

# Case Study For Restaurant Information System

## Restaurant Information System

A waiter takes an order at a table, and then enters it online via one of the six terminals located in the restaurant dining room. The order is routed to a printer in the appropriate preparation area: the cold item printer if it is a *salad*, the hot-item printer if it is a hot *sandwich* or the bar printer if it is a *drink*. A customer's meal check-listing (bill) the items ordered and the respective prices are automatically generated. This ordering system eliminates the old three-carbon-copy guest check system as well as any problems caused by a waiter's handwriting. When the kitchen runs out of a food item, the cooks send out an 'out of stock' message, which will be displayed on the dining room terminals when waiters try to order that item. This gives the waiters faster feedback, enabling them to give better service to the customers. Other system features aid management in the planning and control of their restaurant business. The system provides up-to-the-minute information on the food items ordered and breaks out percentages showing sales of each item versus total sales. This helps management plan menus according to customers' tastes. The system also compares the weekly sales totals versus food costs, allowing planning for tighter cost controls. In addition, whenever an order is voided, the reasons for the void are keyed in. This may help later in management decisions, especially if the voids consistently related to food or service. Acceptance of the system by the users is exceptionally high since the waiters and waitresses were involved in the selection and design process. All potential users were asked to give their impressions and ideas about the various systems available before one was chosen.

### **Questions:**

1. In the light of the system, describe the decisions to be made in the area of strategic planning, managerial control and operational control? What information would you require to make such decisions?
2. What would make the system a more complete MIS rather than just doing transaction processing?
3. Explain the probable effects that making the system more formal would have on the customers and the management.

### **Solution:**

#### **Solution for Question #1.**

A management information system (MIS) is an organized combination of people, hardware, communication networks and data sources that collects, transforms and distributes information in an organization. An MIS helps decision making by providing timely, relevant and accurate information to managers. The physical components of an MIS include hardware, software, database, personnel and procedures.

Management information is an important input for efficient performance of various managerial functions at different organization levels. The information system facilitates decision making. Management functions include planning, controlling and decision making. Decision making is the core of management and aims at selecting the best alternative to achieve an objective. The decisions may be strategic, tactical or technical. Strategic decisions are characterized by uncertainty. They are future oriented and relate directly to planning activity. Tactical decisions cover both planning and controlling. Technical decisions pertain to implementation of specific tasks through appropriate technology. Sales region analysis, cost analysis, annual budgeting, and relocation analysis are examples of decision-support systems and management information systems.

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There are 3 areas in the organization. They are strategic, managerial and operational control.

Strategic decisions are characterized by uncertainty. The decisions to be made in the area of strategic planning are future oriented and relate directly to planning activity. Here basically planning for future that is budgets, target markets, policies, objectives etc. is done. This is basically a top level where up-to-the minute information on the food items ordered and breaks out percentages showing sales of each item versus total sales is provided. The top level where strategic planning is done compares the weekly sales totals versus food costs, allowing planning for tighter cost controls. Executive support systems function at the strategic level, support unstructured decision making, and use advanced graphics and communications. Examples of executive support systems include sales trend forecasting, budget forecasting, operating plan development, budget forecasting, profit planning, and manpower planning.

The decisions to be made in the area of managerial control are largely dependent upon the information available to the decision makers. It is basically a middle level where planning of menus is done and whenever an order is voided, the reasons for the void are keyed in which later helps in management decisions, especially if the voids are related to food or service. The managerial control that is middle level also gets customer feedback and is responsible for customer satisfaction.

The decisions to be made in the area of operational control pertain to implementation of specific tasks through appropriate technology. This is basically a lower level where the waiter takes the order and enters it online via one of the six terminals located in the restaurant dining room and the order is routed to a printer in the appropriate preparation area. The item's ordered list and the respective prices are automatically generated. The cooks send 'out of stock' message when the kitchen runs out of a food item, which is basically displayed on the dining room terminals when waiter tries to order that item. This basically gives the waiters faster feedback, enabling them to give better service to the customers. Transaction processing systems function at the operational level of the organization. Examples of transaction processing systems include order tracking, order processing, machine control, plant scheduling, compensation, and securities trading.

The information required to make such decision must be such that it highlights the trouble spots and shows the interconnections with the other functions. It must summarize all information relating to the span of control of the manager. The information required to make these decisions can be strategic, tactical or operational information.

Advantages of an online computer system:

- Eliminates carbon copies
- Waiters' handwriting issues
- Out-of-stock message
- Faster feedback, helps waiters to service the customers

Advantages to management:

- Sales figures and percentages item-wise
- Helps in planning the menu
- Cost accounting details

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## **Solution for Question #2.**

If the management provides sufficient incentive for efficiency and results to their customers, it would make the system a more complete MIS and so the MIS should support this culture by providing such information which will aid the promotion of efficiency in the management services and operational system. It is also necessary to study the keys to successful Executive Information System (EIS) development and operation. Decision support systems would also make the system a complete MIS as it constitutes a class of computer-based information systems including knowledge-based systems that support decision-making activities. DSSs serve the management level of the organization and help to take decisions, which may be rapidly changing and not easily specified in advance.

Improving personal efficiency, expediting problem solving (speed up the progress of problems solving in an organization), facilitating interpersonal communication, promoting learning and training, increasing organizational control, generating new evidence in support of a decision, creating a competitive advantage over competition, encouraging exploration and discovery on the part of the decision maker, revealing new approaches to thinking about the problem space and helping automate the managerial processes would make the system a complete MIS rather than just doing transaction processing.

## **Solution for Question #3.**

The management system should be an open system and MIS should be so designed that it highlights the critical business, operational, technological and environmental changes to the concerned level in the management, so that the action can be taken to correct the situation. To make the system a success, knowledge will have to be formalized so that machines worldwide have a shared and common understanding of the information provided. The systems developed will have to be able to handle enormous amounts of information very fast.

An organization operates in an ever-increasing competitive, global environment. Operating in a global environment requires an organization to focus on the efficient execution of its processes, customer service, and speed to market. To accomplish these goals, the organization must exchange valuable information across different functions, levels, and business units. By making the system more formal, the organization can more efficiently exchange information among its functional areas, business units, suppliers, and customers.

As the transactions are taking place every day, the system stores all the data which can be used later on when the hotel is in need of some financial help from financial institutes or banks. As the inventory is always entered into the system, any frauds can be easily taken care of and if anything goes missing then it can be detected through the system.