

SUBJECT: HOTEL MANAGEMENT

## **ROLE OF MANAGEMENT INFORMATION SYSTEM (MIS) IN HOSPITALITY INDUSTRY**

### **Introduction**

MIS is Management Information System, which refers to a computer based tools to organize, evaluate and efficiently manage departments within an organization. Management Information System (MIS) has played a potent role in the hospitality industry. With time, it has become the most dependent tool, having gone through some changes apart from being customised to a company's needs. These changes in a way enabled the hospitality sector to view MIS as a complete networked platform upon which performance of a company can be viewed and dissected easily.

We shall discuss the various aspects of MIS in Hospitality industry under five different headings

1. Significance of MIS
2. MIS operational platform
3. Computer applications in Hospitality
4. Various modules of a PMS
5. Selecting a PMS for a hotel.

### **1. Significance of MIS**

In today's world of ever increasing complexities of business as well as business organization, in order to service and grow , must have a properly planned, analyzed, designed and maintained MIS so that it provides timely, reliable and useful information to enable the management to take speedy and rational decisions.

MIS has assumed all the more important role in today's environment because a manager has to take decisions under two main challenges.

First, because of the liberalization and globalization, in which organizations are required to compete not locally but globally, a manager has to take quick decisions, otherwise his business will be taken away by his competitors. This has further enhanced the necessity for such a system.

Second, in this information age wherein information is doubling up every two or three years, a manager has to process a large voluminous data; failing which he may end up taking a strong decision that may prove to be very costly to the company.

In such a situation managers must be equipped with some tools or a system, which can assist them in their challenging role of decision-making. It is because of the above cited reasons, that today MIS is considered to be of permanent importance, sometimes regarded as the name centre of an organization. Such system assist decision makers in organizations by providing information at various stages of decision making and thus greatly help the organizations to achieve their predetermined goals and objectives. In other words, organizations today just cannot survive and grow without properly planned, designed, implemented and maintained MIS. It has been well understood that MIS enables even small organizations to more than offset the economies of scale enjoyed by their bigger competitors and thus helps in providing a competitive edge over other organizations.

## **2. MIS operational platform**

MIS is undertaken to take account of the day-to-day operations and the aberrations that need to be quickly addressed. It works on client-server architecture and facilitates maintenance of necessary data as well as generation of reports and queries. This software explicitly expresses the operation in a format that is conceived easily and enables quick understanding of various levels of operations. Today, hoteliers are even extending the use of MIS for keeping a bank of guest information and feedback using this real data into bringing about changes in service styles, menus, etc. An in-depth analysis can therefore be possible with the kind of information available through customisation, feeding the right inputs and evaluating the output generated.

MIS primarily focuses on the soft skills of the operations. But there has to be a synergy of information flow within the managerial, operational and the top management of a hotel. In a hotel, there are different departments and MIS is made on a platform where work is divided and managed according to the departments.

MIS operations have become more complex and challenging in this sector because of chain hotels which need to be linked to each other when it comes to finding out the performance of each unit. Therefore, MIS is presently being upgraded for Web-based operations too. Here, a central system is created - central MIS - that takes into account the reports generated by each property (through MIS) at the end of the day after the completion of night audit. This is done by uploading the day's report at the central Web server.

The idea is to reach the root of any discrepancy quickly and keep the profitability of the business at the optimum. This tabulation brings the performance of all properties on a single platform - single window information system - for evaluation and appraisals. This also enables a company to study past trends to predict future trends. Also, MIS going the Web way not only secures data from possible theft but also ensure quick recovery from any part of the world for reference and future planning, which gives this software a status like never before.

### 3. COMPUTER APPLICATIONS IN HOSPITALITY

The application of computers in the hospitality sector is of great importance because this area offers the greatest potential for improvement like cost reduction, better management of information, reduced training and manpower costs and prospect of more interesting work. Today, even smaller hotels have turned to the use of computers to manage their enterprise.

