NATIONAL OPEN UNIVERSITY OF NIGERIA

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: HCM 432

COURSE TITLE: HOSPITALITY INFORMATION SYSTEMS

COURSE DEVELOPMENT

HCM 432

HOSPITALITY INFORMATION SYSTEMS

COURSE GUIDE

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Introduction

Traditionally, hotels were largely dependent on cards and paperwork at the front desk to keep in touch with old and current customers. They were largely at the mercy of the desires of vacationers to arrive, and on their own efforts and staff to be ready for potential surges or long droughts of occupancy. Luckily, such inconvenience and old-fashioned methods are long since past, thanks to advances in information technology.

Automation is one of the fastest-changing aspects of the hospitality industry. Advances in the areas of reservation systems, guest services, food and beverage management, hotel sales, food service catering, and hospitality accounting have placed computer systems technology in virtually every area of hospitality operations.

Ever since the 1980s, ICTs have been changing the way in which business is conducted in the hospitality and tourism industries. Progress in ICTs has transformed business practices, strategies and industry structures dramatically. The development of computer reservation systems (CRSs) in the 1970s, global distribution systems (GDSs) in the late 1980s, and the internet in the 1990s not only generated a new paradigm-shift, but also changed operational practices in the industries.

Today, more than ever before, hospitality managers must understand the fundamental features of computer systems and manage the information systems within their organizations.

What you will learn in this Course

During this course, the students will learn about:

System and Information Technology in the Hospitality Industry
Hospitality industry technology
Types of hospitality industry technology System
Choosing IT systems
Hospitality Information processing (Property Management Systems)
Information Technology in reservations and rooms
Information Technology in sales, marketing and events management
Information Technology and food and beverage service
IT in Security and labour management
IT in inventory control and food costing
Internet and hospitality industry
IT and efficiency enhancement

Working through this Course

For a successful completion of this course, one is required to go through the study units, reference books, and other resources that are related to each unit.

The Tutor-Marked Assignments (TMA) should be done immediately and submitted to the Course Facilitator.

The medium and time for the submission of the TMA will be specified later. This is a two (2) credit unit course, and so you are expected to spend a minimum of two (2) hours on it weekly. It is expected that you complete the entire course outline in 18 – 25 weeks.

Course Evaluation

As earlier stated, every unit of this course has an assignment section which you are expected to do at the end of the unit. You are required to keep an assignment file. At the end of the course, the evaluation shall be as follows:

Assessment	**Marks**
Assignments	30%
Examination	70%
Total	**100%**

Out of all the assignments you will do, each shall be marked and converted to 3%. At the end, the best ten (10) shall be selected to make up 30%. The examination at the end of the course shall cover all aspects of the course.

Study Units

The study topics to be discussed have been grouped in units and modules as shown below:

Module 1

Unit 1 System and Information Technology in the Hospitality Industry

Unit 2 Hospitality industry technology

Unit 3 Types of hospitality industry technology System

Unit 4 Choosing IT systems

Module 2

Unit 1 Hospitality Information processing (Property Management Systems)

Unit 2 Information Technology in reservations and rooms

Unit 3 Information Technology in sales, marketing and events management

Unit 4 Information Technology and food and beverage service

Module 3

Unit 1 IT in Security and labour management

Unit 2 IT in inventory control and food costing

Unit 3 Internet and hospitality industry

Unit 4 IT and efficiency enhancement

The units shall be treated in sequential order.

Textbooks and References

Nickerson, R.C. (2001) Business Information Systems, Upper Saddle River, NJ: Prentice hall, p.4

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Erik Lars Hansen and Raymond M. Owen (2010) Evolving Technologies To Drive Competitive Advantage in Hospitality Industry.Hotel.Online.
SaeedKazmi (2010) Mobile Technology: The Revolution In Human Resource Management. HotelExecutive.com
Ryan Day ( ) Mobile Efficiency: New ways mobile technologies save hotels time and money. HotelExecutive.com

Presentation Schedule

Specific dates for particular activities, such as submission of assignments, tutorial schedules and examination dates shall be made available to you at a later date. This will enable you plan your activities in the same line. The method of submitting your assignments and receiving other course materials shall be agreed upon on a later date. You should endeavour not to fall behind the schedule whenever it is given.

Conclusion

By the time you go through all the modules and units, you will be well grounded in Hospitality Information Systems.

COURSE DEVELOPMENT

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Unit 3 Types of hospitality industry technologySystem

Unit 4 Choosing IT systems

UNIT 1 INFORMATION SYSTEM AND INFORMATION TECHNOLOGY IN THE HOSPITALITY INDUSTRY

CONTENT

1.0 INTRODUCTION

Until fairly recently, hotels were very much a local business. Hotels offered very few amenities and travelers did not expect much beyond a room with a bed. In the early

1900's, the chain hotel business began to take form and later coast-to-coast hotel chains came into existence. This all occurred along with increased business and pleasure travel. With increased travel, and with the hotel chain having business units spread over a larger geographic area, some form of Information System (IS) became necessary. With increased business and improved technology, an Information Technology (IT) System became possible. IS and then IT became necessary to have a consistent method of tracking and maintaining business operations. Later, as customers' expectations changed, IS/IT became necessary to ensure consistency in meeting customer needs.

2.0 OBJECTIVES

At the end of this unit, you will be able to explain:

Information system

Information technology

The evolution of IS and IT in the Hospitality industry.

3.0 MAIN CONTENT

3.1 INFORMATION SYSTEM

3.1.1 a. Definition of Information System

Information system (IS) is any combination of information technology and people's activities that support operations, management, and decision making. In a very broad sense, the term information system is frequently used to refer to the interaction between people, processes, data, and technology. In this sense, the term is used to refer not only to the information and communication technology (ICT) an organization uses, but also to the way in which people interact with this technology in support of business processes.

Information systems typically include an ICT component but are not purely concerned with ICT, focusing instead on the end use of information technology. Information

systems are also different from business processes. Information systems help to control the performance of business processes.

Information system can be seen as a special type of work system. A work system is a system in which humans and/or machines perform work using resources to produce specific products and/or services for customers. An information system is a work system whose activities are devoted to processing (capturing, transmitting, storing, retrieving, manipulating and displaying) information.As such,

Information systems inter-relate with data systems on the one hand and activity systems on the other. An information system is a form of communication system in which data represent, and are processed as a form of social memory. An information system can also be considered a semi-formal language which supports human decision making and action.

b. Hospitality Information Systems (HIS)

Hospitality information systems are a collection of components that work together to provide information help in the operation and management ofa hospitality organization. Information technology systems in use in the hospitality industry are primarily computers and telephone systems. However, some software application s and hardware are in use in various sectors of the industry.

In the hospitality industry, computers and telephones are used to provide guest services, to make business more effective, and to perform decision-making functions for managers. The computers, communication equipment and other technology in use in information systems are called information technology (IT).

Computer information systems give hospitality managers an advantage because they reduce the chance of error. These systems allow the managers to control an entire property at the touch of a button. For example, computerized systems can now help monitor work as it is going on there warning against obvious or likely errors before such errors cascade and create additional errors elsewhere. In housekeeping operations,

housekeepers can be notified in advance of guests' requests before the guests check into the hotel. Information is kept on guests' likes and dislikes. This helps create a comfortable and predictable environment for guests and at the same time, it saves time and provides efficiency in the housekeeping department.

Hospitality information systems are also mechanisms that deliver processed data to management to facilitate the decision-making process. Much of the information needed by management exists within the enterprise. Some are required to be maintained by law, and other data exists as a result of business transactions entered into by the enterprise. Some information exist within individuals and are not available without involving that person in the decision-making process. As the operation grows, hospitality information systems become more structured, requiring additional data production, sorting and processing. With the increased speed and capabilities of microcomputers, and the reduced cost of hardware and software, hospitality information systems are available to assist management in many ways.

Centralized purchasing management systems are available to create purchase orders that can be immediately communicated to vendors. This system works best for multi-unit organizations. There are also products available to track inventory and to compute theoretical sales. These systems can automatically route requisitions and delivery worksheets. Systems for recording food and beverage sales continue to improve, offering not only sales tracking data but internal control features, such as remote printers at production stations giving authorization to release inventory. Orders can be taken tableside by hand-held wands or touch screens, eliminating the need for servers to write down guest selections.

In the area of telecommunications, hospitality information systems have proven to help enterprises generate additional revenue through facsimile (fax) machines, modem connections, conference calling and videoconferencing. As technology increases, this continues to be a growth area for the industry.

Hospitality information systems provide entertainment to guestrooms through on demand movies, video games and videotape rentals, and premium channel selections.

Security, a major concern in tourism, is another area where the systems have improved delivery of guest service through key cards, security cameras and motion detectors. Energy costs are also better managed with hospitality information systems by controlling heating and air conditioning.

Front office and back office accounting procedures have been greatly enhanced by hospitality information systems. The most visible to the guest is the property management system which helps the check-in and check-out process and stores data on each guest. This, coupled with other sales software packages, allows management to maximize revenue through yield management.

3.1.2 Components of Information system

Information system consists of computers, instructions, stored facts, people and procedures. It can be categorized in four parts:

a. Management (MIS)

b. Decision Support System (DSS)

c. Executive Information System (EIS)

d. Transaction Processing System (TPS)

a. Management Information System (MIS)

Management information system (MIS) is a system that provides information needed to manage organizations effectively. Management information systems involve three primary resources:

- Technology
- Information
- People

It is important to recognize that while all three resources are key components when studying management information systems, the most important resource is people.

Management information systems are seen as a subset of the overall internal controls procedures in a business, which cover the application of people, documents, technologies, and procedures used by management accountants to solve business problems such as costing a product, service or a business-wide strategy. 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. Decision Support Systems, Expert systems and Executive information systems and transaction Processing System.

b. Decision Support System (DSS)

A decision support system (DSS) is a computer-based information system that supports business or organizational decision-making activities. DSSs serve the management, operations, and planning levels of an organization and help to make decisions, which may be rapidly changing and not easily specified in advance.

DSSs include knowledge-based systems. A properly designed DSS is an interactive software-based system intended to help decision makers compile useful information from a combination of raw data, documents, personal knowledge, or business models to identify and solve problems and make decisions.

Typical information that a decision support application might gather and present are:

- inventories of information assets (including legacy and relational data sources, cubes, data warehouses, and data marts),
- comparative sales figures between one period and the next,
- projected revenue figures based on product sales assumptions.

Expert system

An expert system is a computer system that emulates the decision-making ability of a human expert. Expert systems are designed to solve complex problems by reasoning

about knowledge, like an expert, and not by following the procedure of a developer as is the case in conventional programming. The first expert systems were created in the 1970s and then proliferated in the 1980s.

An expert system has a unique structure, different from traditional programs. It is divided into three parts:

- one fixed, independent of the expert system: the inference engine
- one variable: the knowledge base.
- a dialog interface to communicate with users

To run an expert system, the engine reasons about the knowledge base like a human. This ability to conduct a conversation with users was later called "conversational".

The rule base or knowledge base:

In expert system technology, the knowledge base is expressed with natural language rules IF ... THEN ... For example:

- "IF it is living THEN it is mortal"
- "IF his age = known THEN his year of birth = date of today - his age in years"
- "IF the identity of the germ is not known with certainty AND the germ is gram-positive AND the morphology of the organism is "rod" AND the germ is aerobic THEN there is a strong probability (0.8) that the germ is of type *enterobacteriacae*"

c. Executive Information System (EIS)

An executive information system (EIS) is a type of management information system intended to facilitate and support the information and decision-making needs of senior executives by providing easy access to both internal and external information relevant to meeting the strategic goals of the organization. It is commonly considered as a specialized form of decision support system (DSS).

The emphasis of EIS is on graphical displays and easy-to-use user interfaces. They offer strong reporting and drill-down capabilities. In general, EIS are enterprise-wide DSS that help top-level executives analyze, compare, and highlight trends in important variables

so that they can monitor performance and identify opportunities and problems.EIS and data warehousing technologies are converging in the marketplace.

d. Transaction Processing System (TPS)

Transaction processing system is a type of information system. TPSs collect, store, modify, and retrieve the transactions of an organization. A transaction is an event that generates or modifies data that is eventually stored in an information system. To be considered a transaction processing system the computer must pass the ACID test. The essence of a transaction program is that it manages data that must be left in a consistent state, e.g. if an electronic payment is made, the amount must be both withdrawn from one account and added to the other; it cannot complete only one of those steps. Either both must occur, or neither. In case of a failure preventing transaction completion, the partially executed transaction must be 'rolled back' by the TPS.

While this type of integrity must be provided also for batch transaction processing, it is particularly important for online processing: if e.g. an airline seat reservation system is accessed by multiple operators, after an empty seat inquiry, the seat reservation data must be locked until the reservation is made, otherwise another user may get the impression a seat is still free while it is actually being booked at the time. Without proper transaction monitoring, double bookings may occur. Other transaction monitor functions include deadlock detection and resolution (deadlocks may be inevitable in certain cases of cross-dependence on data), and transaction logging (in 'journals') for 'forward recovery' in case of massive failures.

3.2 INFORMATION TECHNOLOGY

3.2.1 Definition of Information Technology (IT)

Information technology refers to the application of computers to process, store, transmit and display information. The information may be data, text, graphics, voice, images or videos, and the computers may be supercomputers, mainframes,

minicomputers, microcomputers, laptops or network computers. Their processing speed, size, storage capabilities, input-output devices and inter-connectivity vary with each installation

Information technology is a combination of hardware and software. The hardware includes the computer itself, monitors and input-output devices (keyboards, mouse, touch screens, scanners, joysticks, optical bar coding, printers, fax machines, modems, digital telephones), communication hardware such as multiplexors, connecting cables (twisted copper wire, coaxial cable, fibre optics), and other methods of communication including satellite and microwaves.

Software applications include both system and applications software. The former refers to operating systems (such as DOS, Windows 98, XP, Me, Vista, 7, etc.), utility and communication software. Operating systems are becoming more user-friendly and less proprietary, allowing different software packages to be used on different operating systems.

3.2.2 Hospitality industry sectors and IT

The hospitality industry's customers -hotel guests at large- have become increasingly dependent on technology, and more demanding in terms of in-room technology support. This is particularly true for the business traveler whose laptop computer often serves as a mobile office. Technology-driven entertainment options for guests - both business and leisure - also will require investments in the future.

Tourism

In tourism, information technology plays a very important role since the industry is so information-intensive. Every firm in the industry must process information about its products and services and make them available to consumers. It must also receive reservations, and process its own internal company information. Even though this is a service-based industry relying heavily on human relations, tourism firms are finding that the implementation of information technology can contribute to higher levels of service.

This is occurring since employees are freed from the tedious tasks now performed by information technology.

Application software used in tourism includes both generic business software such as spreadsheets, word processing, databases, desktop publishing and accounting software. There are, however, many more applications written specifically for tourism firms.

The most important information technology applications used by travel agencies are terminals to one or more of the global distribution systems. The terminals allow agents to research and book all types of tourism products. They may be used to run other software applications such as travel policy software, and fare auditing software. Travel agents also use back office software to process their accounting, commission tracking, and customer information for marketing purposes and to produce reports.

Government tourist offices are also using information technology to manage and market their destinations. Common applications include destination information systems, which are databases used to store comprehensive, updated information on facilities which are online to travel counselors and major marketing offices in the destination's originating markets. Various software applications are also used to assist government offices in the collections and analysis of tourism statistics.

The Internet is a major information tool for tourists and firms catering to them. Hundreds of thousands of tourism companies have home websites on the World Wide Web providing information on their products to the millions of Internet users. Reservations are possible through the Internet, but the percentage of users of this service is lower than those who search for information. The travel distribution channels are changing as electronic access for consumers increases.

Information is beginning to incorporate higher levels of intelligence and functioning. Expert systems and robotics are two applications of artificial intelligence that are being used in the tourism industry. For example, the airlines are operating expert systems for crew management, maintenance of aircraft and network design. Robotic technology is being experimented with in the foodservice sector. Virtual reality, which uses a variety

of computer technologies to give an experience of a different reality, are being considered as a way of giving tourists a 'taste' of a vacation before they purchase it. Future computer systems in tourism are likely to incorporate more intelligence and be able to assist with higher level functions.

Many applications have been written for the hospitality industry. The most important is the property management system used in hotels to process guest, room, facilities and accounting information. Guest history files containing detailed information of frequent guests are an important component of the system. Chain hotels also operate central reservation systems to store, process and communicate their room rates and availability for hotels in the chain. Numerous additional applications of technology including electronic locking system, digital phone systems, guest-operated devises and energy management systems are used in the accommodation sector.

Point-of-sale systems are used in foodservice outlets and retail stores to process transactions and inventory information.

3.3 Evolution of IS and IT

3.3.1 The evolution of catering computers

Whilst the application of new technology within other industries had moved very rapidly during the generations of computers since the early 1950s, the hospitality industry has frequently been criticized for lagging behind. Caterers were even regarded as dinosaurs by those unfamiliar with the intricacies of an industry which is primarily people and service oriented.

In fact, the apparently slow take-up of this new technology within the hospitality industry may not have been such a bad thing in the long run. The industry has been able to benefit from the experiences and mistakes of other industries, and there have been relatively few failures on the grand scale. It is worth noting that in more recent years, the take-up of new technology has speeded up.

Compared to other industries, hospitality presented a complex computing problem, and it therefore hardly surprising that it adopted the new technology less readily than other

industries with relatively simple requirements. Much of the very necessary research and development of computerized systems had already been undertaken by the time computer manufacturers sales staff targeted hospitality as a profitable outlet for their wares. Those hospitality companies that did jump onto the technology bandwagon at the onset were soon to be overtaken by development and were not to have the 'user-friendly' benefits that were commonplace in systems and software a matter of a decade later.

There is no doubt though, that managers in the hospitality industry as in other industries, felt threatened by computers and this considerably slowed the penetration of new technology. There was the worry that both staff and managers themselves might be replaced by new technology, and that the skills of a manager could be usurped by a computer. In the hospitality industry, there were additional concerns, such as the perception that the relationship of a hospitality establishment and its customers would suffer. It was felt that the 'host' and 'hospitality' elements of a hospitality operation might be lost, and it was feared by some managers that guests would not have as much contact with staff as had previously been possible.

Some of these fears had been recognized in other industries and they took some time in the hospitality industry to be overcome. Many were eventually conquered only when experience showed that they were groundless. Computerization in many instances started to allow more time for members of staff to be with their customers and gave managers much better information upon which to base their decisions.

Whilst computer technology advanced at a rapid rate throughout the 1970s and 1980s, the attendant publicity led to problems. The caterer was often led to expect something miraculous from the computer and despite the fact that systems had become much cheaper, in reality disappointment was often the eventual outcome.
The major reasons for disappointments were:

- Potential users had insufficient knowledge of how the new technology could be applied.
- There was a severe shortage of experienced and skilled personnel who could build reliable computer systems.
- There had been too little collaboration between system suppliers and potential users of sophisticated technology. Such collaboration is vital if there is to be a smooth transition from existing methods to automated computerized systems.

3.3.2 History of Automation in Hospitality Industry

Until fairly recently, hotels were very much a local business. Hotels offered very few amenities and travelers did not expect much beyond a room with a bed. In the early 1900's, the chain hotel business began to take form and later coast-to-coast hotel chains came into existence. This all occurred along with increased business and pleasure travel. With increased travel, and with the hotel chain having business units spread over a larger geographic area, some form of Information System (IS) became necessary. With increased business and improved technology an Information Technology (IT) System became possible. IS and then IT became necessary to have a consistent method of tracking and maintaining business operations. Later, as customers' expectations changed, IS/IT became necessary to ensure consistency of meeting customer needs.

At first, automation was a tool for producing and analyzing budgets, reports, statistics, and accounts. Then, automation crept into such areas as sales reports, rooms inventory control, timekeeping. Advancements in telecommunications and technology brought reservations systems and their ability to handle transactions. Further advances came as computers were used to analyze captured reservations data, thus providing important marketing information. Still further advances brought front-office systems that provided guest histories, patterns of use, and preferences.

4.0 CONCLUSION

We have defined information system and hospitality information system. We have also discussed the components of information system. We as well discussed information technology and how it affects the hospitality industry, as well as its evolution in the hospitality industry.

5.0 SUMMARY

Information system (IS) is any combination of information technology and people's activities that support operations, management, and decision making. It is frequently used to refer to the interaction between people, processes, data, and technology.

Hospitality information systems are a collection of components that work together to provide information help in the operation and management ofa hospitality organization.

Information technology systems in use in the hospitality industry are primarily computers and telephone systems. However, some software applications and hardware are in use in various sectors of the industry.

Management information system (MIS) is a system that provides information needed to manage organizations effectively, and it involves three primary resources which are technology, information and people

Decision support systems, expert systems, executive information systems and transaction processing system constitute a group of information management methods tied to the automation or support of human decision making.

Information technology refers to the application of computers to process, store, transmit and display information.

6.0 TUTOR-MARKED ASSIGNMENT

Define the following terms:

Information system

Hospitality information system

Management information system

Explain the group of information management methods tied to the automation or support of human decision making.

7.0 REFERENCES/FURTHER READING

Nickerson, R.C. (2001) Business Information Systems, Upper Saddle River, NJ: Prentice hall, p.4

Steven Alter, (2002) Information Systems, The foundation of E-Business Upper Saddle River, NJ: Prentice hall, p.14

Hodge, E. March (1980). Microprocessors. British Hotelier and restaurateur

John Walker, Introduction to hospitality, 4th edition

UNIT 2 HOSPITALITY INDUSTRY TECHNOLOGY

1.0 INTRODUCTION

Hotels are under such pressure to keep up with expectations of guests that they are implementing new technologies to regain their edge. Leading hospitality properties are using technology products to differentiate themselves from their competition and thereby increase market share and improve revenue. Even smaller hotel brands are turning to technology products to equip their public spaces and guestrooms with the latest electronics. The Digital Door Viewer (DDV) is one such technology product that can be beneficial to both hotel guests and to hotel operations. The DDV is a functional and visible amenity that helps to differentiate the property.

According to ElonKenchington, chief operating officer of the Gansevoort Hotel Group, what many hoteliers are trying to do is give guests the chance to experience firsthand the latest in technology.He further explained that choosing the right technology has become as critical as other elements of a hotel's design and that it is an integral part of not only the success of an operation, but also what makes one brand better than another or more interesting to travelers than other brands.

2.0 OBJECTIVES

At the end of this unit, you will be able to:

Define hospitality industry systems.

Enumerate hospitality industry technology systems and

Components of hospitality industry technology

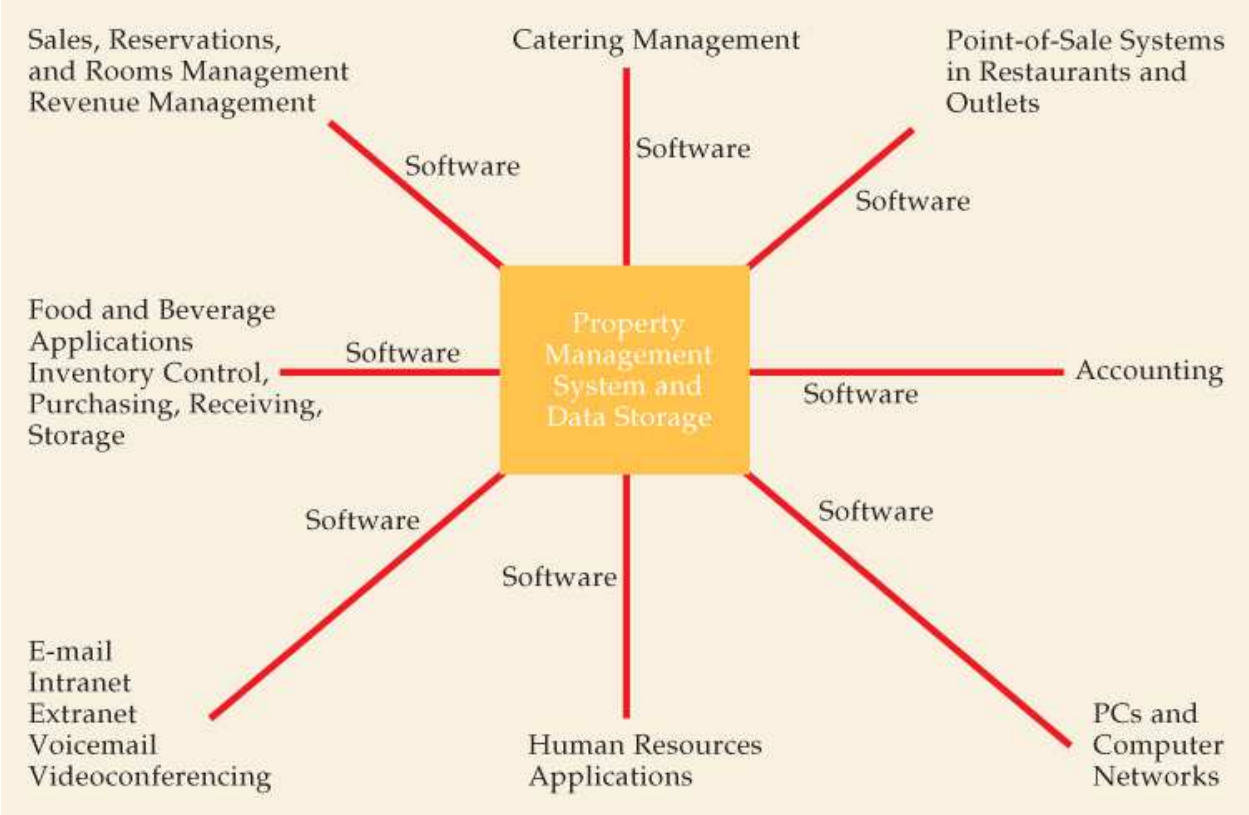
3.0 MAIN CONTENT

3.1 Definition of hospitality Industry Systems (HIS)

Hospitality Industry Systems is a collection of components that work together to provide information help in the operations and management of a hospitality organization.

Components of HIT

- Sales, reservations, rooms and revenue management
- F&B applications, inventory control, purchasing, receiving storage
- Email, intranet, extranet, voicemail, videoconferencing
- Human resource applications
- PCs and computer networks
- Accounting
- POS
- Catering management



Information Technology Systems

- Work group information systems
  - LAN
  - WAN
- Email
- Organization information system
- Global/international information system

Hospitality Information Processing

Hospitality information processing involves the following:

- Data
- Information
- Information sharing
- Electronic data exchange

Property Management System (PMS)

- Hub of information processing
- Rooms management module
- Guest accounting module
- Ving cards system

Energy Management Systems

- Room occupancy status reporting
- Automatic lighting control
- Minibar access reporting
- Smoke detector alarm reporting
- Central electronic lock control
- Guest control amenities

Call Accounting Systems

- Track guest phone charges
- Available software application
- Coordination with PBX and PMS
- Discounts during off peak hours

Guest Reservation Systems

- Global distribution systems
- Central reservation systems (CRS)
    - Affiliate
    - Non-affiliate
    - Springer Miller Systems

Factors in Choosing a CRS

- Determine whether property is affiliate or non-affiliate

- Size and design of database
- Application service provider
- Web reservation system

Other HIT Services

- Billing of guests (rooming cycle)
- Security
- Guest comfort and convenience
- Video games and Internet

Sales and Marketing

- Database of customers
- Email
- Voicemail
- Internet
- Meeting Matrix

Catering

- Event management
- Software
    - Caterease
    - Delphi

Front of the House Systems in Restaurants

- Point of Sale (POS)
- Kitchen display systems
- Guest services solutions

POS Systems

- Central processing unit (CPU) interfacing with individual units
    - Acts as a cash register
    - Guest transactions
    - Sales and guest checks
- MICROS

Choosing and Implementing a POS

- Contingents
    - Size and type of operation
    - Security issues
        - Guest identification verification
- Ease of training for manager and employees
- Compatible with financial applications
- Uses Microsoft Windows NT and SQL
- Scalable over time

Product Management

- Multiple costing methods
- Units and counting locations
- Maintains perpetual inventory balance
- Supports scheduled count
- Detailed recipe management
- Real-time depletion of inventory
- Batch recipes

Back of the House Systems

- Inventory and food costing
- Labor management

- Financial reporting

Beverage Management

Beverage management systems are:

- Scanbar
    - On-going, real-time inventory control
    - Tamper-proof reliability interfaced the major POS systems
        - Bar coded label
        - Wine module
            - Keeps control of all wines by region, variety or vintage
            - Bar coded
- AZ Bar America

Trends

- Online travel purchasing is rising dramatically
- Online reservation sites provide a place for independent restaurants to advertise and book reservations
- Customer relationship management
- Use of PDA's
- Hotels utilizing wireless connections

4.0 CONCLUSION

We have defined hospitality industry systems and have enumerated thhe various hospitality industry technology systems.

