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# Malaysia Use of Technology by Auditors Survey

May 2022



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# Executive summary

## 168

participants from 38 firms participated in the survey



85% of participants work in audit and assurance

## 71%

of participants are at manager level or above within their firm

62% of participants are from the Big 4 firms



## 80%

of the firms use technology in external audits for managing the engagements and in audit procedures

Cloud technology to store documents and data is the most widely used technology

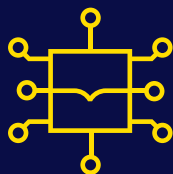


## TOP 3

challenges for firms are IT skills and knowledge gaps, budget constraints and data privacy concerns



Almost half the participants believe, use of technology moderately improves audit quality and efficiency



Top 3 technologies that audit firms and staff want to invest in and learn more:

- Data analytics
- Data visualisation
- Robotics process automation

Exceptions or outliers identified using technology-based audit procedures – determining extent of further audit procedures can be challenging



# Key takeaways

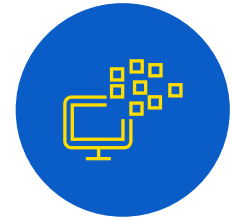
## Key comments and observations from participants



Urgent need to review and update auditing standards to cater for the new digital environment and future development.



Need for closer dialogue between regulators, standard setters and audit firms on emerging tech.



Develop interdisciplinary course to enhance both IT and audit skills.



Support digital transformation with more incentives and grants.



Better utilise resources through efficiencies achieved by increased automation.



## About the survey

In May 2022, CPA Australia with the support of the Malaysian Audit Oversight Board conducted an online survey of 179 external audit and IT professionals in Malaysia to obtain their perspectives on the use of technology by auditors.

### **The survey examined:**

- what technologies are used for which stages of external audits,
- the benefits of and challenges arising from the use of technology
- expected technology trends and potential future investments by audit firms.

While the majority of questions were multiple-choice questions, for some questions we allowed participants to add further comments. These comments are presented in the text boxes.



# About CPA Australia

CPA Australia is one of the largest professional accounting bodies in the world, with more than 172,000 members in over 100 countries and regions, including more than 10,500 members in Malaysia.

CPA Australia has been operating in Malaysia since 1956 and opened our Malaysian office in 1994.

Our core services include education, training, technical support and advocacy. CPA Australia provides thought leadership on local, national and international issues affecting the accounting profession and public interest.

We engage with governments, regulators and industries to advocate policies that stimulate sustainable economic growth and have positive business and public outcomes.

Find out more at [cpaaustralia.com.au](https://cpaaustralia.com.au)

## Acknowledgements

CPA Australia would like to acknowledge the continuous support provided by the Malaysian Audit Oversight Board.

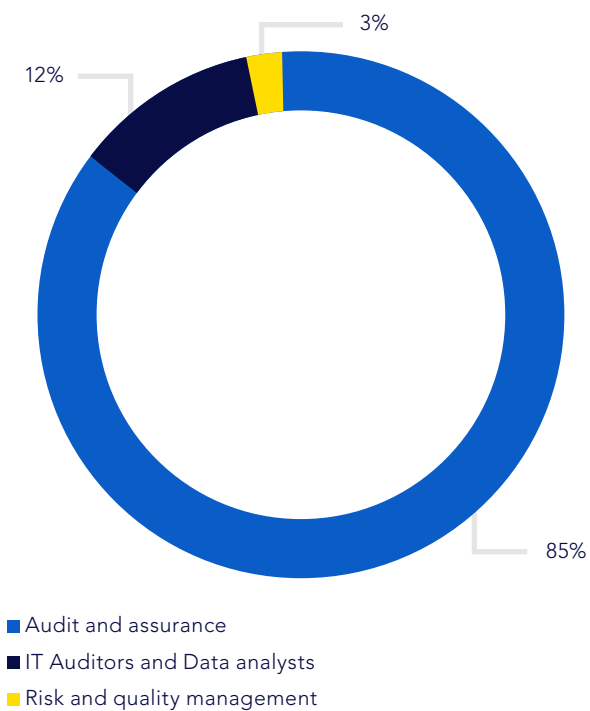
We also thank all auditors and IT professionals who took part in this survey.

