Types of organization

Business, Organization

LESSON 2: ORGANIZATIONAL INFORMATION SYSTEMS An introductory topic on Management Information System Organizations are formal social units devoted to the attainment of specificgoals. The success of any organizations is premise on the efficient use and management of resources which traditionally comprises human, financial, and material resources. Information is now recognized as a crucial resource of an organization. Examples of organizations are business firms, banks, government agencies, hospitals, educational institutions, insurance companies, airlines, and utilities.

Organizations and information systems have a mutual influence on each other. The information needs of an organization affect the design of information systems and an organization must be open itself to the influences of information systems in order to more fully benefit from new technologies. [pic] This complex two-way relationship is mediated by many factors, not the least of which are the decisions made—or not made—by managers. Other factors mediating the relationship are the organizationalculture, bureaucracy, politics, business fashion, and pure chance. 1. Organizations and environments Organizations reside in environments from which they draw resources and to which they supply goods and services. Organizations and environments have a reciprocal relationship. • Organizations are open to, and dependent on, the social and physicalenvironmentthat surrounds them. Without financial and human resources—people willing to work reliably and consistently for a set wage or revenue from customers—organizations could not exist. • Organizations must respond to legislative and other requirements imposed by government, as well as the actions of customers and competitors. On the other hand,

organizations can influence their environments. Organizations form alliances with others to influence the political process; they advertise to influence customer acceptance of their products. Information systems are key instruments for environmental scanning, helping managers identify external changes that might require an organizational response. New technologies, new products, and changing public tastes and values (many of which result in new government regulations) put strains on any organization’s culture, politics, and people. | 2. Standard operating procedures (SOPs) Precise rules, procedures, and practices developed by organizations to cope with virtually all expected situations. These standard operating procedures have a great deal to do with the efficiency that modern organizations attain. 3. Organizational Politics People in organizations occupy different positions with different specialties, concerns, and perspectives.

As a result, they naturally have divergent viewpoints about how resources, rewards, and punishments should be distributed. These differences matter to both managers and employees, and they result in political struggle, competition, and conflict within every organization. Political resistance is one of the great difficulties of bringing about organizational change—especially the development of new information systems. Virtually all information systems that bring about significant changes in goals, procedures, productivity, and personnel are politically charged and elicit serious political opposition. . Organizational culture Organizational culture describes thepsychology, attitudes, experiences, beliefs and values (personal and cultural values) of an organization. It has been defined as " the specific collection of values and norms that are shared by people and groups in an

organization and that control the way they interact with each other and with stakeholders outside the organization. • It is the set of fundamental assumptions about what products the organization should produce, how and where it should produce them, and for whom they should be produced. It is a powerful unifying force that restrains political conflict and promotes common understanding, agreement on procedures, and common practices • organizational culture is a powerful restraint on change, especially technological change. Most organizations will do almost anything to avoid making changes in basic assumptions. Any technological change that threatens commonly held cultural assumptions usually meets a great deal of resistance.

However, there are times when the only sensible way for a firm to move forward is to employ a newtechnologythat directly opposes an existing organizational culture. Types of Organizational Information systems Decision making is often a manager’s most challenging role. Information systems have helped managers communicate and distribute information and provide assistance for management decision making. No single system provides all the information needed by the different organizational levels, functions and business processes.

Organizations can be divided into strategic, management, and operational levels. 1. Operational-level systems support operational managers' needs for current, accurate and easily accessible information primarily used to keep track of the elementary activities and transactions of the organization. Decision making for operational control determines how to carry out the specific tasks set forth by strategic and middle management decisions. 2.

Management-level systems are designed to serve the monitoring, controlling, decision-making, and administrative activities of middle managers.

Decision making for management control focuses on efficiency and effective use of resources. It requires knowledge of operational decision making and task completion. 3. Strategic- level systems help senior managers with long-range planning needed to meet changes in the external and internal business environment. Strategic decision determines the long-term objectives, resources and policies of the organization. Decisions at every level of the organization can also be classified as unstructured, structured and semi-structured. Unstructured decisions involve judgment, evaluation, and insight into the problem definition. They are novel, important, and nonroutine. • Structured decisions are routine • Semi-structured decisions involve cases where only part of the problem can be answered by an accepted procedure. Modern information systems have been most successful with structured, operational and management control decisions. But now most of the exciting applications are occurring at the management knowledge and strategic levels where problems are either semi-structured or unstructured.

