Understanding the Difference: Digitization, Digitalization, Robotic Process Automation and Digital Transformation
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According to the “Future of Jobs and Skills in Africa Report” it is predicted that 52% of all job activities in Kenya are susceptible to automation.

The forth industrial revolution is projected to create new jobs in STEM “Science, Technology, Engineering and Math”, data analysis, computer science and engineering.

Auditors and Information Security professionals need to understand the different digital options available to today’s business leaders.
Digitisation

- What is Digitisation?
  - IT creating a digital version of something physical so it can be used by computer systems
    - It does not impact the original document
    - It just makes a computer readable copy
      - Ex. When a document is scanned
Project Underway and Complete

- Civil Registration Department (CRD) Digitisation
  - Ministry of State for Immigration and Registration of Persons
    - Birth and Death Registries – Consolidation of DB’s
      - Now 107 Civil Registration Centres where parents register births and families register deaths & 62.5 million records have been digitalized
  - Improved accessibility; Improved security; Reduced record maintenance costs; Improved transparency
- Source: ICTA.go.ke/digitisation/
Project Underway and Complete

- Digitisation of Company Registry
  - Registers companies
    - 25 million pages scanned and stored
  - Digitisation of the High Court Registry
    - 60 million records digitised

- Source: ICTA.go.ke/digitisation/
Digitalisation

What is Digitalisation?

♦ According to i-SCOOP, “Digitalisation most often refers to enabling, improving and/or transforming business operations and/or business functions and/or business models and/or activities, by leveraging digital technologies and a broader use and context of digitised data, turned into actionable knowledge, with a specific benefit in mind”

♦ Remember that digitalisation of a process is impossible. It’s is best said that we would automate a process by digitizing information and injecting technology for the purpose of automation
Business Process Automation

From its simplest definition in Wiki

- “Business process automation (BPA), also known as business automation or digital transformation, is the technology-enabled automation of complex business processes

- It can streamline a business for simplicity, achieve digital transformation, increase service quality, improve service delivery or contain costs

- It consists of integrating applications, restructuring labor resources and using software applications throughout the organization
Digital Transformation

- Digital Transformation is broader than Digitalisation
  - It is a process to move toward a more digital business
  - It requires a digital transformation strategy
  - It’s an enterprise phenomenon

- Common Transformation frameworks, like MIT, breakdown into 3 silos of Customer Experience; Operational Process; and Business Model. In addition, there are 4 Digital capabilities which include: 1. Unified Data & Processes; 2. Analytics Capabilities; 3. Business and IT Integration; 4. Solution Delivery
Current Project

- Kenya News Agency
  - Digitisation and Automation project
    - KNA Photographic Library
      - Library established in the 1940’s
        » Will store Kenya’s history in Photos
        » Ease retrieval of data to public

- Source: ICTA.go.ke/digitisation/
Robotic Process Automation

From its simplest definition in Wiki

- Robotic process automation is an emerging field within BPA and uses (forms of machine learning, deep learning and sometimes) artificial intelligence

- Bot’s perform actions that would otherwise be performed by humans
  - Repeated Tasks
  - Error Prone Tasks
  - Some Complex Tasks
Evolution to AI

- BPM / RPM
  - “Process Driven”
  - Self Service

- Machine Learning
  - “Data Driven”
  - Prescriptive Analytics w/ Decision Engines

- Artificial Intelligence
  - “Data Driven”
  - Deductive Analytics
  - “Natural Language”
  - “Capability to Think”
Automation Readiness

- Before embarking on a digital journey you must first understand your entity's current capabilities
  - Is there an accurate inventory of processes by business unit?
    - Is the business owner identified?
    - Has the process been given a criticality rating?
    - Has the process been given a redundancy rating?
    - Has the process been given an error rating?
Automation Readiness

- Before embarking on a digital journey you must first understand your entities current capabilities
  
  - How thoroughly documented are today’s processes?
    - Are the dataflow, API/Services and workflow diagrams up to date?
      - Has a SIPOC, RASCI and Swimlane diagram been created and reviewed by management?
Other Considerations for Automation

- What are the inherent risks of automation?
- How will the overall risk rating change with automation?
- What are considered best practices?
- What motivated our company to embark on an automation journey?
- Are their resisters in the enterprise? What is their concern?
- How will change management, change?
- Has a governance committee been formed?
- What about a Center of Excellence (CoE)?
Considerations for Automation

- What new controls will be necessary with automation?
- How can the new controls be validated for effectiveness?
- What new technology will be needed to achieve the automation goals including tech needed for monitoring?
- What skillsets will be needed for automation?
  - Can existing resources be trained? Cost and time to proficiency
  - What is market price and availability for net new skilled talent?
  - What incentive can be given to retain this talent?
Thank You

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