



Future thought

The audit is changing:
How techniques in D&A and Lean in Audit™ are enhancing quality and value in the digital evolution

The traditional audit: Where are we coming from?

Everything evolves – organisms, individuals, societies – and processes like the audit are no different. The inevitable application of improving technologies and techniques has had a profound effect on the way audits can be delivered and the ripples of that effect are accelerating and gaining momentum.

Where once the slide rule gave way to the power of the computer, whose capabilities were in turn transformed by the ability to access and share information on the Internet, auditors today have access to an exploding range of capabilities that are helping improve audit quality and enhance audit value in powerful new ways.

Just 10 years ago, auditors were still working with red pencils and shipping information packages around the world. Online audit programs now let them review working papers generated in any geography.

Digital and online processes have supplanted the paper-driven audit, which consisted of a largely manually-executed mix of analytical procedures, spreadsheets, hard copy checklists and testing. And if the audit has evolved so dynamically over the last decade, what will the next five or 10 years bring?

The potential is enormous, even if it's hard to quantify, but it's a certainty that key trends, such as the **Data and Analytics** (D&A) - enabled audit and **Lean in Audit™**, will be at the heart of the new environment.

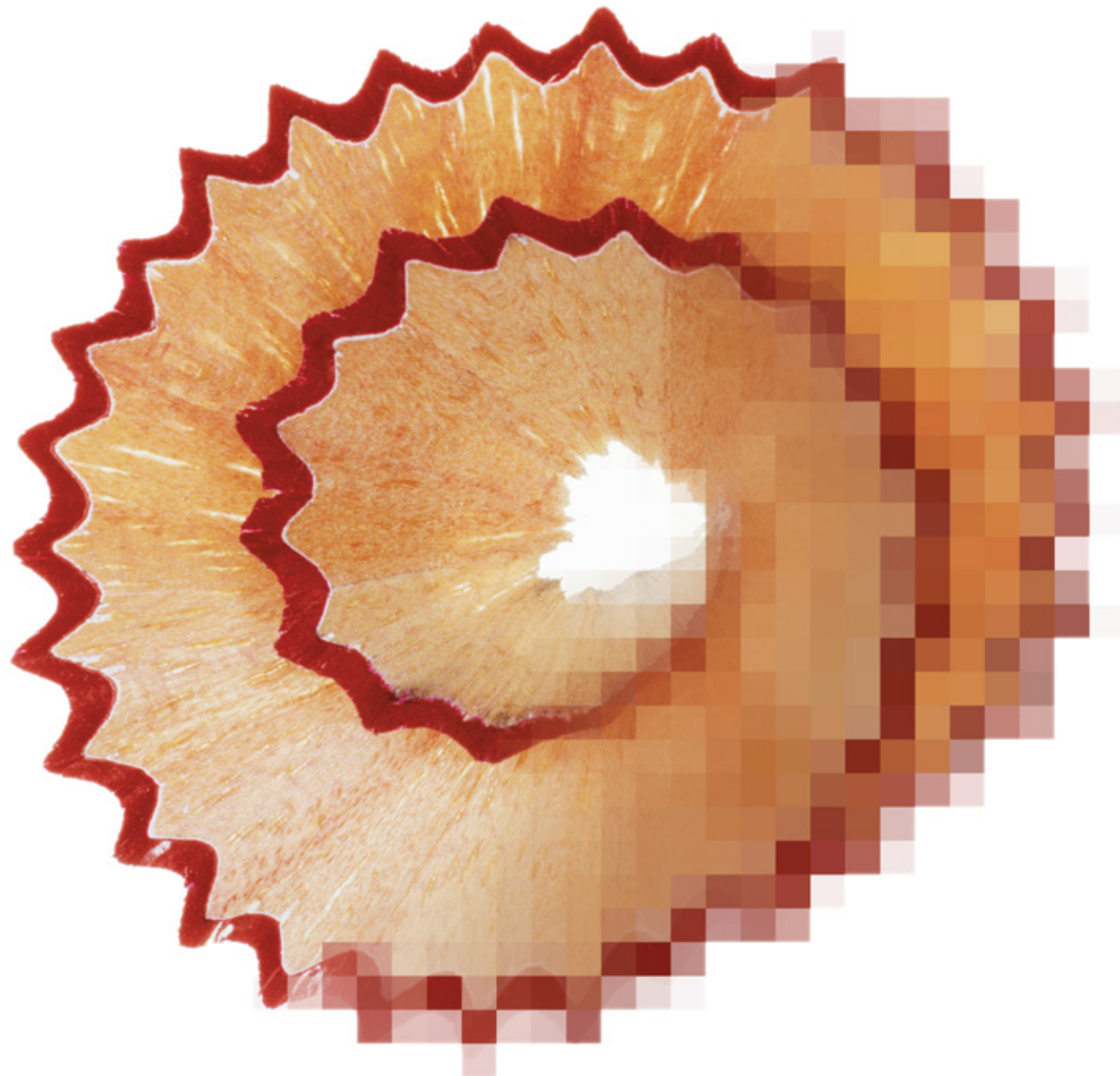
The evolution of the audit

This report looks at how both D&A and Lean in Audit™ are shaping the audit today and how this evolution may play out in the coming years. It examines the value both approaches add to the audit and outlines some of the key benefits available to companies that take advantage. It also provides a checklist of what companies should be thinking about and asking as they try to decide what's right for them and how their future audit engagements should be conducted.

New approaches raise the quality quotient even further

In the case of D&A, data has always been the lifeblood of the audit. Companies would provide auditors with vast amounts of paper-based material – including invoices, reconciliations, shipping documents and a range of computer-generated reports – upon which a number of manual procedures were then performed across several hundred sample transactions. There's no question the audit profession had the traditional audit down to a science, consistently delivering the highest-quality audit possible with the data and tools available. The fact is, however, that when the power of D&A is applied to the audit, that data becomes unimaginably broader and deeper, with virtually 100% of financial statement data available for analysis. Similarly, advancements in D&A tools enable auditors to analyze data at more granular levels, focusing in on specific areas and developing insights clients can then leverage to improve compliance, potentially uncover fraud, manage risk and more.

