

A hand in a blue shirt points at a tablet. The tablet screen shows a bar chart with seven wireframe bars of varying heights. The background is a blurred blue fabric.

Adapting to the Digital world of Auditing

Way forward

M P Vijay Kumar

“The world is changing very fast. Big will not beat small anymore.
It will be the fast beating the slow.”
Rupert Murdoch

- Disruptive technological innovations have historically started out cheap and simple, gradually improving until they challenged incumbents
- Today, new products are perfected with a few trial users and then embraced quickly by the market, wiping out incumbents @ speed of light

Agenda

- 01 Audit Progression – Past, Present & Future**
- 02 Digital Auditing “Way Forward”**
- 03 ICAI as an enabler through DAAB**
- 04 Opportunities vis-a-vis Road ahead – Auditing the digital**
- 05 Audit Applications – In-house or outsourced?**
- 06 ICAI Survey 2017 on trends**
- 07 Sustainability for Small & Medium Practitioners (SMP)**



Changing Perspective – “Developing The Assurance Profession”



“

Audits are not dying yet, but they do need to adapt to the digital age. ”

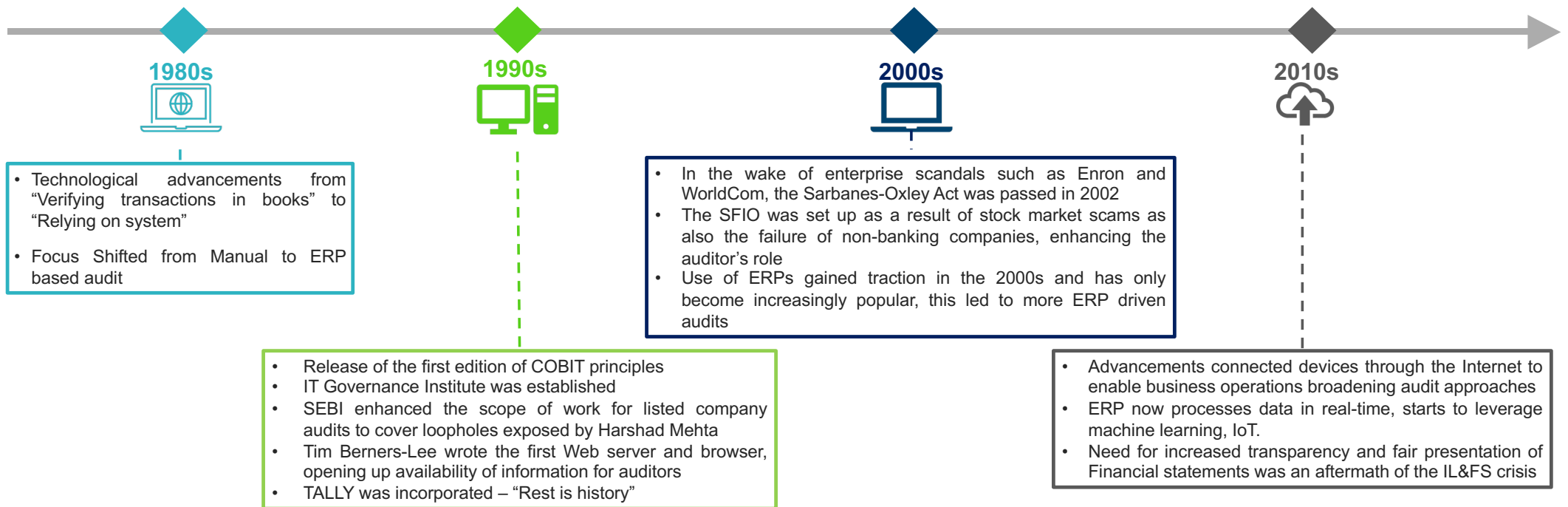
- Arnold Schilder | IAASB Chairman

“

The launch of our digital standards platform responds to the demand for increased accessibility and is another step in pursuing our strategic objective of benefiting from technological innovation ”

- IFAC on electronic International Standards launched by IFAC developed collaboratively with IAASB

Audit progression – Past, Present & Future



Road Ahead Post 2020 (Next 10 years)

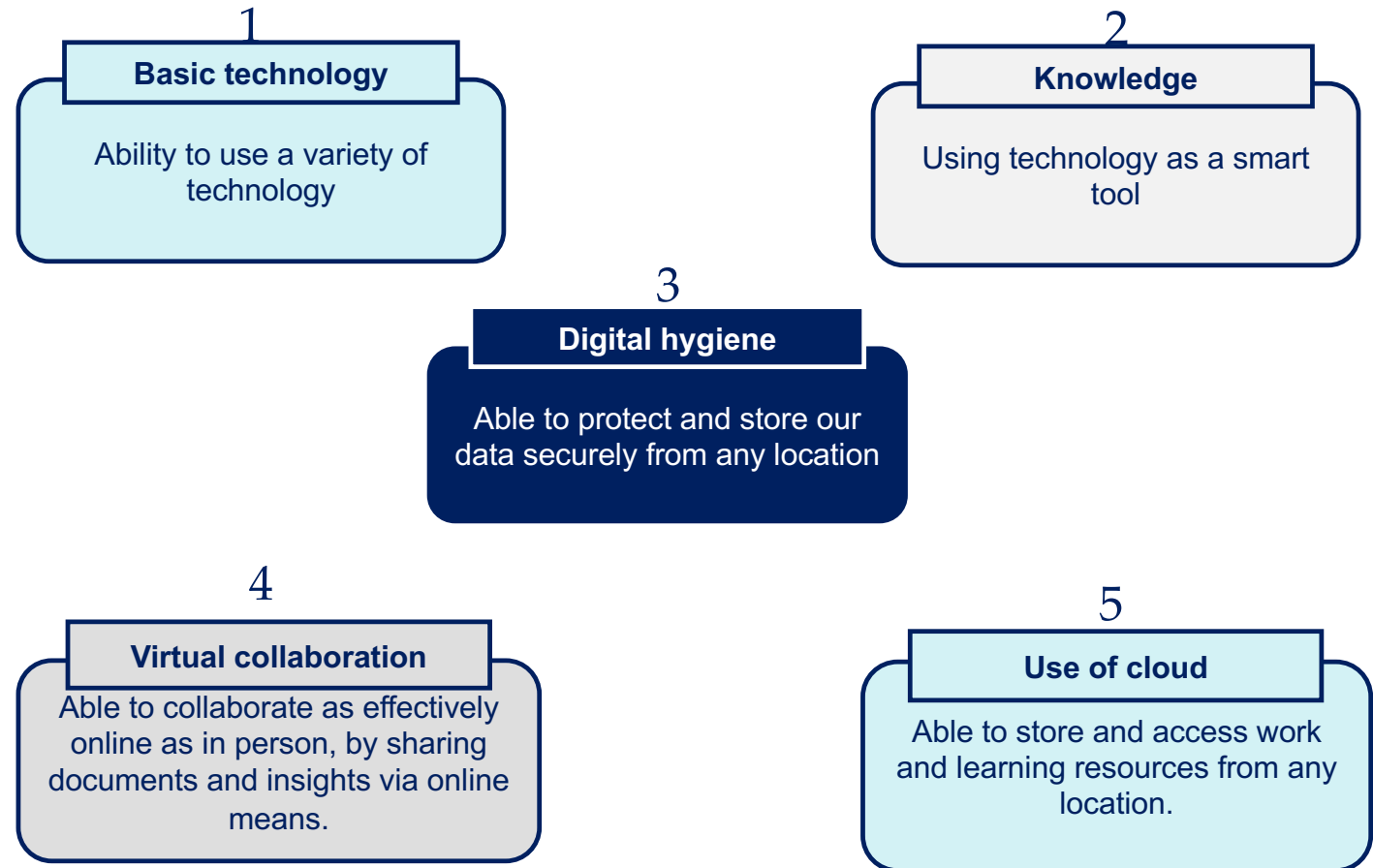
- Technology revamps the world around us; every component of our lives is changing rapidly. It is expected that the next 10 years would have more advancements in technology than the last 40 years – **Auditor’s role is paramount in the fast-growing digital transformation by Clientele.**
- Auditors will face **challenges involving artificial intelligence (AI)**, robotics, ethics and their interfaces with new technologies.
- Digital technology has transformed the outlook of client management, expected deliverable and regulatory compliance, which impacts every area of business – **Auditors to Adopt the digital technology**
- Considering the clientele requirement, digital technologies should be enabled through **automation opportunities arising out of study of business processes** and services which will substantially contribute to the quality deliverable of the clientele.

