

Unlocking The Power of Technology in Audit



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A STRONG FOUNDATION, A BIGGER OPPORTUNITY

Statutory audit in India is built on a clear methodology: identify the highest-risk areas, draw a sample of transactions, test it, and form an opinion on the financial statements. SA 315 governs how auditors identify and assess risks; SA 530 sets the framework for sampling. Together, they form the backbone of how most audits are executed. It is a profession built on rigour – and one that has, for the most part, remained structurally unchanged for decades. That is now being tested, not because the methodology is broken, but because the world it operates in has moved on considerably.

Technology has entered virtually every professional discipline over the past two decades – redefining how work is done, what can be delivered, and at what speed. Audit has been no exception, though the pace of adoption has been more measured than in other fields. The methodology has never been the problem. The

opportunity lies in extending its reach – and that is precisely what technology unlocks.

HOW TECHNOLOGY ENTERED THE AUDIT ROOM

The first meaningful intersection of technology and audit was not dramatic. It was the shift from physical registers and paper-based ledgers to spreadsheets – that began to take hold in India in the late 1990s and early 2000s. Globally, this was followed by the development of dedicated audit-support tools. By the early 2000s, firms in the US, UK, and parts of Western Europe began deploying Computer Assisted Audit Techniques tools like ACL (now Galvanize) and IDEA – that allowed auditors to import large data sets and run automated checks across entire population. By the mid-2010s, data analytics dashboards, robotic process automation (RPA), and structured audit platforms had become standard at large firms globally.

The direction of travel has always been toward doing more, with greater precision, at lower cost. India has followed this trajectory, but with a lag – attributable in large part to structural realities. The audit market in India developed at a scale and pace where the economics of technology investment took longer to justify. Equally, the client data infrastructure needed to make those tools effective – clean ERP systems, consistent master data, reliable digital records – was not sufficiently mature across the market until relatively recently. Both conditions are now changing, and the gap is narrowing faster than it has at any point before. India also has a structural characteristic that makes the technology opportunity particularly significant: the sheer volume and diversity of entities that require statutory audits. Running those audits more efficiently – and more effectively – at scale is not a marginal improvement. It is a fundamentally different operating model and an opportunity for audit firms to disrupt the market.

WHERE TECHNOLOGY CAN MAKE THE BIGGEST DIFFERENCE

Automation and Data Analytics in Population Testing

Conventional audit sampling tests a subset and infers conclusions about the whole – a method that works until the problem sits outside the sample. Technology replaces this by applying testing logic across the entire transaction population.

In interest income audits at banks and NBFCs, rather than manually verifying a selection of loan accounts, the interest calculation logic – rate, principal, day count convention – is codified and run across every account in the portfolio. Deviations above a materiality threshold are flagged automatically. The auditor reviews exceptions, not a pre-selected sample, achieving 100% coverage in a fraction of the time.

The same applies to journal entry testing under SA 240. Machine learning tools scan millions of entries and surface anomalies – round-number postings, entries outside business hours, unusual reversals – ranked by risk. Several accounting misrepresentations could involve journal entry manipulation present in the data. The tools to detect it systematically now exist.

Remote Evidence Gathering | Asset Verification

Verifying fixed assets across geographically dispersed locations is one of the most time and cost-intensive parts of an audit. Traditionally, it requires teams to physically travel to each site – a process that can take weeks for infrastructure companies, utilities, or large manufacturers. The practical constraints of time and cost mean that physical verification is often partial, with coverage limited to a selection of locations rather than the full asset base.

Drone technology changes both the economics and the reach. Aerial surveys generate geo-tagged photographic evidence of asset existence and condition, with barcode and QR-code scanning enabling direct matching of physical assets to the fixed asset register – identifying assets no longer in service and flagging discrepancies, without anyone needing to be on the ground. Evidence is uploaded directly to a cloud-based audit file and reviewed remotely. Critically, what was previously a sampled exercise can now achieve full coverage – every site, every asset – at a fraction of the time and cost of manual verification. Globally, audit firms have begun using drone surveys as audit evidence – measuring stockpiles, verifying remote assets, documenting asset condition. In India, the drone infrastructure already exists at scale. Its application to statutory audit is a logical next step, and not a distant one.

AI Agents in Continuous Monitoring | Anomaly Detection, Analytical Procedures

Beyond individual procedures, AI agents – systems capable of executing multi-step tasks autonomously – are beginning to enable a fundamentally different audit model: continuous monitoring rather than point-in-time testing.

An AI agent can be configured to run analytical procedures on a client's financial data at regular intervals throughout the year – tracking ratios, flagging unusual movements, and escalating anomalies for auditor review as they emerge. This shifts audit activity from an annual exercise conducted after the fact to an ongoing process that surfaces issues in real time. For listed companies and large financial services entities, this represents a material improvement in audit responsiveness and, ultimately, in the quality of assurance provided.

