IT AUDIT FUNDAMENTAL

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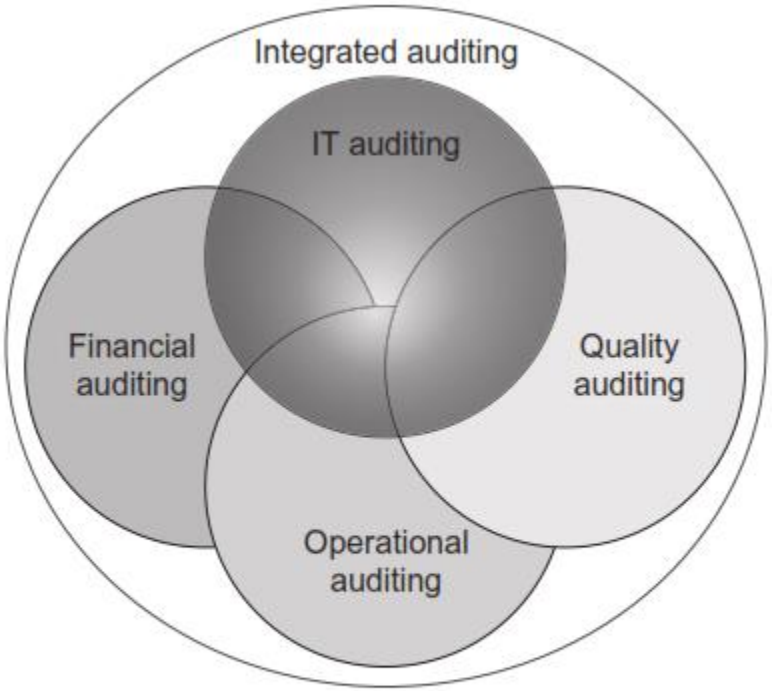


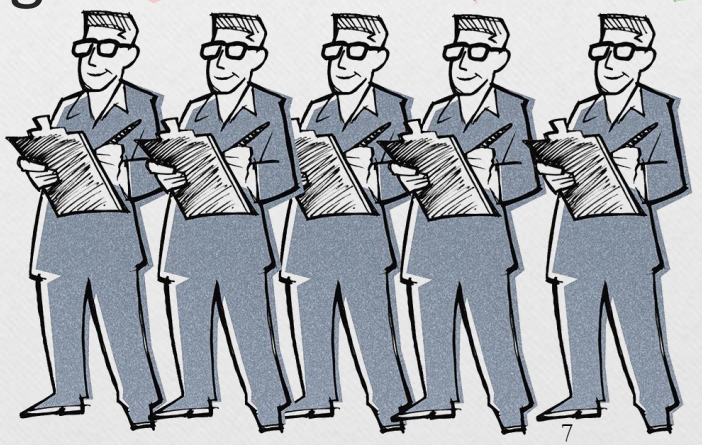
IT auditing has much in common with other types of audit and overlaps in many respects with financial, operational, and quality audit practices.

1. What is auditing?

- An audit is often defined as an independent examination (*pemeriksaan*), inspection, or review
- While the term applies to evaluations of many different subjects, the most frequent usage is with respect to an organization's financial statements or accounts

1. What is auditing?

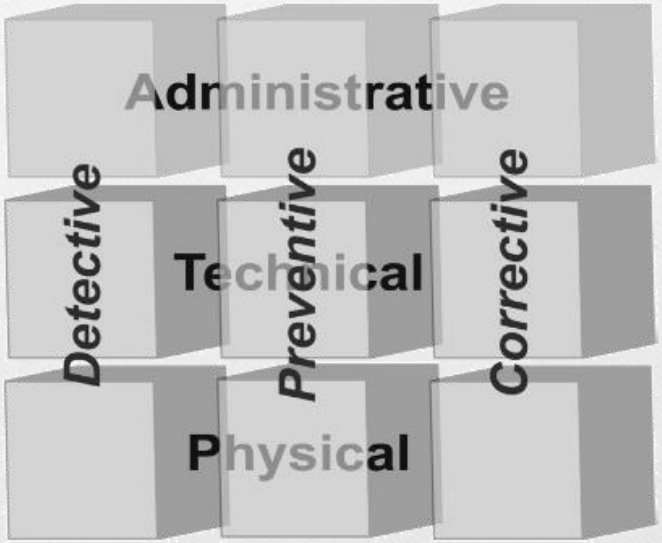
- Such general interpretations are well suited to IT auditing, which comprises (terdiri) a wide range of standards, requirements, and other audit criteria corresponding to processes, systems, technologies, or entire organizations subject to IT audits