Digital Auditing – Way forward

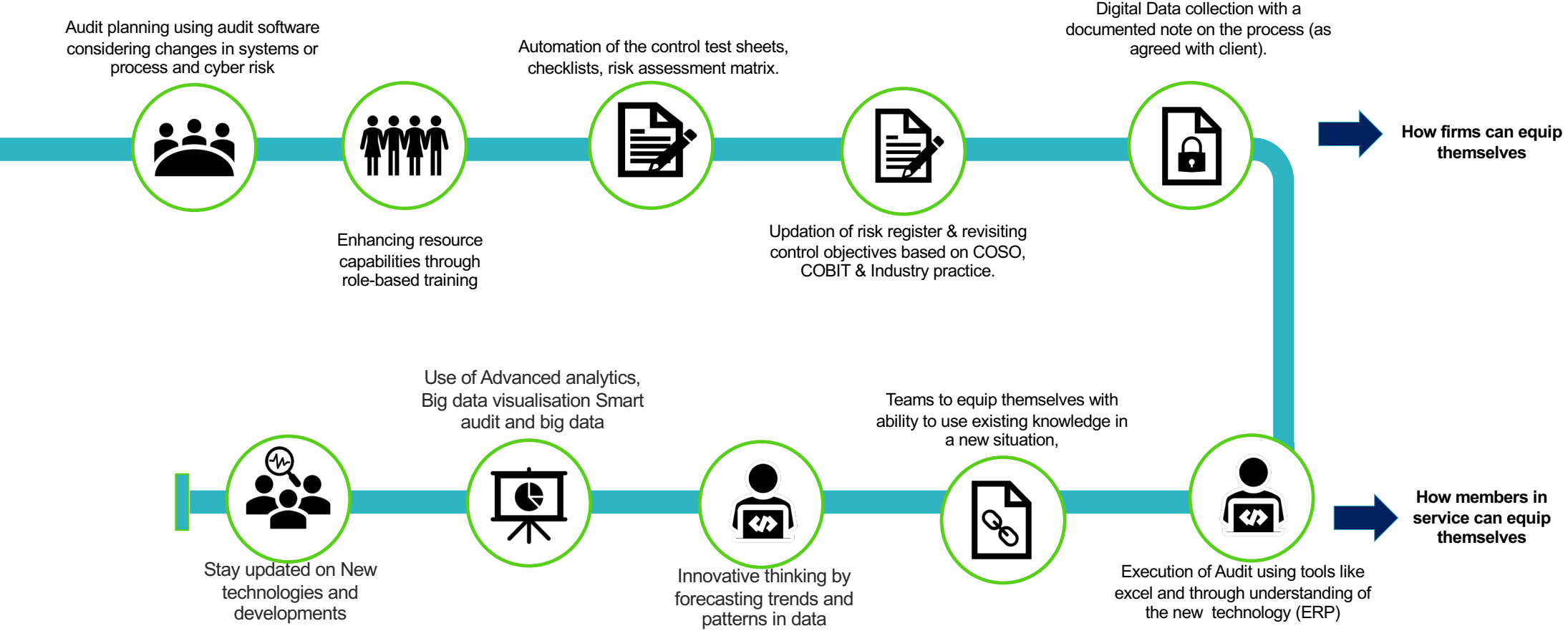
Digital literacy

Digital literacy is a hugely broad term which encompasses many different skills.

The role of technology and digitalization is more evident now after the world was led to a global self isolation wherein, we are able to connect and conduct business only due to the technological advancements



Digital Auditing – Way forward



Digitizing the Audit

Audit firms are increasingly using digital tools for:

- **Audit quality.** Deliver sustained high-quality audits in a world of ubiquitous information and exploding data.
- **Empowerment.** Position audit professionals for success in a digital and mobile world.
- **Insights.** Richer, more detailed audit evidence, enhanced transparency, consistency and depth of audit procedures, and deeper views into a company, its risks, its controls and its operating environment.
- **Confidence.** Identify anomalies and focus audit professionals on risk to provide high-confidence outcomes.



ICAI as an enabler through DCMM

- ✓ The Institute of Chartered Accountants of India (ICAI), the Council constituted the Digital Accounting and Assurance Board (DAAB) as an enabling Board to proactively assess the impact of digitization on accounting and audit.
- ✓ Digital Competency Maturity Model (DCMM) is an endeavor to provide a set of minimum requirements which the firms can evaluate on a self-assessment basis and build a strategy for up skilling, to leverage the opportunities which will unfold in the digital era.
- ✓ DCMM helps firms to gauge their relative maturity level as regards digital competency pertaining to Audit and Accounting related functions being rendered by them. It includes the following dimensions of digital maturity organized into sections:

Section Reference	Max Score
Section A- Automation of the firm's internal processes	Extent of usage of IT by the firm for its own internal processes for example, billing, document management, client relationship management, and staff attendance and work tracking, cyber security,
Section B - Availability of Qualified Resource Pool and Talent Development	Attracting, retaining and developing staff with requisite qualifications and skills.
Section C1 – Audit	level of automation at client's end, access to automated audit tools, training of employees on audit tools, ability to handle digital evidence, Information Technology Audits, etc.
Section C2 – Tax & Compliance	level of automation at client's end, access to automated tax and compliance tools, customization of tax and compliance tools, training of employees on the same
Section C3 - Accounting	level of automation at client's end, access to automated accounting tools, training of employees on client accounting tools, etc.
Section C4 – Management Consultancy Services	level of automation at client's end, access to automated miscellaneous tools, training of employees on tools, management consultancy services, forecasts, consultancy services, training activities, etc.
Section D - Adaptation of Advanced and Emerging Technologies	The extent of adaptation of advanced and emerging technologies like, Advanced Excel, Use of Data Analytics, Robotic Process Automation, Artificial Intelligence, Social Media, etc.

