities, equipment, personnel, resources, etc., utilised in providing a service (producing a product). Then classify each element into variable or fixed. Sum up all the variable and fixed elements separately, to obtain the total variable cost per unit, and the total fixed cost of producing that product/ service.

Draw up charts showing total costs (variable and fixed) of producing each product/service at different output levels.

Information Centre Costs Costs which cannot be directly traced to any product/service would constitute the Information Centre Cost. Most of this would be fixed in nature as discussed earlier.

Cost–Volume Relationship The total cost of the information centre at different levels of production of specific products and services can be obtained by adding the cost—volume relationships of specific products/services and the IC costs.

SELECT A BASE PRICE

Customer's wants and expectations (demand) and competitors' prices largely set the ceiling to the prices that we can charge, while our costs set the floor. A commercial firm also wants to charge a price that includes a fair return for its effort and risk, that is, a profit. However, many information providers are still subsidized or partially subsidized; thus their costs may be unrealistically low, and they may in addition be forbidden to seek a profit.

Other factors that influence pricing preferences include competitors, suppliers, distribution, economic and socio-political conditions, regulations and product composition. The more a firm's product is differentiated, the more leeway it has in setting prices.

Pricing Objectives

Various players will have varying pricing objectives, according to their current circumstances and their medium and long-term plans.

BOX 5.1

NICMAN at IIM Ahmedabad: Considerations in Pricing

What is Marketing?

National Information Centre of Management has been set up at the Indian Institute of Management, Ahmedabad. NICMAN would utilize the resources of the Vikram Sarabhai Library of IIMA. As per the agreement, between IIMA and National Information System for Science and Technology, NICMAN should, ultimately, become financially self-sufficient and offer sustainable products and services to its clients in business and industry, as well as academic and research organizations.

What is Being Marketed?

NICMAN plans to develop and market information products and services in three phases. In the first phase, the offering will be:

(i) Extend indexing and current awareness services to external clients (both, academic and business and industry).
(ii) Start abstracting service from our own database, as well as CD-ROM based databases, and extend to external clients.
(iii) Extend to external clients database search service using our own database and CD-ROMs.
(iv) Extend access to external clients for case bibliography and develop an electronic delivery system, i.e., through e-mail or floppy diskettes.

Immediate introduction of Current Contents and Index of Management Literature was planned in each of the six areas of management. The products would be delivered monthly and would be, to begin with, in hard copy.

Who are the Buyers?

The clients being targeted for both, the products and the services are:

- Business and industrial organizations
- Academic organizations offering MBA programmes
- Executives
- Teachers and students

The value of information on management literature is likely to be higher for executives in certain departments (like training, human resource development, corporate planning, etc.) of organizations. Although the organizations and executives are likely to have purchasing power/ability, only the organizations are likely to buy. Purchase of such information by executives in India is mostly governed by 'allowances' provided by organizations. The allowances vary with the level of executive in the hierarchy within an organization and also across organizations.

(*Contd*)

In academic institutions, the grants from government and public agencies have been frozen/limited. The private ones also, are not likely to have significant funds. Most private academic institutions charge a hefty fees for their programmes, but do not necessarily have even adequate premises to house a library. Students are likely to be hard pressed for buying such materials, as the fees charged are already high. Teachers/researchers may be able to buy depending on the allowances available to them, and/or provision for information acquisition in research projects.

Competition

Management information, especially conceptual and theoretical, originates mostly from educational and research institutions in developed countries. It is available to Indian users mostly through foreign journals and books. But the prices of such publications are un-affordable to Indian academic institutions, as well as to small and medium size organizations. Indian material is extremely limited.

Services like indexing and abstracting mostly originate from the developed countries. Coverage of literature on management as a discipline/subject is very limited, as management is treated as a part of social science information. This limitation of coverage is a great handicap for locating the right and relevant information. National institutions like IIMs, and a few sectoral institutions have the base sources and are generating indexing and bibliographic services, targeted mainly to the in-house users. The benefit to the clientele, outside the campus, is minimal because no conscious effort has been made to develop products/services which could meet their needs.

Increased availability of access to internet in future and availability of information products and services is likely to affect the market for such products. However, in usefulness, price, and accessing, the picture is not yet clear.

Price–Volume Relationship

No secondary information was available on the price–volume relationship of such products similar to the ones being planned by IIMA. IIMA, therefore, had conducted a countrywide market research to assess the potential demand for Current Contents, and Index of Management Literature in each of the functional areas of General Management, Finance, Marketing, Production, Personnel and Industrial Relations, and Purchase/Materials. For arriving at the Price–Volume Relationship, following steps were followed:

1. Sample products were prepared and specific prices (options) at which the products could be marketed were decided.

(*Contd*)

2. Each respondent in the survey was shown and requested to go through a sample of the product.
3. The respondent was then asked to indicate his interest in buying the product for his organization on the following scale: Very Keen, Interested, Will Think, Not Decided, Not Interested.
4. The respondent was asked to show the interest at the lowest price, the middle price and the highest price.
5. Those mentioning 'Very Keen' and 'Interested' categories of responses were assumed to be prospective buyers giving rise to demand.
6. By aggregating the responses, demand at different prices was assessed.

Following relationship was found between demand per year and price charged for the two products:

For Current Content

Price/Year	1500	2000	2500	3000	3500	4000
Demand in Percentage Penetration on the basis of 'Very Keen' Only	7	6.5	5.5	5.0	4.5	4.0

Cost–Volume Relationship

It was assessed that the number of copies per functional area could vary from 100 to 1000. It was, therefore, decided to find the (fixed and variable) costs for these levels of sales. It was further assessed that the number of pages in each monthly issue would be about 20.

Sr. No.	***Cost Elements***	***Cost***	***Nature of Cost***
1.	Composing and Plate Making	: Rs. 180/page.	Fixed
2.	Cost of Paper/page	: Rs. 0.25	Variable
3.	Cost of Printing/page	: Rs. 0.55	Variable
4.	Cost of Cover and Binding per copy	: Rs. 2.50	Variable
5.	Cost of Postage per copy	: Rs. 12.00	Variable
6.	Cost of (Paper + Printing) per copy: $20 \times (0.25 + 0.55)$	: Rs. 16	Variable
7.	Total Variable Cost/copy (4 + 5 + 6)	: Rs. 30.50	Variable
8.	Fixed Cost/Issue (number of pages × 1)	: Rs. 3,600	Fixed
9.	Fixed Cost/Year (12 issues) (8 × 12)	: Rs.43,200	Fixed

The per month and per year costs for volumes of 100, 250, 500, 750, 1000 copies per issue were calculated as follows:

(*Contd*)

Volume	Per Month			Per Year			Per Issue Cost
	Variable Cost	Fixed Cost	Total Cost	Variable Cost	Fixed Cost	Total Cost	
100	3,050	3,600	6,650	36,600	43,200	79,800	798.0
250	7,625	3,600	11,225	91,200	43,200	134,700	538.8
500	15,250	3,600	18,850	183,000	43,200	226,200	452.4
750	22,875	3,600	26,475	274,500	43,200	317,700	423.6
1000	30,500	3,600	34,100	366,000	43,200	409,200	409.2

Other costs of operation of the centre were mostly fixed and could not be traced directly to the products under consideration. These for the first two years were as given below. The costs have been adjusted for 10% inflation for the second year.

	First Year (Rs)	Second Year (Rs)
Fixed costs of equipment (depreciation, etc. excluding software)	2,40,000	2,40,000
Base resource costs, CD-ROM, etc.	4,00,000	5,50,000
Staff costs	1,32,000	2,40,000
Promotion (mailers, ads, travel)	1,10,000	1,60,000

It was difficult to identify costs of infrastructure, supplies, etc.because of lack of data and hence, are not included.

Objectives should be both feasible, given available resources, and measurable over time. For instance, a year long, month long or quarter long target would be considered 'measurable'. The methodology in setting objectives should be zero-based (not extrapolated from past trends or current budgets), and consistent with the data in the strategic planning document of the organization (Chapter 3, Gumbs). Once objectives are clearly stipulated, appropriate strategies can be adopted that are clearly and soundly related to the goal.

Token Pricing

Subsidized players may decide to introduce token pricing for a variety of reasons:

BOX 5.2

Guidelines for Developing Considerations

1. Who are You?	– Type of ownership. – Purpose(s) of library/information centre. – Purpose(s) of parent organization to assess nature of objectives of the library.
2. What are You Marketing?	– Type of product: product, services value added. – Product: hard copy, electronic. – Service: electronic, personal – Value added: consulting.
3. Who is Buying?	– Organization, individual. – Organization: private/public, commercial/academic/research. – Ability and willingness to pay. – Gauge through personal assessment/research.
4. Assess Price–Volume–Relationship	Identify what influences purchase. – Role of price in influencing purchase. – Establish relationship–price to purchase. – Through research on representative consumers, past data.
5. Assess Cost–Volume Relationship	– Identify elements of cost. – Classify cost elements into fixed/variable. – Calculate variable costs of additional (copy) unit. – Calculate fixed costs. – Calculate total costs at different volumes of production.
6. Assess Competitive Moves	– Identify direct, and generic competitors. – Identify type of competitors (like in who are you above). – Assess current price and trend of prices over time—the past Identify their objectives. – Identify their share in the market. – Assess likely reaction, particularly the lowest price they could go to (equal to variable cost in most cases).

- They may feel that what is given 'free' is not valued or that free services are not respected.
- They may wish to educate their clientele to the fact that information is not a free good.
- They may have been instructed by their supporting agency to do so.
- They may doubt that their subsidies will continue for ever, and be taking a first step toward some unspecified time when they will have to generate their own income.

Whatever factor is moving them, they have decided or have been instructed to begin with a token price, so as not to impose undue hardship on their customers.

Token pricing, however, may generate unrealistic views of the value of information in the mind of customers as does free distribution. It may also spoil the market for any unsubsidized libraries/ information centres as effectively, or more effectively, than a library/centre providing 'free' service.

Income Generation

'Income generation' for information services has generally meant 'generating some income to support a particular service.' Thus, some services are priced (and may be expected to break-even), while others are not. Selling publications (including journals) is common, as is passing on to the customer the charges for the use of on-line services. Photocopying charges are generally borne by the customer. In this phase, it is probably advisable to charge a realistic price for any priced services, rather than to accept any internal cross-subsidizing. This will assist the customers in acquiring a realistic picture of what information actually costs, and assist management in gauging the market for non-subsidized services.

Sustainability

The information centre is taking a step beyond 'income generation'; it is now being asked to sustain itself (meet its costs) through charging for its services. This is happening in developed countries also, as corporate 'special libraries' are being redefined as cost centres/profit centres. If 'sustainability' is being phased in, the centre may be able to survey its customers to prioritize the various products and services which are offered or could be offered, indicating which are most important to them, and the level of pricing that they could support.

Market Share

Maximizing market share is a common strategy among service providers who, in the initial phases of business, often absorb losses to gain a strong foothold in a competitive industry. Pricing to preserve or increase market share must move with competitors prices, though price wars should be avoided. Market share as a concept is generally linked to high-volume markets. Price has a direct effect on volume. If prices are perceived as being too high, price resistance develops and customers turn to a competing product. In the information field these include markets for infotainment media, wire services, telecommunications services (including telephone and Internet services), computer hardware and software, documents delivery (including booksellers) and database vendors. Market share may be pursued at the expense of profits in the short term.

Individual information providers and small information centres are more likely to think in terms of building up a loyal clientele than of 'market share'. Customer satisfaction is frequently their main aim, with the resulting word-of-mouth recommendations to other potential customers. Their prices still have to be realistic in competing goods/services, but a modest premium will generally be acceptable if satisfaction is high.

Managing Demand Relative to Supply

One of the goals of service pricing is to manage demand relative to supply. An information centre may have a music listening centre, where it charges by the hour. It may have limited terminals for on-line searches, or a staff member may have more questions than he/she can handle effectively at certain hours. Pricing and prior appointments can assist managers in levelling demand throughout the day, and reducing the proportion of slack time, when no service is provided and no revenue is earned. For this strategy, the focus is on demand-based pricing, not cost-based pricing.

To manage demand, it is necessary to understand how customers behave relative to price and price changes. Customers attempt to negotiate prices down, or to maximize the amount they will gain by paying a set fee. For example, if prices for on-line searching are based on connect time, since it is very difficult to assess the relative value of an information search, the customers' goals would tend to be to minimize connect time and/or to maximize information acquisition relative to a predetermined time/budget limit. Neither is likely to enable them to maximize the value received from the search.

Most sellers of goods and services adopt the opposite strategy from the customers' strategy; that is, they attempt to negotiate prices upward and/or the amount of goods/services they are to exchange for the agreed prices downwards. For libraries/information centres, who do not deplete their stock of information by selling it, the best strategy is often to maximize the value received by the customer, and so attract continuing business.

Positioning Objectives

Customers often use price as an indication of quality. Thus, higher prices are appropriate to a firm marketing its services as a high quality and exclusive product, moderate prices to a firm serving a mid-level clientele, and rock-bottom prices to an agency serving disadvantaged groups. If prices are too low, customers often assume the product or service is cheap and shoddy, and refuse to buy for that reason.

Packaging of services (like packaging of products) has implications for positioning. For example, services and products can be bundled by selling memberships.

Pricing Strategies: Options

In the context of information products and services, pricing options should be generated for information products, information services, information projects for specific purposes, and memberships of various types. This section first deals with basic pricing approaches and then, with specific modifications required for the above offerings.

Basic Options

There are three basic options for pricing strategies: cost based, competition based, and customer value/benefit based.

Cost Based Options This is essentially the approach from the point of view of coverage of total costs and, if needed, generating profits by charging a certain percentage of cost in addition to the cost itself. To assess the 'percentage plus' figure, first assess the fixed costs associated and the reasonable volume that can be produced/sold during the month/year. Most find the fixed cost per unit of volume by dividing the associated fixed costs by the number of units that can be produced. Lastly, express the per unit fixed cost as a percentage of the base (variable) cost of the product/service.

As manager of an information centre you need to decide two things: base (variable) cost and the percentage of fixed costs that need to be recovered.

The base cost ideally should be the variable cost. In case of services, however, this creates problems because many services have very low variable cost. Bulk of the direct costs are/could be fixed costs. In case of services, therefore, the information manager should use per unit direct fixed costs as base cost.

The percentage plus is a managerial decision depending on what part of the fixed cost (other than the direct cost) the centre decides to recover. The percentage could vary from 0% to more than 100% depending on the objectives set for the information centre/the specific service/product.

Competition Based Options The basic options are: (i) to match the competitors price, (ii) be less by a certain percentage, and (iii) be more by a certain percentage. This applies more in the case of similar competing products/services. The extent of difference in prices could be decided on the basis of quality and other parameters of your service/centre vis-a-vis similar parameters of competitors.

Customer Value Based Options In this approach you first assess the value (both real and perceived) of your offer to the specific customer/target customer group. You could then decide to charge a price which is either equal to, or lower than, the value (perceived) realised by the customer group. Information of (perceived) value from the point of view of the customer may be generated through estimating the worth of each feature of the offer provided by you and/or the worth of the offer as a whole.

Help of market research/experts may have to be taken for this purpose. How much below this value you should charge, depends on the total volume of product/service that you wish to sell, or any other market related objective you need to achieve like market share, individual customer share, target profit, etc. This is because the larger the difference between the value to customer and the price, higher the attractiveness of the offer.

Pricing Strategies for New Offerings

There are two basic strategies for pricing new products/services: penetration pricing and skimming pricing.

Penetration Pricing The purpose of penetration pricing is to achieve a quick build up of sales among the customers in the target market. It boils down to as low a price as you could charge —usually close to variable cost/base cost of the product/service. This is used when the product/service is well known, the primary hurdle in using the service could be its higher price, and when there are economies of scale in production (i.e., cost per unit could be lowered significantly if higher volumes are produced). It is inadvisable to use this strategy when other efforts are required to develop the market and the market is not likely to develop fast enough. This is because, extra costs would be incurred in developing the market whereas, the same would not be recovered through generation of sales.

Skimming Pricing This is the opposite of penetration pricing. In this, you charge about the highest (close to the perceived value by the most sophisticated customers) price in the introductory phase, and then slowly reduce it over a period of time. This is applicable when there are very few customers who are knowledgeable about the service/product and its benefits, the market development effort (of other than lower price) is likely to be significant, competition is not likely to develop quickly, and there are low economies of scale (i.e., cost per unit is not likely to go down significantly with increase in volume of production). Over time, the marketer keeps reducing the price to expand the customer base to include those customers for whom the benefits are less and/or whose paying abilities are less.

In this option, the revenues generated through higher prices in the earlier stages help the financing of market development in later stages.

A Word of Caution It is strongly suggested that you do not confuse the penetration pricing with the discounts offered to the customers to try the product, for assessing the real benefits of the product/service during introductory phase (or for other specific purposes). The latter could be important elements for introducing services/products whose benefits can be realised only after sustained use/experience by individual customers. In fact, in case of experience based offers the price could actually go up after the benefits have been realised. However, penetration pricing is different in the sense that it is used when customers realise the benefits to begin with and the primary hurdle to adoption/purchase is its price. In such a case, low price can be used to quickly penetrate a large proportion of the market.

Strategies for Different Types of Offerings

Products/Services For specific products and services, you should first identify which basic approach of pricing to use, i.e. cost based, competition based, or customer based. The decision hinges on the objectives of the information centre and the specific market conditions.

Cost Based Cost based approach fits well with certain objectives of covering costs, and are about the only approach when competition does not exist and when it is difficult to assess the benefits of the offer from the point of view of the customer.

Competition Based Competition based approach should be used when similar competing offers are available in the market and the potential buyer is not able to distinguish between the competing offers quite well.

Customer Based Customer based approach should be used when special benefits are likely to accrue to the customers which are difficult to be obtained by producing the offer on their own and/or acquire an offer from competition. Value added information products/services may be better suited for adopting customer based approach.

Information Projects Information centres may be contracted by customers to work on a project whose output could be design of information products/services, design of information processing systems, etc. Such projects would be of higher value and of significant importance to the customers. The options available for preparing a budget could be: fixed fee (for manpower) plus expenses (of all kinds), fixed fee alone (inclusive of expenses), or sharing of certain proportion of benefits accruing out of the implementation of the project. The last option is applicable only if output is distinctly measurable. Among the fixed fee alone and the fixed fee plus expenses, the size of the project may actually influence the approach. Larger the size, chances are that the client might insist on fee plus expenses and may in fact put down conditions/penalties if the project gets delayed or does not measure up to the quality standards set out for it.

Membership The membership is a highly flexible offer. It can be designed primarily for seeking clients' help in developing the information centre as a whole or a significant service activity being planned by the information centre. It can also be designed for funding specific resources or services. For example, an information centre/library may identify patrons who may be interested in development of a kind of information centre. Alternatively, an information resource like a journal, could be funded/ subscribed through a member. The member in return might be cited at the place where the journal is located and also receive some free or subsidised services/products offered by the centre.

The 'membership' as a pricing unit has a number of advantages. From the point of view of the customers, a number of products/services are available whenever needed, as part of the membership (and thus easily budgeted) or at a 'member's discount' price. The membership fee is tax deductible as a business expense in some countries. Depending on the package offered, the membership may provide useful contacts with fellow members. Depending on the name attached, there may be prestige value in being a member.

From the point of view of the provider, memberships can be a useful marketing tool. They can provide funding for a journal and/or a newsletter. Other publications can be included in a higher membership fee, or offered at a discount with a less inclusive membership. A specific number of 'free' queries/database searches can be offered; this can be useful in promoting new or underutilized resources or services. A limited number of free photocopies can be included, in effect waiving charges when the price, in any case, would be so small that it would not be economical to collect it.

The membership list is itself valuable. If the members agree, it can be sold on a single-use basis to advertisers. The information centre can use it to announce new services, circulate questionnaires, announce meetings and workshops, and survey customers' needs and preferences, to fine-tune its efforts to serve them.

When purchasing a membership, whether in an information service network or a health spa, a customer is paying for an intangible benefit. There are tangible features, primarily equipment and facilities and professional advice. At the spa the member is paying for use of exercise equipment, the advice of a trainer, and for better health or a better body image. In the information network members are paying for use of the information resources and perhaps the equipment of the information centre, plus the expertise of the staff. They are also paying to be better informed, and hence more competent in their professions.

Membership pricing programs permit considerable flexibility and creativity: they need not be limited to a 'one size fits all' approach. As mentioned earlier, fee structures can be used to manage demand for limited resources. Different fee structures can be charged for customers who agree to use the facilities only during limited (low peak) hours. However, clearly defined rules of membership must be provided to customers and, at least equally important, be constantly in the forefront of staff attention, to assure that each member receives full agreed value for fees paid.

To counter high turnover, renewal rates can differ from initial membership rates. Discounts can be offered to those who introduce new members.

Services can also be 'unbundled', with separate fees charged for various packages or 'membership plans'. One fee might be charged to use all services, with separate rates for those who want only the main journal or newsletter, or only the 'current contents' service. A flat membership fee may be charged for use of most of the equipment and services, with a per-use charge for high demand or high variable cost services. This is an old tradition in libraries: many 'subscription libraries' charged a membership fee, plus a surcharge for borrowing 'best sellers'.

Membership pricing can incorporate a variable pricing structure offering subscription rates, volume discounts, and peak load and off peak load prices. The variable pricing structure can set differential rates based on the type of file queried (e.g. bibliographic vs. full-text database), the type of search utilized, and perhaps, the nature or type of InfoPros (Information Professionals) doing the search (e.g. university library vs. private sector firm or the nature or type of a customer). Important points to remember are:

- Markets for information services may not be homogeneous. Differential pricing structures can be tailored to differences in buyers' sensitivities to prices, owing to differences in available resources and in the perceived value of the information to be received.
- A complex pricing structure has its own costs, in staff training and time required for administering it, and in possible bad feeling which may arise when customers compare the prices they paid for 'the same service'.

Generate Pricing Options

To begin with generate the lowest price that can be charged and the highest price that can be charged. Subsequently, decide on intermediate points.

Specify the Lowest Price

This would depend on three specific factors. Firstly, from the point of view of economic sustainability, the lowest price should never be less than the variable cost. This is because at a price lower than this, you would be incurring a cash loss, i.e. more units you market, more losses you would make. Such a situation must be avoided altogether. Secondly, this option (price lower than variable cost) may be considered, in case, there are alternative ways of recovering the difference through indirect means, i.e. subsidies from some other source. Thirdly, this option may be considered for short period if such a price is required for inducing trial by customers so as to provide them opportunity to experience the benefits of the product. Besides, the information manager must look for reducing the costs of producing the product continuously, to further reduce the lowest price point.

Maximum Price that can be Charged

This is the price which most potential customer(s) would be willing and able to pay, for the benefits provided by the product/service. In case of information, it is not easy to identify such benefits, leave alone their quantification to arrive at the figure. Research may have to be conducted to assess these. A more practical way is to identify the price of the closest substitute product/service, and assess the amount of premium your offering may be able to command for its quality, delivery, prestige, etc. Besides, explicitly look for product enhancements and/or ways of promotion, to enhance the product appeal that could improve the maximum price that could be charged. Obviously, this increase in the price should be more than the cost of building such enhancements.

Generate Intermediate Options

Once the lowest and the highest price options are generated, intrapolating few price points in between the range is not difficult. It would be ideal if these intermediate points had a specific rationale like competitor price.

Select the Base Price

Each one of the pricing options, must be evaluated, on each of the objectives set for the product/service. Crucial dimensions on which the options need to be evaluated are as follows.

Coverage of Fixed Costs

For each of the options, assess the revenue and the costs and check how much of the costs are being covered. You must make sure that the price is, at the least, more than the variable cost. You must also calculate the percentage by which fixed costs are being covered. Ideal would be more than 100% so that you actually make a profit on the service/cover other costs of the information centre.

Sensitivity to Uncertainty in Demand

You need to assess the coverage of fixed costs, to uncertainty in demand, for each option. Lower the effect of uncertainty, better is the option.

Sensitivity to Fluctuations in Price/Costs

The coverage of fixed costs needs to be assessed for likely changes in price in the market place, arising out of competitors' actions and/or market conditions, as well as, likely fluctuations in variable and fixed costs. Once again lower the impact, better the option.

Fittingness to Position

This is the most crucial parameter from the point of view of market so far as the long term viability is concerned. You must make sure that the selected price option supports the position chosen for the offer. You cannot sell gold at half its market price because the customer would never trust you.

Likely Reaction of Competitor/Environment

Certain options may invite drastic reactions from competitors or other stakeholders, like serious complaints by regular buyers/ patrons of the centre. If any such reaction is likely, plans need to be prepared to forestall the same/take care of such eventuality.

Prepare Cash Flow Statement for New Products

A cash flow statement needs to be prepared to see long-term viability of the offer/service.

In a specific situation, any one option may not be the best on all the objectives. In such a case, trade offs among the specific objectives may need to be made judiciously. It would be useful to make such trade offs explicitly and note the rationale for the same. This may also be discussed with/agreed upon by the management of the information centre.

ADAPTING THE BASE PRICE

Pricing of any product may have to be adjusted for a number of situations. Some of the important adjustments are being briefly described here.

For Ability to Pay

Prices of most information products may need to be adjusted for the ability of customers to pay. For example, prices charged to customers in developed economies may be higher than those in developing economies or prices charged to organizational consumers may be higher than those charged to individual consumers. Among the organizations, commercial ones may be charged higher than not-for-profit ones. And among individuals, non-students may be charged higher than students.

The adjustment of price according to the ability to pay (so that demand is created) makes perfect sense. However, effective ways of administering/managing the same may be needed. The most effective ways would be through some differential features like product features, service, delivery, packaging, etc., so that the cross buying across segments is minimised. Besides, administrative arrangements like proof of belonging to the lower price groups may also be useful, but may involve more of policing function than marketing.

For Increased Life/Purchase

Several types of discounts may need to be provided for information products and services. Two important ones are: quantity discounts and cash discounts.

Quantity discounts are frequently offered if multiple copies of the same product are bought. These make economic sense because there are savings in promoting, handling, mailing, etc. of multiple copies together compared to equivalent single copies.

An additional aspect of information products is to discourage the production of copies of the document for own use, or sale by the buyer, as the production of copies whether hard paper or electronic, is easy and low cost.

Cash discounts are being used in information industry through advance payments for delivery/use of service over extended periods. For example, if a subscription is bought for 1 year, 2 years, or more, appropriate discounts are offered. These provide benefit to the customer. At the same time, there are effective ways of pre-empting the future demand, reducing promotional expenditure, and obviously earning interest on advance payment.

Assessment of the impact of various discounts may be made in terms of increased demand, as a result of lower price and meeting other objectives of the centre, before discounts are offered. These may also have to be in line with the industry norms.

For Promoting Trial/Usage

Promotional pricing, as the title suggests, is meant for temporary or medium to long-term promotion. It can take several forms. Some examples are as follows:

- A new product may be priced lower to induce trial in the introductory phase.
- A specific product/service may be priced lower as it can be used to attract more customers who would buy other products/services.
- Special events may be organised, like exhibitions, seminars where the product/service may be offered at a discount to promote the product/the information centre.

In all the situations of promotional pricing, the information managers must evaluate the impact in terms of monetary as well as non-monetary objectives set for the product/service and/or the promotion.

BOX 5.3

NICMAN at IIMA : Setting the Price

Selecting Pricing Objective

Following pricing objectives, could be identified, on the basis of considerations, for pricing of NICMAN products and services.

Considerations	Pricing Objectives
NICMAN to become self sustaining at the earliest.	Sustainability of specific product/service by meeting all costs and contributing to overall income generation.
Product and service being conceptual in nature not possible for the customer to assess value.	Keep price low enough to try on a sustained basis for understanding the real value of products/services.
Differential paying ability of different customer.	Adjust price for paying ability of the customer.
Competition uncertain.	Charge as low a price as possible to cover as much market as possible.
IIMA being parent organization.	Price to match the high quality position.

Selecting Basic Approach

The considerations and the pricing objectives developed above, strongly indicate the following:

Competition is difficult to assess and is uncertain. Therefore, competition based pricing would be difficult to use.

Value of the products/services is difficult to assess for both customer and NICMAN. Hence, customer value based pricing may be difficult to use.

It is possible to assess costs quite well, particularly the costs directly associated with the specific product/service. Hence, this basis is both feasible and useful to apply.

NICMAN is introducing most of the products for the first time. Use of these products, given the nature of products/services, may be higher if prices are kept low. This would be more among academic and young executives if they are able to afford buying of the products.

This group is of particular importance to NICMAN, as in the long run this could lead to professionalization of management. Penetration pricing, therefore, may be better suited.

(*Contd*)

Generate Pricing Options

The basic approach decided for pricing is cost. In this approach the following options have been generated:

1. Minimum Price	: Lowest Variable Cost	:	Rs. 30.50 × 12
		=	Rs. 366
2. Intermediate Price	:	:	Rs. 800
3. Intermediate Price	:	:	Rs. 2000
4. Intermediate Price	:	:	Rs. 3000
5. Maximum Price	: As obtained from Survey	:	Rs. 4000

The real generation of options is of the lowest and the highest price. The rest are intrapolation of the range.

Setting the Price

Each of the options was evaluated on the objectives identified earlier. The basic parameters of cost were:

Variable Cost: Rs. 366. Fixed Cost of Production: Rs. 43,200; Fixed Cost of Promotion: Rs. 20,000

Criteria	Option: Price/Year in Rs.									
	366	500	800	1000	1500	2000	2500	3000	3500	4000
Contribution/ Member	0	134	434	634	1134	1634	2134	2634	3134	3634
Penetration% in Bus. & Ind.[1]	7.0	7.0	7.0	7.0	7.0	6.5	5.5	5.0	4.5	4.0
No. of Member subscriptions[2]	112	112	112	112	112	104	88	80	72	64
Total Contr./ Yr. (Rs. 000)	Nil	15.0	48.6	71.0	127.0	169.9	187.8	210.7	225.6	232.6
Contr. After Fixed Costs (Rs. 000)	−63.2	−48.2	−14.6	7.8	63.8	106.7	124.6	147.5	162.4	169.4
Risk of:										
- Loss (Contr./ Fixed Cost)	0	0.24	0.77	1.12	2.01	2.69	2.97	3.33	3.57	3.68
- Penetration	←NIL→									

[1]Penetration is assessed as those mentioning 'Very Keen to Buy' at a particular price, based on reactions to price range of Rs. 1,500–Rs. 4,000. Penetration at prices less than Rs. 1,500 has been assumed to be same as that at Rs. 1,500.

[2]Assuming total number of organizations in business and industry as 1,600, i.e. the total number of organizations in India which were assessed to be potential customers of such products in the survey.

(Contd)

The above analysis helps in choosing a price according to what is the primary objective.

— From the point of view of contribution/coverage of fixed costs, any price at Rs. 1,000 or more is acceptable. However, to take care of the risk, the price of Rs. 1,500 or more is more acceptable than the price of less than Rs. 1000.
— From the point of view of penetration/market coverage, any price up to Rs. 1,500 is acceptable as the penetration is likely to be 7% up to that price.
— From the point of view of fittingness with the position, information products/services from the premier management institutes, a price of Rs.1000 upwards is acceptable. This is because the price of competing products from Indian suppliers of similar products/services is less than Rs. 1,000. The foreign products/services are priced much higher.

The NICMAN could choose a price for commercial clients which is anywhere from Rs. 1,000 to Rs. 1,500 per year.

For Promoting Product-Mix

Two specific forms of price adjustments related to product/service mix offered by information centres/libraries are: two part pricing and product/service bundling pricing.

Two part pricing involves a fixed fee for the service/product plus a variable component depending on usage level. For example, you may offer annual membership of the centre plus a specific charge for individual services (usually at a lower price compared to casual users). This kind of pricing helps the information centre in getting assured revenues (to cover bulk of the fixed costs of the service) and assured liquidity, though at a lower per unit price of the service. This method would attract bulk users as they may be able to reduce their total cost by paying lower price per unit of service.

In product bundling pricing, the information centre bundles a number of products/services in distinct groups of interest to customers. The price of each bundle is done in a manner that the price of the bundle is lower than the sum of prices of individual product/service which are included in the bundle. This could

BOX 5.4

Guidelines for Setting the Base Price

1. For Setting Objectives

1.1 Review the objectives of the product/service/centre (library) from the document on marketing plan.
1.2 Review the considerations for Pricing and assess implications for objectives.
1.3 Decide whether the objective is Token Pricing/Income Generation/ Sustainability from the point of view of market situation and organizational objectives.
1.4 Decide whether Image, Market Share, and Positioning objectives are relevant on the basis of considerations.
1.5 On each objective, define the desirable level/value to be attained.
1.6 Given the situation, assess the relative importance of objectives.

2. Select a Pricing Approach

2.1 Assess the market situation and decide whether the primary marketing task is market development or fighting the competition.
2.2 For developing the market, assess the role of price vis-a-vis other elements of marketing mix.
2.3 For fighting competition, assess whether you have any distinctive advantage/disadvantage vis-a-vis competition.
2.4 If the primary task is market development, assess the price–volume relationship and use the customer oriented approach as pricing strategy.
2.5 If the primary task is fighting competition, study the competitors and assess their reactions to your likely pricing moves. The basic approach would be competitor oriented.

3. Generate Pricing Options

3.1 Decide lowest price option: i.e., lowest variable cost of producing and marketing an additional unit of the product.
3.2 Decide maximum price option:
- maximum value a customer could derive by using the product in case of primary task of market development,
- maximum price at which similar products are being marketed in case the task is snatching share from competitors.

3.3 Decide intermediate price points.

4. Evaluating the Options

Each option must be evaluated on specific objectives/criteria developed.

4.1 Assess the volume of demand for each option.
4.2 Estimate revenue and costs for the level of demand generated for each option.
4.3 Estimate contribution towards coverage of fixed costs for each option.
4.4 Estimate market penetration for each option.
4.5 Estimate market share for each option.
4.6 Estimate the chances of not achieving (risk) the desired (as per objective set) level of contribution, penetration, and market share.
4.7 Select the best option in terms of achieving objectives at affordable/ minimum risk.

BOX 5.5

NICMAN at IIMA : Adapting the Base Price

In the context of NICMAN, the base price needs adaptation to adjust for different clients, product mix, multiple copy purchases, and introductory phase.

Adjustment for Types of Clients

As discussed in Considerations for Pricing, the ability and willingness to pay, varies across the different markets. The base price was decided for a single copy in the commercial organization market. The base price for academic organizations and individual buyers in both, commercial and academic markets, needs to be decided.

- Discounts of 10 to 15 per cent to academic organizations and individuals are customary in the market for books.
- Differential price to organizations and individuals, though existent in the market for journals, could give rise to grey market, i.e., organizations buying in individual's capacity. The discount to individual could be up to 50% of price to an organization.
- The minimum price should never be below the variable cost.

The options generated therefore are,

Minimum Price	:	Rs. 400	
Maximum Price	:	Rs. 1,200	(20 per cent discount on price to commercial organizations)

It is proposed to price the individual copy at Rs. 800 considering, the fact, that even a glossy general publication was priced at Rs. 50 per copy in the Indian market. Academic journals are priced far higher. This price could also be justifiable from the point of view of covering direct costs (both fixed and variable), along with the minimum penetration level of 4% (64) in the commercial sector. Whatever sales are made to the academic sector/individuals would lead to an additional contribution.

Product-Mix Adjustment: NICMAN would offer more than one product/ service. Two types of adjustments could be thought of: buying of multiple products/services and membership of the Centre on some fixed initial payment.

Membership Plus Price: Membership fee could be decided to cover as much of the fixed costs and investments of the Centre as possible. The Centre would get revenue from the membership through interests on its investment. The safe returns on capital in India ranged from 10 to 15 per cent. To attract membership, for making the Centre viable and strong, NICMAN could think of providing 20 per cent (more than the return on investment) of membership fee as discount. A standard package of services/products could be worked out for this.

(*Contd*)

Buying Multiple Products: If a buyer buys multiple products/services, the major savings could be in mailing, distribution, and promotion. These savings in case of CC/IML could be up to 25% of the variable cost (Rs.12 × 15: Rs.180). It is proposed to pass on the distribution cost savings to the clients. Thus, a discount of 10 to 15 per cent could be decided.

Special Discounts: In case any one bought more than one copy of the same product, a discount similar to the one for buying multiple products was proposed. This level of discount was not likely to fully take care of making of copies at customer's end. This is because the cost of making a copy at customer's end could be as low as (Rs. 0.75 per page × 20 pages per issue × 12 issues) Rs.180 compared to a discounted price of close to Rs. 800 to Rs. 1000. However, it was expected that the quality of paper, the binding, and hassles of making copies and distributing to individuals would detach the customers to prepare their own multiple copies.

Introductory Discount: It was proposed to give special discount if orders were placed by a certain date. This could help in generating quick orders in the introductory phase. For introductory phase a 20% discount could be given.

Overall Adjustments: Overall adjustments could be described as under:

	Commercial Organization	*Academic Organization*	*Individuals*
Price (Rs./yr.)	1,500	750	750
Bulk Discount	20%	20%	—
Bulk Price/Copy	1,200	600	—
Other Products	20% of Other Product's Price (same as bulk discount)		
Introductory Discount	20% on the Order		

The price would be as follows:

Implications:

	Commercial Organization		*Academic Organization*	
	Reg. Price	*Intro. Price*	*Reg. Price*	*Intro. Price*
Single Copy	1,500	1,200	750	600
Multiple Copies	1,200	960	600	480

Fixed cost of Rs. 63,200 would get covered in various ways. For covering Rs. 63,200 fixed cost, the number of single copy subscriptions from commercial and academic organizations could be as given in the table below:

Table Subscriptions Required to Cover Fixed Costs of Rs.63,200

Sr. No.	Comm. Orgn.		Academic Orgn.	Total Subscriptions
1.	75	+	0	75
2.	70	+	18	88
3.	65	+	36	101
4.	50	+	54	104

BOX 5.5

Guidelines for Adapting the Base Price

1. Review product/service, market situation, buyer behaviour, and competitive behaviour, etc. (considerations in Pricing) for identifying which kind of adjustments are needed.
2. For each type of adjustment, assess the benefits to the centre/library and the costs. Adjust price, only in cases, where benefits are more than the costs.
3. Review all the adjustments and their implications for the objectives of cash generation and contribution. If necessary, revise adjustments.

lead to increase in demand as the effective price is lower. At the same time, the increased demand more than offsets the impact of reduced margins on the revenue earnings of the centre.

REVISING PRICES

An information centre may be required to change the price of its products/services in response to changes in the costs of inputs, market developments, environmental changes, competitive pressure. In a conceptual sense, you either initiate a price change or react to a price change by competitors.

Reacting to Price Changes

Price changes introduced by competitors could be of two types: increase in price or decrease in price (price cut). In either case, the answers to the following questions might help in deciding the nature of reaction:

- Why has the competitor changed the price? Is it in response to changes in input costs? For grabbing more market?
- Is the price change likely to be temporary or permanent?
- What is likely to happen to sales and profits of competitors?

- How are competitors likely to respond?
- How would the total market get affected?
- What is the effect on your sales and profits?

The options available to react to price changes could be:

- No reaction: If change is temporary and/or is not likely to affect you significantly.
- Introduce New Product: Of better/poorer quality in case the change is likely to open a new slot/position in the marketplace.

The real challenge of price changes in the field of information products and services is going to be assessment of value addition through studying/understanding customer requirements.

Initiating Price Changes

This is the most likely scenario being faced by information centres/libraries. To begin with they would/might start with charging token prices. As the attitudes of buyers change (in terms of expectations of prices) and as they realise the full benefits of better information products and services, prices may have to be increased. Also, acquiring equipment and software to design and market better information products and services is likely to lead to increases in fixed costs/investments of information centres/libraries. For economic viability of such acquisitions also, prices may have to be increased. In the process of recouping the investments and covering the fixed costs faster, the purpose of pricing/marketing may also be getting an additional share in the marketplace. In other words, the primary task is to justify price increases, both for developing the markets, as well as, getting a higher share of the existing market.

For deciding whether the price change needs to be initiated, following assessments may have to be made:

- Assess customers' reaction to the price change—your customers as well as customers in general.
- Assess competitor's reaction to price change.
- Assess your performance in light of the above two.

SUMMARY AND CONCLUSIONS

Introducing the concept of pricing of information products and services, particularly in libraries and in developing countries, is a difficult task. Both, the customers as well as the staff, not only find it difficult to accept, but in several cases actively oppose such moves. However, the changing environment of decreasing/ freezing grants from donor/parent organizations, the changing and increasing complex needs for information of clients, and the need to infuse funds to provide the required products and services, make it essential to devise ways of generating financial resources through charging the users.

A library/information centre might like to first assess the clients to be served and their information and delivery requirements. The worth/value of current information products and services to the clients and their ability and willingness to pay for each product/service, currently offered, can then be assessed. Finally, an assessment of costs can be made which are associated with each of the product/service and the money required to run the library. The requirements of funds for acquiring basic resources should also be made.

The library/information centre then needs to assess the extent of funds that can be generated through charging of information products and services to users/clients/customers. A decision needs to be made as to which customers/products/services can be charged only token price, which ones can be charged to cover a reasonable proportion of cost, and which ones (if at all in the beginning) can be used to generate revenues more than their cost. Strategically, the library may also make similar decisions for medium and long term. It could also fix a time-frame to move towards the achievment of objectives of higher/full cost recovery generating surplus. These decisions would form a part of developing a marketing plan as discussed in Chapter 3.

The libraries/information centres may continue to generate part of their resources through donations and memberships/

patrons as in the past. However, the money received should be, in some way, linked to the benefits the donor/patron is entitled to. Targets of funds to be generated through this route along with the bundle of services to be offered need to be decided.

BOX 5.6

Key Steps in Deciding Prices of Information Products/Services

- Considerations of library objectives, types of clients, types of offering (product/service), competition, likely price and sales volume, cost and volume relationships, and their implications for succeeding steps.
- In the light of considerations, assess the appropriate pricing objectives and approaches.
- In the light of above two steps, generate and evaluate pricing options so as to select a base price for the product/service.
- The base price may have to be adjusted for different types of customers/segments and specific situation in the marketplace to achieve desired overall objectives.
- In general, price charged should not be lower than the variable cost of producing and marketing the product/service, and not more than the value that a customer could derive by using the product/service.
- Prepare a cash flow statement for planning and reviewing the funds generation for the library/centre and each of the product/service.
- The balance requirements of funds should be targeted to be raised through memberships/donations, etc. Devise appropriate product/service bundling for such memberships/donors.

REFERENCES

1. Bridges, William, *Job Shift: How to Prosper in a Workplace without Jobs*, Addison-Wesley, New York, 1994.
2. Brindley, Lynne J., "Information Service and Information Product Pricing", *Aslib Proceedings*, Vol. 45, Issue 11/12, Nov/Dec 1993.
3. Chernos, Saul, "Pricing of Commercial Online Services: A Canadian Perspective", *Information Highways*, Vol. 2, Issue 5, 1995.
4. Cousins, Jill, "Setting up a Business Information Service", *Aslib Information*, Vol. 18, Issue 4, April 1990.

5. Danilenko, Gene, "Activity Based Costing for Services: The Corporate Information Center", *Special Libraries*, Vol. 85, Issue 1, 1994.
6. Drabenstott, Karen, *Analytical Review of the Library of the Future*, Council on Library Resources, Washington D.C., February 1993.
7. George, Anne Lee, "Fee-Based Information Services and Information Brokers: A Case Study in Collaboration", *Fee for Service*, Vol. 1, Issue 1, 1994.
8. Ghani, Din, "Charging and Paying for Information on Open Networks", *Aslib Proceedings*, Vol. 47, Issue 6, June 1995.
9. Gray, Doublas A., *Start and Run a Profitable Consulting Business: A Step by Step Business Plan*, 3rd ed. Self Counsel Press (a division of International Self Counsel Press Inc.), Business Series, North Vancouver, 1990).
10. Handy, Charles, *The Age of Unreason*, Harvard Business School, Boston, 1989.
11. Handy, Charles, *The Age of Paradox*, Harvard Business School, Boston, 1994.
12. Hanna, Nessim and Dodge, Robert, H. *Pricing Policies and Procedures*, New York University Press, New York, 1995.
13. Harrow, John, 'Politics and Pricing—Lessons to be Learned from the Failure of Warwick Statistics', *Fee for Service*, Vol. 1, Issue 4, September 1994.
14. Hatfield, Deborah, 'Partnerships in Information Services: The Contract Library', *Special Libraries*, Vol. 85, Issue 2, 1994.
15. Hoffman and Novak, 'Electronic Enterprises: Looking to the Future', Technology Assessment Report (downloaded electronically), Office of U.S. Congress, 1994.
16. Hyde, Margery, 'Quality Standards for Fee-Based Information Services', *Fee for Service*, Vol. 2, Issue 2, 1995.
17. Illinois Digital Library Project, 'Digital Library Infrastructure; Building the Interspace for a University Engineering Community', *ACM Communications of the Computing Machinery*, Special Issue on Digital Libraries, April 1995.
18. Jotwani, D. and Haravu, L.J., 'Pricing of the SDI Service at ICRISAT', *Journal of Information Science: Principles & Practices*, Vol. 19, Issue 1, 1993.
19. Kinnear, Thomas C. and Bernhardt, Kenneth L., *Principles of Marketing*, Glenview, III: Scott, Foreman, 1986.

