Project Report

On

"Review of Management Information System in consumer sales group of state office in Indian oil & Suggestion to Improve"

Dissertation submitted to the

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ACKNOWLEDGEMENT

My indebtedness and gratitude to the many individuals who have helped to shape this thesis in its present form cannot be adequately conveyed in just a few sentences. Yet I must record my immense gratitude to the brains and hands that worked overtime to support my efforts in making a near comprehensive study of a topic as broad as **"review of MIS in consumer sales group of state office in Indian Oil & suggestion to improve",** in Indian oil corporation Ltd., **Noida.**

I am highly obliged to **Mr. Manoj Mathur , & Mr. Amit srivastsva , IOCL, Noida** for giving me this opportunity to work on this challenging project and lending me his learnings over the months and continuous guidance in his capacity as my Project Guide. I also owe my indebtness NAMES .

Next in line I thank all the **Managers and officers of Indian Oil Corporation ltd., Noida** for apprising me of their specific requirements and the nuances of the system and helping me immensely with their phenomenal and participative responses during the interviews I had with them. The thank list would be far from incomplete without the mention of all such **Supervisors, Associates** and all the employees of **IOCL, Noida.**

Last but not the least I am thankful to **Almighty God, my parents, my uncle, my friends** for their immense support and cooperation throughout.

In fact the list can never be completed….

( )

YOUR NAME

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PREFACE

Summer training in the business organization make the student's more practical and habitual To analyze the situation in more critical and refined way which ultimately contribute in later stage of practice. I feel encouraged by doing summer training in the Indian oil corporation ltd. in Noida. The topic assigned to me was "Review Of Management Information System In Consumer Sales Group Of State Office In Indian Oil & Suggestion To Improve".

Management information system is a complex, multifaceted phenomenon and can be viewed from multiple perspectives and it is developed to support all levels of management.

I got an opportunity to undergo my summer training in "Indian oil corporation ltd." Under the summer training programme I went through entire consumer sales departments in company. On the basis of my survey work and available data in the company, the prepared report is presented.

ABSTRACT

Management information Systems (MIS), sometimes referred to as Information Management and Systems, are the discipline covering the application of people, technologies, and procedures — collectively called <u>information systems</u> — to solving business problems. Management Information Systems are distinct from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization. Academically, the term is commonly used to refer to the group of information management methods tied to the automation or support of human decision making, e.g. <u>Decision Support Systems</u>, <u>Expert systems</u>, and <u>Executive information systems</u>.The terms MIS and <u>information system</u> are often confused. Information systems include systems that are not intended for decision making. MIS is sometimes referred to, in a restrictive sense, as <u>information technology management</u>. That area of study should not be confused with <u>computer science</u>. <u>IT service management</u> is a practitioner-focused discipline. MIS has also some differences with <u>Enterprise Resource Planning</u> (ERP) as ERP incorporates elements that are not necessarily focused on decision support.

1. Introduction

The 18th largest petroleum company in the world, Indian Oil Corporation Ltd. (IndianOil) was formed in 1964 after the merger of Indian Oil Company Ltd. With Indian Refineries Ltd. It is currently India's largest company (by sales) and has reported a net profit of INR 38.2 bn in fiscal 2008.

At 170th position, IndianOil is also the highest-ranked Indian company in the Fortune Global 500 list. The company's 10,000th petrol station was commissioned during 2004-05. A wholly owned subsidiary, IndianOil Technologies Ltd., has been established for commercialising the innovations and technologies developed by IndianOil's R&D Centre.

1.1 Business

IndianOil controls ten of India's 18 refineries with a combined capacity of 54.20 million metric tonnes per annum. The company lays crude oil and petroleum products pipelines and provides consultancy for commissioning, operating and maintaining pipelines. IndianOil operates a total network of 8952 km crude oil and petroleum product pipelines.

Its Servo brand lubricants control over 42 per cent market share in India. The company also has a 65 per cent market share in the aviation fuel business. Kisan Sewa Kendras, launched to meet the needs of rural customers, offer fertilizers, seeds, pesticides, farm equipment, medicines, spare parts for trucks and tractors, tractor engine oils and pump set oils, besides auto fuels and kerosene. Indian Oil reaches Indane cooking gas to 41.05 million households.

1.2 Partnership

The corporation has launched several joint ventures in partnership with some of the most respected companies from India and abroad including Lubrizol, Petronas, Oiltanking GmbH and Marubeni.

1.3 Location

IndianOil's has a network of 24,000 sales points, 158 bulk storage depots and terminals, 95 aviation fuel stations and 88 Indane LPG bottling plants all over India. Indian Oil has also set up offices in SriLanka, Mauritius and the UAE. Servo lubricants are being marketed in Dubai, Nepal, Bhutan, Kuwait, Malaysia, Bahrain, Indonesia, Sri Lanka, Kyrgyzstan, Mauritius and Bangladesh. IndianOil has been lending its expertise for nearly two decades to various countries in several areas of refining, marketing, transportation, training and research and development. These include Sri Lanka, Kuwait, Bahrain, Iraq, Abu Dhabi, Tanzania, Ethiopia, Algeria, Nigeria, Nepal, Bhutan, Maldives, Malaysia, Sudan and Zambia.

Statistics:

Public Company

Incorporated: 1964

Employees: 32,266

Sales: Rs 113.32 billion ($24.2 billion) (2001)

Stock Exchanges: Mumbai

Ticker Symbol: 530965

NAIC: 324110 Petroleum Refineries

1.4 Company Perspectives:

We strive be a major diversified, transnational, integrated energy company, with national leadership and a strong environmental conscience, playing a national role in oil security and public distribution.

2. Company History

The Indian Oil Corporation Ltd. operates as the largest company in India in terms of turnover and is the only Indian company to rank in the Fortune "Global 500" listing. The oil concern is administratively controlled by India's Ministry of Petroleum and Natural Gas, a government entity that owns just over 90 percent of the firm. Since 1959, this refining, marketing, and international trading company served the Indian state with the important task of reducing India's dependence on foreign oil and thus conserving valuable foreign exchange. That changed in April 2002, however, when the Indian government deregulated its petroleum industry and ended Indian Oil's monopoly on crude oil imports. The firm owns and operates seven of the 17 refineries in India, controlling nearly 40 percent of the country's refining capacity.

2.1 Origins

Indian Oil owes its origins to the Indian government's conflicts with foreign-owned oil companies in the period immediately following India's independence in 1947. The leaders of the newly independent state found that much of the country's oil industry was effectively in the hands of a private monopoly led by a combination of British-owned oil companies Burmah and Shell and U.S. companies Standard-Vacuum and Caltex.

An indigenous Indian industry barely existed. During the 1930s, a small number of Indian oil traders had managed to trade outside the international cartel. They imported motor spirit, diesel, and kerosene, mainly from the Soviet Union, at less than world market prices. Supplies were irregular, and they lacked marketing networks that could effectively compete with the multinationals.

Burmah-Shell entered into price wars against these independents, causing protests in the national press, which demanded government-set minimum and maximum prices for kerosene--a basic cooking and lighting requirement for India's people--and motor spirit. No action was taken, but some of the independents managed to survive until World War II, when they were taken over by the colonial government for wartime purposes.

During the war, the supply of petroleum products in India was regulated by a committee in London. Within India, a committee under the chairmanship of the general manager of

Burmah-Shell and composed of oil company representatives pooled the supply and worked out a set price. Prices were regulated by the government, and the government coordinated the supply of oil in accordance with defense policy.

2.2 The Indian Oil Industry Evolves: Late 1940s-60s

Wartime rationing lasted until 1950, and a shortage of oil products continued until well after independence. The government's 1948 Industrial Policy Resolution declared the oil industry to be an area of the economy that should be reserved for state ownership and control, stipulating that all new units should be government-owned unless specifically authorized. India remained effectively tied to a colonial supply system, however. Oil could only be afforded if imported from a country in the sterling area rather than from countries where it had to be paid for in dollars. In 1949, India asked the oil companies of Britain and the United States to offer advice on a refinery project to make the country more self-sufficient in oil. The joint technical committee advised against the project and said it could only be run at a considerable loss.

