

Chapter - 12 " Digital Auditing and Assurance "

Topics Covered:

(A) Introductory Topics

(B) Advanced Topics

(i) Cyber Security

(ii) Emerging Technologies

(iii) Automated Tools :

✓ (A) Internet of Things: (IoT)

- Connecting any device to Internet.

- Key Components: Data collection ; Analysis , Connectivity , people and processes

- Examples : Connected car technology ; Smart home security , Connected manufacturing Equipments.

Imp:

Audit Consideration:

(a) Auditor not being able to rely on manual controls ; rather he needs to introduce new system technologies into his audit plan.

(b) Need to train and upskill team members so that they will be equipped to evaluate design and operating effectiveness of automated controls.

(c) Need to consider Volume of transactions, processes and controls related to it.

Common Risk: Device hijacking ; Dos attack , Device theft , Data breaches etc.

(B) Artificial Intelligence (AI):

- System that can think and learn.

- Systems utilise data analysis and algorithms to make decisions based on predictive models.

- Examples: Self-driving cars ; Smart Assistants ; marketing chatbots

Audit Considerations:

- (a) Focus on logical flow of processes. Auditor should confirm their understanding of how the use of AI affects the Entity's flow of transactions, generation of reports etc.
- (b) Assess effectiveness of algorithms.
- (c) Consideration of Cybersecurity risks; that can affect functionality of AI.
- (d) Consider whether AI is making decisions or being utilised as part of decision making process.

Common Risk: Data security, Data Privacy, Inappropriate Configuration.

(c) Blockchain Technology:

- Based on a decentralised or distributed ledger that is ^{secured} through the Encryption.
- Each transaction is validated by blockchain.
- despite of resistances, blockchain technology is being recognised across variety of industries.

Examples: Cryptocurrency transfer applications; Bitcoins; Money transfer transactions etc.

API

Audit Consideration:

- (a) Considers appropriate governance and security around the transactions.
- (b) Considers concerns related to insecure API (Application Programming Interface); data confidentiality and data privacy.
- (c) Determine whether data put on blockchain will expose entity liable for non-compliance with laws and regulations.

Common Risk: Inability to reverse transactions, Security concerns, Regulatory landscape.

(D) Robotic Process Automation:

- A software technology that emulate human's action interacting with digital systems and softwares.
- Helps in Process efficiency, Customer experiences and Control effectiveness.

Audit Consideration:

- Understanding of the process: including data extraction, aggregation, sanitization and cleaning.
- Review of source code.
- Understanding of tools used to develop and maintain RPA.

Common Risk: Operational and Execution Risk; Strategy Risk.

RPA to check Ind-AS; IFCoFR and Standards on Auditing: from book

Non-fungible Tokens: from book

^{Imp-}
(iv) Next Generation Audit: Human led, tech-powered and data driven
Next Gen. Audit will be based on embedded technologies in the audit processes.

Next Gen. Audit aims to shift focus

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|-----|---------------------------|--------|--|
| (a) | From Sampling Population | —————> | <u>100% Examination</u> |
| (b) | " Multiple datasets | —————> | <u>Single data set</u> |
| (c) | " Disconnected tools | —————> | <u>Integrated Eco. & system services</u> |
| (d) | " Manual Risk Assessment | —————> | <u>Dynamic, data-driven Risk assessment.</u> |
| (e) | " Separated Communication | —————> | <u>Embedded Communication</u> |
| (f) | " Manual work | —————> | <u>Automation</u> |

Technologies forming part of Next Gen. Audit:

- (a) Drone Technology
- (b) Augmented Reality ✓
- (c) Virtual Reality ✓
- (d) Metaverse → AR+VR+other
3D digital space

Potential Application of Metaverse in financial domain:

- (a) Virtual banking and transaction
- (b) Digital Asset Management
- (c) Virtual financial Education and training
- (d) " Meeting and conferences
- (e) Data Visualisation and Analytics.