

THE EVOLUTION OF INTERNAL AUDIT IN A DIGITAL ENVIRONMENT

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Key words: digital transformation, risk assessment, digitization, internal audit function, control

Introduction. The internal audit function must undergo a complete digital transformation to be successful. Traditional methods of risk assessment must be replaced by a more collaborative and participatory approach that is fully digitized. A recommended method for determining residual risk indicators is to prepare a risk assessment questionnaire using the organization's enterprise risk management (ERM) tool or, if necessary, a more basic tool (eg, SharePoint, Microsoft Forms). The questionnaire should include general questions about enterprise risk and specific questions about the specific organization/unit being assessed. Each question should be assigned an appropriate weight based on the applicability and potential impact of the control failures identified in the question. The weighted average is determined based on the questionnaire of the particular unit. This is known as the self-confidence index. [Caputo et al., 2021, 489–501]. The internal auditor that oversees the relevant departments independently evaluates the same control elements in the questionnaire based on their experience, operating losses and near misses, and all other parameters used in the traditional risk assessment process. [Warner, Wäger, 2019, 326–349] The auditor also highlights an assessment of control effectiveness based on previous audit reports and the relevant department's Risk and Control Self-Assessment (RCSA). This is known as the inherent risk rating. The residual risk rating used to finalize audit plans is determined by weighting the Self-Confidence Index obtained from the entity's self-assessment and the Inherent Risk Rating provided by the internal auditor. This approach not only provides a fully digital risk assessment methodology, but also enables a collaborative approach to risk assessment, which is essential for today's dynamic digital business models.

Methodology. The transformation of internal audit in the digital environment was carried out in the Department of Management Accounting and Auditing of the State University of Economics of Armenia. During the research, the data obtained as a result of the international experiment, as well as the information provided by the Armenian banks, were considered. We have used data sets to assess internal audit transformation prerequisites and calculate digitization risks. In order to assess the risks of digitization of the internal audit, many international analyzes of the internal audit process were studied. In the first part of the article, the factors caused by the digital transformation were discussed. Then, the risks of digital transformation in the audit system were addressed and evaluated. The article explains in detail the internal audit process in digital transformation and then concludes.

Literature review. According to the experts, the internal audit function will be adopted to focus on the needs of stakeholders [Caputo et al., 2021, 489–501], and presents the self-confidence index. Building dynamic capabilities for digital transformation is an ongoing process of strategic renewal, long range plan and it is the internal auditor who oversees the relevant departments [Aversa et al., 2019, 326–349]. It is also viewed as a business model response to a digital piracy, a unified view of audit progress, shared through dashboards, and allows better visibility and more engagement from auditees [Arner et al., 2020, 7–35]. The internal audit process may differ slightly based on your organization's policies, circumstances, and reporting speed, but in general, despite the details between each of these processes, internal audit activities will be managed and conducted in this manner [KPMG, 2017] as a relation between external audit fees, audit committee characteristics and internal audit [Florio, Leoni, 2017, 56–74, Carmeli et al., 2016, 347–363].

Scientific novelty. Business transformation in the digital environment is driven by three factors.

1. Intelligent automation advanced technology. Whether an organization uses robotic process automation or artificial intelligence to make decisions, technology is so ingrained in business processes that it seems impossible to separate one from the other. . In an environment where data is a critical decision-making tool, customer master data has become tightly integrated with technology and business processes. Thus, internal auditors must change the traditional approach to provide control via operational processes.