5.0 SUMMARY

Hospitality Industry Systems is a collection of components that work together to provide information help in the operations and management of a hospitality organization.

Components of hospitality information technology are Sales, Reservations, Rooms management, Revenue management, Catering Management, Point of sale systems in Restaurant and outlets, Food and Beverage

Applications, Inventory control, Purchasing, Receiving and Storage, Accounting, E-mail, Intranet, Extranet, Voicemail, Videoconferencing, Human Resources Applications, PCs and Computer networks.

Hospitality Industry Systems include: Information Technology Systems, Hospitality Information Processing, Property Management System, Energy Management Systems, Call Accounting Systems, Guest Reservation Systems, Sales and Marketing, Catering, Front of the House Systems in Restaurants, POS Systems, Product Management, Back of the House Systems, Beverage Management, and Other HIT Services

6.0 TUTOR-MARKED ASSIGNMENT

Define hospitality industry systems.

Itemize the hospitality industry technology systems.

List the components of hospitality industry technology and give a diagrammatic representation of these components.

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UNIT 3 TYPES OF HOSPITALITY INDUSTRY TECHNOLOGY SYSTEMS

CONTENT

1.0 INTRODUCTION

The hospitality industry utilizes various systems and technologies to serve guests more efficiently and effectively. The various systems that assist them in accomplishing these tasks are numerous. They include work group information systems, electronic mail, organizational information systems and global information systems.

2.0 OBJECTIVES

At the end of this unit, you will be able to explain:

Group information system

Electronic mail

Organizational information system

Global information system

3.0 MAIN CONTENT

3.1 GROUP INFORMATION SYSTEMS

Any hospitality businesses today have work group information systems. The systems allow group of associates within a department to share data and information that will help manage the department's functions. These systems sometimes utilize a local-area network (LAN) in which the employees of a business can communicate and work with one another simultaneously via different computers within a complex of buildings.

LAN allows a good number of people to communicate and exchange messages within seconds. The LAN connections are adopted by large organizations and, in conjunction with wide-area network (WAN) connections, allow franchises to link with one another over considerable distances. In large franchises, many people are trying to communicate with one another and theses work groups can communicate faster with high-speed access within and outside the business.

3.2 ELECTRONIC MAIL

Electronic mail (e-mail) is a type of work group information system that allows the staff and guests to communicate from different locations. Messages can be posted and retrieved within seconds by the use of e-mail. A number of hotels provide in-room connections that allow their guests to check their e-mail.

With e-mail, letters and memos that normally would be sent on paper are transmitted electronically, from one computer in the network to another. For example, Sheraton hotels use a system called Geac, which allows departments such as guest reservations or communications to post messages for guests that are received within seconds. This system allows information to be shared within the network. Most hospitality organizations use Microsoft Outlook or Lotus Notes for calendaring and scheduling. These are called groupware.

Electronic mail workgroups can be used for many operations of a hospitality business such as reservation confirmations for guests and interorganizational messages for associates.

3.3 ORGANIZATIONAL INFORMATION SYSTEMS

Organizational information systems are used throughout a company and can be accessed by a number of associates. They are sometimes called enterprise information systems. These systems are controlled by several computers, which are separated by long distances. Examples of these systems are:

Payroll

Time and attendance

Guest history

Reservation systems

Many benefits accrue from using organizational information systems for payroll. Many companies today do not use the traditional time cards; they rather use an electronic system that scans time cards. This kind of system supplies hourly data to the payroll branches in various locations. This facilitates the timely distribution of employee pay checks each pay period.

3.4 GLOBAL INFORMATION SYSTEMS

Companies that do business outside their own country are called international businesses. These worldwide businesses have information systems that allowthem to stay linked. These systems are called global/international information systems. They use international technologies and systems that allow them communicate and make effective transactions.

High-speed Internet service is one form of information technology that these businesses can utilize. With the help of Internet and computer-based software, companies can speed transactions between one country and another. For example, hotel guests can connect to the Web, e-mail and their corporate networks at speeds up to fifty times

faster than traditional normal connections. This gives the hotel a competitive edge when targeting business guests as it will reduce long distance call saturation and cost

3.5 DIFFERENT TYPES OF HOSPITALITY MANAGEMENT SYSTEMS

Hospitality management systems are the software that runs your hospitality business. From the food ordering system in your restaurant, to online accommodation booking software, it enables efficient communication and management of your operation, ultimately increasing revenues.

With a range of hospitality management systems to choose from, understanding what is offered is important in order to find the right system that is tailored for your needs and budget. Depending on the type of operation you manage, you should consider the following systems, their advantages and suitability to your company.

Accommodation management software

Accommodation software packages range from those aimed at Bed and Breakfasts and small motel owners to ones for running big hotels, clubs and resorts. The basic package offers simple guest and room management, while the more complex ones cover every aspect needed to manage and run a big hotel chain. This includes reservations, service, retail, inventory, staff roster and training, accounting and much more.

Front desk

A front office software package should:

- Enable reception staff to keep track of all bookings, state of rooms, guest details and charges, coordinate restaurant reservations for guests, plan housekeeping duties and process guest check-in and check-out.
- Provide a means to communicate effectively with all travel agents and activity operators linked to the system.

Features you should look out for include:

- Reports for arrivals & departures on a specific date.
- Guest ledger and reservation details, including activities and special requests.
- Room rates, discounts, package deals, group bookings, etc.

- Visual schematic of hotel rooms and status.
- Visual schematic of calendar with room availability.
- Facility for printing check-in cards for guests.
- Flexibility in re-assigning guests to different room.
- Facility to easily add charges to rooms from restaurants, spa, gift shop, etc.
- Incorporate all payment options upon check-out and print receipt.
- Print work roster for staff
- Facilities for storing guest history
- Communicate efficiently with reservation and travel agents

Housekeeping/maintenance software

Easy-to-use software for the housekeeping and maintenance departments of your accommodation place will increase the efficiency of cleaning and servicing of rooms. Main features of this module will be:

- Keeping track of room status - dirty, cleaned, inspected, check-ins and check-outs, etc.
- All information such as number of guests, number of beds, length of stay, special requests (e.g. baby cot, high chair) should be visible to both housekeeping staff and management.
- Staff can enter maintenance issues as they arise, and those are automatically sent to the maintenance department.
- Staff can request cleaning materials and toiletries ordered.
- Staff can keep track of laundry status for uninterrupted linen supply.

Online reservation system

This software package is essential to any accommodation place. It helps you increase direct online bookings instantly. Prospective guests can view hotel rooms (size, choice of beds), availability and prices, plus services and facilities offered. The systems should have instant confirmation of credit card payments or other secure online payment method. After payment of deposit and confirmation by email, guests should be able to

login to view or change their reservation details. Cancellation policies should be stated, airport transport options mentioned.

Hospitality management systems for point of sale (POS) operations

This includes restaurants and bars, the hotel gift shop, spa, tour desk and other guest services. It should have the options of direct payment or charge to room. Apart from recording normal vending operations, it should include issuing daily transaction reports to management or the accounting office, and a daily revenue report.

In the POS sector there are many operating hospitality management systems catering for the food vendor sector, namely restaurants, cafés, takeaway shops and delis.

Restaurant (POS) management packages

For POS management packages, you have the choice of an off-the-shelf system for restaurants and cafes, where you can set the options that suit your operation, or a customized one, specifically configured for your business. Most systems are quite easy to use and are cost effective. Their features vary, but most offer the following:

- Order taking, tallying, and cashier options using a hand-held PDA system.
- Credit-card processing interface Receipts customized for your business.

The more advanced systems also offer:

Integrating all transactions with your accounting software.

Full inventory/stocktaking facility

Translation facilities to selected languages.

Administration software

This module is directed at top management and offers access to all levels of the organization. It provides instant access to the data base of all sectors, ensuring total transparency of operations overseeing and early intervention by senior staff can prevent mistakes being made by inexperienced employees and save money and the reputation of your business. · Other facilities in this package may include:

- Tools for setting different rate systems for rooms and services:
    - daily, seasonal, special promotions, etc.

- Statistical data - percentage occupancy over set periods, and other data used for policy making and customized reports for board meeting presentations.
- Organizing promotions and package deals.
- Inventory for different departments.
- Employee accounts and employee training programs

Remember: with the high staff turnover common to the hospitality industry, it is important to choose a system that needs minimal training to use, and has 'secure areas', which only authorized personnel (with the proper clearance) may access and use.

Choosing and introducing hospitality management systems for your business is a significant undertaking, both operationally and financially. But once up and running, the system will increase efficiency, cut costs and improve the service in your company. You will have happier staff and happier guests, who will promote your business and ultimately increase your revenue.

4.0 CONCLUSION

We have discussed group information systems, electronic mail, organizational information systems and global information systems. We also looked at different types of hospitality management systems.

5.0 SUMMARY

Group information systemsutilize a local-area network (LAN) which enables employees to communicate and work with one another simultaneously via different computers within a complex of buildings.

Electronic mail (e-mail) is a type of work group information system that allows the staff and guests to communicate from different locations. Messages can be posted and retrieved within seconds by the use of e-mail

Organizational information systems are systems used throughout a company that can be accessed by a number of associates. Examples are payroll, time and attendance, guest history and reservation systems.

Global information systems are information systems that allow international businesses to stay linked by using international technologies and systems to make effective transactions.

Hospitality management systems are the software that runs your hospitality business. From the food ordering system in your restaurant, to online accommodation booking software, it enables efficient communication and management of your operation, ultimately increasing revenues.

6.0 TUTOR-MARKED ASSIGNMENT

Discuss any two types of hospitality industry technology systems.

List and explain four (4) different types of hospitality management systems.

7.0 REFERENCES/FURTHER READING

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UNIT 4 CHOOSING INFORMATION TECHNOLOGY SYSTEMS

1.0 INTRODUCTION

It seems that every day more technology systems come on to the market for the hospitality industry. Where purchasing these systems are concerned, one would expect that the decision making process would be getting easier with the experience that has been built up. Everywhere, new technology is evident, whether it be in opposition's hotel, or in the fast food hamburger bar on the next street. The thought now becomes 'should not my business be computerized, after all everyone else is using new technology profitably'.

The truth of the matter is that there is an increasing amount of computerization on offer which in itself is quite a problem to a hotelier wishing toinvestigate computerization for the first time. There is a baffling array of software and hardware on offer by various manufacturers and their respective dealers. The wise caterer/hotelier will have to sit carefully through a multitude of systems before making a particular choice.The problems therefore of selecting an appropriate computer system for a particular catering application are considerable but not insurmountable.

It is also important to note that the effectiveness of an automated property management system is directly related to the quality of the management using it. It cannot compensate for management shortcomings and will only accentuate them. In a well-managed hotel, a system is perceived simply as a tool for better performance, while in poorly managed properties, a system often serves as aconvenient excuse for all operational problems.

2.0 OBJECTIVES

At the end of this unit, you should be able to explain:

The need for computer use

The computer selection process and the choice of suppliers

Computer installation process

3.0 MAIN CONTENT

3.1 WHY USE A COMPUTER SYSTEM?

Before looking at the choosing and buying computer systems, let us first establish some of the benefits that will undoubtedly be the goals of catering/hotel mangers intending to deploy new technology. In order to even contemplate computerization, the hotelier/ caterer will want to know how the proposed system is going to justify its cost and what tangible benefits it will bring to the business and customers.

3.1.1 Benefits of computerization

No tea breaks

Being an inanimate object, the computer does not take tea breaks or go on holiday. So it undertakes its functions as long as it is switched on.

Donkey work

The computer can undertake the monotonous paper work and data collection that has constituted a lot of mundane work for staff in the past. This should free staff for more

interesting work and will probably create a more satisfying work existence. Repetitive tasks are made easier.

Reduced human error

A computer will cut out many of the opportunities in manual system for human errors to occur. There will no longer be the need to manually copy certain documents, all of which will be carried out by the computer from the original input. This is particularly helpful where accounting applications are concerned.

Forecasting

From the build-up of historic data on the business, it is possible to produce forecast of future business which will be more accurate than was previously possible.

Modeling

The caterer/hotelier may well be able to test theories on a computer model before actually placing his actual business at risk. This might show the financial risks or benefits that might be achieved through taking specific policy decisions. A spread sheet is a common way of undertaking this type of application.

Access to information

By providing a central database accessible to a number of staff, the computer gives better access to information than might have been possible previously.

Management efficiency and control

The management may receive much more relevant information more speedily, enabling them to take managerial decisions much quicker. A computer will produce large amount of management information much more rapidly than is possible with manual systems. This should give the management a clearer picture of the business and facilitate strategic decisions much earlier, thereby improving the overall control of the operation.

Quality of information

Information that was difficult to obtain may be accessed more readily provided the computer is programmed correctly.

Enhanced image

The work of any member of staff who is involved with paper such as a secretary or clerk, will be enhanced as the computer can utilize a word processing package to undertake the repetitive work involved in dealing with multiple letters or forms. The presentation of both internal and external documents will be much improved thus creating a better image.

Better guest service

Certainly where important applications such as reservations are concerned, the information held by a computer system should be an improvement over that held by manual systems. Check-in and check-out should be speeded up, as should the complete billing system. The accuracy with which computers work will allow the provision of a much better service to one's guests and customers.

Bills presented to customers at the end of their stay are more likely to be accurate, and it should also be possible for reservations to be handled more efficiently, thereby reducing the possibility of guests being forgotten or being allocated incorrect accommodation. A much improved personal service can be given to guests by fully utilizing a database for guest history information.

Cost effectiveness

Most hoteliers/caterers will be looking to a computer system to save them money as their primary objective. Savings may be expressed in staff terms or in improvements in cash-flow, such as more efficient operation of the sales ledger.

Increased revenue

While this may be similar to cost effectiveness, the computer should increase the revenue accruing to the hotel as a direct result of many of the advantages outlined in this list.

Paperless environment

The old manual paper oriented systems may be largely replaced by the use of a computer which will improve communication throughout a hotel business. No longer

will pieces of paper be physically transferred around various departments. Electronic messages will be transmitted instead between printers and visual display units (VDUs).

Reduced costs

Increased efficiency within the business will undoubtedly reduce overall costs and increase productivity.

Scope for expansion

By using a computer system, many possibilities would be opened up that would not have arisen otherwise, perhaps revealing opportunities for expansion that previously would not have been evident.

The suppliers themselves will be keen to draw attention to the benefits of their system. The hotelier will then have to decide which particular system gives the most benefits for them, and which is therefore the one to buy.

3.2 THE SELECTION PROCESS

While computers in the hospitality industry have thrown up all sorts of challenges over the period of time in which they have been used, many of them resulted from complete ignorance that hoteliers had of the technology. Through this ignorance, hoteliers perceived computers as being little more than money savers and hardly realized implications of applying new technology to a catering situation. Some installations were undertaken in a rush to get abreast of computerization, without stopping to consider the implications or even what was required of the system.

Whilst many hoteliers in the early days failed to even identify what their new system would be expected to do, there were, and still are some easily overlooked problems in utilizing a computer that are common to all types of hotel business. It is quite possible in an initial gush of enthusiasm to be swept along without realizing that there are simple pitfalls to watch out for.

Some of these pitfalls are:

Over dependency

Hoteliers should not destroy all their existing systems that presumably have served the business adequately in the past. It is mistaken to believe that a computer will instantly create an electronic office totally devoid of paper. The hotelier will need back-up systems in the event of the computer going down, which will happen despite everything one is told about reliability.

Resistance to change

A psychological problem in the implementation of a new or replacement computer system is that the existing staff have been used to carrying out work by their traditional methods. Resistance to change, a common element of human nature, will therefore have to be overcome in installing a new computer system.

Loss of motivation

It is quite possible that staff who have happily undertaken a job in the past that they have regarded as challenging will lose their motivation when faced with supplying a faceless machine with data.

The computer can become a god

The computer could take over the hotel business, becoming more important in the minds of staff than the applications that it was installed to undertake. Computer systems themselves can prove addictive once staff are exposed to them.

In selecting the computer system to install, there is need to:

Make an initial investigation

It is a common problem with many computer installations that the hoteliers did not really know what they wanted from the computer before they went ahead to buy their system. Numerous computer consultants have been involved in bailing companies out of the inevitable results of not defining what they wanted before purchasing their system. This investigation will assist them in selecting those areas of business that will lend themselves to computerization and to concentrate on those.

Draw up a specification

In considering installing a computer, it should be remembered that it is potentially a very potent force in helping to manage the establishment and, used properly, will allow a much more economical and efficient method of work. No one should contemplate installing a computer purely because the opposition possesses one or because it is fashionable to own one.

How shall I start?

One of the worries for busy caterers is how to construct a specification and fit together a strategic plan for the installation of a computer system which they may be committed to but which may not be so readily acceptable to their colleagues and staff. The following may help:

- Identify and educate influential decision making people within the business and include them in the plan.
- Analyse in detail the requirements of the computer system in the particular work place asking such questions as:
    - What is needed?
    - What must the computer system do?
    - Should I examine one system that should undertake many tasks or should I go for a modular system that can be built up, application by application, over a period of time.
- Make use of information from experts in the industry such as consultants.
- Look closely and methodically at all the products on offer that seem suitableto the need of the business.
- Make direct comparisons between the alternatives and draw up a short list.
- Draw up a cost justification analysis of the short-listed products as the cost implications are always paramount.
- Once a product has been selected, draw up a carefully worded contract so that sales promises are translated into actual product performance.

- Be sure the installation schedule is practical within the operational requirements of the business.
- Make one person wholly responsible for the management of the installation.

3.3 THE SUPPLIERS

The number of hospitality computer system suppliers seems to be constantly on the increase and therefore the array of hardware and software is often baffling. Remember, it often beneficial to use one single supplier for the complete computer system. One will therefore be obtaining the hardware, software, installation, training and support from the same company. This will cut down on the communication problems that might arise if separate companies are involved.

There are several ways a system may be purchased and it is not necessary for all the components to come from a single supplier.

3.4 COMPUTER INSTALLATION

It must be appreciated by the hotelier that whatever the size of the computer, it will be impossible to install it instantly. Sometimes quite impossible deadlines are promised to senior management by inexperienced staff charged with the installation of new technology. These are often younger staff who, because of their age, are supposed to know about computers as far as wary senior executives are concerned. Potential users often make this mistake and expect the impossible. Whilst senior management may want computerization to be instantaneous, this is never a practical possibility as the whole system, whether mainframe or micro, will have to be run-in gradually, even though the eventual change over may take place at a specific time.

Experienced suppliers who have installed a large number of computers can help immensely withy scheduling the introduction of a new computer system. This will undoubtedly be one of the benefits of using a well-known company specializing in the catering field. The supplier can advise on how to phase the installation of a system that may involve a series of departments and therefore separate computer modules. If the

department initially selected for computerization shows swift benefits, this can be of psychological importance in putting the departments in the establishment in the right frame of mind for their eventual computerization.

When do I install the computer?

The most important consideration when choosing the time to install the computer system is when it will create the least possible disruption. Never, for example, plan installation for the same week as the year-end accounts are required or when there are similar peaks of business. The hotelier will presumably want to arrange installation for a slack or quiet period. In a resort hotel this is not too much of a problem, but in a popular busy catering outlet there may be some difficulty in finding an appropriate time. In coming to a decision, it is important to keep the supplier informed so that delivery of the system is worked into the supplier's schedule around the date required. Failure to do this will lead not only to operational problems but also to a probable spiraling of costs. Other options are to install the system whilst the business is running normally, whilst alterations are taking place anyway, or ideally when the catering business itself is its constructions phase.

Installation whilst the business fully operational

It is more than likely that the installation of the system will have to take place whilst the business is operational and the majority of systems are, unfortunately, installed in this way. It will still be necessary to pick as quiet a period as possible to 'go live'. Some hoteliers prefer to make the actual changeover itself at night.

Installation during alterations

If the computer is installed while alterations are being made, this will presumably be during a quiet period in the business. Apart from anything else, it will be better to have the two sets of engineers working at the same time and consequently out of the way quicker, rather than having to endure interference to the business for two separate periods of time. It is also an excellent idea to run-in a system at this time while there is

a limited amount of business going on. There will be fewer possibilities of mistakes being made as there will be a lower number of transactions to be recorded.

Installation during construction

To be able to install a system when the building for a new catering operation is being constructed would be ideal, but is by no means always possible especially when an existing system is being replaced. Any hotelier lucky enough to be in this situation should make the most of it. A major point is that all capital costs can be included in the building and a clear budget for the costings established. Should any departments need to be designed around the system, then, this will be possible at the outset rather than having to adapt existing facilities. Also the costs will be more easily absorbed at this stage.

Where installation is concerned, the actual staff involvement should be considered carefully. Whilst it will be beneficial for a single member of staff to be the initial project coordinator or leader, once the system has arrived, it would be dangerous to leave that person in sole control. What would happen, for example, if the project leader were to go sick or take a holiday? The staff left behind would inevitably flounder. If the same member of staff holds the security code in their head, this will lead to a whole system grinding to a halt in their absence.

It is beneficial to have manuals containing all codes and operational details available to management. One should not rely purely on the manufacturer's manuals (which are frequently inadequate) but should draw up one's own manual tailored to the individual business that is easily understandable by all the staff. At least three senior members of staff should have a complete working knowledge of the system to cover the possibility of one or more being incapacitated. If any should leave the hotel's employ, then another member of staff should be trained to take their place.

PHYSICAL ALTERATIONS THAT A COMPUTER MIGHT NECESSITATE

High profile or low profile?

One of the major decisions in the installation of a computer system is whether the customer should be made aware of its existence or not. Some hoteliers feel that the presence of computers tends to remove the personal nature of their business, whilst others see computer systems as partly a public relations exercise illustrating that their business is modern and businesslike.

Whilst there is no specific answer to this question, the policy decision has to be made. If the system is to be hidden from view, this has to be catered for at installation time, remembering that the staff must be able to work in as efficient a way as possible.

Is a separate computer suite needed?

The term 'computer systems' often conjures up the picture of a huge computer centre with a strictly controlled environment. Whilst it is true that the initial systems were very sensitive to heat and humidity, this is no longer always the case. Mainframes need to be allocated their own suite, not necessarily for environmental reasons but for security. Specialized air conditioning may therefore not be necessary, although some suppliers do stipulate that their systems should operate within specified heat and humidity tolerances.

It is certainly the case, though, that every computer system should be exposed to as little dust, grease or grime as possible as a build-up of these can lead to major problems. Some hotel computer systems have gone out of action purely because of a build-up of dust. Quite often the heat extractor fan on the computer itself not only performs the function for which it was designed but also draws dust into the machine. The best policy is to isolate the processor in as dust-free a room as possible.

In creating a computer suite, one of the considerations should be prevention of fire, especially as so much electrical equipment is involved. The normal ways of

extinguishing a fire are of no use; for example, sprinklers utilizing water would completely destroy both the hardware and software. Major computer systems should be capable of being isolated so that a fire extinguishing gas such as Halon can be flooded into the confined atmosphere.

4.0 CONCLUSION

We have discussed the benefits of computerization and the process of selecting computers systems to use, as well as the points to consider in selecting computer systems. We also mentioned some pitfalls with regard to the use of computers.

We have also discussed the process of installing computer systems and when to install them. We also looked at physical alterations that installation of computer systems can necessitate.

5.0 SUMMARY

The benefits of computerization include:

no tea breaks, no donkey work, reduced human error, forecasting, modeling, access to information, management efficiency and control, quality of information, enhanced image, better guest service, cost effectiveness, increased revenue, paperless environment, reduced costs, and scope for expansion.

Some of the pitfalls in the use of computers are:

over dependency, resistance to change, loss of motivation, and the fact that the computer can become a god.

In selecting the computer system to install, there is need to make an initial investigation and draw up a specification.

The most important consideration when choosing the time to install the computer system is when it will create the least possible disruption. They could be installed whilst the business is fully operational, during alterations or during construction.

Installation of computers might necessitate some physical alterations.

6.0 TUTOR-MARKED ASSIGNMENT

Discuss the benefits of computerization

Explain the pitfalls in the use of computers.

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MODULE 2

Unit 1 Property Management Systems (PMS)

Unit 2 Information Technology in reservations and rooms

Unit 3 Information Technology in sales, marketing and events management

Unit 4 Information Technology and food and beverage service

UNIT 1 PROPERTY MANAGEMENT SYSTEMS [PMS]

1.0 INTRODUCTION

Property management systems may be used in real estate, manufacturing, logistics, intellectual property, government or hospitality accommodation management. They are computerised systems that facilitate the management of properties, personal property, and equipment, including maintenance, legalities and personnel all through a single piece of software. They replaced old-fashioned, paper-based methods that tended to be both cumbersome and inefficient. In the Hospitality industry, the termproperty management systems (PMS) is generally used to describe the set of computer programs that directly relate to front office and back office activities.

2.0 OBJECTIVES

At the end of this unit, you will be able to explain:

Hotel property management systems

Hotel Property Management System Interfaces

Functions of Property Management System

3.0 MAIN CONTENT

3.1 Hotel Property Management Systems

In the hospitality industry a property management system also known as a PMS is a comprehensive software application used to automate hotel functions like guest bookings, online reservations, point of sale, telephone, accounts receivable, sales and marketing, banquets, food and beverage costing, materials management, human resources and payroll, maintenance management, quality management and other amenities. Hotel property management systems may interface with central reservation systems and revenue or yield management systems, front office, back office and point of sale systems.

Property Management systems integrate all of the information needed to manage:

Front office

Back office and

Office automation

Property management systems also provide data that marketing can use for various activities such as:

Revenue maximization, better rooms inventory control, more accurate management of room blocks,and yield management capabilities,

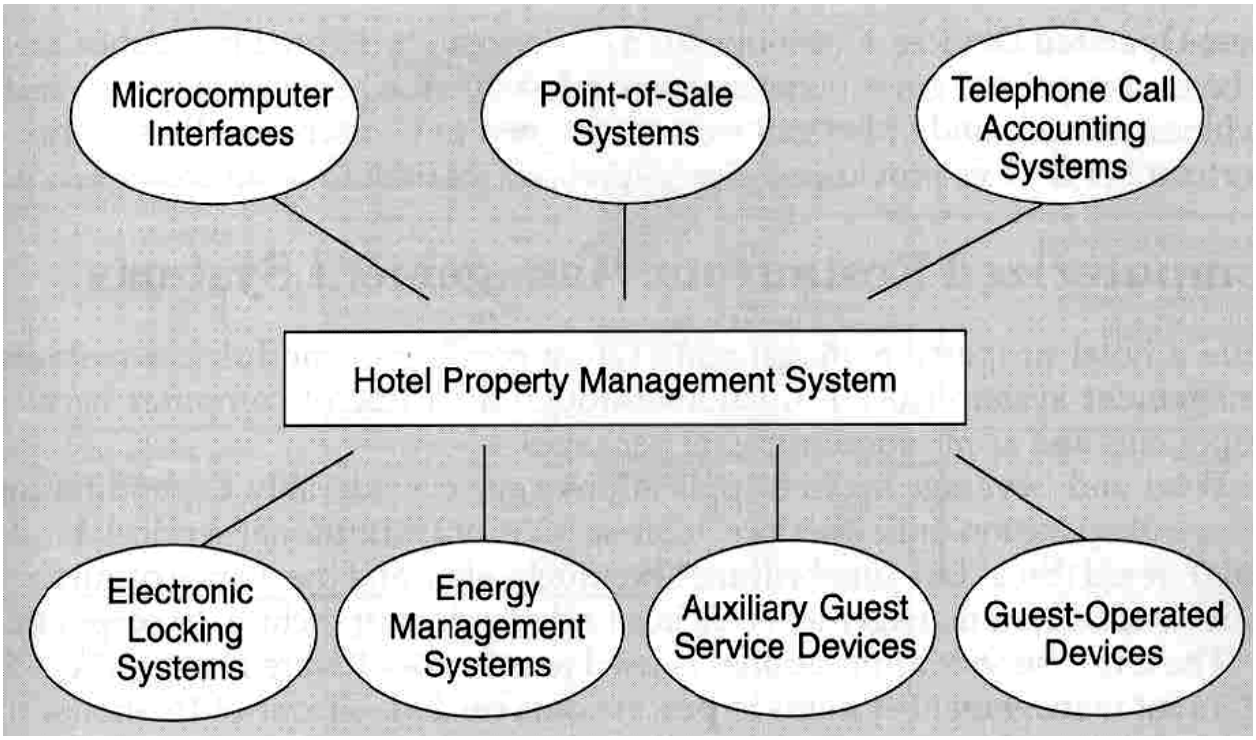
Automation helps hotels provide better guest service and related recognition programs. Indeed, guests can count on same room, same seat, same car preference as a result of guest history and preference systems. By automation, guests will experienceautomated check-in and check-out

Similar technology has provided automated airline ticketing and car rentals

A variety of stand-alone applications may also be interfaced with an installed PMS such as: point-of-sale, call accounting, electronic locking, etc.