1. What is auditing?

- **Internal Control**

External and internal IT audits share a common focus: the internal controls implemented and maintained by the organization being audited



Internal and external IT audits focus primarily on internal controls, differentiated by purpose and type; different auditing methods apply when evaluating different kinds of controls

1. What is auditing?

Table 1.1 Examples of Internal Controls Categorized by Type and Purpose

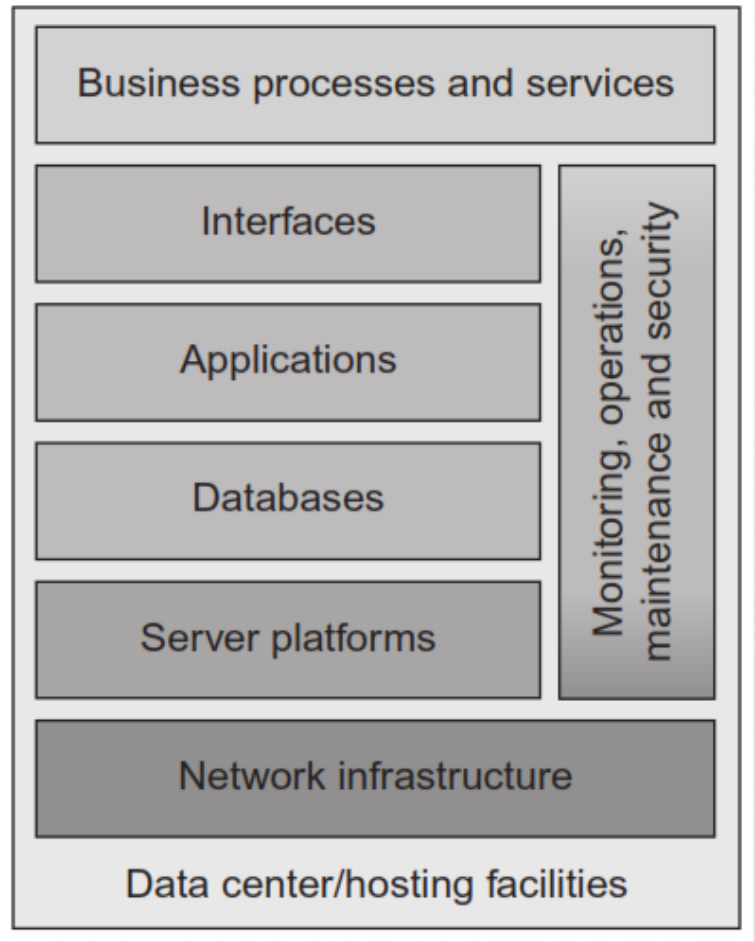
	Preventive	Detective	Corrective
Administrative	Acceptable use policy; Security awareness training	Audit log review procedures; IT audit program	Disaster recovery plan; Plan of action and milestones
Technical	Application firewall; Logical access control	Network monitoring; Vulnerability scanning	Incident response center; Data and system backup
Physical	Locked doors and server cabinets; Biometric access control	Video surveillance; Burglar alarm	Alternate processing facility; Sprinkler system

1. What is auditing?

- **What to Audit**

Just as financial, quality, and operational audits can be executed entity-wide or at different levels within an organization, IT audits can evaluate entire organizations, individual business units, mission functions and business processes, services, systems, infrastructure, or technology components.

