

Impact of digitization on the audit profession



As digital innovation is speeding ahead, the audit profession is forced to follow. It is not a question of “whether” the auditor needs to change, but rather “when” or “how fast”

Audit clients are exploring and implementing digital innovation to drive efficiencies in business operations, increase customer centricity, find new markets, increase productivity and develop their business models. The internet of things is growing, sensors and radio-frequency identification (RFID) chips are embedded in products and machines become smarter. Robotics change human labor in shared services and artificial intelligence is applied in customer services and white collar professions. Employees are always online and connected through social media. Autonomous vehicles, like drones, cars and carts are making logistics and travel faster, safer and more efficient. How should an auditor respond to these changes?

The auditor is expected to move along with these technologies, have a good understanding of what digitization will bring to businesses and how it will develop over the coming years – although nobody really knows which technologies will make it and will be disruptive. The auditor must find an answer to how to audit new technologies, like robots and artificial machines, and the auditor should apply digital technology in their own business and audit processes, in order to keep up with the quality of the audit, the increasing pressure on audit costs and the requirement of clients to receive value for money. There is a need and opportunity for audit efficiency, quality and added value using digitization.

In this article the three main digital trends that impact the audit and how they impact the audit will be discussed: data analytics, robotics and artificial intelligence, and blockchain.

Data analytics

Data analytics can be split into large transactional data and big data analytics. Large transactional and master data analytics are generated by and processed through the financial (back-office) systems of organizations. The landscape of financial reporting systems is constantly changing. Currently two main developments in financial reporting systems are visible: further standardization and cloud. The development of implementing more standardized and central financial reporting systems, in combination with setting up shared service centers, outsourcing/offshoring and process harmonization has started already more than a decade ago, affects many businesses and is driven by the need for efficiency in business operations. These developments enable the auditors to adjust the audit as well, towards more central and harmonized (group/regional) audit approaches, placing more reliance on efficient application controls and standard control reports.

The increasing use of harmonized and standardized systems also drives the increase of central or centrally accessible transactional and master data volumes. This gives the auditors another opportunity to achieve a more efficient and higher quality audit, by transforming the traditional, sample

based audit approach to centralized and data driven audit approaches, such as 100 percent data population testing by automated analytical algorithms instead of sample based testing, thus driving audit quality. To put it stronger, the question arises if current – generally accepted sample based – audit approaches are still up to par with the vast data volumes and transaction process complexity of the auditee. More and more auditors, oversight bodies and regulators understand that in the future new techniques will have to be on-boarded in audit methodologies and guidance.

The other visible development in system landscapes is the rise of cloud based software platforms, like Salesforce.com (sales), Concur (expenses) and Coupa (procurement). The fact of the matter is that many of such platforms have lesser options for application controls. This lack of control options is partly deliberate, to foster an “agile” user experience, partly due to immaturity in the control domain – many of such software vendors have been existing for less than 10 years and simply focused on other strengths than control capabilities. The impact for the auditors is that they need to rethink and adjust the audit approach around cloud systems. Audit approaches are to be transformed into more data analytics driven procedures in order to address the less preventive controls in the systems. Luckily new technologies, like in-memory databases – nowadays allow auditors to do fast and smart analytics.

Another characteristic of cloud based systems is that the data is processed and stored in the cloud, which introduces new challenges around third party management and data security and confidentiality. The increasing number of cloud based systems requires the auditors to integrate more cyber security capability in the audits.

Big data is different from the large transactional data in Enterprise-Resource-Planning (ERP) systems. Big data is typically characterized by volume, velocity and variety. The big data domain is big in itself and there are numerous applications possible. Quite common is social media listening to analyze image and brand trends amongst customers and other stakeholders. Other example applications are found in analyzing political environment, climate and location monitoring. Auditors have identified big data as a means to support the risk assessment, scoping, trend analyses and judgements. Therefore, the audit profession should gain sufficient understanding of how big data solutions can further support the audit process. If they do not have this knowledge they should consider partnering or acquisitions.