Computerized back office application typically included in back office PMS packages contain modules covering accounting and internal-control function.

3.2 Hotel Property Management System Interfaces



3.2.1 Point-of-Sale Systems

When the main processor of a POS system interfaces with a property management system (PMS), data can be directly transferred from the POS system to various front office and back office.

POS place at:

- Restaurants
- Bar and Lounge areas
- Room service stations

- Gift shops
- Pool areas
- Pro shops

3.2.2 Telephone Call Accounting Systems

Telephone Call Accounting Systems (CAS)tracks guest room phone charges. It thus enables hotel to take control over local and long-distance telephone services and to apply a markup to switchboard operations. A call accounting system can place and price out-going calls.

When a CAS is interfaced with a front office guest accounting module, telephone charges can immediately be posted to the proper folios.

3.2.3 Electronic Locking Systems

Often these systems interface with a front office computer system, thereby enabling management to exercise important key control measure.

One kind of electronic locking system functions through a computer terminal at the front desk. The terminal selects a code that will permit entry and then produces a card for the guest to use. Once a code is entered and a card produced, all previous codes are canceled, and cards issued to previous guests no longer function

3.3.4 Energy Management Systems

Interfacing energy management systems with a hotel computer system links guestroom energy controls with the front office rooms management package. This technology is used to extend guest in-room comfort. Passive infrared motion sensors and door switches automatically switch off lights and air conditioning when a guest is out of the room thus reducing energy consumption.

An energy management system monitors guestroom temperatures by computer. This may lead to significant reductions in energy consumption and lower energy costs.

3.3.5 Auxiliary Guest Service Devices

Automation has simplified many auxiliary guest services such as the placement of wake-up calls and voice messaging for guests.

An automated wake-up system permits front desk employee to input a guest's room number and requested wake-up time. At the specified time, the system automatically rings the room and calls back at predetermined intervals until the guest answers the phone.

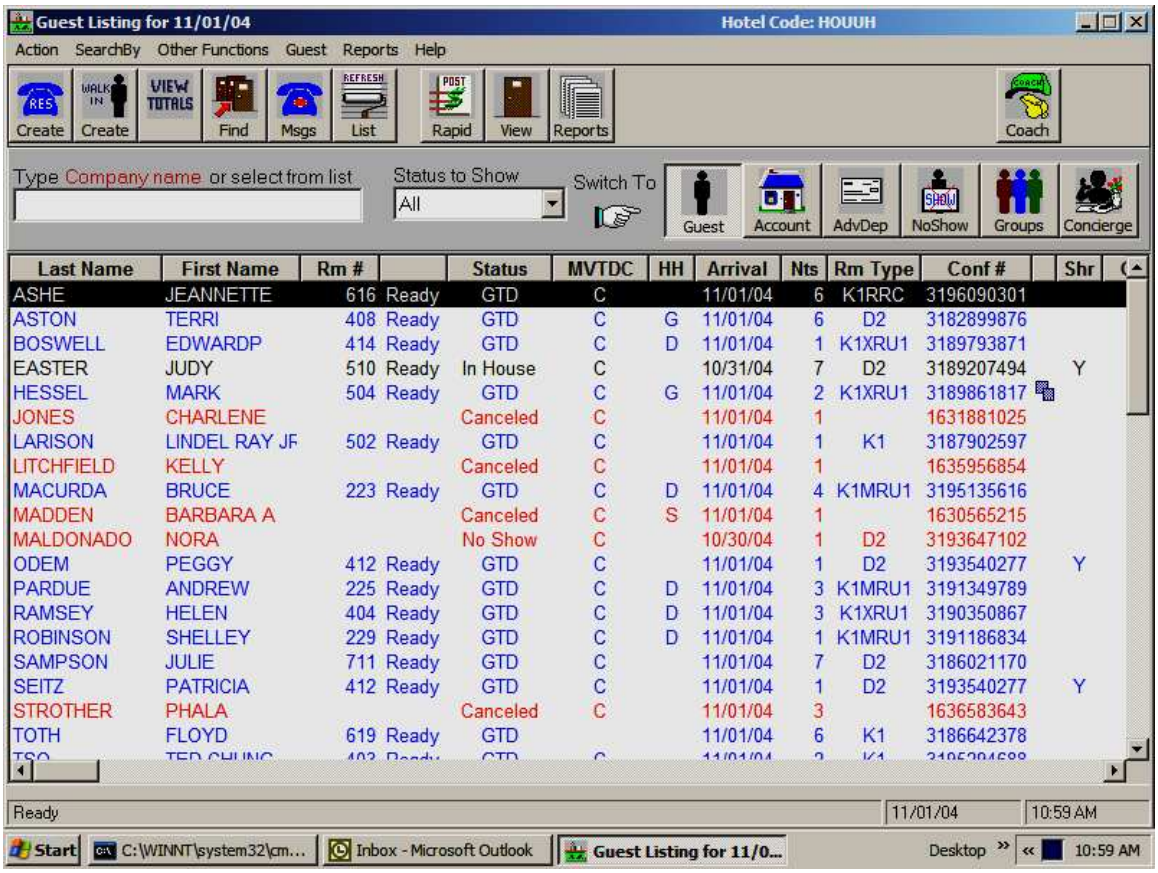
Electronic message-waiting systems are designed to let a guest know that a message is waiting at the front desk.

- Traditional message-waiting device is capable of flashing a light on a telephone or television in the guest's room.
- Now, actually display message on the television screen.

3.3 Functions of Property Management System

A good Property Management System must be able to provide six basic functions which include:

A. Enable guests to make reservations



The figure above represents the use of PMS in guest room reservation.

B. Enable guests to check-in/register when they arrive and check-out/pay when they leave

At front desk

Remotely

PDA

Remote terminal

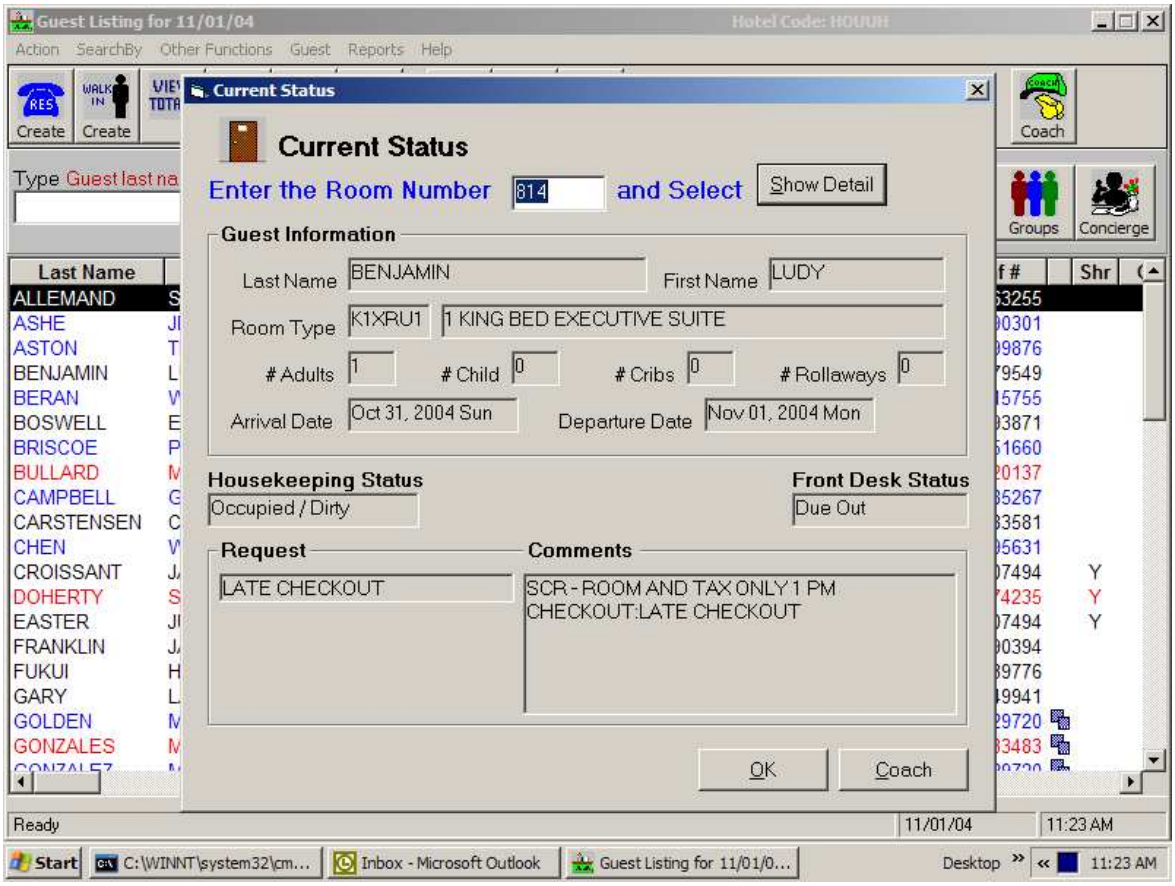
C. Enable staff to maintain guest facilities

Room type

Status

Occupant

Inspections



D. Account for guests' financial transactions

Credit Card Information

Address Information

Business

Home

Room Rate

Room Charges

Night Audit

Collects and Posts Room/Guest Data

E. Track guests' activities for use in future sales efforts

Information relevant and beneficial to future sales efforts

Accessed by:

CRS - Central Reservation System

CRM - Customer Relationship Management

CRM is used to collect and maintain data about sales contacts. Very comprehensive - names, addresses, birthdates, anniversaries, business, personal

F. Interface with other systems

GDS - Global Distribution System

CRS - Central Reservation System

must integrate seamlessly even if from different vendors

Sales and Catering Applications

POS (F&B)

Retail Points

HVAC or EMS Systems

In-Room Amenities

Messaging

Security

Call Accounting System

seamlessly to avoid duplicate data and mistakes.

4.0 CONCLUSION

We have explained what Property Management System is and how it may be interfaced with other systems to enhance operations and efficiency. We also looked at interfaces of Hotel Property Management System and their functions with regard to aiding hotel operations.

5.0 SUMMARY

Property Management System is a comprehensive software application used to automate hotel functions.

Property Management systems integrate all of the information needed to manage:

Front office, Back office and Office automation

Property management systems also provide data that marketing can use for various activities such as:

Revenue maximization, better rooms inventory control, more accurate management of room blocks,

and yield management capabilities,

Automation helps hotels provide better guest service and related recognition programs.

When the main processor of a POS system interfaces with a property management system (PMS), data can be directly transferred from the POS system to various front office and back office.

When a CAS is interfaced with a front office guest accounting module, telephone charges can immediately be posted to the proper folios.

6.0 TUTOR-MARKED ASSIGNMENT

Briefly discuss the hotel property management system interfaces

7.0 REFERENCES/FURTHER READING

Strauss, Michael (2010) Value Creation in Travel Distribution,

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UNIT 2 INFORMATION TECHNOLOGY IN HOTEL RESERVATIONS AND ROOMS

1.0 INTRODUCTION

Computerized front office applications consist of a series of software programs (or modules) including: reservations, rooms management and guest accounting functions.

Online hotel reservations are becoming a very popular method for booking hotel rooms. Travelers can book rooms from home by using online security to protect their privacy and financial information and by using several online travel agents to compare prices and facilities at different hotels.

Prior to the Internet, travelers could write, telephone the hotel directly, or use a travel agent to make a reservation. Nowadays, online travel agents have pictures of hotels and rooms, information on prices and deals, and even information on local resorts. Many also allow reviews of the traveler to be recorded with the online travel agent.

Online hotel reservations are also helpful for making last minute travel arrangements. Hotels may drop the price of a room if some rooms are still available.

2.0 OBJECTIVES

At the end of this unit, the students will be able explain:

Hotel reservation systems

Front office applications

A room management module

A guest account module

3.0 MAIN CONTENT

3.1 Hotel Reservation Systems

Hotel reservations systems, commonly known as a central reservation system (CRS) are a computerized system that stores and distributes information of a hotel, resort, or other lodging facilities.

A Central Reservation System is a tool to reach the Global Distribution Systems as well as Internet Distribution Systems from one single system, namely a central reservation system. A CRS is mainly an assistance for hoteliers to manage all of their online marketing and sales, where they can upload their rates and availabilities to be seen by all sales channels that are using a CRS. Sales channels may include conventional travel agencies as well as online travel agencies. A hotelier using a central reservation system eases his/her tasks for online distribution, because a CRS does everything to distribute hotel information to the sales channels instead of the hotelier.

Information commonly stored in a CRS are:

- Room Types
- Rate plans architecture
- Room Rates and conditions (guarantee, deposit, customized cancellation rules, minimum length of stay, maximum length of stay, closed to arrival, arrival not allowed, departure not allowed...)
- Room inventories
- Generic hotel information (address, phone number, fax number)

- Distribution content (descriptions, amenities, pictures, videos, local attractions...) are stored in the CRS or in a Content Management System.
- Reservation information
- Geocode information
- Nearby IATA cities and airports

Roles of Reservation Systems:

Selling individual reservations

Selling group reservations

Displaying room availability and guest lists

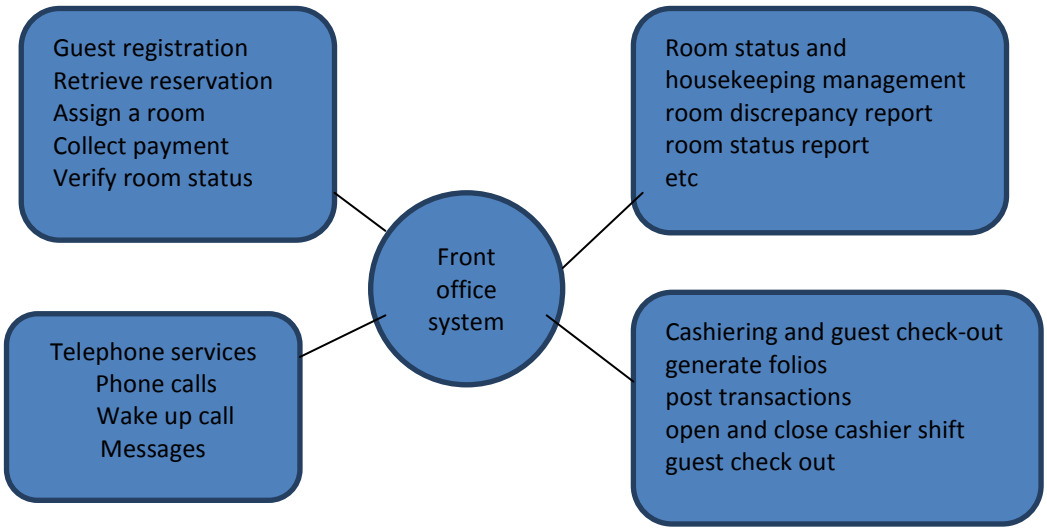
Tracking advance deposits

Tracking travel agent bookings and commissions

Generating confirmation slips and various reservation reports

3.2 FRONT OFFICE APPLICATIONS

A. Front Office System



B. Reservation module

A reservation module enables a hotel to rapidly process room requests and generate timely and accurate rooms, revenue, and forecasting reports. Reservations received at a central reservations site can be processed, confirmed, and communicated to the destination property before the receptionists finish talking with the caller on the telephone. When the destination property uses a PMS, the reservation module receives data directly from the central (or global) reservation system, and in-house reservation records, files, and revenue forecasts are immediately updated.

3.3 Functions of Reservation module

1. Reservation Inquiry

This inquiry typically collects the following data:

- Date of arrival
- Type and number of rooms requested
- Number of room nights
- Room rate code (standard, special, package, etc.)
- Number of persons in party

The receptionist enters the data through a computer terminal according to rapidly defined inquiry procedures. Once the inquiry is matched with rooms availability data, the PMS assigns and blocks a room, thus removing it from the availability file.

2. Determination of availability

Once entered, the reservation inquiry is compared to rooms availability data according to a predetermined system algorithm. The algorithm is a computer-based formula designed to sell rooms in a specified pattern (by zone, floor, block, etc).

Processing a reservation request may result in one of several system-generated responses appearing on the display screen:

- Acceptance or rejection of the reservation request
- Suggestion of alternative room types or rate

•Suggestion of alternative hotel properties

3. Creation of the reservation record

Once the reservation request has been processed and the room blocked, the system requires that the

receptionist completes the reservation record by collecting and entering necessary data, such as:

- •Guest's personal data (name, address, telephone number)
- •Time of arrival
- •Reservation classification (confirmed, guaranteed)
- •Confirmation number
- •Caller data (agency or secretary)
- •Special requirements

4. Confirmation of the reservation

PMS can automatically generate letter of confirmation on the day a reservation request is processed.

Information can be retrieved from the reservation record and printed on a specially designed hotel form.

5. Maintenance of the reservation record

Reservation records are stored in an electronic file and commonly segmented by

date of arrival,

group name,

and guest name.

File organization and the method of file retrieval are critical to an effective reservation module

because callers frequently update, alter, cancel, or confirm their reservation.

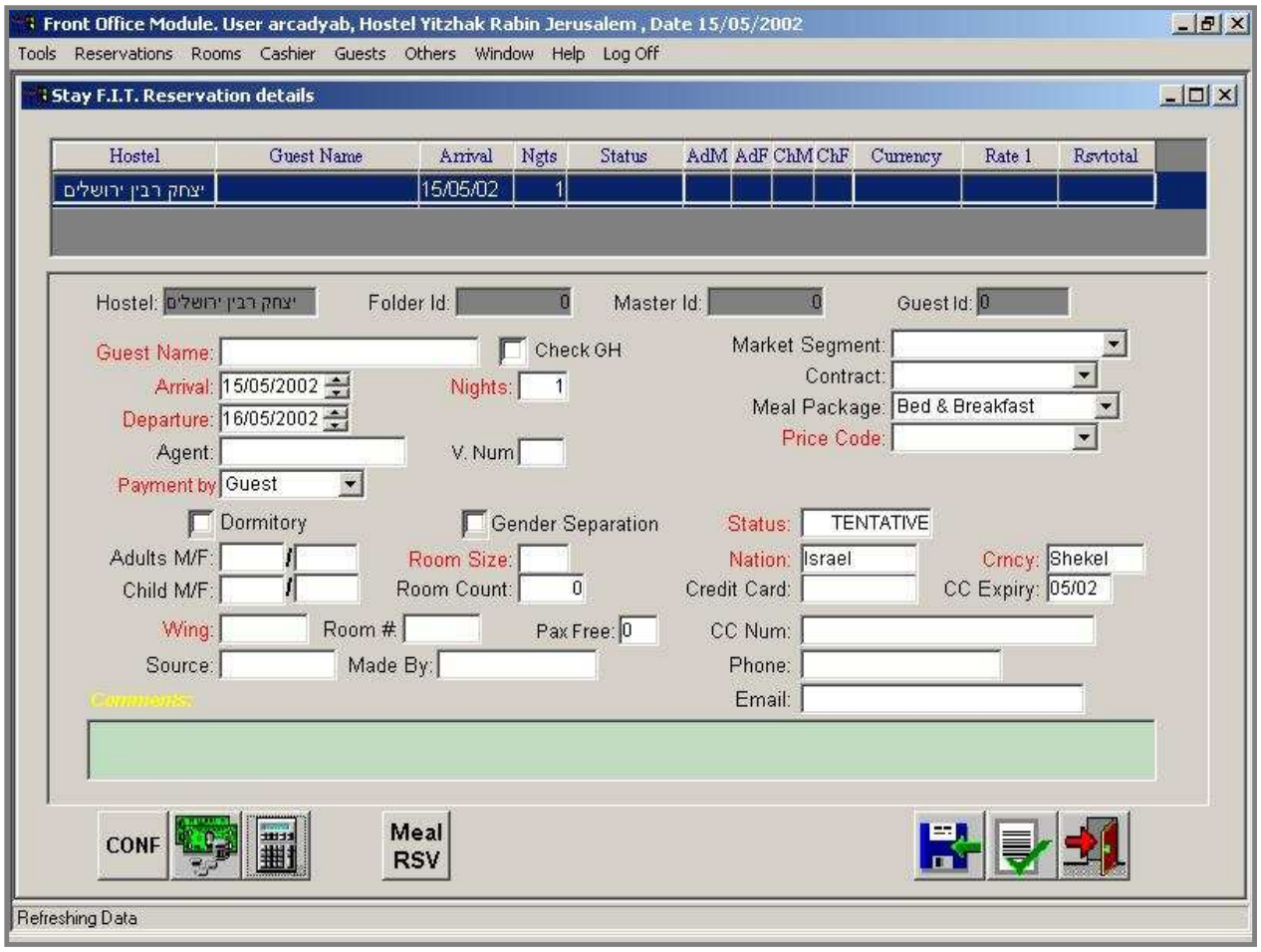
For example, if a caller requests a cancellation, the receptionist must be able to quickly access the

correct reservation record, verify its contents, and process the cancellation.

Reservation record data can be:

- Printed onto pre-registration cards to facilitate faster check-in procedures.
- Used as the basis for printing in-house guest folio and gust information lists
- Transferred to commission agent files for later processing
- Formatted for eventual inclusion in a guest history file.

Reservation Details



6. Generation of reports

Similar to many computer applications, the number and type of reports available through a reservation module are functions of the user's needs, software capability, and database contents. A computer-generated rooms availability report lists, by room type, the number of rooms available each day.

3.4 Rooms Management Module

Rooms management module maintains up-to-date information on the status of rooms, assists in the assignment of rooms during registration, and helps coordinate many guest services. Rooms management modules perform the following functions:

- Identify current room status
- Assist in assigning rooms to guests at check-in
- Provide in-house guest information
- Organize housekeeping activities
- Provide supplementary services
- Generate useful reports for management

Rooms management module alerts front desk employees of the status of each room, just as room racks do in non-automated operations. A front desk employee simply enters the room's number, and the current status of the room is displayed immediately on the terminal's screen.

Once a room becomes clean and ready for occupancy, housekeeping staff change the room's status through a terminal in their work area, and the information is immediately communicated to terminals at the front desk. The hotel property management system (PMS) routes data through the rooms management module and, thereby, helps coordinate the sale of rooms.

Computer-based hotel technology is capable of instantly updating the housekeeping status of rooms, which enables front desk employees to make quick and accurate room assignments to guests at the time of check-in.

3.5 Guest Account Module

Guest Accounting module processes and monitors financial transactions that occur between guests and the hotel. When remote electronic cash registers (ECR) or POS, situated at various revenue centers throughout the hotel are interfaced with a guest accounting module, guest charges are communicated to the front desk and automatically posted to the appropriate electronic guest folio.

4.0 CONCLUSION

We have discussed how technology by way of modules (front office applications) affects hotel reservation and room management in terms of their status. We have also discussed the functions of some of these applications.

5.0 SUMMARY

Hotel reservations systems, commonly known as a central reservation system (CRS) are a computerized system that stores and distributes information of a hotel, resort, or other lodging facilities.

A Central Reservation System is a tool to reach the Global Distribution Systems as well as Internet Distribution Systems from one single system, namely a central reservation system.

Front office applications are reservation modules that enable hotels rapidly process room requests and generate timely and accurate rooms, revenue, and forecasting reports

The functions of Reservation module are

Reservation Inquiry

Determination of availability

Creation of the reservation record

Confirmation of the reservation

Maintenance of the reservation record

Generation of reports

Rooms management module maintains up-to-date information on the status of rooms, assists in the assignment of rooms during registration, and helps coordinate many guest services.

Guest Accounting module processes and monitors financial transactions that occur between guests and the hotel

6.0 TUTOR-MARKED ASSIGNMENT

Discuss the functions of the reservation module

Explain the central reservation system and itemize the information normally stored in them.

7.0 REFERENCES/FURTHER READING

LerluckBoonlamp (2008) Automation in the Hospitality Industry

Ronald A. Nykiel Marketing in the Hospitality Industry Fifth Edition

UNIT 3 INFORMATION TECHNOLOGY IN SALES, MARKETING AND EVENTS MANAGEMENT

1.0 INTRODUCTION

In today's market, it is no longer a question of creating demand; you have to take it away from someone else. Many hospitality outfits have realized the potentials of using information technology to assist them in their sales and marketing strategies. It has proved to be a better way to control sales, as well as to understand market research and analyse present and future business. A suitable database package can be added to an existing system to enable a business identify its existing and future markets.

2.0 OBJECTIVES

At the end of this unit, you will be able to explain:

Sales management system

Marketing information system

The mailing list

Event management

3.0 MAIN CONTENT

3.1 Sales management systems

Sales management systems are information systems used in customer relation management that help automate some sales and sales force management functions. They are often combined with a marketing information system, in which case they are often called customer relationship management (CRM) systems.

A sales management system is a system that automatically records all the stages in a sales process. Its installation will give the company a competitive edge in the cut-throat convention market. The system helps maximize profitability for each individual hotel and aids in giving the customer the most efficient service possible.

A sales management system should:

- Automate the sales and banqueting office thus negating the need for previous manual systems.
- Provide a support system for the sales staff by presenting a complete picture of room and function space availability.
- Improve customer service by giving quicker responses
- Speed up sales decisions by having information on hand
- Raise overall hotel profitability by providing a more efficient service.
- Provide an automatic list of imminent events thus giving the banqueting staff the opportunity to be prepared in advance.
- Improve inter-departmental communication by providing daily, weekly and monthly reports on all booked events.
- Eliminate time consuming work such as manual preparation of statistics and reports.
- Create banqueting event orders within the system thus increasing efficiency.

3.1.1 Marketing database

Marketing database will include actual and prospective bookings, with rapid search and sort capability to enable sales activity to be focused on target markets. With a large number of defined codes, it will be possible to search the database for characteristics that reflect the hotel's present sales strategy.

Examples of attributes on which sales staff may base a search might be:
Frequency
Market segment
Seasonal pattern
Last time in the city and
Next time in the city

There is a database (Delphi) that makes use of a booking method that identifies the channel used for reservation. If the booking method identifies, for example, that travel agents provide 50% of the business that is booked through airline reservations system, this will indicate to the sales manager that it might be good for business to include more travel agency-oriented information about he particular hotel within the airline reservations system.

Using information technology, a hotel is able to weigh up rapidly the costs of encouraging any particular type of business, as well as identifying the business that the reservation staff should be concentrating on. It could also help to identify future training needs of staff to cope with the business that is placed with the hotel as it develops.

Marketing database must be sufficiently flexible to allow each individual hotel to maintain its own identity, as well to hold information on its own specific or peculiar market. For example, in large companies like Hilton, Jerusalem Hilton has a specific

market segment called ‘Pilgrims’ that is peculiar to that hotel and which provides a great deal of business.

3.1.2 Service history

The service history of a computerized system can eliminate the tedious work related to researching the productivity of groups that have used the hotel. Summary information on past performance can be stored for quick evaluation on future projections.

A good sales and marketing system enables staff to keep account histories. This will allow the keeping of the history of all clients’ bookings, including their average bill settlement, the expected actual number of guests, the types of functions booked, etc. The storing of these histories will help keep track of potential business, and allow sales staff to retrieve specific accounts on the basis of established important criteria such as:

- marketing sales person assigned
- convention service manager
- catering salesperson assigned
- last use of property
- projected event date
- seasonality code
- average check (average spend per head)
- cover count
- market segment
- account quality rating, etc.

A typical example of the use of service history is if there is an obvious gap in business in a particular period, the sales manager may refer to the computerised records for that period and request details of accounts that:

- meet during that period (seasonality code)
- have an average of 50 guests or more (cover count)

- have an average spend of ₦5,000.00 or more per head (average check)

The sales/marketing manager can contact them.

3.1.3 Lost business tracking

In addition to accounts and businesses that were successfully accommodated, it is important for the system to record details of businesses that for one reason or the other were lost. Businesses passed over or cancelled should be stored along with the hotel's opinion, chosen from some pre-specified reasons for cancellation or passing over a business. This data is used to evaluate trends for lost business and to research accounts that may fill need times in the future.

Some valid reasons for lost business:

Shortage – guest rooms

Shortage – function space

Shortage – exhibition space

Shortage – suite

Other hotel – rates

Other hotel – total package

Other hotel – facilities

Lack – teleconferencing

Lack – ballroom capacity

Lack – pre-function space

Cancel – deposit not paid

Cancel – rescheduled

Cancel – personal change

Cancel – space given to another etc.