1. What is auditing?

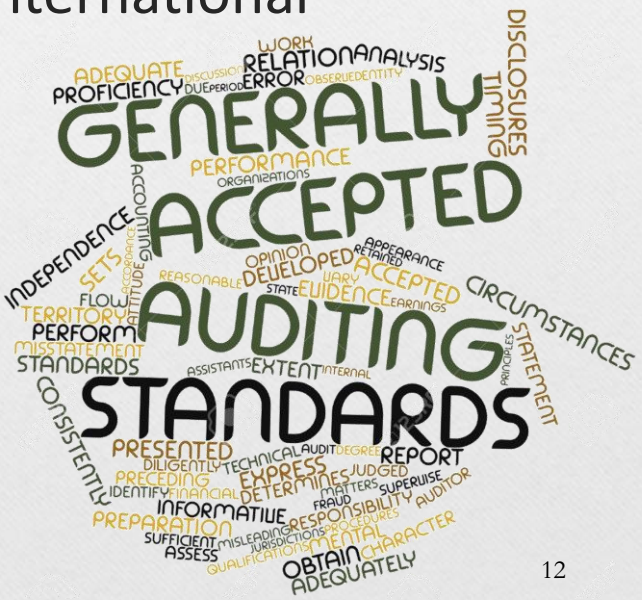


Whether performed from a technical, operational, business process, or organization-wide perspective, IT audits typically consider internal controls associated with different IT components or architectural layers and common processes supporting technologies across multiple layers.

1. What is auditing?

- **IT Audit Characteristics**

Definitions, standards, methodologies, and guidance (*Pedoman/panduan*) agree on key characteristics associated with IT audits and derived (*berasal*) from Generally Accepted Auditing Standards (GAAS) and international standards and codes of practice.



2. Why Audit?

- Performing and supporting IT audits and managing an IT audit program are time-, effort-, and personnel-intensive activities, so in an age of cost-consciousness and competition for resources, it is reasonable to ask why organizations undertake IT auditing

Usaha/upaya

kesadaran

melakukan

2. Why Audit?

- **Reasons used to justify internal IT audits may be more varied across organizations, but include:**
  - ✓ complying with securities exchange rules that companies have an internal audit function
  - ✓ evaluating the effectiveness of implemented controls;
  - ✓ confirming adherence (*kepatuhan*) to internal policies, processes, and procedures
  - ✓ checking conformity (*kesesuaian*) to IT governance or control frameworks and standards
  - ✓ analyzing vulnerabilities (*kerentanan/kelemahan*) and configuration settings to support continuous monitoring;

2. Why Audit?

- ✓ identifying weaknesses and deficiencies (*kekurangan*) as part of initial or ongoing (*Yg sedang berlangsung*) risk management
- ✓ measuring performance against (*terhadap*) quality benchmarks or service level agreements
- ✓ verifying and validating systems engineering or IT project management practices; and
- ✓ self-assessing the organization against standards or criteria that will be used in anticipated external audits

3. Who Get Audited?

- Given the pervasive use of IT in organizations of all sizes and types, and the benefits accruing to organizations that successfully establish and maintain internal IT audit programs, almost any organization can find IT auditing valuable

3. Who Get Audited?

Sources of External IT Audit Requirements	
Sector, Industry, or Type	**External IT Audit Drivers**
Public corporations	SEC rules; Sarbanes–Oxley Act rules on internal controls (§404) [3] and the PCAOB the law created
Financial institutions	Federal Financial Institutions Examination Council IT Examination Handbook, Audit Booklet [11]
Health care organizations	Revisions to Health Insurance Portability and Accountability Act (HIPAA) Security Rule and Privacy Rule in the Health Information Technology for Economic and Clinical Health (HITECH) Act [12]
Nonprofit organizations	Federal and state audits of internal controls for various types of nonprofits, often tied to sources and amount of funding received
Government agencies	Government Auditing Standards (the "Yellow Book") [13]
Federal funding recipients	Single Audit Act of 1984 [14] and OMB Circular A-133, Audits of states, local governments, and nonprofit organizations [15]
Service providers	ISAE 3402: Assurance reports on controls at a service organization [16]

4. Who Does IT Auding?

- Auditing internal IT controls requires broad IT knowledge, skills, and abilities and expertise in general and IT-specific audit principles, practices, and processes

