INTERNATIONAL FORUM OF INDEPENDENT AUDIT REGULATORS

Use of technology in audits – Innovation and audit quality

2026

This report, released on April 20, 2026, presents information and perspectives on the use of technology in audits.

Established in 2006, the International Forum of Independent Audit Regulators (IFIAR) comprises independent audit regulators from 56 jurisdictions representing Africa, North America, South America, Asia, Oceania, and Europe. Dedicated to serving the public interest and enhancing investor protection, IFIAR provides a platform for dialogue and information sharing regarding audit quality matters and regulatory practices around the world, with the shared goal of enhancing audit oversight globally by encouraging collaboration and consistent regulatory activity that promote high-quality audits.

Executive Summary

Rapid advancements in technology continue to reshape audits globally. Audit firms are increasingly embedding tools such as advanced data analytics, artificial intelligence (AI) and automation into their audit workflows to improve efficiency and effectiveness and reduce repetitive tasks.

When applied effectively, a human-led approach can leverage these innovations to improve audit quality, particularly when they are used to deepen analysis and enhance critical thinking. Examples include more consistent execution across engagements, enhanced risk assessment that leverage predictive analytics and/or real-time data, and identifying unusual or unauthorized transactions. Together, these can help to provide better protection to investors and other users of financial information.

However, the use of these technologies also introduces new risks, including challenges around oversight, ethical use and potential over-reliance on outputs without sufficient challenge of the work performed. As such audit firms are encouraged to address these challenges through the establishment of a defined and continually improved governance system that formally manages these risks and ensures firm-wide policy compliance.

IFIAR's Approach to Understanding the Use of Technology

IFIAR remains committed to understanding and monitoring the impact of technology on audit quality. Through ongoing dialogue with the six large global audit firm networks (Global Public Policy Committee (GPPC) firms), analysis of inspection findings and sharing of approaches among its Members, IFIAR seeks to promote transparency and accountability around the use of technology.

IFIAR Members engage with audit firms at the IFIAR Member level as well as the network level through IFIAR's Global Audit Quality Working Group (GAQ) and Technology Task Force (TTF). These efforts help to track the developments in both the technological platforms used and the individual automated tools and technique (ATTs) used to support various functions of the audit.

The observations in this report are based on information shared with IFIAR and are intended to provide insights into emerging trends, practices, and areas of focus. They are not intended to represent a comprehensive or exhaustive assessment of all technological resources or their effectiveness across firms or jurisdictions.

Key Findings and Recommendations

Building on the foundational messages of IFIAR's 2025 report, this publication reaffirms the importance of evolving quality management processes to better understand and monitor the utilization and impact of technological resources. While progress has been made, continued focus is needed to ensure oversight keeps pace with evolving technology.

This report highlights progress made since our last publication, including areas where close attention is needed to strengthen audit quality. IFIAR Members continue to encourage audit firms to:

- Evolve and re-engineer processes (at all levels, where appropriate, including at the global network, local member firm and audit engagement team) by leveraging the International Standard on Quality Management (ISQM) 1 to ensure there is effective monitoring and oversight of the use of technology in the audit.
- Prioritize wider deployment and adoption of ATTs that achieve defined and measurable objectives and that have the greatest impact on improving audit quality. For example, focusing on tools aligned to audit quality objectives that demonstrate reliable and consistent improvements to audit quality.
- Continue to build appropriate governance mechanisms in the development or acquisition of technological resources that promote transparency and reliable performance. This will require coordination within the global networks and member firms, based on their respective responsibilities.
- Take the necessary steps to ensure that auditors are in control of the technology and that they retain responsibility for the judgements and decisions made.

IFIAR encourages all relevant stakeholders within the financial reporting ecosystem to actively understand and manage how emerging technologies may influence financial reporting and audit outcomes. In this context, IFIAR encourages and emphasizes the importance of early engagement with local regulators and IFIAR, particularly when technology may significantly alter the nature of the work performed in an audit.