With Lean in Audit™, we're seeing an evolution of the Lean methodologies developed to reduce waste and improve efficiency – where it has been categorically shown to improve business results and performance. It concentrates on amplifying activities that create or add value while eliminating everything else, which actually complements D&A's focus on value. If D&A provides a way to increase value in the audit, Lean in Audit™ provides ways to realize value. It doesn't change what auditors do – which is continue to deliver the best audit possible – but how they go about doing it. And by executing the audit with Lean principles at the forefront of the process, auditors can provide organizations with more information, deeper insight and stronger analysis, which the organization can in turn leverage to make measurable business and operational improvements. Combining the quantified data derived from D&A together with a Lean approach – which enables and engages the people intimately involved in the process – is a powerful combination that is making a real difference to organizations.



Where do we sit today?

We’ve noted that the audit is changing. In part that’s because the technologies and techniques at hand are simply getting better, but in part it’s because business itself is changing.

As the pressure on boards and the audit committee has grown in the post-crisis economy, business needs, wants and expectations around the value the audit can deliver have increased. D&A and Lean in Audit™ are two critical ways auditors are responding to further increase quality and help companies by adding value. Indeed, D&A represents an across-the-board, value-add capability that will be part of every audit in the future, as ubiquitous as spreadsheets have been.

Lean in Audit™ enhances the audit, leveraging the competencies of the engagement team to develop a depth of business understanding that identifies value while enhancing audit quality.

Data and Analytics

Audits have typically started with a client interview, where things like the past year’s performance, recent organizational changes and ongoing strategy implementation are discussed and noted. When beginning a D&A-enabled audit, auditors start from a somewhat different vantage point. They’re actually likely to meet with Information Technology personnel early in the process to set up access to the company’s data systems. With data mining and aggregation software in place, auditors can be forearmed in advance of meetings with complete populations of client data sets, covering the company’s performance data and operational information.

