

UNIT II

PEOPLE MANAGEMENT-HUMAN RESOURCE SECURITY

INTRODUCTION TO INFORMATION MANAGEMENT

Data

Data is defined as facts or figures, or information that's stored in or used by a computer. An example of data is information collected for a research paper. the quantities, characters, or symbols on which operations are performed by a computer, which may be stored and transmitted in the form of electrical signals and recorded on magnetic, optical, or mechanical recording media.

Information

Information is a stimulus that has meaning in some context for its receiver. When information is entered into and stored in a computer, it is generally referred to as [data](#). After processing (such as formatting and printing), output data can again be perceived as information.

Information (shortened as info or info.) is that which informs, i.e. that from which [data](#) can be derived. At its most fundamental, information is any propagation of cause and effect within a system. Information is [conveyed](#) either as the content of a [message or](#) through direct or indirect [observation of](#) something. That which is [perceived](#) can be construed as a message in its own right, and in that sense, information is always conveyed as the content of a [message](#). Information can be [encoded into](#) various forms for transmission and [interpretation](#). For example, information may be encoded into [signs,](#) and transmitted [via signals](#).

These are difficult times for all organizations of all sizes and in all sectors. On the one hand, customers have ever-increasing expectations in terms of the speed and quality of service they expect and, on the other resources are continually under pressure.

This document sets out how effective information and records management can help any organization to move forward in this challenging environment through,

- achieving cost and efficiency savings;

- making best use of information assets and
- Taking advantage of the opportunities offered by new technologies.

Intelligence

Intelligence has been defined in many different ways such as in terms of one's capacity for logic, abstract thought, understanding, self-awareness, communication, learning, emotional knowledge, memory, planning, creativity and problem solving.

Knowledge

Knowledge is a familiarity, awareness or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning. Knowledge can refer to a theoretical or practical understanding of a subject.

Importance:

- Learning Better
- Setting Goals As You Learn
- Learn Complex Things Faster
- Knowledge Helps You Solve Problems
- Understanding Yourself

Information Technology (IT)

Information technology (IT) is the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data, often in the context of a business or other enterprise.

Need

- Education is a lifelong process therefore anytime anywhere access to it is the need
- Information explosion is an ever increasing phenomena therefore there is need to get access to this information
- Education should meet the needs of variety of learners and therefore IT is important in meeting this need
- It is a requirement of the society that the individuals should possess technological literacy
- We need to increase access and bring down the cost of education to meet the challenges of illiteracy and poverty-IT is the answer

Importance

- access to variety of learning resources
- immediacy to information
- anytime learning
- anywhere learning
- collaborative learning

- multimedia approach to education
- authentic and up to date information
- access to online libraries
- teaching of different subjects made interesting
- educational data storage
- distance education
- access to the source of information
- Multiple communication channels-e-mail, chat, forum, blogs, etc.
- access to open courseware
- better accesses to children with disabilities
- reduces time on many routine tasks

1.1 Information system

An information system (IS) is a system composed of people and computers that processes or interprets information. The term is also sometimes used in more restricted senses to refer to only the software used to run a computerized database or to refer to only a computer system.

1.1.1 Importance

1. To control the creation and growth of records

Despite decades of using various non-paper storage media, the amount of paper in our offices continues to escalate. An effective records information system addresses both creation control (limits the generation of records or copies not required to operate the business) and records retention (a system for destroying useless records or retiring inactive records), thus stabilizing the growth of records in all formats.

2. To reduce operating costs

Recordkeeping requires administrative dollars for filing equipment, space in offices, and staffing to maintain an organized filing system (or to search for lost records when there is no organized system). It costs considerably less per linear foot of records to store inactive records in a Data Records Center versus in the office and there is an opportunity to effect some cost savings in space and equipment, and an opportunity to utilize staff more productively - just by implementing a records management program.

3. To improve efficiency and productivity

Time spent searching for missing or misfiled records are non-productive. A good records management program (e.g. a document system) can help any organization upgrade its recordkeeping systems so that information retrieval is enhanced, with corresponding improvements in office efficiency and productivity. A well designed and operated filing system with an effective index can facilitate retrieval and deliver information to users as quickly as they need it.

Moreover, a well managed information system acting as a corporate asset enables organizations to objectively evaluate their use of information and accurately lay out a roadmap for improvements that optimize business returns.

4. To assimilate new records management technologies

A good records management program provides an organization with the capability to assimilate new technologies and take advantage of their many benefits. Investments in new computer systems whether this is financial, business or otherwise, don't solve filing problems unless current manual recordkeeping or bookkeeping systems are analyzed (and occasionally, overhauled) before automation is applied.