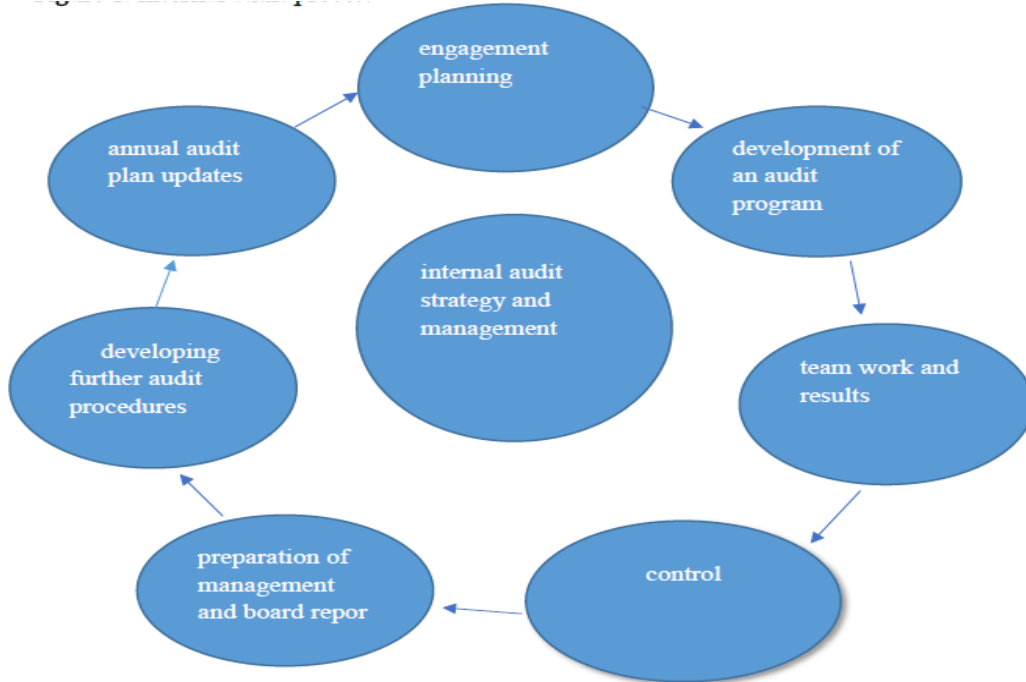
2. Changing customer expectations and investor behavior. The user and user experience have become an important part of digital business models. This, combined with the emergence of environmental/social/governance obligations of investor activism that have captured the attention of both customers and investors, has introduced new considerations for today's internal auditors.

3. Transforming the engagement of mobile workforce workers. The COVID-19 pandemic has fundamentally changed employee expectations and behaviors. An unprecedented number of employees left their jobs in 2021. Internal auditors were forced to focus on risks and controls that were previously only available to privileged users within the organization. In addition, the new work culture requires internal audit to assess the organization's culture and ethics as part of its audit plans.

Results and Discussion. The digital first internal audit function primarily uses agile internal audit and continuous audit methodologies to provide assurance to its stakeholders. Agile internal audit is the mindset the Internal Audit function will adopt to focus on stakeholder needs, accelerate audit cycles, gain timely insights, reduce wasteful effort, and generate less paperwork. [Aversa et al., 2019, 30–58], Agile audit methodologies have become more popular in recent years, but are currently practiced without standards to be used for benchmarking. However, using Scrum boards to track sprint

progress and engage key stakeholders in separate daily meetings has become more common for rapid audits. Alternatively, a more fluid Kanban approach can also be used to conduct audits, supported by Kanban boards and a visualized approach. Agile audit methodologies help achieve a faster turnaround time for audit reports due to consensus on risk associated with agreed audit observations and identified control gaps. Furthermore, a unified view of audit progress, shared through Scrum/Kanban dashboards, allows better visibility and more engagement from auditees [Arner et al., 2020, 7–35]. Continuous auditing has been used by internal audit functions for several decades. However, the level of digitization achieved by enterprises in recent years has enabled a more holistic approach to continuous auditing [KPMG, 2017]. Data correlation and real-time big data analytics help internal audit functions be more proactive in identifying potential control failures. Tools are now available to internal audit functions to correlate past incidents to predict with reasonable accuracy whether potential risk may materialize in control failures in the future. If internal audit can provide such visibility to management based on factual data, its value as an active function will be recognized by all stakeholders. In a digital-first business model, there is no room for physical reports that are printed on hundreds of pages. In fact, many audit departments have moved to a paperless environment, even without digitization, as part of green initiatives driven by the Environmental, Social and Corporate Visions set by the board of directors. Audit committee packages with hundreds of pages that are submitted periodically (e. g. quarterly) do not reflect the core values of a digital-first enterprise. Internal audit functions in digital-first organizations should adopt a dynamic continuous reporting methodology with escalations based on the severity of incidents. A visual representation of outstanding issues and underlying risk ratings through dynamic dashboards developed with visualization tools such as Tableau or Power BI can be well reflected in the digitalization journey of internal audit. The digital first internal audit function primarily uses agile internal audit and continuous audit methodologies [Kent, 2006, 387–404]. Agile internal audit is an evolutionary process. It is not that current internal audit and risk-based approaches are outdated; rather, it is a mindset to focus on continuous improvement and operating with agility. Agile auditing can complement existing processes and not necessarily replace current auditing processes. [Florio, Leoni, 2017, 56–74]. As we explore different frameworks and project management methods, it is important to challenge and question where the methods are best suited to the audit or task, and where the methods may not be used or adopted due to lack of resources, budget, circumstances and/or skills. Without oversimplifying the process, the traditional approach to internal auditing involves planning, fieldwork, and reporting. Implementing an agile internal audit process (using Scrum as a project management framework) also includes planning, fieldwork and reporting.