4. Who Does IT Auding?

- The types of organizations and individuals that perform IT audits include:

1. Internal auditors, comprising either employees of organizations that undertake (*menyanggupi*) internal IT auditing or contractors, consultants, or outsourced specialists hired by organizations to carry out internal audits
2. IT auditors working as independent contractors or as employees of professional service firms that provide external or internal IT auditing services

4. Who Does IT Auding?

3. Auditing or accounting firms (or the audit or accounting divisions of firms offering a wider range of services)
4. Certification organizations authorized to evaluate organizational practices and controls and confer certification to organizations whose internal processes, systems, services, or operational environments adhere to applicable standards or other certification criteria

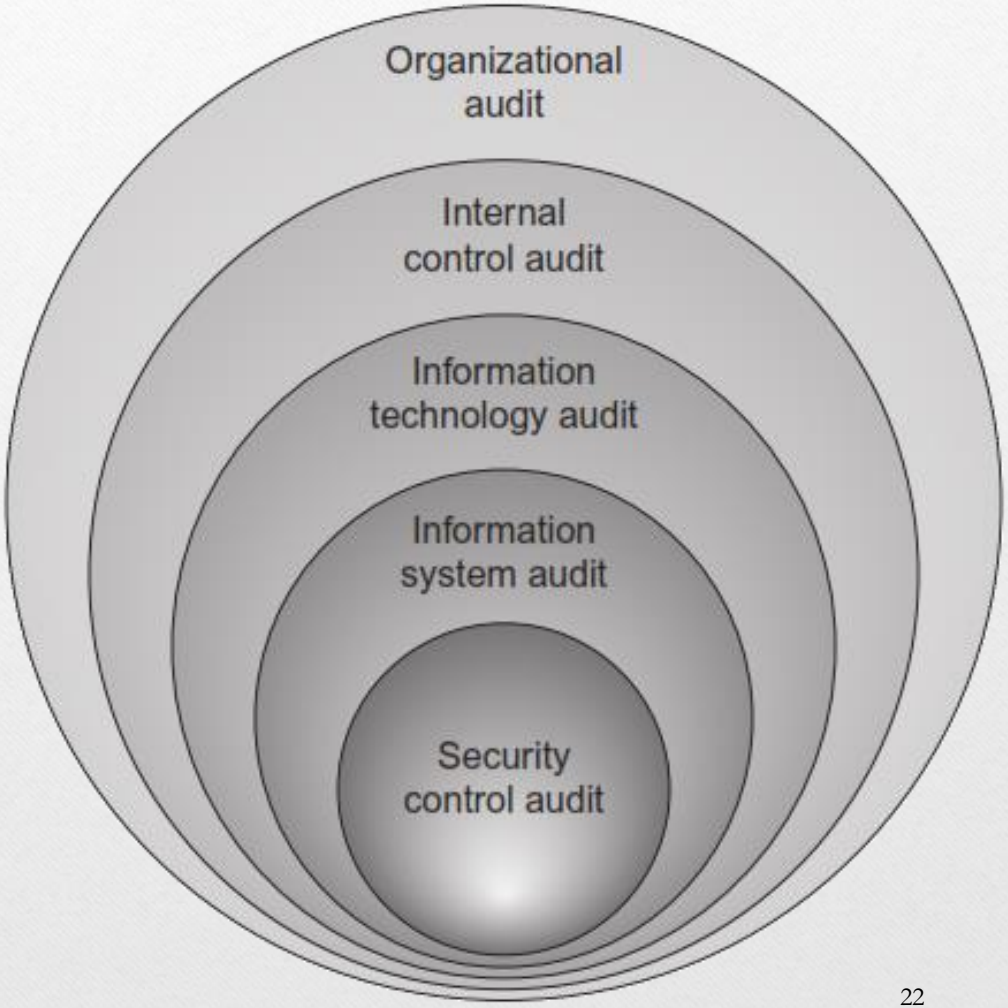
4. Who Does IT Auding?