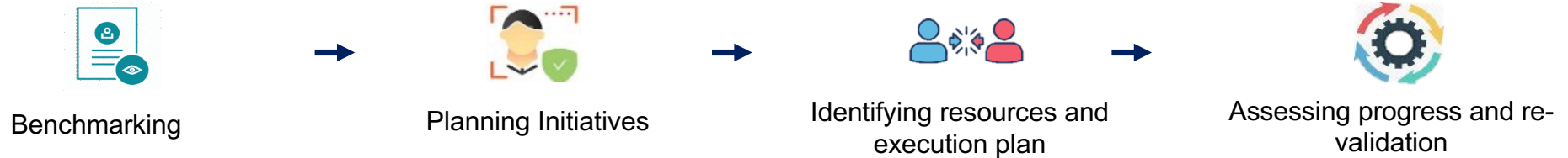
Interpreting the Results

- ✓ **Level 1 Firm** - indicates that the firm is in very nascent stages of adopting digital technologies but will have to take immediate steps to upgrade its digital competency or will be left lagging behind.
- ✓ **Level 2 Firm** - indicates that the firm has made some progress in terms of adopting digital technologies but will have to fine tune further to reach the highest level of digital competency.
- ✓ **Level 3 Firm** - indicates firms which have made significant adoption of digital technologies and should focus on optimising it further to be in the forefront of use of emerging technologies like, Artificial Intelligence and Blockchain.

The DCMM model is practical based and helpful for small and medium firms for adopting new technologies. Firms with minimum investment can achieve the minimum requirement to be graded a level 1 firm. (As shown in the next slide)

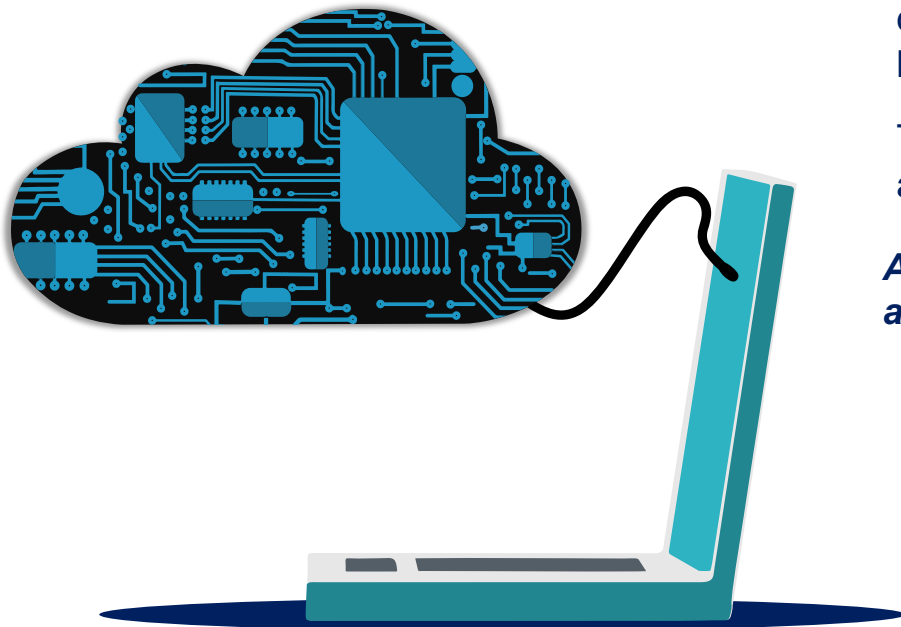
ICAI as an enabler through DCMM

Road Map for Moving Up and adopting technology



MINIMUM REQUIREMENT	FIRM COMPETENCY DIMENSION
Managing Digital Identity	Website, Knowledge bank through website, Corporate Domain Mail ID, cyber security controls, Email signature, Social media presence.
Operational process automation	Biometric system, Electronic payments,, timesheet tool, Digital communication, calendaring mechanism
Device and data security	Asset tagging, central data storage, Automated data backup, Security of devices, Cloud storage, firewall
Access Controls	Assigning Access rights to data stored in server, Restriction on data sharing in devices
Training/skill development	Regular Knowledge dissemination and professional development through Knowledge sharing sessions on latest technology, cyber threats, Data sensitivity
SOP	Data leakage Protection report, IT policy
Automated Audit Tools for Data Extraction, Sampling, Analytics	Onex, dataBelt®, Prowess, Corpository, Tableau
Digital Etiquette	Risk assessment reviewing IT controls and risk of failures of the same vis-à-vis impact on audit planning, including but not limited to audit sample size selection, focus areas of audit, etc.

Approach- Auditing the Digital



All organizations and Governments are moving towards digitalization by investing hugely in technology for business growth like automation using AI tools, cryptocurrencies, and Cloud.

The right approach towards technology is the key for a quality audit.

Auditing the Digital- The way we understand and perform the audit of organization technology.

- ✓ New technology introduces new risks in terms of non-compliance to data privacy laws, cyber-attacks, frauds, business continuity, etc.
- ✓ Having the right level of expertise in technology allow us to achieve a quality audit.

Opportunities via-a-vis Road ahead -Auditing the digital



Data Security

- IT Risk Assessment shall be carried out and based on risk assessment, IT / Information Security Policies and procedure documentation shall be carried out for effective implementation.
- A security audit minimizes risk of business continuity disruptions and ensure the organization and its data are protected anywhere and anytime.



IT governance

- There is increasing need for IT and Data security audit with the emergence of newer technology.
- Assurance is expected to be provided on data confidentiality, integrity, availability, integrity, authentication, etc.
- Specific areas for review include User Access Review for application & User Access management, Change Management Review, Restricted access/Password protection, Review of Network Security, Documentation ITGC Policy



Data protection, Cyber Security

- Audit has a critical role in aiding organizations in the ongoing battle of managing cyber risk and threats, by providing an independent assessment of existing controls, and helping companies understand and address the diverse risks of the digital world.

Opportunities via-a-vis Road ahead : Digital audit

BIG DATA ANALYSIS

- Big data provides an opportunity for organizations to gain insights from their data in order to make better decision. SMPs, can benefit from big data to add value to their business by deploying automation for manually intensive and repeatable tasks to tackle the complexities of going digital and scale up operations with ease.
- Modern data analytic tools like databelt® through open API architecture and data crawler, support fast access and interrogation of all data sources in an organization's data population.
- ***Data is a critical asset for delivering business objectives. And hence the sample selected should be representative of the population of data. (SIA-5, SA-530). By filtering for risk factors, we can apply data analysis and prioritize significant items from the results***

How can an SMP utilize Big data analysis?

