MONASH University

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BUSINESS INFORMATION SYSTEMS AND PROCESSES

Lecture 11b IS in Society - Ethical Use of IS

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Learning Objectives

On completion of this lecture, you will be able to:

- Describe some examples of waste and mistakes in an IS environment, their causes, and possible solutions
- Identify policies and procedures used in eliminating waste and mistakes
- Discuss the principles and limits of an individual's right to privacy
- Outline criteria for the ethical use of information systems

Computer Waste and Mistakes

- Computer waste
  - Organizations operating unintegrated information systems
  - Acquiring redundant systems
  - Wasting information system resources
- Computer-related mistakes
  - Errors, failures, and other computer problems resulting in bad system output
  - Mostly caused by human error

Computer Waste

- Unitegrated information systems make it difficult to collaborate and share information
  - Leads to missed opportunities, increased costs, and lost sales
- Systems acquired in different organizational units that perform the same functions

Computer-Related Mistakes

- Common causes
  - Unclear expectations
  - Inadequate training and feedback
  - Program development that contains errors
  - Incorrect input by a data-entry clerk

Preventing Computer-Related Waste and Mistakes

- Involves:
  - Establishing policies and procedures
  - Implementing policies and procedures
  - Monitoring policies and procedures
  - Reviewing policies and procedures

Establishing Policies and Procedures

- Types of computer-related mistakes
  - Data-entry or data-capture errors
  - Errors in computer programs
  - Errors in handling files
  - Mishandling of computer output
  - Inadequate planning for and control of equipment malfunctions
  - Inadequate planning for and control of environmental difficulties

Establishing Policies and Procedures (cont'd.)

- Types of computer-related mistakes (cont'd.)
  - Installing computing capacity inadequate for the level of activity
  - Failure to provide access to the most current information

Implementing Policies and Procedures

- Policies to minimize waste and mistakes
  - Changes to critical tables, HTML, and URLs should be tightly controlled
  - A user manual should be available covering operating procedures
  - Each system report should indicate its general content in its title and indicate relevant time period

Policies to Minimize Waste and Mistakes (cont'd.)

- The system should have controls to prevent invalid and unreasonable data entry
  - Ensures that data input, HTML, and URLs are valid, applicable, and posted in the right time frame
- Users should implement proper procedures to ensure correct input data

Monitoring Policies and Procedures

- Monitor routine practices and take corrective action if necessary
- Implement internal audits to measure actual results against established goals

Reviewing Policies and Procedures

- Questions to be answered
  - Do current policies cover existing practices adequately?
  - Does the organization plan any new activities in the future? Who will handle them and what must be done?
  - Are contingencies and disasters covered?

Patent and Copyright Violations

- Software piracy
  - The act of unauthorized copying or distribution of copyrighted software
  - Penalties can be severe
- Digital rights management
  - The use of any of several technologies to enforce policies for controlling access to digital media (e.g., movies, music, and software)

Patent and Copyright Violations (cont'd.)

- Patent infringement
  - Occurs when someone makes unauthorized use of another's patent
  - A penalty up to three times the damages claimed by the patent holder can be assessed

Security Dashboard

- Software that provides a comprehensive display on a single computer screen of all the vital data related to an organization's security defenses, including:
  - Threats
  - Exposures
  - Policy compliance
  - Incident alerts

Privacy Issues

- Issue of privacy deals with the right to be left alone or to be withdrawn from public view
- Data is constantly being collected and stored on each of us
- The data is often distributed over easily accessed networks without our knowledge or consent
  - Who owns this information and knowledge?
  - BIGGER Data with the HAT Ecosystem
  - https://www.youtube.com/watch?v=kgxKl_OCOaQ
  - https://www.youtube.com/watch?v=Li2U-MJsnEA

Privacy at Work

- Employers use technology and corporate policies to manage worker productivity and protect the use of IS resources
  - Concerned about inappropriate Web surfing
    - Over half of employers monitoring employees' Web activity
- Organizations monitor employees' email
  - More than half retain and review messages

Privacy and Email

- Federal law permits employers to monitor email sent and received by employees
- Email messages that have been erased from hard disks can be retrieved and used in lawsuits
- Email use among public officials might violate "open meeting" laws
- https://www.oaic.gov.au/individuals/faqs-for-individuals/workplace/

Privacy and Instant Messaging

- To protect your privacy and your employer's property:
  - Do not send personal or private IMs at work
  - Choose a nonrevealing, nongender-specific, unprovocative IM screen name
  - Do not send embarrassing messages
  - Do not open files or click links in messages from people you do not know
  - Never send sensitive personal data via IM

Privacy and Personal Sensing Devices

- RFID tags
  - Microchips with antenna
  - Embedded in many of the products we buy, e.g., medicine containers, clothing, computer printers, car keys, library books, tires
  - Generate radio transmissions that, if appropriate measures are not taken, can lead to potential privacy concerns

Privacy and the Internet

- Privacy concerns with the Internet
  - Sending email messages
  - Visiting a Web site
  - Buying products over the Internet
- The Children's Online Privacy Protection Act (COPPA) of 1998
  - Impacts the design and operations of Web sites that cater to children

Privacy and the Internet (cont'd.)

