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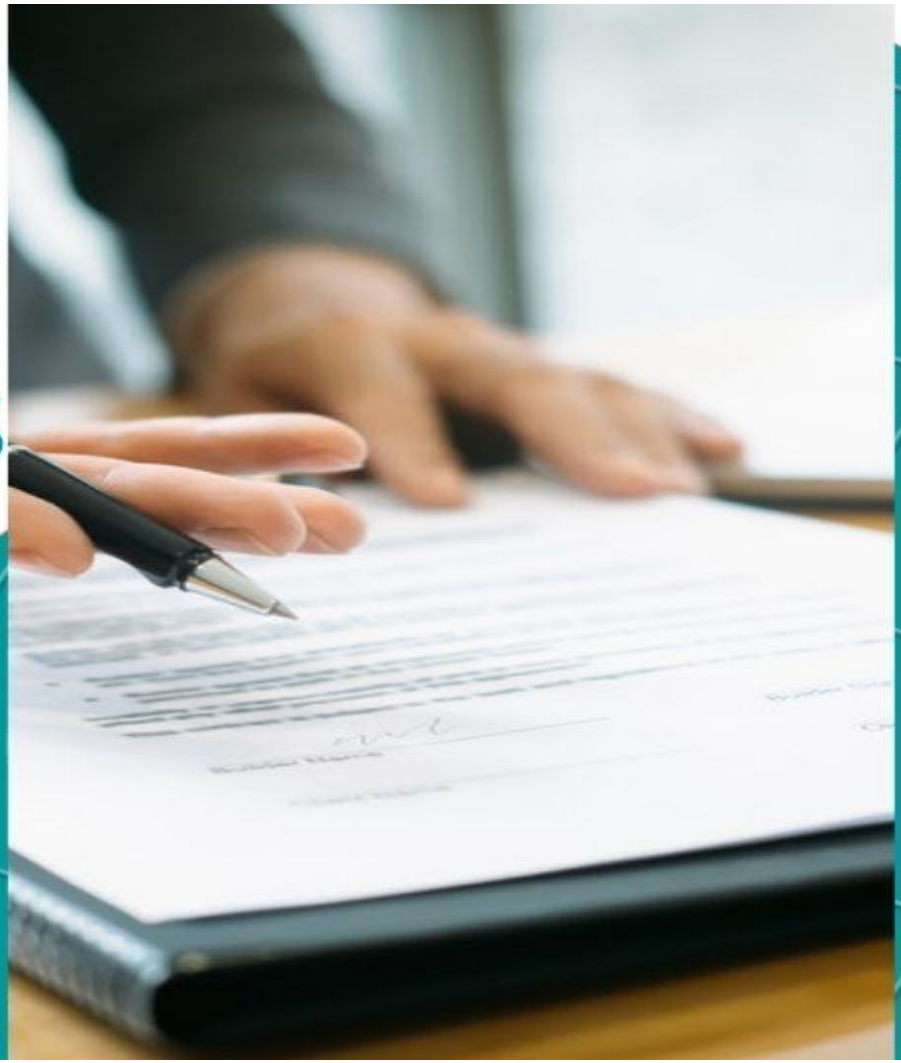
Chartered Institute of Government Finance, Audit & Risk Officers

Online Webinars

INTERNAL CONTROLS

"8 POWERFUL SESSIONS"

THURSDAYS
05 MAY - 30 JUNE, 2022
10:00 AM - 12:00 AM



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5. Internal controls in a digital age