- ❖ Audit of the full population can be achieved by data analytics.
- ❖ Less strain on resources In the presence of a tool
- ❖ Provide better quality service through data driven insights
- ❖ Focus on pattern analysis rather than transactional analysis

Aspects to consider

- ❖ Recruiting and managing talent
- ❖ Saves money in the long run
- ❖ Rely on cloud services to keep costs and complexity down.
- ❖ Customizable through domain knowledge

Key functions big data analysis can improve

- ❖ Payroll - ***Textile Sector***
- ❖ Marketing – ***Auto Components industry***
- ❖ Logistics – ***Textile Sector***
- ❖ Sourcing – ***Manufacturing with “0” inventory***
- ❖ Inventory – ***Multi product industry***

Impediments to be aware of

- ❖ Choosing the right combination of domain knowledge through the right tool
- ❖ Digital competency of resources
- ❖ Changes in resource pool



Opportunities via-a-vis Road ahead : Digital audit



Physical verification Process

- Drones are currently used in stock counts and physical verification of assets in hard-to-reach locations, such as tall buildings, construction sites and out at sea.
- They can be fitted with cameras to scan bar codes and compare assets against a catalogue of data to identify changes, addressing risks such as abnormalities or absences.
- Precision is increased by tagging assets with bar codes, radio frequency IDs, etc.



Automation Process

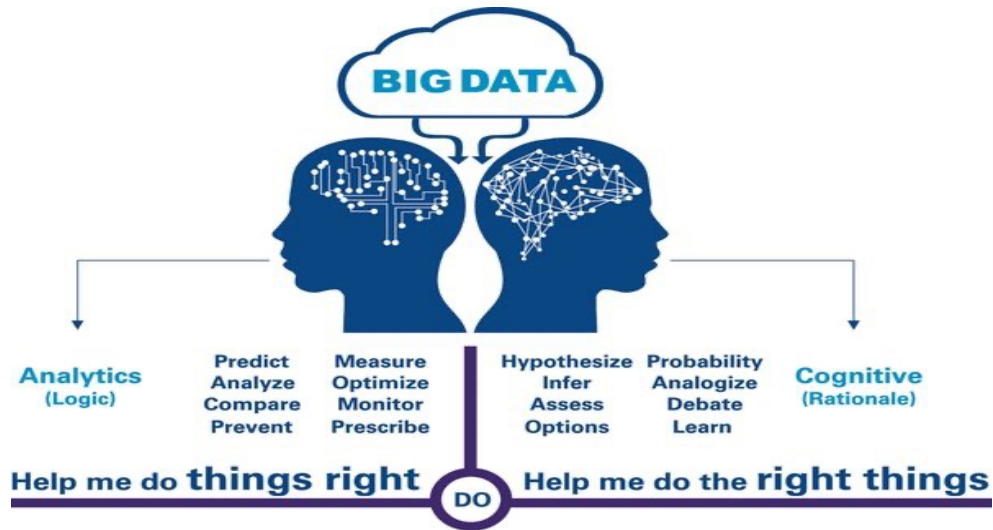
- **Robotic Process Automation (RPA)** is a powerful tool to perform manual, time-consuming, rules-based tasks at shorter cycle times and lower costs. It helps the audit process by increasing productivity and expanding risk coverage in areas like test of transactions, GL review, bank confirmation, etc.
- Auditors will have to consider the individual rights in AI systems, including rights related to automated decision-making, the accountability in AI and Data protection impacts.



Distributed Ledger Technology (DLT)

- Immutability is the key principle of DLT, which means that entries that were made cannot be changed but can be corrected with a balancing entry.
- The database of information is fraud proof since the entries cannot be changed once made.

Cognitive technologies



Auditor "supervised cognitive" technology to focus on higher-value audit judgments

Rapid prototyping and industry – relevant procedures

Leverage industry experience and artificial intelligence to enable capabilities such as predictive analytics and risk assessment

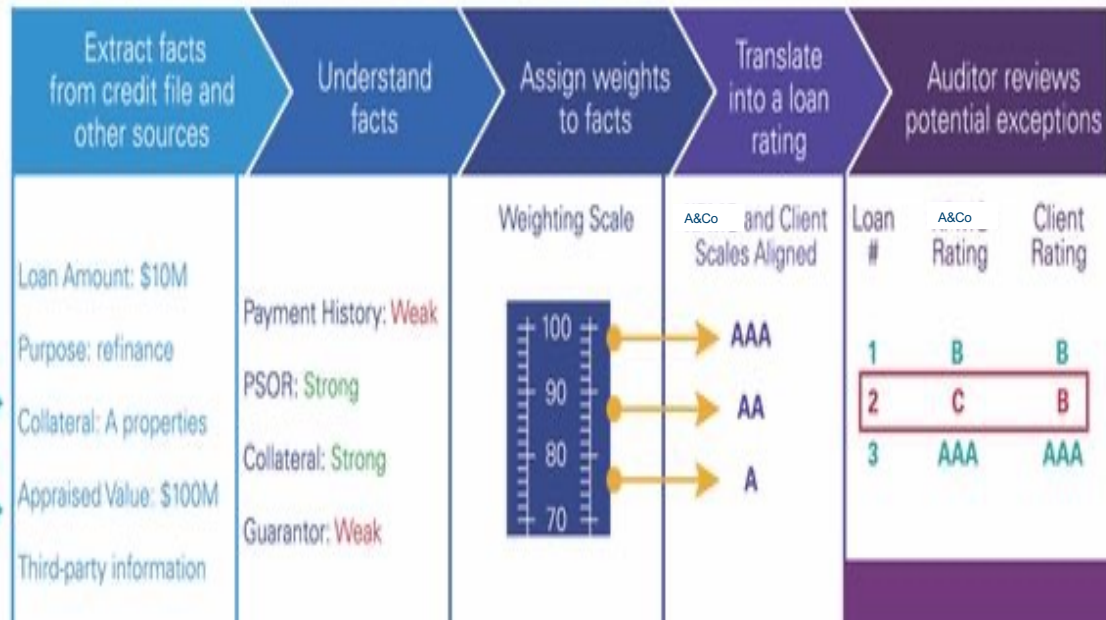


Deriving meaningful insights from previously untapped unstructured data

Today: Small sample of bank's loan portfolio (~40 –150 loans)



Future: Larger, more complete data sets from specific loan portfolios



Opportunities via-a-vis Road ahead –Digital audit

‘Artificial intelligence is growing up fast, as are robots whose facial expressions can elicit empathy and make your mirror neurons quiver.’

– Diane Ackerman



- Reading legislations, case laws and sync with individual clientele.
- Voluminous agreements – determination of accounting issues/embedded derivatives
- Inter firm and intra firm comparison
- Valuation / Impairment
- Client interaction through voice recognition apps
- More text written by machines than people

AI is already here.....