PROPERTY MANAGEMENT SYSTEM (PMS): In recent times, hotels have started using PMS in order to manage and respond to guest needs efficiently and effectively. A PMS is a generic term used to describe the computer applications (computer hardware and software) in managing the interface of various departments in a hotel in order to manage the property effectively. A PMS is important and essential to front office operations in modern hotels. It includes the process of reservations, registration, guest accounts, guest check in and checkout, handling discounts and allowances and the night audit. Interfacing, electronic sharing of data of departments such as Front Office, F&B through points of sale, Maintenance through monitoring of energy and heating and cooling systems and Security through control of guest keys are a few of its applications in a hotel. Others include,

- Energy Management System (EMS)
- Material Management System (MMS)
- Point of Sale (MICROS)
- Human Resource Information System (HRIS)
- Accounting System
- Call Accounting System (CAS)
- Management Information System (MIS)

Benefits of a PMS:

- The operations are improved by the reduction of repetitive tasks.
- The internal operations of a hotel can be kept in a standardised manner making it easier to control which would be difficult in a manual system.
- The information needed by management to make decisions is current and accessible.
- Better internal control can be exercised with quicker and current information being available.

□ **Information is more difficult to compromise with user records being maintained by the system.**

#### **4. PMS MODULES:**

##### **A. FRONT OFFICE SYSTEMS**

###### **1. Reservations :**

When a prospective guest calls to make a reservation, this is the module of the PMS that is accessed. The programme allows any user to enter the details of the guest reservation, change the details or simply cancel the reservation.

All the process of reservations in a manual system would require greater effort and time and manpower.

###### **2. Guest history:**

a. Personal history on each guest is compiled, maintained and updated automatically. The guest history saved would be the most recent one. This would include guest

b. Remarks related to likes and dislikes, arrival and departure dates, room type, room number, mode of settlement, etc would also be included.

c. Guest history is an important tool for guest satisfaction index. Since this is electronically monitored, the front office has enough information about the guests who has previously stayed in the hotel, to upsell the hotel products effectively and to ensure greater personalised service thus ensuring greater guest satisfaction.

3. Registration: This is linked by information transferred from the reservations module. Pre-registration, quick guest room assignments and online verification of room status increase the efficiency during the check in process. The information gets updated automatically which further speeds up the process of handling guest check in, issuing of key cards and card keys as well as handling group arrivals.

4. Guest accounting & Check out: This provides accurate online posting of guest charges when interfaced with the POS. Split charges and multiple folios with specific billing instructions that have been set for each guest speeds up the accounting process. Master and Incidental folios can be monitored easily and effectively.

5. Rooms management (Housekeeping): this module allows for constant updating of room status and maintenance status of all room types in the hotel. This information can also be communicated and made accessible for confirmation to the Front Office. It can display work area allocations of different staff on the floors and can create room occupancy reports and other reports required by housekeeping. It can store statistics related to occupancy with room history records that can help in future planning and in providing better maintenance services.

6. Night Auditing: the most important function of daily operations of a hotel is the night audit. This process posts room tariff and taxes automatically on the guest's folio and helps confirm and reconcile the final balance of the entire day's transactions.

7. Sales & Catering ( S&C/Banquets): This function of the PMS deals with banquet activities and reservations regarding the booking status for any function space, specific occasions as well as days and time of the booking.

B. BACK OFFICE SYSTEMS OF THE PMS Other modules used by the hotel management for operating efficient hotel operations usually include:

i. Material Management System-MMS- (Stores & Purchase): This covers the entire material management operations such as requirement planning, purchase, receiving of stock, costing, etc. The system also provides information for effective decision making and budgeting.

ii. Management Information System (MIS): the MIS should provide statistical information to the management to assist in decision making and revenue control.

iii. Financial Accounting System: this module provides information required for basic accounting as well as financial management of the hotel.

iv. F&B control system: this is the most important area of concern as a major POS which can raise revenue and create a lot of savings through control of F&B by minimising wastage of material.

v. Human Resource Information System (HRIS): the human resource of the hotel is the most important and the most expensive asset. A good HRIS should integrate the requirement for effective career planning, personnel administration, and payroll information.

C. MISCELLANEOUS FUNCTIONS OF A PMS

a. Hotel security: this includes electronic locks and computerised card systems.

b. Energy Management System- EMS- (Engineering & Maintenance): an EMS is used to keep track of energy consumption as this provides a more effective control by highlighting excessive consumption an important application of this is in monitoring and adjusting lighting and temperature requirements in guestrooms and public areas of the hotel.

c. TV interactivity: through this interactive system guests can view and have access to their favourite programmes at their convenience.

d. E-Concierge (Electronic Concierge): this facility helps the guest to make a multimedia graphic and sound assisted virtual tour of the hotel. This also provides and facilitates a virtual tour of the city, local areas and attractions, restaurants and shopping centres in addition to guest rooms.

e. Point- Of- Sale (POS) system: a POS system is made up of a number of terminals located at various outlets or points of sale in the hotel. Each POS terminal contains its own input and output components which are interfaced with a remote central processing unit. The interface allows the electronic data to be processed, and transferred to guest folios when required, thus reducing the time required to post a charge in the appropriate guest folio and recording of the F&B sale at the same time.

f. Centralised Reservation System (CRS): A CRS is used for a chain or group of hotels to enable the sale of their rooms more effectively.