20. Montgomery, Stephen L., *Profitable Pricing Strategies*, McGraw-Hill, New York, 1987.
21. Morris, Michael H. and Morris, Gene, *Market-Oriented Pricing: Strategies for Management*, Quorum Books, New York, 1990.
22. Mowshowitz, A., 'On the Market Value of Information Commodities. I. The Nature of Information and Information Commodities', *Journal of the American Society for Information Science*, Vol. 43, Issue 3, April 1992.
23. Mowshowitz, A., 'On the Market Value of Information Commodities. III. Demand Price', *Journal of the American Society for Information Science*, Vol. 43, Issue 3, April 1992.
24. Nagle, Thomas T., *The Strategy and Tactics of Pricing : A Guide to Profitable Decision Making*, Prentice-Hall, Englewood Cliffs, N.J., 1987.
25. Pienarr, Rae, 'The Organization of Fee-Based Services', *Fee for Service*, Vol. 1, Issue 4, September 1994.
26. Rogers, Len, *Pricing for Profit*, B. Blackwell, Oxford, 1991.
27. Saksida, Marino, 'Shift 'Inevitable', *Information World Review*, No. 63, 1991.
28. Sheedy, Edna, *Start and Run a Profitable Home-Based Business: Your Step-by-Step, First-Year Guide*, Self Counsel Press (a division of etc.) Business Series, North Vancouver, 1990.
29. Sykes, Phil, 'Safe Broking—A Ten Point Guide', *Aslib Information*, Vol. 20, Issue 2, February 1992.
30. University of Toronto Business Information Centre, 'Fee-Based Profile', *Fee for Service*, Vol. 1, Issue 4, September 1994.
31. Warner, Alice Sizer, 'Looking Back, Looking Ahead', *Bulletin of the American Society for Information Science*, Vol. 21, Issue 3, Feb/Mar 1995.
32. Weaver, Maggie, 'The Top Ten Marketing Tips', *Fee for Service*, Vol. 1, Issue 3, June 1994.
33. Webber, Sheila, 'Costing and Pricing Information Services', *Fee for Service*, Vol. 2, Issue 1, 1995.
34. Whelan, Hilary, 'The In-house Information Shop—The Corporate Information Unit as a Profit Centre', *Aslib Information*, Vol. 18, Issue 3, March 1990.
35. Whitmell, Vicki, 'Establishing Long-Term Relationships with Your Fee-Based Clientele. Part One: Agreeing to Agree' *Fee for Service*, Vol. 1, Issue 1, Part Two: Costing Issues, Vol. 1, Issue 2, March 1994.

CHAPTER 6

How to Promote Information Products and Services

■ *S. Sreenivas Rao*

PROMOTION—THE FOURTH 'P'

After an information product or service has been developed, the price for it has been determined, and the way to reach it to the clients, at the places, where they want it has been worked out, then, the potential clients must come to know of the product or service. Without this basic information or awareness, they cannot act. Therefore, the fourth 'P' in marketing, after product, price, and place, stands for *promotion*, i.e., the communication activity. The basic purposes of promotion are to:

- Attract and hold the attention of the clients (both potential and existing).
- Make the clients aware of the product or service and the organization providing it.
- Position the product or service and the organization in the minds of the potential clients in a unique and favourable manner.
- Motivate the clients to actually buy the product or service.
- Constantly reinforce the message on the clients.

S. Seetharama points out:

> Promotion involves mechanisms by which the target groups are informed about the resources available, services and products offered by the library/information centre. Essentially, the purpose of promotional activities is said to be to communicate, to convince, and to compete. Therefore, the library's promotional packages need to be so designed as to achieve these objectives. In this context, the information collected in the market segmentation stage, would be useful.

Dr T. Viswanathan, Director of Indian National Scientific Documentation Centre (INSDOC), New Delhi, gave an example of what would happen if promotion was not done. Speaking at a workshop on 'Marketing of Information Products and Services' held by the Indian Institute of Management, Ahmedabad, and the International Development Research Centre, Canada, in February 1994, he pointed out that INSDOC's CAPS (Contents, Abstracts and Photocopies Services) could only achieve '50% of the target in the first two years.' (Jain *et al.*)

PROMOTION METHODS

In general, promotion, as Philip Kotler points out, involves one or more, or all, of the following methods to reach the clients:

- Direct marketing
- Public relations
- Advertising
- Sales promotion
- Personal selling

The most relevant promotion methods for librarians and information managers are direct marketing, public relations, and advertising—in that order. For them, sales promotion and personal selling may not be much relevant. Fairs, trade shows, presentations, demonstrations, and meetings, which librarians and information managers do sometimes conduct, are more the direct marketing and public relations kind, rather than the sales promotion and personal selling variety.

Moreover, given that the nature of a library or an information centre is that of a social and service institution educating the clients becomes an important promotion tool, particularly about how to use the library and how to use the new information technology available in the library. Therefore, educational and training programmes may have to be organized for clients to help them make the best use of the library or the information centre, and of the new information technology. Teaching, participating in educational programmes of academic institutions and community organizations and conducting short training programmes for clients become major promotion activities of librarians and information managers.

Libraries and information centres have to do promotion not only to their clients, but also, to their own staff and to the managers of their sponsoring organizations. Without the internal bridges, the external promotion activity will not be effective. The importance of internal marketing and promotion is dealt with in Chapter 9.

PROMOTION ACTIVITIES

Some of the relevant promotion activities for librarians and information managers under direct marketing, public relations, and advertising, (adapted from Kotler) are as follows:

Direct Marketing	*Public Relations*	*Advertising*
Catalogues	Press kits	Print and broadcast ads
Mailings	Speeches	Packaging
Telemarketing	Seminars	Packaging inserts
Electronic shopping	Annual reports	Brochures and booklets
TV shopping	Charitable donations	Posters and leaflets
Direct response: radio, magazine, and newspaper	Sponsorships	Directories
	Publications	
	Community relations	

Kiosk shopping Free samples	Lobbying News (events/ people/ products) Public interest articles in media	Display signs Point-of-purchase displays Audiovisuals Symbols and logos

HOW TO DEVELOP A COMMUNICATION PROGRAMME

The First Level—Objectives, Target Segment, and Message

To develop a communication programme, first decide the objectives to be achieved, in a specific target market segment, and with what message.

Objectives	Target segment	Message

These three communication elements interact with one another. It is irrelevant with which element you begin. Which comes first is like the chicken and the egg question. Although the order does not matter, the iteration among the three elements and their matching does.

The objectives indicate the direction for action. They tell us where we want to reach, whether we are on the right track, and finally, whether we have reached where we wanted to. Any evaluation, during or at the end of the programme is possible, only, if clear objectives are available.

On the need for specifying objectives, Kotler writes

> Once the target market and its characteristics are identified, the marketing communicator must decide on the desired audience response. The ultimate response, of course, is purchase and satisfaction. But the purchase behavior is the end result of a long process of consumer decision making. The marketing communicator needs to know how to move the target audience to higher states of readiness to buy.

> The marketer can be seeking a *cognitive, affective*, or *behavioral* response from the target audience. That is, the marketer might want to put something into the consumer's mind, change the consumer's attitude, or get the consumer to act.

Therefore, to be effective, the objectives must be:

- Realistic to the situation and the organization.
- Specific and measurable.
- Prioritized.

The objectives, as Kotler points out, should specify for the market as a whole, and for each target audience the stage at which it is and the level to which it needs to be moved on the following dimensions:

Communication Goals: Percentage Target Audience

Stages	*Hierarchy of Effects*	*Current Status (%)*	*Desired Status (%)*
Cognitive stage	Awareness		
	Knowledge		
Affective stage	Liking		
	Preference		
	Conviction		
Behaviour stage	Purchase		

Libraries and information centres cater to two different types of *markets*, i.e., individuals or households and organizations. The individual and organizational markets can be segmented on different criteria called bases of segmentation. General types of bases used for segmentation are as follows:

Individual	*Organizational*
Socio-cultural (social class, life style)	Industry (sector of the economy)
	Function (production, finance, marketing, HRD, staff/line, etc.)
Geographical (towns, states, nations, etc.)	Level of Managers (top, senior, middle, etc.)
Personal/Demographic (age, education, income, etc.)	Location (headquarter, branch, field, project, etc.)
Psychological (risk prone/averse, etc.)	

The understanding of the target segment should lead to the identification of the client who would be interested in the product or service and his/her motivations to buy it.

Having decided on the target audience and the objectives, the third decision to be taken is about the creation of a message for achieving these objectives. There are three steps in creating messages: generation of message options, evaluation and selection of an appropriate message, and execution of the message. Alternatively, messages can be generated around two dimensions: type of experience and type of reward (Maloney).

Type of Experiences include: (i) end result of the use of the product/service (like value of time saved), (ii) in process benefit of the product/service (like time saved in locating literature), and (iii) benefit incidental to use (like learning to work on internet through an on-line information product).

Type of Reward could be: (i) rational (like time or value of time) and, (ii) emotional (like I use the least reference service).

By combining the two dimensions several types of messages can be created. The ultimate purpose is to generate message options which fit a situation. Artists/advertising people might do this creatively, rather than going through the above systematic route.

Whatever may be the method of creating messages, ultimately only one/two messages need to be selected for execution. You might like to evaluate the messages generated through research. Messages may be evaluated on parameters of desirability, believability, and uniqueness from the point of view of the target audience in the context of competing messages. Obviously, a message which is desirable, believable and also unique should be chosen. Usually, the options in message execution emerge through a combination of ideas, words, pictures, and promises. Broadly, the message execution can be classified on the basis of the senses they appeal to (presentation), and their tone.

Senses	*Tone*
Sight	Positive
Sound	Negative
Smell	Balanced
Taste	Emotive
Touch	Logical
Combination	Combination

In information products and services, sight, sound, and touch become very important. The buyer may like to experience the book (i.e. see it and touch it) before deciding to buy it. The social esteem and self-actualization needs may predominate in motivating a professional, or an educated adult, to buy an information product or service. Straightforward logical appeals (without any hype) would interest an educated adult. But a little bit of hype may be in order to attract the educated youth to join an educational or a training programme.

The test of a good message is that, it is both rational and emotive and that it moves the client towards the desired action. It is useful to test the message on a sample audience before implementing the promotional programme for achieving the objectives set.

Talking about the designing of promotional messages in the publishing industry, Mr. Chin Saik Yoon of Southbound, Penang, Malaysia, said at the workshop:

> A former director of marketing, with the Cambridge University Press in New York, wrote an interesting article on Scholarly Publishing, which has influenced many of my designs of promotional materials for the books I publish. He pointed out:
>
> Librarians prize straightforward information. They dislike hyped-up promotion . . . over designed and full of breathless superlatives. Such ads are thought to be misleading and wasteful. They are likely to be quickly passed over or chucked out by most librarians, who would rather see plain descriptive copy in simple format with full bibliographic data . . . What does persuade librarians to invest their institutions' money in books and journals? Reviews and endorsements by established authorities are probably most important. It makes sense, since the acquisitions people can't

be experts in all fields. They are fearful of drawing criticism for purchasing a 'bad' or non-authoritative publication and being accused of wasting money. Therefore, ads and promotion materials should ideally carry a review quote for every publication listed.... (Jain *et al.*)

The Second Level—Media, Time, and Place

At the second level, find the media which reaches the target audience at the time and place suitable for the objectives and the target audience. The iteration among these three items and between the objectives, target segment and message is important.

Media	Time	Place

For instance, if an advertisement in a newspaper is chosen as a medium, it is important to know that the time when the newspaper will be read depends on the convenience of the target audience. The page or pages which are read more often, or more carefully, depends on the reader's interests. For instance, managers, businessmen, and investors are more likely to read the business page than the other pages. Therefore, an advertisement placed on a business page is more likely to reach them than if it is on any other page. Similarly, an advertisement on TV during the cartoon programmes is more likely to reach children.

Often the choice of media lies, at the first cut, between mass media (like a newspaper), specialized media (like a computer magazine), or direct media (like letter through regular or electronic mail). Within the mass media, the choice is between print, radio, television, and internet. The choice is often decided by (i) which medium reaches the target audience, (ii) how fast, (iii) at which place, and (iv) at what cost.

The direct mail—both regular and electronic—is the cheapest medium. The next cheapest one is the print medium (mass and specialized) and then the radio. Television is the costliest medium and often unaffordable by libraries and information centres. However, special publicity or educational programmes of common interest to a mass audience could be presented on television, as part of public affairs programmes, to achieve high reach at low cost. Such programmes, may also be able to attract sponsorship of outside organizations.

Seetharama points out:

> It is believed that 'word of mouth' campaigns are the best mechanisms for promoting the use of libraries. Alternate mechanisms include—direct contact with target groups either by mail or in person; indirect contact through the medium of brochures, pamphlets, posters, guides, handbooks, newspaper releases, advertisements, tape-slide shows, video, radio transmission, etc., exhibitions and demonstrations, etc. It should, however, be remembered that promotion activity is not a one-time affair but is a continuous process. Further, while each mechanism has its own advantages, it would be ideal if different approaches are adopted at different point of time. Perhaps, the most effective way is through the library staff who should be courteous, efficient, and possess the necessary knowledge and skill.
>
> Some, however, believe that a very well directed user education programme (or user sensitizing programme, as it is often referred to nowadays) will promote better utilization of the library.

The consensus, among the participants of the Ahmedabad workshop, about low cost media was as follows:

> . . . costs of promotion through mass media were extremely high. Therefore, librarians and information managers should develop budgets using the least costly media for . . . marketing of products and services.
>
> The low cost and most frequently used media were direct mail and publicity, particularly for creating awareness among the target customers. CEIS [Caribbean Energy Information System] found that allowing a leading newspaper to publish an article of interest helped in generating tremendous awareness. Cards, logos, etc. could also be used for creating awareness. Advertising could be resorted to only in very limited areas.
>
> Creation of awareness and interest was presently being done through catalogues, brochures, slide shows, exhibitions and fairs. Generating commitment and actual purchase was thought to be best influenced by word-of-mouth, the cheapest means of promo-

tion. However, visits, seminars, and demonstration workshops were found to be useful in getting subscriptions to complex products and services and memberships.

Given the pressure on budget, selection of limited target audience was considered important. However, prioritization of target audience was not easy in the absence of knowledge about their status in the communications hierarchy. Also, sharp focusing of messages was required. Messages and their execution was different for different segments (Chin). The type of messages used were primarily product specific rather than emotive, which in some cases could play a significant role in creating interest, commitment, and purchase. One reason for lack of emotive messages was lack of understanding of what could be promised and fulfilled by the information.

It was proposed that media habits, usefulness of information, etc. be included in the information to be collected through research on buyer behaviour so as to decide appropriate messages and media. Scanning of academic literature on advertising and promotion would also help a great deal in fine tuning promotion (Chin). (Jain *et al.*)

Indicating that publicity could be helpful in promotion, Ashok Vijayavergiya, chief executive of INFUSE Inc, New Delhi, said at the workshop:

What we have earned in these years is decent press coverage. There were a couple of articles in the Financial Express, Business World, Economic Times, and some of the leading journals and magazines of India. That publicity has helped in getting wider awareness of our products and services. (Jain *et al.*)

ICRISAT (International Crops Research Institute for the Semi-Arid Tropics) has undertaken more aggressive promotion methods, like travelling workshops, to market their products. Dr L J Haravu, Senior Manager of the Library and Documentation Services of ICRISAT, explained its methods, as follows, at the workshop:

A number of travelling workshops have been conducted at user sites (research stations and academic institutions) in different countries of SAT. One or two information specialists have been going to user sites in a country to make presentations to potential end-users. Specifically, the workshops have the following objectives:

- To improve the awareness of end-users to the value of information in general and to the products and services of the Library and Documentation Services (LDSD) and Semi-Arid Tropical Crops Information Service (SATCRIS) in particular.
- To build contacts with libraries and documentation centres to (1) examine how they can be enlisted to act as switching centres or distribution channels for SATCRIS products and services, and (2) to encourage and develop exchange relationships encompassing documents, databases, and services.

The workshops are targeted to researchers, academicians, post-graduate students and research scholars, policy-makers, and intermediaries such as librarians and extensionists. The presentation highlights the rationale, purposes, and advantages of each service. The presentation is followed by a demonstration of searches of the SATCRIS database (using a subset mounted on a laptop computer under Micro CDS/ISIS) on topics of interest to the participants. Then the potential end-users are encouraged to enrol on the Selective Dissemination of Information (SDI) services or ask for a specific search.

Librarians and documentalists, among the participants, are encouraged to act as focal points or as channels of distribution for our services. Access tools (e.g. the International Agricultural Research Centres (IARC)—Union Catalogue of Serials) are made available to such libraries, and they are encouraged to utilize our document delivery and other services. Software developed at SATCRIS, which may be useful to the libraries visited, is also demonstrated and made available.

Travelling workshops have been conducted in nine countries of Africa and three countries of Asia. More than 40 user sites in these countries have been visited. About 800 participants have attended these workshops.

The workshops have contributed substantially in making potential users aware of our products and services and enrolling new users

> from these countries. Very importantly, the workshops and enrolment of new users have started a multiplier effect in these countries because satisfied users do 'advertise' our services with their peers.
>
> Presentations and poster sessions are organized at ICRISAT whenever potential end-users congregate in regional or international workshops or seminars. We have found this useful in spreading the word about our services. A colour brochure explaining our services is given away to all visitors to ICRISAT and the LDSD. We have found, however, that presentation, followed by discussions and demonstration, is far more effective in generating interest and demand for our services than the brochure. (Jain *et al.*)

Elaborating at the workshop, the promotional activities that libraries and information centres could take up, Dr H. Arthur Vespry, consultant to the Library and Regional Documentation Centre at the Asian Institute of Technology, Bangkok, said:

> You may consider publishing a newsletter. Certainly your annual report is a good way to attract the attention of your community.
>
> Although it often involves extra work, libraries should not shy away from holding exhibits and displays. Use a display to show the benefits of using the library collection.
>
> At all times, use your imagination. Displays need not be limited to within your library or information centre. You may well use a storefront or other locality, with the permission of the owner. Remember the local groups are always interested in displaying the work of their members, whether they be handicrafts, photographs, paintings, or faculty publications. The public relations value of all these activities, by raising customers' interests, may be very great.
>
> We are supposed to be experts in the new information technology. We should therefore grasp these technologies and use them for our benefit. It is always possible to borrow equipment for audio-visual displays from a photographic centre in the community, and do a slide and sound presentation. The company lending the equipment could receive free advertisement. (Jain *et al.*)

Indicating how some kind of a joint venture could also be helpful for promoting one's activities, Dr Vespry pointed out that:

> AGE [Asian Geotechnical Engineering Information Centre] is working with the international and regional geotechnical societies to forge closer links with the societies and to become a clearing house for them. This could make joint membership possible, and be beneficial to all parties. (Jain *et al.*)

Dr Vespry also cited the following promotional publications of the Regional Documentation Centre of the Asian Institute of Technology.

- Abstract bulletin
- Newsletter
- Primary journal
- Pocket guides
- Reprints
- Do-it-yourself manuals
- State-of-the-art reviews
- Children's book(s), comics
- Proceedings of conferences (on contract)
- Surveys, studies
- Literature surveys

> Publication is one of our major activities at the RDC. We need to think in a commercial manner, and not be afraid to go out and seek advertisements to put in our publications.
>
> Even when you are producing an 'academic' publication, you should try to include news items on projects, people, and happenings. Including these items gives your publication a more human aspect, and hence it is more readable, and more people are likely to subscribe. It is also a way of informing your readers of who you are and what you are doing. Remember, you are trying to gain funds to support yourselves. (Jain *et al.*)

At the Ahmedabad workshop, Ms Mona Whyte, Project Coordinator of CEIS, cited the following promotion activities of the CEIS:

- Publishing a newsletter.

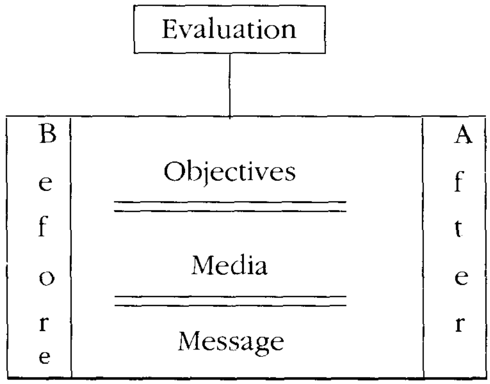
- Establishing a marketing theme around which factors in sales talk can be built. The slogan is 'The One-Stop Shop' for information on energy in the Caribbean.
- Attending energy seminars, exhibitions, etc. where CEIS products have been displayed and more subscriptions solicited.
- Distributing announcement fliers for publications which are being marketed.
- Distributing a brochure on the network, including price lists.
- Developing a booklet on the detailed services at the National Focal Points.
- Approaching companies to encourage them to purchase large numbers of copies for distribution to educational and youth institutions which are unable to presently subscribe.
- Obtaining endorsements of products and services from high level ministers and politicians.
- Encouraging leading journalists to critique articles published in the CEIS newsletter.
- Encouraging contributors of articles to CEIS to hold discussions about CEIS on radio programmes.
- Seeking advertisements in national, regional, and international publications.
- Exchanging advertisements on CEIS with those of other companies.
- Adding a section in the newsletter for comments which would allow for positive/negative feedback. (Jain *et al.*)

The Third Level—Evaluation

At the third level, think of *what, when*, and *how* you would like to *evaluate*. Keep in mind that:

- The evaluation will be as good as the clarity and concreteness of your objectives.
- The two major items of evaluation are message and media options.
- The two stages of evaluation are:
    - Before the launch of the programme (to develop the objectives and fine tune media and messages).

- After the programme (to ascertain the results, assess the effectiveness of the promotion, and draw lessons for future campaigns).



For pre-launch evaluation of the message options for their effectiveness, the most commonly used research method is the focus group discussion. The post-launch evaluation of both media and message is done through survey research.

The Fourth Level—Budget

Finally, at the fourth level, determine whether the budget matches the decisions that you have taken in the first three levels.

Budget, as Kotler points out, is decided upon by:

- Affordable method
- Percentage-of-sales method
- Competitive parity method
- Objective-and-task method

The first method, *affordable method*, is what the organization thinks it can bear.

In the second, *percentage of sales method*, an arbitrary percentage of the sales is the reference point in many businesses. But for information products and services, the reference point could be the overall budget of the library or the information centre.

In the third, *competitive parity method*, the reference point is what the competitors are spending. If information products and services of other libraries and information centres are attracting more attention, the reference could be how much the others are spending on promotion.

Finally, the fourth method, the *objective-and-task method*, appears to be more rational. Having decided the objectives, the audience, the messages, the media, one has an idea of how much money is required to implement the communication programme.

In reality, a mix of all these methods are used. If the budget is not sufficient, either try to get an increase in the budget or re-work the major items so as to fit in the available budget.

The four major items of promotion budget, in order of monetary value, are:

➤	Media
➤	Message
➤	Evaluation
➤	Administration

Media is the costliest item of a promotion budget. For developing the media budget through objective-task approach,

- Assess the current percentage of audience on each objective and what percentage of audience should be moved from the current to the desired level.
- Estimate the cost of moving the audience from the current to the desired level.

Advertising companies normally peg their fee to the media cost—usually 15 per cent of it. They charge for the cost of preparing the message and conducting the evaluation either as a percentage of the media cost, or separately. In addition, they charge the actual costs of copy creation, like photography and cover design, and actual costs of data collection and analysis.

In addition, there are administration costs like the time spent by the information managers on the development of the promotion programme, coordinating with the advertising agency, and mailing letters, brochures, etc. Sometimes, it is difficult to identify and categorise these costs. If well managed, these costs may remain insignificant as a part of the overall management costs. If not, these costs may become a long-term financial burden to the organization, irrespective of whether any promotion activity is undertaken or not on a regular annual basis. For instance, you may hire staff on a permanent basis for *ad hoc* jobs like doing mailing for a campaign.

Integration through Iteration

The development of a communication programme is an iterative process rather than a linear one. The communication dimensions interact between themselves at each level and between the levels. They coalesce into one, to form the kaleidoscopic impression or image on the client.

To process the thought, iterative operation is necessary. But, to implement or to act, a linear or sequential matching of these elements is essential. Therefore, for the successful implementation of the communication programme, it would be useful to have a map by writing down the details at each stage and checking whether they make a meaningful whole.

CONCLUSION

Promotion of an information product or service is the essential communication process to let the prospective client or buyer become not only aware of the new products and services available, but also to motivate him/her to actually subscribe to the products or services. Therefore, promotion forms an essential fourth pillar among the four Ps of marketing.

What happens when promotion is lacking was explained at the workshop by Dr A. Lahiri, Joint Adviser of the Department of Scientific and Industrial Research, with reference to NISSAT (National Information System for Science and Technology) centres as follows:

> Authorities are often found to say with much conviction (with a touch of ego) that they need not take pains to tell others what they can do for them; if somebody is interested in knowing things, let them take pains to find out for themselves; after all when somebody comes for assistance, they are not sent back disappointed (splash of ego indeed!).
>
> While the 'word of mouth' is the best means of communication, additional promotional efforts are indeed necessary. So far the centres have widely used brochures. National Information Centre on Leather Technology (NICLAI), Chennai and National Information Centre on Drugs and Pharmaceuticals (NICDAP), Lucknow print desk and pocket calendars, desk top engagement diary sheets, and posters. Few of them participate in the annual conventions of industries by putting up exhibition stalls. Unfortunately, none of these is done systematically; the hand-outs are also not circulated periodically. Earlier the NISSAT Newsletter had offered them free space to advertise their information products and services, but the response of the centres had been lukewarm, and therefore, the offer was discontinued.
>
> In one case, the product/service was not appropriately defined. Since 1976, NISSAT has been trying to bring in and popularize the 'on-line technology' by setting up various facilities. All the while, the services were being promoted as 'on-line technology' in the brochures, talks, and in TV discussions without realizing that the potential users were not aware of the technology and the benefits that would accrue through its use. A concept test carried out by a well-known market researcher at the instance of NISSAT brought out the lacuna in communication. Since then, the services of NISSAT centres are being promoted as information services through international database facilities. While 'information service' goes well with people looking for information, the concept of 'international database facilities' reflects that it provides comprehensive state-of-the-art trends (and trendy touch of class at the same time). (Jain *et al.*).

Appendix 6.1

GUIDELINES FOR PROMOTION

1. The Basic Promotion Tools Relevant to librarians and Information Managers are

Direct mail

Sending information letters, catalogues, free samples, etc., using radio/TV/magazine/newspaper direct response, etc.

Public relations

Conducting fairs, trade shows, and demonstrations, making presentations at seminars and meetings, publicising news—events, people, and products, participating in charitable activities and community relations, sponsoring publications, lobbying, etc.

Advertisement

Print and broadcast ads, packaging, brochures, audio-visual presentations, posters, leaflets, directories, display signs, audio-visuals, symbols and logos, etc.

Using these tools, develop the communication programme as follows:

2. Decide and Match the Objective, Audience and Message

Indicate for each target audience the stage (cognitive, affective, and behaviour) at which it is and specify the level (awareness or knowledge; liking, preference, or conviction; or purchase) to which it needs to be moved. Differentiate the individual and organizational target segments as follows: Individuals on socio-cultural, geographical, personal, and psychological dimensions and organizations on industry, function, and level of managers. While creating or evaluating the messages, check the durability, believability, and exclusivity of the messages. Also check the execution of the message in terms of its tone and the human senses that it would appeal to. Make sure that the message is both rational and emotive to move the client towards the desired action.

3. Decide and Match the Media, Time and Place

Find the medium which reaches the selected target audience at the time and place suitable for attaining the objective. The choice may have to be made between mass media and direct media or the use of both. The choice is to be decided by (a) which medium reaches the target audience (b) how fast, (c) at which place, and (d) at what cost. The direct mail, both print and electronic is the cheapest medium. The next cheapest is the print medium (mass and specialized) and then the radio. Television is the costliest medium.

4. Decide the Evaluation Process and Test the Programme

The two major items of evaluation are message and media options, and the stages of evaluation are before the launch and after implementing the programme. Focus group discussions are used for pre-launch evaluation of messages and survey research for the post-launch evaluation of campaigns.

5. Decide the Budget

For deciding the budget, the methods often adopted are: (i) affordable method, (ii) percentage-of-sales method, (iii) competitive parity method, and (iv) objective-and-task method. Very often a combination of all the four may work. The four major items of promotion budget, in order of monetary value, are: (i) media, (ii) message development, (iii) evaluation, and (iv) administration.

6. Finally, Remember that Development of a Communication Programme is an Iterative and not a Linear Process

HOW TO DEVELOP A COMMUNICATION PROGRAMME (AN EXAMPLE)

Let us take an example of building a communications programme for a management school library which wants to increase its membership.

1. Objectives/Target Segment/Message

First, the library may decide to enrol 500 members in the next three months.

Further, the library may decide what type of members it would like to have. For instance, would it like to have more of undergraduate management students, graduate management students, doctoral or research students of management, management teachers, or managers? Let us assume that the library would like to encourage managers to enrol because the management school to which the library belongs would like to provide opportunities for continued education to the managers.

The library would have to think of the message to be sent out to the potential members. For instance, would it be in the interest of the managers to become members of the library for the improvement of their self, or their work, or their family, or all of these? How do they fulfil these needs now without being members of the library? How would the membership distinguish them from managers who are not members? Therefore, the profile of these managers is needed. The profile would help in pitching the message at the right wavelength to persuade the managers to become members of the library.

If the library wants 500 members, how many managers should it reach. Not every manager approached would become a member. Therefore, a large number of managers, say, *triple* the number (i.e., 1,500 managers) would have to be contacted. This multiplier would depend on the assessment of rate of conversion of contacted to actual members. The conversion rate can be assessed through results of past campaigns or judgement. Then create a list of these 1,500 managers. The library may get the lists from the alumni associations of its own school and other management schools, from management or industry associations, and from companies. If the list is much larger than 1,500 managers, some priority would have to be established among the groups. If the list is much smaller, say about 700 or 800, either scale down the objective of getting 500 members or change the target audience by taking other segments like including management students of various level and management teachers.

When the objective or the target audience changes, the message which was relevant to the managers would no more hold good. Moreover, when you deal with more than one target segment, you might run the danger of having conflicting messages in the open and thereby confusing the audience. What is pleasing to one may be repugnant to another group. The message would have to be reworked.

2. Media/Time/Place

Now think of how to reach these 1,500 managers—through direct mail, public relations, or advertisement, or all three. An ad can be put in newspapers or business/industry journals which are likely to be read by these 1,500 managers. Editors or reporters can be persuaded to cover a news item in their publications on the new offerings of the library. Direct mail could be sent to these managers. Notices or circulars could be sent to companies, industry associations, and management schools for further dissemination to their members. While writing to a company, think of whom to write for help in circulating the information. Get someone to write an article on the various products, services, and activities of the library and its uniqueness as a management library for the relevant newspapers and journals. If any trade exhibitions or professional conferences or seminars are being held during this period, announcements could be made at these places.

Having got an idea of what media to use to reach these 1,500 managers on the list, the timing or sequencing of media activities would have to be decided. Should the direct mail be received by the prospective clients before or after they see the ad? Should the article appear before or after the ad has appeared? Should the circular from schools, associations, and companies follow or precede the letter? If the direct mail is sent, should it be sent to the office or home? Where should the ad appear in the newspaper or the magazine? Once this set of questions are answered and matched with the first set of questions on objective/audience/message, it is time to move ahead.

3. Evaluation

Now decide how to evaluate the communication programme. The evaluation, could be at three levels:

1. How many became aware of the product or service? And how many did not, and why not?
2. Out of the aware category, how many decided to become members and why? And how many decided not to become members and why?
3. Among those who became members, how many were satisfied with the promises made? And how many were not satisfied and why?

4. Budget

Finally, what should be the budget to implement the communication programme? Does what the task demands match with what is available? if it does, that is the happiest situation for a manager. But it is too much to expect to happen in real life. Therefore, some effort is needed to increase the availability of the budget and to prune the task elements.

5. Integration

The real test is whether the communication programme has been able to get the library the required number of members within the targeted time and money? Sometimes the communication programme may be so successful that the number of managers seeking membership is more than expected. In such a situation, the library would have to expand its original objectives. Or the membership may actually fall below expectation. In such situations, the library would have to be satisfied with reduced objectives, or increase and improve the communication programme, or change the product or service, or its price, or the delivery method.

REFERENCES

1. Jain, Abhinandan K., Jambhekar, Ashok, Rao, S. Sreenivas, Rao, T.P. Rama, Jaoo, B.H., Koshy, Abraham. *Marketing of Information Products and Services*, Indian Institute of Management, Ahmedabad, 1995.
2. Kotler, Philip, *Marketing Management: Analysis, Planning, Implementation, and Control*, 4th Edition, Prentice-Hall of India Private Limited, New Delhi, 1994.
3. Maloney John C., 'Marketing Decisions and Attitude Research', in *Effective Marketing Co-ordination*, Ed. Baker, George L. Jr., American Marketing Association, Chicago, 1961.
4. Seetharama, S., *Guidelines for Planning of Libraries and Information Centres*, IASLIC, Calcutta, 1990.

CHAPTER 7

How to Conceive, Design and Introduce New Information Products and Services

■ *Abraham Koshy*

INTRODUCTION

Why Introduce New Products

For long-term survival and growth, organizations need to constantly upgrade and improve their products and services and introduce new ones. Rationale for adapting marketing approach, which also covers much of the rationale for introducing new products and services, has been dealt with in Chapter 1. Brief reasons for improving current products and services and introducing new products are described in this subsection.

The imperative to constantly improve products and services emanate from the following rationale:

- Dynamism of the market due to changes in the customers' needs, wants and preferences.
- Improvements in the existing products and services offered by competitors.

- Emergence of newer and better technologies.
- Entry of new competitors

Following may be some of the important reasons for introducing new products and services in an information centre or a library.

- *Growing Importance of Financial Independence.*

  The world over, there has been a discernible trend towards making libraries and information centres financially independent. Added to this, there has been a gradual decline in the financial support received from traditional sources of funding for the expansion of information centres and libraries. Therefore, there is an increasing pressure to develop mechanisms to augment resources. Introduction of new products and services for clients, who could pay, is one of the ways to address this issue.

- *Changing Consumer Behaviour.*

  Due to changes in consumer needs, relevance of traditional products and services offered by libraries and information centres is being questioned. For example, volume of information available has increased substantially over the decades. However, simultaneously the time available to individuals to keep pace with the information flow is becoming insufficient. Given this transformation, clients may need information to be encapsulated and supplied on a continuous basis rather than spending time in the reference section of the information centre scanning for relevant information. Therefore, any library or information centre with a limited array of traditional services/products will find a sharp reduction in their client base in future.

- *Emergence of New Information Technologies.*

  Developments in information technology, both hardware and software, are helping in significant improvements in storage, processing, transmission, and retrieval of information. These technologies have helped in providing on-line services, remote access to databases, and in publishing CD-

ROMs. Such products and services and the availability of IT are enabling libraries/information centres to provide customised information in a user-friendly manner to their clients. Information centres and libraries, which can provide such products and services, would be able to serve their clients better and also generate more resources.

- *Increasing Market Opportunities.*

  An increasing demand for complex and user-friendly information products and services, particularly in business and industry, is offering attractive opportunities. The wealth of information primarily resides in libraries and information centres. They can use information technology to understand client requirements and design, and offer new user-friendly and relevant products and services to exploit the opportunities. Because of these reasons, it is very critical for information centres and libraries to search for new product opportunities and exploit them.

- *Opportunities to Revitalize Organization.*

  New products provide an excellent opportunity to reposition the organization; that is, to restate its message and to reinvigorate its commitments to the various key publics that it serves, such as employees, competitors, suppliers, government, and patrons. New products enable an organization to strengthen existing customer relationship and build new ones, as well as, create excitement and build commitment among employees/staff, and make the organization more customer friendly.

All the above arguments emphasize the critical need for identifying opportunities for introducing new services/products, and for utilizing these opportunities by designing and introducing appropriate offers by the information centres and libraries. In this chapter, we describe the steps involved in introducing new services/products. But before this discussion, we need to understand the meaning of new products so that we can better appreciate the process of their introduction.

What is a New Product

There have been several definitions of what constitutes a new product. One well accepted definition classifies new products based on two dimensions; namely, newness of the product to the company and newness of the product to the market (Booz, Allen and Hamliton, 1982). Based on this clarification, the following six types of new products can be identified.

- New to the world products that create entirely new markets. For example, information products in multimedia format and CD-ROMs are new to the world products.
- New product or service lines that are designed to enable a firm to enter, for the first time, an existing product category. For example, adding a line of information products targeted at, say, management students.
- Additions to the existing product/service lines.
- Improvements and revisions to existing products/services.
- Repositioning existing products or services are in order to appeal to new market segments.
- Cost reductions where products/services are modified to provide similar performance at a lower cost.

The above classification is useful to appreciate the notion of a new product/service. However, in the context of a library or information centre, several questions about 'newness' of a new product/service can be raised. For example, if a library introduces a 'Current Content' publication which was not done hitherto, because of resource constraints, can it be considered a new product? If an information centre or a library sets up a reprographic (photocopying) facility as an additional service, which can be used by all members, can this be considered as a new product (service)? If a library or information centre provides data/information through internet, is this a new product/service? If the medium for providing information changes from, say, print medium to CD-ROM, can this be called a new product? In other words, given that each 'new' product or service of a library or information centre is a by-product, what indeed is 'new' in a library or information based product/service? The framework given in Fig. 7.1 is useful in clarifying these questions.

Here we use two dimensions to classify new products or services of an information centre or library. The horizontal axis indicates whether there has been any change or addition in the basic or core benefit that the product offers. At the two extreme points of this continuum, we have products or services with no change and products/services which are either new or with additional benefits. The vertical axis indicates whether there has been any modification or change in the modality or method of delivering the product. Here again, at the two extreme ends of the continuum, we have products/services delivered without any change in the modality or method or products/services delivered through a new medium. Combining these two dimensions, we get four quadrants as elaborated in Fig. 7.1.

Quadrant 1: Existing products/services. Here, there is no change either in the basic benefits provided by the product or services or in the modalities/medium or method of delivering the product or services.

Quadrant 2: Improved products/services or new products/services. If for example, we add a brief summary of articles as

		Core or Basic Benefits that the Service/Product Offers	
		No Change	New or Additional Benefits
Modality/ Medium/ Method of providing the servi- ces or product	Current	Existing Products/ Services 1	Improved Products/Services or New Products/Services 2
	New	Modified Products 3	New Products/Services 4

Fig. 7.1 *Framework for Classifying New Services/Products*

an additional feature in the existing 'Current Content' product, then this can be classified as an improved product. Likewise, if we add a new product which gives a listing of articles pertaining to a specific topic on a periodical basis (say, quarterly) in print form, then this can be classified as a new product. Here, we are providing additional benefit, but the method of delivering this benefit is similar (print publication) to other products that the library has been providing.

Quadrant 3: Modified product/service. Here, we are changing only the method of delivering the product without changing the basic benefits. For example, if the 'Current Content' is made available to the clients in electronic format (floppy disc) instead of print form, then we classify this product as a modified product.

Quadrant 4: New product/service. All products which offer a new benefit delivered through a new medium or method are classified under this quadrant. For example, on-line access to information on 'Books under Circulation' through computer network, new series of CD-ROM products, internet services, etc. are classified as new products. Even installation of a photocopying facility can be classified in this quadrant as it provides a new service using a new technology.

The above conceptualization clarifies the notion of what constitutes new products or services in the context of a library. In this chapter, we consider all products/services new to the organization as new products/services and discuss in detail the process of new product introduction.

What is the Process of Introducing New Products/Services

The process of introducing new products or services follows a series of sequential steps, each being vital in ensuring the success of the new product/service. This is because, during each of these steps, we analyse whether or not it is worthwhile to proceed further with the product/service and what improvements/modifications are necessary for the success of the new product/service. In that sense, the steps elaborated later in this chapter are risk reduction mechanisms, through which we increase the chances of acceptance of the new product or service by the clients/customers, and ensure that they meet the organization's objectives as well.

In the following sections, we elaborate each of the steps involved in new product introduction (Fig. 7.2).

	Review of current product-market situation
Step 1	Specifying strategic objectives of new products/services.
Step 2	Generating new product/service ideas.
Step 3	Screening new product/service ideas.
Step 4	Developing product/service concept.
Step 5	Refinement/testing product/service concept.
Step 6	Designing product/service offer.
Step 7	Testing product/service offer.
Step 8	Analysis of commercial feasibility.
Step 9	Developing marketing strategy.
Step 10	Test marketing.
Step 11	Launching the product and ongoing monitoring and control.

Fig. 7.2 *Steps in Introducing New Product/Services*

SPECIFYING STRATEGIC OBJECTIVES OF NEW PRODUCTS/SERVICES

The process of new product introduction starts with a review of current product-market situation and a reassessment of the strategic objectivess. Next, the achievement of the strategic objectives, through existing products and services, is assessed by asking the following types of questions. Does it facilitate increased patronage of the information centre? or, Is the purpose to generate revenue through subscription? Is it to create an image in the minds of the clients that the information centre is a specialist in disseminating information pertaining to a selected field? Answers to such type of questions would help in identifying (extent of) unfulfilled strategic objectives and in achieving them, by the introduction of new products.

In summary, the starting point of the new product introduction process is the specification of the strategic objectives that should be achieved through the new products. Chapter 4 gives a detailed description of how to specify these objectives. Objectives thus specified, provide a sharp focus to the task of identifying new product opportunities and for outlining the criteria useful for evaluating the feasibility of new products/services.

GENERATING NEW PRODUCT/SERVICE IDEAS

Within the framework outlined by the objectives, the next step in the new product/service introduction process, is a search for new product ideas. A major input to generating new product ideas is identification of product-market opportunity. This aspect is discussed in detail in Chapter 3.

What is a New Product Idea

New product ideas indicate possible opportunities to the organization. At a broad level, new product ideas can be expressed in terms of the *function* a product proposes to achieve (e.g. provides classified summary of major research papers) or the specific *attributes* or *features* of the proposed product (e.g. abstract of articles published in printed form on a quarterly basis) or the *key benefits* that will be delivered to specified target consumers (e.g. information on the latest research publications, useful for researchers or students, on a specified subject).

It may be noted that a new product idea is expressed at a broad level without detailed description of the total 'offer' to consumers. One product idea may be transformed to one or more 'offers' or product concepts (discussed later) and evaluated further for feasibility.

Technique of Generating New Product Ideas

How does one generate product ideas? At a fundamental level, product ideas are the seeds of an organization's future growth and it forms the cornerstone of entrepreneurship. A new product idea is an outcome of the systematic and purposeful analysis of market opportunities. There are various methods that can be adopted to generate product ideas. In addition to experience and observations of individual managers and other functionaries, consumers as well as 'experts' could provide useful and important leads to generate new product ideas. In Table 7.1, we give an overview of research approaches that are useful in generating new product ideas.

Selecting the Approach to Generate New Product Ideas

Given the various approaches suggested in generating new product ideas, the question arises as to which of them should be used. The obvious answer to this question is that a variety of approaches will be ideal in generating a number of new product ideas. In fact, during this phase of new product introduction process, it is important to generate a larger number of new product ideas. It is from this larger set of ideas, that we, after proper evaluation and screening, select a limited number of new product ideas for further refinement and testing for feasibility. Once we have generated a large number of new product/service ideas, we need to identify those ideas from this large list that are worthwhile to proceed with. We achieve this in the next step through screening of the ideas.

SCREENING NEW PRODUCT/SERVICE IDEAS

New product ideas, generated during the previous phase, need to be screened to identify and select those which have potential

TABLE 7.1 **Approaches to Generate New Product/Service Ideas**

Sources	*Research Approach*	
	Unstructured	*Structured*
Consumer/ Users		
	Analysis of consumption system. Analysis of complaints by clients. Discussions with users/ patrons. Focus group interviews. Brainstorming. Suggestion box.	Analysis of needs/ benefits of consumers. Need gap analysis/ market structure. Problem detection survey. Product/Service deficiency analysis. Problem opportunity analysis. Growth opportunity analysis.
Experts (Librarians, subject experts)	Independent experts/ consultants/inventors.	Analysis of environmental trends. Analysis of competitive products. Search for other sources of new product ideas like patents, etc., if relevant.

to become successful products at a later stage. There are two important issues for screening new product ideas. First, some of the new product ideas generated may not have much potential to be pursued further. Second, even if the new product ideas generated are highly attractive, resource constraints of the organization may make it infeasible to proceed further. Hence, the need for a mechanism to evaluate and prune new product ideas.

While screening new product ideas, two types of errors can occur. First is called a 'drop error' where a new product idea which is otherwise good is discarded. Second is a 'go error' where a poor new product idea is allowed to proceed further for refinement and development. Therefore, the main purpose of idea screening is to identify and discard poor ideas, as early as possible, so that the organization does not incur further developmental costs, which escalate substantially with each successive stage of new product introduction.

Screening is an evaluation procedure and, therefore, a set of criteria against which we can evaluate various new product/service ideas need to be evolved. At the basic level, what we need are the answers to two questions. First, is the idea sufficiently attractive? Second, do we have the needed capabilities and resources to produce and market the proposed product? Although these are simple questions, we often tend to overestimate market attractiveness and underestimate resource requirements. In order to avoid these pitfalls, more elaborate criteria would be needed. The following generalised criteria are found to be useful in evaluating new product ideas.

- *Marketability*

  This dimension assesses the current market size for the new product/services ideas. Questions such as the ones that follow provide a good indication regarding the marketability of the proposed product. Is the new product/service idea likely to be attractive to a sufficient number of clients? Does it satisfy a felt need? Are the clients willing to buy/subscribe to this product/service at a price? Will there be a sufficient demand, prima facie? Is the existing system for delivering the product or service adequate for the new product? Does the proposed product have good synergy with our existing services and products of the library or information centre? Does the proposed product or service compare well with the competing products/services of similar quality?

- *Merchandisability*

  This criterion refers to the extent to which the proposed product or service will be distinctive and, therefore, amenable for promotional activities/publicity.

- *Growth Potential*

  The scope of the proposed product/service to last longer in the market is captured by this criterion. Factors such as breadth of the market, that is, having a wide variety of clients, resilience to cyclical and seasonal fluctuations and exclusivity of the product or service, determine durability of the proposed product. Factors such as the extent to which the proposed product fulfills a strong need, expected availability of end users, and expected competition, provide insights into the growth potential of the proposed new product idea.

- *Productive Ability*
  We need to check the new product or service idea against the organization's ability to deliver them. Factors such as input requirements and availability, personnel required and their knowledge base, other equipments needed, and costs and scale of investment necessary, indicate the productive abilities of the organization.

- *Organization Specific*
  Issues such as financial position, R&D or product development support available, overall encouragement and support likely to be available for the venture, are other considerations needed to evaluate new product ideas.

The concepts, just elaborated, can be used to develop a 'screening format' to identify those ideas that can be pursued further for the introduction of a new product/service. This format is given in Table 7.2.

The list given in Table 7.2 can be expanded or modified to suit specific needs of the library or information centre. In order to implement the suggested format, we can use a scoring method. We can give five points for excellent, four for very good, three for good, two for average and one for poor. Given this scoring pattern, an excellent idea for a new product/service should get a maximum of 65 points (5 × 13 items, assuming that the idea gets 'excellent' rating on all the 13 parameters) and a very poor idea can get 13 points (1 × 13 items, poor on all 13 parameters). A good idea for a new product or service is one which gets an aggregate score closer to 65 (maximum points). As a 'thumb-rule', we can specify that any idea which gets a score of less than, say 50% (32.5 points in this case) or 75% (48.75 points), as the case may be, will not be considered further and hence, will be dropped. Each library or information centre can thus use the suggested format, with appropriate modifications and by specifying the minimum score that an idea should obtain, before passing on to the next stage.