This is all raw data that can be run through a D&A engine. In many cases, D&A software can generate reporting that companies would previously have had to locate and provide. This all involves performing various routines that can, for example, look for new customer and supplier transactions, isolate large and unusual transactions, regressively analyze and compare performance over the last three years, or investigate aspects of risk that may be of particular concern to audit committees, such as those involving management estimates. It’s possible, for example, to test segregation of duties in particular areas, to not only see if a person has performed conflicting duties, but to identify who it was and which transactions or accounts were impacted.

Once these routines are complete, auditors can determine where to drill down for more granular analysis using different or more specific algorithms and permutations – such as areas where data inconsistencies may indicate the presence of fraud, controls weaknesses or unsupportable risk. Regression analysis can also incorporate structured external data, including changes in interest rates and non-financial data.

For some, this more proactive analytical approach has raised questions of independence, but the fact is, the value being added is no more than an outgrowth of the auditors’ traditional role, which is still to opine on financial statements and provide assurance that assets and liabilities are properly stated. Because the techniques being used to accomplish that goal are now so much more sophisticated – and yield a far deeper understanding of the

organization’s data than was previously possible – the level of results provided to the client in the course of the audit has inherent added value in it. Auditors are not telling companies how to improve productivity or better manage risk. Rather, they’re giving organizations an audit in which data analysis may yield insights into those areas – insights that savvy companies can, and should, apply to improve business.



“D&A SUBSTANTIALLY CHANGES THE KINDS OF CONVERSATIONS WE’RE HAVING WITH THE AUDIT COMMITTEE AND MANAGEMENT – AND THE KINDS OF CONVERSATIONS THEY’RE HAVING WITH ONE ANOTHER. WITH EMPIRICAL, DATA-BASED EVIDENCE AT HAND THAT RELATES TO THE FUNDAMENTAL NATURE OF THE BUSINESS, WE DISCUSS THE “WHY” OF THINGS AS WELL AS RENDER AN OPINION. WE’RE HAVING MORE PRECISE DISCUSSIONS IN AREAS WE NEVER TALKED ABOUT BEFORE.”

– **DOUG A. KING**
National Data and Analytics Leader, Audit
KPMG in Canada

Transforming efficiency and productivity

Lean in Audit™

Lean offers a new way of looking at processes and engaging people within the organization. It has already transformed efficiency and productivity in other industries, and now auditors can apply many of those ideas to achieve a more transparent understanding of business processes and the various problems that can arise. Auditors have long offered observations related to process improvements, but Lean in Audit™ lets them apply a tested, proven and disciplined approach to determining what might be able to be done differently or better – again, insights that emerge during the course of the audit, not as a consultative service.

While D&A provides organizations with a different way to understand their data, Lean in Audit™ is process-oriented, directly engaging organizational stakeholders and employing hands-on tools such as walkthroughs and flowcharts of actual financial processes. It brings auditors into direct collaborative contact with key executives, management and those responsible for auditable systems, creating a mechanism where knowledge is readily exchanged and auditors gain greater understanding of your corporate processes. This understanding is then reflected back to you in ways that will resonate with your business and industry.

Any insights gathered through the course of the audit are available to auditor and client alike. For example, auditors may identify control gaps and potential process improvement areas, while companies have the opportunity to apply such insights to inform business decisions, improve product quality, lower costs, increase profitability, strengthen customer service and satisfaction and drive overall performance.

“OVER THE LAST FEW YEARS, WE’VE BEEN VERY FOCUSED ON ADDRESSING REGULATORY CONCERNS. IT HAS BEEN NECESSARY, BUT WE MAY HAVE GOTTEN AWAY FROM LEVERAGING THE SIGNIFICANT TIME WE SPEND LOOKING AT ORGANIZATIONAL PROCESSES AND SPEAKING WITH PEOPLE IN ORDER TO GENERATE VALUE-ADDED FEEDBACK AND INSIGHT ON PROCESS IMPROVEMENTS. WHEN LEAN IS EMBEDDED IN STANDARD AUDIT PROCESSES, WE ACHIEVE A BETTER UNDERSTANDING OF YOUR END-TO-END PROCESSES, WHICH LETS US IDENTIFY EFFICIENCY AND EFFECTIVENESS OPPORTUNITIES AS A NATURAL BYPRODUCT OF THE AUDIT.”