Google maps tell us how long it will take to drive from place A to B



GMAIL filters 99.9% of spam at unbelievable accuracy



GRE grades essays using a robot
Banks use ML to assess credit score



Chess players use AI-powered engines to analyze their games.



A Boeing flight has only seven minutes of human intervention.

AI vs Automation



Audit Applications

- Audit documentation gives the reassurance needed that audit documentation will stand up to quality inspection.
- Audit software helps organizations plan for, address and mitigate risks that could compromise the safety and/or quality of the goods or services they provide.
- For businesses that adhere to Government regulations and industry standards, audit management is a critical component of their compliance and risk management strategies.
- Use of Audit documentation software helps navigate the correct procedures, ensuring consistent, high-quality results.

myAudit
Plan | Perform | Document

dataBelt®

Power BI

Qualityze

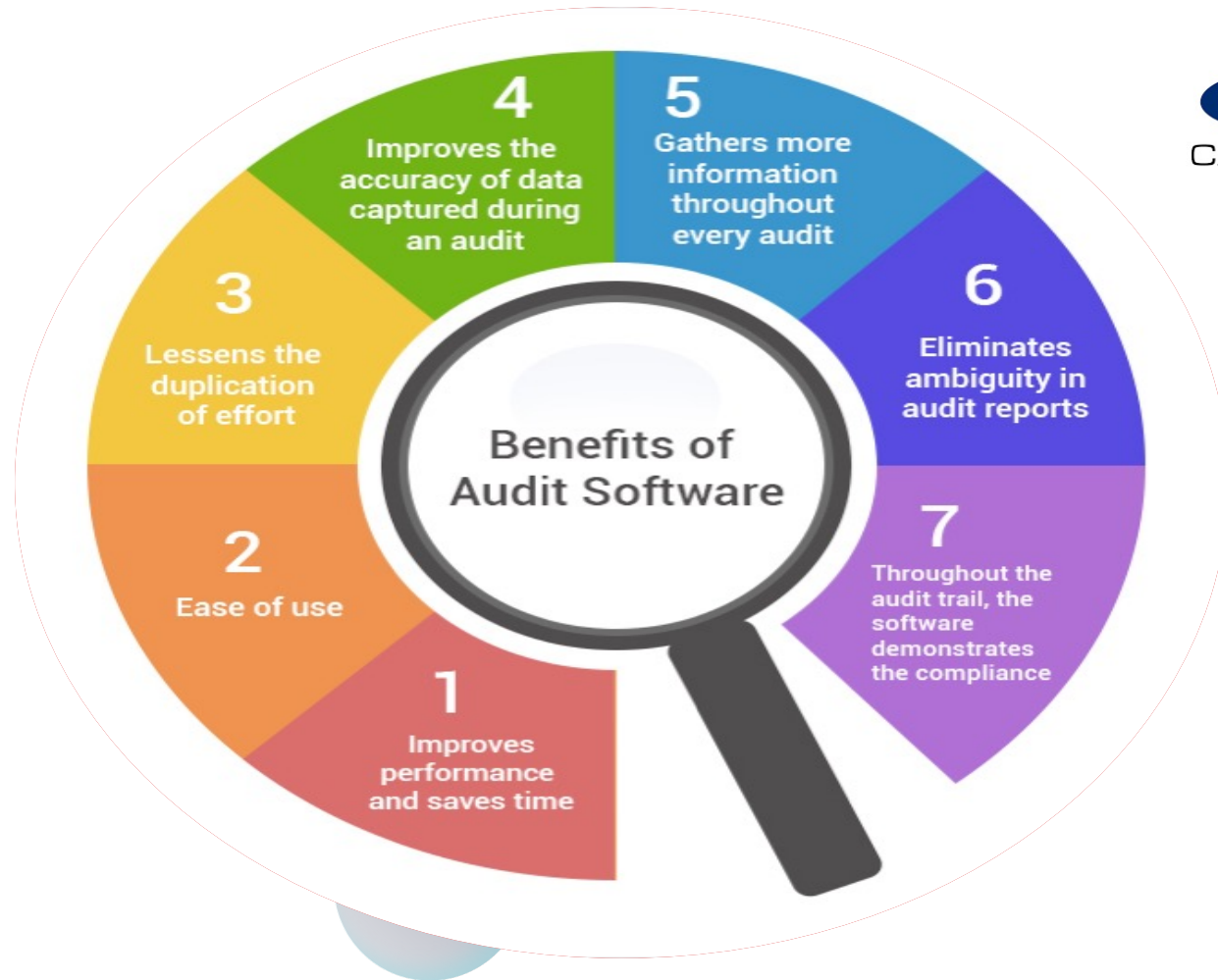
tableau

POWER QUERY



Audit Documentation Software

- Audit Trail
- Effective Collaboration
- Audit Visualization
- Smarter Audit



Third party vs In-house applications



In-house applications

- ❖ Review of organization's policies, procedures to determine if they address the development and maintenance of the application.
- ❖ Review the organization's use of the in-house developed application
- ❖ Review risk assessment procedures, Risk present, appetite and manual mitigation plans
- ❖ Test the compliance aspect of the applications against the SOPs
- ❖ Review access controls with respect to
 - Changes and modifications
 - Backup and recovery
 - Security
 - Data integrity

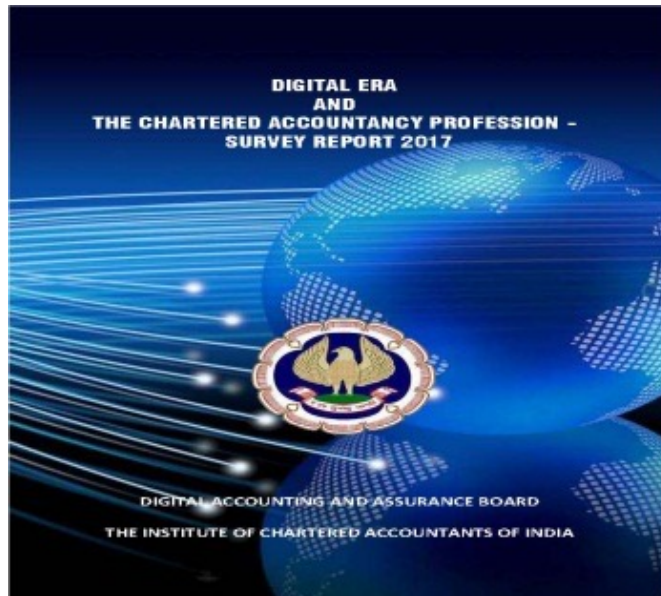


Pros of Third-party applications

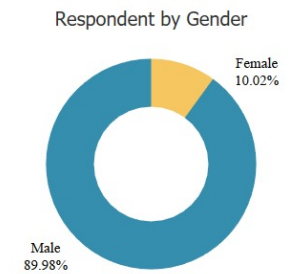
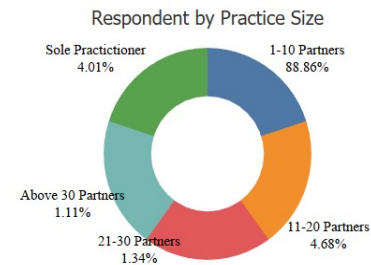
- ❖ Verify and Validate the organization's AMC with the third-party service provider
- ❖ Review the organizations security and IT policies
- ❖ Review the permissions granted to the application
- ❖ Review access controls at both the company's and the third-party service provider
- ❖ Ensure that adequate disaster recovery processes are in place to provide for business continuity
- ❖ Validate the integrity of data at the following stages
 - Processing
 - Storage

ICAI DIGITAL ERA SURVEY REPORT 2017

- Crucial step to gauge level of challenges profession faces in digital era, and making profession digital ready.
- Objective; to stimulate discussion about a broad range of emerging and converging technologies and their potential impact on accounting and assurance.
- Attempt to understand CAs' views on technology, the potential it has to improve the services provided by them.