The approach given in Table 7.2, in addition to identifying 'poor' or 'weak' ideas, will also help us in focussing on parameters on which the proposed idea is weak. We can thus try to overcome these deficiencies, if possible, and proceed with the idea, if otherwise found to be attractive.

TABLE 7.2 Format for Screening New Product/Service Ideas

Factor Considered	*Criteria*				
	Excellent	*Very Good*	*Good*	*Average*	*Poor*
1. Ability of the proposed idea to attract sufficient clients.					
2. Extent to which proposed idea addresses a felt need.					
3. Likely willingness of clients to subscribe to the proposed new product/service if launched.					
4. Adequacy of our existing system to deliver the new product/service.					
5. Synergy/compatibility of the proposed new product/service idea with our existing services/products.					
6. Superiority of the proposed new product/service compared to other information centres/libraries.					
7. Likely client base that the proposed new idea can generate.					
8. Extent to which the proposed idea does not get affected by decline in demand.					

(*Contd*)

9. Likely growth rate in demand.
10. Availability of input resources (information base available, adequacy of staff to provide support, their knowledge base, availability of equipments, etc.).
11. Financial support available.
12. Product development support available.
13. Enthusiasm for the idea shown by staff.

DEVELOPING PRODUCT/SERVICE CONCEPT (OFFER DEVELOPMENT)

What is a Product Concept

A product or a service concept is an expanded version of a product idea, expressed in terms of features or attributes of the product, the benefits that the product will offer, and the costs that a defined group of consumers has to incur. In other words, *a concept description communicates what the proposed product is, what it does and what benefits it delivers to consumers, at what costs, and for whom is this total offer meant.* In Box 7.1, we give an example of translating product idea into product concepts.

How to Translate Product/Service Idea into Concept

What is the process of translating a product idea into a product concept? This can be achieved through two broad approaches. First is through the unstructured route using one's own personal experience, familiarity with product-market and intuition. Second approach is through a systematic and a more structured method of collecting research inputs on consumers' needs, their requirements and preferences. In addition, an analysis of products and services offered by the competitors can provide valuable inputs to developing product concepts. In fact the approaches mentioned in Table 7.1 of this chapter, in addition to providing leads for developing new product ideas, will also generate good inputs for developing product concepts as well.

BOX 7.1

Example of Expressing Product Idea into Product Concepts

Product Idea

A periodical publication, which gives information on research work carried out in the field of, say, Brand Management. The above idea could be transformed into the following product concepts:

Concept 1:

A quarterly print publication containing list of all published research articles, in the area of Brand Management, providing a single ready source of reference of research work carried out during the period of reporting, useful to researchers in marketing and priced at, say, X currency.

Note, that the product idea outlined earlier, contained a reference to only the broad features of the product (information on research work in a specified field of research). The product concept described above, on the other hand, specifies periodicity (quarterly), product form (print publication), product feature (list of published research articles on Brand Management), benefits (single ready reference source), target segment (researchers in Marketing) and price. Likewise, the same product idea can be expressed as an alternative product concept as follows:

Concept 2:

A yearly publication, in electronic form (CD-ROM), containing an abstract of all research articles published during the year, classified into subtopics such as, studies on Brand Image, Brand Equity, Brand Portfolio, Brand Strategy, Brand Introduction, etc. providing a quick reference source to researchers in Marketing, priced at 'Y' currency.

Generating relevant product concepts implies, to begin with, identifying the needs/functions to be fulfilled by the product idea. Next, two things need to be thought about. First, about the target group(s) for whom the needs/functions might be of interest and second, about the type of (physical) product (attribute, etc.) which would enable the offer to perform the intended functions. Finally, you might like to think about the 'price' that the customer would have to pay for acquiring and using the offer. Possible variations in the above dimensions (i.e., needs/functions, target customer group, product attributes, and acceptable price) would give rise to alternate product concepts. For example, in the concept description 2 given in Box 7.1, aspects such as periodicity, form, content, and price are different from what has been described in Concept 1. By altering such elements of the offer we can evolve other possible product concepts. All such concepts emanate from a single product idea.

It may be remembered that the concepts should be generated in a manner, which is consistent with strategic objectives set at the initial stage. It is also important to recognize, at this juncture, the need to generate a larger number of concepts for a single idea. This is because by reducing the number of concepts generated, one might be increasing the risk of leaving out some concepts, which might prove to be a winner at a later stage.

After screening the product ideas and selecting one for further expansion, and then translating this idea into one or more product/service concept, we need to examine whether, or not, it will be worthwhile to pursue it. Here, we would like to examine either acceptability of a single product/service concept or identify one among several concepts which is likely to succeed. We achieve this purpose in this next step.

REFINING AND TESTING PRODUCT/SERVICE CONCEPT

What is Concept Refining and Testing

After developing a set of product/service concepts, the librarian or manager in an information centre begins evaluating them with the purpose of discarding those which do not have potential for acceptance. Questions such as, How is the concept likely to fare in the marketplace? What kind of client base or revenue can this concept generate when it is implemented? Is the concept technically feasible? Is it legal? What is the likely cost of manufacturing and marketing a product that may emerge from the concept?, are very useful in screening out poor concepts. Through this process, the number of concepts that need further analysis and evaluation is reduced. In fact in some cases, after following this process, one may end up with only one valid and potentially viable concept from a single product idea or one may also end up with two or three valid concepts from a single product idea. Both these situations are valid and acceptable.

Once the product/service concept has been identified, we need to verify whether consumers will ultimately utilise/buy the products/services thus evolved. This verification is very crucial in cases where the investments and efforts required in translating a product concept, into a physical product, is substantial and consequently, the risk associated is also high. For example, if a company developed a concept of an equipment to keep stored food items fresh, through the principle of vacuumizing, it may be necessary to comprehensively check whether the consumers will be willing to buy such a product when it is made available at a certain cost/price. This is because, the investments and efforts required for R&D, manufacturing and marketing such a product would be higher and hence, the need to test the concept even before the physical product is made. In other words, when the risk of transforming the product/service concept to a physical product or service is high, then it is advisable to test the concept before firming up the product/service design and later offering it.

Key Information Needed for Concept Testing

Concept testing has two phases. First is the qualitative phase where data on acceptability of the concept is sought from potential consumers/clients through open-ended interviews and focus group discussions. The second phase consists of a quantitative phase which measures clients' or consumers' reaction to the proposed product/service on various dimensions. This phase also generates inputs to forecast likely acceptance of the new product/service and provide other diagnostic information useful for sharpening marketing strategy.

One author has outlined the six important questions which might be useful while testing product concepts (Kotler, 1988). In order to get an evaluation of the concept, it might be useful to obtain a reaction/assessment from a sample of potential clients, on each of the following questions, on a 5-point scale ranging from very low (1) to very high (5):

- *Are the benefits of the proposed product/service clear to consumers and are they believable?*
  This measures the concepts' communicability (extent to which the benefits and advantages of the proposed product/service can be discerned to clients) as well as believability (the extent to which clients believe that these benefits and advantages can be delivered through the proposed product). If the scores on these dimensions are low, then the concept must be refined or revised.
- *Do consumers see this product as solving a problem or filling a need?*
  This dimension measures the need level. If the need level is stronger, then clients'/consumers' interest in the proposed product or service will be higher.
- *Do other products currently meet this need and satisfy the consumers?*
  This measures the gap between the new proposed product/service and existing products/services. If this need gap is high, then the expected client interest will be higher.
- *Is the proposed price reasonable in relation to the value?*
  This indicates the perceived value of the products/services and naturally, a product or a service with high perceived value will have greater patronage.
- *What is the likelihood of clients subscribing to the proposed product/service?*
  This measure of purchase intent is determined from the expressed level of interest in the proposed product or service ranging from 'definitely interested' to 'definitely not interested'.
- *Who would use the proposed product/service?*
  This question profiles the potential clients and is useful in targeting decisions.

We can obtain a reaction to the concepts through a series of such questions. However, an equally important issue that we need to recognize here, is the question of how to present or communicate the concept to the clients for the purpose of testing.

How to Present/Communicate Product/Service Concept to Respondents for Testing

A product concept can be communicated in two different manners as discussed below:

- *Words-only description of concept.*
  Here we are communicating the concept, for testing purpose, through written description only. This written description provides all the details of the proposed product/service such as, features or attributes (appearance, size, shape, other physical properties), the functions of the product, the benefits that the product offers, for whom these benefits will be salient, how to use the product (if it is relevant) and costs involved, including price. (In fact one can even test the acceptability of the concept at different price points. For example, after describing the concept, we can ask the sample of respondents as to what is their likelihood of subscribing/buying the product at say 'X' currency, X + 20% currency, X – 20% currency and so on, to elicit the strength of their purchase or subscription intent at various price points. This information will be useful in deciding the price of the proposed product). In fact, for any new service, words-only description would be ideal for testing purposes.
- *Product along with concept description.*
  Sometimes it is difficult to communicate a product concept without the product. For example, any product which is difficult for consumers to understand without seeing or sometimes using, would make it necessary to show the product, while testing the product concept. Products which need to be evaluated based on colour, smell, taste, etc. like ice creams, fruit juices, soft drinks, perfumes, and so on, fall in this category. Information products and other publi-

cations, like a weekly magazine or a monthly publication, also come closer to this category because it would be easier to understand the product concept by an examination of the product. (It may be noted that engineering products like machinery or equipment cannot be manufactured for the purpose of testing the concept because the cost involved would be prohibitive. In such cases, a visual—a detailed diagram—can serve the purpose).

Product concepts which are difficult to be communicated without the product, therefore, need to be tested along with the product. For information products and similar publications, it would be better if an 'experimental' product is designed for testing the concept. It may be noted that this can be done, only if the cost involved in producing a set of products for testing purpose is sufficiently low. It may be difficult for example, to make a set of experimental CD-ROM based information products, as the cost involved would be high, whereas, a set of information products in print form would not be very expensive. It may be noted that when we are testing the concept along with the product, then we are clubbing together concept testing as well as product testing (discussed in detail subsequently).

Implementing Concept Testing

The procedure for concept testing involves specifying the objectives of the concept test, deciding on the sample of respondents and on the kind of information to be collected and its analysis.

The *first step* in concept testing procedure is to specify the objective that we want to achieve through this exercise. The objective of concept testing could be any of the following:

- To test the acceptability of a single concept pertaining to a product/service.
- To test the acceptability of a single concept at varying price levels.
- To test the acceptability of one among alternative concepts.

It may be noted that any of the above three objectives can be tested either with or without the execution of the concept through a physical product. If we are executing the concept with the product, then we are not only assessing acceptability of the product/service concept, but also obtaining an evaluation of concept execution (concept-cum-product testing). Testing acceptability of one among alternative concepts, along with execution of concept through physical product, implies that we need to have more than one physical product representing each concept. This means that the effort and costs involved would be high and, therefore, we carry out this exercise only if the costs and efforts needed to translate concept into physical product is not very high.

The *second step* in concept testing procedure is to decide on the sample of respondents to be contacted for the purpose of testing. Here, we have to specify who will be contacted (sample profile), how many of the respondents will be contacted (sample size) and how will the sample be selected (sampling procedure). Details of designing the sample, for this research, are discussed in Chapter 8. The major point to be noted in this context is that the sample should be representative of the client group, who will be using our products or service when it is finally launched.

The *third step* in concept testing procedure is to specify what information is needed to achieve our purpose. The following list in this regard would be useful:

- Overall acceptability of the concept (judged from the list of questions outlined earlier in this chapter).
- Strength of likelihood of subscribing to product/service measured through 'likelihood to buy' scale ranging from definitely would subscribe (probably would subscribe, might or might not subscribe, probably would not subscribe) to definitely would not subscribe.
- Specific assessment of some attributes of the product (like ease of access of topic-wise reference material or exhaustiveness of listing, etc. for a reference periodical) if it is important and this could be obtained through a rating scale

(very good, good, average, poor, very poor) against each of the attribute that is being evaluated. It may be noted here, that this piece of information would be more relevant and perhaps easier to elicit if the product is tested along with the concept.

- Profiling respondents which could include, in addition to demographic details, other information which would be relevant to our decision (like for example, topics of research interest, extent of patronage of information centre or library).

Inputs obtained, during concept testing stage, help us in deciding whether to proceed to the next step in product design. After testing the concept the next crucial step is developing and designing the physical product and subsequently, testing it.

DESIGNING THE PRODUCT/SERVICE

How to Develop Product/Service Design

The purpose of concept testing discussed in the preceding section is to identify one product/service concept which has the potential to succeed in the marketplace. Once we have decided on a concept, the next step is to design the product. Here, we are transforming the product concept into a physical product, if we have not yet done this during the concept stage itself.

A product consists of physical elements (features, content, size, etc.), psychological elements (benefits, perceived image) and service elements (what kinds of support services are available). The details about the characteristics of a product have already been explained in Chapter 4 (Koshy).

The starting point of product/service design is a statement of the key benefits that the proposed product or service is expected to offer to the target clients. Technically, this is called 'core benefit proposition.' The product concept which received support from consumers at the concept testing stage is the basis of this statement. Based on the concept and the necessary technical and design inputs, the product or service is designed. It may be noted here that any product has two distinctive aspects: the functional aspects of the product and the aesthetic aspects of the product. Both these aspects are equally important. The process of designing the product can be illustrated by the following example.

Suppose the product concept accepted after the testing is as follows:

> A quarterly print publication, containing a list as well as a brief abstract of all published articles in the area of product management, classified into sub-categories, providing the benefit of a single source of reference and hence, enabling a quick search of relevant literature for researchers in marketing, priced at X currency.

The above product concept needs to be translated into a physical product. This would require the following decisions:

- How to translate the core benefits and product attributes into a physical product? This would require answers to questions such as:
  - How many journals to be scanned for abstracting purpose?
  - Which journals to be scanned?
  - What should be the subtopics under which articles and abstracts are to be listed?
  - Can one article be listed under multiple subheadings? If yes, what should be the criteria for listing articles under different subheadings?
  - What other information (such as source from where one can get the full text of the article) should be provided?

Most of the above decisions would involve inputs from technical experts. Therefore, it would be necessary to develop a network of technical experts/professionals for getting these inputs. This arrangement has to be on a sustainable basis for their continued involvement. In addition, it may also be necessary to check whether our product does not violate copyright laws.

- *How to develop the physical product including aesthetics?*
  This would involve decisions on
  - What should be the physical size of the publication?
  - What should be the type of paper on which the matter is to be printed?
  - What type face (font size, style) should be used?
  - What should be the cover design?
  - What should be the type of binding?

The above aspects too, are technical in nature and this can best be answered by people who are knowledgeable about printing. Each of the above decisions has cost implications. Therefore, we need to develop contact with technically knowledgeable people to provide the necessary inputs for the above decisions.

- *How to produce the product?*
  This would involve either developing one's own facilities to produce the required number of copies of the publication or entering into an arrangement with outside agencies/institutions.

In the above example, if on the other hand, the concept accepted was a product using multimedia technology, then issues that need to be addressed, though basically similar in nature, acquire a different complexion. For example, designing an information-based product using multimedia technology would need help not only from technically qualified people, but also from creative artists to conceive and design the format of presentation of the text.

From the preceding example, two major underlying aspects relating to product design need to be emphasized. First is the 'design' of the product—the process of translating the concept into an actual product and this would include aspects tested under 'How to translate the core benefits and product attributes into a physical product?' Second is developing the product—giving the product a physical shape and this would include aspects tested under 'How to produce the product?'

How to Implement Product/Service Design

The following steps will be useful in designing products/services:

- Develop a specific brief for design and development of the product/services based on the concept which passed the concept testing stage. This brief should contain the following elements:
  - Specification of target audience for the proposed product/service.
  - Specification of the benefits that the proposed product/service intends to offer.
  - Specification of major functional attributes and features of the product/service (which includes, if the product is a physical product, aspects such as periodicity, topics to be covered, subtopics under which abstracts/date/information are to be provided, medium to be used for the product—, i.e., print vs. electronic format—aesthetics and other physical properties; if a service, then what specific activities will be undertaken to provide the proposed service, the procedure to be followed, and so on).
- Develop contacts/network with technically knowledgeable people, to not only fine tune the offers but also, for translating the brief into a physical product.
- Develop facilities/infrastructure to 'manufacture' the proposed product/service. This will either involve making their own investments to produce the product/service (like investing in equipments, or identifying, enlisting and training people who will provide the service) or identifying third parties who can produce the proposed product. It may be noted here that since alternative designs of the product have cost implications, it may be necessary to work out costs for alternative designs. These steps are taken to produce the product on an experimental basis before we launch the product. However, when the final design of the product is accepted after testing (discussed in

the following section), similar steps are required to produce the product on a 'commercial' basis.

PRODUCT TESTING

Before starting the actual production/manufacturing of the product, it will be necessary to test out whether the product designed and developed by us indeed meets the requirement of the consumers. This important step becomes most crucial when the risk associated is high. For example, if regular production of the proposed new product requires additional investment in equipments, or some special facilities which are costly, it will be advisable to test the product before proceeding with the investments. Failure of the newly designed product can severely damage the reputation and image of the information centre. It will, therefore, be worthwhile to test the product thus designed. In this next section we discuss the steps in testing a product/service.

Testing of a product follows several sequential stages as discussed below.

Specifying Objectives

There could be several *objectives* that product testing can achieve. Some of these are:

- To provide information on inherent strengths/deficiencies in the new product which might critically affect its acceptance.
- To gather information on the less obvious strengths of the product that could be used later for promotion.
- If there is more than one product to be tested, then to find out which best fulfills the needs of the customer and which has more acceptance.
- To identify the customer segment to which the product appeals most.

- If a competing product already exists, then to find out how the new product compares with it.

But the most important objective of product testing is to find out whether the product we have designed fulfills the core benefit proposition or not. The first step in product testing, therefore, is to specify which of the just enumerated objectives we need to achieve through product testing. This is required because, the type of information that needs to be collected and the design of product testing procedures are contingent on the objectives specified.

Specifying Information Needs

The second step in product testing is to specify as to what *information* we need to gather. This flows directly from the objective we have specified for product testing. (An understanding of marketing research approaches and methodology will be useful while testing a product—Chapter 8.) The following questions can be used as a guide to specify the information that needs to be collected.

- What benefits do the consumers see in this product?
  Here, we are asking consumers to tell us the benefits that they derive from the product after they use it. This information is valuable because it provides a comparison of what we intended to provide and what consumers received. If there is a match between the two, then the product design is very good in the sense that it has delivered what the product concept intended to.

- What is the consumers' assessment of various product features/attributes?
  Here, we are obtaining information on the consumers' perceptions of the various features of the product. For example, if we are testing the product described in the earlier section (reference periodical on research on product management), then we can obtain the consumers' assessment of, say, exhaustiveness of literature coverage,

ease of identifying articles, appropriateness of subtopics used to list articles. These specific features can be listed, and respondents can be asked to rate each on a 5-point scale ranging from very good to very poor.

- Can respondents discriminate between our new product and the existing competing products?
  This question is relevant if we are testing a product which is likely to compete with another product. In this context, we would like to know the similarities and differences between our product and the competing ones. This information can be obtained by making the respondent compare both the products on various features/attributes.
- Do respondents like the product?
  This question is important not only when we are comparing more than one product, but also when only one product is being tested. Here, we are assessing the overall preference for our product based on the respondents' liking of it.
- Are the respondents likely to subscribe to the product?
  This question obtains information on the extent to which the product meets consumer needs. Data can be obtained by asking the respondents the strength of their purchase intentions measured by a scale of 'definitely likely to subscribe' to 'definitely not likely to subscribe'.

Deciding Testing Procedure

After specifying the information needs, as discussed in the previous section, the next step is to decide on the testing procedure. By testing procedure, we are referring to decisions on the number of people to contact, whom to contact and how to elicit information. Answers to each of these depend on the context. The number of respondents and profile of respondents (sample size and sample definition, in technical terms) are decided so as to obtain a representative set of the population. The sample size also depends on various factors such as costs involved, total size of potential consumers (market) and the level of accuracy required (which, in turn, is contingent on the risk of decision—if the risk is high, then there is a need for greater accuracy and, therefore, the need for a larger sample).

For eliciting information, we need to give the respondents the product to use. If we are testing only one product, then we can obtain information after the respondent has used the product. But on the other hand, if we have two products to test, then we need to give both the products either one after the other or simultaneously. If we need independent assessment of each product, then we must first give one product to the respondent to use, collect data on this product and then repeat the same procedure with the second product. However, if we require a direct comparison between two products, then we can give both the products simultaneously. As already mentioned in the preceding section, in situations, where a product concept cannot be understood by potential clients without the actual product (for example, a print publication), there will be a need to combine concept and product testing together.

Collecting and Analysing Data

This is the stage where we implement product testing and collect data relevant for us. In addition to the specific procedure outlined in the preceding pages, inputs from Chapter 8 in this book would be useful. After collecting data (evaluation of the product) from a sample of respondents, we have to summarise and analyse the data. The output of this exercise should provide us with the information we planned to obtain through this procedure. For example, the deficiencies of the product, as assessed by the sample of respondents, can be used to improve the product.

Deciding on Future Course of Action

An analysis of data during product testing stage will provide us with valuable inputs to help us in deciding whether it is worthwhile to proceed further or not. If significant deficiencies in the product are pointed out by the sample of respondents, and if the overall acceptability of the product is low, then it will be necessary to start with designing the product once again. On the other hand, data analysis may indicate that there are no serious deficiencies in the product, and yet the overall acceptability is low. This finding would strongly suggest that the basic product concept (or the need that the product is addressing) could be weak or inappropriate. If this is the case, then we may have to go back to opportunity identification/or concept development stage.

In summary, at product testing stage, we are assessing whether we have adequately translated the product concept into a physical product and what is the preference for and acceptance of the designed product. It may be noted that we test a product only if the risks associated with proceeding to the next stage of product introduction is high. Otherwise this stage can be avoided.

ANALYSIS OF COMMERCIAL FEASIBILITY

The step of commercial feasibility can be undertaken after the concept testing step or the product testing step. It is essential to conduct this step after concept testing, but before product testing, in case the cost of designing the product/service and producing the same, in reasonable numbers, for product testing is going to be significantly high. Otherwise, this step can be conducted after product testing.

After developing and testing the product/services, the next step, prior to planning the marketing strategy, is to assess the sustainability of the proposal. Inputs collected during the previous stages, particularly data on consumer profile and the likelihood of acceptance of the product/service, can be used to assess the likely demand for the proposed product.

More specifically, we need to assess the following aspects:

- Estimating subscription volume/client base generated.

- Estimating costs involved.
- Estimating profits/contribution.

In other words, here, we are making an assessment of the commercial feasibility of the new product introduction. It may be recalled that during the initial stage of idea screening itself, we had made an assessment of the feasibility of the product. However, at that stage, it was a rough estimate of the feasibility. Now since we have adequate information on consumer reaction, likely costs involved and the acceptable price levels, we can make a more accurate assessment of the demand and profitability of the new product. In Table 7.3, we give a method of assessing the commercial feasibility of a proposal. Subsequently, in Table 7.4, we also give an illustration on assessing the commercial feasibility using a hypothetical example.

It might be worthwhile to do a 'sensitivity' analysis of feasibility. This can be done by calculating commercial feasibility by changing the basic parameters based on 'pessimistic', 'optimistic' and 'likely' situations as follows:

Optimistic: Subscription level higher by 10%
Costs same as in illustration

Pessimistic: Subscription level lower by 10%
Variable costs higher by 10%
Fixed cost same as in illustration given.

Realistic: As given in illustration.

The above analysis will indicate as to whether the proposal is likely to be feasible or not.

DEVELOPING MARKETING STRATEGY AND PLAN

During the earlier stages, we made a thorough assessment of the product, checked acceptability of the price, found out clients' requirements and buying habits, and discerned the benefits that

TABLE 7.3 **Assessing Commercial Feasibility of a Proposal**

Parameter to be assessed	*Data needed*	*Source of data*
1. Number of clients who are likely to subscribe to new product/service.	(a) Total no. of clients (in target group).	Past data from earlier experience.
	(b) Proportion of clients who said they are most likely to subscribe or likely to subscribe.	Data from concept testing or preferably product testing.
2. Costs Involved.	(a) Total investment in equipment/hardware required, if any.	Own estimate or from experts.
	(b) Total fixed costs on permanent staff/ other expenses.	
	(c) Total variable costs of producing the product/ services (e.g., material costs like paper, duplicating costs, etc.).	
3. Profit/Surplus/ Contribution.	(a) Likely price/ subscription rate.	(a) Data on reaction of clients to price/ subscription obtained during concept testing or product testing stage.
		(b) Own decision on price/subscription rate based on the policy of the library/ information centre.

Note: It may be noted that, although the data on the proportion of clients who indicated that they are most likely/likely to subscribe to the new product or service, during concept testing/product testing stage, suggest a strong 'buying interest', it is likely that all of them—may not finally end up subscribing to the new product/service when it is made available. It may also be possible that, out of those who said they most probably will not or definitely will not subscribe to the new product/service may finally subscribe to the new product or service. In reality, therefore, it is difficult to convert the 'purchase intent' score into 'actual purchase' score unless we have data from previous experience. Hence, it is important to keep a close watch on the proportion of clients who actually subscribe to the new product/service when it is launched so that in future, we can adjust the 'purchase intent' score to a 'realistic' figure. In the absence of such data from past experience, however, it is perfectly valid to assume the proportion of 'definitely likely to subscribe/likely to subscribe' to reflect the actual proportion of subscribers.

TABLE 7.4 **Assessing Commercial Feasibility of New Products/Services**

1	Total no. of clients in Target Segment	1000
2	Proportion of people in the sample during concept/product testing who indicated definitely subscribe/likely subscribe	75%
3	Total likely subscription	1000 × 75% = 750
4	Acceptable subscription rate per product/service	100 currency units
5	Total volume of subscription	750 × 100 = 75,000 currency units
6	Total investment in New equipment needed	25,000 currency units
7	Fixed cost (on recurring basis) per year on salary, electricity, etc.	35,000 currency units
8	Variable cost of delivery of service	40 currency units per unit of service 30,000 currency units (for 750 units of service)
9	Contribution margin per unit	Subscription rate minus variable cost per unit (i.e.100 – 40 = 60 currency units.)
10	Break-even level of subscription	Fixed cost divided by contribution margin (i.e., 35000 ÷ 60 = About 580 subscribers)
11	Likely surplus	Total revenue = 75,000 currency unit Variable cost = 30,000 currency unit 45,000 currency unit Fixed cost = 35,000 currency unit Surplus 10,000 currency unit Interest cost on Investment @ 20% = 5,000 currency units Net Surplus = 5,000 currency units
12	Sensitivity Analysis	Feasibility : Yes

the product offers. Each of these assessments enabled us to decide on the major elements of the marketing strategy. These include deciding and specifying the following:

- Specific objectives to be achieved through the new product/service.
- Defining the target market.

- Deciding the positioning.
- Specifying product related elements such as features, brand name, packaging and other services.
- Specifying the price.
- Deciding on the distribution system.
- Deciding the communication and promotion strategy.
- Specifying marketing organization and control and monitoring system.

(For a detailed discussion on these elements and processes, refer to Chapter 3.)

It may be noted that each of these elements may be tested, and decided on, more or less independently. All these elements are put together into a coherent strategy at this stage of new product introduction. This is also the stage where we decide on the critical element of 'pricing' based on the assessment of feasibility and the costs involved, as well as price sensitivity and acceptance by the clients. Once we have developed the marketing strategy, it may be necessary to examine whether all its elements are effective or not. This is achieved through test marketing.

TEST MARKETING

The basic objective of test marketing is to evaluate and fine-tune the product/service and the proposed marketing strategy before its full scale introduction.

The steps in new product development discussed so far, starting from generating and evaluating product opportunities and ideas to developing marketing strategy, constitute the pre-launch phase of new product introduction. During each of these stages, we have applied filters so that we ensure a higher probability of success of the new product or service when it is launched. Before launching the product, we need to examine whether all the elements of the marketing strategy, when put together, are likely to result in the successful acceptance of the new product. This is the basic purpose of test marketing.

Test marketing involves placing the fully formulated and developed product in (selected) markets for subscription by clients, and observing its actual performance under a proposed marketing plan. In other words, test marketing enables us to check whether there are any major flaws in the strategy, under actual marketing conditions, before committing resources for the final 'roll-out' of the product.

Implementing test marketing involves the following decisions:

- *Deciding whether to test or not.* This will depend on the risk of launching the product without testing the total offer. Guidelines indicated subsequently, will be useful to decide whether to test market the product.
- *Specifying test marketing objectives.* These include (a) whether to launch the product or not, (b) to decide which alternative marketing plan should we accept, (c) to decide, modify/correct specific elements of marketing mix, and (d) to identify weaknesses in operationalization of marketing plan.
- *Specifying information needed and the research plan.* This involves specifying what data we need and the methodology for collecting the same.
- *Deciding on where to test market.* This involves specifying which locations, or among which customer groups, will we conduct the test marketing.
- *Deciding duration of test marketing.* This decision will depend on the nature of data required. If we need to study repeat buying, then test marketing should cover a number of sales cycles over which customer behaviour is likely to stabilise.

It may be noted that test marketing, like the earlier testing phases, is costly. Therefore, we need to carry out test marketing only if it is very essential. The following factors are useful in deciding whether or not to test market (Cadbury, 1975).

- It will make sense to test market only if the information available, prior to test marketing, is inadequate to take decisions to launch the new product.
- If the costs and the risk of failure is low, then test marketing is not required.
- If the value of diagnostic information generated through test marketing is low, then test marketing is not a useful tool. Likewise, if the speed of introducing the product is vital, then it may not make sense to test market.

Test marketing is carried out for taking specific decisions. Some of the decisions relevant in our context and the information base for deciding these are given in Table 7.5.

In summary, test marketing involves launching the new product with a fully formulated marketing strategy at a smaller scale, and carefully monitoring performance and consumer reactions through research, so that we can modify and improve our strategy and plans, before we launch the product.

Test Marketing a Service

Is there any difference between test marketing a service versus test marketing a product? The answer to this question lies in the cost of introducing the service for the purpose of testing and the additional cost of launching the product finally. Take, for example, the case of introducing a service in a library which facilitates clients to take copies of articles by installing a photocopying sys-

TABLE 7.5 **Decisions on Based Test Marketing and Information Base**

Decisions	*Information base*
Whether to launch the interested product or not?	Subscription generated/No. of clients in the new product/service. Market Share. Predicted subscription level/Market share.
Which of the alternative marketing strategy and plan to follow while launching the product?	Subscription generated/No. of clients interested or market share under alternative strategy/plans.
Which of the elements of marketing strategy should be modified?	Clients' reaction to specific or all elements of marketing strategy.

tem. Here, the major elements of costs have already been incurred by the time the service is ready for test marketing. Therefore, no additional costs are incurred at the stage of 'launching' the service. In other words, there is no distinction between test marketing stage and launching (commercialization) stage in this case. Hence, in situations where the 'new product' is in fact a new service, as in this example, there is no need for a separate 'test marketing' stage. However, this stage of initial commercialization of a service can be considered as a 'testing' phase of the service and, therefore, a careful monitoring of clients, reactions, preferences and willingness to pay for the service is needed, so that modifications and improvements in the service can be made. It is important to recognize that in the case of a pure service, concept development and testing stage are very crucial as they tell us about the nature and type of the proposed service.

COMMERCIALIZING THE PRODUCT/SERVICE

The final phase of new product introduction is the commercialization of the new product. This is the stage of 'roll-out' of a fully formulated and tested product or service backed by a marketing strategy and plan which have also been tested. Here, we are implementing the strategy on full scale; adequate number of the product is produced, price is specified, distribution channel is selected and put into action and communication released.

But the important point to be noted here is that the launch of the product should follow a plan. This will involve a time plan to carry out various activities related to the product launch, including the time plan to cover different segments (especially geographical segments). Decisions on when, where, and how to launch the product are the key issues that the commercialization plan should address.

While commercializing the product, we need to keep in mind the following:

- Assign responsibility for various activities to specific individuals during the product launch.
- Recognize that the objective during the commercialization phase is to create an awareness among potential customers and to induce them to try the product.
- Develop systems to closely monitor sales and collect feedback. Information on the number of people who first bought the product, number of people who tried again, reactions of users and their assessment of the product proves very useful in correcting mistakes.

SUMMARY

The new product introduction process discussed so far depicts the systematic steps involved in ensuring the launch of a new product. The purpose of following the steps outlined in this chapter is the reduction in the risk of failure and hence, a reduction in costs. In the final analysis, the fundamental question that we need to answer is: 'Do we really have a well-formulated new product strategy or do we approach new product development in a haphazard fashion that lacks any real strategic rationale and structure?' (Wilson *et al.*, 1994).

In this chapter, we discussed the rationale, procedure and steps involved in conceiving, designing and introducing new products and services useful for a library or an information centre. Several reasons outlined in this chapter suggest a strong need for libraries and information centres to identify opportunities for new products and services and then introduce them.

A review of the current product-market situation will indicate not only the 'gaps' in the product/service mix of the library/ information centre, but also help in specifying the strategic objectives that the new products and services should achieve. After specifying these objectives, the next step is to generate ideas for new products and services. This list is pruned down through a systematic process of screening, and evaluating the

BOX 7.2

Guidelines for Introducing New Products and Services

1. Review the current market-product situation for knowing the gaps in the product/service mix, and for specifying the strategic objectives that the new products and services should achieve.
2. Generate ideas for new product and services. Use consumers, competitors and our staff experts for generating ideas through an appropriate research approach (see Table 7.1 for details).
3. Screen, and evaluate, the attractiveness and feasibility of the new product/service ideas on criteria representing marketability, growth potential merchandisability/promotability, productive use of organizational resources, and other organizational factors. Use a systematic procedure to screen the ideas (see Table 7.2 for an illustrative procedure).
4. Develop the details of the offer by translating the ideas into 'full blown' product/service concepts, in terms of defining the target customer groups, the type of product that could satisfy the needs and provide benefits to the customer group, and the cost that the customer group would have to spend in buying and using the product.
5. Test the product/service concept for acceptance and feasibility through the procedure of concept testing. Present the concept in as much of usable form as possible. A verbal description could suffice but, a working model would be the best. Test the concept on a representative sample of target customers. The dimensions on which you should collect information include: overall acceptability, strength of purchase and the intention, specific assessments of components/attributes which would constitute the product ultimately, and profile of like consumers.
6. Translate the product/service concept into the physical product/service. Develop a brief for the designer in terms of target audience, benefits to be provided, specific attributes/features, and cost per unit. Develop/activate contacts/assign a contract with knowledgeable persons to translate concept/product brief into a product/service. Design the production and quality assurance system to produce the product.
7. Test the product/service in the laboratory internally. Follow this up by testing it on a representative set of consumers. The product/service test should provide an assessment of the overall acceptance, buying intention, and should fit the customers' process of use, specific attributes, suitability of the product for different customer segments, and advantages/disadvantages vis-a-vis competing products.
8. Check the commercial feasibility of the proposed new product/service by estimating the cost, revenues and resources required to support the

(Contd)

new product/service. Use data from concept testing and product testing to estimate the likely customer acceptance and likely revenues. Generate information on the costs of resources for producing and marketing from relevant departments/sections of the organization. Check for achievement of the objectives including financial ones.

9. Develop the marketing strategy and plan for the proposed new product/service.
10. Test market the product by introducing the product, on a limited scale, and collect appropriate data (if the risks associated with launching the product or service are high). The test should be conducted for a time period which can allow the assessment of a stable purchase rate. Analyse the results for any changes that may be needed in the marketing plan, to achieve the objectives set.
11. Fine tune the strategy, and plan and launch the product/service based on the inputs obtained during the test market. Recheck the achievement of desired objectives before final launch.
12. Delegate responsibilities to people, and design systems to monitor and control activities to ensure a greater success of the new product or service.

attractiveness and feasibility of the new ideas generated. After selecting the most feasible and attractive idea from among a larger list, we then develop the details of the offer by translating the ideas into 'full-blown' product/service concepts. These concepts need to be tested for acceptance and feasibility through the procedure of concept testing. This step leads to identification of a product/service concept which has a higher probability of acceptance by the clients. This concept is then translated into a physical product or service. The purpose here is to check whether, or not, we have 'executed' the concept well, and to find out the deficiencies in the new product/service that need ironing out. Simultaneously, we also check the commercial feasibility of the proposed new product/service by estimating the costs, revenues and resources required to support the new product service. The marketing strategy in then developed. Here, we specify the target market, product position and the critical marketing mix elements. If the risks associated with launching the product or service are high, then we may need to test market the product by introducing the product on a limited scale and by collecting appropriate data. Based on the inputs obtained during this stage, we fine tune the strategy and launch the product/service. Delegating responsibilities to people and designing systems to monitor and control activities will ensure greater success of the new products and services thus launched.

REFERENCES

1. Cadbury, N.D., 'When, Where and How to Test Market', *Harvard Business Review*, May-June, 1995.
2. Booz, Allen and Hamliton, *New Product Management for the 1980s*, New York, 1982.
3. Kotler, Philip, *Marketing Management : Analysis, Planning and Control*, 6th Edition, Englewood Cliffs, NJ, Prentice Hall, 1988.
4. Hall, John A. *Bringing New Products to Market*, AMACOM, New York, 1991.
5. Wilson, Richard M.S., Gilligan, Collin and Pearson, David J. *Strategic Marketing Management: Planning, Implementation and Control*, Butterworth Heinemann, Oxford, 1994.

CHAPTER 8

How to Conduct Marketing Research for Marketing of Information Products and Services

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INTRODUCTION

What is Marketing Research

'Marketing research is the systematic and objective search for and analysis of information relevant to the identification and solution of any problem in the field of marketing.' (Green *et al.*)

We need to note the two crucial words here—systematic and objective. The definition emphasizes a systematic approach in the search and analysis of information. It implies that all the steps in the research process should be carefully designed and implemented. The other word, objective, is the most crucial in the sense, that the purpose of marketing research is really to get an objective assessment for improved marketing decisions, rather than to prove or disprove a manager's prior opinion.

Why Marketing Research

Marketing research is useful for improving marketing decisions and for understanding the marketing phenomenon, in any marketing situation. It is especially useful for the marketing of library information products and services.

It would have been obvious from the previous chapters, that (additional) information would be needed to improve decision making in the various areas of marketing of information products and services. The decisions to be made are identification and selection of marketing opportunities (Chapter 3), design of marketing strategy for tapping the selected opportunity (Chapter 3), design of marketing mix elements, i.e. products, price, promotion, and distribution (Chapters 4–6), designing and introducing new products (Chapter 7), and feedback and control of the marketing effort (Chapters 3–8). To improve the decision making in the above said areas, an understanding of macro environment, competition, distribution system, communication system, and above all, the current and potential customers is essential.

The importance of marketing research for librarians is enhanced because of their current background and working.[1] Firstly, librarians/information managers have rarely ventured out to assess the requirements of their clients; they are used to clients coming to them. Secondly, they have usually been managers of a storehouse of information sources, and have only occasionally been pro-active in understanding the requirements of even those who come to the library. Thirdly, among the librarians who could assess these requirements, their own ability to process the available information to suit the client's requirements and to get not available within the library information from outside sources, has

1. In courses on library science, there is usually a paper on research methodology. Also, some inputs are provided on conducting user studies and user's education programmes. However, useful and significant developments in marketing research, which could be quite helpful in marketing library products/services, have not been necessarily reflected in these inputs.

been severely curtailed because of the lack of resources. Finally, if the librarians wish to acquire resources to service the clients, they need to justify the cost by assessing the value/revenue that these services/products, generated from such resources, would get from the clients.

The important areas of research for marketing of information products and services, as judged from the kind of literature available, are the areas of strategy/plan formulation and control. In formulation of strategy/plan, it is necessary to explore the buyer behaviour to help generate alternatives for segmenting/targeting, positioning, and designing of the marketing mix (products, price, promotion and distribution). The next most important step is to assess the revenues and costs of each option in the above decision areas, so as to make appropriate decisions. Monitoring and control of strategies is also an important decision area, to improve the implementation of plans by setting up a feedback and control system. (Jain *et al.*)

Steps in Conducting Marketing Research

The first step in marketing research is to define the purpose of research and associated problems with it. These need to be broken down into information needs and specific variables to be collected from different sources. Also, the value of such additional information needs to be assessed, to decide on how much to spend on conducting the research. The second step is the preparation of a research plan, consisting of research design to achieve the objectives, method(s) of data collection so that the needed information is obtained, and methods of analysing the collected data to achieve the objectives of research and resolve the decision problem. The third step is the implementation of the research plan for collecting the data. The last step is that of interpretation of results, and preparation of action plan to use the results.

What are the Roles of a Librarian and Research Agency

There may be a need to undertake the marketing research through research agencies, who have proficiency in undertaking marketing research. While a research agency might know how to conduct the research by using the most appropriate methods, the use of the research results, in terms of taking specific decisions and implementing them, would be the responsibility of the library/information centre, through its own staff. In terms of the above four steps, the step of problem definition is the primary responsibility of the library/information centre. The research agency is likely to play a role in terms of asking sharp questions about what information would help the decision maker in making a (set of) specific decisions. The role of the research agency becomes quite significant in preparing a research plan, which is the second step. The role of librarian/information manager is to primarily see that the information intended to be collected through the proposed methods, would actually help him to resolve his decision problem/objective. The third step of collecting and analysing data is almost entirely to be conducted by the research agency.

Interpretation of results, may be proposed by the research agency, but is not a prime responsibility of the supplier. The major responsibility for interpreting the results, and preparing an action plan, rests with the decision maker.

Tasks for the Librarian/Manager

The assessment of the tasks described earlier, boils down to the one shown in Table 8.1.

Preparation of brief can be improved through an interaction with the research agency. However, evaluation of a research proposal would require expertise on the part of the librarian, in terms of understanding of the research design, data collection approaches, sampling, and data analysis. Understanding of these aspects would also be required for interpreting the results of the research studies and preparing the action plan.

TABLE 8.1 **Tasks of the Librarian/Manager in Marketing Research**

Task	*Description*
Preparing a Brief:	
	– Describing the objectives of research and deciding the maximum budget.
Deciding the Implementing Agency:	
	– Whether to do the research internally, or seek the help of outside/independent research agency.
	– In case an outside agency has to be used, seek proposals, evaluate the proposals and decide on the agency.
Receive the report, interpret results and prepare action plan.	

Thus, the librarian/information centre manager needs to:

- Be able to define research objectives and information requirements.
- Understand research design and their pros and cons, so as to make an appropriate choice of the research proposal and research agency.
- Understand data analysis to interpret the results of research.

PREPARING THE RESEARCH BRIEF

Purpose of a Research Brief

This is the crucial first step in the commissioning of a research. A good brief will lead to precise information, relevant data, and clear recommendations at an appropriate cost, which will help to effectively plan the development of the products and their successful promotion to the users and customers. A fuzzy brief will bring corresponding hazy results or information which is probably already known. A poor or absent brief will, very likely, bring grief and disappointment in terms of decisions, as well as a feeling of wasted resources.

The research brief can take many forms. In most cases, it will be a written document drafted by the manager commissioning the research. In other cases, it may be articulated verbally by the manager to the researcher who then drafts the brief, based on his/her interpretation of what is requested, before submitting it to the manager for approval. The brief is usually formalized as a contract for consultancy services, if external researchers are to be appointed or as, an official request for research services if an in-house research unit is employed.

A brief should define at least four components: overview of the products and services or any other aspects which are the subject of the research, the objectives of research, anticipated outputs (e.g., a report, and sometimes, business and marketing plans), and the schedule for implementing and completing the research. A brief when finalised (a contract for external researchers), will also include details of expenditure and their timing (like fees and reimbursement of research expenses to external researchers).

Thus, the research brief has two purposes, both critical from the point of view of a librarian/manager namely, to define the research purpose precisely and to assess the budget for conducting the research.

Defining Specific Research Purposes/Objectives and Problems

A decision maker faces one or more problems and is interested in seeking a solution to the same. In the context of such situations, he may not even precisely know the decision area which needs to be addressed. Even if he knows this, the options available may not be clear. Even if they are known, evaluation of each of the options on the criteria (to be used for choosing the best option) may not be known, or may not be known with certainty. The overall purpose of research can be thus classified into exploratory and conclusive. *Exploratory* research includes purposes like structuring a decision problem, generating alternative courses of action, and understanding the dimensions of buyer behaviour, etc. *Conclusive* research, on the other hand, deals with assessing the outcomes of specific actions.

General Purposes of Marketing Research

The important decision areas in marketing are selection of market opportunity (which include selection of product-market, selection of segments for targeting, and choice of positioning, i.e., what you want for the customers in the chosen segment belonging to specific product-market choice), designing marketing plan (specific decisions on product, price, promotion, and distribution) and monitoring and control (market research and feedback). The three situations which have just been described and which decision makers may have to face, might arise in the context of any of these decision areas.

Exploring Buyer Behaviour for Opportunity Analysis

The manager may sense that there is a group of people (e.g. aquaculturists, single parents or trade unionists) who have unfulfilled information needs and would thus, like to develop information products and services for them. Here, the thrust will be to learn about their background, ways of life and work, needs, wants, information seeking behviour, and information usage patterns.

This approach is referred to as 'demand driven'. Or, the manager may work for an organization which already produces a range of products and services and is interested, principally, in increasing the usage and sale of these products and services. The brief in this case is to identify potential users and buyers, and to discover their background, their access to information retrieval hardware such as computers, modems, CD-ROM drives, microfilm readers, video cassette recorders, etc. and information usage patterns. This approach is referred to as 'supply driven'.

Designing Marketing Plan

- *Products and Services* In the demand driven approach, research should discover and describe the products and services required by the target group. For the supply driven approach, research should gather user feedback on products and services. Some of the areas for feedback include usefulness of products, ways in which information is applied by users, ease of use, suitability of format or medium, perceived quality and reliability of information supplied, suggestions for improvement.

