

Information & Communications Technology (ICT) Taskforce

Issues Paper
IAESB Meeting

Nairobi, Kenya
April 18-20, 2018

Business Case

- By 2021, 23% of educators say graduates will have data science and analytical skills and 69% of employers say they prefer someone with these skills*
- 63% cited lack of skilled teams as a key obstacles to digital innovation*
- Finance professionals spend half their time on gathering data and the other half analyzing the data**
- Two years ago 78% of CFOs considered proficiency in Excel as the most important skill for their FP&A teams. Only 5 percent feel the same today. Instead, CFOs rated adaptability to new technologies as the top skill for new hires.***
- Data has been called the world's most valuable resource****

*PwC's 2017 Global Digital IQ Survey: 10th anniversary edition

**PwC's Finance Effectiveness Benchmark Report 2017

***Adaptive Insights, Q42017 CFO Survey

****PwC's Confidence in the Future. How tomorrow's technologies can help the finance function of today

Follow the Money

Venture Capital investors worldwide have invested more than:

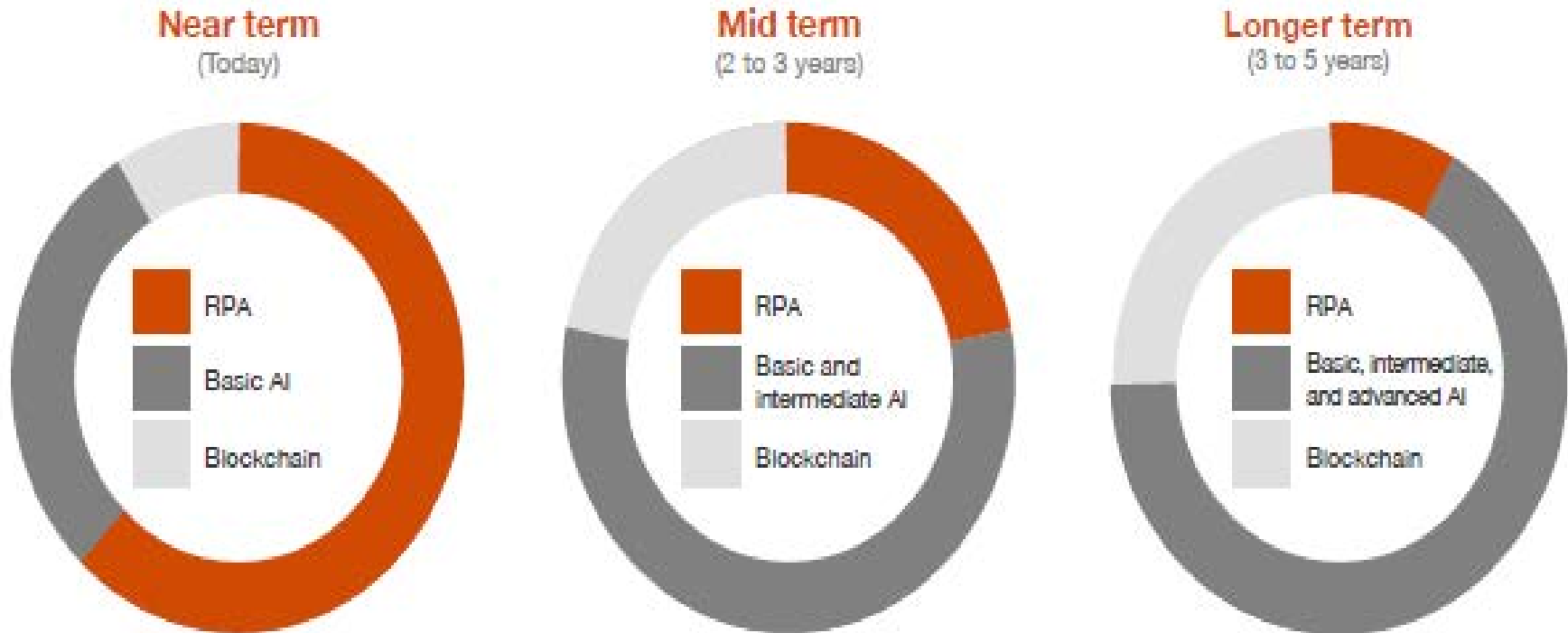
- **\$10.8 billion** into AI and machine learning in 2017 as compared to \$5.7 billion in 2016 – **89% increase**.*
- **\$1 billion** into blockchain in 2017 as compared to \$550 million in 2016 – **82% increase**.**