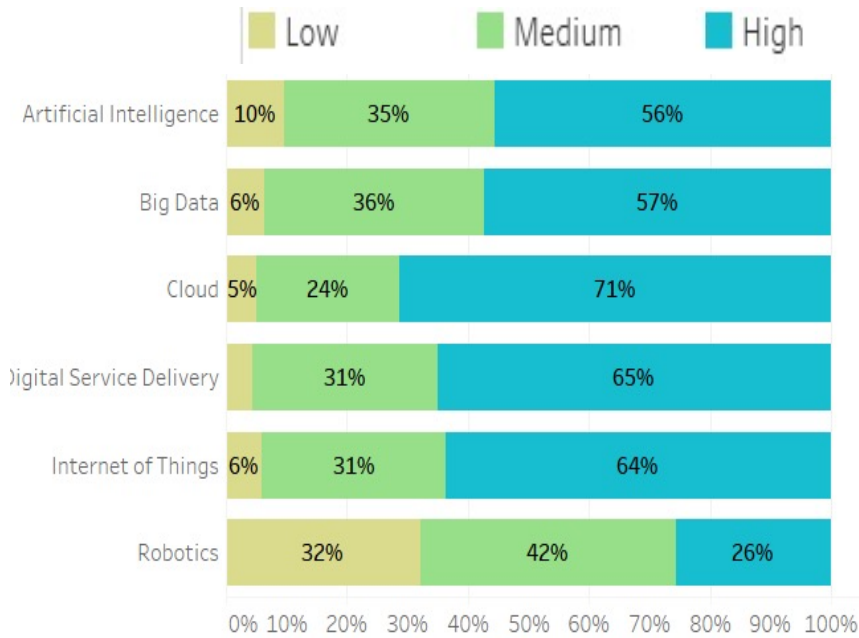


Questionnaire - 10 questions/ 45 issues. Responses of 920 members

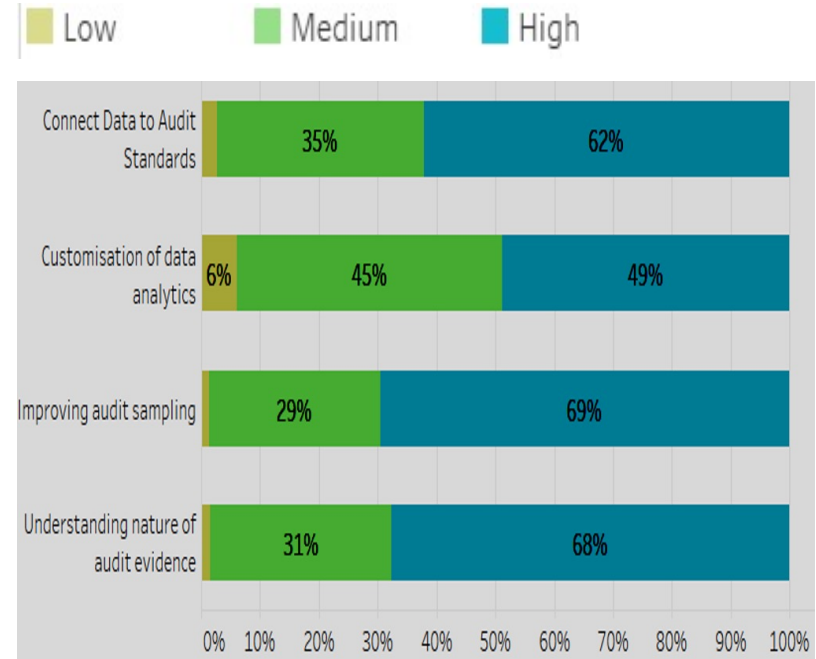




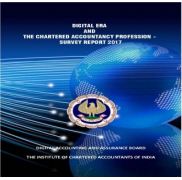
Technology Trends – Significantly impacting next 3-5 years