– LEE ALFREY
National Lean in Audit™ Leader
KPMG in Canada

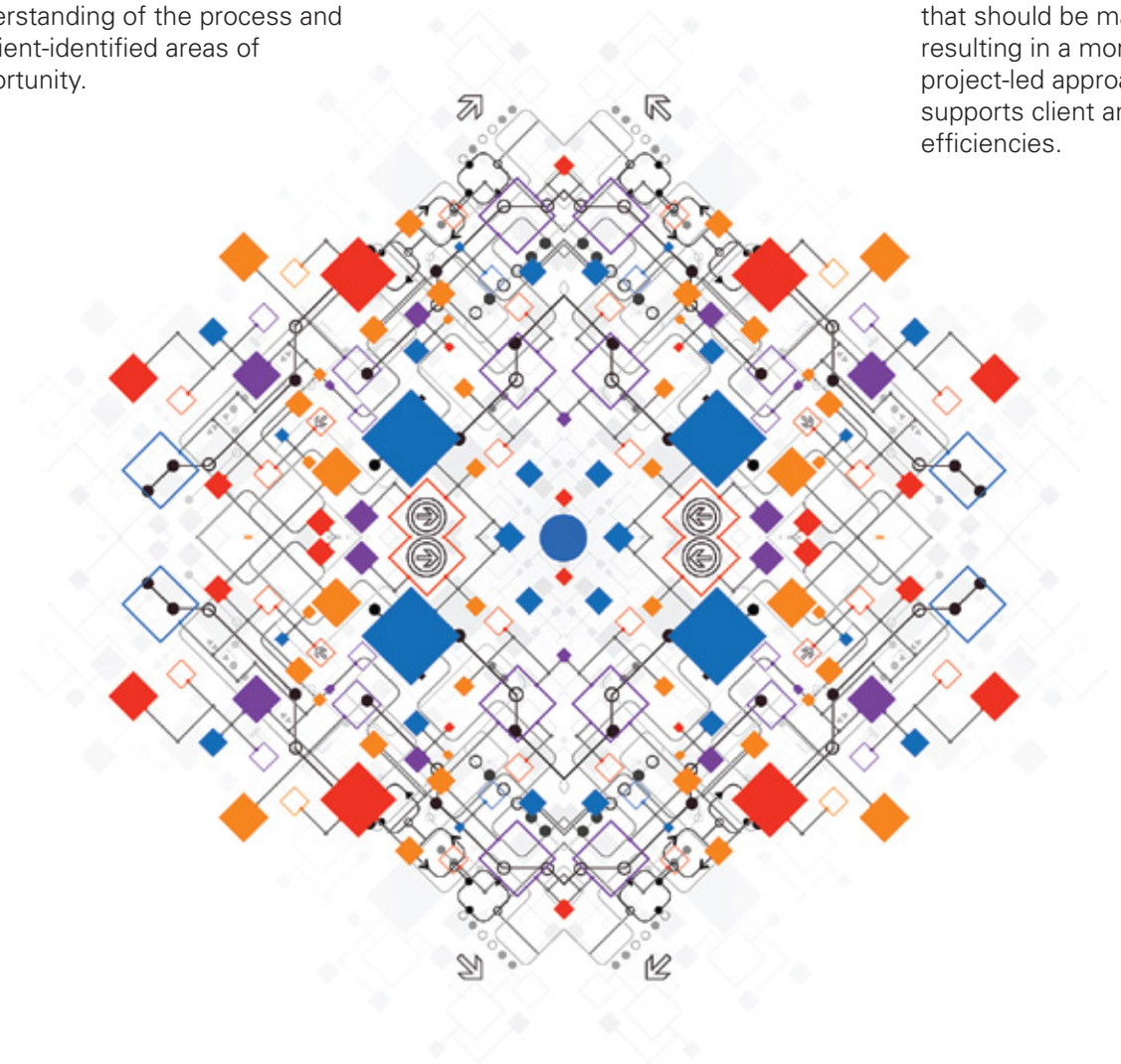
Lean in Audit™ employs three key Lean techniques

1 End-to-end process mapping

This is a workshop-based approach involving those who actually deliver the process, resulting in a shared, detailed understanding of the process and of client-identified areas of opportunity.