- *Place or Distribution Channels and Service Centres* The specific objective here is to discover the ease or difficulty of obtaining the products and services, and the timeliness of the information supplied. Included here is the quality of technical support for products, computer-based databases, CD-ROMs, and dial-in information services.
- *Pricing* The objective is to appraise the price which users are willing to pay for the products and services. In some instances, it is useful to find out the total budget which users and buyers set aside for acquiring information products and services. This is especially useful in the demand-driven approach where, managers have the luxury of developing product(s) from scratch and pricing them according to what the market is willing to bear. The concept of price should not be taken only to mean the money which users will have to pay to obtain the particular product you are selling. With many new information products, the total cost of using your product may be significantly more than your price. For example, a user buying his/her first CD-ROM will, very likely, have to invest at the same time in hardware such as a CD-ROM drive, sound and video cards, a more powerful computer before he/she can access the information on the disc which you are selling to her. The concept of price also need not refer only to money. For example, a publisher who plans to bring out a large odd-size publication must consider the difficulties (the intangible cost) of shelving such an item in libraries, book stores and distributors' warehouses, for the many years that the title will be in circulation among the intended readers.
- *Promotional Opportunities* Under this specific objective, research should aim to find out the media and other com-

munication channels favoured by users and buyers in acquiring information. What publications and periodicals do they read regularly? Which radio stations and television channels do they tune in to? Who do they consult with? Which meetings, conferences, trade fairs do they attend? What associations are they members of? Which stores or distributors do they make purchases from? And when they do all of the above? The information so gathered should help in designing the media-mix for promotional activities.

Feedback and Control

The broad objective here is to evaluate the efficiency and effectiveness of each element of the marketing plan, the extent to which an opportunity is tapped/untapped, and the reasons thereof. Some indicators are number of actual subscribers, library's share in their purchase of information products and services, their attitude towards the products/services/library, etc. The first two can be generated through a regular feedback system, whereas, the third one (attitude tracking) may require conducting surveys at desired intervals of time, say yearly.

The specific objectives defined above need to be translated into specific information pieces and variables, along with the specification of the sources from where to collect them. For example, for fine tuning the design of specific product/service (specific objective), it may be necessary to gather information (*information needs*) on usefulness of the product/service, what is liked/disliked about the product/service, satisfaction with the product/service, propensity to buy the product/service, and suggested improvements. The information required on 'satisfaction with the product' may be in terms of (i) overall performance, (ii) specific benefits, and (iii) attributes, etc. (*variables*). It can be measured on a five point rating scale, say from very high satisfaction to very low satisfaction. The *sources of information/variables* may be specified as actual customers/dealers, etc. depending on the availability of such information/variables with the specific type of respondents.

The output of this exercise of defining the research purpose/ problem would be a tabular format like the one shown in Table 8.2.

TABLE 8.2 **Matrix Chart of Problem Definition**

Decision Problem	*Research Issue*	*Information Needs*	*Variables*	*Source(s)*
1	*2*	*3*	*4*	*5*
Test Given Product	Does the product satisfy customer requirements?	What are customer requirements?	List of customer requirements	Published literature/ experts/ customers
		How well does the product satisfy each requirement	Overall satisfaction	Customers
			Satisfaction on specific requirement	Customers

BOX 8.1

Steps in Deciding Research Objectives and Defining Research Problem

State the decision problem, generate alternative ways of tackling the problem, and specify the criteria on the basis of which decisions would be taken in the context of the phenomenon to be studied.

Identify the broad information required to evaluate the options on the criteria and the issues of interest to be explored.

Translate above into information requirement, variables, and sources.

Conduct a search for available information through secondary sources and decide which variables and information requirement need to be collected through additional research.

Group additional information required into research problem(s).

Draw the chart depicting decision problem(s), research problem(s), information requirements, variables, and source(s) of information.

BOX 8.2

IML at IIMA: Assessing Value of Information

Let us take the situation faced by the Librarian of IIM Ahmedabad, of whether to introduce a new product, i.e., IML (Index of Management Literature) (Option 1) or not (Option 2).

He has analysed the market thoroughly and found that either this product would click with the managers or it would not (states of nature or event or outcome).

If it clicks, the product would capture about 15% of the market. On the other hand, if it does not click, only about 1% of managers would subscribe to it.

The value of each of these two outcomes, in terms of contribution over the next 3 years, was calculated by the librarian (pay off). The pay-off of options 1 and 2 were assessed as a positive contribution of Rs.1.5 million and a negative contribution of Rs. 0.5 million for market shares of 15% and 1%, respectively.

He also assessed that there was a 30% chance of achieving a penetration of 15% of the market, and a 70% chance of achieving 1% penetration. The above situation has been shown in Table 8.3.

If the librarian was to decide without collecting additional information, he would obviously choose the action of introducing the product. This is because this action has an expected value of $(0.3 \times 1.5 + 0.7 \times (-0.5))$ = Rs. 0.10 million, which is higher than the expected pay off value of not introducing the product (Rs. 0.0).

If you were in the position of the librarian of IIM Ahmedabad, would you ask for research? If yes, how much money would you spend? A way of resolving this dilemma is to assume that the research would give 100% accurate information. Assuming 100% accuracy, as librarian, you would:

- Introduce the product (action 1) if the predicted penetration was 5% with a pay off of Rs. 1.5 million.
- Not introduce the product (action 2) if the predicted penetration was 1% with pay off of Rs. 0.0 million.

Given that the chance of event 1 or 2 taking place is 0.3 and 0.7 respectively, the strategy after perfect information would yield: $(0.3 \times 1.5 + 0.7 \times 0 = 0.45 + 0.0)$ = Rs. 0.45 million.

Now the value of the decision after collecting perfect information is Rs. 0.45 million which is Rs. 0.35 million more than the value of the decision before collecting additional information. (whose expected pay off was Rs. 0.10 million).

Hence, the value of research/additional information is Rs. 0.35 million, if the information is 100% accurate.

TABLE 8.3 **Pay-Off Table (Pay-off in Rs. million)**

Action	*Outcome*				
	Penetration 15%		*Penetration 1%*		*Expected Value*
	Chance	*Pay-Off*	*Chance*	*Pay-Off*	
Introduce	0.3	1.5	0.7	−0.5	0.10
Do not Introduce	0.3	0	0.7	0	0.00

Assessing the Value of Information

The importance of assessing the value of information arises from the fact, that the manager/librarian will decide to conduct research/collect additional information if its value is more than its cost. Bayesian approach to decision making provides a way of assessing the value of additional information. (Green *et al.*) A detailed treatment of the subject is not within the scope of the chapter. However, we will present the broad approach and its use in a specific situation to arrive at the upper limit of the value of information, so as to provide the logic of the approach. The value so calculated/assessed when compared with the cost, would help in deciding the upper limit of budget to be spent on collecting additional information. (see Box 8.3)

Contents of Research Brief

For the purpose of sharing with the research agency, the brief would have the following structure with an indication of the upper limit of the budget. However, for internal purposes one has to assess the real upper limit on the budget.

Simple language should be used to frame the brief. It should be kept as short and as precise as possible. The document, while- mainly intended for the reference of the researchers, will also be frequently read by the staff of the organization whose wholehearted cooperation is required during the research. An easily understood brief will help to mobilize their support, and diffuse any threat they may perceive in the research process.

BOX 8.3

Steps in Assessing the Value of Information

Value of decision before collecting information:

- Identify decision problem and generate options.
- Assess the likely outcomes.
- Assess the chance of each outcome.
- Calculate the net pay-off of each outcome, for each of the options.
- For each specific option, calculate the expected pay-off: For this, multiply the chance of each outcome by the net pay-off of the outcome. Sum up such values for all the outcomes of the option.
- Select the option with maximum expected net pay off. Denote this value as A.

Value of additional information:

- Assume that research would provide 100% accurate information.
- For each outcome, assuming that the outcome would take place with 100% certainty, choose what is the best action and calculate the net value of the option.
- Assuming best action for each outcome, multiply net value of each outcome by the chance of that outcome, and sum up the over all outcomes. Term this value as B.

Value of additional information:

- The amount (B–A) gives the maximum value of research/additional information for the decision problem under consideration.

A brief should contain the following:

- *Executive Summary*: Two or three short paragraphs summarising the main intentions and outputs of the research—aim it at senior management who seldom have the time, nor patience, to read lengthy documents.
- *Background & Rationale*: One or two pages describing the products and services to be studied: how they came to, or will be, produced, reasons for production (profit is seldom the prime reason in information providing operations), intended users and beneficiaries, track record of usage or sales to-date, problems faced, potential sensed, competing organizations and their products and services, and a brief overview of the sector or environment in which the

organization has operated in the past, and the forecasted environment in which it will operate in the future.

- *Objectives of Research*: This is the heart of the brief. First state the overall objectives—these will be the long term impact which the research is expected to help in making. For example, developing a plan to increase net income to a point when operations will become self-sustaining. This section is usually a paragraph long. Its purpose is to act as the main reference point for the specific objectives which follow.
- *Expected Outputs*: These must be very clearly itemised and normally include a report, original copies of all completed questionnaires collected, copies of all prototype products, promotional materials, etc. tested, mailing lists used, and audio-visual recordings made of experiments, focus groups or other events.
- *Schedule of Work*: The best way is to display this as a Gant Chart showing the time lines for every distinct activity, beginning with the pre-testing of research instruments and methods, and ending with the writing of the final report.
- *Statement of copyright* (and secrecy, where applicable).

How to Prepare a Brief

There are two approaches to prepare a marketing research brief: backward market research and traditional market research. The method of defining research problem belongs to the latter category.

Backward Market Research Approach (Andreasen)

Since information marketing is a relatively new concept, it is possible, that a manager may not be familiar enough with all aspects of the marketing process to permit him/her to draft an effective research brief. The researchers themselves, may also not be familiar enough with the specifics of marketing information to permit them to take the lead in creating the brief. What process should one use in such an instance to create the brief? The answer often lies in a method called Backward Market Research developed by A. R. Andreasen (1985). It has as its premise that the best way to design usable research is to start where the process usually ends and then work backward. This translates, in practice, to the manager and his/her researchers visualizing the contents of the final research report and its role in guiding the board of directors to make practical policy, management and operational decisions on the development and marketing of the products and services concerned.

This exercise of visualizing the report is initiated by the researchers. After reviewing relevant literature, secondary data, existing sale and usage data, and conducting an audit (examination) of the products and services, the researchers write-up a mock report, complete with imaginary statistics, cash-flow-projections, potential alternatives, and recommendations for action.

This mock report is presented to the full board of directors and managers (or relevant policy-makers) who will eventually be using the actual research report to make real decisions on marketing. The board members and managers are then invited to critique the mock report. They are invited to describe what they like and do not like about the presentation, and the decisions which they can or cannot make based on it.

Frank and direct criticism may clash with many cultures found in developing countries. Researchers who sense that it is not realistic to expect managers and board members to make spontaneous criticism after such presentations may choose, instead, to invite these policy-makers to advise the research team on two fronts:

- The additional research data which they want gathered and analysed.
- The additional findings they want included in the final report.

This indirect approach involves managers and board members as senior advisors, a role they are probably most comfortable with performing.

Besides the policy-makers, researchers may find it useful to conduct a similar presentation and feedback session with middle-level management staff in the organization. These are the people who may not make the decisions but, play the crucial role of implementing the decisions that have been made. They are also the best critics for operational details and probably have a superior feel for actual market conditions and mechanisms. Many of them will probably be motivated by the presentation, to provide the researchers with important data and information, which will further the objectives of the research.

Besides ensuring that the research will lead to results which are useful to people for whom it is intended, 'Backward' Market Research also helps in giving a real sense of ownership of the research process to everyone involved. Because research is not in the main stream of what everyone does in an organization, it is seldom fully understood and appreciated. Many even find the process threatening. This approach of involving the key people right from the beginning reassures them that research serves their common interest, and that they have a say and a stake in it.

This method for developing a brief is probably the most time consuming. It is for this reason, that it is often avoided by researchers who are in a hurry to get the job done. Clients commissioning research avoid the method for the same reason. Research managers, in particular, find it difficult to negotiate with their CEOs to open-up board meetings to such an unorthodox agenda item. However, experience has often shown that this investment of time and resources up-front pays back many times afterwards by producing relevant, usable and acceptable research findings. It is at the same time a rewarding learning exeperience for everyone.

The premise and steps of 'Backward' Market Research are summarised in Box 8.4, 'Backward Market Research'.

The Classical Research Approach

In the classical approach, the manager who contracts the research to external marketing consultants normally prepares the first draft

BOX 8.4

Backward Market Research (Andreasen)

Premise

The best way to design usable research is to start where the process usually ends and then work backward.

Steps

1. Determine how the research results will be implemented.
2. Determine what the final report should contain and how it will look.
3. Specify the analyses necessary to fill in the blanks in the research report.
4. Determine the kind of data that must be assembled to carry out these analyses.
5. Scan available secondary sources to see if the specified data can be obtained quickly from others.
6. If 'no', design instruments and a sampling plan that will yield the data to fit the analyses.
7. Carry out the field work.
8. Do the analysis and write the report.

of the research brief. Her/his colleagues and supervisors will be consulted and invited to vet and improve upon the draft. Once everyone concerned is satisfied with it, the brief is handed over to the researchers as a part of the contract for their services. Many research managers find it very useful to involve the researchers in the finalization of the brief. This is done by providing them with a draft of the brief and contract, for their comments, before they are finalized and signed. In the case of in-house researchers, the brief may be drafted by the manager or the researcher selected for the project. In the latter, the researchers are commonly provided with a verbal explanation and description of what is required, together with relevant background documents and samples of products or demonstration of services to be studied. The researchers next, meet with the key people in the organization to seek their views on the research. A brief is drafted at the end of the consultations, for circulation to all concerned, for their comments and endorsement. This is often a quick process which may be completed in a couple of weeks in small organizations. However in large institutions, and when the research may be contentious (such as, when it gets drawn into departmental rivalries) this process may take months. Such hazards aside, the involvement of as many people as practical in this process, is desirable for sharpening various facets of the brief, and for giving ownership of subsequent research activities and output to members of the organization.

Summary on Preparing Research Brief

- Research brief is a document which outlines the purpose of research, information required to achieve the purpose, and the maximum budget that can be spent on it.
- It is advisable to use the technique of backward marketing research to arrive at the brief through consultations between the research agency and research user/decision maker.
- The upper limit on the budget for research can be decided by using Bayesian analysis.

DEVELOPING A RESEARCH PLAN

After developing the research brief, the next step in marketing research is the development of a research plan/design. The librarian may not have the research expertise to undertake this activity. He may have to take the help of an outside agency/consultant to develop one. The selection of such an agency/consultant becomes, therefore, an important task. It is incumbent on the librarian/manager to have a minimum understanding of research plans, so that the proposals submitted by the research agency are evaluated appropriately. Also, when the research results are presented, he should be able to interpret them for his decision making purposes.

What is a Research Plan

Marketing research plan, to meet requirements of objectivity and systematic approach, is a written document outlining specific steps for conducting the research. It is the research approach, consisting of one or more studies with details of specific research designs to accomplish the purposes of research. Each design used, needs to be described in terms of data collection approach, sample design and selection, implementation procedures, and proposed analysis of data. The plan would specify the personnel, the time, and the monetary resources required for conducting the research. Besides, the research plan would provide the schedule and the budget of each activity of each design, which can be used for monitoring and control of activities of each design and the plan as a whole. In summary, a research plan would consist of (i) description of overall research approach, (ii) number and sequence of studies, (iii) data collection approach, sample design and data analysis procedure for each study and the research as a whole, and (iv) personnel required, time, and cost/budget estimates.

A research budget should provide for the following items:

- *Professional Fees:* For the principal investigator, assisting researchers, subject matter specialist, statisticians, computer programmers, data-entry staff, secretarial staff, mailroom personnel, transportation staff, accountants (if cash flow projections are required), lawyers (if advice on contracts and copyright are needed), etc.
- *Prototype Development:* This may range from the design of a simple leaflet and creating a visual of it, to developing search and retrieval software, and processing of data for mounting on to a prototype CD-ROM.
- *Research Supporting Materials:* These may include printing of questionnaires, envelopes, stationery, rental of office space, and computer hardware at field sites for conducting the research, etc.
- *Travel Expenses:* For the field staff include transportation costs and living expenses.

- *Communication Costs:* For postage (can be considerable amount for an international postal survey), telephones, facsimile, e-mail, video-conferencing, etc.
- *Reference Materials and Services:* Subscriptions to relevant journals, trade publications, CD-ROMs, competing products, literature search and review on commercial databases, etc.
- *Hardware:* Such as computers, CD-ROM drives, video cassette recorders, video cameras, still cameras, etc.
- *Insurance:* For staff involved and to indemnify against their risks.
- *Data Analysis:* This item comprises the wages (which may be budgeted for under 'Professional Fees' in some organizations) of people doing the coding of questionnaires, entry of data into computers, and the analysis of the data processed. Additional funds must be set aside if computers and other peripherals (such as, Optical Character Recognition machines) need to be rented or purchased for the research. Ample funds should also be set aside for purchasing or customizing statistical software to meet your needs.
- *Research Report:* Include the fees of the principal researcher and others involved in writing up the report. If a professional looking document is required, budget also for the desk-top publishing of the text, and the duplication/ printing and binding of the required number of copies of the document.

Types of Research Designs and Data Collection Approach

Research designs can be classified in very many ways. However, a useful classification from managers' point of view is by purpose of research. From the point of view of a researcher, a useful classification is by the type of expertise required to conduct research. Understanding of research designs on both dimensions is necessary, to finally choose an appropriate design that suits the overall purposes of a study.

As mentioned elsewhere in this chapter, there could be two broad purposes of research: *exploratory* and *conclusive.*

The first refers to the exploration of different types of marketing phenomenon for (i) structuring a decision problem, (ii) generating alternative courses of action for resolving the problems, and (iii) understanding the dimensions of any marketing phenomenon like buyer behaviour, attitude, etc.

Conclusive research design builds on the understanding obtained through exploratory research, and is of two types: *descriptive* and *causative.* In the illustration of whether to introduce IML, it may be possible and desirable to describe potential managers on various characteristics. This description might help in, say, segmenting the market. The description may also be sought to build a relationship between intention to buy and manager's characteristics. This description, may then help in assessing the level of penetration expected to be reached, if the product was introduced among similar target audiences. Both these would be descriptive researches. On the other hand, it may be possible to devise a marketing plan for marketing the IML and testing it in a representative market (segment) by actually implementing the marketing plan and observing sales and assessing attitudes and penetration. This research design is causative in the sense that a stimulus (marketing plan, as a whole) is introduced in the system (market) and parameters of interest of the system (sales, penetration, and attitudes) are assessed. Other things being equal, the assessed changes in the parameters may be a result of the manipulation of the input variable, in this case the marketing plan.

According to the expertise required to conduct research, research designs can be classified as follows: studies of secondary sources of information (like raw data, reports, and case studies), informal discussions, indepth studies (of particular individuals and situations), focus group discussions, seminars and workshops (of groups of people), large scale surveys, experiments (laboratory and in-field), and simulation. Almost all these designs could be used for the exploratory purpose. Descriptive research designs, most often used in marketing, include study of secondary sources, case studies, and large scale surveys. Causal research designs that are used, are primarily, survey and experiments.

Data collection approaches vary according to the type of information to be collected. The information needed in marketing research studies can be classified as (i) stable characteristics of products/respondents, etc. (states of being), (ii) awareness attitude, etc. of respondents (states of mind), and (iii) behaviour of people and forces involved in marketing. Also, the sources from which information is collected are classified as secondary and primary. There are three main methods of data collection:

- Systematic abstraction in case of secondary sources.
- Observation of behaviour and other observable characteristics in case of primary sources, through human or mechanical means.
- Question response method in case of all types of information from primary sources.

Question response method is the most used method of data collection in marketing research. In this method, the questions may be either structured or unstructured. Also, the questions may be asked directly or indirectly. It is quite critical to assess what kind of questioning is to be used. For example, in a situation where the researcher is trying to explore a phenomenon, it would not be feasible to ask a structured question. On the other hand, if the subject under investigation is well known, it may be efficient to use a structured question. It is best to question the respondents directly. However, in some situations it may be necessary to ask a question indirectly, like when one is embarassed to talk about oneself, but free to talk about a third person.

In case of research for information products and services, a number of issues like how managers use the information are not known well. In such situations it may be better to ask unstructured questions. Similarly, in an organization which is fast adopting IT, a direct question about the usage of computers may not get the real response from older employees, as they may not actually be using computers, but would not like to admit it. In such situations, indirect methods of eliciting valid responses may be needed.

We would describe the important features of few of the commonly used designs, to provide an understanding in a later section. Each design would be described in terms of data collection approach, sampling, data analysis, and the care required to execute the same.

Criteria for Selecting Research Designs

Selection of a research design is both an art and a science. It requires a high degree of professional skill and experience to be able to make such a decision. Some of the considerations which go into selecting a proper design are (i) validity of results, (ii) reliability of results, (iii) desired level of secrecy in study, (iv) time available for the study, (v) cost vs benefits of study, (vi) availability of required type of personnel, and (vii) researcher's personal consideration.

- *Validity of Results:* A research design should be so chosen that the information and results obtained through it are about the real variable/phenomenon under study.
- *Reliability of Results:* The chosen research design should be such that if the same design is employed to gather the same information from other similar respondents, or the same respondents, at another point in time, the results and the information obtained would not be significantly different from the ones obtained earlier.
- *Secrecy:* In a competitive environment, it is sometimes very essential that the kind of study and results should be kept confidential. Such situations arise particularly in case of new product introduction, pricing decisions, etc. A design, therefore, should be such that the results remain secret, to the desired extent. Generally, it is much easier to keep the results secret, but the study and possible options being tested could become known to the competitors, if a large scale study is undertaken in the field.

- *Time Available for Study:* The time available for conducting the study is not only governed by the dates set for decision-making in a marketing plan, but also by the degree of secrecy required in the particular situation. A study should be completed in the time that the above considerations warrant.
- *Cost vs Benefits of Study:* Generally, the cost of conducting the study should not exceed the expected value of losses that would be incurred if a wrong decision was made on the basis of prior available information. Bayesian Statistics could be made use of to assess this aspect of a design.
- *Personnel Requirement:* The design selected should be such that the required kind of personnel (for designing and executing it and for analyzing and interpreting the data) are available to the organization (either within or outside) and have time to devote to the study during the scheduled time of research.
- *Personal Preferences of Researchers:* The available research designs need to be evaluated on all the aspects mentioned above. If factual information was available on the above aspects, it would be a pretty scientific way of evaluating alternative designs. However, factual information is generally not available and in some cases, like quality of personnel, cannot be available with a high degree of certainty. It is here that the personal experience of the researcher, which is probably biased, plays a significant role. All that can be said is that the researcher should try and be objective, to the extent he can, in evaluating and selecting an appropriate design. However, his decision would be final because it is ultimately his responsibility. The skill or the art of making such decisions is equally important for a researcher.

How to Develop a Research Plan and Select an Agency

Even in the best of marketing organizations, development of an appropriate plan is the responsibility of a selected research agency. The agency not only helps in sharpening the research brief, but also takes the major responsibility of developing it and clearing it with the client, through mutual discussion and consent. In fact, the research agency, even at the time of bidding for the project, in response to a research brief, presents a fairly detailed research proposal. This proposal consists of:

- Agency's understanding of the primary and secondary objectives.
- Statement of research problems, information requirements, and relating them to the objectives.
- Research plan consisting of description of number and types of studies and their scheduling.
- For each study, description of the research design, the data collection approach, the sampling plan and size, and proposed analysis of data.
- Overall proposed analysis, explained using dummy tables, to show that the objectives would be achieved.
- Description of personnel involved.
- Time schedule of the project and budget estimates.

An agency is selected on the basis of (i) proper understanding of the brief, (ii) response to the brief through an appropriate proposal, (iii) reputation of the agency for conducting similar studies, (iv) qualifications and experience of the personnel proposed to be working on the project, (v) time and budget estimates, (vi) quality and size of the field set up, and (vii) ability to work closely with similar size and type of organization.

Having selected the agency, a thorough discussion is generally undertaken to understand the suitability of the research plan. Once it is frozen, it becomes a contract between the client and the agency. It is then used as a guide to execute and monitor the research by both, the agency and the client.

Conclusions on Research Plan

- Research plan is a written document outlining the steps for conducting research in terms of description, timing, and budget.

- It can be used as a guide to execute and monitor the project.
- It is usually prepared by a research agency, but must be acceptable to the client, so as to achieve the purposes of research.
- Librarians/information centre managers need to understand a variety of research designs and data analysis plans to improve the usefulness of research.

BOX 8.5

IML: Research Plan for Deciding to Introduce the Product

Given the nature of information required, the sources of information, and the overall objectives of research, it may be possible to decide the number and type of research studies required to achieve the research objectives. For example, the overall research purpose may be to decide whether to launch a new information product, say an IML for marketing managers in industrial enterprises. The librarian might define this problem in the following way:

Decision Problem/Options: Whether to introduce the digest of marketing articles developed by IIM Ahmedabad for marketing managers?

Criteria: For deciding whether to introduce the digest, could be:

- Likely (penetration) subscriptions by managers.
- Evaluation of the digest on attributes/benefits sought from such a product by the marketing managers.
- Overall assessment of the usefulness of the digest by the managers.

The information regarding how the proposed product would perform on the above criteria is not likely to be available through secondary sources. It is likely to be available from potential customers. Therefore, each of the above three informations is needed to resolve the decision problem. The research objective/problem may be defined as assessment of attitude/ acceptability of the managers towards the proposed product.

In terms of research plans, one possibility is to use *indepth personal interviews* of a small group of marketing managers. The researcher might develop broad guidelines to conduct the discussion on relevant dimensions. Analysis of the information collected would be on the basis of some underlying logic, revealed through the discussion and through the researcher's understanding of managers' motives, knowledge, attitudes,

(*Contd*)

etc. towards such products. The analysis may suggest a strong vs. weak acceptance rather than a specific value of acceptance.

An alternative research plan would be to first generate, through a *focus group discussion* with a group of marketing managers, a list of attributes/benefits sought by them in such a product. Having obtained such a list, a survey of a representative group of managers in adequate numbers (*sample*) should be conducted. This survey could pose specific questions about the respondent's assessment of (i) the performance of the digest on each attribute/benefit, (ii) overall usefulness of the IML, and (iii) likely purchase intention (with or without a price tag). Having obtained this information from a representative sample of potential clients, it would be necessary to analyse the data on (i) level of performance of the product on each attribute, (ii) establish a relationship between such performance and the overall evaluation of usefulness of the IML, and (iii) establish a relationship between purchase intention on the one hand and overall usefulness, performance on specific attributes/benefits, and characteristics of the managers on the other hand. Having thus established buying intention as a function of customer characteristics, the researcher might be able to project the likely demand from all managers, if their demographic characteristics are known from secondary data.

You would notice that the first plan consisted of only one study whereas the second plan consists of two studies. Also, the two approaches above, the *method of data collection, the sampling,* and the *data analysis* differ significantly. Each has its own pros and cons. The librarian must be able to judge which of the above two plans would be better to choose. For this purpose, the librarian must understand types of research designs, their pros and cons, and the criteria on which the research plans need to be evaluated. For example, if in the above research, the purpose of research is demand assessment, the second plan is obviously better suited although, it is more time consuming and costly.

SHORT DESCRIPTIONS OF SELECTED RESEARCH DESIGNS

Study of Internal Sources of Information

A number of in-library sources exist for generating the required information. The most frequently available ones might be a list of members of different types of the library/information centre and/or the parent organization, record of number of copies ordered, record of loan of books and journals (and fee paid for late return), inter-departmental memos, and minutes of meetings held for resolving similar problems.

Information on members may be available in varying degree of detail at different libraries, and could possibly be used for classifying customers (making segments). Loan record and record of copies ordered could provide a good indication of the degree of usefulness of (different type of) the base material in the library to customers. Information centres which are using computers for managing the different systems, may have a whole lot of information at the press of a button. However, such records may not provide information about what the customers are looking for and which required information is not available in the library.

Whenever information is used from internal secondary sources, one should check for (i) what exactly is contained and what does it represent, (ii) bias of the individual reporting, and (iii) misinterpretation by the person reporting.

Information obtained through internal secondary sources costs very little, is totally secret, and requires less time to gather. Its validity and reliability depends on the people and the system employed to collect and abstract/obtain the information from the secondary source.

External Secondary Source Based Studies

External secondary information may be defined as the information collected by an agency other than the library/information centre. Different types of information available from external sources could be (a) collection of facts, (b) reports/articles, etc., based on research studies and analysis and interpretation of data, and (c) case studies describing specific problem situations of interest. These type of data are collected/presented by different types of organizations like the government, academic, trade associations, etc.

While using statistical data from external secondary sources, it is essential that the bona fides of the organization collecting the data should be assessed. This is because the purpose of the organization may be biased, say for lobbying with the government. Also, the purpose of research, the definition of variables, the method of data collection, and the sample size and plan must be carefully assessed to match with the purposes at hand, before using the same for resolving the problems. Such sources are not very costly except, when a commercial organization is offering the data as a syndicated service. Similar cautions need to be used while using the results of research studies/case studies. In addition, appropriateness of data analysis procedures needs to be assessed.

Secondary information sources could provide a significant amount of information about potential customers, i.e. commercial organizations, academic organizations, and managers in the form of directories of various types. There seems to be a paucity of research on acquisition and use of information, particularly in developing countries. However, it seems the growth of the IT industry is giving a fillip to the generation of such information.

Information from external secondary sources could be used for all three types of research studies, i.e., exploratory, descriptive, and causative—depending on the availability of information. These sources cost more and take more time to organize, than the internal sources. The validity and reliability of the information so collected needs to be assessed as mentioned above. The person conducting such a research should have a good contextual familiarity and data analysis/interpretation skills.

Study of Cases

A case is a description of a real-life situation/phenomenon. Development of case study(ies) in the context of a decision may be required, if indepth studies are not likely to provide a reasonable view of the decision situation. This may happen in situations where more than one group of respondents/situations need to be studied for obtaining a perspective of the decision situation. Take for example, a situation regarding whether to distribute goods through distributors or through the company's own sales force. The decision-maker might require information on feelings of customers, reactions of distributors, reactions of own sales force/managers, as well as performance variables (effectiveness/efficiency) of the two alternatives. While each of these aspects could be studied through an indepth study/other exploratory/descriptive/causal study designs, a case study would put all such information in a perspective of decision making.

Case writing is an art which needs to be perfected by an individual (researcher) over a period of time. Such skills are not available very widely. Also, writing a case about a situation is much more time consuming, than probably indepth personal/group interviews. However, the information so collected, if analyzed well, could sharpen the analytical skills of defining problems, identifying alternatives, and setting up decision criteria, as well as evaluating alternative courses of action.

It must be emphasized that the use of cases for exploratory purposes is fairly well accepted, however, their use as descriptive and/or inference building tools is not so widely accepted.

A researcher might come across a number of case studies having some bearing on the kind of problem being tackled. As cases are essentially holistic descriptions, their analysis also have to be of a similar type. The researcher would be able to find certain features of the problem/situation which, in a holistic sense, is common to almost all cases. Some other features may fit the problem situation of a few cases only and still others may be specific to a case. Such an exercise, of study of cases, is likely to aid in all the three types of research purposes.

For illustrations, please see the two cases at the end of the guide. Both cases provide a realistic description of how decisions are made in libraries/information centres in developing countries.

Informal Methods

The culture of many developing countries favours informal interpersonal interactions even in the conduct of business. This, in turn, often renders informal research methods as some of the most effective for the conduct of market studies. These methods, commonly, take the form of conversations between researchers and people who can contribute towards a particular study. Informal methods are very useful in identifying issues for formal research or in selecting a particular orientation for such a study. However, they are less effective for pin pointing, with precision, any element of a marketing mix. For example, informal methods are effective in gauging the range of prices within which a product will sell, but not the exact price. In cases when limited resources and time are available for the conduct of a formal research, informal methods may be used as a stop gap measure, until such time more formal research is possible.

Three important elements need to be considered: people, occasion and location. Given the great amount of time required by this method, the number of people covered is usually kept small. They will probably include the people who potentially, have the most to say about a product or service—the 'champions', 'critics' and 'loyalists'. The champions are the potential users or professionals who think alike as the people who commissioned the research. The critics are those who probably disagree with the thrust of the market study, or those who have discontinued usage of the products and services being studied because they are dissatisfied with them. The 'loyalists' are long time users of the products and services. They are often members of the 'silent majority' who prefer not to articulate their views on the issues being researched. The individuals selected should evenly represent these three groups.

The ideal occasions and locations for meeting members of the selected group may differ between individuals. Researchers would suggest venues which they consider are the most comfortable for the individual. For some it may be a chat over drinks at their club, for others dinner at a local restaurant, and yet for others coffee or tea at their office. In most cases, occasions and locations which are closely related to the thrust of the research are probably the most productive for the champions and loyalists. For example, a chat or lunch at a book fair for research on a publishing programme. Such occasions and locations are ideal because samples of allied products are available for reference, and the mental preoccupation of the moment will all stimulate natural discussions on the relevant issues. The main disadvantage is that these are public events, which may cause avoidable distractions, limiting both the time and candour of interaction. Therefore, select a quiet spot for your discussions in order to minimize these distractions. The critics often find meetings at their places of work, their home-ground, the most comfortable.

BOX 8.6

Illustration: Informal Method

The newly appointed librarian managing the collection of a local textile manufacturers' cooperative found that usage of the collection had remained sluggish ever since it started operation five years ago. During some months, less than three visitors would make use of the library in a week. The management committee of the Association had been asked by a small number of members to consider the closure of the library in view of the low rate of usage.

The librarian decided to spring into action to save the library. She decided that the first step was to conduct a small user study. As no money was available in her budget to do any formal research, she decided to make use of an up-coming trade fair of textile weaving machinery which most association members attend, as her opportunity for research. She and her assistant went to the fair ground everyday of the three days when the fair was held to meet, informally, with a cross section of members. They asked the members four questions:

1. Is information important to your business?
2. What type of information do you need which you cannot easily find?
3. In what ways and format would you like this information delivered?
4. Why are you not making frequent use of the Association's Library?

The librarian and her assistant managed to meet a total of 38 members in the three days. The total represented about 9% of the Association's total institutional membership.

The interviews showed that information was extremely important to members. Because of intense competition from other countries, members wanted information on their competitors, innovations in weaving technology, prices of raw material on the futures market, progress on trade talks with USA, and national policies on their sector of the industry.

(Contd)

They also wanted information on potential buyers in other emerging markets of the world, especially the newly independent states formed after the break-up of USSR.

Members said they wanted some information on a daily basis, these tended to relate to commodity prices and policies. They wanted such information on a single sheet of paper so that they need not spend too much time reading it. More than 75% of members interviewed said they did not use the library because it did not offer useful information. Fur-ther-more, the entire collection was in the French language which the majority of members were not fluent in.

The librarian decided to act on the basis of these results. She launched a daily 'Cotton Market Summaries' service which comprised a page of main price indices of raw materials and finished products, compiled and translated into the local language from various foreign newspapers and information services. These pages were faxed to all members using an existing computer equipped with a fax-card and a fax 'broadcasting' software which automatically dialled preprogrammed numbers. The daily summaries always carried a one paragraph note, at the bottom of the page, announcing the latest additions to the library. Based on the interviews, these new additions tended to be trade directories and new product announcements received from various embassies of countries with which members were doing business or were interested in making contacts with. Appreciation for the library increased significantly and a multi-fold rise in visitors to the library was recorded within a short time. The library was saved.

BOX 8.7

Guidelines for Informal Method

1. Select an even number of 'Champions', 'Critics' and 'Loyalists' who have the most to say about the product or service being studied.
2. Meet them informally to discuss a small number of the most important questions relating to the problem or issue which you are studying.
3. Compile the answers provided by the people met.
4. Analyse the answers for trends which may lead to the forming of solutions.

Guidelines for Conducting the Discussion

Discussions will probably be unstructured. However, the researcher should bear in mind that he/she needs to obtain from the discussion, information on the four 'Ps' making up the marketing mix. Discussions should be steered in this direction. Many researchers find it useful to have, on hand, a short list of eight to ten questions as a check-list of crucial areas which must be covered. Preface discussions with a brief description of the objectives of the research, assure the informant that discussions which follow are meant only to orient the researchers in the direction of their study, and that the inforamant will not be cited. Then allow the informant to take the lead in discussing those issues he/she feels are the most important or relevant. Be ready to probe interesting points raised. The most useful information often emerges from such probing. If discussions stall, ask the informant questions, from the short-list, which appear to be most pertinent.

Note-taking

This is best done immediately after (and not during) the discussions. An absence of note-taking will confirm the informal nature of the discussions. The researcher should first list down the points and issues stressed by the informant. Then record notes for other supplementary points made under each of the 'Ps' making-up the marketing mix. Use the exact words spoken by the informants in the notes—indicate them with quotation marks.

Analysing Notes

The objective here is to identify salient issues and not precise numbers. Concentrate on obtaining from the loyalists, the main reasons why they choose to remain regular users or subscribers—these will be the strengths of the products and services. The champions will probably help in visualizing the future for the products. Finally, the critics will be a rich source of views on the real or perceived weaknesses of the products and marketing approaches adopted. The final report of such an exercise will probably be in two parts. The first is the researchers' overview of the opinions gathered—it may be structured in any way preferred by the researchers. A useful approach may be following the headings of a 'SWOT analysis'—Strengths, Weaknesses, Opportunities and Threats. The second part will be appendices collating views (use actual words said within quotation marks, whenever possible) expressed by informants organized according to the 'four Ps' and further broken down to each product or service, if more than one are being researched. The sources of views expressed should not be revealed to help focus on what has been said rather than, who said it.

Ethics

Results of such research should be given limited circulation. Informants should never be quoted or identified, without their prior permission, because they took part in the exercise on the premise that they will remain anonymous. The client who commissioned the research should be reminded that the results of this method is best used for 'mapping the terrain' to be covered by more formalized research methods.

In-depth Personal Interviews

This is a method particularly suited to 'key informants' who have an in-depth understanding about the marketplace. They include frequent users of the product or service, subject matter authorities in the content areas, librarians, distributors, and retailers (such as bookstore managers). Such in-depth interviews are particularly suited to small studies which are limited by a modest research budget. They are also very useful for identifying key issues for a larger study using more formal methods. The method is particularly suited to information programmes of a local nature where a cross-section of people can be interviewed. It is less suitable for international information activities, where the cost of conducting interviews, in a sufficiently big number of countries may be formidable.

Design

There are no fixed recommendations on the number of key informants who should be interviewed in order to obtain usable results. Begin with ten people who evenly represent various interest groups. At the end of interviews with the first group, analyse the results to see if a clear trend has appeared in the answers to the questions asked. If no, interview another ten. Repeat the process until a clear picture emerges to the key questions posed. The number ten is arbitrary. Select a number that is realistic, given the pool of key informants accessible to the researchers.

Appointments should be made in advance with each key informant to be interviewed. In most situations ask for an hour's time for the interview (most key informants are important, busy people who probably are unable to spare more than an hour for such an exercise). The request for appointments (if made over the telephone) should be followed up with a letter which briefly describes the objectives of the research. Samples of products being studied should accompany the letter. Budgets permitting, the researchers will find it useful to invite the key informants to a meal after the interviews. This is a graceful way of showing appreciation for the informants contribution. It also provides the researchers additional time to probe interesting issues emerging from the interviews.

An interview schedule consisting about eight questions should be drafted and pre-tested for these interviews. This number will allow informants and researchers about nine minutes to discuss each of the questions. The questions should address the most important aspects of each of the 'four Ps'. They should be fairly broad in nature, e.g., 'What do you think of the technical quality of the information contained in the CD-ROM?' The researcher should then probe the answers given, to obtain a clear understanding of the rationale behind each answer. For this reason, the researcher conducting the interview must have a thorough appreciation for the products being studied. Always end the interview with one final open-ended question—'Are there any important aspects of the [name of product] which we have not discussed?' Many researchers have obtained numerous critical fresh perspectives from replies to this question.

Data Collection

The most efficient method is a portable audio-cassette recorder with a highly sensitive microphone. Ask the informant for permission to audio-record the session before commencing to do so. If the informant asks not to be taped, turn to the trusty old pen and note-book. Record answers in the actual words of the informant, whenever possible. If using an audio-recorder, researchers should record the name of the informant and date of interview on to the tape, using their own voices, prior to setting out for the place of interview. This will permanently identify a tape. Place the cassette recorder on a table in front of the informant with the microphone pointing towards him and the window showing the running tape facing the researcher. Minimize handling the recorder after that in order that the informant can relax towards its presence. Use a voice-activated recorder which will automatically pause when no one speaks (such as when the informant is studying a sample product). It will save a lot of time during the transcription of the tapes.

After starting the recorder, the researcher should take about five minutes to introduce samples of the products and services being studied. This is to 'warm' the informants up to the interview, and to allow them time to relax to the presence of the recorder. Researchers should try a trick which television reporters use to obtain good on-camera interviews. After asking a question and receiving a reply which seems to have additional information behind it, pause and look politely and inquiringly at the person being interviewed. In many cases, this will cause the interviewee to volunteer additional information (often candidly making up the crux of the answer) because most people are uncomfortable with pauses and extended silence in conversations. Researchers should use this approach sparingly, just in case the interviewees should begin to question the abilities of the researchers to conduct proper interviews or even to question their sanity!

Never record or take notes during meals or tea which may follow the proper interview. However, more candid views will be obtained during such occasions. Researchers should note the

BOX 8.8

Illustration: In-depth Personal Interviews

A donor agency, which had been funding the publication of a medical journal had given notice to its editor of its intention to phase out the agency's support in a couple of years. The editor realised that the only way of ensuring the continued publication of the journal was by increasing subscriptions. Not knowing where to begin in mounting a marketing drive to obtain the additional subscriptions, he decided to do some research by meeting different people who were knowledgeable about medical sciences and promotion of scientific journals. He met with 17 people altogether—4 senior medical specialists, 8 young medical professionals, 3 librarians and 2 scientific book distributors. These meetings or in-depth interviews took place over a 13 week period and in the capitals of 3 countries from the region where the journal is circulated. The editor had successfully made full use of his travel to various international conferences and professional meetings to conduct the interview.

The result of the interviews was most revealing. The senior specialists and young professionals found parts of the journal very useful and the rest disappointing because it replicated, in an inferior way, with the coverage of *Lancet* (a well-known international journal). All of them recommended, that the journal should drop the latter and concentrate on the former, which was a unique research dealing with the traditional medicine of the region. They also complained about the long time taken from the submission of a paper to its publication. This robbed the journal of currency and frustrated contributors. The librarians described the complex decision making process followed by them in getting a journal subscription approved. The key decision-makers were identified for future promotional exercise. The librarians also made available listings of various institutions in the region which were potential subscribers to the journal. The book distributors were not able to contribute much feedback on the contents of the journal. However, they made good suggestions on the pricing of the journal and how to make it easier for subscribers to make their payments. They also suggested that the editor should arrange for his journal articles to be abstracted in a number of key international bibliographies which was an effective way of promoting the journal. They further suggested the best ways of designing effective promotional materials such as flyers and advertisements.

The editor made changes to the editorial of the journal, and designed a marketing campaign using the results of his in-depth interviews. The first round of the campaign succeeded in doubling the subscriptions to the journal. The editor is now planning to use some of his additional revenue to conduct a formal survey of his existing subscribers and potential subscribers to further improve the journal's editorial and marketing strategies. There appears a good chance that the journal will be able to break-even by the time the donor agency ceases its funding.

views expressed, immediately afterwards. However, researchers should be mindful that any information given after the proper interview is probably given off-the-record and should never be quoted without prior permission.

Data Analysis

Tapes of interviews should be transcribed as quickly as possible after an interview. The draft transcript should be reviewed and corrected, or muffled passages clarified by the researchers as soon as possible. Researchers will be likely to forget and thus, be unable to fill-in inaudible sections of the tape recording if they are left too long after the event.

The next step is to collate answers provided by the different informants to particular questions. A quick way is to photocopy all the transcripts, cut them into pieces, sort them according to the different questions and post them on to blank sheets of paper. Note, on to each cut-out, the occupational background of the informant providing the answer, e.g., librarian, lecturer, distributor, doctor, etc.

Analysis is done by reading through all the answers provided to a particular question, and seeing if they contain any general trends or make up distinct clusters; e.g., most of the informants recommending the inclusion of the same additional types of information, all librarians complaining about the clumsiness of the search and retrieval software, and all distributors asking for a larger sales commission. If the answers are diffused and provide no clear trends, proceed with the interview of another batch of informants until such time a clear picture evolves.

Focus Groups

This research method is founded on the premise that people interacting with each other, as a group, will contribute more useful information than personal interviews with them. There are three commonly cited reasons for this:

BOX 8.9

Guidelines for In-Depth Personal Interviews

1. Select about 10 people for interviews. They should comprise current and potential users, librarians, book-sellers and others who have an influence on the use of the product or service.
2. Prepare a short list of the most important questions on the market-mix.
3. Interview each person for about an hour. Tape-record each session and transcribe the recordings immediately after each set of interviews.
4. Collate answers to each question to discern trends, if any, in the answers.
5. Plan action to address those issues which are clearly identified in the trends of answers provided.

- Members of a group will be encouraged to express more of their thoughts on a particular topic by the views and feelings expressed by other participants in the group.
- The overall dynamics of the group will reveal how peer pressure contributes towards the adoption of a product or concept.
- People feel more comfortable discussing a topic when they are involved in a group discussion on it.

These assumptions reflect the North American origins of the method. Many people in developing communities react in quite the opposite way—feeling more comfortable in private interpersonal interactions rather than as a group, and more ready to agree, rather than disagree, with the views of the others. The latter creates the risk of assertive individuals dominating the process. These risks aside, the focus group method is often superior for appraising the appeal for marketability of new products and how they are packaged. Group analysis of such products usually produce more profound insights than an individual critique.