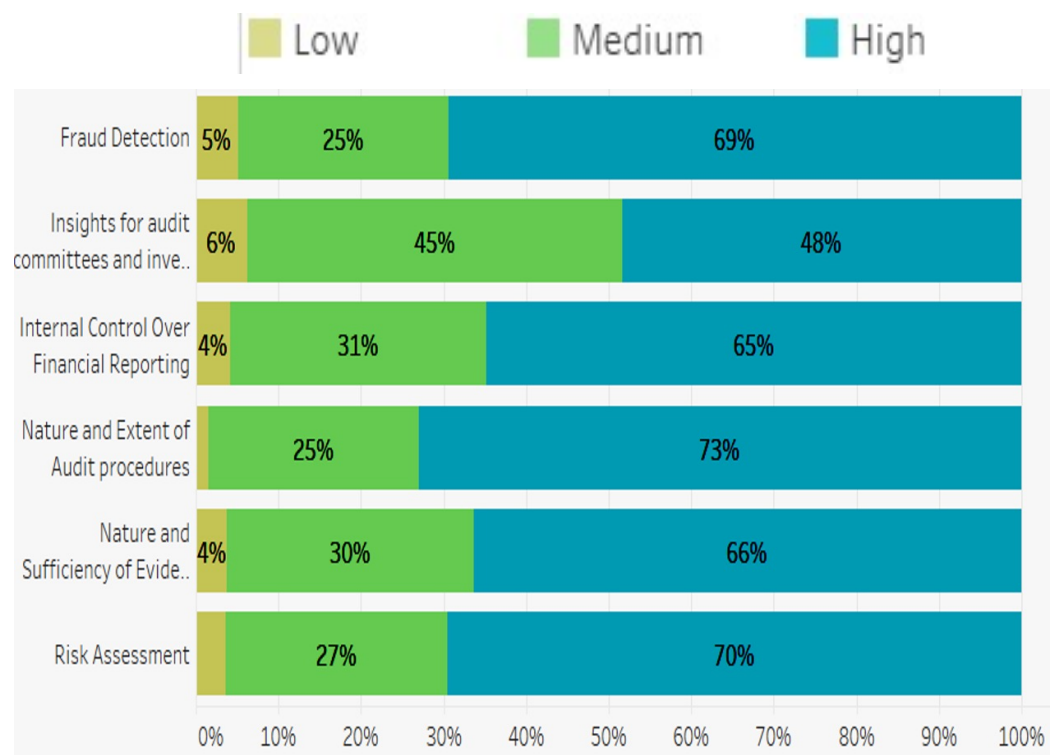
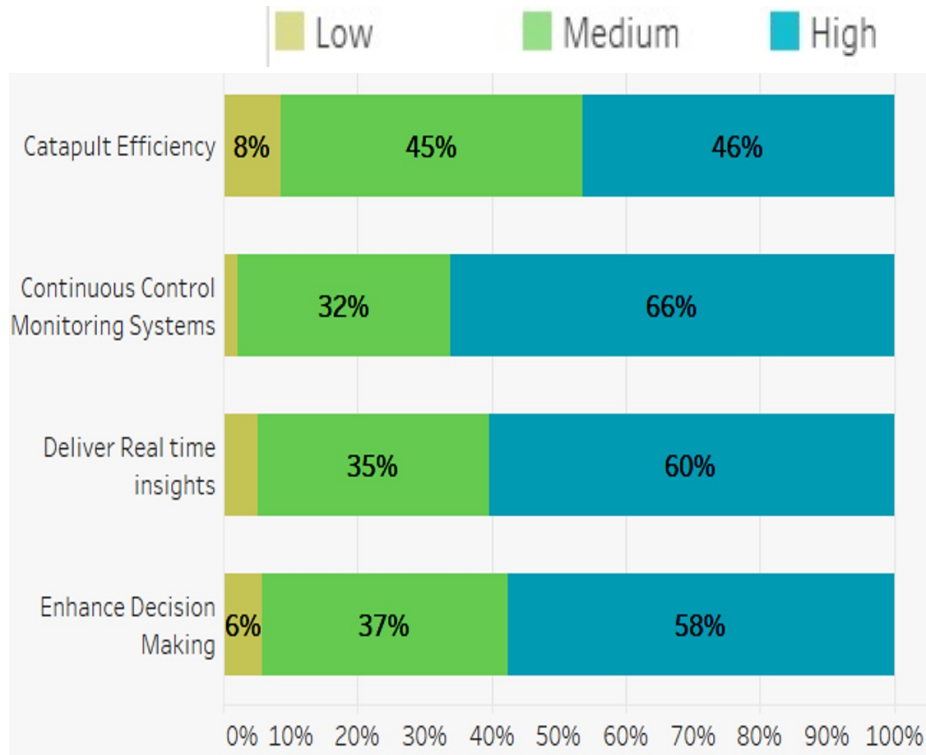
Survey reveals that all six technologies except robotics is perceived to have high impact on accounting profession.



Majority of respondents agreed to importance of incorporation of data analytics into audit process.



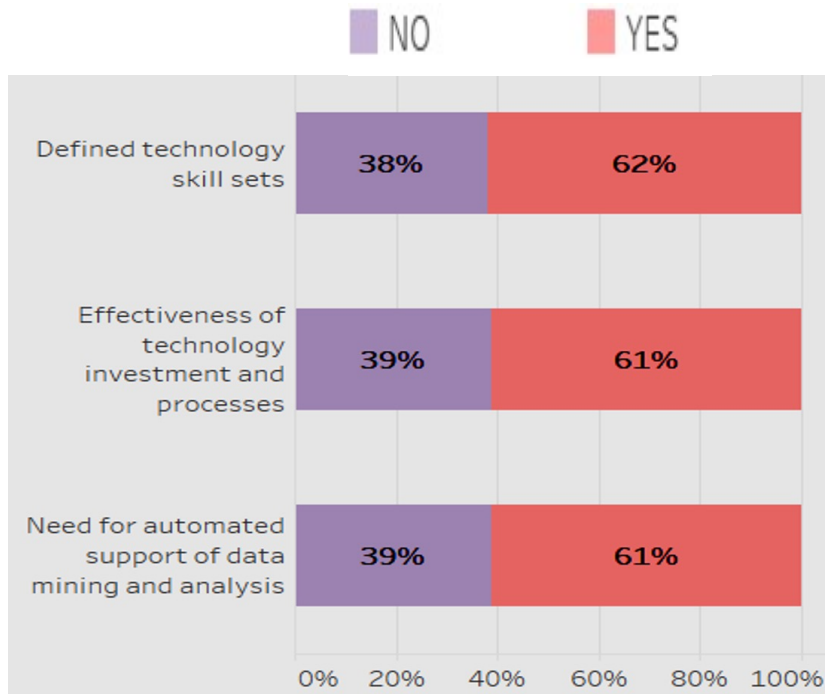
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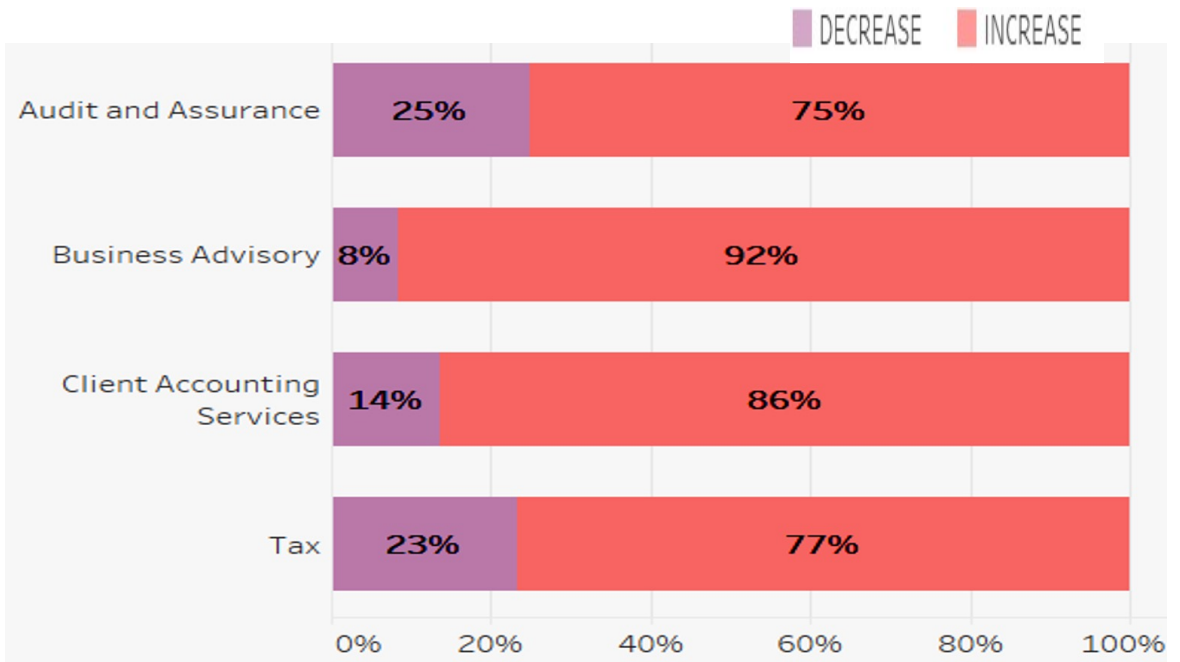
More than 50% reported that AI will play an important role in eliminating the manual process in accounting and assurance sector.