The oil companies were prepared to consider building two refineries, but only if these refineries were allowed to sell products at a price ten percent above world parity price. The government refused, but within two years an event in the Persian Gulf caused the companies to change their minds and build the refineries. The companies had lost their huge refinery at Abadan in Iran to Prime Minister Mussadegh's nationalization decree and were unable to supply India's petroleum needs from a sterling-area country. With the severe foreign exchange problems created, the foreign companies feared new Iranian competition within India. Even more important, the government began to discuss setting up a refinery by itself.

Between 1954 and 1957, two refineries were built by Burmah-Shell and Standard-Vacuum at Bombay, and another was built at Vizagapatnam by Caltex. During the same period the companies found themselves in increasing conflict with the government.

The government came into disagreement with Burmah Oil over the Nahorkatiya oil field shortly after its discovery in 1953. It refused Burmah the right to refine or market this oil and insisted on joint ownership in crude production. Burmah then temporarily suspended all exploration activities in India.

Shortly afterward, the government accused the companies of charging excessive prices for importing oil. The companies also refused to refine Soviet oil that the government had secured on very favorable terms. The government was impatient with the companies' reluctance to expand refining capacity or train sufficient Indian personnel. In 1958, the government formed its own refinery company, Indian Refineries Ltd. With Soviet and Romanian assistance, the company was able to build its own refineries at Noonmati, Barauni, and Koyali. Foreign companies were told that they would not be allowed to build any new refineries unless they agreed to a majority shareholding by the Indian government.

In 1959, the Indian Oil Company was founded as a statutory body. At first, its objective was to supply oil products to Indian state enterprise. Then it was made responsible for the sale of the products of state refineries. After a 1961 price war with the foreign companies, it emerged as the nation's major marketing body for the export and import of oil and gas.

Growing Soviet imports led the foreign companies to respond with a price war in August 1961. At this time, Indian Oil had no retail outlets and could sell only to bulk consumers. The oil companies undercut Indian Oil's prices and left it with storage problems. Indian Oil then offered even lower prices. The foreign companies were the ultimate losers because the government was persuaded that a policy of allowing Indian Oil dominance in the market was correct. This policy allowed Indian Oil the market share of the output of all refineries that were partly or wholly owned by the government. Foreign oil companies would only be allowed such market share as equaled their share of refinery capacity.

2.3 Indian Oil Corporation: 1964 to the 1990s

In September 1964, Indian Refineries Ltd. and the Indian Oil Company were merged to form the Indian Oil Corporation. The government announced that all future refinery partnerships would be required to sell their products through Indian Oil.

It was widely expected that Indian Oil and India's Oil and Natural Gas Commission (ONGC) would eventually be merged into a single state monopoly company. Both companies grew vastly in size and sales volume but, despite close links, they remained separate. ONGC retained control of most of the country's exploration and production capacity. Indian Oil remained responsible for refining and marketing.

During this same decade, India found that rapid industrialization meant a large fuel bill, which was a steady drain on foreign exchange. To meet the crisis, the government prohibited imported petroleum and petroleum product imports by private companies. In effect, Indian Oil was given a monopoly on oil imports.

A policy of state control was reinforced by India's closer economic and political links with the Soviet Union and its isolation from the mainstream of western multinational capitalism. Although India identified its international political stance as non-aligned, the government became increasingly friendly with the Soviet Bloc, because the United States and China were seen as too closely linked to India's major rival, Pakistan. India and the USSR entered into a number of trade deals. One of the most important of these trade pacts allowed Indian Oil to import oil from the USSR and Romania at prices lower than those prevailing in world markets and to pay in local currency, rather than dollars or other convertible currencies.

For a time, no more foreign refineries were allowed. By the mid-1960s, government policy was modified to allow expansions of foreign-owned refinery capacity. The Indian Oil Corporation worked out barter agreements with major oil companies in order to facilitate distribution of refinery products.

In the 1970s, the Oil and Natural Gas Commission of India, with the help of Soviet and other foreign companies, made several important new finds off the west coast of India, but this increased domestic supply was unable to keep up with demand. When international prices rose steeply after the 1973 Arab oil boycott, India's foreign exchange problems mounted. Indian Oil's role as the country's monopoly buyer gave the company an increasingly important role in the economy. While the Soviet Union continued to be an important supplier, Indian Oil also bought Saudi, Iraqi, Kuwaiti, and United Arab Emirate oil. India became the largest single purchaser of crude on the Dubai spot market.

The government decided to nationalize the country's remaining refineries. The Burmah-Shell refinery at Bombay and the Caltex refinery at Vizagapatnam were taken over in 1976. The Burmah-Shell refinery became the main asset of a new state company, Bharat Petroleum Ltd. Caltex Oil Refining (India) Ltd. was amalgamated with another state company, Hindustan Petroleum Corporation Ltd., in March 1978. Hindustan had become fully Indian-owned on October 1, 1976, when Esso's 26 percent share was bought out. On October 14, 1981, Burmah Oil's remaining interests in the Assam Oil Company were nationalized, and Indian

Oil took over its refining and marketing activities. Half of India's 12 refineries belonged to Indian Oil. The other half belonged to other state-owned companies.

By the end of the 1980s, India's oil consumption continued to grow at eight percent per year, and Indian Oil expanded its capacity to about 150 million barrels of crude per annum. In 1989, Indian Oil announced plans to build a new refinery at Pradip and modernize the Digboi refinery, India's oldest. However, the government's Public Investment Board refused to approve a 120,000 barrels-per-day refinery at Daitari in Orissa because it feared future over-capacity.

By the early 1990s, Indian Oil refined, produced, and transported petroleum products throughout India. Indian Oil produced crude oil, base oil, formula products, lubricants, greases, and other petroleum products. It was organized into three divisions. The refineries and pipelines division had six refineries, located at Gwahati, Barauni, Gujarat, Haldia, Mathura, and Digboi. Together, the six represented 45 percent of the country's refining capacity. The division also laid and managed oil pipelines. The marketing division was responsible for storage and distribution and controlled about 60 percent of the total oil industry sales. The Assam Oil division controlled the marketing and distribution activities of the formerly British-owned company.

Indian Oil also established its own research center at Faridabad near New Delhi for testing lubricants and other petroleum products. It developed lubricants under the brand names Servo and Servoprime. The center also designed fuel-efficient equipment.

2.4 Changes in the Oil Industry: Late 1990s and Beyond

The oil industry in India changed dramatically throughout the 1990s and into the new millennium. Reform in the downstream hydrocarbon sector--the sector in which Indian Oil was the market leader--began as early in 1991 and continued throughout the decade. In 1997, the government announced that the Administered Pricing Mechanism (APM) would be dismantled by 2002.

To prepare for the increased competition that deregulation would bring, Indian Oil added a seventh refinery to its holdings in 1998 when the Panipat facility was commissioned. The company also looked to strengthen its industry position by forming joint ventures. In 1993,

the firm teamed up with Balmer Lawrie & Co. and NYCO SA of France to create Avi-Oil India Ltd., a manufacturer of oil products used by defense and civil aviation firms. One year later, Indo Mobil Ltd. was formed in a 50-50 joint venture with Exxon Mobil. The new company imported and blended Mobil brand lubricants for marketing in India, Nepal, and Bhutan. In addition, Indian Oil was involved in the formation of ten major ventures from 1996 through 2000.

Indian Oil also entered the public arena as the government divested nearly 10 percent of the company. In 2000, Indian Oil and ONGC traded a 10 percent equity stake in each other in a strategic alliance that would better position the two after the APM dismantling, which was scheduled for 2002. According to a 1999 *Hindu* article, Indian Oil Corporation's strategy at this time was "to become a diversified, integrated global energy corporation." The article went on to claim that "while maintaining its leadership in oil refining, marketing and pipeline transportation, it aims for higher growth through integration and diversification. For this, it is harnessing new business opportunities in petrochemicals, power, lube marketing, exploration and production ... and fuel management in this country and abroad."

In early 2002, Indian Oil acquired IBP, a state-owned petroleum marketing company. The firm also purchased a 26 percent stake in financially troubled Haldia Petrochemicals Ltd. In April of that year, Indian Oil's monopoly over crude imports ended as deregulation of the petroleum industry went into effect. As a result, the company faced increased competition from large international firms as well as new domestic entrants to the market. During the first 45 days of deregulation, Indian Oil lost Rs7.25 billion, a signal that the India's largest oil refiner would indeed face challenges as a result of the changes.