3.1.4 Mailing list

Your customer mailing list is one of the most valuable assets of your hotel or restaurant. It is amazing that very few hotels and restaurants use e-mail marketing. It's never too late to start building a database, and e-mail marketing is a great way to continue to build the relationship with your customers and keep you in their mind when the time comes for a return visit or when asked to make a recommendation. Without a list, every time you want to get something in front of your customers or prospects you have to start all over again. Your list gives you the opportunity to tell every existing and potential customer about promotions, seasonal events and any other newsworthy information relevant to your target market.

The more detail you have on people who are interested in what you offer, the more often you can return to them with additional offers that are tailored to them. And the more often you do this, the more likely it is that this will result in business.

Offer incentives to build your list

To build your list, you may need to set up incentives for people to fill in a physical form or coupon, or sign up online and share their details. Some ideas might be:

- Discounts or vouchers (ensuring they are attractive offers, but include time limits and offers that won't leave you out of pocket once redeemed)
- Free information such as a pdf downloadable guide to something of relevance and of interest to your target market, your business or your local area. For example, recipes for your popular dishes, aromatherapy guide related to your spa, golfing tips if you have a golf course, 101 things to do with the kids during your stay
- Prize draws or competitions, with relevant prizes from your own products or services, or those of your joint venture partners
- Access to exclusive offers or 'members only' offers

Whatever the incentive, it needs to be something that is of value and highly desirable to your target audience; something that will compel them to fill out the form and part with their details.

Where to find contacts

There are three key sources of names:

Existing customers:

Simply ask them to leave their business card, or fill out a blank card which enables those who'd rather not give their business details to fill in their personal contact details. Present this with their bill so it gets their attention.

You may want to combine data gathering with gaining feedback on your customers' stay or visit at the same time.

Collecting phone numbers at the time of booking will allow you to make follow up calls, and having a mobile number allows you to confirm reservations.

Online:

This may be existing customers, but more likely will be for people in response to an advert or people who have just stumbled on your website. You'll need an 'opt in' or 'landing' page to capture their details.

As there is no relationship yet with these people you need a really enticing offer to encourage people to share their details. Remember, some of these may be those who may not want to buy right now, but that doesn't mean they won't be potential customers in future.

In order to track the effectiveness of your marketing activities it's useful to be able to identify the source of the contact. So you may need to include a 'how did you hear of us?' field, unless you have dedicated urls for different adverts or press mentions to help you keep track.

Your joint venture partners:

Ask your JV's to give their customers your discount vouchers or an invitation to receive your exclusive offers. Then ask customers to complete their details in order to redeem them with you.

Never compromise your contacts' trust by giving or selling your list to anyone else; if a joint venture partner wants to offer something to your contacts do it through you, and vice versa.

You could in theory use contact information taken from customers' registration details, but use this sparingly and only for a follow up and very relevant offers. You're legally entitled to contact your own customers with future offers, but always seek permission to use customers' details for any marketing activity. And of course if any customer asks not to be contacted at any time, you must respect this, and record their preference on your database.

Whichever way you capture prospects' and customers' contact information, under the Data Protection Act 1998 you must have permission to communicate with them. The Information Commissioner's Office website (www.ico.gov.uk) shows what you need to do.

What information you really need

The more information you have the better in order to tailor your mailings to suit the needs of your customer. Asking for a lot of personal detail up front is, however, not very practical (and likely to be very off putting) so it's better to gather it over time.

What you gather first off will depend on how you want to contact them, so if emailing is your preferred option start with just their name and email address. But if knowing who

is local and who is not is important, you may want to gather mailing addresses too. This opens up the opportunity for a physical mailing, which although more expensive is certainly more eye catching than an email and may be a better match for your audience. So balance what you ideally need with what is reasonable for people to share with you

3.2 Marketing information system (MIS)

A marketing information system is a management information system designed to support marketing decision making.

It is defined as a "system in which marketing data is formally gathered, stored, analysed and distributed to managers in accordance with their informational needs on a regular basis."

Kotler, et al. (2006) define it more broadly as "people, equipment, and procedures to gather, sort, analyze, evaluate, and distribute needed, timely, and accurate information to marketing decision makers."

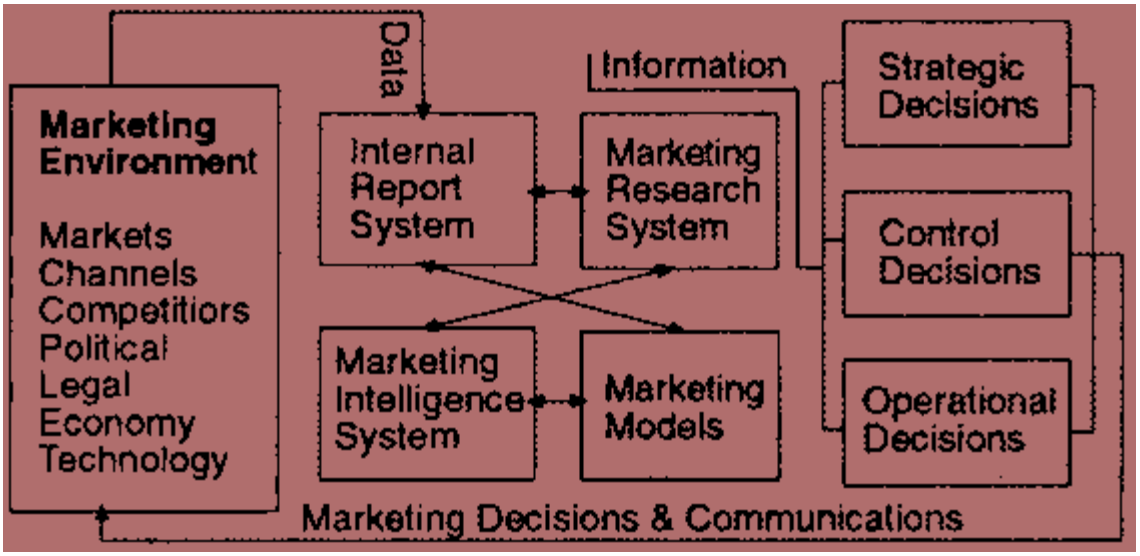
Marketing information system can be of great benefit to any organization whether profit making or nonprofit making, no matter its size or the level of managerial finesse. It is true today that in many organizations,marketing information system is integrated as part of a computerized system. To manage a business well is to manage its future and this means the management of information

3.1.1 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 the MIS provides. Moreover, as Kotler's definition says, an MIS is more than a system of data collection or a set of information technologies:

"A marketing information system is a continuing and interacting structure of people, equipment and procedures to gather, sort, analyse, evaluate, and distribute pertinent, timely and accurate information for use by marketing decision makers to improve their marketing planning, implementation, and control".

The figure below 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.



Marketing information systems and its subsystems

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 industrialised countries being computerised 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.

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 compartmentalised, either in the form of an individual entrepreneur or in the functional departments of larger businesses. That is, information is usually categorised 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.

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.

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 centers 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.

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 exposes him/herself to information that may prove useful. Whilst the behaviour 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

Marketing intelligence is the province of entrepreneurs and senior managers within an agribusiness. It involves them in scanning newspaper trade magazines, business journals and reports, economic forecasts and other media. In addition it involves management in talking to producers, suppliers and customers, as well as to competitors. Nonetheless, it is a largely informal process of observing and conversing.

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.

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 computerised 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.

Hotel Sales & Marketing Ideas

Hotel sales and marketing is an evolving endeavor. A hotel needs to change marketing styles and strategies to reflect current conditions and trends in the hotel and hospitality industry. The same theory holds true with the vehicles and media used for presenting marketing campaigns. Hotels can utilize technology-based marketing ideas to get sales messages out to a wide audience.

a. Social Media

A hotel can utilize social media sites to promote current specials and events. Social media sites allow a hotel to establish a page, upload photos and write postings about the hotel itself. To use social media for sales and marketing, you must keep the page updated. Frequent postings on the sites allow current and potential customers to read about happenings, events and specials. For example, the sales and marketing department makes postings on the social media site every Wednesday to announce specials for the upcoming weekend. You then link to your main website from the social media site and from your main website to all social media sites. You request contact information through your social media sites for all visitors to your page and then incorporate those contacts into other direct marketing campaigns.

b. Travel Review and Local Guide Websites

Travel reviews are a marketing tool to promote a hotel. Invite travel writers to come personally tour the hotel and offer a free night's stay and dinner as a way to get reviewers on-site. Use travel review websites to your advantage by asking guests to submit reviews.

Local travel guides are another marketing vehicle for a hotel. Place advertisements in print and online editions and keep information up-to-date and accurate. Provide coupons and specials for your hotel on all travel guides and review sites, and have the coupon link direct people to your main website, where they obtain the special information**.**

c. Video on Demand

You can market your hotel in various ways through technology. Video on demand and streaming media are two ways to get information about your hotel to repeat and potential guests to show them what your hotel offers. Post the videos on your website

and on travel sites, and run them through a dedicated hotel information channel on the televisions in the rooms of your hotel.

d. Charity Events

Allow a charity or organization to hold an event at your hotel. You benefit by getting marketing and publicity through the event. Make sure that all materials generated by the organization mention your hotel. You can use this marketing tactic with schools, nonprofit organizations and industry associations.

3.4 Event management

Event management is the application of project management to the creation and development of festivals, events and conferences. It involves studying the intricacies of the brand, identifying the target audience, devising the event concept, planning the logistics and coordinating the technical aspects before actually executing the modalities of the proposed event. Post-event analysis and ensuring a return on investment have become significant drivers for the event industry.

The recent growth of festivals and events as an industry around the world means that the management can no longer be ad hoc. Events and festivals, such as the Asian Games, have a large impact on their communities and, in some cases, the whole country.

The industry now includes events of all sizes from the Olympics down to a breakfast meeting for ten business people. Many industries, charitable organizations, and interest groups will hold events of some size in order to market themselves, build business relationships, raise money or celebrate.

3.4.1 Event management and computers

The successful handling of events and functions is of paramount importance to a large number of hotels and caterers. This is because their reputation depends on this sphere of the hospitality business. Event management software tools can be harnessed to smooth the operation of such events.

Software tools can handle many common activities such as delegate registration, hotel booking, travel booking or allocation of exhibition floor space. The tools can also handle execution of conferences, meetings, and other events of all kinds from initial enquiry through quotation, detailed planning and information dissemination, to invoicing, and full accounts.

A typical event management computer system might have the following main spheres of operation:

- Enquiries
- Event diary
- Staff organization
- Function list
- Quotation and sales forecasting
- Bookings
- Market research data base
- Marketing and mailing
- Invoicing
- Sales ledger
- Reporting

Enquiries

In order to respond effectively to conference enquiries, a rolling diary of events will need to be maintained with on-line enquiry facilities covering room availability within

certain dates or date availability for certain rooms. Enquiry should also be possible for particular event types and numbers, and for specific days of the week

Event diary

Theevent diary of the system is possibly the most important as it permits full control to be exercised over the total number of events booked. As events are booked way ahead of time, it is wise to have an event diary that satisfactorily holds information for a long time period: moat computer systems provide a range of at least five years. Historical information may also be required, so the event system should have a memory of at least two years into the past.

The facilities available within the event diary of a comprehensive system will include:

- The ability to refer quickly to reservations for a particular day or week in the future and to a comprehensive event listing for any range of dates in the diary.
- Should also be able to request from the system details of rooms that are available for specific functions by asking questions such as:
  Which rooms and dates are suitable for an event of 500 people on a Saturday?
  When making a reservation, it will be useful if there is a prompt facility to remind the member of staff concerned if there is a major event or occasion happening at that time.
- A detailed cancellation report facility will be useful for checking customer reliability.

Staff organization

In a busy event centre or hotel, an organization system will help with staff rotas, job scheduling, and allocation of staff to individual functions. Details may also be kept of holidays, sickness and special events.

Function list

As part of the operations of the event diary, it will be useful for the computer to produce function lists as well as departmental function sheets to give detailed reporting for each department such as the kitchen, dispense bar, florist, electrician, external contractors, and reception.

Quotation and sales forecasting

A good quotation and forecasting package for events should enable the events manager to have access to client quotations for events. There should be a fully analysed internal cost and sales quotation report

facility, as well as the ability to provide gross profit forecasting. The events manager should also have access to the sales persons' commission and bonus point forecasting.

The reports produced should include monthly, quarterly, and yearly sales forecasts, as well as sales analyses by sales persons and an analysis of prospective clients and all event venues in competition.

Comprehensive quotations detailing all the bookings, facilities and services should be reviewable on-screen with ability to print-out on an adhoc basis.

Bookings

A single booking entry into a computerized system may cover both meetings and overnight accommodation for a day or series of days, or even specific times within a day. So the system should be capable of handling this amount and variety of details.

Facilities should be able to booked, with or without charge, against individual rooms both before the event in the case of, for example audio visual equipment, or after the event such in a situation of electricity being charged on a consumption basis.

Catering requirements should be recordable and chargeable for each room at specific times. A link to a Catering Management Information System will facilitate full kitchen production planning and purchase ordering.

Bar extensions should be recorded and listed separately over specified periods for the purpose of coordinating applications, and any special requirements may be detailed on an unrestricted 'note pad' facility against each room.

Market research data base

A market research database should be tailored to a specific establishment with the intention of providing a comprehensive management information and marketing analysis system.

Marketing and mailing

A good computer system will provide the ability to interface the market research database with a word processing system for brochure mailing or personalized letter production and mailing

Invoicing

With an interface to an accounting package, there will be ability for remote or independently controlled event centres to quickly prepare and print client bills. It should be possible to generate invoices individually or in batches at the user's discretion.

The standard charges for all services and facilities may be overridden to reflect negotiated rates or discounts.

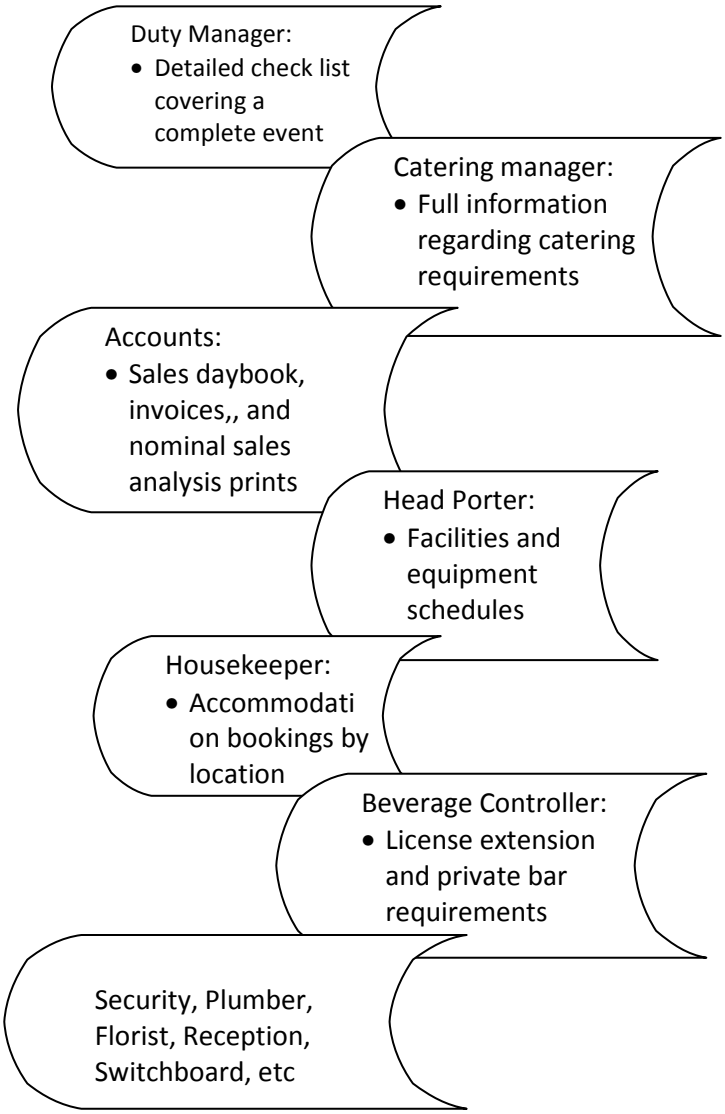
Sales ledger

The event system may include its own sales ledger and credit control system that interfaces with the invoicing and word processing systems to permit automatic personal debt collection correspondence to be created and mailed.

Reporting

The real power of a computerized event system lies not only with the standard reports that already exists, but more particularly with the flexibility of reporting that allows the user to create and tailor results to specific needs.

Special areas of reporting might include:



Events computer system reports

4.0 CONCLUSION

We have discussedsales management systems as information systems used in customer relation management that help automate some sales and sales force management functions. We have also looked at marketing database and attributes to base searches on, as well as service historyand how it can eliminate tedious workrelated to researching the productivity of groups that have used the hotel.

We also discussed lost business tracking, marketing list, its benefit and how to find contacts to send mails to. We also looked at marketing information system and its components; internal reporting system; marketing reporting system; marketing intelligence system; and marketing models.

We looked at marketing ideas and hotel sales, as well as event management and computerization.

5.0 SUMMARY

Hotels experience greater profits when their technology is cutting edge

With IT professionals trained in hospitality, many hotels are improving service

Hotel managers should have some degree of education in Information Technology

A marketing information system is a management information system designed to support marketing decision making.

A marketing information system (MIS) is intended to bring together disparate items of data into a coherent body of information

Event management is the application of project management to the creation and development of festivals, events and conferences.

6.0 TUTOR-MARKED ASSIGNMENT

Name the four components of an MIS.

List the spheres of operation of event management computer system and discuss any five (5) of them. Discuss the following:

Marketing models

Marketing intelligence system and

Marketing ideas and hotel sales.

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UNIT 4 INFORMATION TECHNOLOGY AND FOOD AND BEVERAGE SERVICE

CONTENT

1.0 Introduction

The food service industry has benefited from the use of information technology. A proper implementation of information systems aids large and small restaurants and food service business in providing more efficient services to their guests and offer more control to prevent losses.

In the food service world, guest satisfaction is of high priority. Guests with all sorts of demands can be satisfied by a restaurant that provides efficient and effective service. Therefore, to achieve higher revenues and a successful future, businesses must constantly seek out new ideas to increase the efficiency of their systems and achieve guest satisfaction.

In the restaurant and food service industry, Information technology is divided into front-of-the-house operations and back-of-the-house operations.

2.0 Objectives

At the end of this unit, you will be able to explain:

Front-of-the-house restaurant systems

Back-of-the-House Restaurant Systems

3.0 Main content

3.1 Front-of-the-house restaurant systems

The front-of-the-house systems include:

- Point-of-sale systems
- Kitchen display systems
- Guest services solutions.

3.1.1 Point-of-Sale Systems (POS)

Point-of-sale systems are systems mostly used in restaurants and hotels in which a computer replaces a cash register. Point-of-sale systems are common in restaurants and other food service settings such as stadium, theme park. Airport, or cruise ship. These systems are also used by hotel properties that have food and beverage service retail outlets. They are used to track food and beverage charges and other retail charges that may occur at the hotel or restaurant.

A point-of-sale system is made up of a number of POS terminals that interface with a remote central processing unit. These terminals may also have their own microprocessors so that processing can be done at the terminal, and all the terminals are networked.

A POS terminal may be used as an electronic cash register. The POS system is usually interfaces with a property management system at a hotel to record guest transactions during their stay at the hotel. Terminals are placed anywhere in the hotel or restaurant where transactions are taking place.

For example:

A hotel may have POS terminals at the front desk, at the food and beverage service outlets, and at any retail outlet in the hotel.

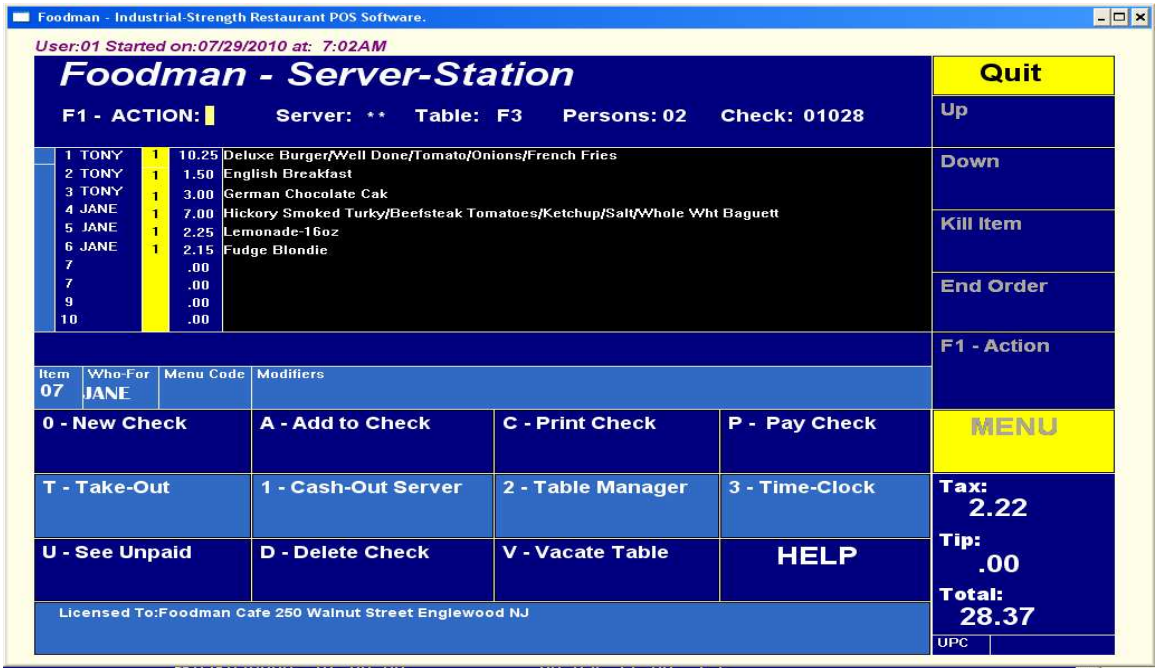
Examples of POS systems:

A. Restaurant Point-of-sale system

B. Wireless Order Taking

With Restaurant POS you can use a normal PDA to take orders wirelessly minimizing the time to serve your clients. Orders are immediately printed in the kitchen ensuring a better customer service.

C. Restaurant POS Software



The waiter selects the category and the items in the category are displayed. The waiter touches the screen to enter the items. Note that there can be up to 54 menu items on a single touchscreen.

Users of POS

POS has many users. In the hotel, front-desk managers and employees are some of the most frequent users. This is because they have the most contact with guests and guests transactions.

The room service manager and employees also use POS.

The restaurant manager and employees also use POS. They use it to keep track of sales and guest checks.

3.1.2 Kitchen Display System

Kitchen display system further enhances the processing of orders to and from the kitchen. Printers in the kitchen are replaced with video monitors. This systems presents not only orders to the kitchens, but also presents information on how long orders are taking to be prepared. Orders change colour or flash on the monitor to alert kitchen staff when orders are taking too long.

Kitchen monitors are widely used in quick service restaurants, and they are also gaining momentum in table service restaurants.

Kitchen videos systems also post order preparation times to acentral data base for later reporting and analysis by management to determine how the kitchen is performing.

3.2.3 Guest Services Solutions

Guest services solutions are applications that are designed to help a restauranteur develop a dining relationship with guests. The applications include:

- Frequent dinner management program
- Delivery management with caller ID interface
- Guest account receivable to manage home accounts
- Gift certificate management.

All these applications are accessed through the POS system. They give restauranteurs the opportunityto offer convenience to their guests, while allowing them to track who their best customers are.

Guest activity is posted into the central database and management can develop targeted marketing programs based on this information.

3.2 Back-of-the-House Restaurant Systems

The back-of-the-house restaurant systems are called product management, and they consist of:

- Inventory
- Food costing

- Labour management
- Financial reporting

3.2.1 Inventory

Technology for beverage management has improved as it offers beverage operators a system that accounts for every ounce of beverage with daily, weekly, or monthly results. The real-time inventory interfaced with major POS systems, allows viewing results at any time and place with tamperproof reliability.

A particular liquor model (Scanbar) has a bar-coded label on each bottle making it easy to track bottles from purchase to recycle bin. Each bottle variety has the same ribbon allowing for easy calibration. The bar coded ribbon is used to as a measuring tool to give accurate results.

Inventory taking is done with a portable hand-held radio-frequency bar code reader. Once the label is scanned, he level of alcohol in the bottle is recorded and the data is sent from the user's hand-held reader to the computer in the office for real-time results.

The wine module keeps controlof all the wines by region, variety, or vintage. Once the wine has been configured within the directory, the received wine is identified by scanning the bar code already on the bottle, or selected directly from the portable hand-held radio-frequency bar code reader. A bar-coded tag is placed around the collar, and this creates a unique identity for each bottle.

Once the bottle is ready to be served either at the table or the bar, the bar-coded tag is removed from the bottle and scanned out of inventory. Scanning the tag around the neck of the bottle accomplishes inventory taking.

Another beverage system (AZ2000) offers a POS system that runs the operation from behind the bar. It rings up the charge as the beverage is being poured, while automatically removing the product from inventory. Instead of holding up bottles and guessing what is left in them, or even weighing each bottle at the end of shifts, the AZ2000 controller can at any time give a report of what was sold, who completed the transaction, how the system was used, and actual profits by brand, transaction, or product group. This system offers the convenience of remote monitoring either from home or vacation by just dialing into the location and inventory to make changes such as price changes or even monitoring sales activity.

The AZ2000 is the heart of a dispensing system. It interfaces with a variety of products. Foe example, it “spouts” a cocktail tower, beer, wine, juice, soft drinks machines and soda guns. The system even runs cocktail programming such that should the bar tender not know what goes into a certain drink, he/she can hit the cocktail button, and it will tell them what liquor bottle to pick, and also control the recipe pour amounts.

3.2.2 Food costing

Food cost of menu items sold through the POS system is linked to recipes, which are made up of inventory items. Each time an item is sold, the appropriate inventory items are automatically depleted through the software application. For example:

When a hamburger is sold, the inventory is depleted by one hamburger patty, one bun, one slice of tomato, one ounce of lettuce, and one ounce of onion.

The system can also determine when inventory is low and time to place order.

3.2.3 Labour management

Most front-of-the house systems have the ability to track employee working time. A back-of-the-house labour management package adds the ability to manage all of a restaurant’s payroll and human resource information. A labour management system includes a human resource module to track hiring, employee personal information,

vacation, security privileges, tax status, availability and any other information pertinent to employees working at the restaurant.

A labour management system would also include scheduling capability so that managers can create weekly schedules based on forecasted business. Schedules will now be enforced when employees check in or out so that labour cost can be managed.

A labour management package also presents actual work time and pay rate to a payroll processor so that paychecks can be cut and distributed. It also collates tips data and receipts data from the front of the house so that proper tips allocation can be reported according to IRS guidelines.

3.2.4 Financial reporting

The back-of-the-house and front-of-the-house systems post data into a relational database located on the central server. The restaurant manager uses these data for reporting and decision making. Profit and loss reports, budget variances, end-of-day reports, and other financial reports are generated from the central database.

Both back-of-the-house and front-of-the-house systems must be reliably linked so that POS food costs, labour costs, service times, and guest activity can be analysed on the same reports. This will enable restaurant managers make critical business decisions armed with all necessary information.

4.0 Conclusion

We have discussed the two divisions of information technology in the food service industry and their collective name. We also explained in detail the components of each of the two types of IT in the food service industry. We have looked at the pictures of some POS systems and mentioned the users of POS.

5.0 Summary

In the restaurant and food service industry, Information technology is divided into front-of-the-house operations and back-of-the-house operations.

The front-of-the-house systems include point-of-sale systems, kitchen display systems, guest services solutions.

Users of POS in the hotel are front-desk managers and employees, room service manager and employees, as well as restaurant manager and employees.

The back-of-the-house restaurant systems are called product management, and they consist of inventory, food costing, labour management, and financial reporting.

6.0 Tutor-Marked Assignment

Mention the two types of IT in the food service industry and list their various components.

Discuss restaurant point-of sale system and mention the users in an hotel.

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Module 3

Unit 1 IT in Security and labour management

Unit 2 IT in inventory control and food costing

Unit 3 Internet and hospitality industry

Unit 4 IT and efficiency enhancement

UNIT 1 IT IN SECURITY AND LABOUR MANAGEMENT

CONTENT

1.0 INTRODUCTION

Security in its widest sense is of major importance to the hospitality industry, especially as it has become accepted that guests have a right to feel as secure in their hotel bedrooms as they would feel at home.

Security encompasses areas such as security of the property itself, company assets, employees' and customers' personal belongings and valuables, life security, personal security etc.

Hotels are not designed with high-security in mind and, in normal times, they do not need to be.

They are built to accommodate the traveling public, and high-end resorts and facilities around the world have aesthetics and comfort, not security and safety, in mind.