# Survey participants

## Participants

168 staff and partners from 38 accounting firms participated in the survey, with 85 per cent working in audit and assurance, 12 per cent working as IT auditors and in data analytics, and the remaining 3 per cent work in risk and quality management.

### Breakdown of participants



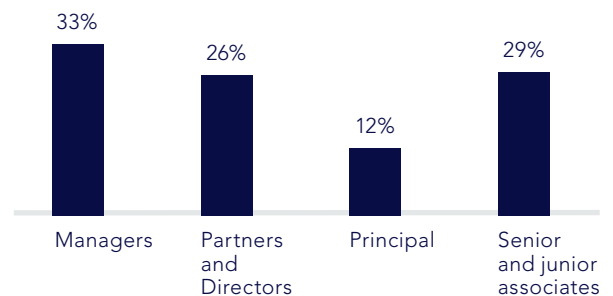
## Firms

Close to 63 per cent of the participants work for big 4 firms, 32 per cent work for the smaller firms and 5 per cent work for mid-tier firms. For the rest of this report, we have amalgamated the results from smaller and mid-tier firms as "other firms".

## Position

Close to 33 per cent were in the position of managers, including senior managers and assistant managers. Partners and Directors/Principals made up 26 per cent and 12 per cent respectively, with the remaining 29 per cent holding positions of senior and junior associates.

### Position of participants





# Technology uptake

## Extent of firms using technology in external audit

All participants stated that technology is used in external audits in some form. The extent of firms using technology in external audits largely aligns with the firm's size and the nature of audit clients.

### Big 4

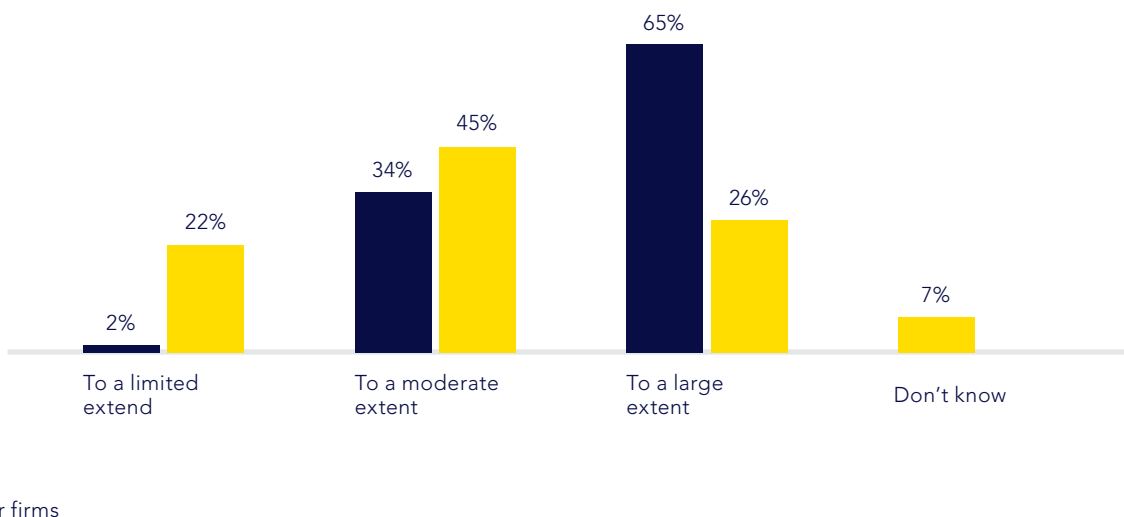
We observed that participants from big 4 firms indicated the firms use technology in audit:

- to a large extent – 65 per cent
- moderate extent – 34 per cent
- limited use of technology – 2 per cent.