Nevertheless, Indian Oil management believed that the deregulation would bring lucrative opportunities to the company and would eventually allow it to become one of the top 100 companies on the Fortune 500--in 2001 the company was ranked 209. With demand for petroleum products in India projected to grow from 148 million metric tons in 2006 to 368 million metric tons by 2025, Indian Oil believed it was well positioned for future growth and prosperity.

2.5 KeyDates:

1948: India's government passes the Industrial Policy Resolution, which states that its oil industry should be state-owned and operated.

1958: The government forms its own refinery company, Indian Refineries Ltd.
1959: Indian Oil Company is founded as a statutory body to supply oil products to Indian state enterprise.
1964: Indian Refineries and Indian Oil Company merge to form the Indian Oil Corporation.
1976: The Burmah-Shell and the Caltex refineries are nationalized.
1981: Half of India's 12 refineries are operated by Indian Oil.
1998: The company's seventh refinery is commissioned at Panipat.
2002: The Indian petroleum industry is deregulated.

2.6. Key executives of IOCL:

S.No	Name	Designation
1	Mr. Sarthak Behuria	Chairman / Chair Person
2	Mr. Vishan Chandra Agrawal	Director
3	Mr. Brij Mohan Bansal	Director
4	Mr. Anand Kumar	Director
5	Mr. Gyan Chand Daga	Director
6	Mr. Sthanunathan Sundareshan	Director
7	Mr. Pradeep Kumar Sinha	Director
8	Mr. Serangulam Varadarajan Narasimhan	Director
9	Mr. Basavaraj Ningappa Bankapur	Director
10	Mr. Pranab Kumar Chakraborti	Director
11	Dr. Indira Parikh	Director
12	Prof. Gautam Barua	Independent Director
13	Mr. N K Poddar	Independent Director
14	Dr. Indu Shahani	Independent Director
15	Mr. Anees Noorani	Independent Director
16	Mr. Michael Bastian	Independent Director
17	Mr. S V Narasimhan	Nominee Director

2.7. Principal Subsidiaries: Indo Mobil Ltd. (50%); Avi-Oil Ltd. (25%); Indian Oiltanking Ltd. (25%); Petronet India Ltd. (16%); Petronet VK Ltd. (26%); Petronet CTM Ltd. (26%); Petronet CIPL Ltd. (12.5%); IndianOil Petronas Ltd. (50%); IndianOil Panipat Power

Consortium Ltd. (26%); IndianOil TCG Petrochem Ltd. (50%); Librizol India Pvt. Ltd. (50%).

2.8. Principal Competitors: Bharat Petroleum Corporation Ltd.; Hindustand Petroleum Corporation Ltd.; Royal Dutch/Shell Group of Companies.

Company	Sales (Rs.Cr.)	Current Price	Change (%)	P/E Ratio	Market Cap. (Rs.Cr.)	52-Week High/Low
Essar Oil Ltd.	38106.35	146.20	3.18	0.00	17566.36	247/54
Sah Petroleums Ltd.	205.76	21.50	1.90	1954.55	94.60	40/8
Indraprastha Gas Ltd.	860.41	143.90	1.70	11.68	2014.60	154/93
Hindustan Petroleum Corporation Ltd.	104312.99	334.00	1.46	24.42	11310.15	398/163
Mangalore Refinery And Petrochemicals Ltd.	32565.85	84.30	1.38	12.39	14776.97	102/30
Bongaigaon Refinery & Petrochemicals Ltd.	6030.46	45.60	1.10	3.10	911.17	71/34
Bharat Petroleum Corporation Ltd.	110208.13	467.00	1.04	22.94	16884.02	516/226
Reliance Petroleum Ltd.	0.00	118.90	0.38	639.25	53505.00	177/68
Chennai Petroleum Corporation Ltd.	28172.61	178.25	-0.11	0.00	2655.93	336/78
Cals Refineries Ltd.	0.08	0.73	-1.35	0.00	579.62	5/-

3. Indian oil major units

1. Refinery division

2. Pipeline division

3. R&D division

4. Marketing division

3.1. Refinery Division

IndianOil controls 10 of India's 20 refineries. The group refining capacity is 60.2 million metric tonnes per annum (MMTPA) or 1.2 million barrels per day -the largest share among refining companies in India. It accounts for 33.8% share of national refining capacity.

IndianOil refineries have an ambitious growth plan with an outlay of about Rs. 55,000 crore for capacity augmentation, de-bottlenecking, bottom upgradation and quality upgradation. Major projects under implementation include a 15 MMTPA grassroots refinery at Paradip, Orissa, Naphtha Cracker and Polymer Complex at Panipat, Panipat Refinery expansion from 12 MMTPA to 15 MMTPA, among others

IndianOil Refineries: Installed Capacities (MMTPA)

Digboi	**0.65**
Guwahati	1.0
Barauni	6.0
Koyali	13.7
Haldia	6.0
Mathura	8.0
Panipat	12.0

Bongaigaon	2.35
Subtotal	**49.70**
CPCL - Chennai	9.5
Narimanam	1.0
Subtotal	**10.5**
Group Total	**60.2**

(MMTPA – Million metric tonnes per annum, equal to 20, 000 barrels per day)

3.2. Pipeline Division

It is an established fact that pipelines are preferred as a cost effective, energy efficient, safe and environment friendly method of transportation for petroleum products and crude oil and are playing a leading role in meeting the demand for petroleum products in India. Economic growth and expansion of infrastructure in India offer opportunities to better utilize the existing pipeline network in addition to expand by constructing new pipelines.

IndianOil, the pioneer in cross-country petroleum product pipeline in the Indian sub-continent constructed and commissioned its first petroleum product pipeline, Guwahati-Siliguri Pipeline in the year 1964. Since then IndianOil has mastered the art and technology of pipeline engineering. Over the last four decades the pipeline network of IndianOil has grown to 10,000 km with a capacity of about 62 million metric tonnes per year. Commissioning of new projects worth about Rs. 2,300 crore including LPG and R-LNG pipelines will reach the capacity to 75 million metric tonnes per annum with a network of over 10,000 km.

3.3. Marketing division

IndianOil provides a wide range of marketing services and consultancy in fuel handling, distribution, storage and fuel/lube technical services. With a formidable bank of technical and engineering talent, IndianOil is fully equipped to handle small to large-scale infrastructural projects in the petroleum downstream sector anywhere in the country. Our project teams have

independently or jointly as a consortium, have set up depots, terminals, pipelines, aviation fuel stations, filling plants, LPG bottling plants, amongst others. IndianOil's fuel management system to bulk customers offer customized solutions that deliver least cost supplies keeping in mind usage patterns and inventory levels. A wide network of lubricant and fuel testing laboratories are available at major installations which is further backed by sector-wise expertise in the core sectors of power, steel, fertiliser, gas plants, textile mills, etc. Cutting edge systems and processes are designed around one simple belief-to provide valuable customers with an unbeatable edge in their business. IndianOil's supply and distribution network is strategically located across the country linked through a customized supply chain system backed by front offices located in conceivably every single town of consequence.

The wide network of services offered by IndianOil, Marketing Division is illustrated in this section, which includes; commercial/reticulated LPG; total fuel management/ consumer pumps; IndianOil Aviation Service; LPG Business (non-fuel alliances); loyalty programs; retail business (non-fuel alliances) and SERVO technical services.