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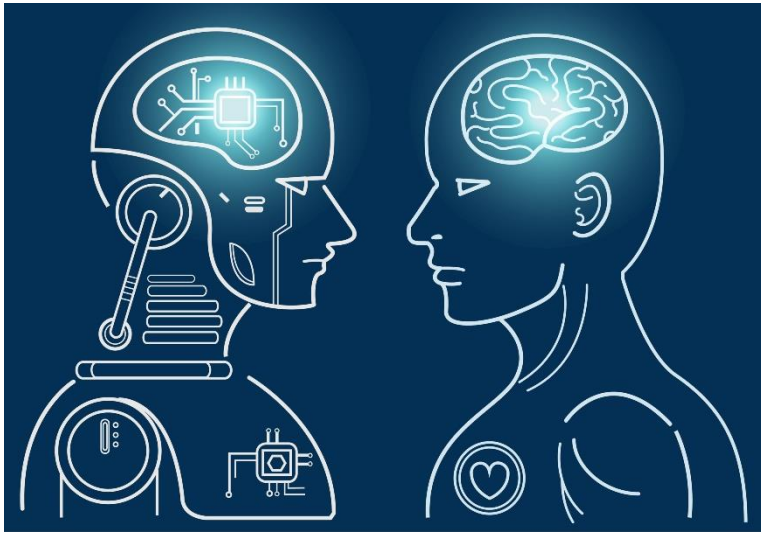
Week 5: Presenter

Roelita Cloete
CA(SA)

Week 5: Outline

- ✓ Introduction
- ✓ Methodology
- ✓ Integrated control framework
- ✓ Key technologies and associated risks
- ✓ Key risks
- ✓ Stakeholder impact
- ✓ Challenges to entity transformation



Introduction

What does the future hold?

Companies put in place internal controls to safeguard assets, prevent fraud, verify financial records, monitor entity performance and ensure efficient and uninterrupted flow of business.

- Digital technologies are transforming traditional industries and business models – **impacting common internal control procedures, the control environment and risk management**
- Robotic process automation (RPA) is used by finance and operations to automate controls and improve precision

We will be exploring contemporary technologies allowing improvements to business processes and control environments

Introduction

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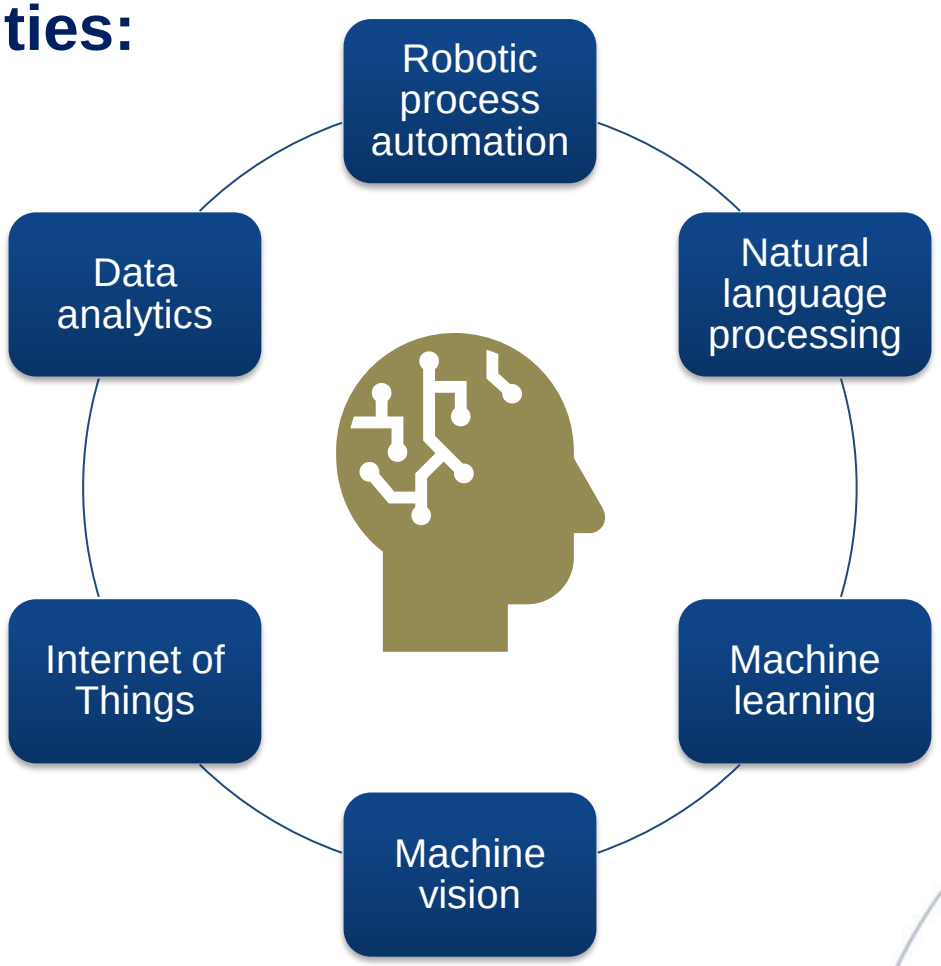
Some of the latest technologies used by organisations of municipalities:



Integrated control framework

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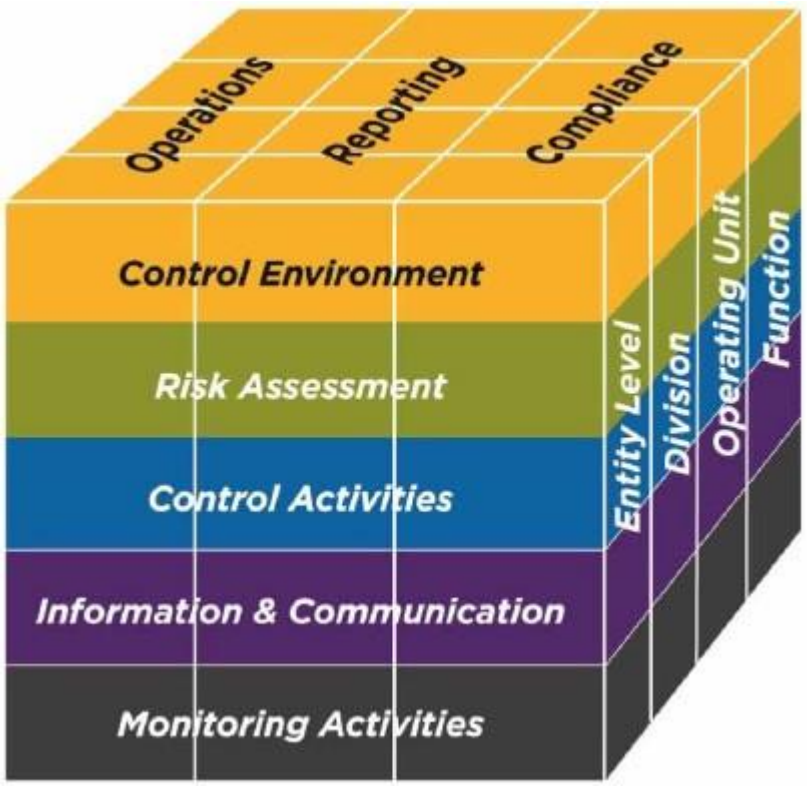
COSO framework:



Integrated control framework

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Internal control transformation:

- COSO (control environment component) also has a principle around accountability of internal controls
- Stakeholders raise concerns around lack of accountability
- Regulators step in to encourage and enforce accountability
- In response, entities are using data intelligence to provide transparency and visibility into key accountability indicators and tracking these quantitatively
- This gives real time transparency to appropriate controls, delegation and problem management (including employee behaviour and conduct)
- The way entities design and operate controls can be disrupted with technology

