

## The Digital Transformation of Auditing and the Evolution of the Internal Audit

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This book discusses the digital transformation of auditing and its impacts on internal audits. It poses the question of whether digitalization significantly impacts internal audit practices and methodologies, information technology/information system audit, IT governance, and risk management. Internal audit, particularly IT audit, addresses corporate strategy and alignment, corporate governance, IT governance, agility, risk management, and compliance. The author manages emerging technologies, including artificial intelligence, blockchains, cloud computing, and data analytics. She presents diversified opinions concerning these issues of utmost importance to audit professionals. Auditors must develop new skills to deliver high-quality services in a digitalized environment consistently. Audit methodologies, processes, and tools used to conduct audits have progressively changed from those used by traditional audits. The internal audit function has gradually evolved from passive monitoring to strategic and dynamic consulting. Understanding the evolving risk landscape is challenging to the performance of internal audits. As a value-adding function, internal auditing is crucial in advising organizations and their stakeholders to ensure their objectives, manage risk, and improve governance processes. The author claims that there is a need for further research in internal auditing as new and emerging internal auditing activities involve technology. As a consequence of the digital transformation of auditing, the author assumes that audit regulators revise existing auditing standards or codify new ones to reflect the technologically driven changes.

The book's target audiences are academics and practitioners who want to learn more about the evolution of internal auditing in a rapidly changing global business landscape driven by digital transformation. It contributes to the academic knowledge of internal auditing by clarifying and expanding on emerging issues related to business strategy and alignment, corporate governance, IT governance, agility, risk management, and compliance. The book provides a vision of the internal audit function and its vital technological challenges in a rapidly changing business landscape. The author, Nabyla Daidj, is a Professor in information systems management and strategic management at Institute Mines-Télécom Business School, Paris, France. She is an expert in digital transformation and disruptive innovations. The structure of the book's six chapters is coherent and consistent by helping

the reader to digest the reading matter through a conclusion at the end of each chapter, containing a summary of the reading material, raising questions for follow-up discussions, and containing an overview of the relevant literature.

Chapter 1 concisely presents the emergence and development of the audit function, the subject of digital transformation, the impact of digital transformation on internal auditing, the evolution of internal auditing as distinguished from external auditing, the development of IT auditing, the importance of internal auditing and IT audits in the reviewed literature and reflects on the essential features of digital transformation based on a comprehensive literature review. The author points out that digital transformation concerns both industry-level and organizational-level changes. Moreover, the book highlights research findings on internal auditing and IT auditing from a historical perspective and the current challenges of an increasingly dynamic and complex global corporate landscape.

Chapter 2 shows a detailed and well-explained overview of the characteristics of strategic planning using a theoretical framework and outlines relevant influencing factors for businesses to achieve business-IT alignment to benefit from a digital competitive advantage. The author explicitly emphasizes that the strategic alignment of IT with business goals is a critical success factor for most companies. The alignment implements a Balanced Score Card, including strategy, organization, functions, business lines, information systems, and processes. According to Daidj, internal audit has always played an important, helpful, and valuable role in strategic planning. In competitive business environments, aligning the business strategy with technological changes has significantly increased with the emergence and growing importance of new digital technologies. This process reflects the internal audit function that became increasingly strategic by reflecting the need for such alignment.

Chapter 3 addresses in-depth IT Governance (ITG) issues, risk management, compliance, ITG frameworks, and professional practices. The author characterizes corporate governance as processes and structures that increase the productivity and competitiveness of the entire organization and serve the management of the organization's business to achieve the

shareholders' objectives based on a standardized set of rules. According to Daidj, ITG is a trailblazer for aligning business and IT while minimizing IT risks. The book raises the question of what role internal auditing plays in IT governance. The internal audit's role includes evaluating the organization's governance processes and making recommendations for improvement to help prevent governance failures and improve strategic performance. Internal audit serves as the third line of defense. It is responsible for independently confirming that risk management and internal controls are operating effectively and providing advice to senior management and the board.

Chapter 4 analyzes the traditional IT audit approach and discusses the issue of digital maturity concerning internal auditing and the evolution of IT audit methodologies driven by digital transformation. Analysis of the three specific audit approaches, risk-based framework, IT governance audit methodology, basics of agile audit, and the development of agile internal and IT audit are subject of Chapter 4. According to the author, the growing complexity of the economic, legal, regulatory, digital, and technological environment is a driver for developing new risk analysis and management strategies models. The Digital Maturity Model (DMM) drove the development of new internal audit practices through continuous audit procedures. The maturity model serves as a guide from traditional internal audit models toward more mature levels of continuous auditing.

Chapter 5 presents a solid overview of advanced technologies such as blockchains, technology adoption models in auditing, and audits with new technologies such as data analytics, robotics, machine learning, and artificial intelligence. Technology-based audit tools in the book include generalized audit software, test data generators, computerized audit programs, specialized audit utilities, blockchains, and computer-assisted audit techniques (CAATs). Daidj outlines that these technologies impact internal audits, as auditors must adapt their auditing processes accordingly to integrate the new updated technologies into their auditing methods. Moreover, the author examines how new technologies open up new possibilities for internal auditing and the auditing process, resulting in numerous opportunities for increasing value and reducing costs for the respective companies. Data analytics techniques can replace sampling audit techniques by testing the correct functioning of a process or a series of controls on a whole population. Expanding on the initial use of CAATs, one of the most significant advances in the use of IT in internal audit has been the increased use of data mining, continuous auditing, and analytics for auditing data. These technologies are impacting the audit of financial statements in particular, as the increased use of IT improves the efficiency and effectiveness of audit processes, helping the auditor detect fraud while reducing litigation costs. The use of new technologies in auditing (e.g., computer-aided applications for auditing, data analysis, artificial intelligence, or robot-controlled process automation, etc.) is a current topic for internal auditing, as data analytics can significantly expand the breadth and scope of audit coverage.

Chapter 6 prescribes risks, uncertainty, crisis issues, and their consequences for internal auditing in the COVID-19 era and post-COVID-19 considerations. The COVID-19 crisis has exposed the vulnerability of individuals and entire economies, raising questions about the future and "long-term" prospects and scenarios. The world after COVID-19 has changed. Internal audit needs to evolve with the "new normal." The author points out that the usage of technology will become increasingly crucial for conducting

internal audits in the future. Prospects for internal audit work should consider remote work, process automation, and predictive analytics. More broadly, internal audits have the potential to support strategic decision-making as companies increasingly rely on internal auditors to provide timely business insights while helping to guide their organization through a dynamic risk landscape [1-6].

### Conclusion

In summary, the author thoroughly researched and analyzed the function of internal auditing and the impact of digital transformation on internal auditing methodologies based on a comprehensive literature review. However, the book needs a more critical analysis of the literature, as the literature review only serves to gather information and conduct research. Daidj provides an overview of current and future technological changes affecting internal auditing and how internal auditing will continue to evolve. However, technological developments such as artificial intelligence, blockchain technology, or data analytics should be covered or analyzed in more detail in the book.

The book enriches scholarship and improves understanding of technological change and subsequent further development of internal auditing. Each chapter includes a presentation of the reviewed literature, a conclusion with questions for discussion, and perspectives for future research. The book primarily targets an academic audience that wants to gain an overview of the digital transformation of auditing and the further evolution of internal auditing. The book would be less appropriate for practitioners, as the author analyzes and evaluates the technological developments, the impact on internal auditing, and its further development from an academic macro level. The book includes no reference to the practice of internal auditing.

The reviewers are independent blockchain technology experts, not acquainted with the author.

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