- Social network services
  - Examples: Facebook, Twitter, LinkedIn, Pinterest, Google Plus, Tumblr, and Instagram
  - Parents should discuss potential dangers, check their children's profiles, and monitor children's activities

Privacy and Internet Libel Concerns

- Libel: publishing an intentionally false written statement that is damaging to a person's or organization's reputation
- Individuals:
  - Can post information to the Internet using anonymous e-mail accounts or screen names
  - Must be careful what they post on the Internet to avoid libel charges

Privacy and Fairness in Information Use

- Selling information to other companies can very lucrative; many companies store and sell the data they collect on customers, employees, and others
  - When is this information storage and use fair and reasonable to the people whose data is stored and sold?
  - Do people have a right to know about and to decide what data is stored and used?

Privacy and Filtering and Classifying Internet Content

- Filtering software screens Internet content
- Children's Internet Protection Act (CIPA)
  - Schools and libraries subject to CIPA do not receive the discounts offered by the "E-Rate" program unless they certify that they have certain Internet safety measures in place to block or filter "visual depictions that are obscene, child pornography, or are harmful to minors"

Corporate Privacy Policies

- Most organizations realize that invasions of privacy can:
  - Hurt their business
  - Turn away customers
  - Dramatically reduce revenues and profits
- Most organizations maintain privacy policies

Individual Efforts to Protect Privacy

- To protect personal privacy:
  - Find out what is stored about you in existing databases
  - Be careful when you share information about yourself
  - Be proactive to protect your privacy
  - Take extra care when purchasing anything from a Web site

Work Environment

- Use of computer-based information systems has changed the workforce
  - Jobs that require IS literacy have increased
  - Less-skilled positions have decreased
- While information systems increase productivity and efficiency, there are inherent concerns with their use

Health Concerns

- Occupational stress
- Seated immobility thromboembolism (SIT)
- Repetitive strain injury (RSI)
  - Carpal tunnel syndrome (CTS)

Avoiding Health and Environment Problems

- Work stressors are hazardous activities associated with unfavorable conditions of a poorly designed work environment
- Ergonomics is the science of designing machines, products, and systems to maximize safety, comfort, and efficiency of people who use them

Avoiding Common Discomforts Associated with Heavy Use of Computers

Common Discomforts Associated with Heavy Use of Computers	Preventative Action
Red, dry, itchy eyes	Change your focus away from the screen every 20 or 30 minutes by looking into the distance and focusing on an object for 20 to 30 seconds. Make a conscious effort to blink more often. Consider the use of artificial tears. Use an LCD screen that provides a much better viewing experience for your eyes by virtually eliminating flicker while still being bright without harsh incandescence.
Neck and shoulder pain	Use proper posture when working at the computer. Stand up, stretch, and walk around for a few minutes every hour. Shrug and rotate your shoulders occasionally.

Table 14.8, Pg 683, Stair & Reynold

Avoiding Common Discomforts (cont'd.)

Common Discomforts Associated with Heavy Use of Computers	Preventative Action
Pain, numbness, or tingling sensation in hands	Use proper posture when working at the computer Do not rest your elbows on hard surfaces Place a wrist rest between your computer keyboard and the edge of your desk. Take an occasional break and spread fingers apart while keeping your wrists straight Taken an occasional break with your arms resting at your sides and gently shake your hands

Ethical Issues in Information Systems

- A code of ethics:
  - States the principles and core values essential to a set of people and, therefore, govern their behavior
  - Can become a reference point for weighing what is legal and what is ethical

Ethical Issues in Information Systems (cont'd.)

- Mishandling of the social issues discussed in chapter 14 (Stair & Reynold, 2016) including waste and mistakes, crime, privacy, health, and ethics—can devastate an organization
- Prevention of these problems and recovery from them are important aspects of managing information and information systems as critical corporate assets

Including Ethical Considerations in Decision Making

FIGURE 14.6
There are many factors to weigh in decision making

Code of Ethics

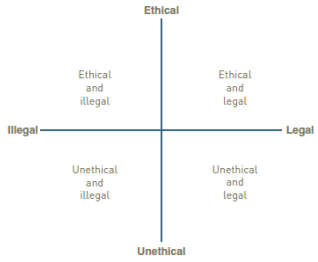

FIGURE 14.7
Legal versus ethical
Just because an activity is defined as legal does not mean that it is ethical.

Summary

- Computer waste is the inappropriate use of computer technology and resources in both the public and private sectors
- Preventing waste and mistakes involves establishing, implementing, monitoring, and reviewing effective policies and procedures
- Security measures, e.g., using passwords, identification numbers, and data encryption, help to guard against illegal computer access
- Balancing the right to privacy versus the need for additional monitoring to protect against terrorism and cyberattacks is an especially challenging problem
- Employers use technology and corporate policies to manage worker productivity and protect the use of IS resources
- A business should develop a clear and thorough privacy policy

Summary

- Jobs that involve heavy use of computers contribute to a sedentary lifestyle, which increases the risk of health problems
- Ergonomic design principles help to reduce harmful effects and increase the efficiency of an information system
- A code of ethics states the principles and core values that are essential to the members of a profession or organization
- Ethical computer users define acceptable practices more strictly than just refraining from committing crimes; they also consider the effects of their IS activities, including Internet usage, on other people and organizations