5. To ensure regulatory compliance

In terms of recordkeeping requirements, China is a heavily regulated country. These laws can create major compliance problems for businesses and government agencies since they can be difficult to locate, interpret and apply. The only way an organization can be reasonably sure that it is in full compliance with laws and regulations is by operating a good management information system which takes responsibility for regulatory compliance, while working closely with the local authorities. Failure to comply with laws and regulations could result in severe fines, penalties or other legal consequences.

6. To minimize litigation risks

Business organizations implement management information systems and programs in order to reduce the risks associated with litigation and potential penalties. This can be equally true in Government agencies. For example, a consistently applied records management program can reduce the liabilities associated with document disposal by providing for their systematic, routine disposal in the normal course of business.

7. To safeguard vital information

Every organization, public or private, needs a comprehensive program for protecting its vital records and information from catastrophe or disaster, because every organization is vulnerable to loss. Operated as part of a good management information system, vital records programs preserve the integrity and confidentiality of the most important records and safeguard the vital information assets according to a "Plan" to protect the records. This is especially the case for financial information whereby ERP (Enterprise Resource Planning) systems are being deployed in large companies.

8. To support better management decision making

In today's business environment, the manager that has the relevant data first often wins, either by making the decision ahead of the competition, or by making a better, more informed decision. A good management information system can help ensure that managers and executives have the information they need when they need it.

By implementing an enterprise-wide file organization, including indexing and retrieval capability, managers can obtain and assemble pertinent information quickly for current decisions and future business planning purposes. Likewise, implementing a good ERP system to take account of all the business' processes both financial and operational will give an organization more advantages than one who was operating a manual based system.

9. To preserve the corporate memory

An organization's files, records and financial data contain its institutional memory, an irreplaceable asset that is often overlooked. Every business day, you create the records, which could become background data for future management decisions and planning.

10. To foster professionalism in running the business

A business office with files, documents and financial data askew, stacked on top of file cabinets and in boxes everywhere, creates a poor working environment. The perceptions of customers and the public, and "image" and "morale" of the staff, though hard to quantify in cost-benefit terms, may be among the best reasons to establish a good management information system.

3 Kinds of Information Systems

- Organizational Hierarchy
- Organizational Levels
- Information Systems

Four General Kinds of IS

- Operational-level systems
 - Support operational managers by monitoring the day-to-day's elementary activities and transactions of the organization. e.g. TPS.
- Knowledge-level systems
 - Support knowledge and data workers in designing products, distributing information, and coping with paperwork in an organization. e.g. KWS, OAS
- Management-level systems
 - Support the monitoring, controlling, decision-making, and administrative activities of middle managers. e.g. MIS, DSS
- Strategic-level systems
 - Support long-range planning activities of senior management. e.g. ESS
- Executive Support Systems (ESS)
- Management Information Systems (MIS)
- Decision Support Systems (DSS)
- Knowledge Work Systems (KWS)
- Office Automation Systems (OAS)
- Transaction Processing

Systems (TPS) Transaction Processing
Systems (TPS)

Computerized system that performs and records the daily routine transactions necessary to conduct the business; these systems serve the operational level of the organization

- TYPE: Operational-level
- INPUTS: transactions, events
- PROCESSING: updating
- OUTPUTS: detailed reports

- USERS: operations personnel, supervisors
- DECISION-MAKING: highly structured

EXAMPLE: payroll, accounts payable

Office Automation Systems (OAS)

Computer system, such as word processing, electronic mail system, and scheduling system, that is designed to increase the productivity of data workers in the office.

- TYPE: Knowledge-level
- INPUTS: documents, schedules
- PROCESSING: document management, scheduling, communication
- OUTPUTS: documents; schedules
- USERS: clerical workers

EXAMPLE: document imaging system

Knowledge Work Systems (KWS)

Information system that aids knowledge workers in the creation and integration of new knowledge in the organization.

- TYPE: Knowledge-level
- INPUTS: design specifications
- PROCESSING: modelling
- OUTPUTS: designs, graphics
- USERS: technical staff; professionals

EXAMPLE: Engineering workstations

Decision Support Systems (DSS)

Information system at the management level of an organization that combines data and sophisticated analytical models or data analysis tools to support semi-structured and unstructured decision making.

- TYPE: Management-level
- INPUTS: low volume data
- PROCESSING: simulations, analysis
- OUTPUTS: decision analysis
- USERS: professionals, staff managers
- DECISION-MAKING: semi-structured

EXAMPLE: sales region analysis

Management Information Systems (MIS)

Information system at the management level of an organization that serves the functions of planning, controlling, and decision making by providing routine summary and exception reports.

- TYPE: Management-level
- INPUTS: high volume data
- PROCESSING: simple models
- OUTPUTS: summary reports
- USERS: middle managers
- DECISION-MAKING: structured to semi-structured

EXAMPLE: annual budgeting

Executive Support Systems (ESS)

Information system at the strategic level of an organization that address unstructured decision making through advanced graphics and communications.