Design

- The researcher and client should draft, and agree on, the objectives of the focus groups and the anticipated outputs. This should then be translated into the form of a discussion schedule.
- Selection of the moderator who will lead the group discussions is the most important step. The moderator makes or breaks this method. Researchers can probably track down potential candidates through recommendation from their colleagues who use focus groups. An ideal moderator is a person who is flexible, has a friendly disposition, is a good listener with a good memory. The moderator must feel comfortable working with groups of people in fairly quick succession. The person should also be able to quickly to grasp the product and the research brief. An ability to quickly synthesize the many inputs of participants into common views or consensus of the group is crucial for both, probing the reasons for the consensus, and also for preparing the report of the group afterwards. Finally, if written reports are required, the moderator should also be a good writer.
- Quality time should be set aside by the researchers and client to discuss, with the moderator, the research brief and the products and services under study.
- Forming the groups is the next most important step. There is no standard rule about the size of each group. Most researchers will form groups comprising eight to ten participants. The objectives of the research will help determine the people who should be selected to form the groups. For example, if the task is to appraise the marketability of a research journal on aquaculture, then the people who should be chosen will be potential readers of the journal: researchers, teachers and students of aquaculture, the librarians who order the journal for the readers, and the jobbers who purchase the journal for the librarians. As a general rule, each group should be as homogenous as

possible in terms of age, sex, usage or non-usage of the products and services being studied.

There are four main methods of identifying potential participants: random telephone screening, selection from the membership of professional or community groups, selection from databases, and based on a screening of questionnaires returned. The increasingly common practice of recruiting people from convenient public gatherings, such as a trade fair, or just off the streets, should be avoided. People who are known to each other should never be placed in the same group—friends will inhibit the expression of each other's views. Many practitioners believe that a minimum of four to six groups must be formed and conducted to obtain reliable results.

- Selecting a suitable venue is also important. The ideal venue should be able to accommodate the group comfortably. It should be air conditioned, fairly soundproof and not have windows overlooking distracting activities. Purpose-built rooms will have a one-way mirror looking into the room from behind which, clients and researchers will observe the discussions. The moderators's chair should be positioned with its back facing the mirror so that all the participants will be looking in the direction of the observers. If no specially equipped rooms are available, allow a maximum of two observers to sit-in on the discussions. The presence of the client and the researcher responsible for the study, at the group sessions, is crucial. Their presence and observation of the proceedings is the best way of communicating the results of the exercise to them. Their presence will also allow them to prompt the facilitator to probe interesting views evolving from each of the groups.
- There should be an ample supply of paper and pencils, and soft drinks for the participants. In commercial situations, the organizers would also have prepared cheques, or cash, for paying participants an agreed participation fee immediately after the event. In the case of information products where participants are fairly senior professionals

and do not expect to be paid, appropriate gifts such as pens, books, etc. should be elegantly gift wrapped and presented to the participants at the end of the event. Be very nice to the participants because they will become either critics, or champions, of your product (especially if you have demonstrated to them a prototype) after they leave your group meeting. Unlike commercial products, information products, very often, have a small number of potential users, most of whom are closely networked with each other, so word of mouth impressions are important.

- Provide everyone with a large name tag with only the first name of the participant clearly written on it. If culturally acceptable, do not identify the positions of participants with titles such as 'Professor' or 'Father' (in the case of a Catholic priest). All participants should be encouraged to interact on as equal a basis as possible.
- The focus group discussions can begin after these preparations are complete. The moderator should first welcome participants, then introduce him/herself (stress the point that the moderator is not a member of staff of the organization producing the product to emphasize his/her neutrality). The moderator should next review the objectives of the session. The length of the session should be stated at this stage. Point out that soft drinks are available at the back of the room (get some one to serve the drinks, if local culture requires that this be done) and announce time for the mid-session break. The break is important for the moderator to consult with the client and researcher if they want to probe any aspect of the topic under discussion. Finally explain, casually, the purpose of microphones or one-way mirror (if used).
- The group should then be invited to discuss a general topic to warm them up to the main topics. For example, the importance of information in their work. The focus of the discussions should begin to narrow after that to build a bridge to the core topics. For example, the opinion of participants on the different sources of information which they currently use.

- The group is probably ready by now to address the core questions of the exercise. These questions may be preceded by a careful presentation of the concept behind the new product. A prototype can then be demonstrated. The participants are often then given a simple questionnaire to complete. The first question may be a five point scale where participants are asked to indicate the degree of like or dislike for the prototype. The next questions are about the reasons why they like certain aspects of it and dislike other aspects.
- After the questionnaires are completed, the moderator asks the participants to indicate, by a show of hands, the different points along the scale, where participants have marked their reaction to the prototype. The purpose is to commit participants to their views so that the dynamics of the group does not alter them afterwards. Discussions can then begin on the reasons behind the members' reactions. The moderator can then move on to present a second alternative concept and repeat the process for the first. As many concepts, as is required, can be presented in this way. However, it may be useful to limit the total to a maximum of three or four. The moderator may wish to give the group a break at this point and also provide him/herself with time to consult with the client or researcher.
- After the break the group can move towards summing-up. This final session should aim at identifying those elements which have been found to be the most attractive, and the reasons why the participants find them attractive. The group should close after discussing a final openended question: e.g. 'Has our meeting today raised anything which you consider important to the product which we have not yet discussed but which you feel we should?'

Data Collection

The proceedings of the discussions may be audio or video recorded. All the questionnaires completed by the participants during the session should also be collected. In some social settings, mechanical recording of discussions may seriously affect the candour of views expressed. In such situations, a person may be appointed to act as the rapporteur—a secretary who is able to write short-hand will be ideal. The rapporteur should record the participants' contributions using the actual words spoken.

Data Analysis

The moderator usually writes the main report which summarises the proceedings of the group he/she has facilitated. Many believe that the presence of the client and the researcher at the group discussions is more important, and more productive than reading reports afterwards. Subtle yet crucial nuances are difficult to record on paper, but can be quickly appreciated by being present during the interaction of the group. Such nuances are particularly important for products which need to be manipulated—such as an interactive CD-ROM—because it is often the users' spontaneous reaction to the handling of the product that makes it a success or failure.

Limitations

Although this method is a very valuable tool for gathering user insights and their attitudes towards product concepts, it is limited in many other ways. Results obtained cannot be confidently projected to the user population. However, the results can be used to design other forms of research which lead to statistically reliable conclusions. It is difficult to control the quality of focus groups. Much depends on the 'right' choice of a suitable moderator to facilitate the exercise, and on the choice of the 'right' participants to form the group.

Those who intend to use this method should read Thomas L. Greenbaum's *The Practical Handbook and Guide to Focus Group Research* published by Lexington Books, Lexington, U.S.A. (1988).

Seminars and Workshops

This must be one of the oldest methods of market research for scholarly and scientific information products. Journal and series

BOX 8.10

Illustration: Focus-groups—Spare Part Catalogues

The documentalist, and head of publishing of a large motor parts stockist were asked to convert their existing 800-page spare parts catalogue into the CD-ROM format as part of the company's overall strategy to improve the order processing time-both within the company and at their customers' factories. The two were not sure which design and approach towards the organization of the catalogue data would work best with the intended users of the disc. They were also not sure if their management was right in selecting the CD-ROM format for the task. They decided to do some user research to answer these nagging questions.

The first step taken was to commission a local software customising company to create a prototype of the content format of the CD-ROM. They adapted the format of their competitor's CD-ROM catalogue in the creation of the prototype. While the prototype was being developed, they asked the Marketing Manager to help set up six groups of customers who represented the full range of establishments for which the company worked.

When the prototype was available, it was pre-tested first on a cross-section of the company employees who had to make frequent references to the catalogue in the course of their work. They all loved it and appreciated the quick search and retrieval software used. Apart from some minor changes in the wording of categories of products, no other amendments were requested.

The prototype was then pre-tested and discussed in the six focus groups of customers. Like the staff, they all loved the speed at which information could be retrieved. They also requested very minor changes in the contents. However, they all protested at the proposal to distribute the catalogue in the CD-ROM format citing the cost of having to purchase the drives. When asked to suggest a more convenient format, more than 70% suggested that it be accessed through the Internet as a web-site. Many of the customers also requested that a facility to order parts on-line be introduced together with the electronic catalogue. It turned out that most of the customers were already connected to the Internet to make use of other on-line ordering facilities offered by a number of multinational companies.

Armed with the results of the focus groups, the documentalist and head of publishing were able to convince management to drop the idea of a CD-ROM. The web-site turned out to be a big success halving the order processing time. There were also tremendous cost savings from not having to replicate copies of the catalogue, and from not having to pay for postage to deliver these copies.

BOX 8.11

Guidelines for Conducting Focus Group Discussions

1. Define objectives and anticipated outputs.
2. Select an experienced and effective moderator.
3. Create prototypes needed for presentation to the focus groups.
4. Brief moderator.
5. Select members of the focus groups.
6. Conduct the focus groups in the presence of the managers responsible for the product or service under study.
7. Moderator summarises findings of each group, as well as the overall responses of all the groups.

editors have always made it a point to attend professional meetings. Most editors usually aim at accomplishing two main tasks at these meetings: to gauge where current information interests rest, and who had the best ideas and information to offer, to meet these needs. The information is gleaned from papers presented, and the degree of interest, agreement or disagreement generated by each paper. All the editors also routinely collect names of participants at such meetings for adding to their mailing list of people who definitely have an interest in a particular subject and, therefore, are potential subscribers or customers for a particular product. This was early 'quick-and-dirty' market research.

In recent years, various agencies (especially donors) have used professional meetings in a more systematic way for designing new information products and services. These meetings, typically, involve a cross-section of the people who will use the products and those who will produce them. The agenda for such meetings will often open with one or more background papers reviewing needs, current supply or shortage of information, and potential solutions. The meeting may then break-up into a number of working groups which discuss in detail, different facets of the problem or issue. The outcome, of the working groups, will then be presented at a plenary session and further discussed

BOX 8.12

Illustration: Seminars; Workshops

A development agency which had been supporting the sensitization of traditional birth attendants (TBAs), from two provinces, on HIV and AIDS related issues, found that they did not have a regular communication channel through which to receive further information on these issues. The agency approached a local NGO, well known for publishing handbooks for the region's rice farmers, and awarded them a grant with which to launch an HIV & AIDS Newsletter for the TBAs. The staff of the NGO did what they always did when launching a new publication. They organized meetings of the intended readership—the TBAs in this case. Two meetings were organized, one in each of the two capitals of the provinces from which the TBAs came. Both meetings were formally opened by the respective Governors of the province. The most revered abbots from the capitals' main temples were invited to bless participants, and the Regional Director of Health Services gave the keynote addresses.

The NGO then proposed the idea of the newsletter to the TBAs attending the meetings and asked them for their comments on the proposed content, format, frequency of publication, and best method of distribution of the publication. This was done by breaking-up the large meetings into small working groups comprising six people. The NGO had discovered, through experience, that people tended not to speak freely in the setting of a large meeting, but would actively contribute their ideas in smaller groups. The working groups were given four hours to collate their ideas. During this time they also had lunch together.

The suggestions offered by the groups when they reconvened in the plenary sessions produced strong consensus on several points.

- The TBAs wanted the newsletter to cover all the important health issues, not just HIV and AIDS. For a start, they wanted information on jaundice in newly-borns, and post-natal complications. They complained that they lacked a good source of information on all issues, not just HIV.
- They wanted the newsletter to be heavily illustrated so that TBAs who were semi-literate would have less difficulties understanding the messages.
- All TBAs asked if it was possible for the newsletter to have a page on social matters and news related to fellow members. They saw the newsletter as a way of keeping in-touch with their peers on a regular basis.
- Where AIDS was concerned, the TBAs requested the NGO to design and print some illustrated posters on how HIV is transmitted so that they can use them as educational support materials when talking to mothers about the dangers posed by the virus. They also asked for similar posters to be produced on jaundice, diarrhoea, and other common complications if funds were available.

The donor agency, when presented with the reports of the two meetings, were convinced of the need to open-up the newsletter to all matters of concern to the TBAs. The agency also approved a supplementary grant for the production of the posters requested. The newsletter eventually developed into a lively communication vehicle of the TBAs and was eagerly awaited for and read when it arrived every two months. The newsletter has since been extended to cover an additional province adjacent to the previous two.

by all the participants. Recommendations are often then drafted, describing the need for producing various information products and the supply of the various services.

The meetings serve the same purpose as focus groups. They are particularly useful for providing insights into the needs and preferences of groups of people sharing a common interest. Because the products and services are produced with the sanction of a major professional meeting, the products and services also bear credibility and a valid mandate—very important elements when serving a specialist market.

The main drawback of this method rests with the choice of the participants of such meetings. Many professional groupings tend to be dominated by closed networks of older members who attend international meetings because they happen to be in senior management positions. These networks tend to be conservative and resistant to change. As such, seminars dominated by these elder members will not represent the preferences of the younger members, who often have very divergent views.

BOX 8.13

Guidelines for Seminars and Workshops

1. A reputable organization is appointed to organize the meeting.
2. Invite a cross-section of the intended user-group to attend. Give the meeting status by arranging for it to be officiated by influential and respected members of the community.
3. Provide all participants with ample opportunity and supportive environment for contributing their ideas to the gathering. Make sure all have an opportunity to be heard.
4. Summarise the main recommendations emerging out of the meeting and get the meeting to formally endorse them.

Survey Research

Survey research is the most widely used method of conducting marketing research. Survey research design refers to a design in which, the information about specified variables is collected from a large number of specified type of respondents/situations using questioning and/or observation method. The objectives of information collection, in this kind of research, are the summary values of variables of interest and the extent and significance of the relationships (association) among two or more variables. This is quite different from the focus of indepth studies, case studies, etc., where the individual or a phenomenon is the focus of research in a holistic sense.

Design

The key elements of design are: appropriate specification of variables, design of instrument for data collection, selection of a representative sample of respondents from whom to collect information, information collection, and analysis of information.

Questionnaire

Questionnaire/instrument is a document used for collecting the information needed for the purposes of research. It essentially consists of a set of *questions*, the *response* format to record responses, *instruction* to administer, and *aids* to help in administering the questionnaire.

On any questionnaire, only those *questions* which are essential to the purposes of the research should be asked. Those which need not be asked/answered and cannot/would not be answered by respondents should not be included. Each *question* should relate to one variable. Its wording should be simple and it should not lead to any bias in the response to that, or a subsequent, question.

An important decision in phrasing a question is whether to ask a question directly or indirectly. As far as possible, the question should be asked directly. However, in some cases the respondent may not like to answer a direct question. In the latter case, an indirect way of asking the question may have to be resorted to. Response to a question may be recorded broadly in two ways, i.e., open-ended (wherein it may be noted verbatim) or closed ended (wherein the respondent ticks/checks one of a number of categories). The response format depends on the purpose of the question and the researcher's understanding of the likely responses from the respondents. In case the likely response is not known, or the purpose of research requires obtaining a verbatim response, only an open-ended response format should be used. Closed ended questions are easy to administer and analyse and, therefore, should be used wherever possible. Categories in the closed ended questions, obviously, should be designed to cover the range of all likely responses. In addition, one category should be distinct from the other. The number of categories used and their designation/numbering should be carefully thought about so as to capture valid responses from respondents.

Most questionnaire/instruments in survey research are administered by field investigators who need to be trained and supervised. Appropriate administration of the questionnaire would require specific instruction. These could be for seeking the co-operation of the respondents in answering the questionnaire as well as in the manner of administering it. The latter could consist of, if and when needed, ways of asking questions, manner of recording responses, instructions to skip certain questions depending on the response to some earlier questions, administering a certain portion of the questionnaire to only certain respondents, etc. In addition, for easy and quick understanding of questions and response formats, investigators could be provided with certain aids. For example, if responses are sought to a product concept, it could be depicted in a potential form or may be as a working model. This would help the respondent in understanding the concept better and thus lead to valid responses. Similarly, response formats could be carried on separate cards for easy understanding and quick response.

The questionnaire should be thoroughly tested for any bugs before releasing it for large-scale administration. Besides testing each of the questions and their response format, it is necessary to assess the appropriateness of instructions, sequence of questions, and the overall length (time) of the instrument to avoid bias and/ or non-response. While testing could be done by experts, it is always better to test the questionnaire on a small number (around 5) of different types of potential respondents.

Sampling

Sampling or selection of respondents involves three decisions. The first is the definition of who is the sample respondent (called sampling unit). Definition of sampling unit generally forms a part of the problem definition stage. The other two decisions are of sample size and sampling procedure for selecting actual respondents. Depending on a definition of sampling unit, a list of all possible respondents may have to be generated or obtained from published sources (called sampling frame). Sample size is related to the level of accuracy desired in the results. Larger the sample size, higher would be the reliability of results. Also, higher the level of variation among the respondent population, larger the sample size needed. Ideally, a sample of one is enough, if all the respondents are likely to respond exactly in the same way. For economizing on efforts and costs, in a situation where a higher level of variation is expected in the responses, the potential respondents (population) may be divided into groups so that the variation in each group is less. Usually 20 to 30 respondents per such uniform grouping may provide reasonable results.

Sampling procedure is devised to ensure an appropriate representation of all the potential respondents. There are two kinds of sampling procedures: probabilistic and non-probablistic. Probabilistic procedures are used if you need an assessment of the extent of error in your results. Three useful probabilistic sampling procedures are simple random sampling, stratified random sampling and cluster sampling. However, these procedures require preparation of appropriate lists of clusters/ strata, and within the cluster/strata a list of all the respondents (sampling frame), which may be quite costly to prepare in terms of both, time and money. Purposes of most market research studies may be served, just as well, by non-probabilistic procedures. Two of the important non-probabilistic sampling procedures are judgmental sampling and quota sampling. In judgmental sampling you choose those members of the respondent population who are likely to provide accurate information and who could fairly represent the potential respondents. In quota sampling you divide the respondent population into several categories. The categories are made on the basis of assessments of having more similar reaction patterns from the respondents within a category and differing reaction patterns across categories. A specified number of respondents are then sampled in each category. The procedure within the category could be judgmental, as described above.

Information Collection

Information collection could be through a variety of contact methods. The most frequently used ones are personal interviewing, mail questionnaire, and telephone interviewing. Personal interviewing, is used the most. Besides being most costly, it requires detailed planning of field work, training of field staff, and supervision. However, it is most versatile in clarifying questions in case of difficulty, and observing non-verbal responses. Use of the other two contact methods would depend on the availability of mailing lists and telephone numbers of the respondent population. In case of mailed questionnaire surveys, the response rate (receipt of filled up questionnaire as a percentages of the total questionnaires mailed) could be quite low. However, a response rate of 20% could be considered excellent. For improving the response rate, researchers could use some inducements. However, the inducements should be such that they do not lead to distortion in responses.

Data Analysis

The purpose of survey research and, therefore, of data analysis, is to obtain summary values of some variables among the target respondents, as well as obtain the extent and significance of relationship among two or more variables. Steps in data analysis consist of preparing the data for analysis (data preparation), summarising the data (data summary), selection of appropriate techniques of data analysis, and obtaining results.

In data preparation, filled up questionnaires are first edited so that only the valid ones are used in further analysis. If necessary, responses to open-ended questions are categorised into appropriate categories. A code book is then prepared which consists of the list of all the variables and their respective categories of responses. Finally, a master table is prepared which provides the categorised response to each variable, for each respondent. This is a table in which each line may represent a respondent, each column may represent a variable and the value of the response on each variable is recorded in the specific cell.

The next step in data analysis is summarising the data. This step consists of finding representative values of each variable, for all the respondents. Two summary values are needed. One is the 'average value' for the group and the other is variation of the value across the sample respondents.

The measures of average value and variation depend on the scale on which each variable is measured. In case, the response is only a (a number of categories) nominal scale, a representative value is that category which has the maximum number (or percentage) of responses (called mode). Variation would be expressed as percentage of responses in different categories. In case of quantitative data (interval or ratio scale) arithmetic mean would provide the mean value, and standard deviation[2] would provide the variation in responses. Higher the value of standard deviation in relation to the mean, higher the variation in the responses and vice versa.

The steps of choosing appropriate data analysis techniques and actually carrying out the data analysis could vary from preparation of very simple tables to most sophisticated statistical analysis. Use of sophisticated statistical techniques requires specialised training which librarians/information centre managers may not have. In such situation, help of specialists may be sought. However, librarian/information centre manager should

2. Standard deviation is a statistics term. Reader should consult any book on statistics to understand it.

be able to do two things. First, he should be able to understand the objective of his research and identify those variables which need to be analysed for achieving the objectives. Secondly, he should be able to conduct simple analysis which, in most cases, could provide very important insights and in many cases may be sufficient to achieve the objectives of research. For example, suppose a librarian is testing a new product on a set of representative respondents, consisting of several groups of target customers. His major purpose is to find likely purchasers/non-purchasers of the product and the reasons thereof. For these purposes, the research may have two questions. One obtains the response for buying the product in terms of Yes/No. The second asks for the reasons for such a response. It is easy to visualise that a simple table containing number of respondents saying yes and no, for each group of target respondents, could be prepared. The number could be converted into a percentage, i.e., respondents saying yes as a percentage of respondents in each of the target groups separately. This analysis would easily show whether the likely purchase differ across different groups. For obtaining the reasons of purchase/non-purchase, you could make another table depicting number of respondents saying Yes (No) and the number citing a specific reason for saying Yes (No). You could then calculate the percentage of those saying Yes (No) who mentioned a specific reason for buying (not buying). The reason having higher percentage response could be a more important reason for purchase (non-purchase). You could combine all the reasons and try to judge whether there are some underlying reasons for such responses (a technique called factor analysis could be used by a specialist for this purpose). You could also find the characteristics/profile of respondents who said Yes vs. No and judge what distinguished them (a technique called discriminate analysis could be used by a specialist for this purpose).

As you would notice above, only the specialists use higher level/sophisticated techniques for analysing data. However, simple analysis could be used by the librarian for his own understanding and for interpreting the analysis by the specialist.

Illustration

Please see the case study, Marketing Research for Asian CD-ROM on Health and Environment, Parts I, II, III and IV, for illustrating various aspects of survey research methodology.

BOX 8.14

Guidelines for Steps in Survey Research

Instrument Preparation

- Review problem definition
- Assess each variable and decide whether the information could be collected through direct/indirect question.
- Assess whether you understand the likely responses to a question fully and then decide whether to get the response to the question in an open ended format (as description to be noted verbatim) or in a closed ended format (depicting all possible responses as categories).
- Decide whether the question should be asked directly or indirectly.
- Decide on question wording which is simple, easily understood, not having two meanings, not introducing bias in response etc. so as to get valid response.
- Decide the response format being open-ended/closed ended. If closed ended, decide response categories. You might like to word response categories appropriately to elicit valid response.
- Decide on the instructions to be given to the person administering the questionnaire/instrument. Some illustrative aspects are:
  - Introduction to the research/instrument in terms of its purpose, request for help, assurance of maintaining anonymity of respondent's responses, and offer/compensation for co-operation if something is planned. The field investigator/respondent (in case of self-administered questionnaire) needs to have clear understanding of these aspects.
  - The manner of asking question/s and how to record responses.
  - Skipping questions depending on the nature of response, if needed.
  - Additional help to investigator in terms of cards depicting specific questions or response formats for easy response by the respondent.
  - Product/service/promotion description/prototype to which response is needed.
  - Manner to terminating the interview.

(*Contd*)

- Check sequence of questions to reflect the manner/flow in which the respondent is likely to have the information and would find the flow helpful in recalling unbiased response.
- Check whether the total time required for administering the instrument would be possible to be spent by the respondent. Make appropriate changes in the instrument to shorten it, if it is too long.
- Check whether the responses to all the questions put together would be able to resolve the decision/research problems identified by you.
- Test the instrument on few representative respondents for validity and revise.

Sample Size and Composition

- Divide the potential respondents into groups which are homogeneous within and heterogeneous across with regard to the most critical variable of interest in the study say level of demand.
- Identify lists, available from secondary sources which represent potential respondents, for drawing the list of sample respondents.
- Select one or generate a new one by combining more than one lists so that it does properly represent the potential respondents. The final lists should have lowest under-representation of different types of respondent groups.
- In case lists are not available, there may be need to generate one through primary efforts (field work).
- A sample size of about 20 to 30 per such group could be taken to assure adequate sample size of statistical analysis.
- From the list each group generated above, select 20-30 respondents at random, through generating random numbers on computer or random number tables.

Field Work

- Adequate training is required to the interviewer so as to properly administer the instrument and to select the appropriate sample.
- Field supervisor to call-back on respondents interviewed by interviewers to check fraudulent practices.
- Supervisor to check a sample of instruments at the end of each day to make sure the investigators are performing their duties satisfactorily.

Analysis

- Prepare the data for analysis through editing the responses in the instruments for correct filling; provide codes to non-coded responses to openended questions (coding), prepare the description of codes used for each question (preparation of code book) and prepare a master data sheet in which responses of each respondent to each question are put in a coded manner (master table).

(Contd)

- Understand each research question and research objective, identify respective relevant variables from the master table, and understand whether the response is categorical or continuous.
- Conduct summary analysis. This would mean that for each variable identified above, estimate a value representing the response of the group as a whole (like mean value) and a measure which represents variation in the group (like standard deviation).
- Understand research objectives, and identify variables whose analysis is required for achieving the research objectives. Devise tables/simple analysis methods for the purpose. If there are too many variables to take care for each objectives separately you might like to seek help of a specialist.

Experimental Research Designs

An experiment may be defined as the actual trial of an alternative course of action for objectively observing (measuring) its effects. From the point of view of decision making, this design comes closest to the ideal for evaluating the effects of alternative courses of action. The design is also causative, as the effects of other variables (other than the alternative being tested) are controlled or isolated to get the true effects of the alternative being tested. Therefore, whenever and wherever feasible, such a design should be used in causative studies in marketing.

The basic process of experimentation requires:

- Specification of the alternative course(s) of action to be tested and the measures of effects.
- Selection of representative sample(s) of target segment depending on the specific experimental research design.
- Expose the group(s) to the alternative course(s) of action.
- Conduct data analysis to isolate the effects of alternative course(s) of action.

Specification of alternative courses of action implies the specification of a number of variables to be tested, and their specific values. For example, in case of a new product decision there may be only one new product which has to be tested. In another situation, price and product may be the two variables, each having two values (price A, price B, and product C, product D). The researcher might also wish to find out the interactive effect between the two variables. Measurements need to be taken of both the effects (outcome) as well as the uncontrollable variables in the design itself, so that the effects of experimental variables could be isolated.

In the situation of library information products and services, some very simple designs could help a great deal in fine tuning the marketing decisions. For example, a new product could be tested on a representative sample of respondents. The product could be given for trial/use. Adequate time may be allowed to the respondent for the use of the product. Reaction of respondents can then be obtained on requisite parameters. Such stand-alone experiments on promotion, price, and products could be easily conducted and managed by librarians. Librarian/manager of information centre should use expert help if several variables need to be tested simultaneously.

Experimental designs are the most complicated, costly, and time consuming ones, and are also poor on secrecy. However, if adequate care has been taken to have valid and reliable measures, the results could be high on validity and reliability.

SUMMARY AND CONCLUSIONS

- Marketing research is an important function for the marketing of information products and services. The importance arises from both, the lack of understanding of marketing as well as the lack of knowledge and skills about marketing research on the part of librarian/information managers.
- Marketing research consists of the following steps: defining the purpose of research and the problem definition, developing a research plan (consisting of one or more studies with their own research objectives, data collection

approaches, sampling plan and data analysis), executing the research plan, and interpreting the results for purposes of developing marketing strategies/action plans.

- Marketing research is best conducted by an independent research agency to avoid any biases. However, the librarian/manager (a client) would have a major responsibility in deciding the purpose of research, in selecting the research agency and appraising the research plan, and finally, in interpreting and using the results. The librarian, therefore, must be familiar with basic concepts of research.
- 'Backward market research' could be used quite effectively in defining the purpose of research and for involving the staff in it. Bayesian decision approach could be used for assessing the value of research and hence, deciding the upper limit of the budget for research.
- The chapter described the contents of a research plan and the criteria to be used for deciding research designs and data collection approaches. It also provided a brief description of some widely used research designs. However, these descriptions, at best, would familiarise the librarian with this vast field of study. Use of some of the sophisticated research methods like focus group discussion, large-scale surveys, and experiments for making strategic decisions may be left to specialist agencies till the librarians gain requisite insights.
- Additional references at the end of the guide could be utilised for improving the understanding of this field.

REFERENCES

1. Andreasen, 'Backward Market Research', *HBR*, May-June 1985.
2. Boyd, Harper W., Werfall, Ralph, and Stasch, Stanley, *Marketing Research: Text and Cases*, Richard D. Irwin, Inc., Homewood, Illinois, 1989.
3. Churchill, Gilbert A., *Marketing Research: Methodological Formulation*, The Dryden Press, Chicago, 1991.

4. Green, Paul E., Jull, Donald S. and Albaum, Gerald, *Research for Marketing Decisions*, Prentice-Hall of India Private Limited, New Delhi, 1995.
5. Greenbaum, Thomas L., *The Handbook for Focus Group Research*, Lexington Books, New York, 1993.
6. Jain, Abhinandan K. *et al.*, *Marketing of Information Products and Services*, Indian Institute of Management, Ahmedabad, 1995.
7. Kotler, Philip, 'Marketing Information System and Marketing Research', in *Marketing Management* (8th Ed).

CHAPTER 9

Preparing the Organization for Marketing of Information Products and Services

■ *Dominique Beaulieu*

BACKGROUND

This chapter is based on the experience of the Centre de recherche industrielle du Québec (CRIQ), an organization subsidized by the Québec Government, in Canada. CRIQ's mission is to stimulate the economic development of Québec by guiding businesses in their pursuit of innovation. Using a global approach to their needs, CRIQ provides businesses with up-to-date expertise in the areas of:

- Production technologies.
- Technological and industrial information.
- Standardization.

Our focus will be on the specific division, at CRIQ, that provides industrial and technological information. It is called Industrie Information and it offers businesses the industrial, technical and market information they need, to make informed choices. The following information services are offered:

- Question/Answer Service.
- State of Technology Reports.
- Industrial Marketing.
- Technical-economic Feasibility Studies.
- Opportunity Searches for Subcontracting Contracts.
- Opportunity Searches for Product Manufacture.
- Technological Monitoring (INFO-3D).

To strengthen trade and contribute to Québec's economic growth, CRIQ also provides Québec business and industry access to an industrial information bank. This databank gathers and distributes industrial and commercial information on manufacturers and distributors. Every year, the *Directory of Products Available in Québec*, a complete inventory of more than 12,500 manufacturers and 7,800 wholesalers operative in Québec, is published. Other services include providing company lists, a mailing label service, databank management and specialized directories.

In 1985, in the aftermath of budget cuts, it was decided that CRIQ's overall industrial and technological information services would become payable (Please see Appendix 9.1 of this chapter for a brief description of the industrial and technological information services offered by CRIQ). This new challenge imposed changes not only in the way things were done at CRIQ, but also in its management philosophy. Through a series of structural, technical and what one might even call psychological changes, the division, we knew, went from not charging for its services in 1985, to making over $CA 2 million in 1994.

The next few pages outline our experience. We hope it will be helpful to people in other organizations facing a similar path. We have attempted to outline our operations in such a way, as to provide a guide for organizations thinking of implementing some of our methods to sell their services. Although some of what we present may seem obvious enough, to actually have it implemented, on a routine basis, by a group of people often involves changing mentalities more than anything else—a feat greater than that of even changing technical aspects of an operation.

The subjects in this chapter are: assessing/auditing an organization's service quality; preparing people for change; strategies for effecting changes in staff; strategies for changing systems; marketing; and the impact of selling information services on the overall organization.

ASSESSING/AUDITING AN ORGANIZATION'S SERVICE QUALITY

To introduce this chapter on preparing an organization to sell its information services, we would like to present the research findings of Professors Parasuraman, Zeithaml and Berry of the Texas A&M University. They proposed a conceptual model for evaluating service quality which is both interesting and relevant here (Parasuraman *et al.*, 1984). According to them, a customer uses ten main criteria to evaluate the quality of services purchased:

- *Reliability* involves consistency of performance and dependability. It means that the firm performs the service right the first time. It also means that the firm honours its promises. Specifically, it involves accuracy in billing, keeping records correctly and performing the service at the designated time.
- *Responsiveness* concerns the willingness or readiness of employees to provide service. It involves timeliness of service: mailing a transaction slip immediately, calling the customer back quickly and giving prompt service (e.g., setting up appointments quickly).
- *Competence* means possession of the required skills and knowledge to perform the service. It involves knowledge and skill of the contact personnel, knowledge and skill of operational support personnel and research capability of the organization.

- *Access* involves approachability and ease of contact. It means that the service is easily accessible by telephone (lines are not busy and they don't put you on hold) and that waiting time to receive service is not extensive. It also means providing convenient hours of operation with a convenient location of the service facility.
- *Courtesy* involves politeness, respect, consideration, and friendliness of contact personnel (including receptionists, telephone operators, etc.). It includes consideration for the consumer's property and clean and neat appearance of public contact personnel.
- *Communication* means keeping customers informed in a language they can understand and listening to customers. It may mean that the company has to adjust its language for different consumers—increasing the level of sophistication with a well-educated customer and speaking simply and plainly with a novice. It involves explaining the service itself, explaining how much the service will cost, explaining the tradeoffs between service and cost and assuring the consumer that a problem will be handled.
- *Credibility* includes trustworthiness, believability, honesty. It involves having the customer's best interests at heart. Contributing to credibility are company name, company reputation, personal characteristics of the contact personnel and the degree of hard sell involved in interactions with the customer.
- *Security* is the freedom from danger, risk or doubt. It involves physical safety, financial security and confidentiality (are my dealings with the company private?).
- *Understanding/Knowing the Customer* means making the effort to understand the customer's needs. It involves learning the customer's specific requirements, providing individualized attention and recognizing the regular customer.
- *Tangibles* include the physical evidence of the service: physical facilities, appearance of personnel, tools or equipment used to provide the service, physical representations

of the service, such as account statements and other customers in the service facility.

Since these are the criteria customers use to assess a company, how can we, as a company, use these criteria to assess ourselves? Although there is no formal tool in place at CRIQ for each and every one of these dimensions of quality assessment as such, CRIQ has nevertheless carefully scrutinized all aspects of its operations. Since Industrie Information's inception, the team has worked hard to assess itself in various aspects of its work processes. Two important evaluation mechanisms stem from this effort.

One is an annual customer inquiry done by a third party consultant at the beginning of every year. All CRIQ's customers are contacted and given the same standardized questionnaire. The results enable us to set our annual objectives in the area of customer satisfaction. These objectives are then presented to our employees during a brief ceremony. To give you an idea of results; in 1994, 95% of our customers were satisfied or very satisfied with CRIQ's services, 94% said they would use CRIQ again and 91% would recommend it to other companies.

A second mechanism which has been in place at CRIQ for some time is an internal process for monitoring customer satisfaction. It allows employees and managers to get feedback on their contact with the clientele on a regular basis. Feedback is essential in providing an objective evaluation of the organization's true performance. We send a simple questionnaire to customers when a project has been completed. The questionnaire has several questions, similar to the ones that follow. Respondents were asked to rate them in the scale of 1–4, where

1	2	3	4	
indicates *Very satisfied*	indicates *Quite satisfied*	indicates *Not very satisfied*	indicates *Completely dissatisfied*	Does not apply

1. Welcome

(a) Access to CRIQ's services (physical access, telephone lines, location, hours of work, etc.).
(b) Quality of CRIQ's reception to you on initial contact.
(c) Quality of welcome received on initial visit to CRIQ.
(d) Access and availability of Technical Development Advisor (commercial representative) in charge of project.
(e) Access and availability of Project Technical Supervisor.
(f) Length of time between initial contact and contact with Project Technical Supervisor.

2. Rate your degree of satisfaction with your project in relation to the following points:

(a) The degree to which your needs were understood by CRIQ staff.
(b) The way in which you were able to participate in determining possible solutions to your problem.
(c) The way in which you were consulted about possible limits and risks associated with proposed solutions.
(d) The way in which your role and that of CRIQ staff was defined in relation to your project.
(e) The clarity of contractual conditions.
(f) Negotiation of your contractual conditions.

3. In relation to your contractual agreement with CRIQ, how would you rate

(a) The quality of the technical results.
(b) How well the results conformed to the initial mandate.
(c) Usefulness of results.
(d) Respect for deadlines.
(e) Your involvement and the information you received during the project.
(f) Cost.
(g) Project follow-up.
(h) Billing.

4. How would you rate CRIQ staff on the following points

(a) Competence (technical ability)

(b) Professionalism (integrity, confidentiality)
(c) Attitude and behaviour (availability, empathy)
(d) Personalized approach

5. How satisfied are you with CRIQ's services?

6. Would you use CRIQ again in the future?

7. Would you recommend CRIQ to other companies?

8. We would appreciate any comments or suggestions which would help us improve our services.

When this information is returned by the customer, it is either filed if everything is satisfactory, or sent to the technological development advisor or the division head for follow-up, if it is not.

Another dimension of quality described by Professors Parasuraman, Zeithaml and Berry is access of service. CRIQ is situated in Ste-Foy and in Montréal at the junction of major arteries in high tech industrial parks. Easy access through telephone, including a 1-800 number, cellular telephones for representatives, modem, fax, telex and internet is also provided.

As for security, there is and always has been a security system in place at CRIQ. Over the years it has evolved with more up-to-date security technologies. Only employees circulate freely within the building. All other visitors must be accompanied.

Confidentiality of information is a priority at CRIQ. Indeed, confidentiality itself is an integral part of our contractual agreements with customers. We also have guidelines concerning our research. Knowledge, which is already in the public realm, is not restricted but research done for companies must remain confidential, and employees, when hired, are asked to sign a confidentiality clause in their contracts. Some companies, when using services such as our technological monitoring for strategic planning or guideline setting, will often ask us, to agree in writing, not to work for their competitors. Employees will sometimes give false names in their contracts so that even other employees won't know which company they are working for.

A recent source of pride for CRIQ is that after the hard work of implementing such systems, its operations have been certified by ISO 9000. Its laboratory and testing facilities have been certified for several years and in November 1995, its entire operations were also certified. It is the first research centre in North America to earn the ISO 9001 certification in all areas of its operations.

The ISO registration ensures customers that all CRIQ's activities comply to an international system of quality control, which is functional and effective. It also provides CRIQ with the possibility of complying to international trends in the area of quality control standards. Implementation of ISO 9001 guarantees continued customer satisfaction and provides an even more standardized follow-up system for tracking satisfaction. All work processes are monitored meticulously with everything documented.

Before leaving this section on quality assessment, we would like to mention the aspects of our service we will be working on to improve. In short, the quality of the relationship of employees with customers is a major area for development. Customers themselves are more critical than they used to be. They are accustomed to getting high quality service from many companies and expect it everywhere. Customers today are looking for someone to guide them; they are seeking a counsellor rather than a supplier. This new expectation implies an evolution in how an employee will interact with them. It has a definite impact on personnel and is often very subtle, being reflected in attitudes more than anything else. One could almost say that some people have it and some don't, although as in any art, there are techniques that can, and must be learned. If supervisors don't understand this, there can be unnecessary problems.

Lastly, we have recently modified our hiring policy so that we not only consider the technical qualifications of new employees but also their ability to interact effectively with customers. We seek to hire people with more practical experience in specific areas of expertise and with more entrepreneurial profiles.

PREPARING PEOPLE FOR CHANGE

Since CRIQ successfully went from no charge to the sale of its information services more than ten years ago, we are in a position to compare the differences between giving and selling industrial and technological information. An understanding of these differences is important since it can provide people with the motivation they need to undergo change. No charge services implied working in the following business environment:

- Overall, our clientele perceived our services, since free of charge, as having little value. This caused waste. For example, customers would make all kinds of queries on a variety of topics even though they might not have needed some of the information. Also, it was not uncommon for customers to query more than one organization for the same information.
- If customers complained about the service, the staff might have been tempted to think it didn't matter since they hadn't paid for it. In general, customers did not complain and we missed chances to improve our services.
- There was less pressure on the personnel when the services were free. Pressure to sell has an impact on the quality of services offered, on the business relationship between customer and supplier and on the time required to do the work. Overall, a company that sells its information is more proactive with its customers than a company that doesn't charge.

  It makes me think of a phone company we have here, where if you phone to inquire about your bill, they try to sell you one of their new services. That's proactive! There is not necessarily a direct link between payable services and innovation. However, when services are payable, innovation is even more a necessity than an option, or the personal whim of some. It is important to consider that customers, who pay for information, compare the service with that of the competitors. They may even compare an offer of service made, to the effort they would have to make, to do the research themselves. It is, therefore, vital to offer customers something distinctive to set it apart from their other alternatives.

- This proactivity also comes into play when determining the customer's needs. We needed to adapt our approach during the initial stage of customer needs analysis. The more one questions customers on their needs, the better one understands what they really want—customers themselves sometimes better understand their needs. The customer needs analysis tool we use, is described further, in the section 'Strategies for Changing the Organization's Systems'.
- Becoming a payable service made it imperative for us to look at everything we were offering, to better define it so we could understand it ourselves and share it with our colleagues, and to find the means to make it attractive to our customers. This involves brainstorming. It means looking at how the competitors package their services, and constantly evolving technology to offer, not only, the best services but also the best presented, fastest and best priced services on the market.
- The marketing of payable services brings about a change in mentality for the staff; responding to customers' needs, developing a market and building a regular clientele require more effort, a modified work organization and different behaviour and attitudes on the part of the personnel.

The personnel in direct contact with the public, and the practices supporting these personnel, are vital for the success of a service company. Through a series of sales training sessions, the use of outside consultants, internal meetings and action plans, the personnel gradually became, what one might call, customer-oriented or market-driven. The staff came to realize:

- That the commercial results of the organization are closely linked to their behaviour, attitudes, technical competence and communication skills.

- That customers may feel more attachment to staff members than to the organization itself.
- That a highly motivated staff in contact with the public can make a spectacular impact on the organization's sales.
- That staff must be motivated to sell a lot and sell well; since they are also producers of services, they need more freedom of action from the organization; they like to set their own rhythm of work.
- That because of the relative independence of the contact personnel, the type of structure provided by managers must be different from the conventional model. Managers are more like personnel mentors or coaches and are there to find solutions to problems from within, that would otherwise have a negative impact on sales if not taken care of. Specifically, managers must solve conflicts when the goals of the organization's different divisions overlap. They must give their personnel a clear path to follow, foreseeing potential commercial deals, setting margins of manoeuvre and motivating and encouraging their employees to meet their target goals.
- That managers should not be looked on as followers of orders from above since, the organization's true power is in the hands of the employees at the bottom.
- That better results will be achieved by small divisions with some independence in management and flexibility of operation, than by big centralized structures with heavy administration.

The challenge when going from no charge to the sale of information services is different from one organization to another. However, it invariably involves the following aspects: the staff—attitudes, motivation, behaviour, technical know-how and capacity to interact effectively with customers; systems—sound office practices for such things as billing, work processes and organization; marketing; and the organizational structure as a whole. The following sections deal with each of these subjects in more detail.

STRATEGIES FOR MAKING CHANGES IN STAFF

To implement the programme of change, it is important to make it a collective project. This section deals with how we did that at CRIQ. We noticed three typical reactions from employees faced with change. Some felt stress in the face of the new business environment. For them, having to sell their services and negotiate rates was intimidating and destabilizing. Most saw the transition toward sales of services as inevitable, even though they were conscious that it would mean major adjustments on their part. Some were extremely enthusiastic about the change; the challenge coincided with what they had been wanting to do for a number of years.

We reached the conclusion that for the operation to succeed, we had to demystify the marketing and selling of information services, and develop the skills of the whole staff in that area. That was done by organizing sales courses for all members of personnel. At first, there was a two-day sales course offered at CRIQ by an outside consultant. This course, adapted to our specific situation of selling information, looked at things like how to make deals, meet objectives, plan sales interviews, plan time and territory, psychology, motivation, etc. While people found the course helpful in providing everyone with a common language, giving sales tips, motivating sales and in some ways alleviating stress, it was not enough to change all the staff's attitudes and behaviour.

For that, we sought the services of another outside consultant to help steer the overall project of bringing about organizational change. This consultant gave two two-day workshops, one for employees and one for managers. The employees' workshop aimed to make employees aware of their role in customer relations. The objectives were:

- To make the participants aware of how important customers and customer satisfaction was and about the problems caused by customer dissatisfaction.

- To have the participants recognize their personal contribution in the area of customer relations and identify behaviour to develop, or reinforce, so as to better serve their customers.
- To have participants commit themselves to personally changing their behaviour to improve their relations with customers.

Overall, employees learned that:

- There is a cause and effect relationship between staff behaviour and customer satisfaction.
- The image staff projects to customers is in direct relation to their behaviour.
- The quality of the services offered to customers is not only linked to the technical aspect of their work, but also to the quality of their interpersonal relations with their customers and with their colleagues.
- Customer satisfaction is everyone's responsibility. Team work, synergy and work climate are factors that have an impact on everyone's morale and on customer relations.

Feedback from employees about the workshop was extremely positive and the effect on motivation was palpable. The consultant was dynamic, had great insight and made a powerful impact on the organization.

The second workshop was for managers. Its aim was to have the organization's managers become aware that the work unit atmosphere, their behaviour and the quality of the relationships that they have with their employees have a major impact on customer satisfaction. Furthermore, training sought to give them the tools to develop their skills at positively reinforcing their employees' best behaviour, and minimizing their stress.

All managers participated in this two-day workshop, which was in some ways an outcome of the workshop the consultant had with the employees. What he did was brainstorm with the employees on needs for improvement and then, give this list to the managers who, in turn, made an action plan to implement the improvements.

Feedback on this workshop was positive although, as can be imagined, some of the managers were a little shaken up. An exercise where employees get the chance to openly say what they think offers quite a challenge to managers. It did succeed in providing all of us with a collective project and had a positive effect on motivation.

A management philosophy which has had an important impact on our development was conveyed to managers. That philosophy is summarized in the following statements:

- Whether you are the owner, director or manager of a firm, you must no longer see your role as that of the boss who has to have all the solutions and answers. Admit that you need other people for your success. Your success depends on your employees.
- If you think your employees are disinterested, unmotivated or incompetent or that your customers are dishonest or taking advantage of you, stop seeing yourself as a victim. Your company is a reflection of yourself.
- If your employees or your customers criticize or complain, don't take it personally—they still like you enough to tell you before leaving you.
- Communicate, often, to everyone the vision of the kind of organization you are trying to build. People need a high ideal and they follow leaders.
- Have your employees participate—they are the ones who know their work, their problems and the solutions best. Have them make a list of their problems and make sure it doesn't end up in the trash can.
- Put a mechanism in place to evaluate customer satisfaction. The only people who can tell you if you are any good are your customers.
- Congratulate your employees. Those who make efforts and significantly contribute to the success of your firm deserve to be rewarded. Think up personal ways for your firm to regularly highlight their contribution.

