

MANAGEMENT INFORMATION SYSTEM

Dr. Khine Thin Zar
Professor
CEIT Department
YTU

COURSE OUTLINES

■ Course Title

- Management Information Systems

■ Grading Policy

- Exam → 80%
- Tutorial / Assignment → 20%

■ Textbook and Reference Materials

- Course Manual for Management Information Systems CIS302, University of Ibadan Distance Learning Centre
- Management Information Systems (Managing The Digital Firm) by Kenneth C. Laudon(New York University), Jane P. Laudon(Azimuth Information Systems), Twelfth Edition
- Management Information Systems, Sixth Edition, by Effy Oz

■ Course Duration

- 12 Weeks

Operational Information Systems

LEARNING OUTCOMES

When you have studied this session, you should be able to:

- *describe* the nature of operational information systems
- *discuss* operational accounting and financial information system
- *explain* operational marketing information systems
- *discuss* operational production information systems
- *examine* operational humans resource information systems

CONTENTS

- **The Nature of Operational Information Systems**
- **Operational Accounting and Financial Information Systems**
- **Operational Marketing Information Systems**
- **Operational Production Information Systems**
- **Operational Human Resource Information Systems**

THE NATURE OF OPERATIONAL INFORMATION SYSTEMS

- Routine, repetitive, descriptive, expected, and objective data that describe past activities
- The information - detailed, highly structured, accurate, derived from internal sources, and produced regularly
- To represent pure drudgery for employees who must complete them
- Reduced this drudgery to a great extent and provided managers

MANAGEMENT ADVANTAGES OF OIS

1. Reduced Cost
2. Increased Speed
3. Increased Accuracy
4. Increased Customer Service
5. Increased Data for Decision Making

OPERATIONAL ACCOUNTING AND FINANCIAL INFORMATION SYSTEMS

- The first applications that organizations computerize are **operational-level** financial accounting systems.
- Task oriented
- Focus on processing **financial transactions**
- To produce the routine, repetitive information outputs that every organization finds necessary

ACCOUNTING INFORMATION SYSTEMS

- Process for collecting data, processing the data into information, and distributing that information to users
- To collect, store, and process accounting data
- Produce informational reports
- Computer-based

FUNCTIONS OF AN ACCOUNTING INFORMATION SYSTEM

- **To collect and store data concerning an organization's financial activities**
- **To provide information useful for decision-making process**
- **To make sure controls for recording and processing data**

FINANCIAL ACCOUNTING SYSTEMS

1. General ledger
2. Fixed assets
3. Sales order processing
4. Accounts receivable
5. Accounts payable
6. Inventory control
7. Purchase order processing
8. Pay roll

IMPORTANCE TO DECISION MAKING

- The fact that operational financial accounting systems are predominantly routine and repetitive in nature does not mean that they do not contribute to decisions that are important to the organization.
- Example: The accounts receivable system may routinely process credit information about customers,
 - include comparing the balance of customer accounts to customer credit limits
 - it is essential to a common decision faced by the sales force
 - provide on line credit information to salespeople reduce the risk of incurring bad debts

GENERAL LEDGER SYSTEM

- **General Ledger System** provides managers with periodic accounting reports and statements such as the income statement and balance sheet.
- Helps management of cash, accounting and financial reports.

FIXED ASSET SYSTEM

- **Fixed Assets System** maintains records of equipment, property, and other long--term assets that an organization owns.
- **The records include:**
 - the original cost of the as-sets,
 - their depreciation rates,
 - the accumulated depreciation to date, and
 - the book value of the assets, or the original cost less accumulated depreciation.

SALES ORDER PROCESSING SYSTEM

- Records sales orders and also provides data to other systems
- Maintain inventory levels, and bill the customer
- This system provides:
 - sales tax data to the general ledger system for posting to taxing agency accounts,
 - stock data to the inventory system for updating inventory balances, and
 - sales data to the accounts receivable system for posting to customer accounts.

ACCOUNTS RECEIVABLES SYSTEM

- Allows you to enter, update, and delete customer information
- Inputs to the accounts receivable system include sales invoices, credit memorandums, and cash received from customers.
- Outputs of this system are
 - monthly customer statements of account and
 - a schedule of accounts receivable listing each account and
 - its balance

ACCOUNTS PAYABLE SYSTEM

- Processes much the same routine
- Repetitive information as the accounts receivable system
- The information is about the organization's creditors rather than about its customers

INVENTORY CONTROL SYSTEM

- Provides input to the general ledger system
- Receives input from the purchase order and the sales order systems
- The basic purpose of the system is to keep track of inventory levels and inventory costs.
- Maintains information about each stock item (stock numbers and stock descriptions, receipts and issues of stock, stock damage, and stock balances)