As diplomatic missions are hardened into virtual fortresses around the world, and airports scan every item the traveling public carries, from toenail clippers to toothpaste, it is almost axiomatic that terrorists focus their tactical planning increasingly towards the softer target.

The deadly terrorist attack in Mumbai, India is the latest in a growing trend of attacks on luxury hotels and resort facilities. Paradoxically, these attacks are not on just any hotel, or resort. They are hotels that cater to western diplomats, military personnel, or wealthy businessmen. The resorts are attractive targets because an aggregate of tourists can be found at these locations. If the nationality of the tourists corresponds to the target set on a terrorist's agenda, they invite attack.

Individuals in their own countries are relatively secure behind protected borders with vigilant border guards. Diplomats or on-duty military personnel are relatively safe in guarded compounds with thick, bomb-resistant walls. Off-duty or on vacation, when diplomats, soldiers, or tourists on holiday leave the security of their homes or workplaces, they become accessible targets and are acutely vulnerable to attack. That vulnerability, unfortunately, is passed on to the hotel or resort where they stay.

2.0 OBJECTIVES

At the end of this unit, you will be able to explain

Physical security

Hotel security concerns

Hotel security

How to Increase Security Procedures

3.0 MAIN CONTENT

3.1 Physical security

Physical security describes measures that are designed to deny access to unauthorized personnel (including attackers or even accidental intruders) from physically accessing a building, facility, resource, or stored information; and guidance on how to design structures to resist potentially hostile acts. Physical security can be as simple as a locked door or as elaborate as multiple layers of barriers, armed security guards and guardhouse placement.

3.1.1 Overview

Physical security is primarily concerned with restricting physical access by unauthorized people (commonly interpreted as intruders) to controlled facilities, although there are other considerations and situations in which physical security measures are valuable (for example, limiting access within a facility and/or to specific assets, and environmental controls to reduce physical incidents such as fires and floods).

Security inevitably incurs costs and, in reality, it can never be perfect or complete - in other words, security can reduce but cannot entirely eliminate risks. Given that controls are imperfect, strong physical security applies the principle of defense in depth using appropriate combinations of overlapping and complementary controls. For instance, physical access controls for protected facilities are generally intended to:

- deter potential intruders (e.g. warning signs and perimeter markings);
- distinguish authorized from unauthorized people (e.g. using pass cards/badges and keys)
- delay, frustrate and ideally prevent intrusion attempts (e.g. strong walls, door locksand safes);
- detect intrusions and monitor/record intruders (e.g. intruder alarms and CCTV systems); and
- trigger appropriate incident responses (e.g. by security guards and police).

It is up to security designers, architects and analysts to balance security controls against risks, taking into account the costs of specifying, developing, testing, implementing, using, managing, monitoring and maintaining the controls, along with broader issues such as aesthetics, human rights, health and safety, and societal norms or conventions. Physical access security measures that are appropriate for a high security prison or a military site may be inappropriate in, say, an airport, an office, a home or a vehicle, although the principles are similar.

Physical security is not uniquely human. The practice of actively defending a territory against intruders or opponents is very common in the animal kingdom. Physical security is also not a modern phenomenon. The technology is continually evolving along with the threats. Physical security controls that were considered adequate in the past tend to be insecure today due to advances in the knowledge and capabilities of attackers. In the same way, controls that currently appear strong are likely to prove vulnerable in future, in ways that may not be obvious right now.

3.1.2 Elements and design

Spikes atop a barrier wall

The field of security engineering has identified the following elements to physical security:

- obstacles, to frustrate trivial attackers and delay serious ones; to include:
- explosion protection;
- detection systems, such as surveillance systems, alarms, security lighting, security guard patrols or closed-circuit television cameras, to make it likely that attacks will be noticed; and
- security response, to repel, catch or frustrate attackers when an attack is detected.

In a well-designed system, these features must complement each other. There are at least four layers of physical security:

- Environmental design
- Mechanical, electronic and procedural access control
- Intrusion detection (with appropriate response procedures)
- Personnel Identification (authentication)

There may be many choices to consider and there is no "best" solution that will satisfy a broad class of situations. Each situation is unique. What is offered in this article are only proven techniques, but not always required or expected, or satisfactory for the end user.

Deterrence

The goal of physical security is to convince potential attackers that the likely costs of attack exceeds the value of making the attack, e.g. that consequences of a failed attack may well exceed the gain. The combination of layered security features establishes the presence of territoriality.

The initial layer of security for a campus, building, office, or other physical space uses crime prevention through environmental design to deter threats. Some of the most common examples are also the most basic - warning signs, fences, vehicle barriers, vehicle height-restrictors, restricted access points, site lighting and trenches. However, even passive things like hedgerows may be sufficient in some circumstances.

Access control

An electronic access control

The next layer is mechanical and includes gates, doors, and locks. Key control of the locks becomes a problem with large user populations and any user turnover. Keys quickly become unmanageable, often forcing the adoption of electronic access control. Electronic access control easily manages large user populations, controlling for user lifecycles times, dates, and individual access points.
For example a user's access rights could allow access from 7.00am to 7.00pm Monday through Friday and expires in 90 days.

Another form of access control (procedural) includes the use of policies, processes and procedures to manage the ingress into the restricted area.
An example of this is the deployment of security personnel conducting checks for authorized entry at predetermined points of entry. This form of access control is usually supplemented by the earlier forms of access control (i.e. mechanical and electronic access control), or simple devices such as physical passes.

An additional sub-layer of mechanical/electronic access control protection is reached by integrating a key management system to manage the possession and usage of mechanical keys to locks or property within a building or campus.

Detection

The third layer is intrusion detection systems or alarms. Intrusion detection monitors for unauthorized access. It is less a preventative measure and more of a response trigger, although some would argue that it is a deterrent. Intrusion detection has a high incidence of false alarms.

In many jurisdictions, law enforcement will not respond to alarms from intrusion detection systems.

For example, a motion sensor near a door could trigger on either a person or a squirrel. The sensor itself does not do identification and as far as it is designed, anything moving near that door is unauthorized.

Identification

Closed-circuit television

The last layer is video monitoring systems. Security cameras can be a deterrent in many cases, but their real power comes from incident verification and historical analysis.

For example, if alarms are being generated and there is a camera in place, the camera could be viewed to verify the alarms. In instances when an attack has already occurred and a camera is in place at the point of attack, the recorded video can be reviewed. Although the term closed-circuit television (CCTV) is common, it is quickly becoming outdated as more video systems lose the closed circuit for signal transmission and are instead transmitting on computer networks.

Advances in information technology are transforming video monitoring into video analysis. For instance, once an image is digitized it can become data that sophisticated algorithms can act upon. As the speed and accuracy of automated analysis increases, the video system could move from a monitoring system to an intrusion detection system or access control system. It is not a stretch to imagine a video camera inputting data to a processor that outputs to a door lock. Instead of using some kind of key, whether mechanical or electrical, a person's visage is the key. When actual design and implementation is considered, there are numerous types of security cameras that can be used for many different applications. One must analyze their needs and choose accordingly.

Note that video monitoring does not necessarily guarantee that a human response is made to an intrusion. A human must be monitoring the situation real time in order to respond in a timely manner. Otherwise, video monitoring is simply a means to gather evidence to be analyzed at a later time - perhaps too late in some cases.

Human response

Private guard

Intertwined in these four layers are people. Guards have a role in all layers:
In the first as patrols and at checkpoints.

In the second to administer electronic access control.

In the third to respond to alarms.

The response force must be able to arrive on site in less time than it is expected that the attacker will require to breach the barriers.

And in the fourth to monitor and analyze video.

Users obviously have a role also by questioning and reporting suspicious people. Aiding in identifying people as known versus unknown are identification systems. Often photo ID badges are used and are frequently coupled to the electronic access control system. Visitors are often required to wear a visitor badge.

Other physical security tools

New developments in information and communications technology, as well as new demands on security managers, have widened the scope of physical security apparatus.

Fire alarm systems are increasingly becoming based on Internet Protocol, thus leading to them being accessible via local and wide area networks within organisations.

Emergency notification is now a new standard in many industries, as well as physical security information management (PSIM). A PSIM application integrates all physical security systems in a facility, and provides a single and comprehensive means of managing all of these resources. It consequently saves on time and cost in the effectual management of physical security.

Examples

Many installations, serving a myriad of different purposes, have physical obstacles in place to deter intrusion. This can be high walls, barbed wire, glass mounted on top of walls, etc.

The presence of passive infrared (PIR)-based motion detectors is common in many places, as a means of noting intrusion into a physical installation. Moreover, Video surveillance solution (VSS)/Closed-circuit television (CCTV) cameras are becoming

increasingly common, as a means of identifying persons who intrude into physical locations.

Businesses use a variety of options for physical security, including security guards, electric security fencing, cameras, motion detectors, and light beams.

ATMs (cash dispensers) are protected, not by making them invulnerable, but by spoiling the money inside when they are attacked. Money tainted with a dye could act as a flag to the money's unlawful acquisition.

Safes are rated in terms of the time in minutes which a skilled, well equipped safe-breaker is expected to require to open the safe. These ratings are developed by highly skilled safe breakers employed by insurance agencies. In a properly designed system, either the time between inspections by a patrolling guard should be less than that time, or an alarm response force should be able to reach it in less than that time.

3.2 Hotel security concerns

Anticipating risk in the hotel security field is an imprecise art. It has grown increasingly difficult with the introduction of new technologies, regulations and global threats. In today's world, the growing concern over security is information-technology breaches and terrorism. IT professionals now face new challenges brought on by the prolific use of cloud technologies and mobile devices.

Even though hotel security professionals and government agencies have quelled fears so successfully that travelers are less sensitive to potential threats, anti-terrorism efforts still face an emerging risk from complacency. The result is a field that requires more focus than ever before. Hotel operators feel that security is getting harder and harder, and that they are spending more and more money on it.

The major areas of concern include:

1. Information Technology

In general most mobile devices that are used for business remain unprotected, including lack of any password, let alone a complex password. Rarely do we find that any business

using smart mobile technology has any encryption on it whatsoever. Even less than that do we find that there are written policies and procedures relative to the securing and protection of mobile devices, technology and the information contained within them.

Amplifying the problem is the sheer number of devices. A company could have tens of thousands of smartphones or laptops in the field at any given point—each a potential gateway to hackers and other criminals.

IT protection goes beyond PCI DSS. Data security protection must include end-to-end management that takes a more comprehensive approach. We need to think more than compliance. We need to look at cost and benefit and how it supports the business. “The core principle is to provide end-to-end data protection so you are not just patching.”

2. Terrorism

Ironically, one of the main reasons terrorism tops the list is because it has become less of an issue in recent years. It makes it a little bit harder to get things done because people are like, ‘Terrorism? That’s 10 years ago. Stressing diligence requires a delicate touch, however. Hoteliers need to keep their staff and travelers mindful of possible threats, but they donot want to scare them.The process requires constant communication and the sharing of best practices, often through appropriate software and IT software. Do not assume that you donot need to continue to fund your security effort at your hotel.Also initiatives like the ‘see something, say something’ campaign become very important as well, and so should be encouraged.

3. Skimmers

A related threat is that of “skimmers,” or devices that catch credit card numbers when consumers use them for payment. This problem for now is connected to the restaurant industry, but it could spread to hotels.It is not an easy thing to stop for now.It has to be investigated. You have to be aware of complaints about a particular outlet. Once you have that, you can back into it and find out who the workers on duty were at that point.”

Skimmers typically require an inside man or worker who swipes a credit card through a device before processing the payment. These are usually not hardened criminals but just "opportunists." The best prevention measure is to have an investigative team or third party on hand and making that known to employees, he said. If you have the capability of having an investigations team or using a third party, having people aware that this is something available and out there … just the fact that people know that you have the capability to do that will keep honest people honest.

4. Liability and insurance fraud

These two related issues can double, triple, quadruple and quintuple corporate insurance premiums in the blink of an eye. This is seen in some quarters as the greatest business risk. It can include claims as small as a guest seeking a free room for stubbing his toe in the shower to extreme cases involving prolonged entanglements with worker's compensation.

"Liability" as a general label refers to hoteliers being held liable for the acts, which are often criminal, of third parties.

A recent high-profile example involves a reporter whose privacy was violated when a stalker filmed her changing in her guestroom through a peephole. The reporter filed a US$10-million lawsuit against a Marriott hotel in Nashville and the convicted stalker. Whether frivolous or not, such cases are costly because they have to be defended and often settled.

5. Security as taboo

"Security" still is something of a taboo in the global hotel industry, Not only is it a topic that might give some guests the jitters, but it is one many hoteliers fear. It is akin to Pandora's Box—once it's opened, all the problems will be released. The truth is just the opposite. If security becomes a permanent and prominent part of day-to-day operations, it is more likely hoteliers will be better able to address it. It is like a little kid

that cannot sleep because there is a tiger in his closet or a lion under his bed, but if you turn the light on, you will find that it is not there.

Hoteliers need to do a better job of "turning on the light" by talking about security openly and regularly at staff and association meetings. Hotel executives should insist their GMs make security a priority.

3.2 HOTEL SECURITY

Vulnerability: the "Maginot Line" Syndrome

An example of failed security tactics—designed to fight the last war—is France's Maginot Line. This

massive and expensive system of defenses was built to hold off a German invasion of France. The German tacticians, knowing it was impregnable, simply went around it. France fell, within weeks.

Security practitioners in today's hotel and resort industry have a tremendous challenge in considering all of the scenarios that might be used to compromise their facilities and jeopardize the safety of their guests. Unfortunately, the "Maginot Line" syndrome plagues security design in hotels and resorts, despite the use of tactics by terrorists in recent years that consistently overcome the security countermeasures in place.

The predictability inherent in the traditional "security-in-depth" model of design, has allowed a

new breed of terrorist and infiltrator to craft spectacularly successful attacks against hotels and resorts. Nearly a decade after the attacks of 9/11, adversaries are still widely assumed to come in two basic types:

- the casual, petty criminal/intruder, and
- the more serious professional intruder, or terrorist.

With regard to the latter, the tactic most often anticipated by terrorists is infiltration of bad things: of

the terrorist and a gun, the terrorist and an explosive (hidden on his person, or in/under a vehicle), or both. The extension of this logic is that detection and deterrence

technology is focused on finding bad things at checkpoints. All too often, these checkpoints are aggregated at the main entrance to a facility, more to make guests feel better than for real security. The back door of the hotel, service entrances, and loading docks are only lightly guarded, if at all.

This is the Maginot Line Syndrome, all over again. Recognizing hardened security, the terrorists either

blast their way through with automatic weapons and grenades, or elect a suicide attack with a massive

bomb over infiltration and hostages. In their wake lie twisted and smoking bollards, barriers, fences,

cameras, explosives detectors or portals, and – most unfortunate of all – dead guards. All technically good countermeasures, miscast in their design for a different set of circumstances, and different type of terrorist, in a more innocent era.

Security countermeasures that are built into a traditional "security-in-depth" design, with a focus

on bad things only perpetuate the illusion of good security. It does not take into account the changing tactics of terror today, and the human element. This brings us to the convergence of information technology and physical security design and measures.

Convergent Security Design for the hotel and resort industry

Security practitioners who interpret in-depth physical security with a threat-driven, "outside-in"design must give greater consideration to the specific tactics employed by today's terroristadversaries. These tactics include suicide bombings, as well as clandestine, armed teams infiltrating a hotel or resort to take hostages and inflict as much mayhem as possible. Traditional securitydesign can be coupled with convergent IT and security technologies and applications tosignificantly strengthen the existing security investment because equal weight is given to designingfor threat.

An illustration of this is standard perimeter security for coastal resort facilities. Perimeter-securityis usually considered the outermost ring of “security in depth,” which follows deterrence-through-design methodology that includes fences or walls, bollards, barriers, cameras, height-detectorsat the gates, and lighting. The deterrent element of this design is presumed to befrustration or intimidation of the trivial (petty criminal looking for an easy way in), and delay of theserious (professional criminal, or terrorist infiltrator with an agenda). Using a threat-drivenperspective, and taking into account today’s terrorist tactics, twoadditional needs for perimeter security immediately become paramount:

real-time detection, and

real-time– immediate - assessment of the threat.

Simply using the technologies outlined above, even with a well-trained guard force, is not sufficient. On the other hand, using a network of robust, day-night fixed outdoor cameras, tied to long-range Pan-Tilt-

Zoom cameras, enabled with a video intelligent-application, we have a marriage of IT/convergence technology with physical security measuresthat, by an order of magnitude, strengthens the perimeter.

The intelligence-enabled camera network on the fence-line detects and sends an alert about an approaching threat, in real time. This gives security personnel the time needed to assess and take action to neutralize or avoid the threat before it becomes a liability to everyone in the subject facility. On seaward facing properties, a virtual electronic “bubble” of security can secure approaches out to 12-kilometers, using ground-based radar and all-weather, day-night, laser illuminated PTZ cameras integrated to automatically vector-in, and track on approach unknown targets.

Significant standoff distance can be achieved using this technology by using the space outside of the perimeter, not just between the perimeter and the facility itself. With intelligent video and sensor applications, a dumb perimeter can be transformed from a physical “deterrence through-design” countermeasure to an interactive virtual barrier

with depth that can actually allow real-time denial of lethal attackers. In this application, the CCTV camera array is transformed from being a deterrent or investigative tool to a real-time intrusion-detection and assessment tool providing advance alerts that allows security time to react, save guest and employee lives, and secure valuable property and assets.

A security challenge for large hotels and resorts are the maze of interior labyrinthine corridors, floors, and multiple exits where criminal intruders can hide or escape. While traditional CCTV can provide “after-action” video images of events, the DVRs recording these images are of little use in the real-time tracking of intruders or hostage takers as they move from one sector of the facility to another. Using convergent IT technologies and existing CCTV networks, a traditional “event recording” physical security element can be transformed into a real-time security application. CCTV’s are stitched together for seamless, live tracking of images. RFID technology is integrated into the network to create a “tag and track” system within the hotel environment that allows security authorities in protected command and
control centers to track intruders.

Counter-terrorism forces or SWAT teams responding to a Duos Technologies, Inc. threatening situation can have these images streamed, live, to portable devices so that they know exactly where intruders are and where they are going. As a day-to-day application for hotel security officers, this application can be used to augment guest security and safety measures. In either case, having an integrated, tag-and-track network can significantly reduce insurance premiums for the hotel as it can provide real-time alerts for theft from guests or on-premise shops (such as jewelry), track the thieves, or provide real-time alert for assault of a guest, within the hotel.

Networks can be configured, in select locations within the hotel, to alert automatically for objects left behind or taken, for loitering activity in areas where it is not allowed, or for intrusion in restricted areas. Within “employee-only” areas, electro-mechanical entry technology such as magnetic swipe access can be augmented by facial

geometry/recognition, or biometric access applications that provide the crucial authentication needed to verify access into sensitive areas. This is particularly important, within the hospitality industry, in the food-storage locker area. These areas can be secured with biometric access, restricted for only individuals who are authorized to enter. All entry/exit into these sensitive areas can be logged for audit purposes when required.

21st Century Command and Control, for Hotels

An important shift in emphasis, when incorporating convergent IT/Security applications into overall security design for the hospitality industry, is the Command and Control (C&C) Center and its operation. The application platform used to integrate intelligence-enabled sensors, cameras, and ground-radar, and the displays used to present the information to the operators, must be significantly upgraded from the traditional security operations center used to direct operations. In the old C&C Center design, display monitors use sequential CCTV switchers, rotating through potentially hundreds of CCTV cameras

andshowing them as multiple camera scenes on a single monitor, with perhaps a dozen or more monitors in the room. This is illusory security; in reality, no operator can reliably focus on the scenes displayed for a significant amount of time.

Artist Rendering of Biometric Security Command and Control Center Duos Technologies Convergent IT/Security transform the nature and utility of the C&C Center. Using intelligent video monitors can be replaced by flat video walls that can be used to display Internet screens and video-enabled conference calls, as well as three-dimensional displays of the facility and its environment.

Multiple camera scenes are no longer needed. With the CCTV camera activated as a sensor/detection device, enabled by a robust, server-based application centralized

within a hardened equipment room, a video display comes up only when the camera detects an intrusion and an alarm is sent to the C&C Center.

On a three-dimensional (3D) display of the facility (inside and out), the location of the intrusion and camera field ofview (FOV) glows red; only then does the operator need to react, bring up the display, and – using a Pan-Tilt-Zoom (PTZ) in the vicinity – investigate and assess the threat, in real time.

Sophisticated intelligent video software will detect and generate alerts for multiple alarms and prioritize them. In this way, a security crisis can be efficiently managed by trained hotel security personnel, much as a Combat Controller manages force-protection, or live battle developments within the Combat Control (C&C) room on a naval ship. This capability, with the technology available today, enables security managers, guard force personnel on the perimeter, and first-responders to control crisis situations in the homeland just as efficiently.

Real transformation is taking place in convergent technologies and applications for today's security market. It is believed that careful design of security solutions, taking into account existing measures, and the known threat environment, are an absolute requirement for today's hotels and resorts.

A holistic approach is taken to each client's security needs and as a first step, requires a full security and engineering assessment with equal emphasis on security threat as well as vulnerability, before issuing a proposal.

3.3 How to Increase Security Procedures

Increase security procedures to improve customer and employee satisfaction, protect important information and prevent loss. Whether for home or business, increasing security procedures as a preventative measure can save money. It will prevent loss, damage or lawsuits. Information security is an increasing problem for many businesses and home users of the Internet. Increasing security procedures with regard to Internet use and transactions is also important.

To Increase Hotel Security Procedures, the following are needed:

- Alarm system and monitoring

Install an alarm system, if one is not already installed, and subscribe to 24-hour monitoring service through the alarm system provider. This will monitor the alarm system 24-hours a day for alerts, such as intruders disturbing the door or window contacts when the system is armed and also for fire and carbon-monoxide alarms. Motion sensors attached to the alarm system are also beneficial, especially in a business setting.

- Closed-circuit camera set up and monitoring

Install a closed-circuit monitoring system with security cameras in key locations throughout the business or home. In many of the newest systems, monitoring is available through the Internet, allowing the home or business owner to see the camera views from anywhere. A business will require a set up for security camera monitoring.

- Security personnel

Hire a security service, which will provide trained security guards during certain desired hours of each day or on a set schedule. The security guards may or may not be armed; this depends on the service, the customer's desire and whether or not the guards possess firearm licenses. The security guards will monitor the security camera monitors, patrol the business building or grounds to deter intruders and keep employees and clients safe by escorting them to their cars.

- Light fixtures

Place motion-sensor lights around the outside of the house. Improve lighting around the business especially in hard-to-see places such as alleyways between buildings, back doors, truck-loading locations and garages. At home, place motion-sensor lights around the outside of the house; these lights switch on automatically when something moves past them.

- Establish a security entry procedure

This involves having everyone who enters the building sign in at the security desk, which should be conveniently located at the front entrance. Additional possible procedures include metal detectors or the use of visitor passes for all non-employees entering the building, and employee passes allowing access to offices and areas of the building, like a card key.

- Upgrade the company's firewall and computer security measures.

Technology quickly becomes outdated, and services such as Internet security, virus scans and firewalls should be regularly assessed by trained Internet technology specialists. You can use a firewalls on your home computer to protect personal information and prevent cyber-attacks.

- Establish a backup system

This is very necessary for the computers in the company, with the use of external hard drives or an additional server. An alternative is a virtual backup, where the information stored on computers is backed up to an off-site server and saved in case the company's computers crash. These off-site backups are also great for protecting family photos and files.

3.4 Focusing on labour

In today's business environment labor is both a key to driving revenue growth and the largest cost item in the operating budget. Given this, establishing a solid strategy and tactics for managing labor cost is crucial. Some crucial questions to be asked include:

What is your plan for managing labor cost?

Is it reactionary or strategic?

Is it focused on cost or service?

Is it well articulated and visible or vague and unfamiliar?

Applying a focused and proactive approach to your labor management program can help you assure that you have the right answers to these questions.

The average full-service hotel spends between 32 percent and 36 percent of revenue on direct labor. Because labor represents such a large percentage of the cost base at the property level, improving labor efficiency represents a tremendous opportunity for profit improvement. However, it would be a mistake to consider a labor project strictly as a cost reduction opportunity. A plan to manage labor costs should not be about reduction. It should be about establishing a mechanism to continually ensure an organization has the right amount of labor in place to provide the necessary level of service.

More often than not, labor is viewed purely from the cost perspective and often adjustments result in negative impacts on guests, employees and ultimately the shareholder. A more effective approach is to take a strategic view of labor costs to ensure that all aspects of labor management are taken into account. The result is a broader approach that takes into account key areas of impact such as:

Guest service levels and guest satisfaction

Internal service levels

Employee satisfaction and retention

In order to continually manage the improvements made to labor management capabilities, an organization must be able to review labor cost figures on a timely basis and down to a level that is meaningful such as by property, by department, by shift and by labor classification. This will require that a process be developed to gather, analyze and distribute labor cost information in a timely manner. This is where information technology comes in.

Make Competition a Factor

Internal benchmarking and comparisons of each property on the basis of defined, comparable labor metrics can be very powerful. Once department heads know that their numbers will be compared with their peers and included in performance measurements, they look for every improvement opportunity available. A key to this is

using a balanced set of performance metrics that encompass not only cost but also guest and employee satisfaction.

Skill Assessments and Effective Training

A very important and necessary factor in the effectiveness and efficiency of an organization's labor force will be their mastery of the required skill sets. Identify the competencies that are required for each position at each level. Evaluate employees and design and implement the needed training programs. The cost of this effort will typically be returned many times over through labor productivity gains.

While tighter labor management can be viewed as a negative by employees — it actually is quite the opposite. Employees gain by knowing what is expected of them, avoiding the frustration of performing a job they are not well trained for and by having a schedule they can count on and that suits their needs. Additionally, the better the company is doing financially the more secure the employee is and the better the opportunity to participate in the rewards.

Effective Labor Management

A project methodology that can be quite effective in establishing a focused program for labor management should include the following:

- Eliminate any unnecessary work through process reviews, activity analysis and other means including the review of best practices.
- Review the organizational structures in the identified areas for opportunities to improve effectiveness.
- Once processes and organizational structures are optimized, labor standards and the accompanying management processes will need to be established. The resulting labor standards must be beta tested at a selected group of properties with the appropriate level of monitoring, adjustment and reporting.

- Based on the resulting labor standards, an implementation plan must be established that will include the resulting labor standards and an action plan to implement the standards across the organization.
- Prior to rollout the organization should ensure that a mechanism to forecast the need for labor is in place. This is critical to making effective use of labor productivity standards.
- Additionally, automation of the scheduling process is necessary to achieve the full benefits of labor productivity standards. There are several impressive labor scheduling systems available. Selecting a package that best matches the specific needs of an organization is important.
- Finally, labor analytics provided to key information points are necessary to effectively maintain and continually improve labor cost. An organization will need to design the process and mechanism to distribute the information in a timely manner.

Whatever methodology is pursued there are steps an organization can take to avoid some of the common pitfalls of a labor management project.

For many companies the development of an effective labor management program is an untapped opportunity to improve profitability, guest service and employee satisfaction. So why wait? Take the first steps in initiating a labor cost project today and begin enjoying the benefits sooner rather than not at all.

4.0 CONCLUSION

We have discussed physical security and the identified elements to physical security such as:

obstacles, to frustrate trivial attackers and delay serious ones; explosion protection; detection systems, such as surveillance systems, alarms, security lighting, security guard patrols or closed-circuit television cameras, to make it likely that attacks will be noticed; and security response, to repel, catch or frustrate attackers when an attack is detected.

We also looked at layers of physical security as environmental design, mechanical, electronic and procedural access control, intrusion detection and personnel Identification.

We discussed hotel security concerns, hotel security and how to Increase security procedures

5.0 SUMMARY

Physical security are measures designed to deny access to unauthorized personnel from physically accessing a building, facility, resource, or stored information; and guidance on how to design structures to resist potentially hostile acts.

The layers of security are deterrence, access control, detection, identification and human response.

Security concerns in hotels include information technology, terrorism, skimmers, liability and insurance fraud as well as security as a taboo.

The needs to improve hotel security are alarm system and monitoring, closed-circuit camera set up and monitoring, security personnel, light fixtures, establishing a security entry procedure, upgrading the company's firewall and computer security measures and establishing a back-up system.

Labor is both a key to driving revenue growth and the largest cost item in the operating budget.

Automation of the scheduling process is necessary to achieve the full benefits of labor productivity standards

6.0 TUTOR-MARKED ASSIGNMENT

Discuss the major areas of hotel security concern.

Explain the layers of security.