Integrated control framework

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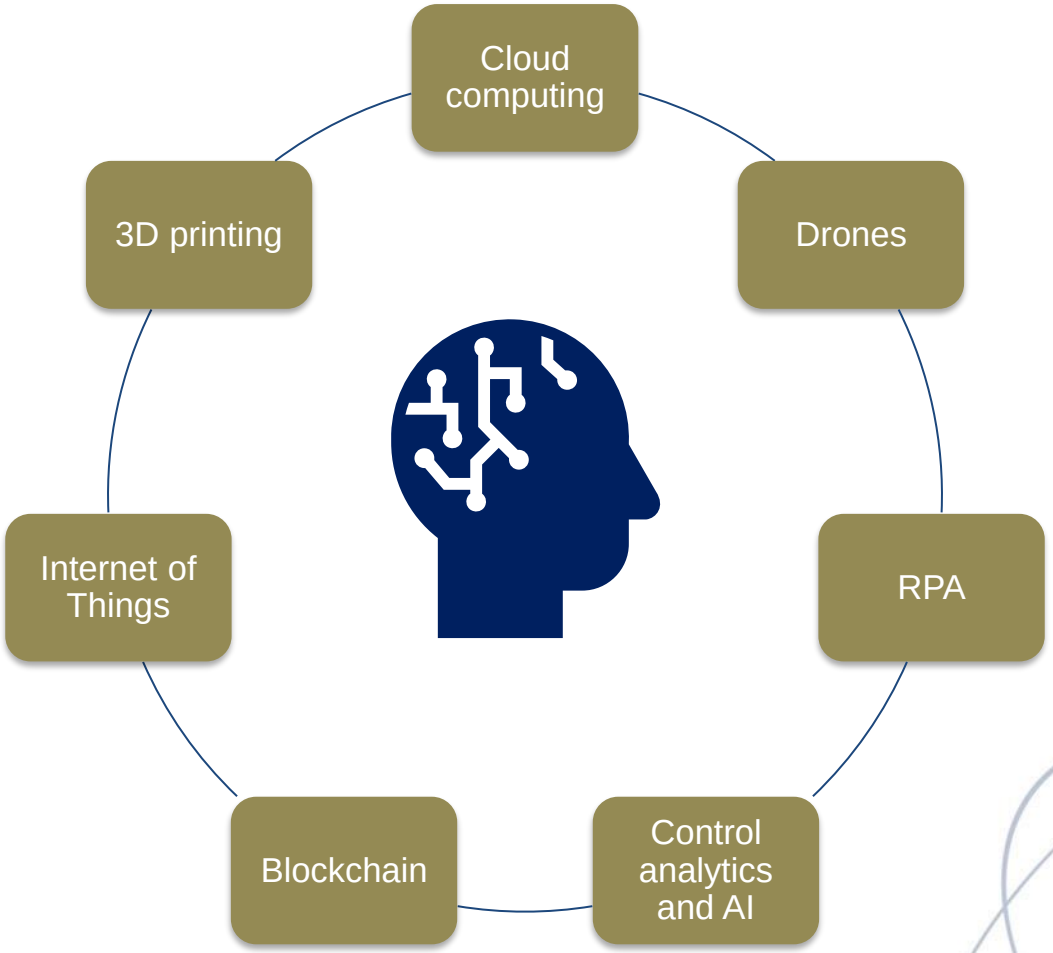
Data analytics:

- Track accountabilities assigned to senior roles, and their respective delegations
- The metrics are used to measure and track the performance and activity against accountabilities and responsibilities

Key technologies and associated risks



Key technologies and associated risks

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Cloud computing:

- POPI Act compliance
- Cybersecurity risks have increased due to the use of third party infrastructure and multiple data centres, where applications and data reside
- Having the right controls over the infrastructure, platform, applications and data is critical
- Every entity needs to conduct risk and control assessments in line with industry standards, frameworks and best practices and take appropriate remedial measures
- Additional consideration may be required to evaluate unforeseen risks due to an entity's current lack of familiarity with technology

Key technologies and associated risks

Drones:

- Drones are unmanned aerial vehicles, which can be equipped with a ground based controller and on-board cameras
- Data captured, such as videos and images, can be transmitted back to the base for analysis
- The benefits include speed of image capture, ability to access remote locations (e.g. out at sea), controlling health and safety risks of humans, and greater precision
- Using drones can help several control objectives:
  - Reporting
  - Compliance
  - Operational