Updates to the Technological Landscape

IFIAR Members have observed that global audit networks and member audit firms continue to demonstrate a commitment to expanding and enhancing their technological resources. These resources are designed to support the execution of high-quality audits and include:

- Integrated audit platforms (that leverage many tools previously used as individual ATTs)
- Other technological resources (outside of an audit platform)

There is a growing trend toward developing or re-engineering audit tools to leverage AI. In 2025, the GPPC networks collectively reported an approximate 30% year-over-year increase in AI-enabled tools.[1]

IAASB's Actions to Navigate the Technological Landscape

IFIAR supports the International Auditing and Assurance Standards Board (IAASB)'s efforts to encourage the appropriate use of technology in audits. This includes developing guidance to help firms apply the requirements of both the International Standards on Auditing (ISA) and ISQM 1, in context of technology. IFIAR shares IAASB's commitment to scalability, ethical alignment, and ongoing stakeholder engagement so that technology can be used to enhance audit quality globally.

Emergence of Agentic AI

IFIAR's TTF have been informed by many audit firms of plans to continue to explore emerging technologies, including agentic AI systems. Over time this may evolve from task automation toward an orchestration of multiple audit activities.

These developments introduce new complexities, particularly as systems become increasingly autonomous. It is critical that auditors retain responsibility for evaluating, validating and where necessary, challenging decisions made by AI systems, including:

- Clear explanation of key judgements or decisions that materially affect the audit. For example, how auditor judgement was applied, challenged, or exercised in relation to AI-generated outputs or any critical human decision points made throughout the process.
- Implementation of frameworks that define the role of the auditor within the audit process.

For other emerging technologies, please refer to Appendix A of this report.

[1] These figures were collected by IFIAR's technology task force. These figures are subject to differing firm reporting practices. While the numbers help to demonstrate the trend, the TTF acknowledges that differences exist in how the data was prepared and presented by each GPPC network.

Network-Wide and Member Firm-Level Considerations

As technological resources become increasingly complex and more autonomous, responsibilities extend beyond the engagement team to include the firm, and where applicable, the global network. Audit firms and global networks play a critical role in establishing, governing, and maintaining technological resources. In this context, they need to re-evaluate and assess whether changes should be made to supervision and oversight mechanisms.

The International Standard on Quality Management (ISQM) 1 outlines a framework for managing quality within an audit firm, which includes:

- Assessing the risks associated with the use of technological resources.
- Establishing quality responses to the risks, relating to obtaining, developing, implementing and maintaining the technological resources. This includes ensuring technological resources function as intended, generate reliable outputs and remain fit for purpose.

ISQM 1 also includes requirements related to certifying technology tools used in the audit, establishing appropriate IT general controls over tools developed internally or by third parties, and providing the necessary training and support to ensure teams use those tools as intended.

It is also important that technological enhancements do not obscure professional judgments or reduce transparency. IFIAR Members encourage audit networks to continue developing and improving their monitoring and oversight programs that will assess the design, functionality, and output of ATTs.

The following are some practices for audit firms and global networks to consider as they continue to develop and evaluate their technological resources:

- Develop initial validation and approval protocols for all ATTs and technological resources, ensuring alignment with firm methodology, and all relevant regulatory requirements.
- Document guidance on appropriate tool usage, including limitations and risk considerations.
- Ensure tools are deployed on approved engagements, preventing unauthorized or inappropriate use. This may also include oversight programs that ensure non-approved or decommissioned tools are also not being used.
- Ongoing coaching and reinforcement programs that both encourage proper use and ensure the tools are used when they could enhance audit quality.
- Formal mechanisms to facilitate user feedback around the use of the tool, including reporting issues, concerns and whether the technological resources are fit for purpose.
- Ongoing assessment of each service provider's commercial off the shelf tools.
- Periodic reviews and re-approvals/certification, particularly when tools or underlying models are updated, to confirm continued compliance and effectiveness.
- Formal escalation pathways for identifying and addressing anomalies within tools, such as unexpected outputs or operational failures.

- Ethical governance structures, such as AI oversight committees, to monitor responsible use of technology and evaluate adherence to professional standards.
- Whistleblowing procedures that encourage reporting and protect confidentiality of ethical concerns related to AI use in audits.