Head Quarter: BOMBAY

In the marketing division there is 16 state office, one of them is UPSO-II

3.3.1.Hierarchy Of MarketingDivision
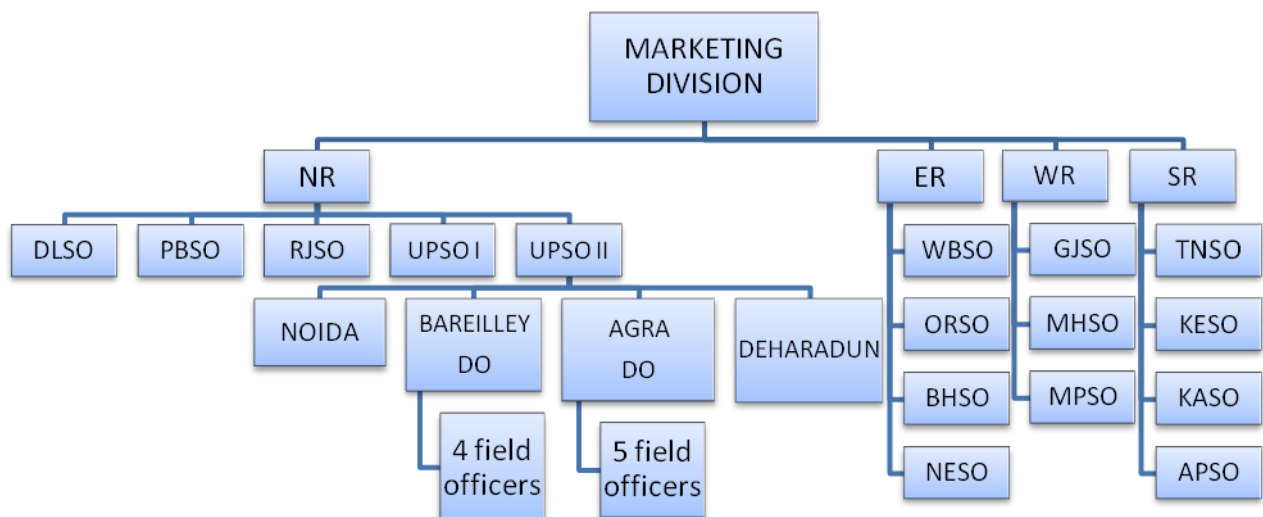
3.4. Research and development

Indian Oil's world class R&D Centre, established in 1972, has state-of –the art facilities and has delivered pioneering results in lubricants technology, refining process, pipeline transportation, bio-fuels and fuel-efficient appliances.

Over the past three decades, Indian Oil R&D Centre has developed over thousands of formulations of lubricating oils and greases responding to the needs of Indian industry and consuming sectors like Defence, Railways, Public Utilities and Transportation. The Centre has also developed and introduced many new lubricant products to the Indian market like multi grade railroad oils.

3.5. Products of IOCL

Petroleum product

As the flagship national oil company in the downstream sector, Indian oil reaches precious petroleum products to millions of people every day through an unmatched countrywide network. That are naphtha, high speed diesel, LDO, Furnace oil, LSHS, Bitumen, packed Bitumen, special products etc.

4. Management information system

Information is the basis for every decision taken in an organization. The efficiency of management depends upon the availability of regular and relevant information. Thus it is essential that an effective and efficient reporting system be developed as part of accounting system. The main object of management information is to obtain the required information about the operating results of an organization regularly in order to use them for future planning and control.

4.1. CONCEPT OF MIS

DEF: "A system of people, equipment, procedures, documents and communications that collects, validates, operates on transformers, stores, retrieves, and present data for use in planning, budgeting, accounting, controlling and other management process."

Management

"Management can be defined as a science of using <u>resources rationally</u> (mobilization, allocation, combination, utilization of resources in judicious manner using appropriate skills, approaches and techniques) and <u>economically</u> to achieve the desired results or meet the targeted performance level"

Information

"Information is data that has been processed into a form that is meaningful to the recipient and is of real or perceived value in current or ***progressive decision"***

- – *Davis and Olson*
- • **The data information cycle can be expressed as**

Idea

Intelligence   **Data**

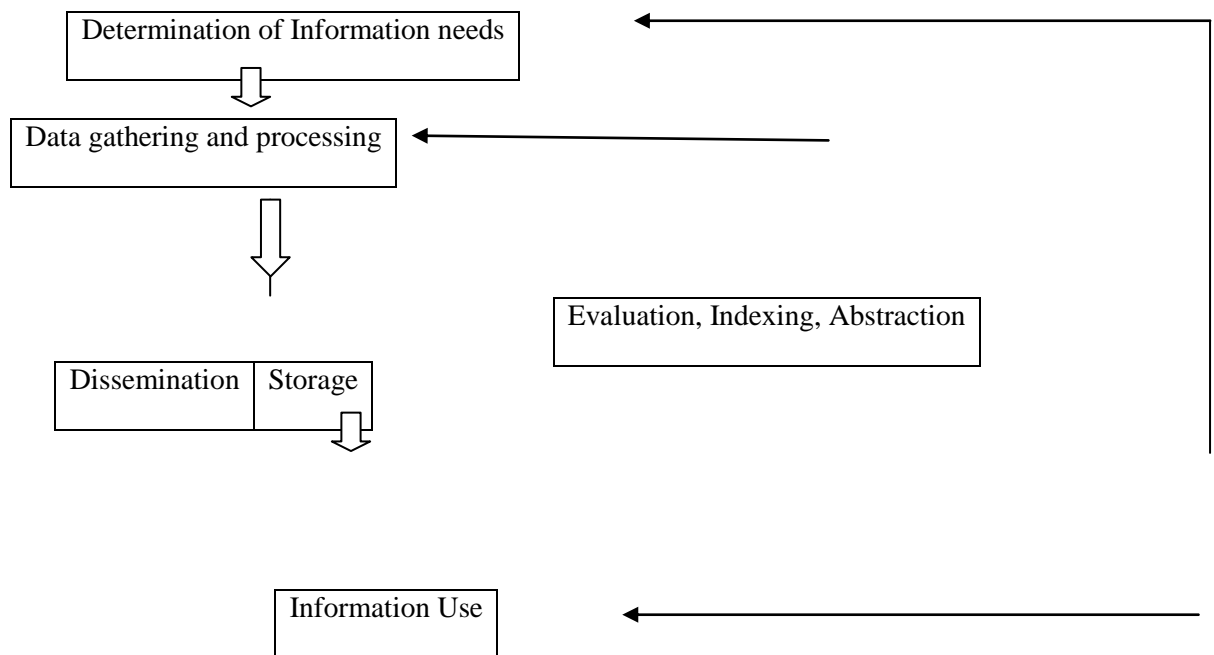**Knowledge**   **Information**
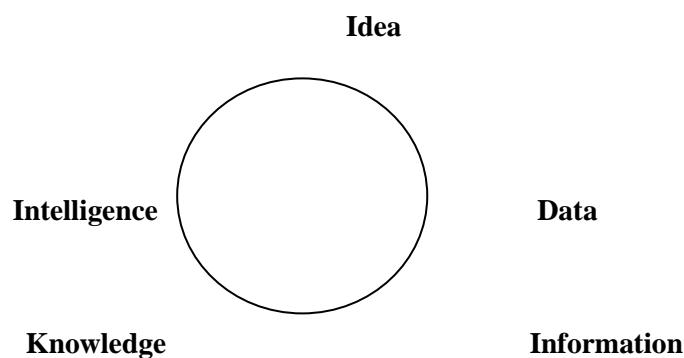
System

"A system can be defined as a group of inter-related, often interacting units that together perform a task in a synchronized manner to provide the desired result."

A <u>business</u> is also a <u>system</u> where resources such as people, money, material, machines etc., are transformed by various organization processes into goods and services.

4.1.1. The function of MIS can be shown diagrammatically as-

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┌─────────────────────────────────┐                    ◄──────────────────────┐
│ Determination of Information needs │                                          │
└─────────────────────────────────┘                                          │
                ⇩                                                             │
┌──────────────────────────────┐  ◄──────────────────────────────            │
│ Data gathering and processing │                                            │
└──────────────────────────────┘                                            │
                ⇩                                                             │
                              ┌──────────────────────────────┐               │
                              │ Evaluation, Indexing, Abstraction │           │
                              └──────────────────────────────┘               │
   ┌──────────────┬──────────┐                                               │
   │ Dissemination │ Storage  │                                              │
   └──────────────┴──────────┘                                              │
                       ⇩                                                     │
   ┌──────────────┐                                                         │
   │ Information Use │  ◄──────────────────────────────────────────────────┘
   └──────────────┘
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4.2. ORGANIZATION STRUCTURE AND INFORMATION NEEDS

The management can be broadly classified, depending upon the requirements of information for performing their managerial responsibilities, into –

4.2.1. Top Management (*Strategic*):

The main responsibilities are:

i)   *Determining the overall goals and objectives of the business.*

ii)   *Dealing with long term plans, policy matters and broad based strategic planning.*

iii)   *Establishing a framework within which the various departments should work.*

"The information used is futuristic and external in nature (political, economical, social, technological, ecological and legal). It receives the summary from the middle management and the decision made at this level is non-programmed but strategic."