TYPES OF ORGANIZATIONAL INFORMATION SYSTEM Following are the different types on information systems that support the needs of the organization: Executive information systems (EIS), Decision support systems (DSS), Management Information Systems(MIS), and Transaction Processing Systems (TPS). A. Executive information systems (EIS) provide top management with ready access to a variety of summarized company data

against a background of general information on the industry and the economy at large.

ESS provides a generalized computing and communications environment for senior managers at the strategic level of the organization. Top management of any organization need to be able to track the performance of their company and of its various units, assess the opportunities and threats, and develop strategic directions for the company's future. Executive information systems have these characteristics: 1. EIS provide immediate and easy access to information reflecting the key success factors of the company and of its units. 2. User-seductive" interfaces, such as color graphics and video, allow the EIS user to grasp trends at a glance. Users' time is at a high premium here. 3. EIS provide access to a variety of databases, both internal and external, through a uniform interface --- the fact that the system consults multiple databases should be transparent to the users. 4. Both current status and projections should be available from EIS. It is frequently desirable to investigate different projections; in particular, planned projections may be compared with the projections derived from actual results. . An EIS should allow easy tailoring to the prefaces of the particular user or group of users (such as the chief executive's cabinet or the corporate board). 6. EIS should offer the capability to " drill down" into the data: it should be possible to see increasingly detailed the summaries. Critical Success factors for achieving a successful EIS 1. A committed and informed executive sponsor. A top level executive, preferably the CEO, should serve as the executive sponsor of the EIS by encouraging its implementation. 2. An operating sponsor.

The executive sponsor will most likely be too busy to devote much time to implementation. That task should be given to another top-level executive, such as the executive vice-president. The operating sponsor works with both the user executives and the information specialists to ensure that the work gets done. 3. Appropriate information services staff. Information specialists should be available who understand not only the information technology but also how the executive will use the system. 4. Appropriate information technology.

EIS implementers should not get carried away and incorporate unnecessary hardware or software. The system must be kept as simple as possible and should give the executive exactly what him or her wants-nothing more and nothing less. 5. Data Management. It is not sufficient to simply display data or information. The executive should have some idea of how current the data is. This can be accomplished by identifying the day and ideally the time of the day the data was entered. The executive should be able to follow data analysis. . A clear link to business objectives. Most successful EISs are designed to solve specific problems or meet needs that can be addressed with information technology. 7. Management of organizational resistance. When an executive resists the EIS, efforts should be taken to gain support. A good strategy is to identify a single problem that the executive faces and then quickly implement an EIS, using prototyping to address that problem. Care must be taken to select a problem that will enable the EIS to make a good showing. . Management of the spread and evolution of the system. Experience has shown that when upper-level management begins receiving information from the EIS, lower level managers want to receive the same

output. Care must be taken to add users only when they can be given the attention they need. B. Management information systems (MIS) - serve the management level of the organization, providing managers with reports and, in some cases, with online access to the organization’s current performance and historical records.

Typically, they are oriented almost exclusively to internal, not environmental or external, events. MIS primarily serve the functions of planning, controlling, and decision making at the management level. Generally, they depend on underlying transaction processing systems for their data C. Decision support systems (DSS), is a type of MIS expressly developed to support the decision-making process in non-routine task. DSS assist middle managers with analytical decisions, and able to address semistructured problems drawing on both internal and external sources of data 1.

It is an interactive computer-based system intended to help managers retrieve, summarize, analyze decision relevant data and make decisions. 2. DSS facilitate a dialogue between the user, who is considering alternative problem solutions, and the system, with its built-in models and access to the database. 3. DSS are interactive, and in a typical session, the manager using a DSS can evaluate a number of possible “ what if” scenarios by using a model or a simulation of a real life system. Two major categories of DSS 1. Enterprise-wide DSS are linked to large, data warehouse and serve many managers in a company.

Enterprise wide DSS can range from fairly simple systems to complex data intensive and analytically sophisticated executive information system. 2. Desk-top DSS such as spreadsheets, accounting and financial models can be

implemented in Microsoft Excel. Another DSS tool, simulation, is usually implemented in desktop packages. D. Transaction processing systems (TPS) is the core of IT applications in business since it serves the operational level of the organization by recording the daily transactions required to conduct business.