2 Visual management

Providing transparent, real-time reporting ensures a shared understanding of audit priorities, progress and any risks or issues that should be managed, resulting in a more proactive, project-led approach that supports client and KPMG efficiencies.



3 Quality and value mindset

New capabilities allow audit teams to deliver deeper insights and focus on quality and value.

D&A is transforming the audit process

If it's clear, then, that audit is in a demonstrable process of transformation in the way we look at and understand data, and in the way the audit process itself is conducted, what will an audit look like in five to 10 years? What exactly is it we're trying to achieve?

D&A capabilities, as reliant as they are on technology, will only continue to advance. Combined with the power of Lean as an audit methodology, audit quality can only be expected to increase. It also means that the audit of the future has the potential to be quite different than it is today. First of all, it will be possible to analyze 100% of the organization's statement data. Imagine being able to correlate every revenue transaction to a sales order or other source information, identify all outliers and, at the same time, get a much better understanding of company processes by applying Lean methodology. It genuinely represents a huge capability shift.

D&A in tomorrow's audit

D&A's ability to deliver virtually split-second analysis of the most current information means the potential of data to inform an organization's key decision making. As a result, future planning will be stronger and more immediate. Moreover, auditors can create industry-specific testing models, so the routines can be run based on the particular characteristics of a company's business. Eventually, unstructured data – mined from big data – may also become part of an integrated data analysis process that will take D&A to the next level, for instance by using posts about a company on Facebook or Twitter to assist with risk assessments or corroborating data received internally.

Hands-on checks and balances will, of course, continue to be present to comply with auditing standards, but the audit will also be far more automated – particularly for routine, low-risk procedures such as data aggregation – which will allow both auditor and client to focus on higher-risk transactions and anomalies. In a sense, D&A is finally fulfilling the promise of technology in the audit, where the great majority of manual tasks are being done digitally. And the enabling technology is not only getting more robust, but easier to use as well.

“ONE OF THE MOST EXCITING THINGS ABOUT D&A IS THE WAY WE WILL BE ABLE TO AGGREGATE DATA EXTERNAL TO AN ORGANIZATION'S SYSTEMS TO HELP THEM UNDERSTAND EXTERNAL AND OPERATIONAL PERSPECTIVES: HOW DO THEY COMPARE TO THEIR INDUSTRY PEERS? ARE THERE OPPORTUNITIES FOR IMPROVED EFFICIENCY ACROSS THE ORGANIZATION OR WITHIN BUSINESS UNITS? D&A TECHNIQUES WILL ENABLE US TO CAPTURE BOTH INTERNAL AND EXTERNAL DATA AND USE IT TO BROADEN OUR INSIGHTS.”

– SARAH C. DEGUZMAN
Partner, Audit
KPMG in Canada

The end goal of the D&A-enabled audit is straightforward: The auditor sifts through the data primarily for the established and ongoing purpose of expressing an opinion on financial information. However, with the D&A-enabled audit, the opportunity is there to also extract information that is relevant to the business's operations, performance and internal controls.

From a governance perspective, with the audit committee increasingly concerned about fulfilling its risk responsibilities in an ever more complex global economy, the enhanced ability of the audit to focus on identifying outliers in risk areas will be an added benefit. While outliers may be so insignificant that they have no impact on the reliability of financial information, each one may indeed tell its own story and lead to operational and/or internal control improvements.

There is also the possibility of conducting continuous auditing – for example, with companies issuing quarterly statements and having them audited on a continuous basis, something that may become possible with D&A as long as the auditor has access to an organization's enterprise resource planning systems. Once that kind of data has been gathered steadily for three, four, five years, sophisticated algorithms may be developed to better predict future performance, which will be highly valuable for the auditor and company alike. And if reporting becomes more continuous, reports should become more robust and timely and may regularly include more information than at present.