4.2.2   Middle Management (*Tactical*):

The middle management is concerned with elaborating, classifying, and transforming of organizational goals into actions and plans. The information is fed from the top management as well as the supervisory management and is internal in nature. It needs information for short-term planning."

4.2.3   Lower level Management (Operation):

The supervisory management deals with the operational plans, policies and procedures for transforming or converting inputs to outputs. It is responsible for "day-to-day" routine decisions and operations of the organization.

"The information is received from the middle management and is mostly internal in nature. Decisions at this level are usually routine, structured and programmed. The functions and processes are standardized."

4.3. The Marketing Information System

Sales and Marketing is a key process for the sustenance of any business as revenues are a direct outcome of it. Information Systems within the Sales and Marketing process implement technologies that allow the personnel to access crucial and updated information related to access crucial and updated information related to customer preferences and market demands to offer prompt services.

Organizations are increasingly gaining a competitive edge by integrating Information Systems with their business processes to determine and implement potential sales strategies. Substantial results can be achieved by using Information Systems to analyze the sales pipelining process. Sales pipelining is the process of recognizing the initiation and closure of each sale in which a prospective customer is converted into a customer and then into a repeat customer.

4.3.1. DEFINING SALES AND MARKETING

A sale is a customer business organization transaction involving the exchange of goods or services with money. In an organization, it is usually the Sales team that interfaces with the customers to enable this transaction.

Marketing is defined as a brand name building exercise for the product or service being offered by a company. The end objective of marketing is to incorporate a sense of recall among existing and potential customers regarding the product or service. Marketing helps to establish and enhance the credibility of the product or service.
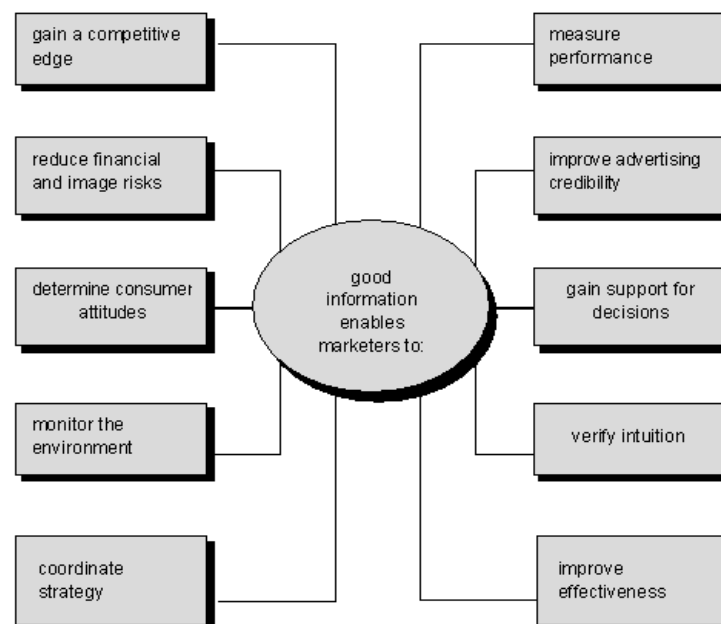
To understand the proper role of information systems one must examine what managers do and what information they need for decision making. We must also understand how decisions are made and what kinds of decision problems can be supported by formal information systems. One can then determine whether information systems will be valuable tools and how they should be designed.

4.3.2. COMPONENTS OF A MARKETING INFORMATION SYSTEM

A marketing information system (MIS) is intended to bring together disparate items of data into a coherent body of information. An MIS is, as will shortly be seen, more than raw data or information suitable for the purposes of decision making. An MIS also provides methods for interpreting the information. Moreover, as Kotler's definition says, an MIS is more than a system of data collection or a set of information technologies:
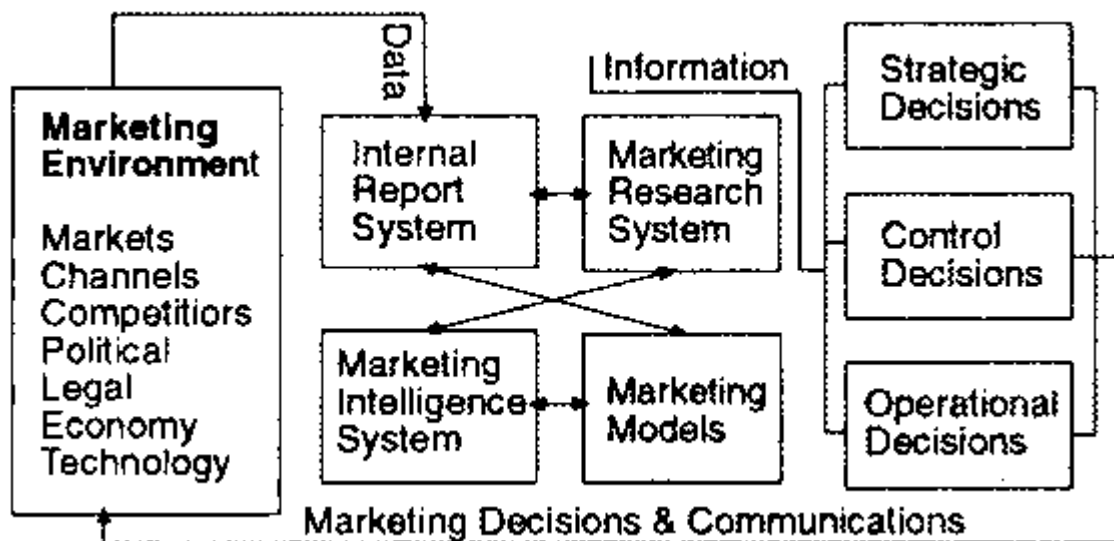

Figure .The marketing information systems and its subsystems

Figure illustrates the major components of an MIS, the environmental factors monitored by the system and the types of marketing decision which the MIS seeks to underpin.

The explanation of this model of an MIS begins with a description of each of its four main constituent parts: the internal reporting systems, marketing research system, marketing intelligence system and marketing models. It is suggested that whilst the MIS varies in its degree of sophistication - with many in the industrialized countries being computerized and few in the developing countries

being so - a fully fledged MIS should have these components, the methods (and technologies) of collection, storing, retrieving and processing data notwithstanding.

4.3.2.1. **Internal reporting systems:** All enterprises which have been in operation for any period of time have a wealth of information. However, this information often remains under-utilized because it is compartmentalized, either in the form of an individual entrepreneur or in the functional departments of larger businesses. That is, information is usually categorized according to its nature so that there are, for example, financial, production, manpower, marketing, stockholding and logistical data. Often the entrepreneurs, or various personnel working in the functional departments holding these pieces of data, do not see how it could help decision makers in other functional areas. Similarly, decision makers can fail to appreciate how information from other functional areas might help them and therefore do not request it.

The internal records that are of immediate value to marketing decisions are: orders received, stockholdings and sales invoices. These are but a few of the internal records that can be used by marketing managers, but even this small set of records is capable of generating a great deal of information. Below, is a list of some of the information that can be derived from sales invoices:

- Product type, size and pack type by territory.
- Product type, size and pack type by type of account.
- Product type, size and pack type by industry.
- Product type, size and pack type by customer.
- Average value and/or volume of sale by territory
- Average value and/or volume of sale by type of account
- Average value and/or volume of sale by industry
- Average value and/or volume of sale by sales person

By comparing orders received with invoices an enterprise can establish the extent to which it is providing an acceptable level of customer service. In the same way, comparing stockholding records with orders received helps an enterprise ascertain whether its stocks are in line with current demand patterns.

4.3.2.2. **Marketing research systems:** The general topic of marketing research has been the prime ' subject of the textbook and only a little more needs to be added here.

Marketing research is a proactive search for information. That is, the enterprise which commissions these studies does so to solve a perceived marketing problem. In many cases, data is collected in a purposeful way to address a well-defined problem (or a problem which can be defined and solved within the course of the study). The other form of marketing research centres not around a specific marketing problem but is an attempt to continuously monitor the marketing environment. These monitoring or tracking exercises are continuous marketing research studies, often involving panels of farmers, consumers or distributors from which the same data is collected at regular intervals. Whilst the *ad hoc* study and continuous marketing research differs in the orientation, yet they are both proactive.