## **5. SELECTION OF A PMS**

Since the PMS is a capital investment, great thought goes into the decision for the shift of a manual working system to a fully automated one.

**STEP 1: Needs Analysis** It includes such issues as analysing the ease with which the telephone system can be used; the availability of room status; the length of time taken to complete a reservation request; analysis of needs includes such issues as how do the F&B report guest charges? How does Engineering monitor and control energy usage in guestrooms? etc. Similar information is researched and various operational and administrative needs are combined to determine which computer application would be appropriate for the property in question. . So, the needs analysis enables to know what is needed and what is not needed and will help choose from the many PMS available in the market.

**STEP 2: Software selection** Today, software is available in modules to cater for different areas in a hotel.

Based on requirements based on the conclusion of the need analysis in step 1, a hotel may go in for the entire PMS or parts of it, i.e. certain modules. Many hotels combine modules for different departments from various PMS available.

**STEP 3: Hardware selection:** Hardware selected should be appropriate to run the selected software with the basic concept to:

a. Processor speed – how fast a CPU makes calculations per second

b. Disk drive: in megabytes is the access time- the time taken by the processor to retrieve information from the hard drive in milli- seconds.

c. I-O ports (Input and out put devices): keyboards, printers, monitors, mouse, modem, CD drives, etc.

d. Other supplies: paper, ink, toner, CDs, DVDs, etc.

Other factors to keep in mind are:

Positioning of hardware: this is based on the workflow analysis done during the needs analysis.

How does it benefit the guest? Who will operate it? Who all will require access to the system at that position? And so on.

Climatic conditions: whether location will be where air-conditioning is required, especially in back-of-the-house areas?

Ergonomics: ergonomics is the study of the psychological and physiological effects of designs of equipment and other work conditions on people in the workplace as these affect productivity.

For example, glare and flicker from the cursor, a flashing point on the monitor that indicates where the data can be entered, can cause eyestrain. Neck pain may result from improper positioning of the monitor, extreme pain in finger joints caused to excessive use of keyboard, and so on.

The form of computers used today may vary from a desktop p.c. to a laptop for check in; tablets are being widely used in guest service while smart phones are also being widely utilised by hotel management today to provide the latest technology for the convenience of the guests.

STEP 4: Other considerations:

a. Vendor claims: (claims made by the supplier) One may inquire about the product from current users whether they are satisfied using their system.

b. Installation plans: Proper planning of installation is essential for maintaining guest satisfaction and employee morale. One must have a complete plan laid out for hardware and questions such as who would be installing the hardware and cables, etc. should be clearly identified.

c. Training: Is classroom and on-the-job training provided by the vendor or not? If yes, is it charged for separately or is inclusive in the price quoted? Whether a training module is included or not?

d. Documentation of procedures: Clear-cut procedures and instructions, guides and manuals provided- yes/no?

e. Back-up power supply: Provision of UPS sources- yes/no?

f. Maintenance agreement: The cost of repair and replacement of hardware and software; provision of emergency services should be considered. Annual Maintenance Contracts- AMC- may be a good idea to keep the system functioning smoothly.

STEP5: Financial considerations

The following should be considered:

- The decision regarding option of purchase or rental of a PMS since it is a heavy investment it can tie up cash flow of an organisation.
- If cost benefits are not realistically projected, profit may be difficult to come by.
- Analyse the savings in terms of overtime paid to employees, losses due to late charges, cost of marketing, database collection, etc.
  
- Advantages of outright purchase as opposed to staggered payments (instalments) should be considered. There may be discounts offered for outright purchase in cash.
- Advantages of lease- application of leased payment to purchase price, tax advantages of leasing, etc.

#### Conclusion

In this episode under Role of MIS in Hospitality we have learnt that for operational aspects of a hotel MIS is a must. MIS is the life blood of any organization. We also learnt the various modules of Property Management Systems and the factors in selecting a PMS for a hotel.