5. Organizations with the authority to oversee the implementation of required controls or enforce regulations, such as the Government Accountability Office (GAO), SEC, Federal Deposit Insurance Corporation (FDIC), and Department of Health and Human Services (HHS) Office for Civil Rights (OCR) within the U.S. federal government
6. Inspectors general, audit executives, or equivalent officials charged with the authority to provide independent review of many aspects of the organizations for which they work, including compliance with organizational policies, provision of adequate security, effective allocation of resources, and maintenance of fiduciary responsibility or other standards of care

4. Who Does IT Auding?

Eksternal Auditor

The scope of IT audit activities ranges from organization-wide to more narrowly defined subsets of internal controls, including those implemented for specific information systems or to achieve specific objectives such as information security.



4. Who Does IT Auding?

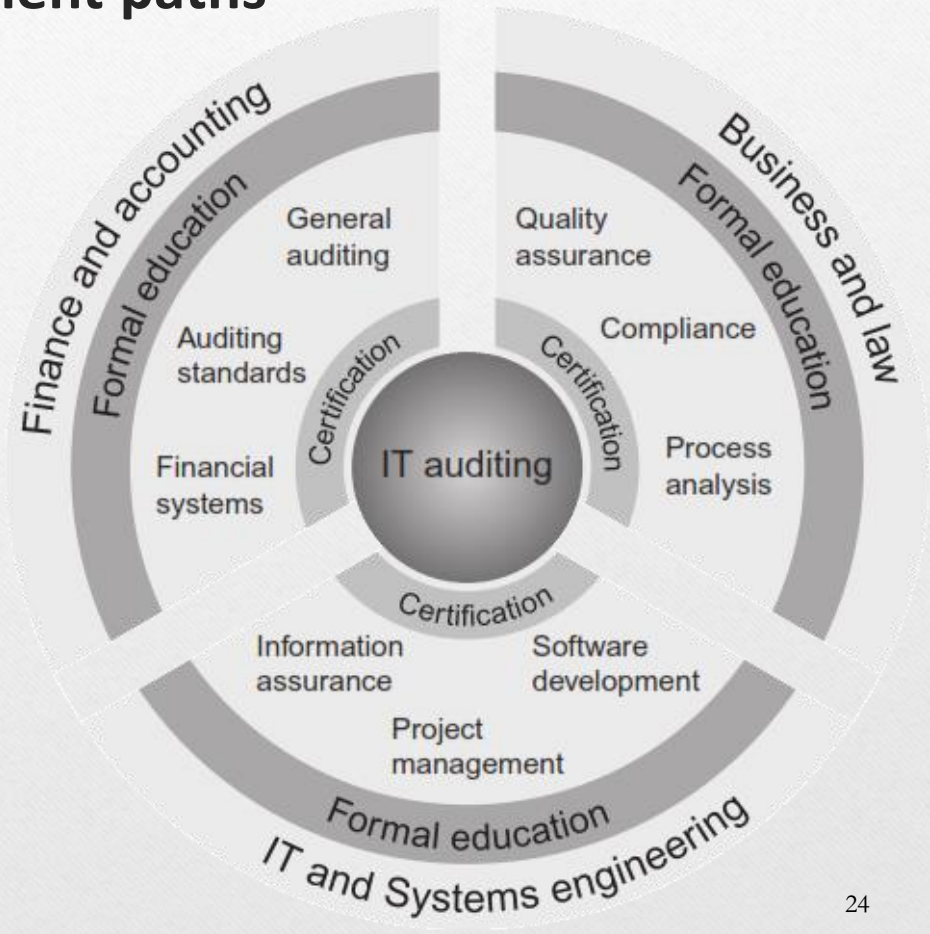
Internal Auditor

Auditing internal controls is a discipline in its own right, having much in common with external IT auditing but in many respects extending further in terms of the technical expertise, operational knowledge, and level of detail required to effectively conduct internal IT audits.

4. Who Does IT Auding?

IT auditor development paths

Individuals travel through many different career paths to develop the skills and expertise needed for IT auditing, coming from traditional finance and accounting, business and legal, or IT backgrounds



Thank You

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