*PitchBook Platform

**Statista 2018

Indicative Impact of Timing

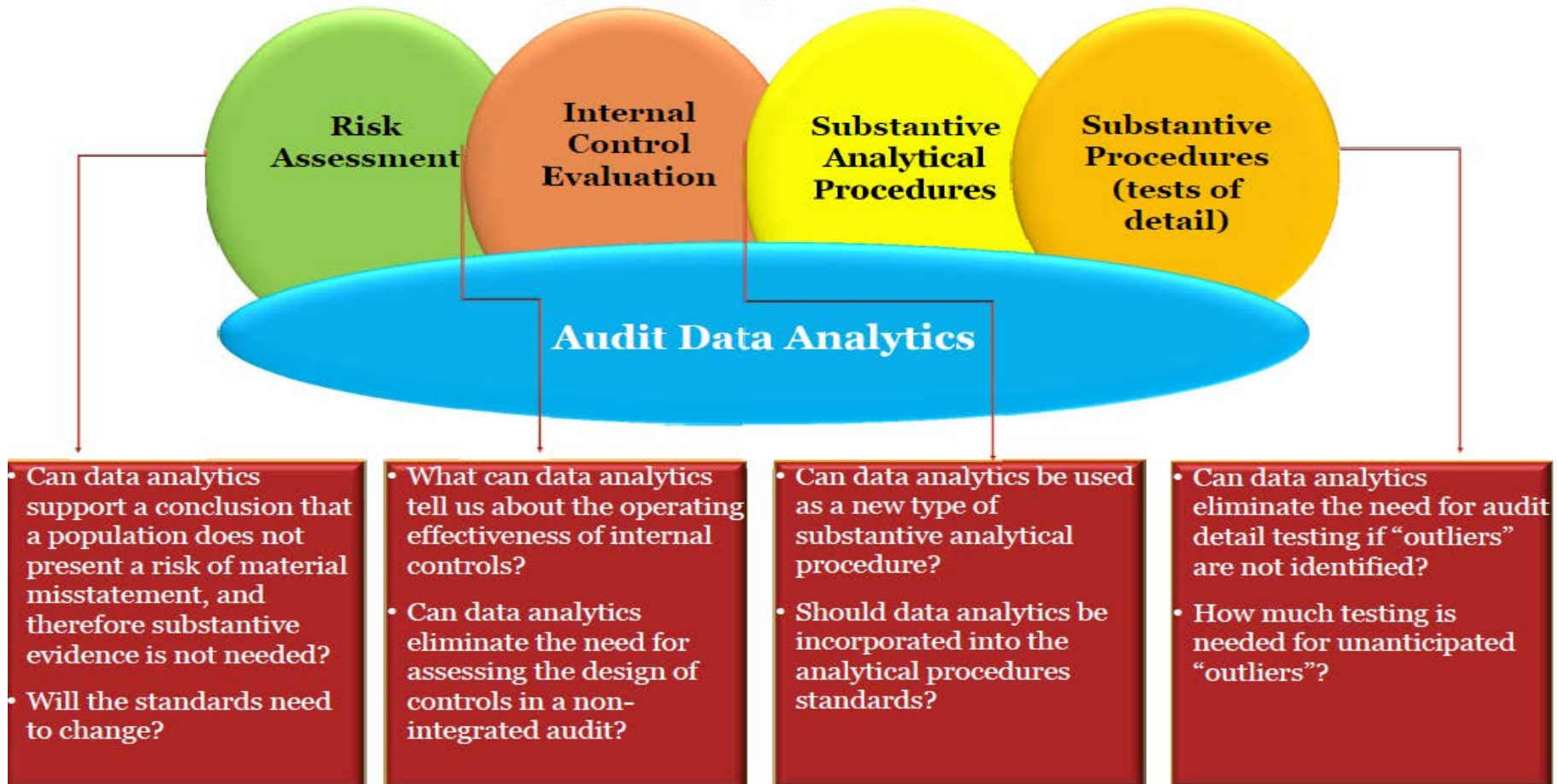
Which technologies will have the biggest impact on finance?



Confidence in the future – How tomorrow's technologies can help the finance function of today (PwC 2017)

From an Auditor's Perspective

Practical challenges – defining the audit evidence



- Can data analytics support a conclusion that a population does not present a risk of material misstatement, and therefore substantive evidence is not needed?
- Will the standards need to change?

- What can data analytics tell us about the operating effectiveness of internal controls?
- Can data analytics eliminate the need for assessing the design of controls in a non-integrated audit?

- Can data analytics be used as a new type of substantive analytical procedure?
- Should data analytics be incorporated into the analytical procedures standards?

- Can data analytics eliminate the need for audit detail testing if “outliers” are not identified?
- How much testing is needed for unanticipated “outliers”?

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ICT Taskforce Objectives

OBJECTIVES

- Obtain sufficient evidence through information gathering activities to evaluate whether current IESs are fit for purpose in the digital age.
- Recommend standards development activities that are responsive to the needs of stakeholders.

ICT Elements

Business Acumen

Behavioural Competence

Digital Acumen

Data Interrogation, Synthesis and Analysis

Communication

Key Enhancements

Business acumen

- Elimination of reference to processes.

Behavioral competence

- Change from demonstrate to enhance in the first paragraph and started the last paragraph with an expected outcome

Digital acumen

- Added examples of the impact of selected technologies.

Data interrogation, synthesis and analysis

- Added decision making.

Communication

- Started second paragraph with an expected outcome.