OCR in Document Vouching | Invoices, Challans, Agreements

India presents a documentation reality that many markets have largely moved past – physical and scanned records remain prevalent across client types. OCR technology extracts structured data from these documents – amounts, dates, counterparty names, reference numbers – and maps it automatically against corresponding ERP entries, flagging discrepancies without manual intervention. An auditor verifying vendor invoices against purchase orders, or cross-checking delivery challans against sales records, can now do so across the full population rather than a sample – with a more meaningful review focused only on the anomalies.

The Broader Impact: Coverage, Quality, Efficiency

Technology in audit does not improve one thing – it improves three simultaneously, which is what makes it genuinely different from previous incremental improvements.

Coverage increases because testing is no longer constrained by what is feasible to check manually. Quality improves because errors of omission – things missed because they were not in the sample – become far less likely, and documentation is more structured and defensible. Efficiency gains are significant: industry estimates consistently suggest that well-implemented technology integration can reduce time spent on routine audit procedures by at least 30 percent.

This matters because client expectations are evolving. Doing more, more accurately, in less time is not just a quality story – it is an economic necessity for firms that want to remain competitive. When audit coverage is broader, findings are more defensible, and procedures are demonstrably rigorous, the financial statements that emerge carry greater credibility – and the stakeholders relying on them have stronger grounds for the trust they place in them.

WHAT AUDIT DELIVERY WILL LOOK LIKE

The shape of audit teams will change. The traditional model – a large base of junior staff doing transaction-level testing, supervised by a smaller senior layer – will become less relevant as automated tools take on that transaction work. Leaner teams with higher average seniority become possible, and the economic case for them is strong.

The skills profile will shift as well. Data science capabilities – the ability to build and validate testing tools, interpret outputs, and manage data pipelines – will become as important on an audit team as accounting knowledge. The most effective delivery teams will combine domain specialists who understand the business and the standards with technical specialists who understand what the data is saying.

The mid-management layer – senior managers and directors – becomes more important in this model, not less. They are the people who translate audit risk into testing design, who determine where automation is appropriate and where human judgement is essential, and who are accountable for the quality of AI-assisted work. This is a more complex role than its current equivalent and building that capability is perhaps the most important investment audit firms can make.

Technology companies will increasingly enter the audit-adjacent space – selling tools, platforms, and data products to auditors. This will continue and accelerate. But the regulatory structure of statutory audit creates a durable boundary: the opinion, the licence, and the professional accountability remain with the qualified auditor. The tools are inputs. The judgement is not.

WHAT NEEDS TO FALL INTO PLACE

Client data maturity is the most fundamental enabler. Automated audit procedures are only as effective as the data they run on. A client whose ERP system is fragmented, whose master data is inconsistent, or whose chart of accounts changes every year creates significant friction for any automation effort. The encouraging development in India is that larger corporates – particularly listed companies, financial services firms, and multinational subsidiaries – are generally further along on data infrastructure than they were even five years ago. The push from clients themselves for more

technology-enabled audit processes is, in many cases, driving investment in the data foundations needed to support it.

Regulatory frameworks will also need to evolve to keep pace. Audit standards should increasingly acknowledge and provide guidance on what AI-assisted evidence looks like, how population-based testing is documented, and what professional standards apply when algorithms are doing work that was previously done by humans. This is a reasonable expectation – and one the profession should be proactively engaged in shaping.

Within audit firms, the internal change management challenge is as important as any technology investment. The value of these tools is only realised if partners, managers, and delivery teams actually change how they work. Adoption has to be driven from the top.

The One Thing Technology Cannot Replicate

For all the efficiency and coverage gains that technology brings, professional scepticism remains stubbornly human. The ability to look at a set of numbers that reconcile perfectly and feel that something is not right – to push back on a management explanation that is technically coherent but intuitively unconvincing – is not something that can be fully codified.

Audit standards have always recognised this. Professional scepticism is a defined requirement, not a personality trait. But it is also something that emerges from experience, from knowing how similar businesses behave, from reading a room as much as reading a spreadsheet. A model trained on historical data will identify patterns that match what it has seen before. It may struggle with what it has not.

Some of the most significant audit failures in recent decades were not failures of process – the samples were drawn, the procedures were followed, the documentation was in order. They were failures of judgement: the willingness to look past what the numbers appeared to say, to question what was not in the sample, and to challenge explanations that were coherent on the surface but wrong underneath.

Technology narrows the space where things can go unnoticed. It does not replace the auditor's responsibility for what is done with what is found.

WHERE THIS IS HEADING

Technology is reshaping how every professional service is bought, delivered, and evaluated. Audit is not insulated from that shift – nor should it be. The trajectory is clear. Audit firms that treat technology only as a supplementary tool – something that helps junior staff work faster – will find themselves at a disadvantage as clients begin to understand what a more fully technology-enabled audit can deliver. The more interesting and more demanding question is how quickly firms can rebuild their delivery models around these capabilities, rather than fitting technology around the model they already have.

Clients are already asking the question. The firms that move first – and move thoughtfully – will define what audit is expected to look like for the next generation. The rest will be catching up.