4.3.2.3.

4.3.2.4. **Marketing intelligence systems:** Whereas marketing research is focused, market intelligence is not. A marketing intelligence system is a set of procedures and data sources used by marketing managers to sift information from the environment that they can use in their decision making. This scanning of the economic and business environment can be undertaken in a variety of ways, including:

➢ *Unfocused scanning: -* The manager, by virtue of what he/she reads, hears and watches expose him/herself to information that may prove useful. Whilst the behavior is unfocused and the manager has no specific purpose in mind, it is not unintentional.

➢ *Semi-focused scanning: -* Again, the manager is not in search of particular pieces of information that he/she is actively searching but does narrow the range of media that is scanned. For instance, the manager may focus more on economic and business publications, broadcasts etc. and pay less attention to political, scientific or technological media.

➢ *Informal search: -* This describes the situation where a fairly limited and unstructured attempt is made to obtain information for a specific purpose. For example, the marketing manager of a firm considering entering the business of importing frozen fish from a neighbouring country may make informal inquiries as to prices and demand levels of frozen and fresh fish. There would be little structure to this search with the manager making inquiries with traders he/she happens to encounter as well as with other *ad hoc* contacts in ministries, international aid agencies, with trade associations, importers/exporters etc.

➢ *Formal search: -* This is a purposeful search after information in some systematic way. The information will be required to address a specific issue. Whilst this sort of activity may seem to share the characteristics of marketing research it is carried out by the manager him/herself rather than a professional researcher. Moreover, the scope of the search is likely to be narrow in scope and far less intensive than marketing research

Some enterprises will approach marketing intelligence gathering in a more deliberate fashion and will train its sales force, after-sales personnel and district/area managers to take cognizance of competitors' actions, customer complaints and requests and distributor problems. Enterprises with vision will also encourage intermediaries, such as collectors, retailers, traders and other middlemen to be proactive in conveying market intelligence back to them.

4.3.2.5. Marketing models:

Within the MIS there has to be the means of interpreting information in order to give direction to decision. These models may be computerized or may not. Typical tools are:

- Time series sales modes.
- Brand switching models.
- Linear programming.
- Elasticity models (price, incomes, demand, supply, etc.).
- Regression and correlation models.
- Analysis of Variance (ANOVA) models.
- Sensitivity analysis.
- Discounted cash flow.
- Spreadsheet 'what if models.

These and similar mathematical, statistical, econometric and financial models are the analytical subsystem of the MIS. A relatively modest investment in a desktop computer is enough to allow an enterprise to automate the analysis of its data. Some of the models used are stochastic, i.e. those containing a probabilistic element whereas others are deterministic models where chance plays no part. Brand switching models are stochastic since these express brand choices in probabilities whereas linear programming is deterministic in that the relationships between variables are expressed in exact mathematical terms.

4.4. Marketing Strategies Using MIS

The role of Information Systems in devising Marketing strategies has been increasing over the years. Organizations derive the following benefits from implementing Information Systems in marketing:

- Creating effective Marketing plans: Target market identification, implementation of the entire marketing campaign and finally setting up of required standards criteria and evaluating the performance of the plans generated.

- Customizing modules for specific requirements: Information can be used to manage campaigns to retain customers, vendors and optimize services regarding each contact.

- Managing critical business issues: Information Systems are effectively used to manage critical issues, such as costs and budget analysis, media policies, establishing milestones and segment management for every campaign.

- Creating Product promotional strategies: Information Systems are used to design, analyze and implement product promotional strategies of a particular brand according to its price, quality, and other related issues.

- Conducting market analysis: Information Systems can be used to survey the potential market and this information can be analyzed to develop specific target market strategies.

- Preparing comprehensive reports: Information Systems can filter information to provide customized solutions to marketers. This information can be viewed in various ways such as summarized views, total, sub total, statistical views or graphic views.

4.4.1. Strategic Information Mining

Data-based marketing is fairly new, so few CIOs have experience with the relevant methodology and technologies. Here's how to go from data processing to information mining.

One of the important challenges today's CIOs face is the shift from data processing to information processing. On the forefront of this phenomenon is perhaps the most strategic application of all: data-based marketing. At the core of data-based marketing is the mining of historical transactional data to uncover customer patterns and trends.

Data-based marketing cannot succeed without support from technology experts. Unfortunately, marketers often find IS personnel uncooperative. The problems usually stem from some basic misconceptions:

Misconception:

The MIS department has the knowledge and tools to build correct data-based marketing systems; it just needs to move more quickly and pro-actively.

Reality:

MIS's experience base is usually operational systems. An order-entry clerk's very regimented use of data does not resemble the way marketers use information to devise customer-acquisition strategies, plan promotions, and search for new marketing ideas. Thus, most of what IS personnel learn from building operational data processing systems simply doesn't apply to data-based marketing.

Misconception:

Marketers do not communicate what they want.

Reality:

Marketing requirements differ significantly from other business requirements. Marketers cannot communicate a complete and invariant set of requirements because their most important requirement is to be able to deal with constantly changing needs.

Misconception:

The way the data already exists in the operational databases is good for marketing information mining.

Reality:

For marketing needs, the data must be carefully prepared to address ever-present integrity and consistency problems. Moreover, the data must be cast into logical and physical structures tailored to the unique task of marketing information mining. Resource sharing between operational and informational databases usually leads to bottlenecks and escalating costs.

Misconception:

Relational queries give users enough flexibility for accessing the data.

Reality:

Relational interfaces cannot do complex data transformation and statistical aggregation in a straightforward and efficient way. Expressing marketing analysis queries in SQL is about as natural as writing operating systems in COBOL. This is the reason that, in the absence of their own database, marketing analysts may use SQL to pull data extracts, but they do the real work with other tools.

Misconception:

End-user "automated" analysis tools, based on rule induction, neural networks, fuzzy logic, genetic algorithms, fractals, or fuzzy logic, replace the need for human information mining.

Reality:

All these techniques require, just as old-fashioned statistical analysis does, careful structuring of the inputs and tinkering with the knobs. At the very least, a human analyst must discover what is relevant before asking a program to verify, refine, and quantify it.

Misconception:

Data-based marketing is just a sales forecasting or a customer-selection system.

Reality:

Analyzing marketing data and implementing the results of the analysis are two different things. Information mining will likely result in a slew of new operational systems, but one should not confuse gold with the process of mining it.

Because data-based marketing is new, few CIOs have experience with the relevant methodology and technologies. CIOs must understand the key differences between data processing and information mining. The goal of data processing is to support the smooth flow of a business's daily activities. The goal of information mining is to detect and measure marketplace phenomena in order to actively manage business change.

4.4.2. Different Process

Because of differences in purpose, data processing and information mining use computers in very different ways. Information mining is characterized by the use of:

- Long, detailed histories of interactions with each and every customer, as opposed to just current or highly pre-summarized data.
- Data dynamically derived from the basic elements by computations, re-coding, etc., rather than stored static data.
- Statistical aggregation of data rather than retrieval of individual record values.
- Ad hoc, data-driven iterative processing rather than a well-defined flow of execution steps.
- Individual project work organization.

These characteristics lead to wide swings of resource utilization, greater need for resource flexibility, and low reuse rate (and therefore little opportunity for traditional systems quality assurance).

Information mining is done not through a collection of well-specified applications, but in a computational environment that facilitates data-intensive research.

4.4.3. Dedicating Storage And Processors To Information Mining

The integrated world of MIS often considers segregating databases and creating data redundancy a capital offense. But, as Inmon observed, not doing so may lead to much greater and uncontrollable redundancy, with every user pulling his own extracts to get his job done. A separate historical database, (or in Inmon's words a "data warehouse"), minimizes and controls redundancy.

Having processors and storage dedicated to information mining avoids the conflict that arises if you introduce erratic information processing into an environment of predictable utilization rates. Fortunately unless your customer file contains the entire population of the United States and all citizens' purchases, you may not need very complicated and costly hardware.