Question

- A. What is the Board's point of view on whether the refinements to the descriptions appropriately distinguish between the five ICT elements?
- For example, is the difference between business acumen and digital acumen clear?

Outreach to Stakeholders – Completed and In-Process

- Literature review
- Roundtables in Mexico with participants from private sector, public accounting and academia
- Roundtables in Kenya
- Webinars for Academics
- Global Accounting Alliance (in person)
- Financial Executives Institute (in person)
- Large accounting staffing firm (in person)
- Professional Accountants in Business Committee (in person)
- American Accounting Association
- AACSB
- Member bodies
- Initial and targeted surveys
- IAASB, IESBA (planning in process)
- Public sector
- Regulator

Standards and Frameworks (in process)

- Evaluate PCAOB auditing standards, ISAs and ethics standards (Standards) to identify inherent ICT skills that are needed in the application of the Standards
- Evaluate existing competency frameworks to identify ICT skills

QUESTIONS

B. What is the Board's point of view on the sufficiency of the information gathering activities?

C. Are there key stakeholders, other sources of information, or geographies that should be considered as part of the information gathering activities?

Initial Observations

- The five ICT elements broadly capture the skills needed by Accountants in the digital age.
- There is a growing shift towards a greater focus on specific tasks, skills and mindset and less on job titles.
- Technological awareness, its potential for disruption, and agility varies across stakeholder groups.

Initial Observations

- Business strategies will be significantly influenced by ICT and business models will continue to change.
- New skills have not been identified but certain existing skills will be more widely used by Accountants, for example, business acumen, professional judgment, critical thinking and 'digital skepticism'.
- CPD will be essential in responding to the disruptive changes of technology led environments.

Initial Observations

- There is a need to look outside of the accounting function to understand processes and data in other areas of the business and develop skills outside of the traditional accounting function.
- There will be a shift towards “self-service” use of data and technology.
- The change is not the specific technology, but the impact on how the Accountant’s role will change as a result of ICT.

Information Gathering Activities

Review of Standards (in-process)

- Understand the nature of technology used in business processes and controls and the manner in which these technologies are used
- Data analysis, including computer assisted techniques
- Greater emphasis on certain of the five elements, for example, business acumen

ICT Survey

Objective: provide an initial source of information on the importance of the five ICT elements and whether they broadly capture ICT skills.

Overall findings:

- Technology is having a significant impact on accounting education.
- Increased awareness about new and emerging technologies must be partnered with a range of other skills, such as interpretive, analytical, ethical change management and data handling skills.
- Support for a range of standard setting development activities, including provision of guidance

Timeless skills:

- Lifelong learning 
- Adaptability and change  
- Professional skepticism and professional judgment 
- Intellectual curiosity
- Ethical behavior relating to data protection awareness and integrity
- Emotional intelligence and communication

Framework – CPD, paragraph 35

“Change is a significant characteristic of the environment in which professional accountants work, requiring them to develop and maintain their professional competence throughout their careers. Pressures for change come from many sources.....” “As a result, continuous learning is integral to CPD as professional accountants need **actively to pursue the education, training, knowledge, and skills which they need to anticipate and adapt to changes** in processes, technology, professional standards, regulatory requirements, employer demands, and other areas.”

ICT Elements Mapped to IESs

Business acumen

- Understand the impact ICT has on business models and risk, including how current and emerging technologies will impact the way business is conducted and measured.

ICT Elements Mapped to IESs

Behavioral competence

- Enhance intellectual curiosity, critical thinking, agility and lifelong learning to effectively respond to an environment of rapid technological change.
- Professional judgment and professional skepticism will be applied in more situations, which requires a strong sense of self- and situational-awareness.
- Demonstrate ethical use and dissemination of data.

ICT Elements Mapped to IESs

Digital acumen

- Understand how new and emerging technologies operate, are used, and impact the generation, processing, and flow of data.
- Understand and influence how governance effectively oversees the impact of ICT, including data security.

ICT Elements Mapped to IESs

Data interrogation, synthesis and analysis

- Use structured and unstructured data, evaluate data integrity (complete, accurate and relevant) and understand exceptions to expectations.
- Effectively and appropriately interpret the “story” the data is telling and make decisions accordingly.
- Conduct risk assessments, predictive analysis and effectively use visualization tools.

ICT Elements Mapped to IESs

Communication

- Effectively use new and emerging communication channels to communicate with impact, influence, and tell the “story” of new insights gained through the use of technology.

QUESTIONS

- D. Are there additional competency areas or learning outcomes in the IESs that are directly related to ICT as described in the five elements?

- E. Based on the information gathering activities to date, what is the Board's point of view on whether the competency areas and learning outcomes in the IESs effectively capture the skills needed by Accountants in the digital age?

Proposed Milestones and Timeline

April/May
2018

- Primary outreach activities completed and analyzed

June
2018

- Analysis of ICT competencies and skills identified (skills inventory)
- Evaluation against competence areas and learning outcomes in IESs

July
2018

- Recommend standards development activities to the Board

QUESTION

F. What is the Board's point of view on whether there are additional milestones expected to achieve the ICT project's objective?