What firms need to do ?



Firm strategy to address



Change in demand of SMP Services in Future

Sustainability for SMPs

Audit firms now realize that 80% of the audit can be done from our own premises and the balance 20% at the client's premises, if in case we start adopting technology (for validation of issues and collection of data to evidence your findings)

A combination of multiple technologies is enabling organizations to improve efficiency. While there is a change in the form of implemented technology, the base process remains the same. This brings about the need to have skilled staff with a deep understanding of the client and industry processes.

Human capital and intellect are renewable sources of productivity. Firms can focus on improving the quality of its Human Capital through:

- ❖ Internalizing staff with organizational ideology
- ❖ An efficient selection process of employees
- ❖ Constant training in specialized skills, including leadership qualities
- ❖ Building an environment for efficient teamwork

Investing in peoples' skills is the secret of successful audit.

Auditing the Digital

- Understanding the functionalities of latest technologies.
- Knowledge of International standards and IT laws.
- Regulations on data privacy
- Cyber Security
- Business Continuity Management
- ERP (Enterprise resource planning) experience.

Digital Auditing

- Coding and rule-based filters
- Data mining and warehouse management.
- Analytics skills and data visualization.
- Forensic tools.
- Artificial intelligence and machine learning.
- Agile Auditing.
- Continuous monitoring

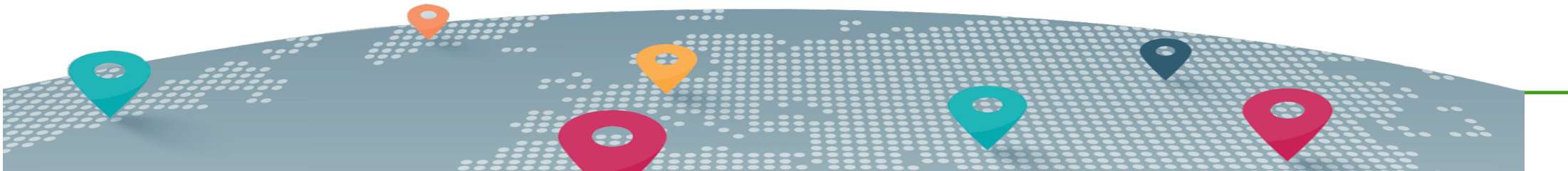


Workplace 2030

- Mobile work force:** Employees will be scattered across physical locations but connected via the Internet.
- Organizational flux:** Customers want to talk to the doers. They don't want layers.
- Networked organization:** Companies get leaner and flatter. Freshmen must have a customer-centric view.
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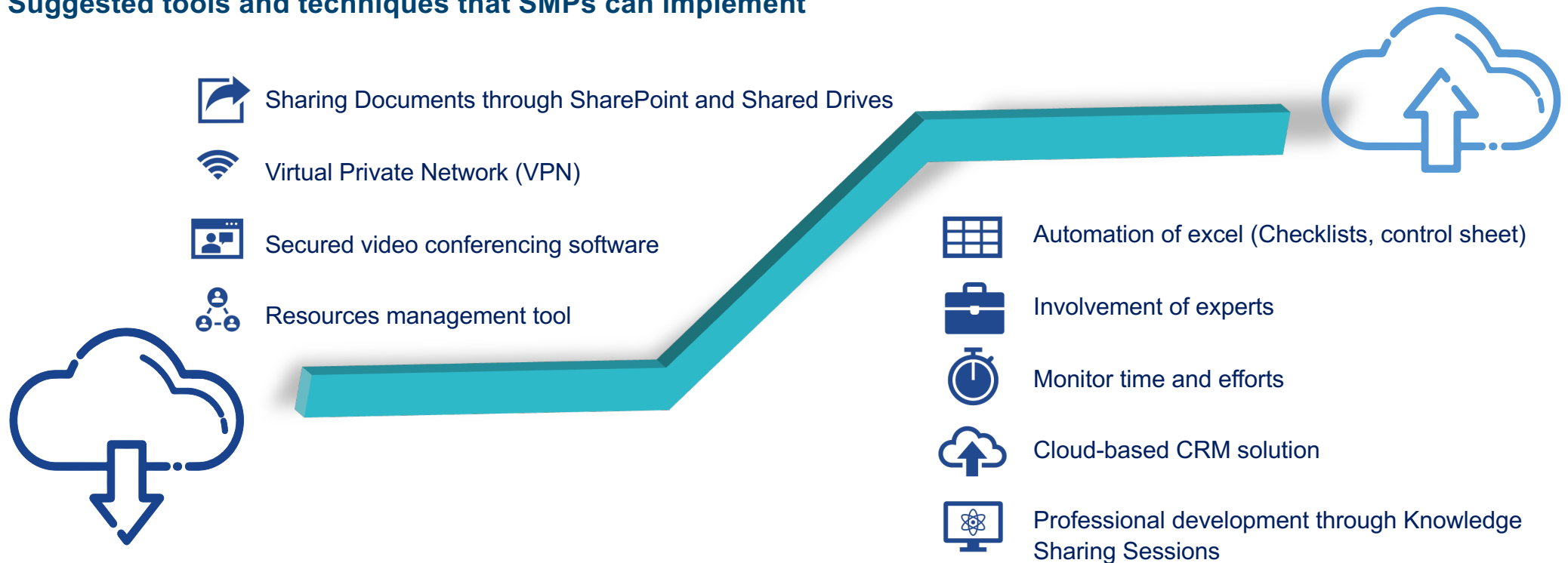
Skills 2030

- Creative Thinking:** Let's make a flying car
- Life Long Learning:** 60% of the skills required today may not be relevant in five years time.
- All rounder:** Employers look for all-rounders and not for generalists or specialists
- Industry Orientation:** At college, students must exhibit employability at each stage. Extend an entrepreneurial streak even if you are in employment
- Management Selling Skills:** You must learn to sell ideas.
- Syndrome of Can-do:** Industry wants people who are patient and courteous. It is easy to say "Sorry I can't do this." This is not service.



Sustainability for SMPs

Suggested tools and techniques that SMPs can implement



The biggest opportunity for SMP has come in the way of automation of internal processes. This has levelled the playing field irrespective of the size of the firm. New technologies and approaches are merging the physical and digital worlds in ways that will fundamentally transform Audit.

The extent to which that transformation is positive will depend on how we navigate the risks and opportunities that arise along the way.

the future is the beginning.....

Credits

- Presentation content and design
CA B Rajagopalan,
G Balu Associates
- Inputs: Friend forever
CA Sanjay Vasudeva

Thank
You!



In just 10 years camera man & pilot both
lost their jobs. UPGRADE YOURSELF

Education will now have to start from where it ended for us.