### Other firms

The observation in the other firms that consist of mid-tier and smaller size firms is also encouraging although the technology uptake in other firms is slightly lower. 26 per cent use technology in audit to a large extent, 45 per cent use it to a moderate extent and 22 per cent indicated that there is limited use of technology in external audit.

### The extent firms are currently using technology for external audits

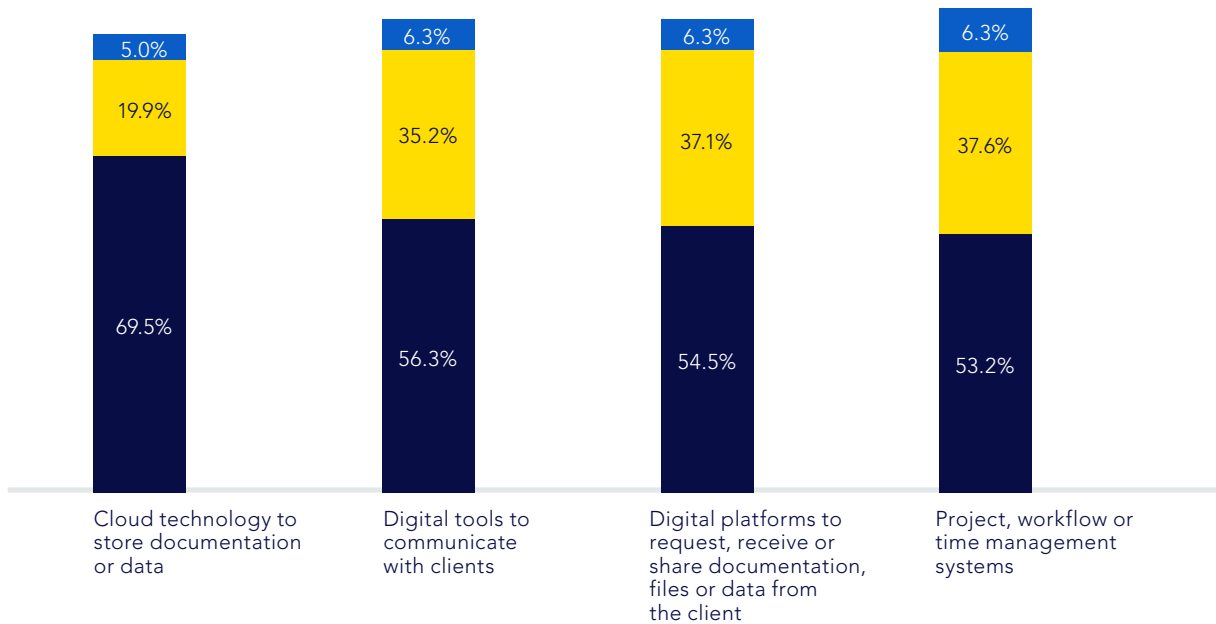


## Nature of technology use

80 per cent of firms surveyed said they used technology in both managing audit engagements and performing audit procedures.

A small percentage of firms only use technology in exclusively managing audit engagements or exclusively for conducting audit procedures.

### What does your firm use technology for in external audits



- To a large extent
- To a moderate extent
- To a limited extent

### Using technology in managing external audit engagements

We observed that over 90 per cent of participants have embraced the use of four core technologies (cloud technology, digital tools, digital platform and projects, workflow or time management system) in managing external audit engagements.

The significant uptake of cloud technology, digital communication tools and platforms to request, receive and share documents, data and files were not surprising given the audit profession was required to perform audit procedures remotely during the pandemic.