This accumulation of data will also make internal benchmarking capabilities far more powerful. At the same time, the amount of general external industry data that can be collected will increase. In particular, we will be able to leverage external data that sits on the web – StatsCan data on unemployment, for example – to help us benchmark organizations against their peers, make sense of industry trends and better understand what's happening with a business's data. This is something that, in our experience, audit committees really want to talk about, as they increasingly look to see how their peers handle external risk and how they can demonstrate appropriate governance and diligence.

D&A, and its potential to revolutionize the audit, is something in which organizations are actively expressing interest. Even those that may not know what a D&A-enabled audit is, are still interested because D&A is itself a hot topic. Many organizations are also modernizing the back office to be as digital as possible and D&A fits directly into that goal. While D&A can deliver audit value to any company, the extent and readiness of your technology investments can expand that advantage.

D&A delivers a range of audit benefits

The D&A-enabled audit enables:

- Internal benchmarking that compares results and trend analysis across subsidiaries/business units over time
- A holistic view of the company and its competitive environment through meaningful comparisons within an industry or against peers
- Identification of higher risk, potentially fraudulent transactions
- More confidence in the quality and accuracy of audits due to 100% data analysis
- Minimal disruption to a company's normal business
- A higher level of precision for audit procedures, leading to more and deeper insights
- More detailed analysis that can uncover the business reasons behind, and root causes of, outliers and anomalies.

"THE USE AND SHARING OF DATA, FROM A PROFESSIONAL STANDPOINT, IS SOMETHING WE COULDN'T POSSIBLY TAKE MORE SERIOUSLY. ADDING D&A TO THE AUDIT DOESN'T ALTER OUR RISK PROFILE BECAUSE OUR MANDATE TO SECURE CLIENT DATA IS ALREADY EXTREMELY STRONG. I SIMPLY DON'T SEE THE RISK CHANGING THERE."

– ROGER E. O'DONNELL
Global Head of Data
and Analytics, Audit
KPMG International

What will Lean in Audit™ bring to the table?

Lean allows organizations to actually get more value out of something they’ve always done. By independently leveraging the results of the Lean in Audit™ process to make real, measurable changes, they can begin a process of continuous improvement and extend the application of Lean principles to broader business processes going forward.