- Clearly indicate the negative consequences of poor quality work, whether in production or customer relations.
- Listen, listen and listen.

To finish this section on preparing people for change, I would like to personally share how the training helped me change my vision of what my role as a manager was. I came to realize that since the key of success is in the hands of the employees, my job was to facilitate their work by removing any obstacles in their way. I needed to create a favourable context for them, and try to be alert enough to anticipate what they might need to work even better.

STRATEGIES FOR CHANGING THE ORGANIZATION'S SYSTEMS

The major change in the organization's systems involved becoming customer-oriented. At CRIQ, we implemented a specific program called the Customer Satisfaction Evaluation System so that employees and managers get feedback on their contact with customers. This system has already been fully described in the section 'Assessing/Auditing an Organization's Service Quality'.

Our work processes and the tools and practices to support our services and staff all needed to be reviewed. An action plan was drawn up. Employee work committees were formed to brainstorm and make suggestions on ways of doing things. These committees were loosely structured, usually with one manager and several interested employees. The people generally met once a week over a period of several months. Here are some of the areas where clear methodologies were developed:

- Telephone reception—answering calls, using a standardized greeting, taking messages, transferring calls and follow-up, returning calls, hours of access, presence at work station.
- Determining needs by telephone—defining the status of the need (and referral to the right person), assessing needs

according to standardized criteria and establishing a question-type approach, finding out why there is a need.

- Determining needs at individualized meetings—defining the status of the need (and referral to the right person), assessing needs according to standardized criteria and establishing a question-type approach, finding out why there is a need.
- Advising the customer—analyzing possible action and ways to respond, making reminder charts for preliminary work content, no-go stage (integrity vs customer) and determining messages for acceptance or refusal.
- Tools for the sale of services—work plans (content and format), sales reminders, price lists, administrative procedures, involvement of partners in projects, redoing resumés.
- Presentation methods for offers of service and reports—content and format, presentation of results to customers, building confidence and future work.
- A code of ethics—confidentiality, ownership of results and use of data collected.
- Setting up internal training methods for:
  - reception services—telephone use, how to answer.
  - determining needs and collecting data—interview techniques.
  - sale of services.
- Training on information sources.
- Better understanding of other staff members jobs.
- Project management.
- Office management.
- Role and task clarification of personnel.
- Integration of new employees—integration plan, training programme (written in task description).
- Customer follow-up mechanisms—contact after delivery of results, tools for measuring customer satisfaction, assisting in technology application in the company and communication on overall services.

Adjustments also had to be made in the way work was organized. Specifically, we more clearly defined the fields of activities and responsibilities of our personnel.

The customer expects the organization to keep its commitment in terms of accessibility of the service, work deadlines, quality of services, precision in billing, easy to use payment methods and the means or equipment to provide the service. In CRIQ's case, we needed to revise or even acquire new work methods and practices. Specifically, we had to:

- Set up a clientele management bank to do customer follow-up, issue invoices and monitor work progress. This bank uses a computerized programme specific to our needs; some of our projects now entail helping other businesses set up clientele management banks and we have helped a number of research centres internationally.
- Request a basic accounting system from the organization to control deposits and withdrawals, evaluate real cost prices for work billed and make necessary adjustments either in hourly rates or overall charges for work done.
- Develop project management tools for determining the personnel's project expenses.
- Ensure supply of documents, office supplies or other data required to do our work. This was done by negotiating an agreement with suppliers.
- Set up a reception service to direct customers and queries to the specialist most apt to meet their needs. For more complicated requests, we chose to use representatives more at ease with discussing content and costs with customers.
- Make the necessary arrangements so that all the basic services required to provide quality work on time were in place. This was particularly important for office services, document reproduction, databanks, etc.
- Implement a mechanism, as we have previously mentioned, for ensuring customer satisfaction. In addition, we named a person in-charge for responding to customers with a problem or complaint.

To implement the recommendations of this action plan, the administrative team established priorities, shared out the responsibilities (according to strengths), defined the needs, looked at alternatives, made the best decisions for our circumstances and then developed and tested systems. We then did a follow-up to see if everything was working as planned.

MARKETING

Although we could have talked about marketing in the previous section, we felt that a separate presentation would better highlight the strategic importance of the organization's marketing approach. The development of a marketing plan is crucial for an organization, especially for one dealing with marketing issues for the first time. The decisions to be made may determine the success or failure of the whole operation. This is an exciting period because there is so much to learn. At CRIQ, we focussed on the following priorities:

- Fine-tune the range of products/services offered.
  Much effort was put into fine-tuning our products. We needed to better define the range of products and services we were about to offer to project a convincing image on the market. To do this, each group, with the help of a CRIQ marketing specialist, was asked to brainstorm about the following:
  - the definition of the services offered;
  - the methodology;
  - the target clientele;
  - the usefulness of our services to the customer;
  - the competition;
  - competitive advantages and disadvantages;
  - alternatives to our services;
  - factors influencing the market;
  - development strategies;
  - annual action plan (market and service development).

These sessions lead to tighter groups and better understanding of the products and services offered by the organization's other divisions. The information group also became more involved with CRIQ's sales force to better understand CRIQ's complete range of products and services and prepare promotional tools, like product charts, to sell our services.

- Set up a step-by-step process from no charge to payable services with a fair pricing policy.

  To ease going from no charge to payable services, we decided to proceed in stages. Initially, we offered our industrial clientele the possibility of a yearly subscription to our research services. For longer projects, we offered considerable savings. This helped ease our market launch and provided more time to develop our products and services. We kept this policy for the first three years, the length of time we felt necessary for staff and customers to get used to the new business environment. We later aimed at selling our services at real market value.

The marketing action plan was jointly prepared by managers and staff. Our first action plan contained these three main elements:

- A communication strategy to create an image (trademark, logo, personalized stationary), correspond with customers and better target clientele.
- Internal marketing programmes for:
  - staff (social and training activities);
  - CRIQ's other technical groups (meetings and presentation of services);
  - marketing department and sales force (support and mutual adjustment).
- Outside marketing programmes:
  - study of competitors;
  - advertising (media plan);
  - participation at fairs and exhibitions;
  - audio-visual material (slide shows);
  - advertising documents (folders, product charts);
  - promotional articles (pencils and note pads);

- support to representatives;
- standardization of offers of service;
- advertising on customer invoices;
- acceptance of major credit cards for payment;
- welcoming visitors (with visitor kiosks);
- activities with counterparts (participation in sectorial associations).

For the next fiscal period, CRIQ's information services are forecasting fewer activities, keeping only those with a direct link to our 'key success factors' (Rockart, 1979) which are:

- Increase our visibility, popularity and product/service recognition on our markets.
- Balance product/service budget and customer need.
- Better understand our customers, competitors and partners.
- Fine-tune our information tools (information technologies, network development, etc.).
- Recruit employees with solid qualifications.

THE IMPACT OF THE SALE OF INFORMATION SERVICES ON THE OVERALL ORGANIZATION

The last point to include when talking about preparing an organization to sell its information services concerns the information division's dealings with the rest of the organization. Technological and industrial information divisions are only one dimension of an organization whose goals are greater than that of just providing information. The information division not only needs to manage the changes directly affecting it, but also set itself guidelines that conform with those of the organization. It must get the support it needs from the rest of the organization, and manage the consequences of the changes its functioning will have on the other divisions. Aspects to consider are:

- *Choice of clientele.*

  A sensitive area for any service is its choice of clientele. Since the interest is in customers who can pay for their services, it only stands to reason that some customers will be more actively sought than others. The choice brings up issues that need to be dealt with since they have an impact on the organization's mandate.

- *Overall positioning.*
This aspect deals with how the organization intends to use its information services in relation to the rest of its divisions. It is not uncommon for the rest of the organization to want to use its information services 'free of charge' to help sell its other services. However, when starting to sell information, there will have to be changes not only in the way the organization does things but also in its mentality.

Information services can also act as a gateway for the sale of the organization's other services. Behind every query lies a project with potential involvement for other divisions. Some means must be found to allow the organization to take advantage of this wealth of easily accessible customers. At CRIQ, the method used is to give the list of queries made by customers to the corresponding technological development advisor, who then makes contact with them. This is done monthly to regionwise.

- *Organization support.*
The parent organization usually offers a variety of services to its information division: office space, accounting services, financial services, sales, etc. However, the way the information division decides to serve its customers will inevitably imply a change in the way the organization supplies such services.

The parent organization will no doubt want to assess the information division's performance. It is important that it has vision when assessing customer employees, so as not to undermine their efforts. There should not be too much pressure to reach short term self-financing since there are also medium and long range goals to be considered, especially when building a regular clientele. If the personnel concentrates solely on making money, he may not take the time it needs to develop good customer relations. That should be avoided.

Other support from the rest of the organization includes financial and moral support. To make the kind of changes talked about in this chapter, implies time and money. It also requires encouragement, concern and recognition toward employees for their efforts and performance. Those are the essential ingredients for weathering storms over time.

- *Managing the consequences of change on the organization's other units or divisions.*
  Whether we like it or not, changes to the information division will have consequences on the overall organization. Some services will be eliminated, there will be new fees within the organization itself and there may even be some inter-division competition. Such consequences may be interpreted positively or negatively by other divisions. It is important to be sensitive to warning signs and to discuss problems openly when they occur. The challenge of developing one's clientele is enough without having to worry about competition from within.

CONCLUSION

There are a variety of reasons for an organization to want to offer payable services. From what we hear from other organizations, there is no doubt that financial restrictions—doing more with less—are an ever-growing reality for all government or government subsidized organizations. Going from no charge to payable services represents an important shift—in some ways, the customer and customer satisfaction become the ultimate goal behind all decisions and activity. It is important to realize that such a change does not happen overnight or without the support of the whole organization. What we have offered in this chapter, although we

Appendix 9.1

Information Products/Services Offered to Customers

No Cost	*$50 to >> 1,500*	*$1,500 to >> 7,000*	*$5,000 to > 100 - K $*
Referring clients to other organizations	Question/Answer • Firm's name and address; • Trademarks; • Identified documents; • Identified patents; • Equipment suppliers; • Statistics; • Lists/labels; • Associations.	Medium-scale files according to client needs • Equipment research; • Situation analysis; • Bibliographical files; • Patent research; • Technical advice; • Market evaluation advice; • Information on manufacturing process or technique; • Financial data; • Testing methods; • Technological intelligence (profiles of interest).	Complete Studies • State-of-the art report; • Market studies; • Techno-economic stud-ies; • Diversification; • Inventories; • Technological intelligence.

hope will be useful, cannot replace the actual experience of applying this process to an organization.

The challenge of going from no charge to payable services is demanding but well worth it. There are many decisions to make, personnel guidelines to set, systems to set up and inter-division relations to manage. It is stimulating work and brings a great sense of personal achievement.

REFERENCES

1. Parasuraman, A., Zeithaml, Valarie A., Berry, Leonard L., *A conceptual model of service quality and its implications for future research*, Marketing Science Institute, Cambridge, MA, August 1984.
2. Rockart, John F., 'Chief executives define their own data needs', *Harvard Business Review, March-April,* 1979.

CASE STUDY

A

Marketing Research for Asian CD-ROM on Health and Environment

Chin Saik Yoon and Abhinandan K. Jain

PART

I

Selection of a Research Agency

In early 1992, Miss Lee, the information specialist (managing information projects) in the South East and East Asian Regional Office of the International Development Research Centre (IDRC), reviewed two proposals for conducting a market study for the proposed Asian Environmental Health CD-ROM (See Appendices I.1 and I.2). This review would help IDRC in deciding which agency should undertake the study.

INFORMATION ENVIRONMENT

By the late 1970s, managers and researchers of development programmes had come to appreciate information as a strategic

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Cases are prepared as a basis for class discussion. As educational or training material, cases are not designed to present illustrations of either correct or incorrect handling of administrative or management problems.

resource. They found that, appropriate and timely information provided the key to numerous critical questions confronting those who were working for improving the socio-economic conditions of developing countries. A number of international development agencies responded to this need by funding numerous information resource centres in universities and research institutes. These centres were usually managed by documentalists and librarians, in consultation with subject matter specialists. Since the centres were established to support specific programmes their content/coverage tended to be tightly focused.

Each of the centres, typically, had a comprehensive collection of documents and publications relating to a particular subject. These included published items such as journals, books, statistics, directories and manuals, and unpublished materials (sometimes also known as 'grey' or 'fugitive' materials) such as conference papers, research reports, theses, policy papers, etc. The materials were organized and tracked through professional library systems involving indexes, catalogue entries, abstracts and bibliographies. When affordable mini and micro-computers became available, many of these centres converted their manual indexing, cataloguing and abstracting operations to automated ones. Because fugitive materials were difficult to find in developing countries, the information centres were encouraged to pay more attention to their collection and documentation.

In most cases, the number of clients who made use of these centres was limited. The core users tended to be researchers and practitioners, based at the same locations as the centres. Other interested users were often unable to make good use of the services offered by these centres, owing to the vast distances separating them and the centres. Number of users were also limited because of the tight subject focus of each centre. For a good number of years, the centres provided invaluable support to researchers and practitioners.

Sometime in the 1980s, the philosophy of development research shifted away from highly specialized methods to multidisciplinary and interdisciplinary approaches. Researchers suddenly found that their tightly focused information centres were unable to provide, on their own, the wide range of information needed to carry out inter and multidisciplinary research. At about the same time, new information technologies, capable of moving vast amount of data, cheaply and efficiently, from information sources to users, became available, much of it made possible by the computerization and digitization of information. Examples of these technologies include on-line information services, computer diskettes and CD-ROMs. The geographical isolation of information centres was quickly overcome, and information could be speedily delivered to the users. In recent years, the widespread reach of the Internet network, allowed users to roam the world, sampling and accessing information from hundreds of thousands of information sources. The information revolution had finally conquered the world and set information seekers free.

IDRC: SOUTH-EAST AND EAST ASIAN OFFICE

IDRC had invested substantially, in assisting well established institutions in the Asia-Pacific region to build and strengthen national, regional or international information and resource centres, databases and databanks. Many of these information centres were now mature. The host/parent institutions had continued to maintain the initial operations and facilities.

In late 1991–92, Miss Lee saw the potential of tapping these new technologies to add value to the centre's past investments as well as those of national governments and other donors. She visualized the strategic importance of the project for the South East and East Asian Regional Office, by making inroads into countries that had suffered loss of information resources because of wars. These countries were highly disadvantaged in keeping pace with the rest of the world, as they tried to compete in free markets. She visualized the following major gains of pursuing this opportunity:

- Improved access for developing countries to relevant information systems, services and networks that will remain effective and sustainable when IDRC support ends.
- Demonstrate a successful developing country application of modern information technology—CD-ROM publishing—through local testing, adaptation and implementation.
- Increase collaboration among developing country partners, donors and development institutions.

CHOICE OF TECHNOLOGY

Present forms of accessing and disseminating information resources in the developing countries, tended to discourage usage. Print indexes made searches slow, cumbersome and difficult for correlate multiple search terms. At the same time, distribution was costly and often delayed for many months, if sent by surface mail. Print media was bulky and required storage space as well as tedious catalogues for identifying and locating information. Direct access to external databases in the West, through packet switching, was too expensive and often limited by under-developed telecommunications systems in the South. It also did not solve the problem of access to important Asian information resources that were available in the region. Dissemination and exchange of diskettes were not expedient, because of the large number of diskettes that needed to be sent and exchanged, given the normal database volume and updating regimes.

The advantage of CD-ROM was that it could hold voluminous amounts of data. Up to 630 MB (Megabyte) of data could be stored on a single disk; a standard 5 1/4 inch floppy disk holds only 1.2 MB. Accessing information from a CD-ROM had become an irresistible option because it offered the excitement of multimedia, huge storage at a relatively low price and searches at any time and any place without the need to incur telecommunication costs. But, depressingly enough, the present proliferation of serial titles, monographs, etc. on CD-ROM was coming out only from the West. While industry in Asia had started approaching institutions, libraries and documentation centres to provide information resources on CD-ROM, the capability to self-premaster CD-ROM was limited.

There was no doubt that the capacity to make use of the CD-ROM publishing technology, and to access information in CD-ROM formats, needed to be strongly encouraged in the developing countries. This was necessary, if they were not to be left behind the fast pace that industry was setting for the information sector in the world. Industry projected more and more users getting into multimedia and electronic publishing. High quality colour graphics, stereo sound, full motion/video clips, animation and texts available on CD-ROMs were especially advantageous for encouraging information use. Some of the most exciting softwares for personal computers were being published on compact disks instead of floppy disks. Asian industry also saw a lucrative market in CD-ROM drives and was expanding into making them, each targeting at a million or so units of sales per annum. The price of a CD-ROM drive had dropped as low as 300 Canadian dollars (CAD). The number of CD-ROM applications was growing exponentially. Users worldwide were snapping up CD-ROM drives as fast as manufacturers could make them. However, the growth in Asian developing countries was not as promising.

DEVELOPMENTS SO FAR

In 1992, keeping in mind the changing scenario, Miss Lee decided to harness the potential of these new technologies and broaden the reach of the information centres which IDRC had been instrumental in establishing. After consulting with a cross-section of experts in the development field, she opted to explore the feasibility of producing a CD-ROM having as its theme, 'ASIA/ HEALTH/ENVIRONMENT'. In reviewing the portfolio of information projects which IDRC had been associated with, she discovered that this broad thematic area was not adequately covered by the IDRC funded projects alone. She identified a number of other established information centres, which had the potential of making significant contributions towards the CD-ROM, and approached them to explore the idea jointly. Most accepted the invitation.

A technical study was next commissioned to determine if the data available were suitable for mounting on to a CD-ROM. The study reviewed at the same time, local capacity for processing the various contributions of information into a form, suitable for inclusion on the proposed disk. The study was undertaken by the Canadian Centre for Occupational Health and Safety (CCOHS), a leading CD-ROM publisher. The Director General of CCOHS was exceptionally well placed to undertake the study, as he had worked extensively in developing countries and routinely undertook projects, which involved the type of syndication of different institutions, which the project was attempting to set up. The findings were positive. The data were found to be suitable for the CD-ROM format, and highly competent personnel existed locally to assist in data processing and preparation.

After a thorough review of available databases in Asia, six databases were tentatively identified for inclusion in the CD-ROM, as they fitted the scope of the topic. These were drawn from specialized and leading national institutions, in specific fields, in different countries of Asia. The information contents of the databases and the institutions housing them were as follows:

A: Natural Toxins and Venoms, National University, Country A

B: Environmental Sanitation, Asian Institute, Country B

C: Water Borne Diseases, International Research Centre, Country C

D: Traditional Medicines, Traditional Medicinal Research Centre, Country D

E: Aromatic and Medicinal Plants, National Research Centres, Countries E and F

Miss Lee presented the idea to her peers for consideration, as an activity which should be supported. She suggested that the proposed grant be used as seed money to launch the enterprise which should be eventually, self-financing. The committee which heard the proposal, accepted it in principle but requested more proof, that the project had real potential of generating sufficient revenue to fund itself, once IDRC funding ceased. A market study for the CD-ROM was decided upon. Two groups of consultants were considered for the study: the first was a highly respected group of consultants which had undertaken studies which had led to the launch of very successful products. The second was Southbound, a young company based in Penang (Malaysia), dedicated to working on development issues with the NGO sector. The company had just completed a market study of a South Asian information network. (The proposal by Southbound is given in Appendix I.1 and that by the Singaporean consultants group in Appendix I.2.)

Proposals of both the groups were reviewed. The proposed budget of Southbound was significantly lower. However, besides considering the budget, Miss Lee was keen on selecting one which would deliver the results and put the venture on the road to success.

QUESTIONS FOR DISCUSSION

1. Please assess the two proposals for suitability of the proposed project.
2. Please think through the criteria you would like to use for making a choice between the proposals submitted by the research and consulting agencies.
3. Recommend the proposal you think is better for acceptance. Please justify your recommendation.
4. As Miss Lee, please think through a plan of action to work with the selected agency, to conduct the market study.

Appendix I.1

Market Study for the Proposed Asian Environmental Health CD-ROM: Proposal by Southbound

RATIONALE

Southbound described IDRC's role in promoting research, development and use of information services, systems, networks, tools and technologies to catalyse its work of accelerating the development process. It also described the capabilities of CD-ROM and explored its usefulness for achieving the objectives outlined in the text of the case. (These are omitted for the sake of keeping the description brief.)

OBJECTIVES

The overall goal of the market study is to determine the feasibility of producing a CD-ROM containing Asian Health and Environment related data for sale within the region, its primary market; and the rest of the world, its secondary market. It will also consider the possibilities of setting up a consortium of database owners, who will jointly develop the product and collectively undertake its marketing. Limited resources for promotions and management of sales may thus be pooled. An effective cooperative marketing arrangement will contribute towards the sustainability of the participating databases. Specific objectives of the study include the following:

- Identification of market niches for Asian data and information contained in the selected databases.

- Pre-testing the prototype CD-ROM for the main purpose of obtaining user specifications for the proposed product.
- Collection of information which will allow IDRC to determine or forecast:
  - The size of the potential market (how many users have or plan to acquire the hardware needed to use the CD-ROM), its characteristics and preferences.
  - The presence ofother important, relevant databases that need to be considered for inclusion in the final CD-ROM.
  - The most appropriate channels to deploy in promoting and making available the product to end-users.
  - The price of the CD-ROM.
  - The number of disks to be pressed in its initial manufacture.
  - The revenue to be generated by sales.

METHODS

The study will be guided throughout by market-driven strategies.[1] Instead of focusing only on user reactions to the prototype, the emphasis here will be on using the prototype to trigger and probe potential subscribers into thinking about the most useful and attractive information product. The assumption here is that the prototype is not the final product and, perhaps, may not even resemble the product to be eventually developed and launched into the market. Congruent to this approach will be the devotion of a larger part of the study to obtaining user specifications on the proposed CD. Given that the product remains to be fully conceptualized and launched, such an approach will allow users to feed forward descriptions of their needs for immediate processing into the development of the disk, and the selection of institutional partners, who bear the greatest potential of contributing to the success of this undertaking.

This study presents an excellent opportunity to operationalize several innovative market research techniques in a development setting.

1. Day, George S., '*Market Driven Strategy: Processes for Creating Value*', 1990.
2. Andreasen, Alan R., 'Backward Market Research', *Harvard Business Review*, May-June 1985.

The first and overriding method is backward market research[2] which is increasingly used in the private sector to address weaknesses of classical approaches; the method promises to make research more useful and more directly focused on the decisions and actions management will need to take on the product; it should also avoid presenting management with research results that are not action-oriented or tell them what they already know. In backward research, the researchers begin by establishing the ways in which the research results will be implemented. This usually involves a detailed and careful mock-up of a dummy report in close collaboration with the clients, so as to determine the critical elements to be included in the actual report. Through this process, the objectives of the research become sharply focused, and an agreement is reached amongst the people commissioning the research and between them and the researchers, for the best direction to be followed in the study. The implementation of backward research, however, requires the management to take part in a detailed and careful analysis of decision alternatives. It also requires additional time of the researchers to prepare dummy research instruments, data and findings, to help determine how research results are expected to eventually affect management decisions.

IDENTIFICATION OF MARKET NICHES

This objective will be met through a self-administered mail survey. A questionnaire, already pre-tested with professionals and librarians in the business, will be posted to 500 general practitioners, medical specialists, other specialists, hospital administrators and health/medical librarians in and outside Asia. This sample will be identified with the help of research institutions and professional medical bodies and key informants in the region. A response rate of 20 per cent is anticipated. To encourage this response rate, a modest gift of medical publications, together with a special pre-publication offer of a special discount off the price list, both to be determined later, will be offered to people who return completed questionnaires.

The results of the survey will be used to conduct semi-structured in-depth interviews with ten experienced librarians, drawn from the leading medical libraries of the region. Apart from serving to clarify the results of the survey, the interviews will also serve to reaffirm the information-seeking behaviour of doctors and specialists. Similar interviews will be repeated with leading vendors of information products who are willing to participate in the study.

Presenting the Prototype CD-ROM

Ten focus groups will be convened, at different locations in the region, at which the prototype CD will be presented. Each group will be formed of about eight medical professionals and librarians, representing a cross-section of the intended market for the product. Whenever possible, steps will be taken to involve only those people, who are not acquainted with each other in the groups, although this may not always be possible in developing country settings, where professionals belong to small and tightly knitted groups. The demonstration of the disk will be used to trigger discussions on:

- Product ideas represented on the disk.
- Specifications for a disk which will best serve the professional and economic interest of group members, including updating issues after the initial sale.
- The information seeking patterns of members and of their peer groups.

The prototype will also be presented to information product distributors. As their numbers are very small in any location, such presentations will be followed by semi-structured in-depth interviews rather than group discussions.

COLLECTION OF INFORMATION ON PROMOTIONAL/ DELIVERY CHANNELS, PRICE AND DEMAND

This information will be gathered as a part of the activities already described, involving postal surveys, focus groups of medical personnel and in-depth interviews with medical librarians and commercial distributors. 'Desk research' including a review of literature, information gathering on related databases, and study visits to various resource/ information centres that are already producing or planning to produce and market CD-ROMs, will also be carried out.

PRODUCT OF THE STUDY

Study Report

The main product of the study will be a report containing a set of detailed user specifications for the proposed disk. These should include details on content, format, and search and retrieval features. The specifications should allow IDRC and its partners to identify the market niche and the most advantageous position for the CD. The second part of the report will contain analysis and recommendations on a pricing policy, promotional strategies and distribution mechanisms. If there should still be a lack of knowledge, and if additional information is available at the time of the preparation of the report, further observations, comments and recommendations, if any, will be included in the business arrangements of the consortium of owners of the product, as well as in its management and operations, in the long term.

Mailing List of Potential Customers

This list will be built in the course of the researchers' work, travel and interactions with the people coming into contact with the study. The list is anticipated to contain at least a few hundred names and addresses of potential purchasers of the CD-ROM, working within and outside Asia. The list will be provided in the form of a paper print-out and as a FastPak Mail (Version 5.0) database which can be used instantly by the consortium to generate direct mail promotional materials. It will have mail-merge, labelling and sorting facilities usually required in implementing direct mail campaigns.

Collection of Promotional Materials Used by Other Producers

Direct mail materials and promotional aids employed by CD-ROM producers with good track records, will be collected as a resource and reference tool for the later design and distribution of materials to be used in the promotion of the CD-ROM.

Appendix I. 2

A Feasibility Study on Database Dissemination through CD-ROM

Project Proposal by Consultants, Singapore

To maximize the utilization of its project results, IDRC plans to facilitate direct access to the databases, compiled under the various projects sponsored by the Centre. A most recent information storage and retrieval instrument is the CD-ROM. Hence, it is proposed that a CD-ROM marketing study be undertaken, to determine its efficiency and cost-effectiveness in disseminating IDRC's databases.

OBJECTIVE OF THE STUDY

The proposed study will ascertain the economic viability of a CD-ROM information dissemination system for IDRC's databases. It will also develop an administrative/organizational system for its sustainability in the long run.

METHODOLOGY

The study will comprise the following stages:

1. *Sample survey of users for the selected databases*
   Based on the type of data/information in the databases, the database researchers' opinions and public information systems (e.g. directory of medical libraries), a list of potential users will be compiled.

Assessment of potential users' intention to acquire the CD-ROM on the databases will be obtained from a mail survey of a sample of 100 potential users.

The questionnaire will attempt to determine, inter alia:

- Similar existing data
- Desire to acquire proposed data.
- Desire to acquire other data available from IDRC projects.
- Existing system for CD-ROM (including type of software).

The survey findings should provide information for estimating the size and type of demand for IDRC CD-ROM databases.

2. *Pilot test of IDRC CD-ROM prototype*

   If the survey confirms an adequate demand for the selected IDRC databases, a prototype of the proposed IDRC CD-ROM will be produced and tested in a sample market (for instance, two major institutions in each of eight selected country markets).

3. *Financial analysis on production of IDRC CD-ROM*

   An analysis will be done to determine the following:

   - Unit production cost.
   - Unit price (including differential pricing).
   - Ownership of copyrights.
   - Royalty payments to database researchers.
   - Administrative system.
   - Technical support.
   - Updating schedule.

4. *Marketing strategy for IDRC CD-ROM*

A marketing strategy will be designed to cover:

- Type of promotion and advertising activities to capture a larger market.
- Strategic positioning of the product.
- Type of distribution channels.
- Type of mechanism for user feedback and subsequent follow-up action.
- Assessment of effectiveness of promotional activities.

DURATION

The project will require at least 18 months. A tentative schedule is as follows:

1.	Mail survey on 100 potential users	2.5 months
2.	Pilot test of prototype	5.5 months
3.	Financial analysis	4.0 months
4.	Marketing strategy	6.0 months

BUDGET

The total cost is estimated at CD 1,69,100.

The major components included were all the items listed under the sub-heading 'Methodology'. Each item had cost budgets (at particular rates) for researcher's fee (CD7000 per month), research assistance (CD2,500 per month), clerical assistance (CD700 per month), stationery and communication, transportation and administrative costs. Transport, communication and administrative costs were about 15 per cent of the total budget (The details have been omitted).

RESEARCHERS

The project will be undertaken by:

(Details have been omitted here. The team consisted of three researchers. One of them was managing director of a management consulting organization. The others were senior faculty members at a leading management school, in a country in South East Asia.)

PART

II

Finalizing Research Plan

In early 1993, Miss Lee was reviewing the detailed research plan submitted by Southbound, for studying the market for an Asian CD-ROM on health and environment. The purpose of the review was to make sure that the information obtained from the study was adequate to achieve the objectives, for which the research was being conducted.

BACKGROUND

In 1992, Miss Lee saw the potential of tapping new technologies to broaden the reach of the information centres which IDRC had been instrumental in establishing. After consulting with a cross-

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Prepared by Chin Saik Yoon, Publisher, Southbound, Penang, Malaysia, and Abhinandan K. Jain, Faculty, Indian Institute of Management, Ahmedabad, India. Help given by Mr Ashok Jambhekar, Librarian, Vikram Sarabhai Library, Indian Institute of Management, Ahmedabad in data collection and case preparation is gratefully acknowledged.

This case was written as part of the *Marketing of Information Products and Services: A Guide for Librarians and Information Professionals*, which was sponsored and funded by the International Development Research Centre, Canada and prepared by Indian Institute of Management, Ahmedabad.

Cases are prepared as a basis for class discussion. As educational or training material, cases are not designed to present illustrations of either correct or incorrect handling of administrative or management problems.

section of experts in the development field, she opted to explore the feasibility of producing a CD-ROM having as its theme, 'ASIA/ HEALTH/ENVIRONMENT'. In reviewing the portfolio of information projects which IDRC had been associated with, she discovered that this broad thematic area was not adequately covered by the IDRC funded projects alone. She identified a number of other established information centres, which had the potential of making significant contributions towards the CD-ROM, and approached them to explore the idea jointly. Most accepted the invitation.

A technical study was then commissioned to determine if the data available were suitable for mounting on to a CD-ROM. The study reviewed at the same time, local capacity for processing the various contributions of information into a form, suitable for inclusion on the proposed disk. The study was undertaken by the Canadian Centre, for Occupational Health and Safety (CCOHS), a leading CD-ROM publisher in Canada. The Director General of CCOHS was exceptionally well-placed to undertake the study, as he had worked extensively in developing countries and routinely undertook projects, which involved the type of syndication of different institutions, which the project was attempting to set up. The technical study was carried out in four locations: India. Thailand, China and Singapore. The findings were positive. The data were found to be suitable for the CD-ROM format, and highly competent personnel existed locally to assist in data processing and preparation.

After a thorough review of available databases in Asia, six databases were tentatively identified for inclusion in the CD-ROM, as they fitted the scope of the topic. These were drawn from specialized and leading national institutions, in specific fields, in different countries of Asia. The information contents of the databases and the institutions housing them were as follows:

A: Natural Toxins and Venoms, National University, Country A.

B: Environmental Sanitation, Asian Institute, Country B.

C: Water Borne Diseases, International Research Centre, Country C.

D: Traditional Medicines, Traditional Medicinal Research Centre, Country D.

E: Aromatic and Medicinal Plants, National Research Centres, Countries E and F.

The rationale for choosing the broad theme of health and environment, and the six specific subject areas, were mentioned by Ms. Lee in her communication to the case writers:

> The theme was one of IDRC's programme focuses. We had been associated with most of the databases as they were IDRC projects. Before IDRC funds a project, the need would have been established first. We wanted to enhance the value/utilization of these databases into which we had made much investment. We knew of other important datasets in the region that fall within the subject scope. They form the largest single collection of data resources, that we knew of, that were allied and could logically become a family of CD-ROMs. The owners of these databases were willing to participate because they were familiar with IDRC's role.

RESEARCH BRIEF/OBJECTIVE

The appointment of Southbound as market researcher was formalized through a contract signed with IDRC. The contract described and defined the research brief in the following manner:

Purpose of the Grant

> This allocation will enable Southbound to undertake a market study, to determine the feasibility and sustainability of producing a CD-ROM, containing Asian related data for sale within the region and the rest of the world. The nature and methodology of the study is detailed in Appendix I.1 (Part I) of the case.

The specific objectives of the study include the following:

- Identification of market niches for Asian data and information contained in the selected databases.
- Pre-testing the prototype CD-ROM for the main purpose of obtaining user specifications for the proposed product.

- Collection of information which will allow the Centre to determine or forecast.
- The size of the potential market (how many users have or plan to acquire the hardware needed to use the CD-ROM), its characteristics and preferences.
- The presence of other important, relevant databases that need to be considered for inclusion in the final CD-ROM.
- The most appropriate channels to deploy in promoting and making available the product to end-users.
- The price of the CD-ROM.
- The number of disks to be pressed in its initial manufacture.
- The revenue to be generated by sales.

The words ' ... and the rest of the world' in the opening paragraph of the brief were accepted by the researchers with much reservation. It was inserted at the specific request of IDRC. The researchers felt that, given the limited resources available for the study, attempting a global survey was unrealistic and overly ambitious. IDRC's insistence was based on its hunch that the CD-ROM would sell outside Asia, and that the disk would probably make most of its profits in Europe and North America, where it could be marketed at the full international price—the thoughts had already emerged at this point for discriminatory pricing, where developing countries would be charged a lower price for products than other subscribers. (The proposal of Southbound is given in Appendix I.1 (Part I) of the case.)

METHODS

The market study was guided by market-driven approaches. The researchers first aimed at determining user applications and benefits, and only then the attributes of a product. Congruent with these approaches, the study devoted one half of its efforts towards stimulating and gathering information on user-needs and product/format preferences. The other half was spent on pretesting the very effective prototype CD-ROM.

RESEARCH DESIGN

The study presented an opportunity for the researchers to operationalize innovative market research techniques in a development setting. The first, overarching method was backward market research. It was used in finalizing the design of the study. By beginning at the point where research ends—i.e., the use of the research results by managers—the method strives to make research more useful and directly focused on supporting the decision-making processes of management.

In actualizing this first step of the study, the researchers prepared a mock-up of the executive summary of the proposed study and presented it to the staff in IDRC's regional office. Accompanying the presentation were survey instruments, interview schedules and key questions for focus groups. The presentation was followed by an in-depth critique of the mock research report and the instruments proposed. The feedback was used to finalize the design of the study.

LITERATURE REVIEW

Much of the information used in preparing the dummy research results were obtained through a review of selected published and unpublished papers on CD-ROM design, production and marketing. The literature review helped lay the base from which this study was planned, implemented and concluded. (A short list of some of the references used is included at the end of this case study.)

The literature review led to the following conclusions:

- The professional CD-ROM market is just emerging from its gestation stage.
- The number of specialist titles is increasing at a geometrical rate.

- There is no title in the broad thematic area of the proposed theme.
- CD-ROMs containing specialist infoımation tend to be purchased by institutions rather than individuals.
- Users must be closely involved in developing a CD-ROM if the product is to sell.
- Past CD-ROMs which have sold well did so not only because of the quality of the information they contained, but also because of the superior search and retrieval software which came with the disks.
- There is a definite trend for including still and moving images, and sound in CD-ROMs to make such multimedia disks more attractive to users.
- The hardware required to run multimedia CD-ROMs is expensive and may become a standard feature of the next generation of personal computers.
- Although many CD-ROMs are created on the Apple-Macintosh platform, most users own IBM compatible systems. The PC platform, therefore, promises the dominant share of the market.
- Prices of most CD-ROMs are on the decline.

POSTAL SURVEY

The first half of the study was implemented through a postal survey of potential end-users and buyers of the CD-ROM.

The original plan to survey only Asians was expanded to cover the whole world at the request of IDRC. This was an appropriate change in view of the intentions to market the disk globally. The North American and European markets were particularly important as they possessed the purchasing power to buy the CD at international prices and, therefore, had the potential to contribute significant profits to the enterprise.

The Sample Twelve countries were selected for the postal survey. In selecting the countries, the researchers used the latest published list which rank ordered the majority of nation states in the world according to their respective GNP per capita (Appendix II.1.) The countries in the list were grouped into four GNP categories. From each of the groups, three countries were randomly selected. Other criteria guiding the selection included the level of fluency in English (the language used in the survey), and the manageability of the total user population size. The countries selected were as follows:

Group I	*Group II*
Switzerland	Hong Kong
United States of America	Singapore
Australia	Saudi Arabia
Group III	*Group IV*
South Africa	Philippines
Malaysia	India
Thailand	Bangladesh

THE MAILING LIST

Within each of the 12 countries, the names of those working in the fields covered by the prototype CD-ROM were selected from *The World of Learning 1991* and compiled into a mailing list. As with most surveys, the list compiled and deployed was limited. It lacked, primarily, names of potential users in the private sector, particularly the pharmaceutical industries. This weakness was considered and accepted in view of the absence of a superior mailing list. The list was, however, very thorough in its coverage of all the major medical libraries and institutions of higher learning and research.

THE QUESTIONNAIRE

The questionnaire, together with an accompanying letter introducing the study, are given in Appendix II.2. Apart from being subjected to criticism during the presentation of the mock study results at IDRC, Singapore, the questionnaire was pre-tested on a network of hospitals serving a medium-sized city, at a university covering medical, pharmaceutical and environmental sciences, and finally at a network of local and international NGOs working on issues of health, environment and toxics. The hospitals belonged to the Department of Health, City of Ipoh, a city in one of the selected countries. The university and the NGOs were also from the same country.

The draft questionnaire was also sent to all the database owners for their comments and for local pre-testing in six Asian countries.

Information specialists at the IDRC headquarter and the Regional Office reviewed the draft instrument and made many suggestions for its improvement.

DATA COLLECTION

The researchers mailed 1,894 questionnaires (1,533 addresses from the *World of Learning* and 341 from TROPMED) from Penang, Malaysia. Thirty questionnaires accompanied by covering letters, were couriered to each database owner to be distributed to their contacts. This was done because earlier attempts to obtain clients' lists from the owners had succeeded in getting only two lists. A survey of the owners' current clients was necessary as it was the intention of the researchers to study the potential of cross-selling (where one group of subscribers is targeted with promotional efforts for an allied, but different, product).

The covering letter explained the thrust of the study and offered two sets of incentives for the participants of the study:

- The first 100 people to return the questionnaire would be given a selection of WHO publications (letters to the Malaysian list were mailed 7 days later than the rest to ensure that the Malaysians did not have an unfair advantage over addressees further afield).
- All respondents returning the completed questionnaires would receive a discount voucher of US $20 to be 'cashed-in' on the purchase of the CD-ROM.

A reminder letter was sent to everyone on the mailing list, who had not returned the completed questionnaire, six weeks from the date of posting.

FOCUS GROUP DISCUSSIONS

The prototype CD-ROM, produced by CCOHS with data provided by the database owners, was to be demonstrated and discussed at 11 focus groups as shown in Table II.1.

TABLE II.1 Country-wise List of Focus Groups

City	*Researchers/Practitioners Participant Groups*	*Librarians Participant Groups*	*Total Focus Groups*
Manila	2	1	3
New Delhi	2	1	3
Bangkok	2	1	3
Singapore	1	1	2
Total	7	4	11

The selection of participants for the focus groups was to be undertaken by the database owners, hosting each set of discussions. The four cities had potential users of the CD-ROM and represented regions in which the CD-ROM would be distributed. The four organizations were to make their selection of participants according to the criteria provided by the researchers. Special attempts were to be made to identify participants not known to each other, within each of the 11 groups. This was to address a frequent criticism of focus groups made up of acquaintances and friends who did not provide frank reactions to issues under discussion.

The conduct of the focus groups was standardized for all the 11 groups in the four locations. The steps to be followed were as follows:

1. Welcome session.
2. Briefing participants on the objectives of the study.
3. Briefing on the reason for choice of the CD-ROM medium and its capabilities.
4. Demonstration of the prototype.
5. Discussion of points contained in the schedule.

The prototype demonstration was to follow a standard routine. The bibliographic databases running on the CCFIND software were to be demonstrated first. The facilitator used key words in the demonstration which had been carefully selected and rehearsed beforehand. The words selected were always from the most current interest areas of the participants. They were also to be selected to present the most impressive search output, given that the prototype contained only samplings of the various databases. The next to be demonstrated were the full text databases running on CCPUB software. Search strategies were to be carefully selected and rehearsed as with CCFIND software. Special attention was also devoted to demonstrating colour pictures and other graphics embedded in the disk. Other features demonstrated were hypertext links, bookmarks and various search strategies.

All the groups discussions, except the two in Singapore, were audio-taped.

CONSULTATION WITH DATABASE OWNERS

Selected database owners were to be consulted to clarify two important issues:

1. Facets of collaboration which would make it rewarding for individual institutions to be members of the consortium of owners on a sustained basis.

2. Existing sales of owners' publications and other information products which may be affected by the marketing of the CD-ROM.

INTERVIEWS WITH CD-ROM DISTRIBUTORS

Members of the trade dealing with CD-ROMs were invited to the demonstrations held at Manila, New Delhi, Bangkok and Singapore for their appraisals of the prototype.

QUESTIONS FOR DISCUSSION

1. Please study the specific details of the following studies in the proposed designs
   - Literature Survey
   - Postal Survey
   - Focus Group Discussions
   - Consultation/Interview with database owners and CD-ROM distributors
2. The achieving the objectives of specific studies:
   - Critique the sample, the data collection process, and the data collection instruments
   - Suggest suitable changes wherever needed.
3. Please assess the suitability of the overall design for obtaining the information required to take decisions.

REFERENCES

1. Bryson, Jo, 'International Market for Information Goods and Services', *International Information and Library Review*, Vol. 24, 1992.
2. Michael, Benedict P., 'Marketing of Information in the Water Sector in Tanzania: A Strategy for MAJIDOC', *Information Development*, Vol. 8, No. 2, April 1992.

3. Casey, Michael, 'The Electronic Information Industry in Europe', *Journal of Librarianship and Information Science*, Vol. 23, No. 1, March 1991.
4. *CD-ROM Librarian*, various numbers.
5. *CD-ROM for African Research Needs*, Sub-Saharan Africa Program, American Association for the Advancement of Science, Washington, DC, 1993.
6. Kaw, Hun Woon, 'Computerized Databases in Libraries: Are We Naive', *Asian Libraries*, September 1991.
7. Nelson, Nancy Melin, 'CD-ROM Growth: Unleashing the Potential', *Library Journal*, February 1, 1991.
8. Philips International, various product information brochures.
9. Sabartnam, Selvarani and Loh, Chee Meng, 'Trends in Electronic Information Services in Singapore', *Asian Libraries*, March 1991.
10. Sears, Garry et al., 'Marketing Strategy for UNCED Archives CD-ROM', unpublished report submitted by Peat Marwick Stevenson and Kellogg to IDRC, June 1993.

Appendix II.1

The countries used in the selection process:

Country	*GNP US$*		*Country*	*GNP US$*
Group I			**Group IV**	
Switzer land	35,100		Papua New Guinea	1,025
Japan	27,326		Philippines	835
USA	22,550		Egypt	730
Canada	21,500		Indonesia	645
Germany	21,475		Sri Lanka	550
France	21,188		Maldives	470
Italy	19,511		Bhutan	415
Britain	17,738		Pakistan	400
Brunei	17,500		China	360
Australia	16,310		Kenya	340
			Nigeria	330
Group II			India	310
Hong Kong	15,750		Burma	250
Singapore	15,030		Bangladesh	208
New Zealand	11,875		Vietnam	200
Macau	11,300		Laos	185
Taiwan	10,215		Nepal	170
South Korea	6,635		Afghanistan	150
Saudi Arabia	6,600		Cambodia	150
			Mongolia	100
Group III				
Mexico	3,200			
South Africa	2,970			
Malaysia	2,965			
Brazil	2,200			
Fiji	1,945			
Turkey	1,670			
Thailand	1,660			

Asian CD-ROM

Southbound, 9 College Square, 10250 Penang, Malaysia.
Tel: 60-4-282 169, *Fax*: 60-4-379 280

April 3, 1993

Dear ______

Leading Asian and international research institutions are exploring the possibilities of producing a 'compact-disc-read-only-memory' (CD-ROM), to improve the accessibility of their unique databases containing information relating to various aspects. These institutions are:

A: National University, Country A.
B: Asian Institute, Country B.
C: International Research Centre, Country C.
D: Traditional Medicinal Research Centre, Country D.
E: National Research Centres, Countries E and F.

The consortium of institutions seeks your input into the design of the CD-ROM. We hope you will participate in this survey of some of the world's leading health specialists. The survey is aimed at identifying the information needs of experts and specialists working in the field so that we can fulfil them effectively.

Please take *five minutes* to complete the questionnaire enclosed and airmail it to me, in the envelope provided, by May 2, 1993. We would like to show our *appreciation for your participation in the survey* in the following ways:

- If your completed questionnaire is among the first 100 questionnaires received by us, *we will buy and airmail to you a selection of World Health Organization publications in your fields of interest;*

- In addition to this, we will send you a *voucher for the value of Twenty United States Dollars* ($20.00USD) which you can 'cash-in' as a discount on your future purchase of the CD-ROM we are planning to produce, irrespective of whether you are among the first 100 respondents or not.

This survey is being funded by a research grant from the Agency for Development Research.

CD-ROM is a relatively new information delivery technology. It records data on a compact disc which is similar to the CDs used in the music recording industry. The CD-ROM is used on a disc drive connected to a personal computer. The computer enables quick, complex searches to be carried out on the CD-ROM—the information you are seeking will be found within seconds after the commencement of each search. Up to 250,000 A-4 sized pages of information can be stored on each disc.

