




# Evolution of a CPA through Cyber Risk

Tabish Gill, CPA, CA, CISA, CITP  
Senior Director, IT Internal Audit  
Royal Bank of Canada




## Cyber risk & cyber security

Cyber Risk is the likelihood of financial loss, regulatory non-compliance, reputational damage and disruption of service as a result of cyber-attacks.

Cyber security which encompasses people and technology aims to protect digital information by preventing, detecting, and responding to attacks. Management of Cyber risk requires collaboration amongst all stakeholders that include the Board, C-suite, business units, IT and Security teams, as well as Auditors.

**Cyber is a Business Risk**





# What the CPAs are saying?

When asked how they are using technological tools and techniques on audits today, of the auditors in the audience:

# 53%

had applied technological tools and techniques in **isolated areas of the audit**

# 40%

are using them in **all areas of the audit**

Source: Chartered Professional Accountants of Canada (CPA Canada) and the Institute of Chartered Accountants of Scotland's (ICAS) Future of Assurance Symposium



# Emerging technologies and their impact



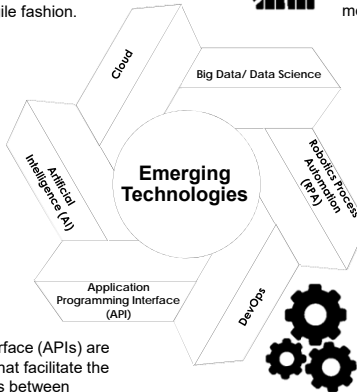
Public Cloud platforms provide businesses on-demand compute and storage capacity and provide the ability to quickly standup application environments to meet demands in a more elastic and agile fashion.



Big Data collects, organizes and manages an enterprise's data in a more research friendly way. There is an increased requirement for managing data lineage and accuracy as well as monitoring privacy and the right to be forgotten.



AI is the simulation of intelligence processes such as learning, reasoning, and self-correction. The system learns from past experience to determine next steps. Use cases include credit and market risk underwriting, anti-money laundering and fraud monitoring.



RPA leverages user-friendly applications to build software robots that can be quickly trained and deployed to automate manual tasks across various business processes



Application Programming Interface (APIs) are reusable software interfaces that facilitate the exchange of data and services between applications. APIs play a key role in enabling the integration between legacy and modern services within and outside the organization.



DevOps is an evolving software delivery approach where software developers work closely with the operations team using tools and agile methodology resulting in faster application and services delivery. The use of this methodology blurs traditional roles and responsibilities between development and production operations teams.





# The future auditor has evolving demands

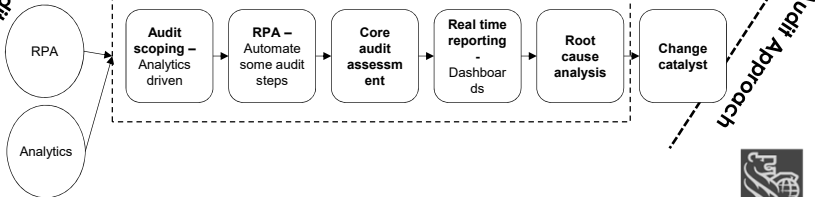
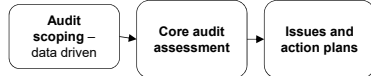
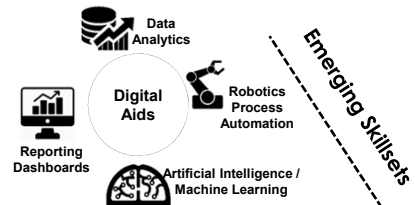


## IT Auditor: Traditional vs. Future

**Traditional Skills**

Management & Leadership	Auditing skills	Effective Communication
Knowledge of business	Knowledge of IT systems and technologies	Knowledge of IT internal controls

Data analytical mindset	Automation mindset	Subject matter expertise
Relationship management	Knowledge of emerging technologies	Risk-based assessment





## Concluding thoughts

- Never has there been a better time to be in this profession
- Demand is high and supply is low
- Attitude, Aptitude and a continuous learning mindset
- Luck is when preparation meets opportunity

**Are you ready?**