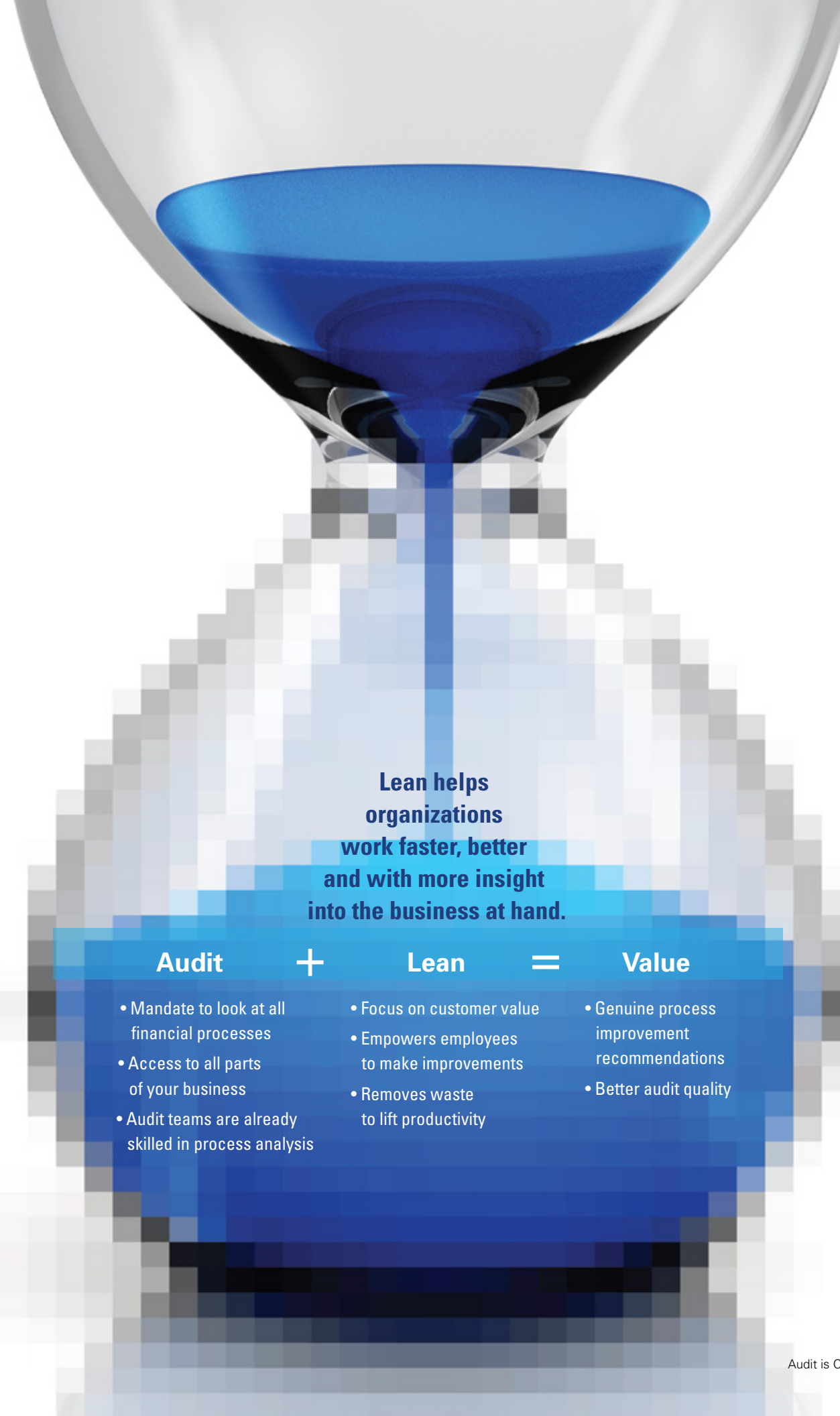
Lean thinking is applicable to every audit, as it focuses on what delivers true quality and value. It requires a reallocation of time spent, from one-on-one meetings to a workshop-based approach. This applies to senior people on both the audit and client sides of the equation. This new approach has unlocked significant opportunity for auditors to provide additional business value, pointing out not only what’s good about what you’re currently doing, but also areas for improvement.

Lean in Audit™ is a little different from D&A in that – while technology and data are of course important in both – D&A does not naturally engage those that are within the process. Lean provides the structure, engagement processes and mindset to challenge and address why things are done the way they are today and to drive for continuous improvement in quality and value.

- Lean in Audit™ lets organizations:**
- Identify opportunities to streamline processes, improve compliance, minimize costs and increase quality and efficiency
 - Empower, engage and motivate staff to challenge the norm, take action and make a difference
 - Experience real-time tracking of audit status and issues
 - Apply new thinking, skills and capabilities to make a difference immediately
 - Increase productivity and profitability in ways that are both incremental and sustainable
 - Leverage a range of specific outcomes to realize business benefits and improve existing processes, including:
 - In-depth process maps – detailed step-by-step process notes, including the identification of key controls, pain points and improvement opportunities
 - Process analysis – pragmatic identification of those activities that add value versus those that don’t
 - Controls assessment – opportunities to streamline the existing controls environment to reduce waste and rework
 - Prioritization of opportunities – improvement opportunities prioritized based on expected benefit and implementation effort/cost.

“EVER SINCE I’VE BEEN PRACTISING, CLIENTS HAVE SAID “BRING ME MORE VALUE FROM THE AUDIT.” AS AUDITORS, WE HAVE AN INDEPENDENT VIEW OF THEIR BUSINESS AND THEY NEED, APPRECIATE AND EXPECT OUR INSIGHTS. THE MORE RELEVANT, PRECISE AND VALUABLE WE CAN MAKE OUR COMMENTS TO THEIR BUSINESS, THE BETTER.”