Thank you very much for your time and contributions.

Yours sincerely,

Chin Saik Yoon

Researcher

(Contd)

Appendix II.2 (*Contd*)

Asian CD-ROM
Southbound, 9 College Square, 10250 Penang, Malaysia.
Tel: 60-4-282 169, *Fax*: 60-4-379 280

INFORMATION NEEDS SURVEY

A: Please complete this section in BLOCK LETTERS

Please do not write in this column

Your name: ______________ Position: ________________

Organization: ______________________________________

Address: ____

____

City: ___________________ Province: _________________

Country: _____________ Postal Code: ________________

Telephone: ____________ Fax: _______________________

Please tick (✓) against one or more appropriate boxes (☐) to answer the questions below:

B.1 Please describe your occupation/profession:

☐ Physician/Medical Doctor ☐ Public Health Specialist ☐ Government Official

☐ Pharmacist/oxicologist ☐ Water & Sanitation Specialist ☐ NGO Staff

☐ Consultant/Specialist, please describe area of specialization ___________________

☐ Researcher, please describe area of research:

____

☐ Librarian, please describe area of responsibility:

____

☐ Other, please describe: __________________________

B.2 How would you describe your organization?

☐ Private Practice ☐ Government Hospital/Clinic

☐ NGO

☐ University/Medical School ☐ Private Sector Company

☐ Local Municipality

☐ Other, please describe: ___________________________

(*Contd*)

Appendix II.2 *(Contd)*

C.1 Please list below, in order of priority, the three subject areas related to environmental health which you are most interested in keeping up-to-date with over the next two years.

Priority	*Names of environmental health subject areas*
First	______
Second	______
Third	______

C.2 Please indicate if you will find information in the following subject areas useful to your work.

	Extremely useful	Very useful	Useful	Probably not useful	Definitely not useful
1. Occupational Health and Safety	☐	☐	☐	☐	☐
2. Environmental Sanitation	☐	☐	☐	☐	☐
3. Aromatic and Medicinal Plants	☐	☐	☐	☐	☐
4. Traditional Local Medicines	☐	☐	☐	☐	☐
5. Natural Toxins and Venoms	☐	☐	☐	☐	☐
6. Mosquito Borne Diseases	☐	☐	☐	☐	☐

C.3 Would you be interested in purchasing information in the following subject areas from Asian databases for these databases see Appendix II.4 for reference at your work place?

	Very Definitely will buy	Definitely will buy	May buy	Probably will not buy	Definitely will not buy
1. Occupational Health and Safety	☐	☐	☐	☐	☐
2. Environmental Sanitation	☐	☐	☐	☐	☐
3. Aromatic and Medicinal Plants	☐	☐	☐	☐	☐
4. Traditional Local Medicines	☐	☐	☐	☐	☐

(Contd)

Appendix II.2 (*Contd*)

5. Natural Toxins and Venoms	☐	☐	☐	☐	☐
6. Mosquito Borne Diseases	☐	☐	☐	☐	☐

D.1 What is your annual budget for acquiring books, journals and other information products and services?

☐ Less than $1,000 US ☐ $4,000-$5,000 US ☐ $8,000-$9,000 US
☐ $1,000-$2,000 US ☐ $5,000-$6,000 US ☐ $9,000-$10,000 US
☐ $2,000-$3,000 US ☐ $6,000-$7,000 US ☐ More than $10,000 US
☐ $3,000-$4,000 US ☐ $7,000-$8,000 US ☐ Please state amount:US $__

D.2 What price are you willing to pay for a set of health-related references totalling 5,000 pages of information which are directly relevant and useful to your work?

☐ $100 US ☐ $500 US ☐ $900 US ☐ $1,300 US ☐ $1,700 US
☐ $200 US ☐ $600 US ☐ $1,000 US ☐ $1,400 US ☐ $1,800 US
☐ $300 US ☐ $700 US ☐ $1,100 US ☐ $1,500 US ☐ $1,900 US
☐ $400 US ☐ $800 US ☐ $1,200 US ☐ $1,600 US ☐ $2,000 US

E.1 How do you acquire most of your new reading and reference materials?

☐ Purchase from Bookstore, please provide name of store: ________

☐ Orders via Distributor/Sales Agent, please provide name of agent: ________

☐ Orders directly from Publisher ☐ Orders via Librarian

E.2 How do you find out about new reading and reference materials which you buy?

☐ Reviews/Advertisements in journal(s), please provide name(s) of journal(s): ____________________

____

☐ Bibliographic Abstracts, please name abstracts or databases: ____________________

☐ Catalogues and pamphlets received from publishers

☐ Recommendations from colleagues ☐ Recommendations from librarians

☐ Other ways, please elaborate: ____________________

(*Contd*)

Appendix II.2 (*Contd*)

E.3 Do you use computerized databases on health topics for your work?

☐ Yes ☐ No

If 'YES' please tell us which databases you use: ____________

____

If 'NO' please tell us why you do not use computer databases:

____

E.4 When do you make most of your purchases of reading and reference materials?

☐ January ☐ April ☐ July ☐ October
☐ February ☐ May ☐ August ☐ November
☐ March ☐ June ☐ September ☐ December
☐ No specific months, I make purchases throughout the year

E.5 Do you need to obtain endorsements from your colleagues before buying professional books and information services to support your work?

☐ Yes ☐ No

If 'YES' please tell us whose endorsements do you need to obtain:

☐ Departmental Head ☐ Librarian ☐ Departmental/Library Committee
☐ Accountant/Administrator ☐ Others please describe: ________

F.1 Do you have access to a computer? ☐ Yes ☐ No

If 'YES' please specify computer type:

☐ IBM/PC ☐ MAC/Apple ☐ UNIX
☐ Others, please specify: ____________

F.2 Do you have access to a computer with a CD-ROM drive?

☐ Yes ☐ No ☐ I will have access within the next two years

F.3 If you have access to a computer with a CD-ROM drive, please tell us where the computer is located:

☐ My office ☐ Library ☐ Colleague's office ☐ Located at: __________

F.4 Is the computer equipped with the 'WINDOWS' operating system?

☐ Yes ☐ No

(*Contd*)

F.5 If you use CD-ROMs, please list below the titles which you use most frequently in connection with your work: ____________

____

____

____

Thank you very much for participating in this survey Please return the completed questionnaire by airmail to Asian Environmental Health CD-ROM, Southbound, 9 College Square, 10250 Penang, Malaysia

(Contd)

Appendix II.2 (*Contd*)

1. *Occupational health & Safety:*
   The database provides explanations of approximately 4,000 occupational health and safety terms, including entries for individual chemicals. The entries range from short definitions to descriptions of several hundred words.
2. *Water Supply and Sanitation:*
   (a) The following issues are covered in the databases: conventional and non-conventional methods of collecting, treating, using and recycling water, solid wastes and wastewater; water supply management; water resources planning; hygiene education; and community participation. The databases include bibliographic references and abstracts on research in the above areas.
   (b) Another database which is an integrated database on water and sanitation comprises four components: bibliography on water and sanitation; directory of projects; registry of experts; and list of institutions.
3. *Medicinal and Aromatic Plants:*
   (a) The database is a bibliographic database covering current world literature on medicinal and aromatic plants. Journal literature, patents and papers presented at international seminars and conferences in the field are included in the database.
   (b) Encyclopaedic series comprise 5,000 entries in alphabetical order, relating to plants, animals and animal products, mineral resources and industrial products of India. It is issued in two sub-series: Raw Materials sub-series which comprise 11 volumes of articles on plants, animals and mineral resources. The Industrial Products sub-series which contains nine volumes which deal with major, small-scale and cottage industries.

(*Contd*)

4. *Traditional Chinese Medicines database:*
   The database contains pharmacognostical, chemical, pharmacological and clinical information on plants, animals, minerals and other natural products of pharmaceutical value in traditional Chinese medicine. The information is provided in the form of bibliographic references which are accompanied by abstracts.
5. *Natural Toxins:*
   Snake bites and the treatment; A colour guide to dangerous animals; A colour guide to dangerous plants; Snakes of medical importance in the Asia-Pacific region: are a series of guides which cover various aspects of the biochemistry, molecular biology, pharmacology and pathology of venoms and toxins.
6. *Mosquito-borne Diseases:*
   TROPMED is a bibliographic database, with abstracts, covering diseases of tropical countries, particularly mosquito-borne diseases.[1]

1. Bibliographic references are records of publications, papers and articles: each record will contain the name of the author(s), name/ title of the book/journal/magazine, name of the publisher, place and data of publication, and volume/series number in the case of a journal/magazine.

   Abstracts are brief descriptions of the contents of a book or article.

PART III

Research Findings on Feasibility

This part of the case describes the respondent profile, and analysis for assessing the market feasibility of the CD-ROM project.

RESPONDENT PROFILE

Postal Survey

Of the 1,894 questionnaires posted the researchers received back 832 completed questionnaires. Of these, 114 were rejected for a variety of reasons including non-response. The completed questionnaires came from all the countries surveyed (12 of them). Table III.1 summarizes the responses from different countries:

Prepared by Chin Saik Yoon, Publisher, Southbound, Penang, Malaysia, and Abhinandan K. Jain, Faculty, Indian Institute of Management, Ahmedabad, India. Help given by Mr Ashok Jambhekar, Librarian, Vikram Sarabhai Library, Indian Institute of Management, Ahmedabad in data collection and case preparation is gratefully acknowledged.

This case was written as part of the *Marketing of Information Products and Services: A Guide for Librarians and Information Professionals*, which was sponsored and funded by the International Development Research Centre, Canada and prepared by Indian Institute of Management, Ahmedabad.

Cases are prepared as a basis for class discussion. As educational or training material, cases are not designed to present illustrations of either correct or incorrect handling of administrative or management problems.

TABLE III.1 **Distribution of Total Response across Groups of Countries**

Country Group	*I*	*II*	*III*	*IV*	*Others*	*Total*
Percentage of Total Respondents	36	3	20	25	16	100

Group I: Per capita GNP more than $16000
Group II: Per capita GNP between $5,000 and 16000
Group III: Per capita GNP between $1250 and 5000
Group IV: Per capita GNP below $1250

The response rate from the *World of Learning* list was found to be about 15 per cent, whereas it was 25 per cent from the TROPMED list.

The respondents belonged to a variety of professions. Deans/ Directors, Librarians and Professors accounted for between 20 and 25 per cent each, whereas researchers and associate professors accounted for less than 10 per cent each.

Focus Groups

Focus group discussions, consultation with database owners and interviews with CD-ROM distributors in Manila, New Delhi, Bangkok and Singapore were satisfactorily conducted. Some of the focus group discussions could not be audio-taped (as in Singapore).

The researchers were satisfied with the responses and with the response rates of the two mailing lists used in the survey. They were also satisfied with the conduct of the focus group discussions.

Feasibility of the CD-ROM

The primary information used for assessing the market feasibility of the CD-ROM was:

- Usefulness of information.
- Willingness to buy.

- Willingness to buy at different price levels.
- Projection of demand, in numbers, at selected price levels.
- Cost of producing and marketing the CD-ROM at different levels of demand.
- Competing products and their prices.
- Preparation of cashflow statement for the next several years.

Usefulness of Information

Respondents were asked to rate the usefulness of each category of information, on a scale of usefulness. The responses are summarized in Table III.2.

TABLE III.2 Usefulness of Information

Category	*Extremely Useful*	*Very Useful*	*Useful*	*Probably Not Useful*	*Definitely Not Useful*
Occupational Health and Safety	23.6	26.9	32.7	11.5	5.3
Environmental Sanitation	17.2	27.3	27.8	17.7	10.0
Aromatic and Medicinal Plants	17.8	27.4	26.0	18.8	10.1
Traditional Local Medicines	20.0	21.4	27.1	18.6	12.9
Natural Toxins and Venoms	9.4	28.2	43.6	10.9	7.9
Mosquito Borne Diseases	11.0	13.4	29.4	30.5	15.7
Average Usefulness	16.5	24.1	31.1	18.0	10.3

The breakdown could be collapsed into a table of positive and negative ratings for the usefulness of each information category. Respondents giving a rating within the scale of 'Extremely Useful', 'Very Useful' and 'Useful' could be considered as reacting positively to a particular category of information. On the whole, about 72 per cent respondents found the proposed type of information to be useful.

Willingness to Buy

Willingness to buy was obtained through the question: 'Would you be interested in purchasing information in the following sub-areas from Asian databases (for descriptions of these databases see Appendix II.2)?' (Question no. C.3 of the questionnaire.) The responses are summarized in Table III.3 On the whole, about 49 per cent respondents were willing to buy the databases.

TABLE III.3 **Willingness to Buy**

	Very Definitely Will Buy	*Definitely Will Buy*	*May Buy*	*Probably Will Not Buy*	*Definitely Will Not Buy*
Occupational Health and safety	2.0	5.9	42.6	27.9	21.6
Environmental Sanitation	2.9	12.9	30.5	23.8	30.0
Aromatic and Medicinal Plants	2.4	11.1	38.6	26.1	21.7
Traditional Local Medicine	3.9	8.7	41.5	27.1	18.8
Natural Toxins and Venoms	3.4	8.2	38.6	25.1	24.6
Mosquito Borne Diseases	1.6	8.4	29	27.2	33.8
Average	2.7	9.2	36.8	26.2	25.1

The willingness to buy was then compared with the responses on usefulness. The categories of information surveyed were well received, averaging 71.75 per cent acceptance as useful amongst the respondents. However, the willingness to pay for such useful information was relatively averaged at 49 per cent. This finding was not surprising given the existing reluctance of users to pay for information they require. Overall, the responses were found to be encouraging.

Respondents were posed an open-ended question. They were asked to list, in order of priority, the three subject areas related to environmental health which they were most interested in keeping up-to-date within the next two years. Their responses are summarized in Table III.4.

TABLE III.4 Unaided Response in Important Areas (Percentage of Total Respondents)

	Importance Ranking		
	First	*Second*	*Third*
Occupational Health	20	12	10
Water Supply and Sanitation	10	18	13
Pollution, Environment, Toxins	10	8	7
Medicinal and Aromatic Plants	8	5	11
Diarrhoeal Disease	6	5	10
Natural Toxins	5	6	6
Mosquito Borne Diseases	4	8	4
Biological and Chemical Hazards	4	5	–
Cancer	4	–	5
Traditional Local Medicine	–	4	–
Ecology and Water Management	–	–	4

A comparison of the results showed that the subjects chosen for the CD-ROM were quite useful although, one new subject area of pollution, environment, and toxin could be more useful than some of the subject areas already chosen.

Willingness to Buy at a Price

Respondents were asked 'What price are you willing to pay for a set of health related references totalling 5000 pages of information, which are directly relevant and useful to your work?'

This information was analyzed for individuals and institutions, the latter by assuming that individuals working in the same organization may not subscribe separately. Results are summarized in Table III.5.

Demand Projection

At Different Prices

For projecting demand, the following method was used.

TABLE III.5 **Willingness to Buy at Different Prices**

At Price USD	*Individuals*	*Percentage Willing to Buy Institutions in Countries Belonging to*			*Demand in Units*
		Group I	*Groups II & III*	*Group IV*	
$100	72	73	81	87	1200
$200	50	43	45	39	700
$300	44	29	39	33	490
$400	40	24	32	28	400
$500	29	19	23	23	320
$600	27	12	19	15	150
$700	26	7	10	10	120

1. Count distinct institutions (in the areas of subjects selected in the CD-ROM) in the *World of Learning* in each country, identified earlier for targeting (Appendix II.2).
2. Count distinct institutions in each group of countries.
3. Multiply the number of distinct institutions by the percentage willing to buy in the group of countries, as found from the survey.
4. Multiply the number of those willing to buy by the percentage willing to pay a specific price, as obtained in the previous section.
5. Step 4 was repeated for all price levels US $100 to US $700.

The projected demand at different price levels was thus arrived at and varied from a low of 120 at US $700, to a high of 1200 at US $100 (see Table III.5).

Demand Forecast in Ten Years

Forecast of the demand in each of the next 10 years was also made. In the first year, the potential market that could be tapped was assessed as 30 per cent of the demand at a specific price. This was expected to go up by 5 per cent in each subsequent year to reach 75 per cent in the tenth year.

Cost of Producing and Marketing CD-ROMs

Besides weighing the buyers appraisal of value and affordability of the disk, the major element of production cost must be considered at the same time for assessing the market feasibility. The costing is partly based on the estimates provided by the technical consultant.

		in CAD$
One Time Costs		
CD-ROM processing hardware	30,000	
CD-ROM software	40,000	70,000
Recurring Annual Costs		
Hardware maintenance	3,000	
Software maintenance	5,000	
Operational costs	1,00,000	
Meetings of database owners	60,000	1,68,000
Per Issue Cost		
CD-ROM mastering	3,000	
CD-ROM replication: 300 disks × $4	1,200	
Search and retrieval software licence fee: 300 disks × $ 22 per disk*	6,600	
Total for one issue	10,800	
Total for two issues	21,600	

* The search and retrieval software licence fee varies according to the number of disks as shown below:

Number of disks	*Licence fee CAD $*	*Number of disks*	*Licence fee CAD $*
1–24	50	500–749	20
25–49	40	749–999	18
50–99	30	1000–1999	16
100–199	26	2000–2999	14
200–299	24	3000–4999	12
300–499	22	5000 +	10

Although the study recommended the promotion of five sub-sets of products based on one overarching theme (described in Part IV of the case), the technical consultant confirmed that these sub-sets could be mounted on one CD-ROM. Access could be provided to each of the sub-sets, through search and retrieval software or passwords provided separately to users on floppy disks, individualized according to the subscriptions ordered by each user. In effect, a single CD-ROM was capable of carrying all the five sub-sets (The estimates are based on the pressing of a single disk). The researcher suggested amortising the one time cost over the first five years, as that was a reasonable life span for hardware and software items.

In addition to the above costs, $30,000 was set aside for the cost of promotional activities and materials; and 20 per cent as sales commission for distributors and sales agents. Current commission ranged from 20 per cent to 35 per cent. The total cost of marketing was expected to be 25 per cent of the product price.

Competing Products and Their Prices

The survey confirmed the findings obtained from the focus groups that many of the potential users were MEDLINE subscribers; 44.2 per cent of the respondents bought MEDLINE.

In one of the focus groups, a suggestion was made that the proposed CD-ROM aim to complement MEDLINE as a marketing strategy. This could be done by covering journals and other publications not abstracted by MEDLINE.

A review of the offerings in the market place identified another line of information products offered by MICROMEDEX, a Denver based company, which might compete with the proposed CD-ROM. Although these products had not shown up in the survey, the researchers felt that producers of the CD-ROM should keep them in mind while designing it.

MICROMEDEX's computerized clinical information systems contained the following databases:

- Commercial, Pharmaceutical, Biological, Substance Identification and Management POISONINDEX system—Management/Treatment Protocol Format and Managements List.
- Industrial/Environmental, Chemical Substance Identification and Management: TOMES System.

The price of the competing product MEDLINE was US $2,500 for a full subscription (12 monthly updates). Another product, TOMSPLUS was also priced in the same way. However, a third product, CCIS Martindale, was priced US $500.

Overall Assessment of Market Feasibility

The contents of the CD-ROM were found to be useful (72 per cent) and about 49 per cent of the respondents were willing to purchase the information. Of those who were willing to purchase, different segments were willing to buy at specific prices. Considering the demand and the costs at different prices, the researchers prepared cash flow statements at these different prices.

Miss Lee has been wondering whether she should recommend the project for acceptance and funding by IDRC.

QUESTIONS FOR DISCUSSION

1. Please understand the data analysis presented in the case to arrive at specific decision/inference.
2. What is your assessment of overall feasibility of the Asian CD-ROM on Health and Environment on the basis of the analysis given in the case? Should the CD-ROM be launched or not? Why?
3. To arrive at (strengthen) your decision what further analysis would you like to conduct on the data available.
4. Please prepare (plane for) cash flow analysis to assess the feasibility on the basis of given data.

PART IV

Recommendations on the Marketing Plan

Miss Lee, the information specialist in the South East and South Asian Regional Office of IDRC, was reviewing the findings and recommendations made by Southbound. Southbound was the agency appointed to study the market for the Asian CD-ROM on health and environment. She had already reviewed the feasibility of the project (See Part III of the case). The review of market feasibility of the CD-ROM, along with the recommended marketing strategy, would form the basis of the final decision to be taken in a meeting of the database supplying organizations and the staff of IDRC. (Results of the analysis for market feasibility were presented in Part III of the case.) While about 72 per cent of the respondents found the CD-ROM useful, only 49 per cent of them were positive that they would buy the product.

Prepared by Chin Saik Yoon, Publisher, Southbound, Penang, Malaysia, and Abhinandan K. Jain, Faculty, Indian Institute of Management, Ahmedabad, India. Help given by Mr Ashok Jambhekar, Librarian, Vikram Sarabhai Library, Indian Institute of Management, Ahmedabad, in data collection and case preparation is gratefully acknowledged.
This case was written as part of the *Marketing of Information Products and Services: A Guide for Librarians and Information Professionals,* which was sponsored and funded by the International Development Research Centre, Canada and prepared by Indian Institute of Management, Ahmedabad.
Cases are prepared as a basis for class discussion. As educational or training material, cases are not designed to present illustrations of either correct or incorrect handling of administrative or management problems.

BUYERS AND USERS

Specialized research/professional CD-ROMs of the type studied, were bought by institutions centrally, from a pooled budget, to meet the information needs of multiple users. Many of the actual buyers—people who actually sign the purchase orders—were not users. Librarians were a good example. Similarly, many of the users—doctors, researchers and development specialists—were not buyers of the product. They recommended purchases but their proxies, librarians, did the actual purchase. The study set out to confirm if this set of norms applied to the CD-ROM.

The survey asked respondents if they needed to obtain endorsements from their colleagues, before buying professional books and information services to support their work. Results showed that while about 46 per cent of the respondents needed endorsements, others did not require them.

The respondents requiring endorsements, identified the following as the categories of colleagues and supervisors from whom they had to obtain the endorsements:

Departmental head	27.9%
Departmental/library committee	22.3%
Departmental head and committee	6.1%
Accountant	5.6%
Departmental head and librarian	5.6%
Librarians	4.5%
Librarians and committee	4.5%

The consensus of the focus groups was that most purchases required the endorsements of heads of departments and deans.

POSITIONS AND OCCUPATIONS OF INTERESTED RESPONDENTS

The survey asked the respondents to indicate their interest in purchasing information databases contributed by the database owners. They were invited to rank their interests in five categories: 'Very definitely will buy', 'Definitely will buy', 'May buy', 'Probably will not buy', and 'Definitely will not buy'. The researchers grouped answers within the first three categories, as an indication of positive interest in the disk. The distribution of major groups of respondents who have indicated an interest in buying the CD-ROM, according to their positions and occupations, is shown in Tables IV.1 and IV.2 respectively.

TABLE IV.1 **Buyer Profile: Position**

Position	*Percentage of Total*
Dean/Director	26.4
Librarian/Documentation Officer	20.8
Professor/Chair/Reader	18.7
Acting/Assistant Dean	10.7
Researcher/Scientist/Consultant	9.2
Associate Professor/Instructor	4.2

TABLE IV.2 **Occupation of Buyer**

Occupation	*Percentage of Total*
Librarian	22.8
Researcher	10.8
Medical Doctor	6.3
Pharmacist/Toxicologist	4.5
Medical Doctor/Researcher	3.9
Consultant	3.6
Public Health Specialist	3.3
Medical Doctor/Consultant	3.3
Consultant/Researcher	3.3
Nursing Specialist	3.0

Types of Institutions Interested in Buying

The researchers next analysed the type of institutions interested in buying the CD-ROM (see Table IV.3)

TABLE IV.3 **Respondent Profile: Institutions**

Institutional Type	*Percentage of Total*
University/Medical School	65.9
Government Department and Statutory Body	11.4
Research Institute	9.0
NGO	5.7
Government Hospital/Clinic	5.1
WHO	2.4
Private Sector/Practice	0.6
All Institutions	100.0

Groups of Countries Interested in Buying

The groups of countries of respondents, interested in buying the disk, are given in Table IV.4.

TABLE IV.4 **Respondent Profile: Country Group**

Country Group	*Percentage of Total*
I	30
II & III	42
IV	28
Total	100

Profile of Potential Subscribers

The survey showed that most of the potential subscribers for the CD-ROM would be deans, heads of departments, professors and researchers from universities, research institutes and government health networks. They had an average annual budget of US $1,500 for purchasing reference materials. Focus group discussions, involving representatives from the pharmaceutical industries, indicated a strong interest in buying. The above subscribers were likely to come from North America, and South and South-East Asia.

THE PRODUCT

The researchers made recommendations on the product on the basis of the following analysis:

- Content of the product.
- Strengths and weaknesses of the prototype.
- Retrieval software.
- Hardware preference and access.
- Sustainability from the point of view of participation of database providers.

Contents

The information on usefulness and intention to buy, as analysed in Part III of the case, clearly suggested that the chosen databases were quite acceptable. In addition, a new field was discovered, which could be termed as pollution, environment, toxics, biological/chemical hazards. This was obtained through information from the postal survey. The focus group discussion suggested different areas of interest in different countries. Therefore, the researchers recommended that all the databases tested in the research enjoyed a good market and hence, must be included in the CD-ROM. In addition, they suggested that different groupings could be made of the original databases and that some more groups (as identified in the focus group discussions) could also be included. The agency suggested five groupings: (i) animals, plants, and minerals of medicinal and economic importance, (ii) health and safety, (iii) water and health, (iv) mosquito borne diseases, and (v) traditional Asian medicine and medicinal and aromatic plants.

Product Enhancement

Colour images, graphics, and photographs should be incorporated in the database, whenever they illustrate a topic. Some possibilities were:

- *Traditional medicine*: Illustrations of plants and methods of preparing them.

- *Wealth of India:* Pictures of plants, animals, and methods of management/cultivation, harvesting and processing.
- *NICECIS:* Pictures of safety devices and illustrations to explain concepts.
- *Natural toxins:* Pictures as presently available.
- *Meteorological data*: May be presented in the form of a GIS package.
- *Expert system for mosquito identification:* Illustrations of mosquito types.

Full motion video of various methods of processing medicinal plants and other video footages were requested by focus group members. As the hardware needed to run such disks was expensive and not widely available, this point of enhancement was recommended to be noted for future, when the cost of the hardware became more affordable.

Editing and Design

- *Standardization:* of fields and terminologies, across all databases, would be necessary to forge them into a series.
- *Typography:* italics should be used for all scientific names (many researchers in the focus groups were disturbed that this convention was not followed in parts of the prototype).
- *Change:* the present font to a more legible font, if technically feasible.
- *Image size:* users wanted full screen size illustrations for those images which were intended to assist the identification of objects; the present size did not serve this purpose effectively.

Retrieval Software

CCFIND and CCPUB softwares were found to work well, and were recommended to be adopted for the actual CD-ROM. Users, especially librarians, wanted the following additional features:

- Truncated Boolean searches.
- Facility to store and retrieve search profiles.

- Facility to search all databases with one command in CCFIND.
- A thesaurus on disk.

The researchers recommended:

> CCPUB runs in the Windows environment. This is where opinions differ between respondents of the survey and focus groups. The survey found 70.3% of the sample owning computers had access to the operating software. The focus groups, however, expressed reservations of having easy access to the software and powerful hardware required to run it. Some also expressed dislike for manipulating the mouse. Yet focus groups were unanimous in liking the colour photographs which CCPUB running in Windows could offer. We recommend that we decide in the favour of CCPUB and Windows. The survey confirmed fairly extensive access, and we believe that members of the focus group will accept the operating system after training. Hardware prices—with the introduction of Pentium—is in a free fall and the cost of video cards is also falling. It is likely that by the time the CD-ROM is launched in the market, the hardware will be more affordable than it is now and Windows more widely used.

Printing Facility

The recommendations on the printing facility were:

> The existing CCFIND and CCPUB printing capabilities were very satisfactory for text and of acceptable quality for illustration. The technical feasibility of incorporating graphic files in Postscript language may be explored. Training and research institutions will find this an attractive feature for the production of publications and training support materials via laser-jet printers.

PLACE

The respondents were asked about the channels through which they acquired most of their new reading and reference materials. Since librarians represented a principal channel, further analysis of the survey data was done to determine the channels through which the librarians, themselves, obtained their supply of information products. Table IV.5 summarizes the results.

TABLE IV.5 Channels used for Acquiring Reference Material

Channel	*Percentage of Total Sample*	*Percentage of Librarians*
Direct from Publisher	43	42
Through Librarian	40	12
From Bookstore	31	29
Via Distributor	30	64

The focus groups gave different ideas of what they felt were good places for the marketing of the proposed CD-ROM. Indian groups suggested the publication division of a national scientific agency be appointed as the principal distributor in India. There were two reasons for this suggestion: the first was that this was a highly reputable institution, which would lend much credibility to a new and untested product, and the second that, as a government institution, it would enjoy lower customs tariffs and, therefore, allowing savings to be passed on to Indian buyers. The proposed CD-ROM could consequentially be competitively priced in the Indian market.

The Thai and Filipino groups suggested working through government health departments. The idea was to get top health officials convinced of the usefulness of the CD-ROM, with the ultimate objective of winning their endorsements for the disk, and inclusion of demonstrations and use of the disk in in-service training programmes.

The Indian, Filipino and Thai groups were unanimous in their recommendation of national medical conventions and annual meetings of professional associations, as channels for creating awareness of the CD-ROM. Some of these conventions were periodically held in conjunction with regional and international gatherings; this could expose the disk to bigger audiences.

Cross-Selling

The researchers were interested in the potential for cross-selling amongst members of the consortium. Cross-selling, in the context of this study, was taken to mean the promotion of new allied products to existing groups of subscribers, belonging to various members of the consortium. This pooling of subscribers' information could be a major advantage from the viewpoint of marketing. The survey data were analyzed to gauge the interest of subscribers of individual database owners, in purchasing the information offered by other owners. Table IV.6 summarizes the analysis.

TABLE IV.6 **Information Offered by Other Owners**

	Occupational Health	*Environmental Sanitation*	*Aromatic and Medicinal Plants*	*Traditional Local Med.*	*Natural Toxins and Venoms*	*Mosquito Borne Diseases*
Customers of :						
TROPMED	52.1	65.8	NA	54.2	58.5	81.5
APPROTECH	37.6	72.3	41.2	64.8	88.9	46.7
SEARCA	50.0	25.0	80.0	75.0	25.0	25.0
IDRC	63.6	83.3	36.4	75.0	63.6	66.7

The results indicated a good potential for cross-selling amongst the four organizations for which data were available. The strength of the consortium could, thus, be exploited in the promotion of the CD-ROM.

Recommendations

The following were found to be the best places for marketing the CD-ROM:

- Libraries.
- National centres of excellence in the fields covered.
- Conventions of professional associations.
- Regional 'landmark institutions' (a term used by the researchers to describe organizations frequently visited by researchers, practitioners, policy-makers and government

officials on study/technical tours: IDRC, UNESCO, WHO and ILO Regional Offices).

- Institutions represented by the database owners.

PRICE

Pricing was an important decision for both financial viability and tapping the potential in the long run. Balancing the two was not an easy task. The following recommendations were made, keeping in view the twin objectives in mind:

- The price for each theme in the series be fixed at US $400 for the North countries and US $ 200 for the South Countries for an annual subscription comprising two updates.
- Subscribers taking up more than one sub-thematic area be given discounts based on the following scale:
  2 themes: 10 per cent   3 themes: 20 per cent
  4 themes: 30 per cent   5 themes: 40 per cent
- Offer 20 per cent discount or 'free' themes for the launch period of the CD-ROM to subscribers.
- Subscribers who use the disks on computer networks will pay the following licence fees:

Number of work-stations on the Network	Annual Fee
2 to 5	$600
6+	$800

PROMOTION

Promotion was going to be a key decision area for the consortium. Southbound made specific recommendations about promotion: target audience, objectives, promotion tools to be used for each type of target audience, broad outline of messages for each tool, timing of promotion and budget. Before making these recommendations, the agency had analysed the results of the research.

Analysis of Research Results

Sources of Information

The study set out to discover the buyers' sources of information of new reading and reference materials. A summary of the survey results is given in Table IV.7.

TABLE IV.7 **Sources of Information of Buyers**

Sources of Information	*Pecentage Respondents*
Catalogues and Pamphlets	16.5
Catalogues and Colleagues' Recommendation	12.9
Catalogues, Colleagues' Recommendation, Reviews and Abstracts	10.6
Catalogues, Colleagues' Recommendation and Reviews	8.2

Timing

The timing of the launch and distribution of promotional materials was considered important. For example, wrong timing may lead to contact with potential customers at a time when they did not have funds. The survey asked respondents when they made most of their purchases. About 80 per cent of the respondents had no specific time for placing orders. The rest of the responses were between 1 to 2 per cent in January, February, April, May, June, October and November.

Strategies

The focus groups were asked to suggest promotional methods which they felt would be most effective for selling the CD-ROM. They recommended several promotional strategies:

- Concentrating on libraries.
- Conducting demonstrations for the management level staff of institutions.

- Mailing promotional materials.
- Providing demonstration discs.
- Arranging donors to provide hardware and software to user-institutions which could not afford to purchase them on their own.
- Promotion through NGO networks.
- Conducting training sessions.
- Giving talks about the CD-ROM at professional meetings.
- Advertising in professional journals.
- Pricing the product reasonably.
- Exhibiting the product at professional congresses.
- Lending out the CD-ROM to potential users for short periods.
- Selling through credible institutions such as universities, ministries and health departments.

Strategies for Target Segments

The specific strategies recommended for each target segment along with objectives are summarized in Table IV.8 (see Exhibit IV.1 for details of the strategies).

Budget and Timing

The budget for promotion was set at US $30000.

The majority of respondents said that they had no specific time for purchases. The minority who had specific times fell into two clusters: one that purchased in the first half of the year, peaking in May, and the others buying in the last quarter, peaking in October and November.

The researchers recommended that promotion be carried out three times a year to coincide with peak buying as follows:

First cycle: February   Second cycle: April

Third cycle: September

This was likely to tap the market when fresh funds were being released for a new year, as well as the spending peaks towards the end of each financial year, as departments and libraries worked to fully disburse balance funds.

TABLE IV.8 **Objectives and Strategies of Target Segments**

Segment	*Objectives*	*Strategies*
End-Users	Convince of product usefulness.	Reviews and articles in major medical journals.
	Create awareness.	Direct mail.
	Convince of product usefulness and reliability for personal use.	Demonstrations at professional conferences. Advertisements in journals.
	Motivate to recommend purchase.	Inserting flyers in journals.
Librarians/ Deans/ Heads of Department	Create awareness. Convince of usefulness to institutions. Motivate to recommend and approve for staff use.	Pre-publication bulletins. Reviews and articles in journals. Letters of endorsement from authorities. Demonstrations. Personal sales calls.
Distributors /Sales Agents	Create awareness. Convince of usefulness and reliability. Support marketing efforts.	Select and appoint newly established distributors. Pre-publication bulletins. Demonstrations and training. Provide sales promotion kit.
International Development Agencies	Create awareness. Convince of reliability and usefulness for developing country institutions. Motivate provision of hardware and software for developing country institutions.	Pre-publication bulletins. Personal visits and demonstrations. IDRC initiate inter-agency contact. Provide samples and sales material. Contribute articles and illustrations for agency publications and periodicals.

Miss Lee has been wondering whether she should recommend the acceptance of the recommendations as they were, or change some in the light of her understanding of the analysis and the situation, or request Southbound for more analysis.

Exhibit IV.1

Promotional Strategies for Target Segment

Strategies for End-Users

- Reviews and technical papers placed in selected major medical journals.
- Direct mailing of packages ('mail shots') comprising an introductory letter signed by an appropriate database owner and a promotional brochure.
- Demonstrations and exhibits at congresses.
- Advertisements in journals.
- Insertion of promotional flyer ('insert') in journals.

Strategies for Librarians and Deans/Heads of Departments

- Pre-publication bulletins.
- Reviews and technical papers in library and medical journals.
- Mail shots accompanied by letters, or messages or endorsement from local ministry of department or health and six copies of the brochure.
- Demonstrations and exhibits at congresses.
- Demonstration and sales call.

Strategies for Distributors/Sales Agents

- The ideal distributor/sales agent to be appointed was thought to be the one who was relatively new in the CD-ROM business and who was actively sourcing new products to sell. Established agents and distributors were already representing competing, higher priced products with a higher profit margin—they were likely to allocate less efforts to promoting the CD-ROM.
- Pre-publication bulletins.
- Personal calls, demonstrations and training.
- Provision of sales kit comprising
  - Recommended sales strategy.
  - Demonstration disks.
  - sample CD-ROM.
  - Promotional brochures.
  - Part funding for participation in exhibitions.

Strategies for International Development Agencies

- Pre-publication bulletins.
- Personal visits, briefings and demonstration.
- Inter-agency consultations, led by IDRC, to explore bulk purchases of the CD-ROM for free distribution to users who may lack funds to buy the CD-ROM.

- Provision of demonstration disks, sample CDs and promotional brochures for distribution to agencies' contacts: the preferred alternative is agencies providing letters of endorsement and their mailing-lists for direct mailing by us.
- Provision of articles and illustrations for publication in agencies' magazines and newsletters.

QUESTIONS FOR DISCUSSION

1. Please understand and critique the analysis presented in the case for deciding/infering:
   - Target customers
   - Product Design
   - Places for marketing
   - Pricing
   - Promotion
2. Do you agree with the recommendations made and analysis done for the same?
3. Please suggest suitable modifications in the data analysis (plan) for arriving at appropriate decision in the areas mentioned above and justify the same.

CASE STUDY

B

Caribbean Energy Information System

Mona Whyte and S. Sreenivas Rao

PART

I

Origin (1984–87)

At the beginning of the 1980s all Caribbean countries, except Trinidad & Tobago, relied heavily on imported fuel, totalling approximately 98% of the commercial requirements. This resulted in a drain on the foreign reserves and impeded economic development.

In July 1983, the heads of Caribbean Community (CARICOM) governments adopted a Regional Energy Action Plan (REAP). As part of this plan, the Caribbean Energy Information Service (CEIS) was created to coordinate and augment existing collections of energy information.

WORKSHOP

To study the possibilities of establishing CEIS, a workshop was held in Trinidad from 14–18 May, 1984. The workshop was

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This case was written as part of the *Marketing of Information Products and Services: A Guide for Librarians and Information Professionals*, which was sponsored and funded by the International Development Research Centre, Canada and prepared by Indian Institute of Management, Ahmedabad.

Cases are prepared as a basis for class discussion. As educational or training material, cases are not designed to present illustrations of either correct or incorrect handling of administrative or management problems.

organized by the United Nations Economic Commission for Latin America and the Caribbean (UNECLA) and sponsored by the Caribbean Development Bank (CDB) and the Commonwealth Science Council (CSC). It was attended by energy scientists and information specialists from 11 Caribbean countries and representatives from regional and international organizations.

The workshop drew on the expertise and experience of the Commonwealth Regional Renewable Energy Resources Information System, based in Australia, which had already put together the needs of the Asia/Pacific region.

For the workshop, a background paper entitled 'Overview of Caribbean Energy Issues' was prepared by Dr Trevor Byer, Regional Energy Adviser (CDB/CARICOM).

The workshop considered the following subjects to be important in assessing the energy information needs for the region:

1. Sources of petroleum, natural gas, coal, charcoal, fuel wood, biogas, bagasse, fuel alcohol, solar power, wind power, hydropower, ocean-based energy, and geothermal energy.
2. Electricity supply, distribution and conservation.
3. Energy conservation and management.
4. Watching brief on new technologies.

The most important information types, according to the workshop, were:

1. Policy and planning material.
2. Consumer information.
3. Industrial material, including management and conservation.
4. Scientific and technological information.
5. Environmental impact.
6. Appropriate technology and information for entrepreneurs.

The workshop estimated that the database would grow by about 500 items per year. Demands would vary widely from country to country and its level appeared difficult to determine. In general, demand would lie between 5 and 100 requests per year in each country, although it was 20 requests per day in Jamaica, reflecting the public awareness campaign current in that country. However, the University of West Indies handled almost 60 enquiries per year.

The workshop recognized that four countries—Barbados, Guyana, Jamaica, and Trinidad & Tobago—had extensive collections of information on energy. The other countries had at least one library, collecting information, and also depended on regional organizations, such as CDB, for supplementing their collections.

The workshop found that all countries provided passive references through books and articles or by reference to regional services, such as CARISPLAN. Other services, such as directories and bibliographies, were very limited. None of the systems handled numeric data.

The workshop identified the following gaps as illustrated in Table I.1

TABLE I.1 Gaps Identified in the Workshop

General Gaps	*Subject Gaps*	*Resource Gaps*
Numerical data handling.	Fuel alcohol.	Skilled manpower.
Directories of activities (including research in progress).	Energy conservation and management.	Equipment.
Document delivery.	Environmental impact information.	Legal deposit laws.
Regional bibliographies.		National information systems or plans.
Practical information.		
Directories of experts, manufacturers and equipment.		
Research documentation.		

Recommending the formation of CEIS, the workshop suggested that the system be based, as far as possible, on existing facilities and consist of organizations with regional responsibilities such as CDB, UN-ECLA, CARICOM, the University of the West Indies (UWI) and national focal points (one per country). It also suggested that the system be a part of CARIS and be integrated with the existing and future activities of the regional information systems such as CARISPLAN and CAGINDEX.

The overall goal of the CEIS, according to the workshop, would be to enhance the region's capabilities in energy information collection, storage, and utilization so as to facilitate the optimum conservation and utilization of the region's energy resources.

CEIS products and services would include:

1. Bibliographic services, including establishment of data bases, provision of abstracts and indexing.
2. Document delivery, based on microfiche.
3. Directories, including those covering expertise, products and research in progress.
4. Enquiry answering services, including information analysis and packaging.
5. Numerical data.

The workshop agreed upon the following regional responsibilities:

1. Coordinate the activities of national focal points, with particular emphasis on the collection of bibliographic information, indexes or current awareness directories and other regional lists from the Caribbean.
2. Produce an index for all the Caribbean material, and provide a document back-up service for the material in either microfiche or paper formats.
3. Collect material of a regional nature, from whatever source, for input into the system but also collect indexes, bibliographies, directories and abstracting services relating to energy matters.
4. Disseminate material of interest to national focal points.
5. Operate a referral centre.
6. Assist energy information development in the region, particularly by training and the promotion of the system.
7. Establish links with overseas on-line vendors and provide this service to those national focal points which do not have an access to it.
8. Collect published statistical data on energy and assist in the collection of numerical energy data relating to the Caribbean.

The workshop agreed upon the following national responsibilities:

1. Provide information to the centre, with appropriate regional responsibilities. At a minimum level the information should consist of a bibliographic description and subject indexing terms.
2. Develop and strengthen national energy information centres.
3. Provide a document delivery system at local and regional levels.
4. Assist the centres, with regional responsibilities, to collect data for the production of specialized bibliographies, directories, lists, etc.
5. Provide a query answering service at local and regional levels. This may involve direct answers to inquirers or referral to more appropriate resource centres.
6. Collect statistical data on work handled in the national centres, particularly with regard to the evaluation of guidelines and targets.

MISSIONS

Following the workshop's recommendations, a mission in April 1985 identified Jamaica as the regional centre for CEIS, with its headquarters located at the Scientific Research Council in Kingston, Jamaica.

In October 1985, the Government of Jamaica approached the Commonwealth Science Council (CSC), the International Development Research Centre (IDRC), and the United Nations Educational, Scientific and Cultural Organization (UNESCO) for necessary institutional, financial and material support to initiate the system.

Jamaica, as the host country for the regional focal point, undertook another mission to:

1. Brief national representatives on CEIS, and to secure an agreement with the various countries to participate in the network.
2. Identify the local national institution and liaison officer/ project coordinator for CEIS.
3. Identify the infrastructural and training needs of the national focal points to enable their full participation in the CEIS network.

A mission consisting of three persons from Jamaica's Department of Science, Technology and Research, Ministry of Agriculture, Scientific Research Council, and Ministry of Mining, Energy and Tourism visited 60 institutions in 12 countries to interview and collect data in November-December 1986 to implement CEIS.

A questionnaire, designed to determine training and infrastructural needs, was administered by the mission, during discussions with personnel, in each institution. This approach was preferred to submitting the questionnaire beforehand, in order to get a first hand view of the information situation.

Besides background information, the questionnaire contained questions about the organization on the following items:

1. Type and number of professional staff employed.
2. Type and number of personnel required and employed by the computer section.
3. Training courses which members of the information staff have attended over the past five years.
4. Areas in which urgent training is required for effective participation in CEIS, and the number of staff members who would need to undergo this training.

On energy information, the questionnaire covered the following items:

1. Whether the institution had an energy, economics and planning unit, a library or information unit. If yes, the type and number of personnel employed and required by these units.
2. Whether the organization collects and processes any information on energy policy and planning, consumer informa-

tion on energy, industrial energy information, management and conservation, scientific and technical information, environmental impacts, and appropriate technology. If yes, in what form—statistical tables, forms, bulletins, books, journals, reports, microforms, or others and from where—local or international sources.

3. Whether the organization collects and processes information on new and renewable sources of energy. If yes, in what areas, in what form, and from where.
4. Whether the organization is involved in energy research, and if so, in which areas.
5. Who are the readers for whom the information is intended, and the number of requests received for energy information per month.
6. Size of collection in various areas.
7. Number of new documents added each year to the institute.
8. Number of periodicals.
9. Number of statistical reports on energy.
10. Facilities offered—reading only, borrowing, copying, literature searches, etc.
11. If no information/library facilities are offered, does the institute have any need for an energy information service?

Information was asked as to whether the following facilities were available at the organization:

1. Access to computers.
2. Energy database and, if yes, what type and size.
3. What information products does the information gener—ate—bibliographies, directories, statistical tables, accession lists, others?
4. Microfiche/printers.
5. Communication links.
6. A leased telephone line.
7. A modem.
8. Communications software.

9. Whether any formal or informal inter-island information service for the delivery of information existed. If yes, what were the countries and the turnaround time for the delivery of information? Was this service satisfactory?
10. Would the organization participate in CEIS? If no, why not? If yes, which organization was most suitable to function as the national focal point for CEIS? If selected as the national focal point, what were the necessary administrative steps to officially formalize the functioning of the organization in this capacity?