Stock takes

Compliance checks

Key technologies and associated risks

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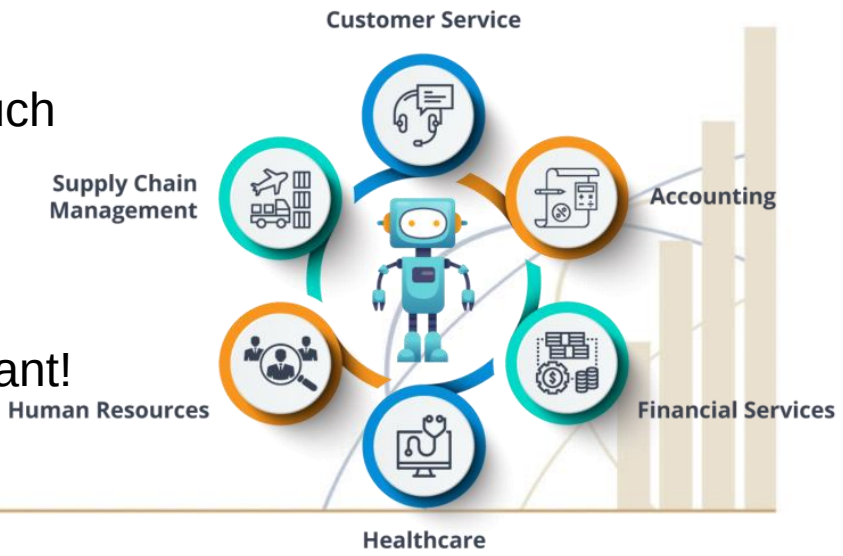
Robotic process automation (RPA):

- Tool used to perform manual, time-consuming, rules-based office tasks at shorter cycle times and lower costs than other automation solutions
- RPA replicates end user activities, typically through a Graphical User Interface (GUI) that sits on top of other front-end and back-end applications
- Reduces errors, improves quality, and compliance and customer satisfaction through reduced queries and complaints
- RPA is being used in operating controls such as reconciliations to testing controls either as a compliance function or independently
- Robust ITC Controls are extremely important!



Key technologies and associated risks

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Control analytics and artificial intelligence:

Artificial intelligence

Machine learning

Deep learning

- Continuous monitoring using data analytics allows patterns such as application of discounts, void transactions and splitting of cheques to be identified and investigated early and proactively
- Preventative control using predictions – prevent mis-functioning or malfunctioning, identified necessary maintenance
- Risk assessment procedures

Key technologies and associated risks

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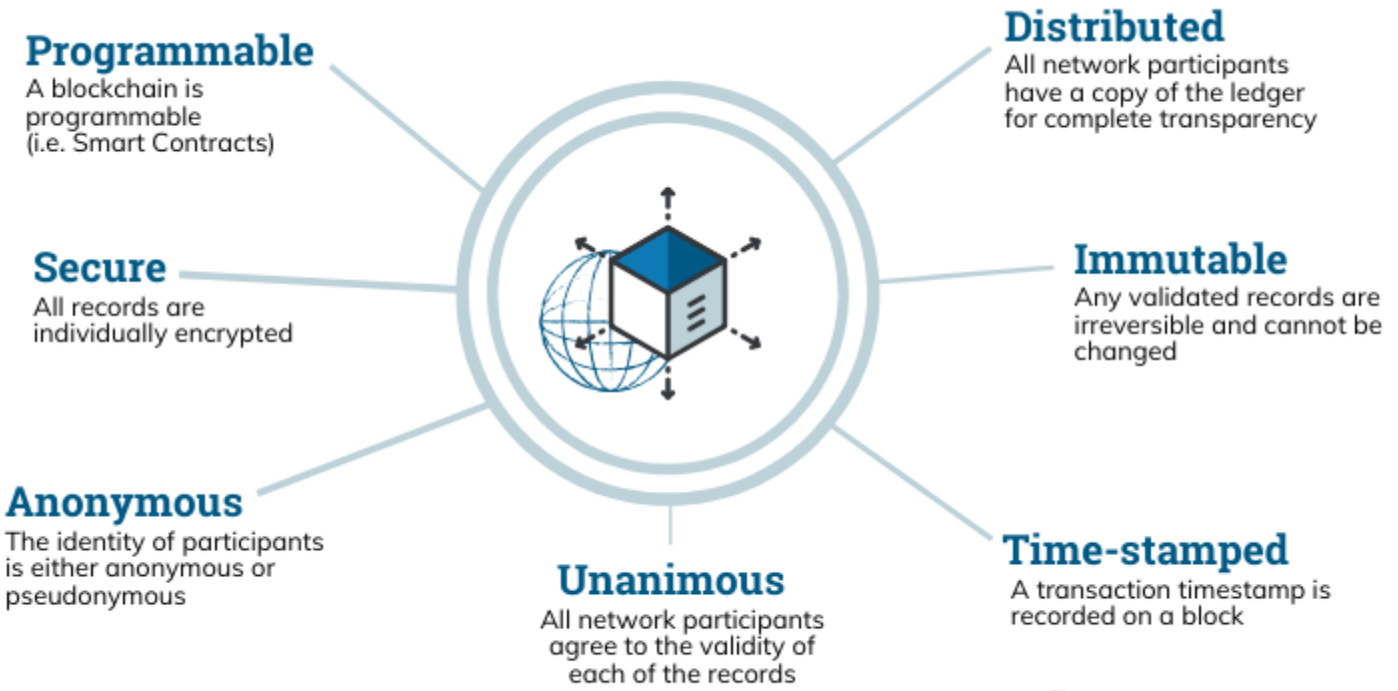
Block chain:



Key technologies and associated risks

Internet of Things (IoT):

- A network of physical objects embedded with sensors, software, connectivity and computing capability to collect, exchange and act on data
- Placing sensors on “Things” can help to collect data about them and their environment
- More connected devices means more data to analyse, and this has provided commercial benefits in a range of industries
    - Predictive maintenance in the transport industry
    - Precision farming techniques in agribusiness, where data on soil and weather forecast can help distribute water for irrigation precisely

Key technologies and associated risks

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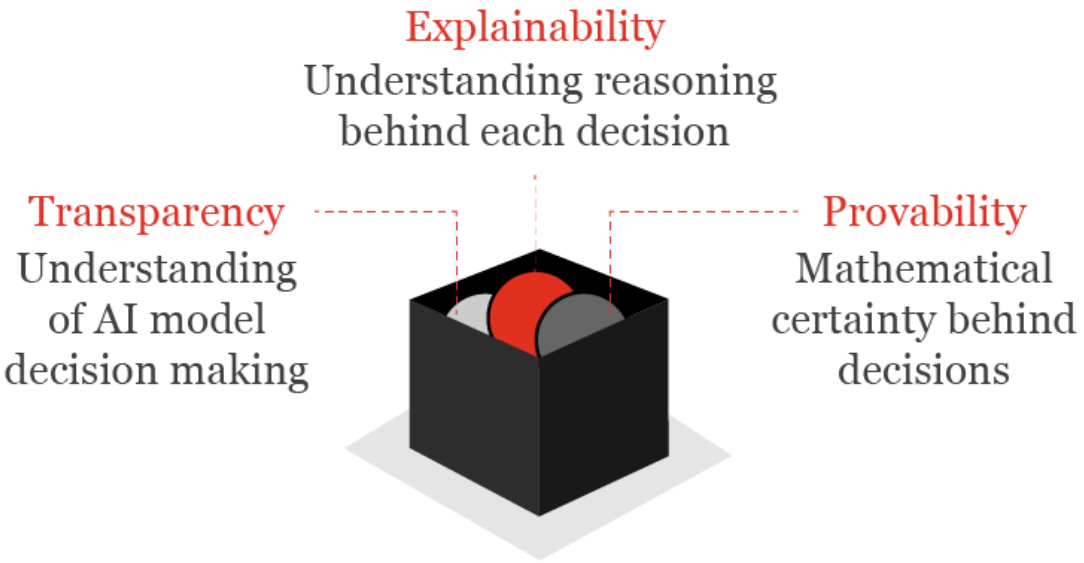
3D printing:

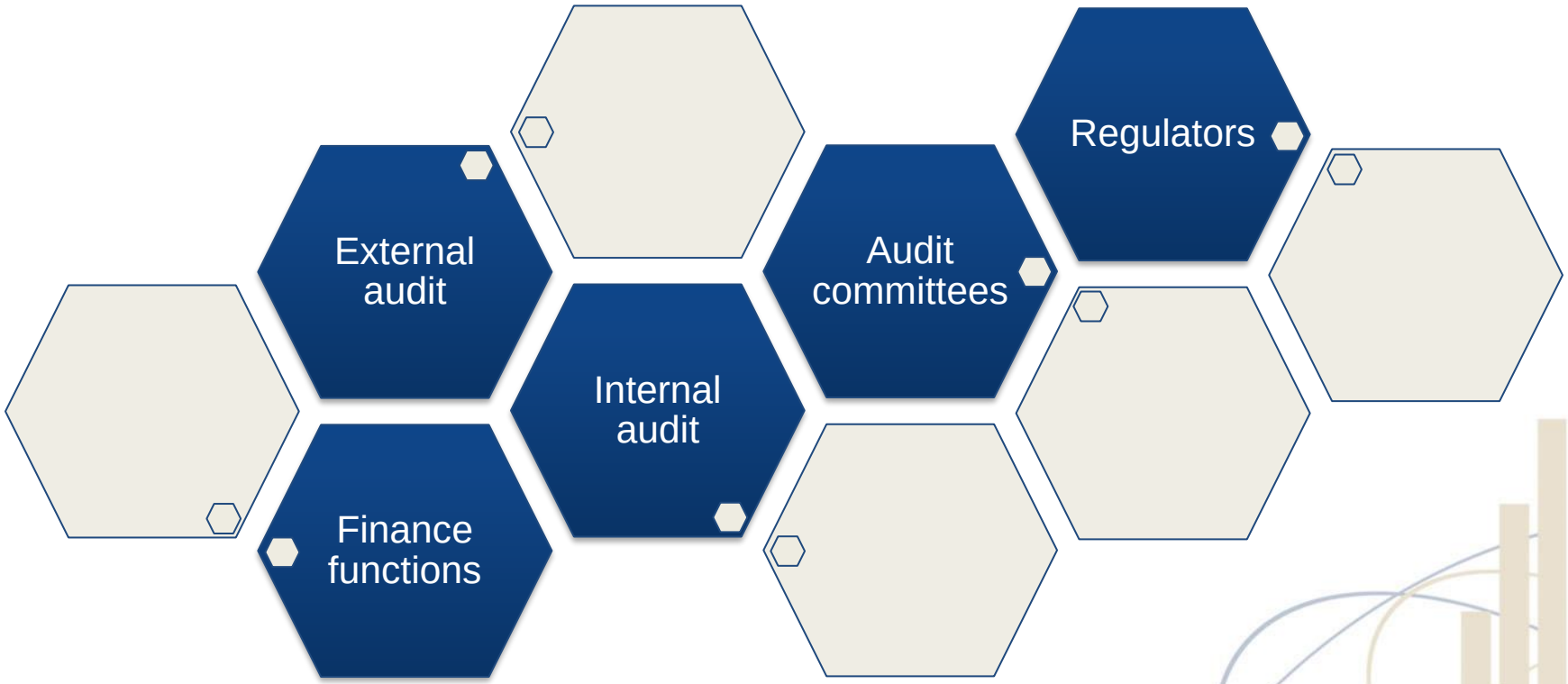
- Allows three-dimensional objects based on digital models by layering or “printing” successive layers of materials
- Inventory management by printing what is needed “on demand”, for example:
  - Healthcare – printing human parts can assist to provide prosthetic limbs, or creating personalised replicas of organs that can be used to simulate interactions with them for medical procedures
  - This can help mitigate risks of ineffective procedures within real life surgery
- Additional controls are needed when functions are outsourced to an expert

Key risks

- Cyber security
- Information security
- Responsible AI (AI's black box)
  - Fairness
  - Explainability
  - Safety and security
  - Accountability



Stakeholder impact



Challenges to the entity's transformation

- Entity culture
- Systems and data
  - Methods to create and enrich data faster than an Enterprise Resource Planning (ERP) system:

Conclusion

- Technology can enhance the quality, rigor and efficiency of internal controls
- Entities must consider how to embed technology into the control framework in a safe way, while taking into consideration the risks that arise with the use of technology
- Established risks around system development, change management, access and security still applies
- Besides addressing risks, entities must consider how to use technology responsibly and ethically, particularly in a future in which machines will act more autonomously

85%

of CEOs agree that AI will significantly change the way they do business in the next five years.

Source: PwC's 22nd Global CEO survey 2019

Thank You!

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