– LAURENT GIGUÈRE
Partner, Audit
KPMG in Canada



Checklist

Getting your organization ready for D&A and Lean

Data and Analytics

- ☐ Make sure management, internal audit and IT have early discussions with the auditor to discuss changing roles and resources
- ☐ Ensure the auditor will have access to the different types of required information, which may mean working with different organizational people than in the past (i.e., more contact with IT)
- ☐ Secure support from the top at the outset – including management, the audit committee, the finance team and the CIO – with respect to the value of the process
- ☐ Don't hesitate to make required effort upfront, because once the processes are in place, they will largely look after themselves
- ☐ Audit committees need to be open to having new processes guiding the audit; they will find themselves spending time in new risk areas when they examine that data, but that will definitely pay off in the end
- ☐ Carefully consider the risks in your business and to what extent your external auditor is currently providing feedback on those issues
- ☐ Ask some specific questions of a D&A audit specialist, including: Is the organization decentralized or centralized? Do we deal with a huge number of individually small transactions? Does your organization employ a lot of people? Are there many variables in our data that might benefit from granular D&A analysis?

"WE'RE EXCITED ABOUT BOTH D&A AND LEAN IN AUDIT". WE SEE THEM AS COMPLEMENTARY WAYS TO BE ABLE TO BRING VALUE AND BUSINESS INSIGHTS TO OUR CLIENTS AS AN INTEGRAL PART OF THE AUDIT, THROUGH THE APPLICATION OF PREVIOUSLY UNAVAILABLE TOOLS, TECHNIQUES AND TECHNOLOGIES."

– KRISTEN CARSCALLEN
Canadian Managing Partner, Audit
KPMG in Canada

Lean in Audit™

- ☐ Encourage key organizational teams to embrace the opportunity from the outset; there is some time involved in the process, but no preparation is required and the outcomes – such as long-term cost savings – are potentially significant
- ☐ The CFO and/or CEO should own the process and be committed to spending the time that a successful engagement requires
- ☐ Prepare for a thoroughly interactive, collaborative process, as face-time and discussion are crucial elements of the Lean in Audit™ process
- ☐ Involvement is critical; if the key players don't attend the sessions, results will suffer
- ☐ Don't let your people get caught up in "waste reduction-think"; it's really about identifying issues that impact the quality of financial information and realizing productivity by redeploying resources on more value-adding tasks
- ☐ Encourage people to think about processes differently and to want to make things better; their input will not only be accepted, but encouraged and requested



Where do D&A and Lean in Audit™ intersect?

On the most obvious level, both approaches are designed to add value to the audit and increase audit quality. The fact is, however, D&A and Lean work well together.

If you use data and analytics, which reveals an anomaly or outlier, a Lean process analysis review can often uncover the problem in the underlying process, for example, an area where controls are not working properly. When effectively integrated, D&A and Lean combine qualitative analysis with a quantitative understanding of why things happen the way they do. It's not just insight or understanding, but insight *with* understanding.

Getting ready for a new audit reality

We'll say it again: the audit is changing and companies should be prepared – not to be snowed under by a tidal wave of change management demands, but to embrace the opportunity to receive a higher-quality audit and get the added value they've been looking for from their audit engagement. The D&A-enabled audit and Lean in Audit™ can deliver on this potential.

Certainly it's a learning curve for many. Organizations – more and more – are understanding the cutting-edge tools and techniques being proposed and how heavily the audit profession is committed to their capabilities.

Auditors are committed to becoming better at what they do and with

D&A and Lean in Audit™, the means are there for everyone to reap the benefits.

Of course, this is not about giving the audit over to technology, but about giving auditors the ability to do things – important, game-changing things – that they simply couldn't do before. Technology can only help people to do better and that's what these new approaches are all about.

There will be a period of adjustment for everybody; that's inevitable. But the bar for quality and value in the audit is going up. Once the critical transitions are made, there's no question that the benefits will outweigh the concerns that are gently tugging on the coat of progress.

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