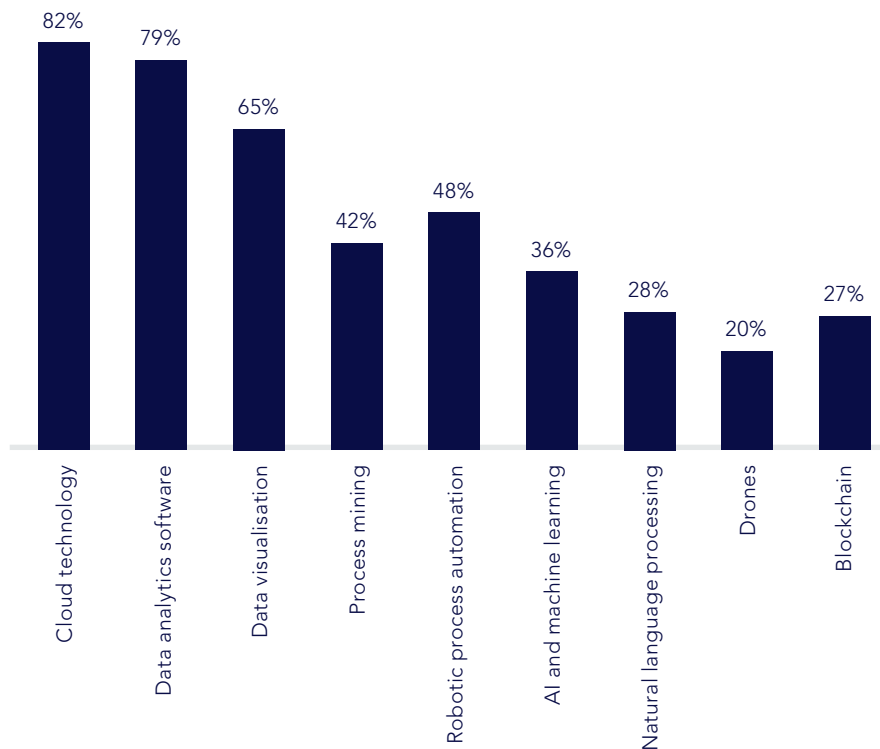
## Using technology in performing audit procedures

Unlike the consistently high uptake of technology in managing external audit engagements, we observed the use of technologies in performing audit procedures differ between technologies.

Cloud technology and data analytics have the highest uptake at 82 per cent and 79 per cent respectively in performing audit procedures.

Given their emerging nature, it's not surprising that drones, blockchain and natural language processing are the least used technologies in audit procedures at this stage.

### The extent to which your firm uses the following technologies when conducting audits



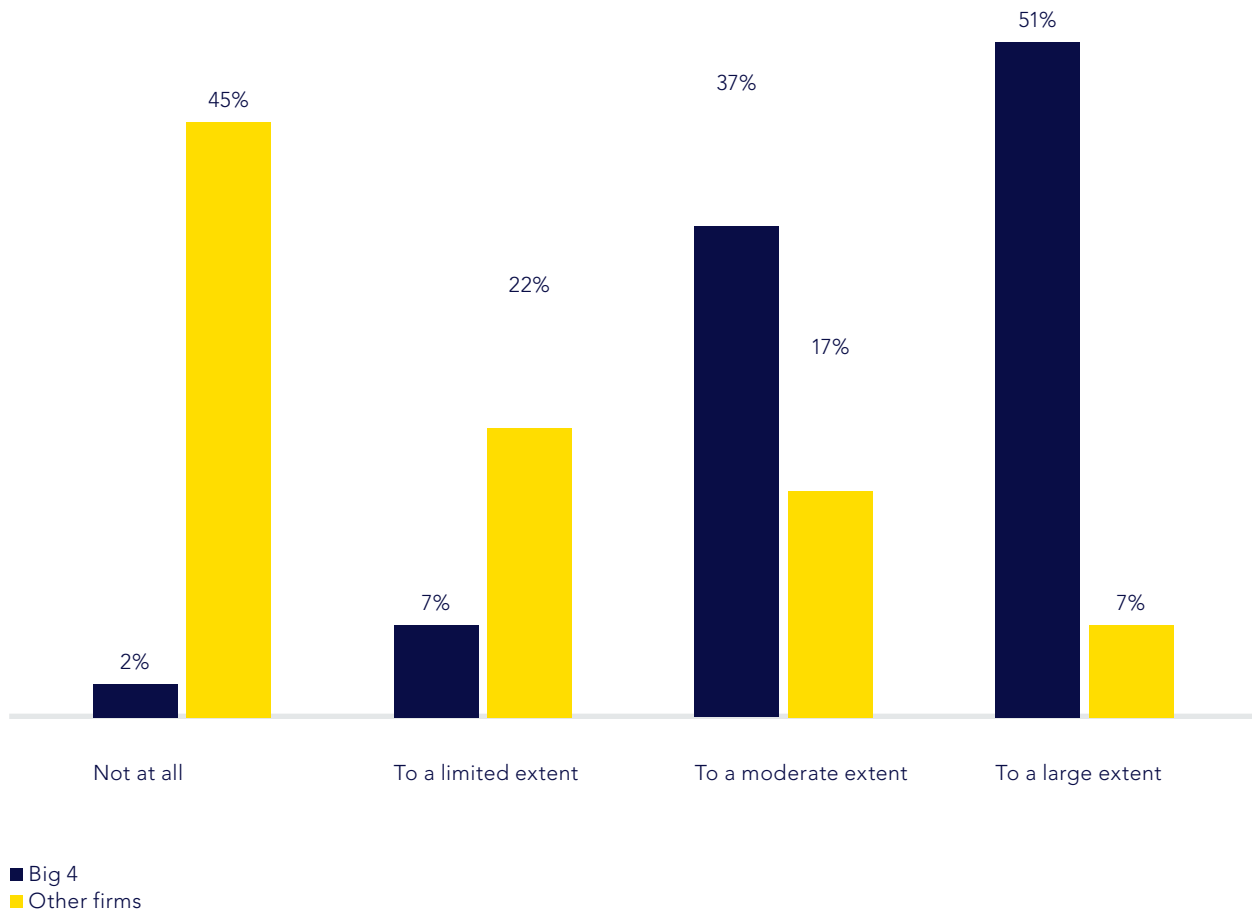
## Using data analytics in performing audit procedures