A system's investigation was undertaken through the questionnaire by indicating two situations. The first situation was:

> A client in your country wishes to dry 700 lb of ginger, for export, using a solar crop dryer. The person would like information on the financial and technical aspects of construction, operation and experiences of such equipment in the Caribbean. He would also like to have technical advice from persons and/or institutions at a cost, if necessary.

The respondents were asked to outline the steps they would take to satisfy this request under their existing system, and under the proposed CEIS system.

The second situation was:

> A regional/subregional institution, e.g. CARICOM, the Organization of Eastern Caribbean States (OECS) is formulating a proposal for a more efficient petroleum supply system for the Caribbean region. Data are required on the sources, quantities and prices of crude oil and petroleum products which are imported annually, in each of the Caribbean countries, in order to carry out the study.

The respondents were asked to outline the steps they would take to satisfy this request under the existing and proposed systems.

The approach to establish the network was as follows:

1. To first develop the regional focal point which was based at the Scientific Research Council in Kingston, Jamaica.

2. To interact with the national focal points on a group basis. All, however, did not join the system at the same time. Initially, the network began its activities with a small number of national focal points and later expanded to 15 member countries. Over a period of time contributions and network participation of countries were varied—strong with some and weak with others.

In operation, the regional focal point only laid down the criteria for the selection of liaison officers, and the countries chose the persons. As a result, CEIS was able to get the participation and commitment of the member countries.

Since the regional focal point was hosted and administered within the information division of the Scientific Research Council (SRC), some internal organizational adjustments had to be introduced. For instance, the Project Manager had to report directly to the Executive Director of SRC (which was not the usual case), who had ultimate responsibility for SRC's role as a regional focal point. This change was necessary for effective and speedy decision-making on matters concerning the network.

The CEIS consisted of approximately 65 per cent energy specialists representing government agencies and 35 per cent information systems specialists. This combination helped the network to make pragmatic decisions regarding energy policies in the various countries as well as develop information gathering skills, which were of relevance to the energy scientists.

SPONSOR

CEIS received sponsorship from IDRC, CSC and UNESCO for eight years, at a total cost of US $ 1,357,830. In addition, the Government of Jamaica, as the regional focal point, contributed US $ 292,570. The governments of the countries in the region also agreed to provide funding for NFP staff and day to day operations of the system.

CEIS

CEIS pooled the energy information, collected from the following 15 Caribbean countries.

1. Antigua and Barbuda
2. The Bahamas
3. Barbados
4. Belize
5. British Virgin Islands
6. Cuba
7. Dominica
8. Grenada
9. Guyana
10. Jamaica
11. Montserrat
12. St. Lucia
13. St.Kitts/Nevis
14. St. Vincent and Grenadines
15. Trinidad & Tobago

The following five regional/subregional institutions supported and provided information to CEIS.

1. CARICOM (The Caribbean Community)
2. UN-ECLAC (The United Nations Economic Commission of Latin America and the Caribbean)
3. OECS (The Organization of Eastern Caribbean States)
4. CDB (The Caribbean Development Bank)
5. UWI (The University of the West Indies)

The regional focal point had the following staff headed by a Network/Project Manager:

1. A research officer.
2. A data analyst.
3. An indexer/abstracter.
4. A systems analyst.
5. A data entry clerk.
6. A publications clerk.
7. A secretary.

CEIS comprises a network of national focal points which are coordinated by liaison officers and regional agency representatives as shown in Fig. I.1

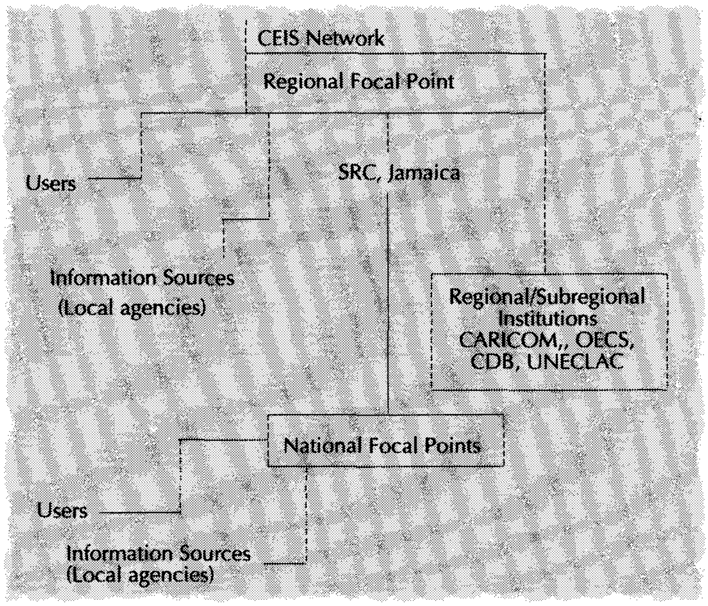

Fig. I.1

QUESTIONS FOR DISCUSSION

1. If you were the head of the regional focal point, how will you plan to implement CEIS?
2. If you were the head of national focal point, how will you plan to implement CEIS?

PART II

Getting Established (1987–93)

The Caribbean Energy Information System (CEIS) was launched in 1987 as a networking system among 15 countries in the Caribbean, consisting of a regional focal point (the central coordinating unit for the whole network) and 15 national focal points. Each country, in turn, has a local networking subsystem, with each national focal point operating as a coordinating unit for the local agencies, from which data are sourced for input into the system.

The system is targeted at government organizations, private institutions and individuals engaged in energy related work, in order to make energy information into a key resource for development in the region. The network enables the English-speaking Caribbean and Cuba to document, analyse and disseminate energy information/data.

Prepared by Mona Whyte, Project Coordinator, CEIS, Scientific Research Council, Kingston, Jamaica and S. Sreenivas Rao, Faculty, Indian Institute of Management, Ahmedabad, India. Help given by Mr Ashok Jambhekar, Librarian, Vikram Sarabhai Library, Indian Institute of Management, Ahmedabad, in data collection and case preparation is gratefully acknowledged.

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CEIS serves over 1,200 clients in the Caribbean. The clients comprise businessmen, consultants, engineers and technicians, manufacturing industries, service organizations, students and teachers, and planners and policy makers.

STRENGTHS

The CEIS is one of the two regional energy information systems (the other being the Latin American Energy Organization, OLADE) operating in the Caribbean, and the only Commonwealth Caribbean information network. It has assessed its opportunity in the Caribbean market as being able to:

- Offer an energy information service which includes the very small islands in the region. The other system provides information on the larger states.
- Provide products in a published format—an alternative to the second system which mainly offers products in electronic form.
- Provide a forum for discussion for the energy scientists in the region.

PRODUCTS AND SERVICES INTRODUCED

The main publications/services of CEIS are:

1. Caribbean Energy Abstracts (Quarterly)
2. CEIS Update (Quarterly)
3. Petroleum Energy Statistics
4. Directory of Energy Research (2 issues per year)
5. Directory of Energy Expertise (2 issues per year)
6. Petroleum Market Reviews (Quarterly)
7. Caribbean Energy Titles in Microfiche (Quarterly)
8. On-line Search (Databases)

MARKET

Based on the following studies, the total market for the CEIS products and services has been identified as including energy and energy-related institutions throughout the Caribbean:

- The 1984 workshop, which was attended by a wide cross-section of energy scientists and information specialists, identified specific energy information needs.
- The three-man mission in 1985, which visited selected countries, identified the possible end-users for the system and the form in which the information, as perceived by the end-users, should be provided.
- A small informal survey, by network managers in 1989, to correlate information being collected for building up a database with perceived user needs.

Information from these initiatives was used to get started. In June 1991, the steering committee, consisting of the national liaison officers, decided to do a User Needs Survey because it felt that the response for the CEIS products and services was far below the needs expressed by the targeted clientele. The survey was to determine the reasons for the variance, pinpoint weaknesses and areas of neglect, and identify the strengths. Specifically, the objectives were to:

- Measure the usage of CEIS products and services.
- Determine needs which are not presently being met by CEIS.
- Find out other sources of energy information which are being used by the targeted clientele.

Before doing the full scale survey, the committee decided to do two pilot surveys.

PILOT SURVEYS

Dominica (population of 81,000) and Jamaica (population of 2.46 million) were chosen to conduct the pilot surveys (one each) to represent a small and a large country. It was expected that the countries which are similar to the Dominican size, population, and level of energy activities could adopt the Dominican model and others, the Jamaican model.

The pilot surveys were meant to test the validity of the questionnaire, the methodology and sample. They were targeted to the present energy users and the potential ones. The pilot surveys were expected to capture active areas of research, so that CEIS could provide the necessary support. To begin with, a sample of questions used in a similar survey for engineers was used.

The pilot surveys were conducted in 1992. The questionnaire was administered, as the Dominica report indicated, to four persons engaged in the energy field—policy makers, planners, researchers, and managers and technicians. Respondents were selected from 21 persons who would make up the sample for the final survey. Ten organizations, as indicated by the Jamaican report, were covered.

In the Dominican pilot survey, apart from the identification of the responding executive and his/her organization, questions on the following areas were asked:

1. Area of business.
2. Importance of energy information to the success of the respondent's organization.
3. Source of information.
4. Type of energy information required and its frequency.
5. Familiarity with CEIS.
6. If familiar, how did they get to know about the CEIS.
7. Use of CEIS publications.
8. If any CEIS publications were used, rating of their usefulness.
9. Whether they would like to receive these publications regularly.
10. If yes, which publications?
11. Willingness to pay for the publications.
12. Whether they used the services of the National Documentation Centre for sourcing any other type of information?

For the pilot survey, the Jamaican questionnaire contained, apart from the questions on the respondent and his/her organization's identification, the following issues:

Users

1. Area(s) of business activities.
2. Whether energy information was necessary for the respondent's business.
3. Frequency of the use of energy information.
4. Type of energy used in business operations.
5. Type of energy information used.
6. Whether any additional energy information needed to be accessed.
7. If yes, list the specific type of information.
8. Rank difficulties in getting specific information.

Quality of Service

9. Ranking (on a 1-8 scale) of the sources of information according to regularity of use.
10. Recent information requested from the national focal point.
11. Reaction about the waiting period after making the request.
12. Ways of improving national focal point services.
13. Use of the information received from the national focal point and its rating.
14. Difficulties in obtaining energy information from sources other than the national focal point.
15. If yes, list them.

Regional Information

16. Whether there was an access to regional energy information.
17. If yes, sources and types.
18. If no, whether access on various items was needed.

CEIS

19. Ever heard of CEIS or its publications/services?
20. If yes, sources of information.
21. Identification of CEIS publications which were seen, heard or used.
22. Which publications/services were found to be most useful?
23. If any CEIS materials were used, rate the information provided.
24. If any CEIS publications were found useful, a willingness to subscribe to selected ones.
25. Indicate preference for the ones you would be willing to subscribe or purchase.
26. Access to other types(s) of information, not supplied by CEIS as yet.
27. If yes, list the type(s) and relevant format of the energy related information which CEIS should offer.
28. More information on energy and its effects on the environment.
29. Willingness to supply information for publication in the CEIS Newsletter.
30. Type of energy information that could be supplied.
31. Advertisement in the CEIS Newsletter?

The Jamaican pilot survey also had a sheet for the interviewer to record specific body language, and additional information relating to problems/difficulties which the respondent encountered in response to each question. This information was considered vital for reviewing the questionnaire after the pilot test.

USER NEEDS SURVEY IN 1993

A regional survey was conducted, in 1993, on the user needs as well as the relevance of the scope, content, and format of the CEIS products and services, from 409 responses from the 11 participating countries (Table II.1).

TABLE II.1 Population and Sample Size of Countries Surveyed

	Country	*Population*	*Energy Population*	*Sample Size*
1.	Barbados	258,600	96	60
2.	B.V.I.	13,000	24	13
3.	Dominica	81,000	31	30
4.	Grenada	94,800	88	45
5.	Guyana	781,100	113	25
6.	Jamaica	2,460,000	248	100
7.	Montserrat	11,900	20	14
8.	St. Kitts/Nevis	44,500	20	14
9.	St. Lucia	151,290	30	16
10.	Trinidad & Tobago	1,260,000	250	60
11.	St. Vincent	106,598	84	32
	Total	5,262,788	908	409

The survey could not be done in Antigua and Cuba, the other two participating countries.

Objectives

The principal objective of the survey was to help formulate strategies to increase the demand for energy information, through CEIS. The sub-objectives were to find out:

1. The level of importance of energy information to the users and potential users.
2. The sources of information.
3. The type of information required and the frequency of use.
4. Awareness of CEIS and the source of such awareness.
5. Use of specific publications and their potential usefulness.
6. Need for the specific publication and willingness to purchase it.
7. The importance of a government agency or documentation centre as a source of information.
8. Ways in which CEIS could improve its relevance in the wider business community.

In addition the survey was intended as a performance analysis of CEIS after five years of operation. It was also meant as a means to introduce CEIS to the respondents. Interviewers had been trained to speak competently on the contents of each publication, and create a demand for the information in instances where there was no previous awareness.

Methodology

A questionnaire was used. In about 90 per cent of the cases face-to-face interviews were also held. A wide cross-section of businesses were surveyed, including research, production, marketing and professional groups, directly or indirectly, involved in energy matters. A 31-item master questionnaire was designed. Many questions had multi-response options. The questions asked were more or less the same as those contained in the Jamaican pilot survey.

Some of the limitations of the survey were:

1. Each country adjusted the question items according to the perceived sensitivity to needs. The master questionnaire was amended and applied in varying degrees. Some countries used all the 31 items. Some countries amended and adapted the questions. Some others varied the number of questions.
2. The multiple response questions posed difficulty in analysis. For example, Question 1 required a statement of area(s) of business activity and eight categories were given. Most of the responses indicated more than one category. Unless the interviewer indicated the main area of activity, the analyst had difficulty in correlating discrete business activities with the publications most required. Also multiple counting of personnel could result from multiple responses.
3. For lack of a seemingly justifiable basis, the sample size was based on the total population of a country. A more meaningful basis would have been the total population which used energy data. But this was difficult to do owing to the region's inadequate databases.
4. The geographical spread of the samples was restricted to prime cities, except in Jamaica.

5. The level of personnel interviewed was also a limiting factor. For instance, the technocrat who purchased CEIS publications or advertised in them, was actually not the person with the authority to decide on spending money for the same. This meant another interview within the same organization to get an accurate or definitive response. This was either not ascertained or delayed the completion of the questionnaire.

Content

The questions were designed to provide response to general issues like:

1. Importance of energy information to the 'public', i.e., the energy information users.
2. Business profile of the client.
3. Type of information used.
4. Area of information which the businesses required.
5. Present sources of information.
6. Frequency of use of information.

There were also questions to elicit specific information on CEIS like:

1. Public awareness of CEIS.
2. Usefulness of CEIS publications/services.
3. Potential usefulness of CEIS publications/services.
4. Demand for CEIS publications/services.
5. Willingness to pay for CEIS publications/services.
6. Perceived role of national focal points in disseminating CEIS information.
7. Access to other regional information.

Major Findings

The major findings of the survey could be summarized as follows:

1. Most respondents (80 per cent) agreed that energy information was important for their businesses. Of these 43 per

cent strongly agreed. In nine countries, 77 per cent affirmed the importance of energy information for their current and future development. Only an average of 14 per cent of the surveyed population in the region did not consider energy information important for their businesses.

2. People sought external sources of energy information, prior to contacting the national focal point sources. Approximately, 77 per cent used professional journals and magazines which originated outside the Caribbean. Energy information was used frequently—on a monthly basis as well as when the need arose.
3. The average regional awareness of CEIS itself, was 41 per cent. This figure was somewhat exaggerated as some persons became aware of CEIS as a result of the survey. Moreover, a small sample size in some countries affected the percentage figures. The awareness was very low among the private sector, low among government agencies, and high among government energy centres.
4. The regional average awareness of CEIS publications was only 15 per cent. The use of the CEIS publications ranged from a high of 15.5 per cent to a low of 0.2 per cent. In two territories, none of the persons interviewed had even seen the CEIS publications.
5. The role of the national focal points in publicizing CEIS publications and services was critical to the awareness of the existence of the CEIS.
6. Persons were willing to pay for the CEIS publications.
7. One of the main criticisms of the CEIS publications was that data were usually out of date by the time of publication.
8. The layout of the information was also identified for improvement. Some persons requested more graphics and tables.
9. In spite of these negative reactions, respondents were anxious to be a part of a new CEIS thrust in which topical issues were presented. Matters such as energy conservation, alternate energy, energy research in the region, new

> equipment, and technology were suggested. The respondents were willing to contribute articles and advertise, on a smaller scale, in the CEIS publications.

In short, the survey report indicated:

> The most important finding of the survey was that CEIS was ineffective in achieving its objectives. The low level of use of publications attest to this. It is therefore critical for CEIS to focus on its deficiencies, and prepare and implement strategies to make it effective. Outdated information, presentation style, inactive national focal points, and lack of promotion are possible contributors to this.

It said:

> The need for marketing and promotion is obvious, as well as the need for self examination by the national focal points concerning their increased role, on a local territory basis, in making CEIS the driving force to national developmental objectives.

It suggested:

> CEIS needs to re-examine its objectives and goals, and perhaps expand them, to satisfy the demand for energy information. The use of such information is vital for development and for escorting the region into the 21st Century.

It added:

> There are enormous possibilities for CEIS as new areas of energy mature, and non-traditional, commercialized renewable sources of energy gain acceptance.

Type of Information Used and Needed

Table II.2 indicates, in descending order of importance, the type of information or subjects that are presently used in business and the information which respondents needed.

The bottom line in the use of energy information is related to reduction of energy costs in the processes of production, the service oriented businesses (hotels), offices, and domestic levels.

TABLE II.2 Type of Information Used and Needed by Respondents

Subject	*Type of Information Used* Total Territory Responses	Rank	*Type of Information Required* Total Territory Responses	Rank
Alternate energy*	211	1	211	1
Conservation**	205	2	191	2
Electricity	172	3	118	5
Consumption	107	4	117	6
Research	106	5	121	4
Prices	94	6	141	3
Other***	72	7	26	11
Power equipment	59	8	60	7
Energy expertise	47	9	54	8
Energy resorves	25	10	46	9
Energy applications	11	11		
Energy prospects	4	12		
Solar energy			37	10

* Alternative energy includes solar energy and the various equipment options, photovoltaic, ocean thermal, wind and biomass energy.
** Conservation methods include not only light bulbs, but also new equipment which had energy saving features such as air conditioners and refrigerators.
*** Other includes new fuels, technologies, and standards.

Respondents seemed to require information on alternative energy, conservation, prices, research, electricity and consumption. These appear to relate strongly to costs.

The correlation between the information being used now and the information required is given in Fig. II.1.

Present Sources of Information

Approximately, 77% of respondents use other information sources such as magazines, professional journals and manufacturer's catalogues. Overseas subscriptions were the norm for multinational corporations which generally expressed that CEIS information is inadequate in content and currency.

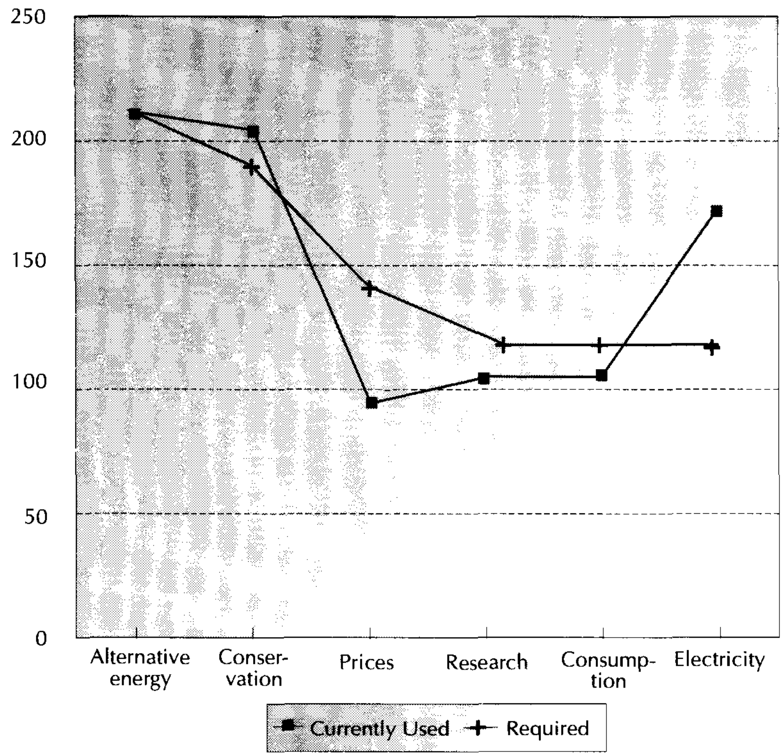

Fig. II.1 *Correlation between Energy Information Used and Required*

Frequency of Use of Information

Majority of respondents use the information on a monthly basis followed by as and when needed (See Fig. II.3).

CEIS Publications

The usage of CEIS publications in the whole region was as shown in Table II.3.

Products and Services

The survey indicated that the users found the content of the products of CEIS to be inadequate: not current enough, not accurate enough, need to reflect greater relevance to needs, unattractive

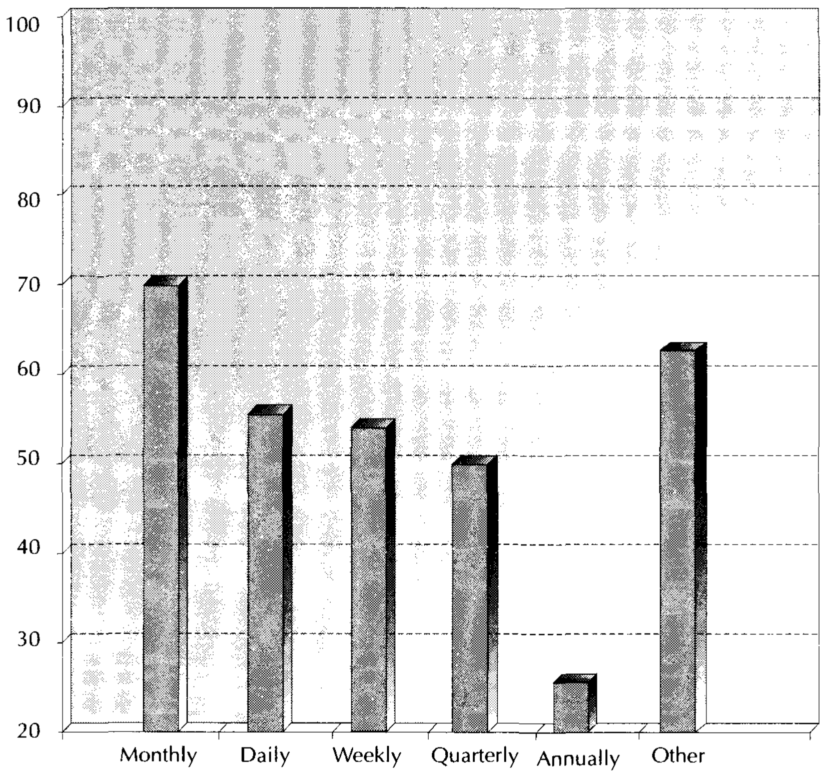

Fig. II.2 *Frequency of Energy Information Used*

TABLE II.3 Usage of CEIS Publications

Publications	*Usage %*
Carib. Energy Abst.	6.4
CEIS Update	15.5
Petroleum Statistics	3.7
Dir. of Energy Research	2.7
Dir. of Energy Expertise	3.3
Pet. Mark. Rev.	3.45
Carib. Ener. Title	0.2
On-line Search D.B.	0.5

and ineffective in format. Poor circulation and late distribution of publications were also cited as shortcomings.

Potential Usefulness, Demand, and Willingness to Pay

Table II.4 Indicates the ranking of the CEIS publications that the respondents found most useful, on a scale of 1 to 8 (1 being extremely useful and 8 not at all useful), the number of respondents indicating interest, and willingness to pay.

During the survey, products were shown to the prospective clients and responses were solicited on the following questions:

- If the CEIS publications/services are found to be useful/needed by you, would you be willing to subscribe to selected ones?
- List, in order of preference, those to which you would be willing to subscribe to or purchase.
- Would you like to advertise in the CEIS Newsletter?

TABLE II.4 Usefulness, Interest and Willingness to Pay for CEIS Publications

Publication	*Potential Usefulness Ranking*	*Demand*	*Willingness to Pay*	
			Respondents	*Willing to Pay (%)*
Caribbean Energy Abstract	3	138	105	26
CEIS Update	1	180	190	47
Petroleum Statistics	3	107	70	17
Directory of Energy Research	4	79	77	19
Directory of Energy Expertise	4	78	76	19
Petroleum Market Reviews	4	64		
Caribbean Energy Title	7	15		
On-line Search Database	7	16		

- How much would you be willing to spend on the acquisition of CEIS information annually? (1) \$1000–5000 (2) \$6000–10,000 (3) \$11,000–20,000 (4) \$21,000–30,000 (5) > \$30,000.

A profile of potential annual expenditure on energy information was created. A number of NO responses showed up because persons interviewed were unwilling to commit themselves, despite the interviewers' assurances that these questions were not binding, and also due to the respondents' inability to take the final decision on spending. Others appeared quite nervous and requested that their responses should not be published. In many instances, the technocrat who was being interviewed was not necessarily, the person with authority to decide on spending money on information. This meant another interview, within the same organization, to get an accurate or definitive response.

The table indicates that more users were willing to pay for the general information publication (CEIS Update) than the specific information publication (Petroleum Statistics).

A small percentage of companies were willing to advertise in the CEIS Update.

Market Segmentation

Based on the demand indicated for specific products and services by a category of users, the degree of demand was assessed (see Table II.5)

Respondents were asked to rank, on a scale of 1 to 5 (5 representing extremely useful and 1 not useful), the usefulness and need of a particular publication to them.

A profile of the business/operations of the persons who were surveyed, served to provide some correlation between their business/operations and their need for CEIS publications (see Table II.2).

Targeting of Specific Segments

The information in Table II.5 was analyzed and broken down, according to the identified segments or specific groups where the

TABLE II.5 **Demand for CEIS Products**

Category	*1*	*2*	*3*	*4*	*5*
Research	H	H	H	H	H
Marketing	H	H	H	M	M
Planning	H	H	H	H	L
Production	H	L	H	M	L
Energy	H	H	H	H	H
Management	H	L	M	L	H
Sales	H	L	M	L	L
Consumer	H	H	M	L	L
Education	H	M	H	M	L

Code: H = High Demand, M = Medium Demand, L = Low Demand
1. CEIS Update 2. Caribbean Energy Abstract
3. Petroleum Statistics 4. Directory of Energy Research
5. Directory of Energy Expertise

network felt it would be able to cope with initially, and target them independently. Thus the present and potential users were categorized as follows (Table II.6).

TABLE II.6 **Present and Potential CEIS Users**

Users by Category	*Present Size*	*Potential Size*
Research & Development	85	386
Energy & Energy Related Institutions	29	55
Education	1522	1600
Planning & Policy Making	55	160
Consumer Oriented	15	4000
Private Sector (Sales, Production)	74	500
Utility & Petroleum Marketing Companies	41	41

The data on potential size of the market is based on the total number of energy and energy related agencies which exist in the region within the respective categories. For example, Education reflects the number of schools and education institutions which exist. The present size reflects the current number which CEIS now serves.

Format

The following item was designed to get the answers which would improve the format of CEIS products:

> List the type(s) and relevant formats of energy related information which you would like CEIS to offer (suggested information formats: graphically, tabular, newsletter tabular, graphical statistical tabular, and graphical colour, etc.).

Conclusions

Major issues considered for upgrading and improving the products, based on the users' recommendations, were:

- Adding colour to the covers of the publications.
- Producing colour graphs.
- Verifying the information given in the publications is current.
- Making content of greater relevance to users' needs (40% on alternative energy issues, 20% petroleum, 10% energy conservation, 20% environment, 5% prices and 5% on other energy issues).

QUESTIONS FOR DISCUSSION

1. If you had to do the pilot survey and the survey, how would you have done it?
2. Given the results of the pilot survey and the survey, what plan of action do you propose for the CEIS and why?

PART III

After the Survey (1993–95)

The information collected from the survey enabled CEIS liaison officers to meet and take decisions on:

1. Developing specialized services for targeted users.
2. Identifying the most marketable products and revamping them if necessary.
3. Devising promotion policies.
4. Pricing strategy.
5. Distribution policies.

DEVELOPMENT OF SPECIALIZED SERVICES FOR TARGETED USERS

It may be recalled that based on the demand indicated for specific products and services by various category of users, the degree of demand was assessed (Table III.1).

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This case was written as part of the *Marketing of Information Products and Services: A Guide for Librarians and Information Professionals*, which was sponsored and funded by the International Development Research Centre, Canada and prepared by Indian Institute of Management, Ahmedabad.
Cases are prepared as a basis for class discussion. As educational or training material, cases are not designed to present illustrations of either correct or incorrect handling of administrative or management problems.

TABLE III.1 **Demand for CEIS Products**

Category	*1*	*2*	*3*	*4*	*5*
Research	H	H	H	H	H
Marketing	H	H	H	M	M
Planning	H	H	H	H	L
Production	H	L	H	M	L
Energy	H	H	H	H	H
Management	H	L	M	L	H
Sales	H	L	M	L	L
Consumer	H	H	M	L	L
Education	H	M	H	M	L

Code H = High Demand, M = Medium Demand, L = Low Demand
1. CEIS Update 2. Caribbean Energy Abstract 3. Petroleum Statistics
4. Directory of Energy Research 5. Directory of Energy Expertise.

The information from Table III.1 was analyzed and broken down, according to the identified segments or specific groups where the network felt it would be able to cope with initially, and target them independently. Thus the present and potential users were categorized as shown in Table III.2.

TABLE III.2 **CEIS Users by Category**

Users by Category	*Present Size*	*Potential Size*
Research & Development	85	386
Energy & Energy Related Institutions	29	55
Education	1522	1600
Planning & Policy Making	55	160
Consumer Oriented	15	4000
Private Sector (Sales, Production)	74	500
Utility & Petroleum Marketing Companies	41	41

DEVELOPMENT OF A SPECIAL INTEREST GROUP

Various initiatives came out of the recommendations of a Caribbean High Level Energy Policy Workshop, which called for a need for energy professionals to debate and discuss energy issues of interest to the region, using the special interest group.

The establishment of a Special Interest Group (SIG) for Energy and Environment was introduced in conjunction with the United Nations Economic Commission for Latin America and the Caribbean. The objective of SIG was to share ideas, experiences and discussions on relevant issues affecting the region via the electronic forum as well as to provide answers to questions.

CREATION OF ENERGY MODELS

It was felt that the policy and planning aspects of the network's database, particularly the petroleum statistical data which had been collected since the inception of the network, could be targeted more precisely, and used more effectively, by regional planners. To this end, the regional university was commissioned to develop a number of energy models for the system, which would incorporate this data and create a more valuable resource, which would be suitable to the needs of the Caribbean energy policy-makers. Training workshops were also held to train network members in the use of these models as well as to introduce the models to the regional policy-makers.

REVAMPING OF PRODUCTS

Based on the survey data, three products—CEIS Update, PETSTAT, and Caribbean Energy Abstracts—were selected for upgrading and targeting to specific segments. The decision to revamp them was based on the survey which identified these products as most useful and most popular among clients.

The layout and format of publications were changed based on interview responses.

The content was improved based on the comments made by the various client categories on the aspects of energy that they wished to obtain from CEIS publications.

Pricing was based on the indication of the respondents as to the amounts they were willing to pay.

CEIS Update

The CEIS Update was expanded to include three additional sections.

For the education sector, a six page column entitled 'Energy for Young Minds' was introduced. Topics were geared to assist students in Grades 10–12, who were having difficulty in answering questions in the Integrated Science, Chemistry and Physics syllabi of the regional council examinations.

For the consumer sector, a section, 'The Consumer and Energy' was added. Articles for this group were mainly of a type that the average energy consumer could be informed of basic energy issues. This section included energy conservation tips, consumers' experiences in the use of alternative sources of energy, etc.

For the policy and research segment, a new column on 'Energy and the Environment' was added. This section covered energy and environmental issues in the various Caribbean countries.

The Update was given a glossy cover, more colour, increase in size from 16 to 32 pages and a more varied subject mix. This made the publication more attractive, of a higher quality, and more likely to be displayed and read by target audiences. In addition, it contained more information on energy, a higher level of discussion, and benefits from the participation of more experienced contributors from respectable institutions. Subscriptions were offered to users at US$ 16 per year.

All this led to an increase in the subscriptions and the personnel identifying themselves with the CEIS Update.

PETSTATS

This was an eight year numeric statistical series of regional petroleum imports, production, marketing, costs, etc. which was mainly used by policy-makers and planners, research personnel, development banks, petroleum companies and statistical institutions.

The publication was revamped to include 12 country series and a Caribbean issue. The time-series for both publications covered the period from 1985 to 1992. A printed cover was added. Colour graphs accompanied the tables. The Caribbean issue was sold at US$ 55 to the focal point users, at US$ 65 to Caribbean public sector users and at US$ 100 to others. The individual country issues were sold at US$ 18.50 to the focal point users, at US$ 25 to Caribbean public sector users and at US$ 30 to others. For packaging, handling and mailing, the subscribers were asked to add 25 per cent of cost in the Caribbean region, 45 per cent of cost in USA, Canada, Central and South America, and 55% of cost in Europe and all other countries. All orders were to be sent by air mail.

PETSTATS found favour with specialized regional energy institutions, e.g. oil marketing companies, development banks and some international energy agencies.

Caribbean Energy Abstracts

This abstracting journal highlighted papers which were presented and summaries of research which were being conducted in the region. It was used mainly by the research and development sector as well as some private sector clients. No changes were made in this publication.

Subscriptions were available at US$ 25 per annum.

The additional subscription to this publication was almost zero. Much emphasis was placed on this fact since one had to wait for important new research to make the publication intrinsically interesting. Therefore, there was a tendency to devote more attention to the secondary source rather than the primary one.

PROMOTION POLICIES

After the 1993 User Needs Survey results were available, CEIS considered various promotion strategies:

Market Segmenting

1. Targeting of private sector companies (e.g., insurance companies, bauxite companies, airlines, banking sectors) and public sector institutions in the Caribbean.
2. Encouraging the companies to purchase large numbers of copies of CEIS publications for distribution to educational and youth institutions which are unable to subscribe at present.

Preference Building

3. Obtaining endorsements for CEIS products and services from high level ministers and politicians.

Knowledge Building

4. Encouraging leading journalists to critique articles published in the CEIS Update.
5. Encouraging contributors of articles to CEIS to hold discussions about CEIS on radio.
6. Developing announcement fliers, brochures, booklets on CEIS products and services.
7. Attending energy/environment seminars, mounting exhibitions at regional and national fora and displaying products.

Awareness Creation

8. Advertising in national, regional and international publications.
9. Seeking exchange advertisements with other countries.

IDRC provided US$ 10,000 for promotion and marketing.

As a result of targeting the promotion to private and public sector companies, 41 private sector companies took up sponsorship of the CEIS Update leading to underwriting on subscriptions.

At least five round-table discussions were held on radio and television throughout the region.

The endorsements of products and services from high level ministers and politicians, however, was not attempted.

PROMOTION IMPLEMENTATION

An annual meeting of all network members was held to consider and decide on the range of promotion tools. Each country selected the specific tools which suited it best.

Awareness Activities

The following energy awareness promotion activities were carried out throughout the region:

1. Mobile exhibitions in individual country and regional fora.
2. Radio and television promotions—call-in radio programmes, question and answer sessions.
3. Distribution of energy saving brochures at public libraries and book stores.
4. Televising energy tips.
5. Broadcasting energy tips.
6. Gift subscriptions to various agencies and government departments.
7. Panel discussions.
8. Print media.
9. Other promotional material.

Mobile Exhibitions

Mobile exhibitions were centrally planned to standardize the message and to save cost. The exhibitions were sent to the countries when requested for.

Mobile exhibitions were highly successful, because they met the objectives for which they were designed. Feedback from the public about the exhibitions was quite encouraging. The exhibitions increased the requests for energy information by over 40 per cent.

Exhibitions carried themes such as 'CEIS—Serving the Caribbean Energy Needs' and 'Build a Better Country through Energy Awareness'. The objectives of the exhibitions included:

1. Promotion of CEIS by informing the people of the region of its existence.
2. Promotion of CEIS publications and services.
3. Raising the level of energy awareness throughout the region.
4. Promotion of alternate sources of energy.
5. Encouragement of energy conservation throughout the region.

The target audience of these exhibitions were usually students, policy-makers, regular and energy entrepreneurs, agricultural sector people and home owners. Exhibitions were held at various venues throughout the region.

Radio/Television Programmes

Liaison officers conducted a series of promotion programmes on radio. Many of these were government sponsored radio/television programmes where the system was discussed in detail—its mandate, objectives, services, publications, etc. Radio programmes included panel discussions.

A multifaceted panel was usually convened which included the liaison officer who would speak on CEIS, an economics planner to speak on the energy sector in the relevant countries and an energy entrepreneur who sold energy products. Such an opportunity was seized to promote CEIS, to encourage energy conservation, to promote alternative sources of energy and to show the relation of energy to the overall development of a particular country.

Television and radio stations played a vital role in the promotion of CEIS throughout the network countries. Energy tips were televised and special 'X-mass Energy Tips' were televised for the season. Other energy tips were also broadcast, by both radio and television stations, as public service announcements.

Energy Brochures

Distribution of CEIS brochures and 'Energy Saving Tips' was another way chosen to reach the public. Gas stations, libraries, banks and book stores were used to distribute energy brochures throughout the region so that customers could browse while they waited for service. Even post offices and its outer branches participated in the distribution of brochures.

Gifts

Another strategy used for the promotion of CEIS was gift subscriptions to the CEIS Update. It was hoped that at the end of the gift subscription, the recipients would become regular members by renewing their subscription.

Print Media

Various forms of print media were utilized to promote CEIS throughout the Caribbean.

- Press releases.
- Flyers, advertising CEIS activities, enclosed in the Events diary.
- Magazines featuring energy tips and information on the exhibitions.
- Local and regional newspapers featuring the activities of CEIS.

Other Material

CEIS introduced other promotional material like calendars, year planners, pens, T-shirts, booklets, bookmarkers, bumper-stickers, billboards—all carrying information and facts on CEIS.

The impact of these various promotional tools, on the awareness and use of CEIS, was needed to be more precisely and accurately assessed in future users needs survey, to be conducted probably in two years time.

Letters of invitation to insurance companies, banks, airlines and public sector institutions were sent out. Forty five per cent of the respondents agreed to take out subscriptions to the CEIS Update.

PRICING

While the user needs survey provided basic information on the range of prices which users were willing to pay for CEIS products, the network still had to wrestle with questions relating to the maintenance of a flexible price structure in the Caribbean. Some of the questions which needed to be answered were:

1. Should one universal price be instituted for all member countries?
2. Since all member countries had varying currencies, which currency should be used as the standard?
3. Should the price be different for private and public sectors?
4. What discounts, if any, should apply and to whom?
5. Are all national focal points in a position to collect money? What if the national focal point was a government institution? Could it collect money from other government agencies?
6. How would the management of income generated by the whole network be accounted for globally, when each national focal point held funds individually and in different currencies?
7. How is the income generated from CEIS products to be distributed fairly among the network members?
8. Should products be offered outside of the region, and how should these be priced?
9. If publications were to be sold at commercial agencies (e.g., book stores) outside of the national focal points, what should the terms and conditions be?
10. What elements should comprise the CEIS pricing formula?

The following decisions were taken and implemented:

1. One universal price was instituted, and it was denominated in US dollars. Caribbean countries could make payments in their local currencies, but must have the universal price equivalency. Network members felt that this was the only way to ensure objectivity and to eliminate any unfair advantage that any country had over the other.
2. Sixty per cent discounts were offered to users in the Caribbean. Further a 55 per cent discount was offered to government and quasi-government agencies for some products. This decision on discounts only applied to those products, for which most of the data/statistics originated from the region in general and from government or quasi-government agencies in particular.
3. Some national focal points were unable to collect payments. Therefore, their clients were advised to send payments directly to the regional focal point. Where the national focal points had no policy objections to the collection of payments, the payments were forwarded to the regional focal point in the designated US currency equivalent. The regional focal point would hold funds centrally.

Prices for the CEIS products and services were based on production costs. At present, no payment was being made to the contributors of articles. In future, however, costs such as intellectual inputs, data gathering costs and staff time would have to be accounted for. Pricing was also determined by the price of similar products in the region.

Profits from publications, such as the CEIS Update, with a fairly wide circulation would probably have to be used to offset costs of the specialized publications with limited circulation.

Discount was given selectively for publications. For instance, there was a discount on PETSTATS because the government gave the base data.

It was also recognized that there was a need to secure advertisements to pay for publication costs. Pricing of the advertisements, therefore, was also an important issue.

To date, a formal pricing policy has not yet been finalized and the issue of re-distribution of income generation amongst network members has still not been resolved. The proper analysis of costs at the regional as well as national levels would be needed, before these policies are formulated.

DISTRIBUTION

During the survey, users raised the issue of poor circulation and late receipt of the CEIS publications. Respondents revealed that information was outdated by the time it reached them and the major problem was the mail delivery system. This finding led to an examination of the weaknesses in this area and decisions were taken regarding on-time publication and delivery of publications. Before the survey, publishing and distribution was done on an ad-hoc basis. The publications were prepared for distribution either at the RFP or at the national nodes. As a result, control of distribution was difficult. The following new alternatives were considered:

1. A more centralized system of delivery and distribution of publications to reduce the publishing time.
2. The use of courier services, instead of mail, for speedy delivery.
3. The contracting of printing services to private companies for publishing at regular intervals.
4. The institution of an internal schedule and deadlines for submitting articles by the NFPs to the RFP for timely production.

Before the survey, RFP sent documents meant for clients to the NFPs by post. In turn, the NFP locally sent them by post. In the Caribbean, the mail system is unreliable. Mail could take up to three to four weeks to reach an NFP.

The use of courier services and express mail services was agreed upon by network members as the preferred mode of distributing CEIS publications to the NFPs. Even though the new cost was ten times more than that of mail, publications could be guaranteed to be delivered within two days. Publications would be sent to the NFPs by courier or express mail and they, in turn, would distribute them locally by mail or hand delivery. The cost of the postage was included as part of the subscription or cited as additional.

Packaging was also an issue, within the network faced in the distribution process. For example, publication orders, particularly of PETSTATS, could range from 1 to 13, where a client could order one country copy or all 12 country copies plus the Caribbean copy, which weighed approximately 2 lb.

Specific size packages had to be designed to accommodate ease of handling and shipping as well as standardized costs which the clients could prepay, based on the number of publications ordered.

ROLE OF NFPs

Each country NFP initiated circulation expansion strategies in its territory, and built up a personal rapport with its known subscribers. The RFP continued its support of NFP activities through its own marketing strategies, and assisted and advised NFPs when necessary.

RESULTS AND CONCLUSION

The network has already witnessed a remarkable increase in the number of subscriptions/purchases of publications since the survey in 1993 (see Table III.3).

CEIS has been successful in attracting private sector sponsorship for schools and consumer groups that find it difficult to enlist subscriptions.

TABLE III.3 **Breakdown of Subscriptions/Purchases of CEIS Publications (1995)**

Publications	*1993*	*Income Generated US$*	*1995*	**Income Generated US$*
CEIS Update	16	256	1218	19200
PETSTATS (Purchases)	0	0	171	7000
Caribbean Energy Abstracts	4	80	28	700
Total		336		26900

* Data for income generated in 1995 are unofficial. Data include sponsorship from private companies and international agencies for schools, etc.

CEIS intends to continue research and evaluation to develop this process. User needs tend to be 'one off, diverse and cross-functional, and a continuous refinement process is necessary to enable the system to respond effectively. By widening its input sources, information capturing capability and delivery capabilities, it is anticipated that in the next three years, the system should become viable.

WHAT NEXT (1996–99)

The main concern now, is how to make CEIS into a viable institution, by the end of the century. The International Development Research Centre's nine-year funding comes to an end in December 1995. CEIS intends to continue financing its activities through financial support from member governments, earnings from its products and services and from funding for small projects from donor agencies.

CEIS has approached member governments for funds. The share of each member is not yet decided. It would be on the basis of membership for a flat fee of US$ 3,000. Shortfall may be made up by the countries who have a higher GDP.

CEIS has begun to market three of its products and services, and in two years it has earned nearly US$ 27,000 from its major publications, which include Petstats, Caribbean Energy Abstracts, CEIS Update and search services. Earnings are generated not only from sales and subscriptions, but also from advertisements in the network's publications, as well as by private sector underwriting of subscriptions.

Marketing of CEIS products was severely limited as it required the network members themselves (who have other responsibilities, had no formal training in marketing, and were uncomfortable with the new situation into which they were thrust) to approach companies. The liaison officers also had other full-time jobs and work was thus not exclusively directed to CEIS activities. Therefore, there were delays from time to time. Hence, CEIS has contracted MARKETEC, a subsidiary marketing company of the Scientific Research Council, to market CEIS products and services as of January 1996.

CEIS has to develop a three-year plan (1996–99) with a budget and get the support of member governments.

QUESTIONS FOR DISCUSSION

1. What is your assessment of actions taken by CEIS after the survey? What would you have done, how and why?
2. What is your plan for CEIS for 1996-99?

Marketing Information Products and Services

A Primer for Librarians and Information Professionals

Library and information sciences are experiencing a period of radical change. Today, businesses must compete for survival, growth, and market space. Librarians and information professionals must assume a more proactive role to cope with increasing competition. This new demand presents a number of unanswered questions.

- What is the nature of this competition?
- How can libraries attract alternate sources of funding when public sponsored government spending are at a low ebb?
- What are some strategies for expanding the customer base and fulfilling customer requirements and expectations?
- And, finally, what is preventing librarians and information professionals from developing successful marketing strategies.

Marketing Information Products and Services responds to these questions. This comprehensive manual describes the fundamentals of marketing in the context of library and information sciences, presents various options for raising money, offers tips and techniques for management, and provides a step-by-step approach to developing marketing strategies.

The book is an outcome of a project funded by Canada's International Development Research Centre (IDRC). It is assembled as a practical guide, with case studies and illustrations for libraries and information centres throughout the world.

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