Enumerate points to consider when planning effective labour management

7.0 REFERENCES/FURTHER READING

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UNIT 2 IT IN INVENTORY CONTROL AND FOOD COSTING

1.0 INTRODUCTION

Control of inventory, which typically represents 45% to 90% of all expenses for business, is needed to ensure that the business has the right goods on hand to avoid stock-outs, to prevent shrinkage (spoilage/theft), and to provide proper accounting.

Inventory control systems range from eyeball systems to reserve stock systems to perpetual computer-run systems. Valuation of inventory is normally stated at original cost, market value, or current replacement costs, whichever is lowest. This practice is used because it minimizes the possibility of overstating assets.

Hotel organizations are invariably competing in assuring the service quality and are facing many challenges in terms of inventory management that directly impacts the overall customer satisfaction. The ability to deploy appropriate technology for inventory management will go a long way towards improving hotel organizations efficiency.

2.0 OBJECTIVES

At the end of this unit, you will be able to explain:

Inventory control

Approaches to inventory control

Inventory control systems and softwares

3.0 MAIN CONTENT

3.1 WHAT IS INVENTORY CONTROL?

Inventory Control is the supervision of supply, storage and accessibility of items in order to ensure an adequate supply without excessive oversupply. It can also be referred to as internal control - an accounting procedure or system designed to promote efficiency or assure the implementation of a policy or safeguard assets or avoid fraud and error etc. Inventory control involves the procurement, care and disposition of materials.

Inventory control may refer to:

- In economics, the inventory control problem, which aims to reduce overhead cost without hurting sales
- In the field of loss prevention, systems designed to introduce technical barriers to shoplifting

It answers the 3 basic questions of any supply chain which are:

1. When?
2. Where?
3. How much?

There are three kinds of inventory that are of concern to managers:

• Raw materials,

• In-process or semi-finished goods,

• Finished goods.

If a manager effectively controls these three types of inventory, capital can be released that may be tied up in unnecessary inventory, production control can be improved and can protect against obsolescence, deterioration and/or theft.

Reasons for inventory control

The reasons for inventory control are:

• Helps balance the stock as to value, size, color, style, and price line in proportion to demand or sales

trends.

• Help plan the winners as well as move slow sellers

• Helps secure the best rate of stock turnover for each item.

• Helps reduce expenses and markdowns.

• Helps maintain a business reputation for always having new, fresh merchandise in wanted sizes and

colors.

3.2 APPROACHES TO INVENTORY CONTROL

Three major approaches can be used for inventory control in any type and size of operation. The actual system selected will depend upon the type of operation and the amount of goods held.

a. The Eyeball System

This is the standard inventory control system for the vast majority of many small operations and is very simple in application. The key manager stands in the middle of the store or production area and looks around. If he or she happens to notice that some items are out of stock, they are reordered.

Similarly, in a small operation, low stocks of some particularly critical item may not be noticed until there are none left. Then production suffers until the supply of that part can be replenished.

b. Reserve Stock (or Brown Bag) System

This approach is much more systematic than the eyeball system. It involves keeping a reserve stock of items aside, often literally in a brown bag placed at the rear of the stock

bin or storage area. When the last unit of open inventory is used, the brown bag of reserve stock is opened and the new supplies it contains are placed in the bin as open stock. At this time, a reorder is immediately placed. If the reserve stock quantity has been calculated properly, the new shipment should arrive just as the last of the reserve stock is being used.

In order to calculate the proper reserve stock quantity, it is necessary to know the rate of product usage and the order cycle delivery time. Thus, if the rate of product units used is 100 units per week and the order cycle delivery time is two weeks, the appropriate reserve stock would consist of 200 units (I00u x 2w). This is fine as long as the two-week cycle holds. If the order cycle is extended, the reserve stock quantities must be increased. When the new order arrives, the reserve stock amount is packaged again and placed at the rear of the storage area.

This is a very simple system to operate and one that is highly effective for virtually any type of organization. The variations on the reserve stock system merely involve the management of the reserve stock itself. Larger items may remain in inventory but be cordoned off in some way to indicate that it is the reserve stock and should trigger a reorder.

c. Perpetual Inventory Systems

Various types of perpetual inventory systems include:

manual,

card-oriented, and

computer- operated systems.

In computer-operated systems, a programmed instruction referred to commonly as a trigger, automatically transmits an order to the appropriate vendor once supplies fall below a prescribed level.

The purpose of each of the three types of perpetual inventory approaches is to tally either the unit use or the dollar use (or both) of different items and product lines. This

information will serve to help avoid stock-outs and to maintain a constant evaluation of the sales of different product lines to see where the emphasis should be placed for both selling and buying.

An inventory control system is a process for managing and locating objects or materials. In common usage, the term may also refer to just the software components. Inventory control system is a systematic way of handling the flow of material which will be beneficial for industries and help

Modern inventory control systems often rely upon barcodes and radio-frequency identification (RFID) tags to provide automatic identification of inventory objects. Inventory objects could include any kind of physical asset: merchandise, consumables, fixed assets, circulating tools, library books, or capital equipment.
To record an inventory transaction, the system uses a barcode scanner or RFID reader to automatically identify the inventory object, and then collects additional information from the operators via fixed terminals (workstations), or mobile computers.

Inventory control of food, beverage, and liquor is something most operators dread. It takes a lot of time, the results are not timely, and the desired objectives are not achieved. However, every establishment needs the control.

If one (1) server steals one (1) drink per shift, the revenue lost can exceed ₦150, 000 per year. Imagine if you have 50 people working for you. And think about procurement losses, mathematical errors, etc. If you are not controlling your inventory, you should be. There are latest technologies that help in the control of inventory in the hospitality industry since 2001.

Applications

An inventory control system may be used to automate a sales order fulfillment process. Such a system contains a list of order to be filled, and then prompts workers to pick the necessary items, and provides them with packaging and shipping An inventory system also manages in and outwards material of hardware.

Real-time inventory control systems may use wireless, mobile terminals to record inventory transactions at the moment they occur. A wireless LAN transmits the transaction information to a central database.

Physical inventory counting and cycle counting are features of many inventory control systems which can enhance the organization.

Imagine counting one (1) item every 6 seconds using the latest handheld computer.

Imagine 15 immediate reports completed in real time as you count your inventory.

Imagine an accurate liquor and food cost report one minute after count completion.

All these are possible with information technology.

You will have complete piece of mind knowing you have the ultimate in inventory control at your fingertips. They provide fast, accurate, correct, and timely results.

3.4 INVENTORY CONTROL SOFTWARES

a. The SmartTurn inventory control software suite

This is an on-demand, web-based inventory control system that provides real-time information on the quantity, location, status, and history of every inventory item within the warehouse at any time.

Fully integrated, the SmartTurn inventory control software solution ensures essential flow of up-to-the-minute information between departments. Equally important is the web-based inventory control system's ability to easily see, direct, and manage the movement of inventory.

Having inventory at the right time eliminates costly write-offs and unhappy customers. The SmartTurn inventory control system helps operators establish optimum inventory

levels by easily identifying the fast and slow inventory movers, thereby reducing costs and keeping inventory at the right levels.

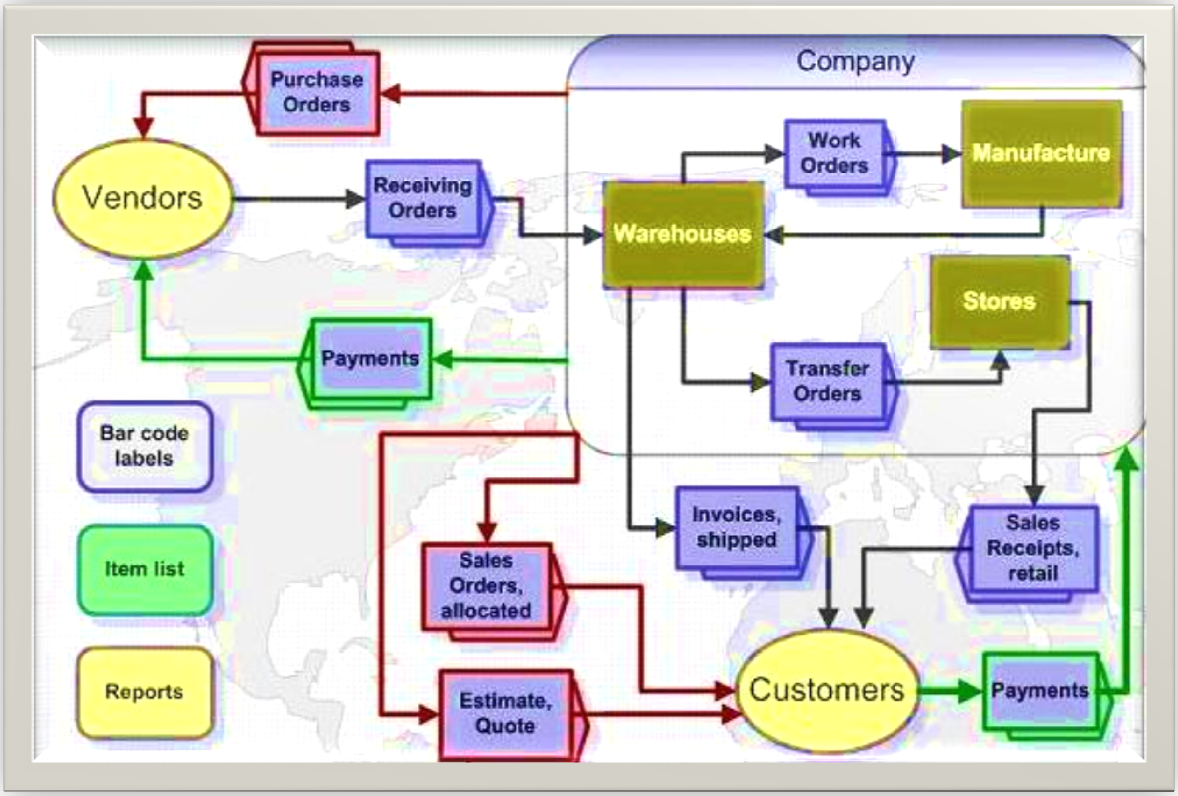


Diagram representation of inventory control

Benefits:

Improve warehouse inventory control, inventory management & accuracy

Minimize inventory overstocks and costly stock-outs

Control inventory levels in real-time

Access up-to-the-minute inventory information

Eliminate manual administration and data entry

Centralize inventory control of data across facilities

Reduce labor intensive procedures such as physical inventory counts

b. Inventory software system for inventory management

This inventory software are designed for any business that desires a complete control over stock levels and inventory tracking. This inventory software can be used either as a simple inventory control system or a complete manufacturing solution.

c. SilverNet Inventory System

This is a Web based version of the inventory system (b). It has the same functionality as our usual network inventory system. SilverNET can be run on your web server. This system allows you to see inventory information anywhere. All you need is an internet connection. You will be able to track receiving and shipping of your goods, payments from customers, transfer products between warehouses. It is not a web service as you will receive your own web based full-functional inventory system.

d. Bronze Inventory System

Bronze Inventory System (BrInSy) is the universal inventory management and point of sale system .You can use this system in your business, office and home. This system will guide you through the creation of vendors list, products list, receiving lists, invoices, sale receipts and cash receipt. This is in addition to product labels with barcodes, transfer orders between locations and various types of reports for monitoring your business.

e. Inventory Management System

Inventory management module is an important module that lets managers automate the process of tracking rooms, and food and beverage consumption in the hotel. Many inventory managers will agree that manually filing cash memos and getting clearance from finance department to pay vendors was a nightmare and a huge waste of effort. With the arrival of inventory management module, automation of the inventory system means lesser work and greater visibility into stock, automated reminders as stock levels diminish, faster decision making on which vendor delivers what, at what price point and thus greater efficiency on stock maintenance in the hotel.

A hotel property management system (PMS) simplifies inventory management to a large extent and makes tracking of purchase and sales accurate. There are numerous operations in inventory which happen simultaneously. These include sales through point of sale terminals, room service, purchase of food, beverages, other room related consumables and durables. Tracking all these activities can be difficult and if not tracked adequately can result in revenue leakage, wastage, and theft. A good inventory management system helps a hotel predict demand and supply rate with great accuracy and reduces the chance of error, it also helps a hotel access business intelligence, plan expenditure and keep a tighter control on profit. Besides all this, inventory management also facilitates vendor management and provides information such as:

Vendor Performance

Allows hotel managers to choose better performing vendors by tracking information such as time of delivery time, accuracy of delivery, cost effectiveness etc.

Vendor Accountability

Ensuring a vendor delivers the right shipment and hotels. An integrated inventory management system allows hotel managers to pinpoint errors in delivery with great accuracy and make vendors accountable for their own action.

Order Management

To prevent both overstocking and stock outing situations

Data obtained from inventory management system can be advantageous to increase the efficiency of a hotel. To begin with inventory management maintains a database of all buying, selling and consumption trends and thus acts as an incredible source of business information as it pinpoints areas of concern and helps minimize fraud.

Functions of Inventory Management softwares

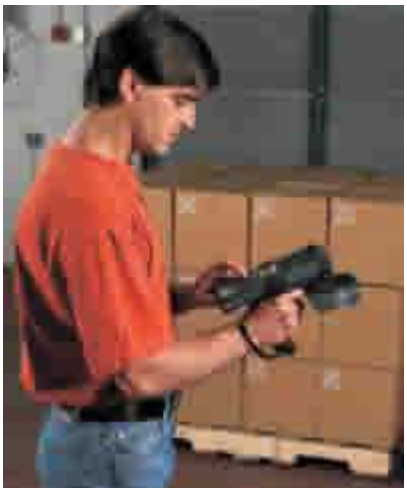
- Stores creation – sub store and main stores can be created with rate calculation like weighted average, last price and last in first out (LIFO)
- FSN can be defined and analysis reports are available
- Quotation analysis can be done with vendor analysis, tender forms, comparison sheets and auto generation of purchase order is available
- Purchase requisition, purchase orders, indents can be mailed, printed and two levels of authorizations are available. Also available is a standing purchase order
- Service work order is available
- Item stock levels like minimum, maximum, and reorder level and reorder quantity can be defined with recording of Batch#, Consignment#, Capital goods etc
- Vendor master with vendor analysis, tax deduction at source entry applicable
- Reports on stock levels, consumption summary by cost centers/ departments, spending pattern based on the last year average consumption in comparison with current year
- Audit reports for transactions, PO, SPO, indents and purchase requisition is available
- Value added tax (VAT) reports can be accessed
- Budgets can be defined and budgets vs. actualization is available
- Physical stock entries can be made for a month end process and reports on physical stock, store balance, negative variance reports are available
- Access to efficiency reports
- Reports on reorder levels and reorder quantities and option to update reorder levels
- Lookups on stocks, consumptions and authorization status for PO, SPO, indents and purchase requisitions, vendor selection based on lat price and last received date

An inventory management system is a must for the smooth functioning of any hospitality property but while choosing, a hotel needs to review its size and requirements.

Radio-frequency identification(RFID)

This is the use of a wireless non-contact system that uses radio-frequency electromagnetic fields to transfer data from a tag attached to an object, for the purposes of automatic identification and tracking. Some tags require no battery and are powered by the electromagnetic fields used to read them. Others use a local power source and emit radio waves (electromagnetic radiation at radio frequencies). The tag contains electronically stored information which can be read from up to several meters (yards) away. Unlike a bar code, the tag does not need to be within line of sight of the reader and may be embedded in the tracked object.

RFID tags are used in many industries. An RFID tag attached to an automobile during production can be used to track its progress through the assembly line. Pharmaceuticals can be tracked through warehouses. Livestock and pets may have tags injected, allowing positive identification of the animal.They can be attached to apples in order to transmit location information and monitor temperature throughout the channel of distribution.
Although a relatively new technology in the hospitality industry, RFID is predicted to be able to dramatically change the management and distribution of products



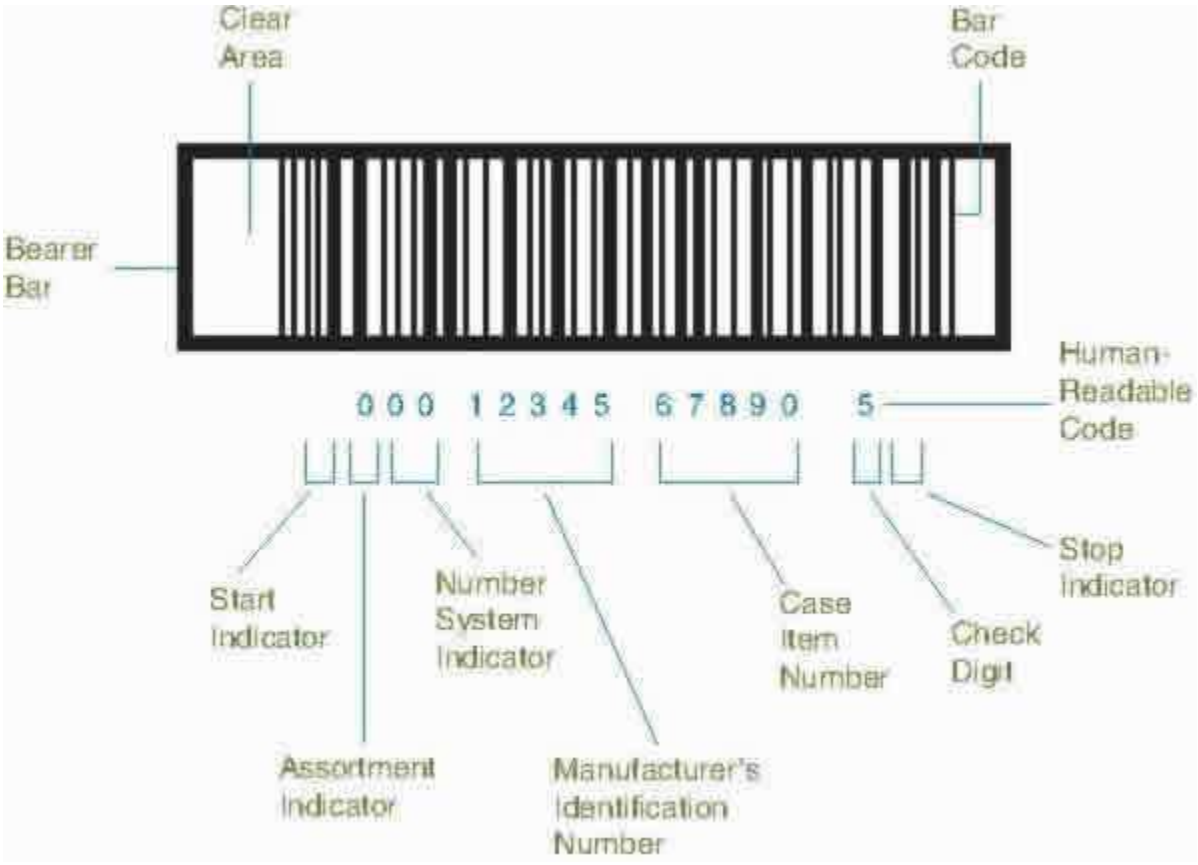
In most hospitality operations, POS systems are networked and communicate with a central computer, referred to as a "server." This server can track sales from the connected computers in all departments or areas within the hospitality operation and instantly provide vital information to managers. Advanced POS systems integrate with inventory-tracking systems that automatically delete from inventory the standard amount of each ingredient used to make each menu item. The integration of POS and inventory systems provides the manager with a theoretical inventory usage figure that can later be compared with actual physical counts.

Furthermore, some POS systems facilitate the ability to send purchase orders directly to the distributors, based on sales and inventory reduction information.

Bar Code Reader

Some hospitality operations place bar code labels on their inventory items to streamline the inventory-control process. Bar code labels are vertical lines of varying thicknesses separated by blank spaces. These lines and spaces, or "elements," provide a bar code reader with an identification code (ID). This ID is used to look up the product on a database. Bar code elements, IDs, and corresponding product information are based on a standard that associates these pieces of information. The most commonly used standard is the Universal Product Code (UPC). However, other standards include: EAN, Code 128, Code 39, Interleaved 2-of-5, PDF417, Macicode, Data Matrix, and QR Code.

When a bar code system is used, the physical inventory count of a hospitality operation usually consists of scanning each product in the storeroom with a portable bar code reader. There is no need to spend large amounts of time locating a product on a lengthy printed inventory list and recording, by hand, the total number of units in inventory at the end of the month. Instead, the portable bar code reader quickly gathers and downloads the data to the computer for instant analysis.



Many bar code readers now provide wireless communication to a computer and can instantaneously download and upload information over radio frequencies (RFs)

The portable bar code reader also automates the counting of in-process inventories. For instance, each type of alcohol in a lounge can be bar-coded to streamline the beverage inventory procedure.

Without bar codes, the typical procedure in beverage operations is to estimate, by sight, the amount of beverage remaining in a container to the nearest tenth. This tedious, time-consuming process often yields inaccurate results. Using a handheld bar code reader and a programmable small scale, the operator simply reads the bar code and then places the container on the scale. By reading the code, the computerized scale matches the product ID with the type and container size of the beverage, computes the total weight, and subtracts the container weight and, if necessary, the weight of the attached pourer.

Next, the scale calculates the residual weight and converts it to fluid ounces or milliliters. This precisemeasurement system provides an incredible amount of cost control in the beverage area because it immediately highlights discrepancies between the amount of beverage the POS system indicates should have been used and the actual usage computed with the bar code reader.

An innovative technology has been developed that utilizes free-pour spouts containing tiny radio transmitters that send pouring information directly to the POS system or inventory management software

Inventory-Tracking and Storage Management

If product orders have been made through an online ordering system, this information can be utilized to streamline the inventory process. For instance, it can be linked to other software and used in the equations and formulas noted in other articles.

Today, many hospitality operators use some type of computer application to increase their inventory-control and cost-control efforts. For example, some operators develop elaborate spreadsheets using generic spreadsheet software, such as Microsoft Excel®. They list all of their products in inventory and then develop mathematical formulas to calculate costs and usage. On the last day of each month, they physically count their storeroom and in-process inventories and enter this information on the spreadsheet.

They also enter all product costs, which usually come from typing in invoice receipts for the month or from directly downloading the information from an ordering system they are using. The information currently entered is the “ending inventory,” and the information entered the previous month becomes the “beginning inventory.” Once the major variables have been entered (beginning inventory, ending inventory, purchases, and other end-of-month adjustments), the computer can easily calculate the monthly cost of goods sold.

Some hospitality operators use off-the-shelf software packages and services that manage inventory in a hospitality environment, such as the Materials and Management System (www.agilysys.com) by Agilysys. These software packages can streamline the back-of-the-house hospitality operation. Many of these software packages can be linked to an operator’s POS system. These packages can also cost recipes, analyze a recipe’s nutritional information, calculate food and beverage costs, evaluate a food item’s sales history, forecast sales, develop audit trails, allow instant stock level information, and enhance menu planning efforts. In addition, many of these software packages can track employee work schedules, attendance patterns, and work-hour accumulations.

When generic spreadsheet programs and off-the-shelf software do not meet a hospitality operator’s needs, he or she might hire a software-consulting firm that specializes in the hospitality industry. A specialist can develop customized software applications to satisfy almost any need. Alternately, the developers of some off-the-shelf software productscan customize some or all of their software packages.

Computerization has revolutionized inventory management as technologies ranging from automatic scanners to radio frequency identification chips now allow businesses to track their inventory from the moment a company buys it wholesale to the moment the products leave the building in the hands of a customer.

Receipt of Goods

A retail store or a central warehouse uses bar code or radio-frequency identification scanning at the point of receipt of goods. Scanning individual items or shipment pallets allows a company to itemize all shipments from the supplier, which can be compared against the purchase order for errors or losses in transit. When your business ships these goods out of the warehouse to their point of sale, a second scan can automatically tally the remaining stock in the warehouse, and send messages to the purchasing managers indicating that it is time to reorder.

Retail Turnover

Many businesses use similar scanning techniques at the point of checkout. As of 2010, bar code scanners are more popular than RFID for this purpose. Both will automatically enter the correct price at the register and prevent data entry errors. They also can create a perfect real-time record of how much stock remains on the shelves, how much is available in on-site storage, and whether a new shipment is necessary from the warehouse. Combine this information with warehousing data, and your business can create additional alerts to key management when a bottleneck occurs. For example, if a dozen retail stores anticipate needing restocking, but the warehouse does not have sufficient goods on hand, your business can place a rush order to fill the need.

Stock Management and Cost Reduction

The process of moving goods through a company pipeline is always economically inefficient. The purchase of the goods represents an investment of company capital, which your business cannot recoup until you sell your inventory. Warehousing of goods before sale introduces the possibility of inventory shrinkage in value from theft, damage, deterioration or changes in customer taste. Moving goods from warehouses to the point of sale involves shipping costs, especially if the shipment is incorrect, or if the internal shipping process is inefficient. Computerization provides a real-time picture of this entire work flow process, and allows managers to reduce purchasing costs through

minimizing inventory, increase the efficiency of internal shipping systems, and reduce the possibility of theft or damage by being able to track each item down to the individual staffer who takes responsibility for it.

4.0 CONCLUSION

We defined inventory control and explained reasons for inventory control. We also looked at approaches to inventory control. We discussed inventory applications and softwares as well as the functions of inventory management softwares, and inventory control records.

5.0 SUMMARY

Inventory Control is the supervision of supply, storage and accessibility of items in order to ensure an adequate supply without excessive oversupply

The reasons for inventory control are helps balance the stock as to value, size, color, style, and price line in proportion to demand or sales trends, help plan the winners as well as move slow sellers, helps secure the best rate of stock turnover for each item, helps reduce expenses and markdowns, and helps maintain a business reputation for always having new, fresh merchandise in wanted sizes and colors.

Three major approaches used for inventory control arethe eyeball system,reserve stock system, and perpetual inventory systems

Some inventory control softwares are the smartturn inventory control software suite, inventory software system for inventory management, silvernet inventory system, bronze inventory system, and inventory management system.

6.0 TUTOR-MARKED ASSIGNMENT

Define inventory control and state the reasons for applying inventory control

Discuss the three major approaches to inventory control

Explain the use of three inventory software systems.

7.0 REFERENCES/FURTHER READING

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UNIT 3 INTERNET AND HOSPITALITY INDUSTRY

1.0 INTRODUCTION

The hospitality industry covers a wide range of establishments providing hospitality services in the form of accommodation, food and beverage, casinos and tourism. The industry is very global and so large that it is worth over 3.5 trillion dollar within the global economy. Nonetheless, the industry is cyclical and it is dictated by the fluctuations that occur with an economy every year. In the past, travel agents were used for not only travel plans but they also sold transports, tours and accommodation for suppliers. Travel agents were the most common source for booking hotel rooms and any other travel components. It is believed that only budget minded travelers did their own research and contacted the suppliers directly.

As time passed by and technology advanced; we reached the digital age, also known as the information age. It was the global economy's shift in focus away from the

production of tangible goods, towards the manipulation of information. The internet emerged and the World Wide Web was invented, linking the world into one global network. The emergence of the internet had a great impact on all businesses including the hospitality industry.

2.0 OBJECTIVES

At the end of this unit, you should be able to explain:

The management of internal operations

The rise of the internet

The interaction between hotels and the Internet

e-Hospitality futures

Internet Reservations Module

Effective Email Marketing

The impact of internet on hospitality industries

3.0 MAIN CONTENT

3.1 MANAGING INTERNAL OPERATIONS

Hotels need ICTs to manage their inventory. Hotel chains in particular use group-wide systems to focus on the management for single properties as well as the distribution through a variety of electronic distribution channels. Most hotel properties around the world operate a property management system (PMS) that enables them to integrate their 'back-office' operations. As a result they can improve general administration, as well as specific functions such as accounting; marketing research and planning; yield management; payroll; personnel management; and purchasing at individual properties. Increasingly these functions move on Intranet platforms, improving interfaces and allowing easier employee training. PMSs were also introduced to facilitate the front office, sales, planning, and operation functions.

This was achieved by employing a computer reservation system (CRS) to administrate a database with all reservations, rates, occupancy, and cancellations PMSs and CRSs facilitate the following business functions:

- Improve capacity management and operations efficiency
- Facilitate central room inventory control
- Provide last room availability information
- Offer yield management capability
- Provide better database access for management purposes
- Support extensive marketing, sales, and operational reports - Facilitate marketing research and planning
- Enable travel agency tracking and commission payment
- Enable tracking of frequent flyers and repeat hotel guests
- Allow direct marketing and personalized service for repeat hotel guests
- Enhance handling of group bookings and frequent individual travelers (FITs).