Consistent with our above observation, the extent of firms using data analytics in performing audit procedures is influenced by the firm's size and the nature of their audit clients.

### Big 4

51 per cent of participants from big 4 firms indicated they used data analytics in audit to a large extent, 37 per cent to a moderate extent and 7 per cent to a limited extent.

### Extent of data analytics usage in audits



### Other firms

Close to half (45 per cent) of other firms stated they do not use data analytics in performing audit procedures. Only 7 per cent stated they use data analytics to a large extent when performing audit procedures.

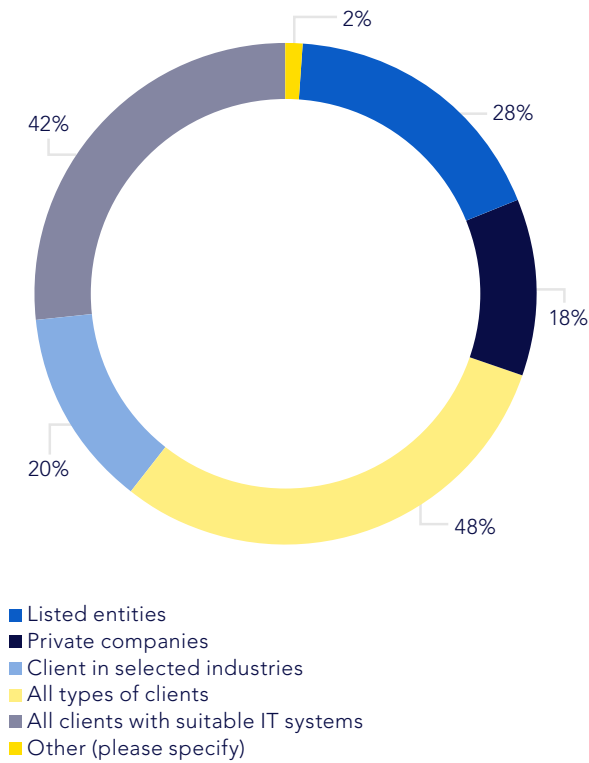
This is consistent with our understanding that, the client base of smaller firms may be less technologically mature to enable effective use of data analytics as part of audit procedures.