Once all parties agree to separate computing resources, periodic, not continuous, feeding of data from operational databases is a natural outcome. The strategy of updating the marketing database only periodically has few drawbacks and several important advantages:

- It permits creation of a Data Quality Filter (discussed later) to assure data usability.
- Iterative analysis is best done on data that are not changing.
- Continuous updating takes up resources needed for data analysis. Periodic updating fits well with peaks and troughs of information mining.
- Not having the most current layer of data can be easily compensated by straightforward short-term projection of customer counts. Most of the time, it is not even an issue because analysis is done by time slicing the past.

Short-term promotion tracking reports can be easily produced from the operational databases.

4.4.4. From Information Mining to Applications

Certainly not all information-mining efforts lead to the creation of new applications. Some do not even produce interesting results, let alone influence strategies or tactics. However, the most common applications that emerge are:

- A customer-acquisition planning system that helps marketers choose the best ways to acquire new customers based on models that project the long-term payoff of such efforts.

- A promotion planning, customer selection, and tracking system based on a segmentation model that ranks customers based on expected profitability — a financial model combined with a model of customer long-term value determines the depth of selection for targeted promotions.

- Tracking and projection of critical customer segments — this is an EIS application used to keep a watch on the "health" of a customer base, project sales, and play "what if" scenarios with the marketing strategy.

- A test planning and evaluation system supported by well-defined customer clusters.

- Merchandising support based on discovered clusters of products that customers tend to buy as a group.

The use of these systems leads to new ideas and new research questions that translate into more information mining. CIOs should develop and execute these marketing and executive applications in the information-mining environment for the following reasons:

- In the operational environment it will be difficult to get data of the same quality and consistency as in the historical informational data-base.

- Moreover, although these applications are not as fluid as information mining itself, they need to be considerably more open to revisions than order entry or accounting.

- A compelling argument for maintaining these applications within the information-mining environment is that quality-control procedures established there are more appropriate than regular data processing quality controls.

- A crucial element in executive information systems is a human information provider, usually a marketing data analyst. Information providers perform information mining, investigate suspicious results, and answer follow-up questions. The place for these is the information-mining environment.

4.5. MIS Reports

4.5.1. Need for MIS Reports

1. **Provides data**: One of the important functions of the management accountant is to keep the management informed of all the facts relating to the business to assist the management in the effective management of the business. The effectiveness of the information depends upon on its proper reporting.

2. **Aid to managers**: The growth of size of business requires the delegation of authority to various levels of management. Therefore, there arises need of control, co-ordination and communication. Without mis, the managers, working at different levels in the organization, cannot carry out the function of planning, controlling and decision making effectively.

3. **Basis of decision**: It is through mis reports only the management is able to get a full insight into the entire operative activity of the concern. The mis reports are basis for the management to make decisions.

4. **Take informed decisions**: The primary object of mis reporting is two fold: informing the management of the actual performance, to enable the management to make scientific and sound decision.

4.5.2. Different Types Of Reports Used In Marketing

1. *SALES CALL REPORT* – This report contains data about the potential customer. It also contains details about the types of items customer is interested in.

M/s ABC Ltd.

Sales Call Report

Division Name: ____   **Sales Call no._____**

Date: __/__/__

Customer's Name: _____

Type of Customer	**Item(s)**	**Interested in**
Retail Shop	_____	_____
	_____	_____
Distributor	_____	_____

Follow up plan _____

Date of next call: __/__/__

Remarks: _____

_____

Sales Person: _____   Signature: _____

2. *QUOTATION* – It is a document that gives a statement of the price, terms and the condition for a sale a supplier offers for the items. A quotation enables both the sales person and the customer to have a written proof of the sales offer.

M/s ABC Ltd.

Quotation

Date: __/__/__

To,

_____

_____

_____

Dear Sir,

We are pleased to submit our quotation as under:

Sr. No.	Particulars	Rate	Quantity	Amount
1.	**Product P**	Xx	Xxx	Xxxx
2.	**Product Q**	Xx	Xxx	Xxxx
3.	**Product R**	Xx	Xxx	Xxxx
	Amount Payable			Xxxxx

Delivery period: **Within 30 days of receiving order.**

Payment Terms: **50% advance, 50% within 30 days of delivery.**

Mode of Payment: **By Bank Draft.**

Validity: **One month from the date quoted above.**

3. _**PURCHASE ORDER**_ – It is a written document from the customer to the seller listing the required items and providing a description of the goods.

M/s ABC Ltd.

Purchase Order

To,   **P.O. No. _____**

_____   **Date: __/__/__**

_____

_____

      You are required to deliver the items mentioned below within 30 days of the purchase order date, at the address mentioned above.

Sr. No.	Particulars	Description	Quantity
1.	Product P	Medium	Xxx
2.	Product Y	Large	Xxx

The payment for above consignment will be made within 30 days of the receipt of goods. Liability for lost or damaged goods lies with the supplier only. Payment will be made only for goods passing the quality test.

Prepared by: _____   **Passed by: _____**

4. **_INVOICE_** – It is a note asking for payments for goods and services that have been supplied. The invoice accompanies the delivery of ordered goods.

M/s ABC Ltd.

INVOICE

To,   **Invoice No: _____**

_____   **Date: __/__/__**

_____

_____

Dear Mr._____,

The details of items supplied to you are mentioned below:

Sr. No.	Particulars	Amount (Rs.)
1.	Product P	Xxx
2.	Product Q	Xxx
	Total	Xxxx
	Discount 2%	(xx)

	Sales Tax @10%	Xx
	Amount Payable	Xxxx

The payment for the goods supplied is to be made within 30 days of the invoice date.

5. ***SALES REPORT (product wise)*** – A sales report suggests the total product wise sales. From this report one can draw conclusions about the product preferences of customers in different months of the year.

M/s ABC Ltd.

MONTHLY SALES REPORT

Product wise

Month: February   **Page: 1**

Product Name	Quantity Sold	Sales Value (Rs.)
Product P	Xxx	Xxxx
Product Q	Xxx	Xxxx
Product R	Xxx	Xxxx
	Total Sales	Xxxx

6. ***MONTHLY SALES REPORT (Sales person wise)*** – Sales persons are given individual sales targets. This report shows the cumulative sales made by each salesperson for a month.

M/s ABC Ltd.

MONTHLY SALES REPORT

Sales Person wise

Month: February
Page: 1

Salesperson Name	Quantity Sold	Sales Value (Rs.)
Mr. ABC	**Xxx**	**Xxxx**
Mr. DEF	**Xxx**	**Xxxx**
Mr. GHI	**Xxx**	**Xxxx**
	Total Sales	**Xxxx**

7. ***OUTSTANDING PAYMENTS REPORT*** – There are many customers who do not make the payments in time for the goods and services they have taken. Every delayed payment impacts the financial planning of an organization. Therefore, it becomes very important that payment collection be done on time. It shows the details of all invoices for which payments are pending till the last day of the month.

M/s ABC Ltd.

SALES DEPARTMENT OUTSTANDING PAYMENTS REPORT

Month: February   **Date: __/__/__**

Customer Name	Invoice No.	Date	Invoice Amount (Rs.)	Amount Pending (Rs.)
Mr. ABC	12	__/__/__	Xxx	Xx
Mr. DEF	44	__/__/__	Xxx	Xx
Mr. GHI	102	__/__/__	Xxx	Xx
		Total Outstanding		Xxxx

4.6. other aspects of MIS in marketing

4.6.1. Managing Financial transactions:
- Managing cash on sales delivery and credit based delivery.
- Centralizing the security systems and electronic cash drawer support to avoid mismanagement of cash.
- Managing any refunds or exchanges made for each individual product.

4.6.2. Providing stock and inventory details:
- Consolidating the stock availability, sales information, inventory details and data transfer across geographically dispersed stores.
- Allowing the view of stock availability by individual product, product category, department, supplier and manufacturer.

4.6.3. Maintaining relevant customer information:
- Maintaining relevant information about customers specifying the personalized shopping habits, customer profiling, tracking and membership details.
- Analyzing every account including the potential buyer, personal benefits being offered to the buyer if the sale is closed and the problems faced during the particular sale.

4.6.4. Integrating sales processes:

- Identifying the top selling product by category, department, supplier and manufacturer
- Managing the sales pipelines to maximize the chances of closing a sale.
- Storing detailed sales histories by individual product, product category, department, supplier and manufacturer.