Most mission- critical information systems for both large and small organizations are essentially transaction processing systems for operational data processing that is needed, for example, to register customer orders and to produce invoices and payroll checks. This system keeps track ofmoneypaid to employees, generating employee paychecks and other reports. A symbolic representation for a payroll TPS Typical applications of TPS There are five functional categories of TPS: sales/marketing, manufacturing/production, finance/accounting, human resources, and other types of systems specific to a particular industry.

Within each of these major functions are subfunctions. For each of these subfunctions (e. g. , sales management) there is a major application system. [pic] The various types of systems in the organization exchange data with one another. TPS are a major source of data for other systems, especially MIS and DSS. ESS is primarily a recipient of data from lower-level systems. Systems from a Functional Perspective There are four major functional areas in an organization: sales and marketing, manufacturing and production, finance and accounting, and human resources. . Sales and Marketing Systems The sales and marketing function is responsible for selling the organization’s product or service. Sales function is concerned with contacting customers, selling the products and services, taking orders, and following up

on sales. Marketing is concerned with identifying the customers for the firm’s products or services, determining what customers need or want, planning and developing products and services to meet their needs, and advertising and promoting these products and services.

Sales and marketing information systems support these activities and help the firm identify customers for the firm’s products or services, develop products and services to meet customers’ needs, promote these products and services, sell the products and services, and provide ongoing customer support. Examples of Sales and Marketing information systems are Order processing, pricing Analysis and sales Trend Forecasting. 2. Manufacturing and Production Systems The manufacturing and production function is responsible for actually producing the firm’s goods and services.

Manufacturing and production systems deal with the planning, development, and maintenance of production facilities; the establishment of production goals; the acquisition, storage, and availability of production materials; and the scheduling of equipment, facilities, materials, and labor required to fashion finished products. Manufacturing and production information systems support these activities, it deal with the planning, development, and production of products and services, and with controlling the flow of production. 3. Finance and Accounting Systems

The finance function is responsible for managing the firm’s financial assets, such as cash, stocks, bonds, and other investments, in order to maximize the return on these financial assets. The finance function is also in charge of managing the capitalization of the firm (finding new financial assets in stocks, bonds, or other forms of debt). In order to determine whether the

firm is getting the best return on its investments, the finance function must obtain a considerable amount of information from sources external to the firm.

The accounting function is responsible for maintaining and managing the firm’s financial records—receipts, disbursements, depreciation, payroll—to account for the flow of funds in a firm. Finance and accounting share related problems—how to keep track of a firm’s financial assets and fund flows. They provide answers to questions such as these: What is the current inventory of financial assets? What records exist for disbursements, receipts, payroll, and other fund flows? Examples of Finance and Accounting Systems : Accounts receivable, Budgeting, Profit Planning. 4. Human Resources Systems

The human resources function is responsible for attracting, developing, and maintaining the firm’s workforce. Human resources information systems support activities, such as identifying potential employees, maintaining complete records on existing employees, and creating programs to develop employees’ talents and skills Examples of Human resources information systems: training and development, compensation analysis, and Human Resources Planning. Management Challenges Businesses need different types of information systems to support decision making and work activities for various organizational levels and functions.

Well-conceived systems linking the entire enterprise typically require a significant amount of organizational and management change and raise the following management challenges: 1. Integration. Although it is necessary to design different systems serving different levels and functions in the firm, more and more firms are finding advantages in integrating systems.

However, integrating systems for different organizational levels and functions to freely exchange information can be technologically difficult and costly.

Managers need to determine what level of system integration is required and how much it is worth in dollars. 2. Enlarging the scope of management thinking. Most managers are trained to manage a product line, a division, or an office. They are rarely trained to optimize the performance of the organization as a whole and often are not given the means to do so. But enterprise systems and industrial networks require managers to take a much larger view of their own behavior, including other products, divisions, departments, and even outside business firms. ---------- Objectives : At the end of the lesson, the students should be able to: • Illustrate the relationship between organizations and information systems • Explain the factors mediating the relationship between organizations and information systems • Discuss the different types of information systems in the organization. • Explain how information supports the different levels of an organization • Give examples of the information systems that are being used to support business functional areas