

# Internal Controls and the importance of data security

# WHAT IS INTERNAL CONTROL, AND HOW CAN IT BE USED TO PROTECT A COMPANY'S ASSETS?

Internal control is the plan and measures designed to:

1. Safeguard assets
2. Encourage employees to follow company policies
3. Promote operational efficiency
4. Ensure accurate, reliable accounting records

# Why is data security important?

## Causes of Data Breaches



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- Ponemon Data Breach Study (released June 2017)
  - Malicious or criminal attacks continued to be the primary cause of data breach. Incident analysis:
    - 47% involved a malicious or criminal attack
    - 28% were caused by negligent employees
    - 25% involved system glitches that included both IT and business process failures
- Your Takeaway
  - 53% (28% + 25%) of incidents are preventable with proper employee awareness and training, competent IT staff, and properly designed business processes

# Data Security

## Confidentiality vs. Privacy vs. Information Security



When people say they're worried about  
"cybersecurity",  
they usually mean they're worried about the  
*confidentiality* and *privacy* of their data.

# Data Security

## Confidential vs Private Data

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- Confidential data is generally considered to be sensitive (not for public consumption) but not necessarily private
- With confidential data, the objectives usually are to:
  - Limit access to those who are authorized to view the data
  - Protect the data from accidental or purposeful unauthorized access by internal or external parties
- Private data:
  - Is personally identifiable (i.e., can be linked to an individual person)
  - Usually has regulatory or compliance requirements that force organizations to ensure that the data is not disclosed except in certain allowed circumstances
- Examples of compliance requirements requiring privacy:
  - State identity theft laws
  - Payment Card Industry Data Security Standard (PCI DSS) for credit card data
  - HIPAA for health care-related data
  - European Union privacy laws

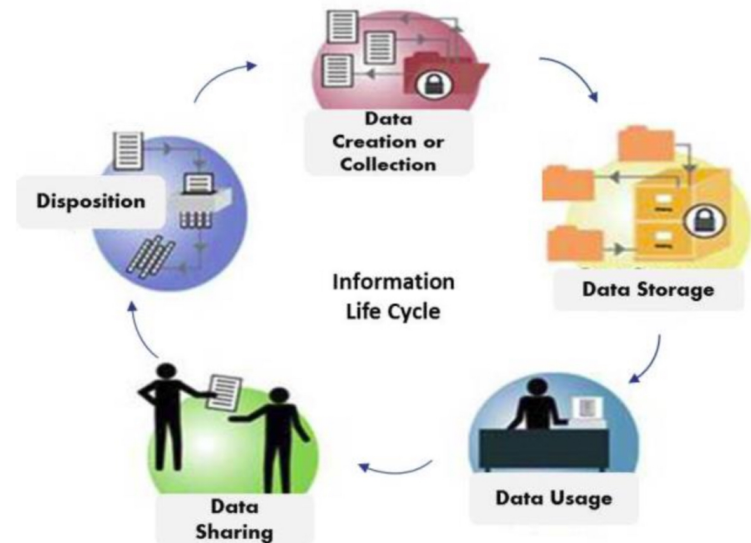
# Data Security

## Review All Stages of the Information Life Cycle

Source: DHHS Privacy Awareness Training; Fiscal Year 2015

Protecting PII is important during each stage of the information life cycle.

- **Data Collection or Creation:** Gathering PII for use.
- **Data Storage:** Maintaining or storing PII.
- **Data Usage:** Using PII to accomplish a job function.
- **Data Sharing:** Disclosing or transferring PII.
- **Disposition:** Disposing of PII when no longer needed in accordance with record management requirements and organizational disposal policies.




## WHAT IS INTERNAL CONTROL, AND HOW CAN IT BE USED TO PROTECT A COMPANY'S ASSETS?

- A key responsibility of a business manager is to control operations.
- **Internal control** is the organizational plan and all the related measures adopted by an entity to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting records.

# The Components of Internal Control

- **C**ontrol procedures
- **R**isk assessment
- **I**nformation system
- **M**onitoring of controls
- **E**nvironment



Internal controls  
are monitored by  
**internal auditors**  
and **external**  
**auditors.**



# Internal Control Procedures

- Competent, reliable, and ethical personnel
- Assignment of responsibilities
- **Separation of duties**, which is a division of responsibilities between two or more people to limit fraud and promote accuracy of accounting records
  - Separating operations from accounting
  - Separating the custody of assets from accounting

# Internal Control Procedures

- Audits
  - Internal audits are performed by employees of the company.
  - External audits are performed by independent auditors (not employees).
- Documents
- Electronic devices
  - For example, sensors attached to inventory can reduce theft.

# Internal Control Procedures

- E-commerce
  - **Encryption** rearranges plain-text messages by a mathematical process.
  - **Firewalls** limit access into a local network.
  - Passwords, PINs, and signatures are additional security measures.
- Other controls
  - Examples: Fireproof vaults, alarms, loss-prevention specialists, fidelity bonds, mandatory vacations, job rotation

# The Limitations of Internal Control— Costs and Benefits

- Internal controls cannot completely prevent fraud.
- **Collusion** occurs when two or more people work together to circumvent internal controls and defraud a company.
- The stricter the internal controls, the higher the costs.
  - Internal controls are judged based on their cost versus benefit.

# Malia needs your help

- Malia is a new restaurant owner and doesn't see the need to spend money on the implementation of internal control procedures to safeguard her data. She insists that she does not have anything that anyone would want. Write an email to Malia and explain what she has, who would want it, why she should protect it, and how.
- Send it to [kellyaw@hawaii.edu](mailto:kellyaw@hawaii.edu).