4.7. Management Information System In E – Commerce

4.7.1. Meaning: E – Commerce is one of the fastest growing segments of the internet, which is used by businesses. E – Commerce can be divided into the following categories:

- Business to Business E – Commerce (B2B)
- Business to Consumer E – Commerce (B2C)
- Consumer to Consumer E – Commerce (C2C)
- Business to Peer (B2P)

BENEFITS:

Information Systems are being used in management of E - commerce. The Information Systems offer the following benefits:

- ✓ Integrating existing point of sales systems.
- ✓ Integrating with other E – Commerce driven applications to provide the analysis of market effectiveness in terms of real business.
- ✓ Managing customer information that can then be used for effective analysis to predict buying trends.
- ✓ Provides various methods that can be used for diverting traffic onto the required websites.

- ✓ Integrating graphs and multiple report building wizards for the creation of effective reports based on any type of information.
- ✓ Information systems also provide various customer retention strategies according to each segment or market campaign or sales force.
- ✓ Information systems also manage the search engine optimizations:

- The Information System can manage the inbound links to a website. It monitors and manages these inbound links as the number of inbound links can have a visible effect on the listing of the website by a search engine.
- Information Systems are able to identify the appropriate keywords that best describe the company and its products. The content on the site, which is developed around the keywords, has to be clear, concise and relevant.

Information Systems can also set up and manage pay per click mechanisms. They continuously generate new keywords and messages for the website to analyze the combination so as to divert the maximum traffic to the company's website at a minimum cost to the company.

5. Consumer Sales Department

Project objective

The primary objective of developing and establishing an MIS for the selected major marketing department in consumer sales was to provide a comprehensive system facilitating planning, design, various kind of unstructured data in the structured & planned way so that top management can take any strategic decision for the system.

The system developed to:

- Provides quick, accurate and relevant information.
- Improves data management and handling capacity.
- Provides effective sharing of data and information amongst various management levels and with associated offices

Scope

- To handled the study, design, development, testing and installation of the management information system, training of officials, as well as implementation support for the system.

MIS has the following modules:

1. **Core activities**

   - Petroleum refining
   - Pipelines – crude oil & Petroleum Products

- Petroleum product marketing
- Research and developement

2. **Integration**

- Exploration and Production
- Petrochemicals

3. **Diversification**

- Natural gas-Import and marketing
- City Gas Destribution

4. **Overseas Business**

- Equity Oil & Gas
- Petroleum products & marketing
- Lubricants Blending & Marketing
- Exports- Petroleum Products & Petrochemicals

5. **Offerings**

- Consultancy –refinery and pipelines projects
- Refinery revamp, turnaround, O & M
- Refining Process Technologies
- Manpower Secondment
- Training & development

Annual sales analysis of IOCL(2008)

Product Name	Year	Month	Sales Quantity	UOM	Sales Value (Rs. Crores)	Product Mix (%)
Petroleum Products	2008	12	714.21	Lakhs Metric Tonnes	220,449.52	88.22
Oil Crude	2008	12	88.25	Lakhs Metric Tonnes	20,100.02	8.04
Lubricants & Greases	2008	12	4.47	Lakhs Metric Tonnes	4,068.33	1.62
Gases	2008	12	903.36	Lakhs BTU(Brit Therm Unit)	2,088.81	0.83
Purified Terepthalic Acid (PTA)	2008	12	3.92	Lakhs Metric Tonnes	1,666.47	0.66
Lab	2008	12	1.36	Lakhs Metric Tonnes	1,022.65	0.40
Base Oil & Additives	2008	12	0.63	Lakhs Metric Tonnes	206.63	0.08
Explosives	2008	12	0.43	Lakhs Metric Tonnes	93.80	0.03
Others	2008	12	0		78.31	0.03
Scrap	2008	12	0		50.43	0.02
Cryocontainers And Accessories	2008	12	0.17	Lakhs Numbers	30.56	0.01

Sales analysis

It consists of measuring and evaluating actual sales in relations to sales goal. Two specific tools in this approach:

1. Sales variance analysis:

Measures the relative contribution of different factors to a gap in sales performance.

2. Micro sales analysis

Looks at specific products, territories, and so forth, that failed to produce their expected share of sales.

Consumer sales department of IOCL has performed major work on the sales analysis on the basis of management information reporting system (MIRS).

Sales analysis on the basis of:

- Product wise

- Region wise (eg. Northern region)

- Sectors wise (eg. Railway, construction)

- Location wise

- State wise

- Division office wise

- Consumer wise

Sales report MIRS in IOCL:

- Executive MIS of monthly sales

- Cumulative sales

- Daily sales report

- HSD daywise sales

- Flash reports- monthly, cumulative, additional info FTP products

- Industry sales- monthly, cumulative, SO-wise, product- SO wise

- Company wise- monthly sales

- Nill selling CPs

- Y2 Report- district wise report, Flash report, Category wise sales for LPG/SKO/Bitumen

Findings: IOCL mostly using micro share analysis so that company can easily differentiate and find profitable region, division, product, etc. also can easily distinguished the product , region , which give loss to the organization.

Market share analysis:

Company sales do not reveal how well the company is doing relative to competitors. Four different measures are available:

- Overall market share

- Served- market share

- Relative market share (to top three competitors)

- Relative market share (to leading competitors)

Marketing Expense-to-Sales Analysis

Annual plan control requires making sure that the company is not overspending to achieve its sales goals. With the help of control chart management can track key ratio time to time.

Key ratio:

- Sales force-to-sales

- Advertising-to-sales

- Sales promotion-to-sales

- Marketing research-to-sales

- Sales administration-to-sales

Financial analysis

Financial analysis is used by management to identify the factors that affect the company's *rate of return on net worth* . With the help of this expense to sales analysis marketers can make analysis to find profitable strategies and not just sales building strategies.

Customer attitude tracking

This a type of alert companies set up systems to track the attitudes of customers, dealers, and other marketing system participants. By monitoring changing customer attitude before they affect sales, management can take earlier action.

The main systems are:

- Complaint and suggestions system

- Customer panels

- Customer surveys

Corrective Action: When performance starts deviating too much from the plan's goals, management needs to undertake corrective actions,like:

- Production cutting

- Price cutting

- Increased pressure on sales force

- Fringe expenditure cutting

- Personnel cuts

- Bookkeeping adjustment

6. <u>CONCLUSION</u>

From the above findings it can be concluded that management information system is not only the activity that is desirable but also an activity that an organization must efficiently and carefully decide and analyze existing system in better way through which company can able to evaluate errors and take corrective action against it. With the help of MIS of sales data of consumer sales organization can able to find more profitable customer and set goal for its desired growth and profit with respect to the requirement of the local as well as global market .

It is necessary for the continuous systematic development among all levels of strategies and policies determination regarding the marketing plannings and analysis of products in the competitive market as a action plan against the competitors products with respect to their price, quality, technology, performance, innovation, dully delivery & technical support that can fulfill and satisfy the specific requirement of the customers

The main objective attained from the MIS of IOCL to grow in following areas:

- Grow in its capital market

- Grow in its share market

- Grow in its performance

- Can survive and capture the competitive market

- Can understand, fulfill and satisfy the customers as per their requirements

- Grow in goodwill

- Improvement in technology

- To make an strategic decision

- To develop export market

In the absence of proper handling of large and unstructured data company cannot make any kind of sales analysis ,market share analysis, customer attitude tracking etc. and company may lose or decline in all above desirable results.

Thus for the growth of economical as well as social health of the organization in global , international national and in local market proper design of marketing plans and analysis of products must be carefully and effectively conducted to gain the desirable result.

IOCL is improving the level of customer satisfaction by mail questionnaires & personal discussion. Organizing camps at various sites for the limited period listening to the customers problems ,resolving them & providing technical guidance.

IOCL is also participating in international trade fairs which are held in India & abroad as a strategic policy of its marketing planning to cover the national & international market also

The systems are mostly in the place through same process simplifications have to be carried out and certain procedural redundancies need to be remained. The company also needs to make the interdepartmental co-ordination and effective in addition IOCL must be completely responsible for internal follow-up as well as services as a single point contact with the client.

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