The proliferation of the Internet supported the development of a number of additional electronic distribution options. These include direct bookings to the hotel; hotel chains' own reservation central offices; independent reservation agents; hotel representation and consortium groups; airline CRSs and GDSs; hotel aggregators (such as Hotels.com) and destination management systems. For hotels to manage their distribution best they need two integral components, namely yield management and guest history. The yield management assists hotels to maximize both their occupancy and room rates contributing directly to their profitability. Revenue and yield management systems ensure that hotels optimize their revenue, by taking into consideration past and forecasted performance, as well as a wide range of additional factors. Revenue management systems are critical, particularly for large properties with numerous outlets and departments. Moreover, the guest history is effectively an early CRM

software which records data for past guests and other intermediaries, assisting the personalization of the hotel.

3.2 RISE OF THE INTERNET

The Internet is a worldwide network of computers. Its name derives from "internetworking," the original description of computers and networks linked together. It all began in the late 1960s at the Advanced Research Projects Agency Network of the U.S. Department of Defense. Its original name was ARPANET, and its original intention was to give scientists a way to communicate directly with one another while simultaneously exchanging information with all of the other individuals who had access to the system.

The first system consisted of computers located at Stanford University, the University of California at Los Angeles (UCLA), the University of California at Santa Barbara (UCSB), and the University of Utah. Computers linked to the Internet communicate via telephone lines, cable systems, wireless networks, and optical communications. This worldwide network offers many benefits to the hospitality industry.

Wilder (1997b) writes that the Internet is creating a "webolution" in today's society by changing the way people live, work, interact, and shop.2 The impact of these changes is profound for all commerce, including that of the hospitality industry. Nothing is changing the face of hotel distribution and the economics of hotel bookings as much as the Internet and its sister technologies, intranets and extranets.

The Internet provides a host of new distribution options and is spurring new developments and innovations by hospitality companies and vendors alike in attempts to capitalize on its many potential benefits, namely to extend market reach, reduce distribution costs, and enhance customer service.

Many hotel companies are aggressively pursuing use of the Internet to market their properties, disseminate information, correspond interactively and instantaneously with their customers, and extend their booking channels. They are frantically trying to figure out the critical success factors of the digital economy, what have become commonly and collectively known as the five C's of the Internet world:

- content,
- community,
- commerce,
- convenience, and
- context.

To these companies, the Internet represents an economically appealing opportunity for redefining their fundamental business model.

The goals of internet

The goals are:

to enhance the customer value proposition,

to establish customer intimacy, and

to build guest loyalty by taking advantage of one-to-one marketing opportunities and by creating enriched, personalized consumer shopping experiences through the use of collaborative filtering tools and non-intrusive software agents that track users' behavior to learn their interests and tastes.

The benefits:

The benefits are in two ways:

A. To the consumer:

individually targeted promotions,

suggestive selling,

tailored experiences when interacting with company personnel or when paying a visit to its web site.

the Internet is a powerful, convenient, and invaluable tool to explore

destinations and shop for travel accommodations.

Business-to-business commerce over the Internet also presents attractive business opportunities and is being spurred by the rise of intranets and extranets. These technologies offer hotels vast potential in reducing the dependency on travel intermediaries and airline GDSs. They also offer great promise in cutting distribution [channel] costs and overhead while building customer loyalty and switching costs.

To many, it is quickly becoming an indispensable resource. It provides a wealth of current information and resources (e.g., maps, currency conversion, travel advisories, weather forecasts, frequent travel account balances, calendar of local events, and more). With the click of a mouse button, consumers can easily compare hotel properties, rates, and travel destinations. Graphics and multimedia tools allow visual inspection of the accommodations, facilities, and surrounding area so guests know what to expect before they arrive.

The Internet is widely used by consumers to hunt for travel bargains, and with push technology and smart agents, comparison-shopping and bargain hunting become almost effortless. Electronic monitors of rates and fares (sometimes called e-savers) notify consumers via electronic mail. There are even sites available where consumers can specify their price threshold or participate in an on-line auction and bid for travel accommodations. In other words, consumers dictate the prices they are willing to pay.

What the Internet means is that consumers are more in control of the purchase process and are more informed—which may equate to more demanding. Increasingly, the trend points towards the potential for dynamic pricing or what Davis and Meyer (1998) call real-time pricing models, where price fluctuations occur constantly and instantaneously much like that of a stock market where prices are driven by the volume of trading. If successfully adopted in the hospitality industry, this could take revenue (yield) management concepts to a whole new level.

B. For hoteliers

These developments may provide attractive alternatives for selling distressed inventory, boosting occupancy levels during off-peak times, and providing consumers with inexpensive, low-risk trial usage opportunities, but if successful, they will likely change the dynamics of customer-supplier interaction and the way room inventory is managed, controlled, and sold. More sophisticated software applications will be required to monitorand allocate room inventory to these emerging distribution channels.

Today, the Internet provides access to over 327 million users worldwide, and the rate is growing rapidly. Estimates suggest that by the year 2000, the Internet will boast some Today's youth (the so-called Generation X-ers and the Dotcom Generation), the Internet is a normal part of society, just like the telephone, fax machine, or microwave oven. This phenomenon will only continue, as Internet access becomes ubiquitous in schools and public facilities. With the various web sites supporting the travel industry, this industry enjoys the fastest growth of electronic commerce on the Internet. The Internet accounts for hundreds of millions of dollars in travel accommodations and an immeasurable number of instances of advising travelers about some aspect of their travel (e.g., safety, rates, quality, activities, weather, dress).The Internet should not be overlooked or dismissed as infeasible as it promises to provide viable and significant opportunities to sell hotel accommodations.

As the Internet technology becomes faster, more capable, and more widespread and as user fears regarding security and privacy issues diminish, electronic commerce will become mainstream. The Internet is quickly becoming society's umbilical cord. Perhaps President Bill Clinton best summarizes the true impact of the Internet on society and business:

"As the Internet becomes our new town square, a computer in every home—a teacher of all subjects, a connection to all cultures—this will no longer be a dream but a necessity".

World Wide Web

The most active part of the Internet is the World Wide Web (Web or WWW for short). The Web is a graphical interface that allows information to be connected through "hyperlinks." Hyperlinks permit users to select a word or image and connect to more information about that topic. Users who have graphical browser software on their systems can easily locate and view all pertinent information about any topic on the Web.

Information is located on various "Websites." A site, or site "location," is referred to as a Uniform Resource Locator (URL). Information can be found by entering the site URL or by using one of the many search engines that are designed to locate information based on key words or associations.

The Web portion of the Internet has many sites that are useful in terms of the selection and procurement function. Many of these sites provide detailed, current information and can include text, graphics, photographs, sound bytes, animation, full-motion video, and interactivity.

3.3 HOTELS AND THE INTERNET

The proliferation of the Internet in the late 1990s and the revolution of technologies have introduced a wide range of new marketing tools. The Internet allowed hotels to develop their own websites and to display straight and clear information and photos of amenities and locations, as well as to facilitate online bookings. A number of hotel chains receive a significant percentage of their reservations through their own websites, free of commissions and other charges.

More importantly, hotels can integrate their Web presence with their customer relationship management function by offering visitors the ability to store their personal profiles assisting the provision of personalized products and added-value elements.

The Internet also assists hospitality organizations to develop their value chain and to enhance a wide range of their business functions. In addition to e-commerce, e-sales, e-marketing, and e-procurement, hotels increasingly use the Internet for e-finance and e-accounting. This empowers hotels to use information and data from operational processes in order to automate their back office functions.

In addition, e-HRM enables them to recruit and manage all their human resources issues online. By using the Internet they can attract employees and explain their policies, training program, and promotion opportunities.

A great deal of information on the Internet can assist the hospitality buyer. For instance, sites range from those providing daily news about the hospitality industry to those specializing in unique cookware and equipment, and just about anything in between. The amount of information, already rather huge, continues to grow each day.

An example of the use of this dynamic technology is the U.S. Department of Agriculture's (USDA's) Website (www.usda.gov). A portion of this site contains information about fresh-produce farming and distribution within the United States. This site allows users to view current information about products grown and harvested in certain geographic regions and provides detailed weather information.

Although this information may seem too detailed for the average hospitality operator, it can be useful in certain situations. For instance, the USDA site provides information about the seasonality of specific fresh-produce items and the current weather in their growing regions. While a buyer's printed produce specification guide might note that, for example, the growing season of asparagus is over, data on this Website might indicate that, in fact, the growing season is continuing for several weeks due to unseasonably good weather. Moreover, if a buyer wants to know why lettuce prices have increased, he or she might find that recent flooding in the lettuce-growing region has caused considerable crop damage, thereby inflating prices. Knowing this type of information allows buyers to work with food and beverage directors and chefs in their

organizations to make menu changes to either take advantage of extended availability of certain items or, if possible, to temporarily curtail the ordering of abnormally expensive products.

The hospitality industry covers a wide range of establishments providing hospitality services in the form of accommodation, food and beverage, casinos and tourism. The industry is very global and so large that it is worth over 3.5 trillion dollar within the global economy. Nonetheless, the industry is cyclical and it is dictated by the fluctuations that occur with an economy every year. In the past, travel agents were used for not only travel plans but they also sold transports, tours and accommodation for suppliers. Travel agents were the most common source for booking hotel rooms and any other travel components. It is believed that only budget minded travelers did their own research and contacted the suppliers directly. Nonetheless, as time passed by and technology advanced; we reached the digital age, also known as the information age. It was the global economy's shift in focus away from the production of tangible goods, towards the manipulation of information. The internet emerged and the World Wide Web was invented, linking the world into one global network. The emergence of the internet had a great impact on all businesses including the hospitality industry.

This paper aims to examine the role of the internet in the hospitality industry. Before explaining and defining the different roles, an insight on the emergence of the internet and e-commerce will be given

The Emergence of the Internet and E-Commerce

The use of the Internet in the business world has become a major trend in practice. The Internet, as a collection of interrelated computer networks, provides free exchanging of information. Over 400 millions of computers on more than 400,000 networks worldwide today are communicating with each other. Furthermore, the Internet has become a powerful channel for business marketing and communication and for new business opportunities; as it is commonly referred to as "e-business" or "e-commerce". Today E-

Commerce allows small companies to have a better web presentation of their products/services. On the other hand, online customers can enjoy a wider choice of products or services, more competitive prices, and being able to buy their favorite services from the sellers located far away. It also provides communication between consumers and companies.

E-commerce can be defined as "... the conducting of business communication and transactions over networks and through computer technology..." One of the common definitions of e-commerce is buying and selling of goods and services on the internet. However, e-commerce is more than the act of buying and selling online. "It encompasses all activities associated with buying and selling, such as financial transactions, business data exchange, and communicating with customers and suppliers". The Internet and e-commerce give consumers an occasion to be better prepared to purchase the right product or service at the right time through the easy on-line information gathering and convenient online shopping.

According to a published survey, more than 90% of new entrepreneurs and starting businesses are using the Internet to either improve their existing business operations or to explore new business opportunities. Given the competition from powerful traditional businesses, a successful e-business can only occur if a business can satisfy its consumers' needs better than those traditional business approaches and provide consumers with at least one of the following advantages: (a) lower price, (b) wider selection, (c) better choices, (d) superior services, and (e) more convenient.

One key issue for the e-business application in service operations is about the possibility of online delivery of the services customers ordered; the services requiring customer participation (or the items demanding immediate delivery) are difficult to be purchased and delivered online. In this regard, the online booking of hotel/motel rooms, airline tickets, advanced car rental, or a total travel package has become one of a few good

example services - which can be inquired, checked, and ordered easily while conveniently communicated and delivered online with the Internet. In fact, the use of internet information delivery and on-line document printing has provided the backbone for the current stream of e-commerce as it can overcome many traditional business obstacles and operational barriers by delivering access to global market and providing new leverage with old large powerful suppliers. In the current performance criteria for service operations, fast service delivery and prompt and reliable service have been identified as two key competitive priorities for the future Web-based service delivery operations, while time-based competition through better customer service has been re-emerging as a major tool of delivering high-quality services to customers through a total operation cycle - including planning, design, processing, marketing, and distribution.

E-Booking

The first role of the internet in the hospitality industry is online booking. As aforementioned in the past, travel agents were the most common source for booking hotel rooms and other travel components like flight tickets and travel tours. However, the internet has changed this; manual booking and reservations have been transformed to E-booking or online booking via Central Reservation Systems (CRS). As of March 2008, there are over 1.4 billion internet users and according to the Computer Industry Almanac, this number is assumed to increase to 1.80 billion in 2010. The Travel Industry Association in the United States stated that in 2002 about 64 million out of 619 million online users were online travelers and used the Internet to purchase travel-related services and products. "Online leisure travel sales totaled $20.4 billion in 2002 and hotel booked online reached $3.8 billion". In 2005 the online travel revenue reached $27.7 billion in the U.S. alone and has steadily increased. Now imagine how big these figures would be on a global basis.

The reason for the popularity of E-booking is that it offers benefits to all parties: the supplier and customer. First of all, in the traditional merchant model, the hotel industry had agreements with travel agencies, where the hotel made rooms available at

wholesale rates and the agencies would mark those rates up by 15% to 30% before peddling them to the public at fixed prices for fixed periods of time. With the emergence of the internet, hotels developed the sharing model in which they had more control of their rooms via online booking by providing higher priority to their own websites. Furthermore, the old system allowed travel agencies to make an average profit of 20% from original wholesale process; with the new system hotels were able to offer a more competitive price on their own websites. Other benefits provided to suppliers included increased customer satisfaction as service was simple and faster. On the other hand, benefits to guests included direct online booking which enabled them to book accommodation directly at hotel, real-time, without waiting for answer, regardless of time difference or hotel working time. Guests were also for the first time able to pay directly online. And last but not least, it was quick and easy to compare rates with other hotels

3.4 E-HOSPITALITY FUTURES

The hospitality industry gradually realizes that the ICT revolution has changed best operational practices and paradigms, altering the competitiveness of all hospitality actors in the marketplace. Hospitality corporations integrate their back and front office in a framework that takes advantage of the capabilities of the Internet as well as of intranets and extranets. Convergence of all technological devices gradually empowers greater connectivity, speed, transparency, and information-sharing. As a result, hospitality organizations are gradually focusing more on knowledge-based competition and on the need for continuous innovation, forcing management to stay abreast of the dynamic developments in the marketplace.

Hospitality organizations are also attempting to increase their online bookings by promoting their Internet presence more aggressively and by capitalizing on partnership and collaboration marketing. As a result, multi-channel strategies are required to assist hotels to interconnect with the wide range of distributors in the marketplace. It is

currently estimated that there are 35,000 websites from which consumers can book a hotel room. This raises a wide range of new challenges, including rate integrity, brand perception, segmentation, and value of customers. Stemming from the Internet, the emerging wireless devices and Bluetooth technology will allow consumers to interact with hotels constantly. This will increase transparency further and it will force hospitality organizations to rethink their pricing strategies.

The Internet has contributed unprecedented tools for communicating with consumers and partners and this has radical implications for hotel distribution. The hospitality industry must appreciate the 'high-tech high-touch' opportunity that emerges through the personalization of products, processes, and information.

Hotels have the opportunity to cultivate relationships with their customers and adopt customer centered approaches. Technology needs to simplify the way hotels look after every single need of their customer. By using ICT-enabled processes to coordinate all departments and services, as well as all properties for hotel chains, they are able to run the business more efficiently and to add value at each stage of consumer interaction.

Innovative smaller properties gradually develop their online presence and are empowered to communicate their message with the world. Small and unique properties will be able to utilize ICTs strategically to demonstrate their specific benefits and to illustrate how they can innovate. By developing links with other properties they can also enhance their virtual size and compete with larger players.

Larger hospitality organizations can benefit from economies of scale, multi-channel distribution strategies and from streamlining their operations through e-procurement.

Larger hotels and chains will also be able to develop their globalized agenda and to ensure that their operations and strategies are coordinated worldwide, reinforcing their brand values and service promise.

In any case, ICTs and the Internet will be critical for the competitiveness of both large and small hospitality organizations.

3.5 INTERNET RESERVATIONS MODULE (IRS)

Internet Reservation System enables Internet users to book and purchase airline tickets and hotel rooms, rent cars and, in the near future, also search and book trip offers. The modularity of the system allows a successive implementation of the engine components as the website grows. Also, a wide range of useful features meet the expectations of the most demanding Internet users.

IRS – Hotel module

Hotel reservation module cooperates with the GTA - Gullivers Travel Associates data bases offering over 28 000 hotels worldwide. On the systems' designing level we have taken care it became the most customizable, flexible and functional solution. Similarly as in the flight module solution - hotel module administration panel allows for transaction fees self-configuration, cancellation and change reservations.

Advantages of hotel module:

- hotels star rating and location filter,
- B2B and B2C module,
- multiple room types booking at the same time,
- graphical atlas and calendars,
- hotel locator graphical presentation using Google Maps API,
- hotel results paging mechanism,
- price/location filter, by distance from the city centre,
- possibility to present prices in different currencies,
- graphical reservation confirmation (html),
- mini-form on each stage of searching,
- available configuration of how to present Transaction Fees based on 12 parameters(eg.subagent, portal, time zone, language version)
    - fees configuration options in case of bookings cancellation or amendment,
    - commentaries module with an option of adding commentaries concerning each object onto the public list,
    - brief hotel description at the stage of the results' list,

- possibility to add own hotels descriptions,hotels facilities filter,
- 3 forms of payment (cash, credit card, bank transfer),
- encrypted data transfer.SSL secured personal form,administration panel,

IRS – Administration module

The administration module is the heart of the entire IRS system. It is a common solution for all the remaining elements, which means that the airline module and the hotel module (along with bookings, sub-agents, promotions, atlases, etc.) can be managed from one place. The administration module forms part of a standard version of other products.

The administration module is equipped with the following elements:

booking list panel, detailed view and export panel

statistics panel with export option

affiliation determination and management panel (portals, agents)

service fee management panel

queryoptimisation panel

log-in history panel

user management panel

B2B user management panel

dictionary panels: cities, carriers and planes

systembehaviour logic panel - determination of days on which a transfer, cash or credit card payment can be accepted, depending on the last ticketing date and date and time of departure

Internet user profile viewing panel

exchange rate management panel

booking monitoring mechanism

promotion panel

current news panel

mailing list address panel

possibility of data export in CSV and XLS formats

Administration module allows also exporting of data (i.e. list of bookings) to MS Excel files and text files (CSV).

3.6 EFFECTIVE E-MAIL MARKETING

3.6.1 Electronic Mail

Electronic mail (e-mail) enables hospitality buyers to communicate with primary sources intermediaries, colleagues, and any other person who has an e-mail address. E-mail allows buyers to send information or documents to other individuals. For instance, a buyer can compose a letter to a distributor, soliciting competitive bid data. However, instead of sending the letter through the postal system, the buyer can send it electronically to the distributor's e-mail address.

An e-mail address consists of a person's user name and the host providing e-mail service. When e-mail first became popular, people were required to receive all e-mail from their Internet service provider (ISP). With the implementation of such sites as Hotmail (www.hotmail.com), and Yahoo Mail (mail.yahoo.com), users can access e-mail from anywhere in the world, regardless of what company is providing the Internet service.

A buyer can also send the same letter simultaneously to all of the persons on a distribution list; however, many ISPs have installed e-mail spam detectors to keep individuals from flooding the Internet with useless items. A distribution list is a group of contacts to whom you can send e-mail. For instance, you can request pricing information on lettuce simply by sending one e-mail to a distribution list that includes all of your produce distributors.

E-mail also enables the sender to attach files and documents to the original communication. For those who want the full range of capability, e-mail applications now let senders embed Web pages, photographs, graphics, animation, and sound bytes into the message. In addition, most cell phones have the ability to send and receive e-mail as well.

There are many advantages to using e-mail communications. Primary benefits include the speed of communication and the creation of a continuous "record" of the items being discussed. It is also easier to store and search for e-mail documents than it is to go through file cabinets.

3.6.2 Newsgroups and Mailing Lists

A newsgroup is an electronic bulletin board where many individuals who have a common interest can post messages. In fact, newsgroups are sometimes referred to as "interest groups." Each newsgroup specializes in a particular topic, and groups are organized hierarchically. People can post messages to a newsgroup, and other subscribers to the group with similar interests can read and respond to them. A good starting point for finding out more about newsgroups is the Website www.usenetlive.com.

Similar to newsgroups are mailing lists. Mailing lists use e-mail to send messages to groups of individuals who have the same interests and have subscribed to or joined the group. Individuals can post messages that are then sent out to all members of the mailing list. Mailing lists that are moderated (edited for appropriate content) are referred to as "manual" lists, whereas those that route messages automatically to all members are referred to as "LISTSERVs" (see: http://www.lsoft.com/ for more information).

Newsgroups and mailing lists offer a great way to keep current in the hospitality field. They allow individuals to obtain specific information very quickly. For instance, a buyer

can compose a short message soliciting distributor references, asking the cost of joining a purchasing co-op, or inquiring about availability of a unique product; send it to the group, and receive relevant information without the normal time delay inherent in other forms of communication.

3.6.3 Email Marketing

Email Marketing will aid booking rooms and building relationships. It is one of the most effective communication and promotion vehicles in the internet marketplace. Ninety percent of internet users use email on a regular basis. Hotels benefit from email marketing because it's fast, direct, cost-effective, and builds loyal relationships. It is one of the lowest cost channels available to the lodging industry to book rooms and build customer relationships. High quality email campaigns can deliver effective messaging that drives action and manages customer relationships. For email campaigns to be truly effective, they have to be managed properly and conducted in a professional manner.

Building Reputation and Credibility

Email marketing practices establishes a hotel's image and reputation in the minds of people who receive the campaigns and messaging. By following some simple guidelines and practices, a hotel can run more effective email campaigns and ultimately enhance its reputation.

Points to note when using Email

Permission Email vs. Spamming:

Permission Email operates on the premise that the recipient of your message has in some way established a relationship with you by indicating an interest in your product or offer. Spamming is sending unsolicited commercial email using broadcast methods to multiple recipients without first establishing a relationship with them and without regard to their interest. Spamming is not only not permissible by law, but is also

ineffective since you are marketing to people who are most likely not interested in your product and are not aware of your presence.

Sender Email Address Clearly Stated:

Make sure that the sender email address is a genuine email address and the recipients of the email can see the address and respond to the email by hitting reply on their email applications.

Unsubscribe:

Make sure that all the emails you send out have a clear "Unsubscribe" link where the visitors can click and choose not to get future mailings from you. While it may seem counter-intuitive to your marketing, by using this technique you ensure that people do not regard your campaigns as spam.

4 Easy Steps to Conducting Effective Email Marketing

I. Build Permission-based Email Database

II. Develop Email Marketing Plan

III. Send Email Campaigns

IV. Track and Monitor Results

I. Building A Permission-Based Email Database

For effective email marketing, it's important for a hotel to develop a targeted, permission-based database. Email addresses can be collected either on the hotel website or at the front desk when the hotel guest checks in or out.

Create an opt-in form on your website so that visitors to your site can sign up for specials and promotional offers. You may want to offer an additional incentive to sign up, such as an entry into a raffle drawing for a gift basket or a percentage off their room rate.

It's good to ask the visitor to specify their area of interest, such as weddings, group meetings, skiing, or wine-tasting so that you can segment your email database by interest. This is especially useful in sending out targeted campaigns that meet the interests of your guests.

For example, you may choose to send out an email special offering ski specials to only the guests who have expressed an interest in skiing.

Once a guest hits "Send" on the opt-in form, they receive an email confirmation stating that they have been added to your mailing list. If they are not interested in getting email specials, they can simply "unsubscribe." Guests who do not unsubscribe become part of your powerful marketing tool – the opt-in email list.

In addition to collecting addresses on your website, you can also collect email addresses at your front desk during check in or check out. Ask your guests for permission on an opt-in card to send specials by email. If you have done a good job of treating your guests well, they will most likely want to hear about your future specials. Ask the front desk staff (some clients will use night auditors) to enter the information of that guest on the website form. By following this process, you make sure all the addresses are being collected in the central database and that they are legitimate email addresses following the opt-in process.

Most hotels build a database of anywhere from 1000 – 20,000 email addresses within a few months depending on how diligently the hotel is focused on collecting email addresses.

II. Developing Your Email Marketing Plan

Once you have a practical sized email database, you are ready to conduct email campaigns. Hotels will get a reasonable return on their investment if the email database is more than 200. The higher, the better.

In this step you decide what campaigns you want to send and how frequently. There are two kinds of campaigns that you can send:

- e-Cards
- e-Newsletters

e-Cards are campaigns that promote one specific special or item. Some of the campaigns that have found to be effective for the lodging industry include:

Spa Specials,

Ski Packages,

Park and Fly Packages,

Mother's Day Specials,

Thanksgiving Specials,

Holiday Specials,

Christmas Specials, etc.

e-Newsletters contain multiple specials and news items.

The frequency at which you send out your campaigns depends on your aggressiveness and the amount of effort you put in. Sending out one campaign a month or less recommend. Sending more often than that could alienate some people on your list, although several hotels will send out campaigns every two weeks.

Design and Content of Campaigns

The design and content of your e-campaigns are perhaps the most difficult part for hotels. Some hotels with an in-house designer and programming capabilities will develop their campaigns in-house. Most hotels will use their e-marketing agency for the design of the campaigns and will provide the content. Some e-marketing agencies are set-up to be full-service and will provide content ideas as well as the design.

III. Sending Out Campaigns

A critical component of sending out campaigns is to determine which email marketing tool you will use. There are several utilities that can be used to send out campaigns depending on the cost and capabilities of the systems. In general, here are some of the criteria that you could use to select a system for sending out your campaigns:

In-House vs. Outsourced

This is a critical decision that most hotels face whether to outsource the sending of their campaigns to an agency or if they are going to do it themselves. If the hotel has resources with reasonable knowledge of html programming and some design capabilities, there are several solutions available that hoteliers can use to send out their campaigns. If the hotel decides to do this internally, it is important to evaluate the ease of use of the system available. There are some systems available that will enable the hotel to send out campaigns with relative ease.

Several hotels prefer an agency to set up the system for them, and then for the hotel to be able to send out the campaigns on their own. Mixed mode systems where the agency sets up the campaigns for the hotel and the actual sending of the campaigns is done directly by the hotel are effective in lowering the costs. These solutions are fairly sophisticated and hence few in number, and can be procured from email marketing agencies.

Working with ISPs

Another important criterion for selecting a tool is based on how much technology is being used by the provider of the tool to ensure that the emails do not get stuck in the spam folders of the major email providers and ISPs. Good tool providers spend a lot of time working with email providers in understanding their spam guidelines and making sure that your emails make it into the in-box of the consumer. Good tool providers will specify the guidelines for the design of your email campaigns that will follow the spam-

checker guidelines for these email providers. Once you have designed your templates and selected the tool that you are going to use to send out campaigns, you are ready to send out your email campaigns.

IV. Tracking Your Campaigns

Most good quality email tools have sophisticated reports available that will tell you the effectiveness of your campaigns. The tools give you the information on how many recipients of your campaigns opened the emails, how many unsubscribed and several other statistics related to the effectiveness of your campaigns.

One of the more effective reports indicates which people clicked on which links of your email campaign. This gives you an insight into the minds of your readers as well as their behavior. It also points to which particular specials in your email campaigns are more effective.

Some of the more sophisticated tools will allow you to set up the system so that the consumers who clicked on specific links can get a follow-up email that sells them only that particular special. This feature is particularly effective when you send multiple specials and you want to send out more targeted campaigns once you gain a better understanding of the interests of your target audience.

Using Email Marketing to Up-sell

Email Marketing can be used effectively to up-sell your hotel. Sending your guests an email a few days before their arrival at your property telling them about your specials and packages offers an immense opportunity to increase the revenue generated per customer. State-of-the-art technologies will enable you to automate the process where all reservations received from all your sources – property direct, internet booking engine, and central reservation systems – can get such an email.

Using Email Marketing to Build Relationships and Get Feedback

Some hotels will send their guests a post stay survey form to get feedback on the stay. This helps to build customer relationships and also understand what guests like and dislike about your hotel. Online surveys offer instant feedback to your hotel.

3.7 IMPACT OF INTERNET ON HOSPITALITY INDUSTRIES

With the advent of the Internet, marketers have access to the technology to customize products and communicate directly with smaller target markets. The Internet is now firmly established as a marketing tool. It serves as an integral part of the marketing mix, serving as a digital distribution channel as well as an electronic storefront.

Consumers in the Internet medium are more than just passive recipients in the marketing process. The Internet is an interactive medium as opposed to traditional marketing which usually allows only one-way communication from marketer to consumer

Most PMS have IRS

Make reservations online

Book through Internet

Eliminate fees –Expedia about %12

The Internet is rapidly changing the way hospitality operations select and procure products. It can streamline operations and minimize costs for distributors and buyers. The Internet also allows buyers and sellers to communicate information relatively quickly. Further, it enables buyers and distributors to acquire information from a wide variety of worldwide sources.