# Type of audit clients

## Client's profile when using technologies in performing audit procedures

The survey results show that the likelihood of using technology during an audit depends on the size of the audit clients. However, there seems to be a consensus that technology in general can be used and has been used in conducting audit procedures for all types of audit clients.

**Types of clients where technology is used in audits - all firms**



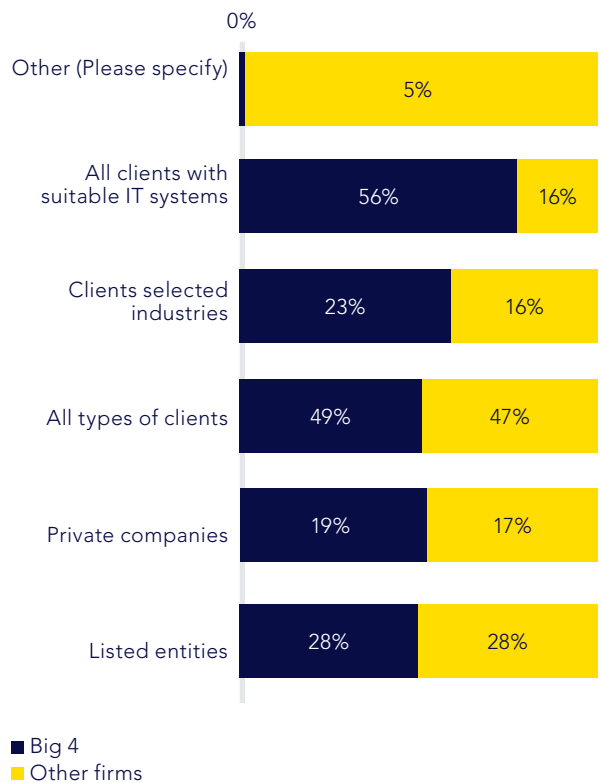
### Big 4

Participants from the big 4 were most likely to use technologies in conducting audit procedures for 'all clients with suitable IT systems' (56 per cent) followed closely by 'all types of clients' (49 per cent).

### Other firms

Participants from other firms were most likely to use technologies in conducting audit procedures for 'all types of clients' (47 per cent) and 'listed entities' (28 per cent). Only 16 per cent of participants in other firms selected 'all clients with suitable IT systems' which is significantly lower in comparison to the responses from the big 4 firms.

**Types of clients where technology is used in audits - Big 4 and Other firms**



# Degree of customisation of technology

The technologies used are:



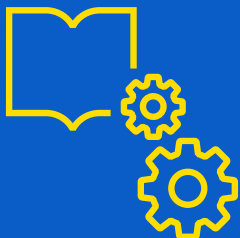
**69%**

Purchased off-the-shelf software



**45%**

Built in-house



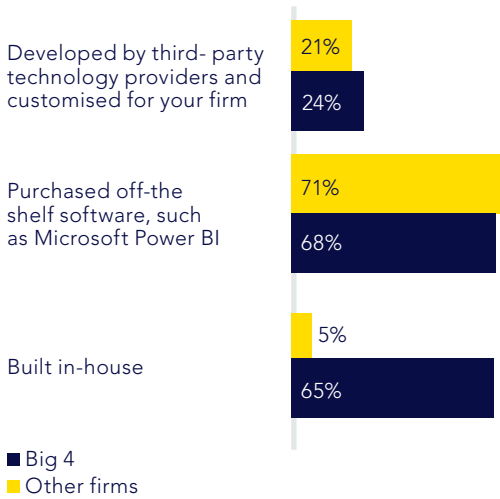
**21%**

Customised software developed  
by third-party technology providers

## Degree of customisation

Customisation of audit technology increases with the size of the firms. Although purchasing off-the-shelf software is still the most popular choice for all firms, this is only marginally so for big 4 firms. The most popular off-the-shelf technology used by auditors was from the Microsoft suite, including Power Bi, Outlooks and Teams.