Figure 1. Internal audit process



The internal audit process depicted may differ slightly based on your organization's policies, circumstances, and reporting speed, but in general, despite the details between each of these processes, internal audit activities will be managed and conducted in this manner. [Lois et al., 2020, 205–217]. Today, as internal auditors, we are trained and focused on risk-based auditing, constant communication, adjusting audit procedures when necessary, and delivering value to management and stakeholders. In other words, a well-conducted internal audit can have the following objectives, activities and results.

Figure 2. Internal audit objectives, actions and results



Is a change needed for the above process and results? From the outside, no, everything works fine. The achieved result is desirable. Agile internal audit is "evolutionary". It is not always transformative. Agile auditing does not transform the entire internal audit process. The guiding belief is that if we apply certain principles and methods, focus on continuous improvement, and adapt quickly as needed, we CAN achieve better or dif-

ferent results. It is about enhancing the process, not fixing it or implementing an entirely new process replacing existing robust risk-based audit. What flexible internal audit can be considered is first the mindset and then the implementation of certain project management techniques that leads to positive results for the team, managers, chief audit executive and, most importantly, management, the audit committee and stakeholders.

Conclusions. Digitization of business processes and digital-first business models have accelerated the transformation of internal audit functions in recent years. Audit departments are at different stages of the maturity curve when it comes to adopting a digital-first audit methodology. Digital transformation will only accelerate in the future as more organizations move to explore business opportunities in new areas such as metaverse and nonfungible tokens (NFTs). continue to add value to stakeholders. Agile audit methodologies have become more popular in recent years, but are currently practiced without standards to be used for benchmarking. Alternatively, a more fluid Kanban approach can also be used to conduct audits, supported by Kanban boards and a visualized approach. Agile audit methodologies help achieve a faster turnaround time for audit reports due to consensus on risk associated with agreed audit observations and identified control gaps. A unified view of audit progress shared through Scrum/Kanban dashboards allows for better visibility and more engagement from auditees. Continuous auditing has been used by internal audit functions for several decades.

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The global COVID-19 pandemic has changed the way businesses do business and caused a surge in digital acceleration. It can be said that the world is experiencing a digital revolution, not a digital evolution. This revolution has created unprecedented challenges and enormous opportunities. In a digital business model, all business capabilities are designed, planned and executed with an end-to-end digital experience for the benefit of customers and internal stakeholders. Additionally, all legacy processes have been digitized for efficiency. In digital-driven enterprises, decision-making is much faster due to the interconnectedness of data elements, which helps to establish clear trends and patterns. Automation is rapidly advancing the audit industry. As processes become automated, auditors can spend more time on audit results and inputs. Data analytics can transform almost every aspect of internal audit, from planning to fieldwork to reporting and beyond. When internal audit teams use analytics in audit planning to capture risks, and when they are incorporated into reports through statistical analysis and visualization, it adds value to the reports.