As technology continues to evolve, it is important for audit networks to remain agile in adapting their methodologies and oversight practices to uphold audit quality and public trust.

Defining the Role of Auditors in a Technology-Enabled Audit

Audit firms consistently emphasize that audits will remain human-led. To support this commitment, firms should be prepared to clarify what this means in practice. Establishing guidelines and practical examples to illustrate what it means for the audit to be human led, including:

- Assigning specific engagement personnel responsible for decision checkpoints.
- Performing an overarching review of autonomous decisions.
- Ensuring appropriate accountability for all work performed.

Advanced technologies such as agentic AI should serve as tools to support or enhance, rather than replace, the professional judgment applied by auditors. Effective integration of technology may require a shift in behavior and a clear articulation of the auditor's involvement at each stage of the engagement.

- At the outset of the audit, engagement leaders should establish clear expectations for how technology will be utilized, including any engagement specific planned uses of AI or ATTs, and review these expectations to ensure that the scope and limitations of technological resources are understood.
- Teams should assess the effectiveness and appropriateness of technology-enabled procedures and critically review decisions driven by technological tools, evaluating whether the use of technology enhances audit quality and supports the achievement of audit objectives.
- Senior members of the engagement team should reflect on the overall use of technology in the audit file, carefully assessing whether professional skepticism was maintained.

Ongoing training and coaching are essential to support auditors' proficiency in evaluating and utilizing technological tools, such as evaluating outputs, understanding limitations, and exercising professional judgement. Training programs should map to required competencies. These can include assessing learning outcomes, maintaining training records, and defining proposed refresher intervals that are proportionate to risk.

Transparency of Use and for Those Charged with Governance

Another area for consideration is how audit firms develop processes that provide engagement teams with visibility into key decisions made by technology tools. For example, this may include implementing alerts or review protocols when technology makes decisions that could impact the

approach and scope of the audit. There should also be appropriate review of the steps taken and decisions made.

Transparency with stakeholders, including those charged with governance, is also important. Communicating how technology is integrated into the audit workflow, the extent of its use, and its impact on decision-making will support the oversight role of audit committees and will help to reinforce confidence in audit quality.

Strengthening Oversight as Technology Evolves

As technology evolves, oversight practices must keep pace. Monitoring frameworks should ensure appropriate tools are used on engagements, track performance over time, and evaluate how technology contributes to audit quality within the broader audit process. Technology does not operate on a standalone basis, and its use should be assessed as part of the firm's overall system of quality management.

Data collected from audit firms continues to indicate a growing awareness of the need for structured oversight and to more formally evaluate the performance of technological resources used in the audit. IFIAR's TTF noted that some firms have started to establish oversight committees and develop internal protocols to validate ATT effectiveness, though practices continue to vary significantly across jurisdictions and firms.

IFIAR's TTF has also observed differing approaches among GPPC networks regarding responsibilities for monitoring audit tools. In some networks, monitoring is led at the global level, while in others it is led by the individual member firms that deploy the tool.[2] However, there is a risk that monitoring and evaluation activities are fragmented, resulting in incomplete coverage across tools and jurisdictions. As a result, it may be difficult to obtain a comprehensive view of tool usage, performance and how technology, together with other drivers of audit quality, influences audit outcomes. This highlights an opportunity to strengthen coordination and transparency across oversight arrangements.

Monitoring frameworks should ensure that tools are used appropriately, that their performance is assessed over time, and that their impact on audit outcomes is measurable. As the advancement of technology continues, it is critical that the related monitoring programs are robust, data-driven processes. This process could include clear insights into tool effectiveness, usage consistency, and the impact on audit quality.

Examples of emerging practices include:

- Conducting thematic reviews assessing technology's impact on audit quality across multiple engagements, supported by defined monitoring metrics (e.g., engagement coverage %,

[2] These differences reflect a range of factors including the risk-based design, tool complexity, governance structures, and certification approaches.

false-positive/negative rates vs. manual sample, rework rates, escalation incidence). Ensure metrics undergo periodic review.
- Developing dashboards to track ATT usage trends and identify anomalies.
- Implementing internal benchmarking exercises comparing ATT-driven results to traditional audit methods to validate accuracy and reliability.
- Monitoring emerging regulations related to technology and data security, including through the local firm's system of quality management, to ensure member firm compliance.