### Degree of customisation of audit technology



### Big 4

Big 4 firms mostly build their audit software in-house (65 per cent) and purchase off-the-shelf software (68 per cent). Most in-house built technology is used to perform data analytics, data-visualisation, audit evidence gathering, audit documentation and audit testing.

The remaining 15 per cent of the software used by big 4 firms consist of software developed by third-party technology providers and customised to the firms' needs, such as software for the purpose of client and project management.

### Other firms

Consistent with our understanding, other firms are unlikely to use technology built in-house due to development costs.

The majority (71 per cent) of smaller firms use off-the-shelf software. 21 per cent use audit software developed by third-party technology providers and customised for their firm.

Only 5 per cent of the participants from the large network firms, outside of the big 4 firms use audit technology built in-house in their firm's audit practice.

# Benefits and challenges of using technology

## Key challenges to technology adoption in the firms' audit practice as a whole

The common challenge most audit firms face in adopting technology into their firm's audit practice as a whole is the lack of understanding in the use of technology in performing audit procedures. This issue was highlighted by both general staff and management.

### Key challenges to technology adoption in audit firms





**Big 4**

Big 4 participants stated that a lack of technology understanding and knowledge among staff was the largest challenge to technology adoption, followed by a shortage of technology staff and a lack of technology understanding and knowledge among management.

Difficulty to align technology with the firm’s audit methodology and inability to obtain assurance over the operating effectiveness of controls or underlying logic/algorithms of technical tools were the least challenging issues for the big 4 firms.

**Other firms**

Amongst other firms, smaller firms struggled with a shortage of technology staff, a lack of technology understanding and knowledge among staff, and a lack of technology understanding and knowledge among management. This is consistent with the reasoning that smaller firms are unlikely to have the financial capacity to attract skilled staff and/or conduct upskilling/reskilling initiatives for existing staff. Smaller firms are also concerned about the increasing exposure to cybersecurity risks as audit firms increase the amount of clients’ data being requested, obtained, and stored online.

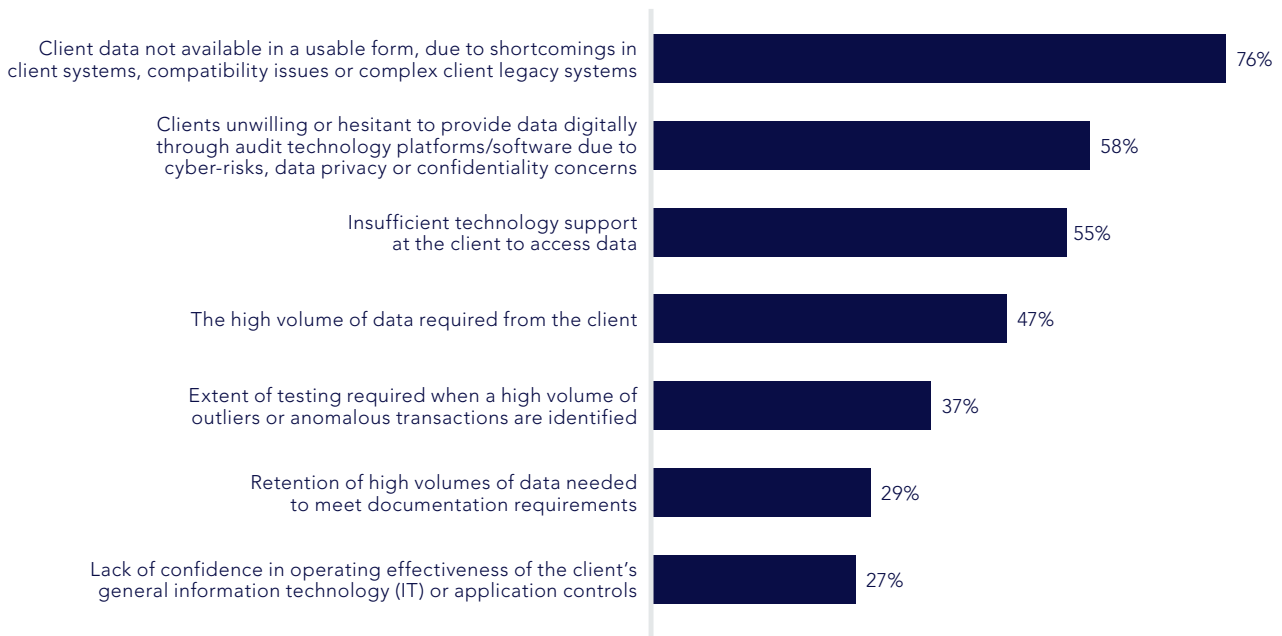
**Audit technology adoption challenges**