Robotics and artificial intelligence

Robotics and artificial intelligence are changing business operations at audit clients and these developments also open up new opportunities for the audit process itself. A key

question that arises is, to what extent (software) robots and artificial intelligence at the client side impact the audit approach. In the case of clients using software robots in key financial processes, the auditors will have to gain a certain level of comfort over the reliability of the (financial) data processing carried out by the robot. The difference with data analytics is that the rise of the robots is very new and the audit profession has had little experience to date with auditing environments using robots. However, the basic line of thinking is that the auditors need to audit the robot software. Again, this means that the auditors will need to boost their technology understanding in order to assess the reliability of robot software. The profession may be supported by the same digital trend, artificial intelligence: what if the programming code of the robot can be analyzed by an "audit bot"?

Artificial intelligence will also support the audit process itself; like the assessing of robot software by an audit-robot, there are many opportunities for auditors to be supported by robotics and artificial intelligence. Artificial intelligence like IBM Watson are able to read, listen, learn and process billions of documents per minute. Such artificial intelligence can work with all the accounting standards, be it United States Generally Accepted Accounting Principles (US GAAP) or International Financial Reporting Standards (IFRS), and other regulations like those of the Swiss Financial Market Supervisory Authority (FINMA) or the Public Company Accounting Oversight Board (PCAOB), including the learning of judgements and other audit considerations, and use this to advise auditors in certain audit questions or challenges. Artificial intelligence could read and interpret evidence received and even file it in the electronic audit file, while ticking off the assertions. Although how these artificial techniques will develop is yet uncertain, there is clearly change upcoming. This could even get disruptive for the audit profession.

Blockchain

Then there is the interesting rising of the blockchain concept. This digital concept was developed for Bitcoin and serves as a digital ledger that is continuously and real time validated by a network of authorized computers.

Currently, businesses and consumers use a trusted party such as a bank to make a transaction. Blockchain allows customers and vendors to connect directly, removing the need for a third party. Using cryptography to keep exchanges secure, blockchain provides a decentralized database, or "digital ledger" of transactions that everyone on the network can see. This network is essentially a chain of computers that must all approve an exchange before it can be verified and recorded. Without the ambition to completely and accurately describe the whole concept in a few sentences, blockchain may be explained using a simplified metaphor without trying to

explain all aspects of the concept: Imagine a large group of people (computers) closely watching an individual (agreeing to) give a red ball to another individual (transaction): in order to register the transaction as valid and approved, all people in the group confirm to a separate police officer (also computer) that the red ball will be handed over and later on, has been handed over from the one to the other individual. All people write this down in their local secured ledger and the police officer writes this down in the central secured administration (ledger). This central ledger is then provided back to all the individuals who validate and accept the updated local ledger.

This concept is currently picked up by banks in order to drive efficiency in financial transactions, cutting out multiple parties and manual steps. Also the first pilots are being conducted to implement blockchain in the supply chain, thus providing a 24/7 real-time and 100 percent reliable view on goods movement, inventory and shipments. The question arises what this means for the audit: is there a further need for audit in a blockchain supported transactional process? Such questions are yet unanswered and the audit profession will need to form a view and opinion in anticipation. The blockchain technology is not yet fully proven and generally accepted. The risk of cyber attacks on a blockchain is increasing and regulations will probably be defined along the way.

In conclusion

While digital developments are progressing in exponential pace, there is a high level of uncertainty about what technologies are really going to be successful over the coming 3 to 10 years, or even disruptive. However, it is clear that digitization will have its impact and auditors will have to rethink their audit approaches and possibly their profession as a whole. It will be absolutely crucial for auditors to keep up with the digital change, to understand the impact and to have the technological competence to deal with it. Auditors must therefore define a digital strategy, should explore experiments, should partner with others or even acquire start-ups, and they should train and transform their people and drive a culture of innovation.



Mark Meuldijk
Partner, Assurance Technology
markmeuldijk@kpmg.com

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received, or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation. The scope of any potential collaboration with audit clients is defined by regulatory requirements governing auditor independence.

© 2017 KPMG AG is a subsidiary of KPMG Holding AG, which is a member of the KPMG network of independent firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss legal entity. All rights reserved.