Anticipating required future skills and competencies is critical. Audit firms should proactively adapt methodologies and policies to reflect technological advancements.

IFIAR Member Perspectives

The following presents responses provided by IFIAR Members as part of IFIAR's annual survey of inspection findings.

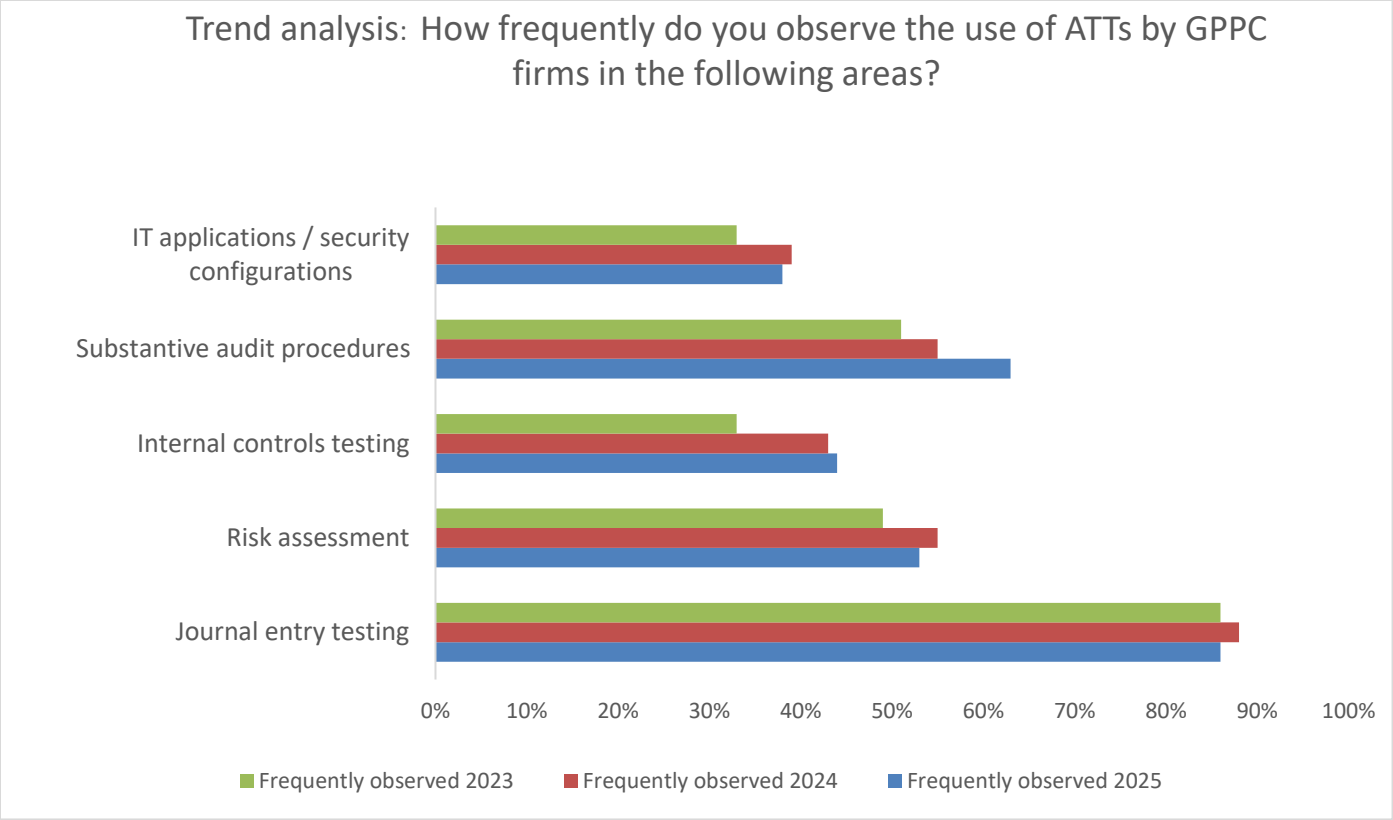
IFIAR Members Are Seeing an Increased Use of Technology in the Audit

The table below indicates how often IFIAR Members have observed[3] the use of ATTs in different audit areas. The data shows a trend of:

- Continuous use of ATTs in areas such as journal entry testing, internal controls and risk assessment.[4]
- Increase in the use of technology in substantive audit procedures.