TYPE:
Strategic level

- INPUTS: aggregate data; internal and external
- PROCESSING: interactive
- OUTPUTS: projections
- USERS: senior managers
- DECISION-MAKING: highly unstructured

EXAMPLE: 5 year

operating plan

Classification of IS by Organizational Structure

Departmental Information Systems
Enterprise Information System
Inter-organizational Systems
NYCE
SABRE or APOLLO

Classification of IS by Functional Area

- The accounting information system
- The finance information system
- The manufacturing (operations, production) information system
- The marketing information system
- The human resources information system

Information security and records management

What is information security?


Information security may be defined as the preservation of:

confidentiality: protecting information from unauthorised access and disclosure; integrity: safeguarding the authenticity, accuracy and completeness of information and processing methods; and availability: ensuring that information and associated services are available to authorised users when required.

Appropriate protection is required for all forms of information, paper or electronic, to ensure business continuity and efficiency, and to avoid breaches of statutory, regulatory or contractual obligations.

Why is information security needed?

Organisations and their information systems face security threats from a wide range of sources, including computer-assisted fraud, sabotage, vandalism, theft, fire or flood. Damage caused by breaches such as computer viruses and computer hacking is becoming increasingly common and sophisticated. Dependence on information systems and services means that organisations are increasingly exposed and vulnerable to security threats; security issues were not always the primary consideration in system design.

What does information security have to do with managing records? If you are managing your records properly, you should be keeping them secure. This process involves an assessment of how secure it needs to be, depending on the nature, content and importance of it. The Information Security Policy and the guidance on the Data Protection Act should help you to make this kind of assessment. Information that will need to be kept secure includes:  Personal information.

For example student and staff information. Information relating to teaching and research, particularly prior to publication Information relating to the School's commercial interests As a general rule, if the loss or unauthorized access or editing of the information could cause damage to the School or stop you from doing your work, it will need greater security. Storage of records Where records fit into the categories listed above, they will need stricter storage solutions.

Paper records in these categories will need to be kept in lockable cupboards or drawers when not in use. This is particularly so when third parties have access to offices where records are stored. The Disability and Wellbeing Office have a good system in place for their paper records.

A clear desk policy is recommended, where files and other paper documentation are locked away at the end of the working day. Electronic records in these categories need to be kept password protected within databases or stored in a shared drive that the relevant people have access to. Cloud services should not be used particularly for personal information or information relating to the School's commercial interests.

Only put into the cloud what you can afford to lose. Portable storage devices should be encrypted or not used at all – the remote desktop allows access to information on the School's systems and should be used whenever away from the School. A shortcut to the shared drive on your H space will allow access within the remote desktop connection. Keep antivirus software up to date on any laptops and password protect any mobile devices.

Email is not a secure system, so be aware that confidentiality cannot be assured for any information sent via email. Tracking of records Tracking ensures that only those users with appropriate permissions are performing information tasks for which they have been authorised. Tracking systems can range from a handwritten note to an automated transaction in an electronic document management system.

All tracking systems, however, have to meet the test of locating any record within the appropriate time period and ensuring that all movements are traceable. For example, the Exams and Ceremonies Office use an Excel based system for tracking scripts for Data Protection requests, allowing them to know where scripts are and when sent out and returned. Electronic records and authenticity Electronic records are particularly vulnerable to unauthorised or inadvertent change and loss.

Security measures need to include: ■ Digital signatures to protect the authenticity and integrity of electronic documents (the Electronic Communications Act 2000 provides for legal recognition of electronic signatures and the process under which they are generated, communicated or verified). ■ Scanning and storing electronic records and digitised documents according to BSI PD 0008:1999, Legal admissibility and evidential weight of information stored electronically to ensure their authenticity in the event of a legal challenge. ■ Encryption of portable storage media. Classification of information for security purposes Classification of records is a shorthand way of determining how this information is to be handled and protected.

Classifications should take account of business needs for sharing or restricting information, and the business impacts associated with such needs e.g. unauthorized access or damage to the information.

The School's information security scheme can be found here. Please note, classifying information as confidential will not necessarily mean that it will be considered exempt from release under the Freedom of Information Act.

Destruction of confidential data All staff have a responsibility to consider security when disposing of information in the course of their work. For destruction of material in paper format refer to the guidance on paper records disposal. Special care must be taken with the destruction of e-records, as deleted information can often be reconstructed.

Erasing and reformatting disks or personal computers with hard drives which contained personal data is likely to be insufficient. Destruction should be carried out in collaboration with your IT Support team, which will have the software tools to ensure that the data is removed. Overwriting should ensure all previous information has been removed, but this should be executed by authorised staff only. All destruction should be carried out in accordance with the provisions of the relevant retention schedule for that information, allowing for an audit trail to be kept.