Although many software companies and forward-looking hospitality and foodservice distributors have already developed Internet applications, content related to the purchasing activity is currently in its infancy. However, a vast amount of information in this area is now accessible. Over the next few years, the Internet will become more

useful and more user-friendly, which, in turn, will cause the selection and procurement process to evolve into a highly technical, digital process.

4.0 CONCLUSION

We have discussed the management of internal operations as well as the rise of the internet. We also looked at the interaction between hotels and the Internet and e-Hospitality futures.

The Internet Reservations Moduleand effective Email Marketing have been explained.

The impact of internet on hospitality industries was also discussed.

5.0 SUMMARY

The proliferation of the Internet supported the development of a number of additional electronic distribution options.

The Internet is a worldwide network of computers. Its name derives from "internetworking," the original description of computers and networks linked together.

The goals of interne are to enhance the customer value proposition, to establish customer intimacy, and to build guest loyalty by taking advantage of one-to-one marketing opportunities and by creating enriched, personalized consumer shopping experiences through the use of collaborative filtering tools and non-intrusive software agents that track users' behavior to learn their interests and tastes.

The most active part of the Internet is the World Wide Web

The proliferation of the Internet in the late 1990s and the revolution of technologies have introduced a wide range of new marketing tools

6.0 TUTOR-MARKED ASSIGNMENT

Discuss the rise of the internet.

Explain the impact of internet on the hospitality industry.

Discuss the effectiveness of the internet as a marketing toll in the hospitality industry.

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UNIT 4 INFORMATION TECHNOLOGY AND EFFICIENCY ENHANCEMENT

CONTENT

1.0 INTRODUCTION

The debate over "high-tech" or "high-touch" is largely a thing of the past in the hospitality industry as emerging technologies drive unprecedented change in the way hotels operate and serve customers. It is clear that investments in technologies can generate greatly improved operating efficiencies, higher hotel revenues and enhanced guest services.

Investment in technology is critical today for hotel operations, given its importance in two areas:

- The desire of operators to improve the guest experience. This is demonstrated through faster check-in and check-out, more timely response to service requests and a myriad of other opportunities to enhance services.
- The potential to improve operating efficiencies. Hotel operators are seeking ways to reduce staffing requirements, cross-train staff, reduce the overall general and administrative expense, and explore opportunities for centralizing some functions while at the same time distributing other functions more widely.

Implementing technological advances promises the potential for greatly enhanced guest services to meet rising customer expectations, improved cost control, more effective marketing strategies and expanded opportunities for hotel companies and properties to achieve a competitive advantage. However, technology is only as good as its application by an organization, and therein lies the challenge for hospitality companies: weighing how best to invest in technology, as well as train employees and implement its use.

2.0 OBJECTIVES

At the end of this unit, you will be able to explain:

The decade of Integration

Client server technology

How technology enhances housekeeping efficiency

Technology applications to human resource management

How technology saves time and money

3.0 MAIN CONTENT

3.1 THE 1990S: A DECADE OF INTEGRATION

A retrospective view of how high technology has been used in the hospitality industry reveals the depth of change wrought in hotel operations during the past four decades. Accounting and financial systems were introduced during the 1960s, but exclusively as mainframe-based systems operated by the largest hotels. Systems oriented to property management were introduced in the 1970s. During the 1980s, systems were ported to mini-computer and micro-computer based platforms. Accounting, financial and property management systems finally became available even to the smallest operators. Sales and marketing applications were developed to provide a competitive advantage for properties.

The 1990s will be marked as the decade of integration, driven by powerful networking capabilities offered by client server technology. This technology will bring no less than

the dismantling of the management information system (MIS) paradigm as we have known it, more completely democratizing access to information than at any time in the past.

Client server technology

This involves "integrated, networked computer systems using applications cooperating across the network. Instead of having a series of mainframes networked together, client server technology involve one large processor unit (which may or may not be a mainframe) and a network of clients linked together, often across large geographic areas. Client server systems make the best use of both the networked client computers processing and user interface abilities, and the server systems database, computational and data management abilities.

Client server technology offers major benefits to companies adopting these systems. Data access is faster because the "server" is not burdened with running applications. Data access is more evenly distributed, and users have the ability to query and create their own reports. At the same time, design of the database can be truly independent of the applications, which are run on the user computers.

Client server technology in the hospitality industry offers significant opportunities as companies make decisions relating to technology. In addition to improving services, hotel operators are seeking ways to effectively integrate the disparate systems accumulated during the last decade. Most of the larger hotel properties currently are running multiple computer platforms (systems), and due to the cost of technology, will continue to do so for the next several years. These platforms have evolved from a patchwork of tactical solutions initiated by various functional areas.

Client server technology is probably the most viable strategic option for medium to large multi-property owners and operators as technology upgrades are made. The number of enterprises in general industry that have adopted client server architectures,

for example, has risen from 35 percent in 1992 to more than 60 percent today. Similar levels of use can be expected in the hospitality industry.

Client server technology benefits hotel organizations primarily because it decouples the applications from the database contained on the "server"system. In practical terms, this means that the applications typically used in the hospitality industry (back office, food & beverage, front office, etc.) can be developed by different vendors (as is typically the case), yet use a common database. Ad hoc reporting and MIS support are simplified and more efficient.

The client server approach, then, makes it possible to rebuild an information technology (IT) infrastructure to unify mainframes, midrange systems and PCs with universal connectivity in a single infrastructure as the ultimate goal. Optimally, hotel organizations should be able to reduce IT costs, leverage investments in PCs and improve staff productivity. In addition, client server technology sets the stage for the still more sophisticated technologies of the next decade in which guests will have greater access to in-room technologies, and fully integrated systems using a common database will be the norm.

A New Era of Guest Services

For most hotel operations, client server technology is inevitable. The benefits of integration via networked computer systems are compelling given the impact of improved technologies and the opportunity for business process reengineering. At the same time, older technologies are phasing out, and hotel operators will need well-integrated systems to support the database marketing and guest services required to compete in coming years. These include:

One-Stop Guest Services

These services in the hospitality industry have two different applications. Guest services accessed by the guest typically involve the use of the in-room television remote control to select from a suite of interactive programs and services. Guests can navigate easily through multi-media video and audio, and be automatically connected by phone to outside services.

In addition, guest services provided by the staff typically involve a PC running a front-end application that allows access to outside services, as well as access to guest-specific information maintained in a central repository or database. In either case, the method employed is driven by the guest familiarity and comfort in using technology.

In the future, one-stop integrated systems will make the same basic services available to hotel staff available to the guest by means of fully integrated systems (retail, ticketing, reservations, etc.) using a central guest data repository and access to outside service providers. All these functions will be on-line and presented to the employee and guest in an intuitive graphical user interface.

Smart Cards

These cards contain an integrated circuit that can allow a guest access to the room or other services in the hotel. Smart Cards also have the potential to be coded for use in charging retail items, meals, minibar use or other purchases. In the future, travel agencies ultimately may issue Smart Card itineraries rather than paper ones. Airlines will have a reader that verifies the traveler's flight number and seat assignment. Hotels will have a reader that can encode the card for use as a room key and capture frequent guest program information.

Since the Smart Card will be a universal card, it could be used at different airlines and hotels during the same trip.

The main drawback of Smart Cards currently is standards. Vendors write information in their own coded software which can only be understood by their own reader. Further agreement on standards will need to be reached by the various manufacturers before the power of this technology can be fully exploited.

Video Check-In and Express Check-Out For these services, touch screens on free-standing terminals at kiosks are being developed as part of systems to check in and check out guests without the need to use the traditional front desk. Touch-and-Go, the first system of its kind in the industry, provides the guest who has an advance reservation and a credit card the option of avoiding the front desk at the beginning or end of the stay. Touch-and-Go was successfully tested by Hyatt Hotels at two properties and is now being rolled out to between twenty and thirty of their properties. The target speed for the system is to allow guests to check themselves into their own rooms in less than 90 seconds. The system on check-out allows a guest to approve expenses which appear on-screen, and then print a folio of charges.

Database Marketing

At the core of technology-driven marketing is the ability to better target a hotel's customer base. A hotel's customer information file provides the opportunity to segment customers, develop profiles of frequent guests, target prospective customers and improve retention. Many finer hotels maintained a guest history system manually before the advent of affordable computer systems. However, these manual systems were limited in their ability to serve as the basis for a marketing program, and also did not permit the chain operator to identify the best individual customers who frequented multiple hotels within the chain. Client server technology now permits a hotel chain to maintain one single customer database which can be accessed by all of the properties connected to the server over the network. In addition, far more data can be collected

about the customer and his spending, making the database much more powerful as a focused marketing tool.

Executive Information Systems (EIS)

These systems offer a way to extract information from disparate systems and present it in a usable and informative manner to top management. What is required is a front-end interactive interface which displays and queries the back-end database (common repository of information) and feeder systems, which include existing financing and operational systems. Design and implementation of an EIS system is typically complex, requiring close examination of a hotel operation's key performance indicators, information sources and other system design features. Once created and implemented, however, an EIS system has the capacity to provide management with a user-friendly, readily accessible and current view of a hotel operation's key financial results and performance indicators.

Technological advances thus have the potential to generate a range of benefits critical to remaining competitive, and ultimately driving expanded market share and profitability. Nevertheless, the barriers to increased investments in technology by hotel owners and operators can be daunting. These include general resistance to change, lack of available funds or manpower to invest in technology, and a perceived inability to quantify benefits.

Like other service companies, hotels are by their very nature more reliant on information than many other industries. The success or failure of a service company can be directly tied to the accuracy of data contained in databases and the speed of retrieval. Clearly, technological advances applied in the hospitality industry will set increasingly higher standards for guest services and hotel operations‹with customer expectations continuing to accelerate. As a result, investments in technologies and effective application of these technologies in hotel operations and services will become

one of the most decisive factors differentiating successful hotel organizations globally in the years ahead.

3.2 HOUSEKEEPING TECHNOLOGY FOR ENHANCED EFFICIENCY

In the recent past, the hospitality industry has seen a sea of changes. One such area that has seen rapid improvements brought on by the growing use of technology is housekeeping. The long neglected department of housekeeping has been steadily adopting technology to increase efficiency, provide guests with a seamless experience and add to customer delight.

The largest costs in a hotel's balance sheet are manpower. 40% of these manpower expenses are directly linked to housekeeping. Hotels are demanding technology based solutions that can enable them to reduce these costs and optimize manpower through innovative means.

Some of the technology leveraged by the housekeeping department has been iPads and smart phones with specific housekeeping applications, kiosk based stations and text message modules to address guests requests and grievances rapidly. Numerous housekeeping functions such as room cleaning, lost and found, supplies and inventory, accessing mini bar using telephones or kiosks and other mundane functions have been automated using smart housekeeping applications. Complaints from guests can be addressed faster through text messages, rather than through staff stationed at a desk. The constant endeavor is to provide guests with personalized service in the least possible time.

Challenges of Delivering Housekeeping Applications

With the demand for technology in housekeeping growing, hospitality software companies are constantly called upon to deliver better software offerings targeted at

addressing real pain-points. R&D wings constantly interact with customers, locating issues and addressing them in newer product versions that are periodically launched.

Some of the requests for housekeeping departments include applications for tracking housekeeping maid cleaning time, floor-wise duty roster for cleaning schedules and comprehensive housekeeping console, which allows floor-wise, and user-wise performance tracking. This tracking is useful for guest supplies, laundry, room cleaning and housekeeping inventory information.

Till recently, hotels were slow to leverage technology, but today, a growing number of hotels see the benefits of technology in housekeeping. With falling costs of technology, hoteliers are allocating higher percentages of their budgets to innovative vertical-specific applications. Hoteliers are also investing in technologies that can aid in guest retention, energy management, and staff optimization and increase average room rate.

3.3 TECHNOLOGY APPLICATIONS AND HUMAN RESOURCE MANAGEMENT

Mobile technology applications are making human resource management more efficient and more profitable.

The widespread usage of mobile applications in hotel operations is a relatively young practice but it has imparted on hotel operations effectively. The use of mobile applications in housekeeping, maintenance, and room inventory has produced dramatic results. Such dramatic results were also achieved in managing workflow – and whenever you make enhancements to your workflow, you have by definition enhanced the way you manage people. Managing workflow and managing people are overlapping concepts, with overlapping human resource implications and human resource benefits.

Managing Workflow

Every hotel has policies and procedures for handling the day-to-day operations that make its business tick – from check-in/check-out to "back-of-the-house" functions such as housekeeping, maintenance, inventory control. Typically, the term "workflow" refers to the tasks, tools, and status updates that are needed to complete each procedure.

Sometimes the procedures are defined or mandated by brand standards; sometimes the procedures have been developed by the local owner or manager and are unique to the property; and sometimes the procedures are a hybrid of these two approaches.

Regardless which of these systems is in place, it traditionally involves a high volume of paper-based documents, including forms, spreadsheets, templates, and reports. This maze of information can be disorganized, is probably confusing, and is almost certainly overwhelming.

That is because most hotels are still using workflows that were designed almost 50 years ago, when mainframes and centralized computing were considered state-of-the-art technology – and when paper was the accepted form of communication.

Today's typical room inspection involves at least four-steps – from filling out forms manually to entering the information in database to generating a report to review the data with management and team members.

Similarly, initiating room repair requires multiple steps that start with reporting the problem and continue with generating a repair ticket, fixing the problem, closing the repair ticket, entering the data, generating a report, and having management review the report.

For employees, the result is lots of job frustration – due to lost paperwork, missed deadlines, missing or incorrect information, and long completion times.

For guests, this translates into the "red tape" of inefficiency – which reduces their loyalty, their return visits, and their satisfaction scores.

For owners, the bottom line suffers.

This started to change with the age of distributed computing – namely, the advent of personal computers (PC's) and databases – which minimized the use of paper, but didn't eliminate it.

Now we are harnessing the power of mobile computing with its mobile applications, or mApplications, and we are seeing what amounts to "workflow automation" – and with it, almost no need for the use of paper.

Installed on a smart phone, tablet, or mobile device, mApplications are a combination "to-do" list and comprehensive project management tool – with a template or dashboard that is customized for the brand, the property, and the function.

Instead of recording information on paper, employees use the mApplications to enter data – including photos, if desired – into the mobile device, using pre-designed custom forms. That data is instantly transmitted throughout the company network, then available simultaneously and in real-time to all authorized personnel.

With mApplications, a room inspection involves one step – entering the data on the mobile device. All desired recipients receive the report immediately, then can review and respond as needed at their desired pace.

A room repair is equally easy – with mApplications a problem reported and a repair ticket generated in one step, then the ticket is closed in the second and final step. Again,

all recipients receive the report immediately, then can review and respond as needed at their own pace.

Consider the following statistics from a 12-month trial at a 2,000-room Chicago hotel:

> Inspections classified as “unsatisfactory” dropped from 26% to below 1% while Inspections classified as “satisfactory” rose from74% to a whopping 99%.
>
> The frequency of inspections increased consistently from about 300 per month when mApplications were introduced to more than 1,000 per month just nine months later
>
> A single manager could report on the occupancy status of more than 400 rooms in less than three hours, which is an average of less than 30 seconds per room.
>
> Vacant rooms were added to the inventory and available to rent at the rate of about 100 rooms an hour – and these rooms were added within minutes after being cleaned by housekeeping, compared to several hours lag time using paper-based reports.

These results represent measurable gains in employee efficiency, employee productivity, and overall business performance. They underscore how mApplications enable hotel management to move quickly towards a “best practices” level of performance.

Benefits of human resource management Technology applications

- Elimination of duplicate data entry, which increases data accuracy.

- Faster access to data, as well as continuous 24/7 online access to that data, which together improve both employee communication and employee decision-making – including the ability to make immediate adjustments to assignments.
- Quicker employee response time, which translates into lower operational and maintenance costs.
- They provide a verifiable version of the "truth" – namely exactly what functions were performed, when, and by whom. This can be especially important in complying with certain regulatory or insurance requirements, in resolving disputes, or in dealing with a union workforce.
- They provide a shift from work being done manually by humans to work being done by machine, under the supervision of humans.

Currently a mobile application for the reporting of accidents on hotel property is being developed. This product is intended to provide indisputable, time-stamped documentation of the facts and the photos associated with any situation – for use as needed by the owner, the brand company, the police, the insurance companies, the courts, and others.

Another mobile application under development is an easy-to-use inventory management system for hotel banquet departments, which traditionally keep cumbersome paper records of items in stock such as plates, silverware, and serving dishes.

By eliminating the clutter of paper-based reports and by streamlining tasks that are mundane or repetitive, mApplications are allowing employees to concentrate on more significant responsibilities and to function at a higher intellectual level.

The payoff for owners is a work environment that is more creative and more satisfying for employees – and ultimately, more welcoming for guests.

Managing Personnel

Mobile applications will never replace the "human" side of "human resources" – supervisors still have to discuss any number of issues with employees – but mApplications certainly are changing the process dramatically and for the better.

Just as mApplications are automating the workflow, they are also causing a web-based automation of the workforce. For example, some of the more popular human resource benefits of mobile technology include:

- Tracking time spent on given tasks to determine the value received compared to the resources invested.
- eTraining and eLearning with download of reference materials, webinars, manuals, and summaries of business books.
- Fast, easy, and fair changes in work schedules – for example, one hotel uses a mobile application to advise employees of shift openings every day and the first employee to respond receives the assignment, thereby eliminating any claims of favoritism.
- Convenient centralized record-keeping for personnel matters, ranging from performance reviews to health insurance matters to accrued time for vacation, sick days, or special compensation

What started as evolutionary change in hotel workflow with the advent of PC's and databases has now, in the age of mobile technology, become revolutionary.

Mobile applications are having an increasingly significant impact on efficient human resource management – on what tasks hotel personnel are assigned as well as on how those tasks are effectively completed. Hotel properties and hotel personnel are becoming productive.

In the process, as we have seen, mApplications help create a more comfortable, more valued experience for both employees and guests – the hotel becomes a place where employees want to work and guests want to stay. The ultimate payoff of mApplications for owners is, therefore, both simple and significant.They make it easier for you to attract and to retain both employees and guests.

Technology Improve Customer Service

Customer service is the lifeblood of any organization, and it is not just a department but must be the attitude of the entire company. Employees can be trained to provide the best service possible to the customer. However, if the technology is not adequate, customers, and employees, will quickly become disheartened and frustrated. A frustrated customer (or employee) can lead to lower company revenues through lost sales or lost productivity. Technology, used properly, can help employees work more efficiently and ease customer frustrations.

There are various ways technology can be used to improve customer service.

Increased automation

Contact centers are increasingly using voice recognition and call-routing technologies. The customer can speak to a computer or press keys that will route him or her to the appropriate department to handle the request. Call routing improves customer service by allowing the customer to go straight to the person that can handle his or her needs. This saves the customer from repeating the request to numerous representatives and ultimately saves time for the customer and saves money for the organization.

Research technologies and consultants can help automate routine processes. Visit similar businesses to understand how they have implemented technology in their operating processes. Interview other businesses to discover how automation has impacted their business positively and negatively.

Customer empowerment

Technology also empowers the customer. With technology, the customer can get what is needed from the company. Self-checkout lines have become popular in retail outlets.

The customer goes into the store to get what is needed and can check out without interacting with the company's associates. The customer is satisfied because he or she can quickly get exactly what is needed, purchase and pay for the item without a long wait. The customer may also choose not to self-checkout and prefer to use a cashier line. This, again, increases customer service because he or she has an option. The customer has control over how he or she interacts with the organization. Look to see what the company can allow the customers to access themselves. When evaluating, be prepared to change or completely eliminate some processes. Simplify the processes to make it easier for the customer.

Customer education

Companies can educate their customers about items as simple as operating hours or as drastic as company shutdowns. Airlines and hotels use technology to send customers reminders of flight check-ins or hotel reservations. This not only helps customers by helping them remember important events on behalf of the company, but it also helps the company by providing a way to confirm the customer's initial request.

Keep the external and internal channels of customer communication updated. For example, the company websites should have the most current information; this includes external websites and the company's intranet. Have an action plan for quickly and accurately updating the company's information. This plan should include the use of websites, social media and phone messages.

More channels of ordering

The internet, telephone and even social media have helped to provide customers with increased, more efficient ways of ordering products. In addition, customers can order a product or service when it is convenient for them. Review the organization's channels of ordering. If the customer cannot order by telephone anytime, provide other channels of ordering such as through the company's website, blog or even through social media. Check to ensure the customer can provide payment information securely via the internet and telephone. If the customer orders via mail or fax, ensure that the organization is PCI-compliant, which also keeps customer payment information secure.

Cut costs

Technology keeps costs low while providing a quality product to the customer. Use technology in those areas where there is "low-hanging fruit." For example, instead of making paper copies to send to other departments, scan the documents and place them on a shared server. This saves money in office supplies, time in document distribution and allows the receiving departments the ability to always access the information.

3.4 TECHNOLOGY SAVES TIME AND MONEY

Lately everyone seems to be focusing on the time and money saving benefits of mobile applications from the guests perspective. Mobile technology can make the lives of hoteliers significantly easier by maximizing efficiency and quality control.

The prevalent use of mobile technology in the travel market is consumer driven and quickly gaining momentum. Consumers demand this technology be available and many hotels are scrambling to grasp the ramifications of the movement. The inevitable fact is mobile platforms will soon penetrate and influence all aspects of hotel operations. Early adopters of mobile technology will be well positioned to best satisfy the needs of their guests and staff.

Outsourcing

Although all hotels should have a mobile solution, it is not necessary for every hotel to create their our native mobile applications. In many regards native mobile applications represent the antithesis of efficiency. To start, native applications require developers to write code for multiple tech stacks and deliver updates for all the unique platforms. This means developers must do the same job multiple times for each platform they choose to support. As you may have learned already, professional application development does not come cheaply!

There are economical alternatives to native applications that provide all the benefits with none of the headache or overhead. The most cost efficient solutions offering the

greatest return on investment lie in free third party web applications. The next generation of web applications will offer user experiences that rival those of native applications. Only web applications allow developers to create their code once and deliver updates across all platforms instantly. Using HTML5 and CSS, web applications provide seamless multi-platform user experiences. This ensures hotel information is always accessible to guests regardless of the device they choose to use.

There are third party application providers offering customizable applications featuring all the functionality of private native applications. These independent service providers often leverage advertising-based revenue models thusallowing them to provide their services free to hotels. With no out of pocket costs, all the additional revenue the hotel applications generate goes directly to the hotel. Furthermore these application providers are continually updating their feature sets to incorporate the most advanced technology.

Marketing

An extremely beneficial feature of mobile applications is the ability to test new marketing strategies and quickly and accurately evaluate their effectiveness. Hotel guests represent a captive audience of active buyers. Using in-application messaging and notifications, hotels can engage their guests and encourage immediate responses. By tracking the click through and conversion rates of each message hotels can quickly see what works and what doesnot.

Before mobile applications, in the world of print, crafting a profitable advertising message and evaluating the effectiveness of marketing campaigns could be a costly and time consuming endeavor. Now by viewing realtime data, marketers can focus their efforts on initiatives that yield results. Applications provide a direct link to hotels target consumers, offering a perfect focus group to test new marketing techniques. This

greatly reduces the time needed to develop campaigns, allowing marketers to start generating additional revenue much sooner.

Social

Today social media seems to be ever-present and influential on all aspect of our lives. Keeping up with the nonstop barrage of comments, posts, likes, and inquires requires constant attention. Brand social media managers have their work cut out for them. Managing multiple social networks simultaneously poses a myriad of challenges.

Mobile applications offer deep social integration, making things a little easier on those trying to get messages out to their target audience. Hotels can share content and promotions directly from applications back-end management systems. This ensures that messages are delivered to all the guests, not just friends and followers opting in on the various social networks. Should guests choose to join,applications provide a fantastic platform for guests to subscribe to hotels social accounts.

Paperless

Going green isnot just about saving the planet. Paperless workspaces are far less costly. Consider how much time and money can be saved by simply eliminating the daily printed turndown letters. Using a mobile application to explain to guests what will be going on in the hotels the following day provides a superior guest experience and is less expensive. The work involved for this service alone ties up multiple staff members. If you consider the time it takes to design, print, and distribute these assets to guests, developing a digital solution is clearly far more economical and useful.

Delivering digital notifications outlining hotel information coupled with a clear call to action encourages on the spot conversions. One way for hotels to utilize this technology is to push out event notifications inviting guests to join them on property. For example:

"Please join us for a unique experience in the wine bar. Enjoy exquisite wine pairings by our renowned sommelier as he takes you on a taste-journey through the south of France. This event will sell out! Click the RSVP button to reserve your place now."

Messages like this work well and they donot cost a thing to deliver. What is better, this streamlines the process to conversion, eliminating multiple steps that guests would otherwise be required to complete to achieve the same results. Making the booking process effortless greatly increases the likelihood that guests will commit.

Paperless options also provide the opportunity to track guest behavior. What are they interested in and what are their viewing patterns? The better you know your guests the easier it becomes to take proactive steps to providing the best possible service.

Quality Control

Applications provide the platform for systems-based staff protocols, ensuring quality control and consistent performance. Using detailed reports each staff member may be held accountable for the work they perform. Real performance data can aid in accurate employee and hotel performance evaluations. Applications may collect key metrics, generating easy to read reports that allow hotels to quickly identify areas needing improvement.

Guest requests may be delivered in real-time directly to the appropriate staff on their personal mobile devices, greatly reducing the service hours spent fulfilling guests requests. For example:

A guest may submit a housekeeping request for their room to be cleaned.

The housekeeping staff will receive the request via a detailed message notification. Any of the housekeeping staff that is logged into the system may process the request. Accepting a request can load a specific task list unique to the request being fulfilled. Staff simply checks the necessary steps off the list until the job is done. This ensures employees repeat the exact process for each job every time.

This systems-based approach delivers predictable and consistent results, ensuring guests receive the same high-quality stay every time. And consistency keeps guests coming back!

Performance Incentives

While some duties can and should be automated, mobile applications should not be intended to eliminate jobs. Rather they should assist employees in doing their jobs well and in a timely manner. Technology is simply a tool. It takes people using this technology to create great and lasting experiences.

Systems-based solutions reduce the chances of incurring human errors and thus reduce the cost of correcting these errors. It is less expensive to get things right the first time around. By developing clearly articulated task lists and protocols, hotel staff can feel confident in their performance, knowing exactly what is required of them at any given time in any situation. Holding staff accountable for their work provides an opportunity to offer recognition for outstanding performance. The key is to get staff to embrace the system. By showing employees how the system can be used to reward them, they will be more inclined to provide the best service possible.

Many hotels are just beginning to explore the potential benefits of mobile technology. We still have a long way to go before standards and best practices are clearly defined and understood. The movement in mobile technology is not a fad that will soon fade. This is a consumer driven phenomenon that hotels must fully embrace to remain competitive in this rapidly evolving market. By establishing strategic partnerships and implementing systems-based operational solutions hotels will run more efficiently and smoothly.

4.0 CONCLUSION

We have discussed how technology has been applied in the hospitality industry and their benefits such as how it has enhanced housekeeping efficiency , as well as the benefits of its application to human resource management. We also looked at how technology saves time and money.

5.0 SUMMARY

Investment in technology is critical today for hotel operations, given its importance in the desire of operators to improve the guest experience and the potential to improve operating efficiencies.

Client server technology involves integrated, networked computer systems using applications cooperating across the network. Data access is faster because the "server" is not burdened with running applications. Data access is more evenly distributed, and users have the ability to query and create their own reports.

Client server technology offers significant opportunities as companies make decisions relating to technology for improving services.

Client server technology benefits hotel organizations primarily because it decouples the applications from the database contained on the "server" system, thus making it possible for the applications typically used in the hospitality industry to be developed by different vendors and yet use a common database.

Housekeeping has been steadily adopting technology to increase efficiency, provide guests with a seamless experience and add to customer delight.

Hotels are demanding technology based solutions that can enable them to reduce costs and optimize manpower through innovative means.

Some of the technology leveraged by the housekeeping department has been iPads and smart phones with specific housekeeping applications, kiosk based stations and text message modules to address guests requests and grievances rapidly.

Mobile technology applications are making human resource management more efficient and more profitable. It is very effective in managing workflow and personnel

An extremely beneficial feature of mobile applications is the ability to test new marketing strategies and quickly and accurately evaluate their effectiveness

Various ways technology can be used to improve customer service are increased automation, customer empowerment, customer education, more channels of ordering, and cutting costs.

6.0 TUTOR-MARKED ASSIGNMENT

Discuss the benefits of client server technology.

Explain how mobile technology aids human resource management.

How does technology enhance efficiency in housekeeping operations?

7.0 REFERENCES/FURTHER READING

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