[3] ATT usage observations are directional and based on IFIAR Member survey responses from their inspections, rather than a comprehensive assessment of use across all audit engagements.

[4] Percentage changes reflect a larger respondent base in 2025, while reports of frequent observations remained largely unchanged or were slightly higher for these categories year over year.



The Use of Advanced Technologies in the Financial Reporting Process

Through our ongoing discussions and activities, we have noted there is considerable variation in the impact that advanced technologies have had to date in the financial reporting process of audited entities. It is important that auditors maintain a clear understanding of how advanced technologies are used across the organization as this may affect the scope and nature of audit procedures performed.

In many instances the use of advanced technologies by audited entities also necessitate a re-evaluation of traditional audit approaches. This is because when processes are integrated through electronic exchange, documents such as order forms, shipment details, invoices, payments records and bank statements may originate from AI systems and be used as audit evidence. Additionally, the use of AI-driven systems will likely influence how financial data is generated, categorized, and presented. Auditors also need to consider the impact that non-accounting AI systems may have on financial reporting, particularly when underlying data used by other departments, third parties or others is used to prepare financial statements. Auditors will need to consider how to evaluate the source and nature of information used as evidence taking into account new risks, including the potential for unreliable output generated by some forms of AI. In addition to risks arising from unintentional error or limitations in AI-generated outputs, auditors should also be alert to the potential for deliberate or adversarial misuse of AI within audited entities. This may include the intentional generation, or manipulation of data, documents, or transactions designed to mislead users or circumvent controls.

At the same time, advanced technologies may also enhance elements of the control environment and financial reporting processes. Auditors should therefore evaluate both the risks and potential benefits of advanced technologies in context, considering how they influence the reliability of information, the effectiveness of controls, and the overall audit approach.

Additional Resources

The following is a list of additional resources, on the use of technology in the audit:

IFIAR Member	Report link
Canada - Canadian Public Accountability Board (CPAB)	Evolving use of technology in the audit
Netherlands - Dutch Authority for the Financial Markets (AFM)	12 building blocks for controlled use of advanced (Gen)AI auditing tools
Singapore - Accounting and Corporate Regulatory Authority (ARCA)	No. 1 of 2025 Audit Practice Guidance – Delivering Quality Audits in a Technology-Driven Environment
South Africa - Independent Regulatory Board for Auditors (IRBA)	The Use of Generative AI Tools and Emerging Technologies in Audits
United Kingdom – Financial Reporting Council (FRC)	FRC publishes landmark guidance providing clarity to audit profession on the uses of AI Thematic Review on the Certification of Automated Tools and Techniques Guidance for audit firms on using generative and agentic AI tools

Appendix A

Other Technologies Used by Auditors

Audit firms continue to explore and deploy a range of advanced technologies that are expected to influence how audits are planned and performed. These developments reflect a broader shift toward more automated, data-driven, and digitally enabled audit methodologies. The table below provides some examples[5] of these technologies:

Predictive Data Analytics	• Use historical and/or real-time data to identify patterns and trends across large data sets. • Enable auditors to analyze full populations of transactions rather than samples. • Can be used in risk assessment and planning to inform where further audit procedures are needed in the audit cycle.
Drone Technology and Remote Sensing	• Use of drones and imaging tools for physical observation, inventory counts including inspection of remote assets and other verification procedures. • Collection of visual and geospatial data, particularly for industries with geographically dispersed operations.
Blockchain and Distributed Ledger Technology (DLT)	• Use of distributed ledgers to record, verify and access transaction data on a near-real-time basis. • Increased use of immutable records, smart contracts and permissioned ledger environments.

[5] Examples are illustrative in nature and should not be considered an exhaustive list.