PURCHASE ORDER PROCESSING SYSTEM

- Processes purchase orders and tracks:
 - Which purchase orders have been filled,
 - Which stock items ordered are on backorder,
 - Which stock items have been damaged or do not meet the specifications of the original order, and
 - Which orders are still on order and when those orders are expected to arrive
- Provides information to the accounts payable and inventory systems
- Produces a variety of reports

PAYROLL SYSTEM

- Processes wage and salary information:
- Payments to employees;
- Deductions from employee pay checks; and
- Payments to federal, state, and other taxing agencies for taxes used
- Produces report as the weekly payroll summary report, overtime reports, and checks for payroll taxes owed to taxing agencies

OPERATIONAL MARKETING INFORMATION SYSTEMS

- The marketing function occurs in all organizations
- The basic goal of the marketing function in any organization is to satisfy the needs and wants of its customers.
- Marketing personnel engage in activities such as planning and developing new products; advertising, promoting, selling, storing, and distributing goods and services
- Operational marketing information systems include systems such as sales systems, advertising systems, sales promotion systems, warehousing systems, and pricing systems.
- Must be coordinated with other organizational information systems

OPERATIONAL MARKETING INFORMATION SYSTEMS (CONT.)

- **Sales Force Automation Systems** : to increase the productivity of salespeople
- Include identifying potential or prospective customers, contacting customers, calling on customers, making sales pitches, closing the sale, and following up on sales.
- Involves equipping salespeople with notebook computers and software to support their activities

OPERATIONAL MARKETING INFORMATION SYSTEMS (CONT.)

- **Prospect information systems:** Locating potential customers are often a time-consuming and frustrating part of the salesperson's work
- The sources of information used to obtain sales leads are diverse and may include other customers, other vendors
- Searching directories and other customer lists may take a lot of time.

OPERATIONAL MARKETING INFORMATION SYSTEMS (CONT.)

- **Contact management systems:** Provide information to the sales force pertaining to customers, their product or service preferences, sales history data, and a historical record of sales calls and/or visits.
- A call report showing the number of sales calls
- Categorized by size of organization, previous sales, or some other characteristic, and the number or amount of sales made per customer, per visit, and/or per category

OPERATIONAL MARKETING INFORMATION SYSTEMS (CONT.)

- **Telemarketing systems:** Usually include support for the automatic dialling of parties and/or
- Delivering voice messages to the answering party under the control of a computer system.
- To make notes about the calls, to generate follow-up letters, and to view a customer file

OPERATIONAL MARKETING INFORMATION SYSTEMS (CONT.)

- **Direct Mail Advertising Systems:** Many organizations generate sales by mailing sales brochures and catalogues directly to customers
- Maintain customer mailing lists that are used for mass mailings.
- Accounts receivable records; prospect files;
- Commercial databases of households, businesses, and organizations; or
- They can be purchased from other firms

OPERATIONAL MARKETING INFORMATION SYSTEMS (CONT.)

- **Point of Sale System:** Systems provide immediate updates to sales and inventory systems
- Allow firms to monitor sales trends minute by minute
- Allow firms to capture customer data and preferences
- Add the information to their data warehouses

OPERATIONAL MARKETING INFORMATION SYSTEMS (CONT.)

- **Delivery Tracking and Routine Systems:** Customers like to receive their merchandise on time.
- In a manual system, customers called in to a customer representative to check on the delivery of their merchandise.
- Call the delivery vehicle driver who uses a cell phone to tell the rep where he or she is
- How soon the merchandise might be delivered
- Process took time, frequently frustrated the customer, and cost the firm money to support

OPERATIONAL MARKETING INFORMATION SYSTEMS (CONT.)

- **Electronic Shopping and Advertising:** Firms have been able to advertise and customers to shop via TV; radio, and the telephone
- The computer age, however, has made other avenues for shopping and advertising available
- The Internet

OPERATIONAL MARKETING INFORMATION SYSTEMS (CONT.)

- **Virtual shopping:** When people view, select, and purchase products and services from a store in another location
- virtually shopping at that store
- allows organizations to present information about goods and services to potential customers
- Examples: Selecting and buying goods using an electronic kiosk, from an organization's Internet site, and from a "virtual mall" of Internet Web "stores"

OPERATIONAL PRODUCTION INFORMATION SYSTEMS

1. Purchasing Systems
2. Receiving Systems
3. Quality Control Systems
4. Shipping Systems
5. Cost Accounting Systems
6. Materials management systems
7. Inventory Control System
8. Automated Material Handling Systems
9. Computer Aided Design and Manufacturing
10. Image Management Systems
11. Material Selection Systems
12. Shop-Floor Scheduling

OPERATIONAL HUMAN RESOURCE INFORMATION SYSTEMS

1. Position Control Systems
2. Employee Information Systems
3. Performance Management Systems
4. Government Reporting Systems
5. Applicant Selection and Placement Systems
6. Training Systems

ASSESSMENT

1. Highlight some of the benefits of operational information systems management
2. List four financial accounting systems that you know
3. List four components of the operational production system

End of the Lecture!

THANK YOU.