## Key challenges arising with audit clients and specific audit engagements when utilising technology in external audit

The common challenges that auditors face when using technology in audit engagements are when the client's data is not readily available in a usable format. This is mainly due to challenges with the client's system, compatibility issues or client legacy systems, and concerns around cyber-risks and data protection.

### Challenges when utilising technology in an audit



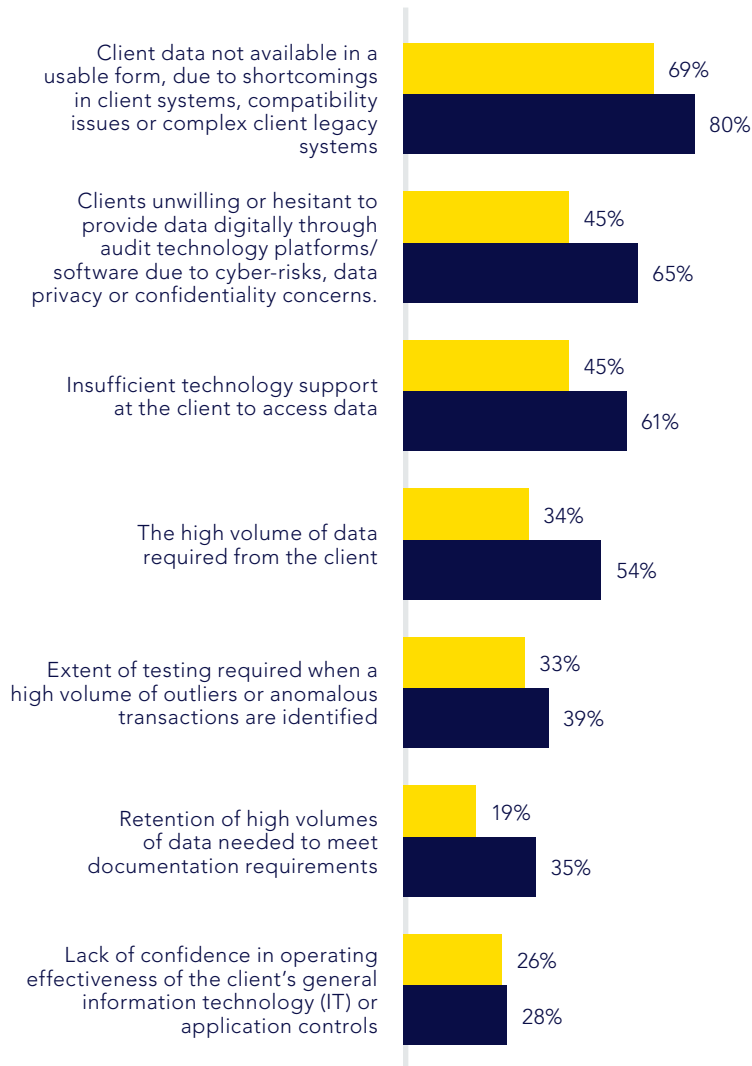
**Big 4**

Big 4 firms were most likely to find that client data not being available in a useable form, and this was their biggest challenge. This is mainly due to compatibility issues or client legacy system. Clients were also hesitant to provide data digitally due to potential cyber-risks, data privacy or confidentiality concerns.

**Other firms**

Other firms also faced similar difficulties to big 4 firms around the usability of client data and a hesitancy by clients to share data digitally.

**Common challenges when using audit technologies**

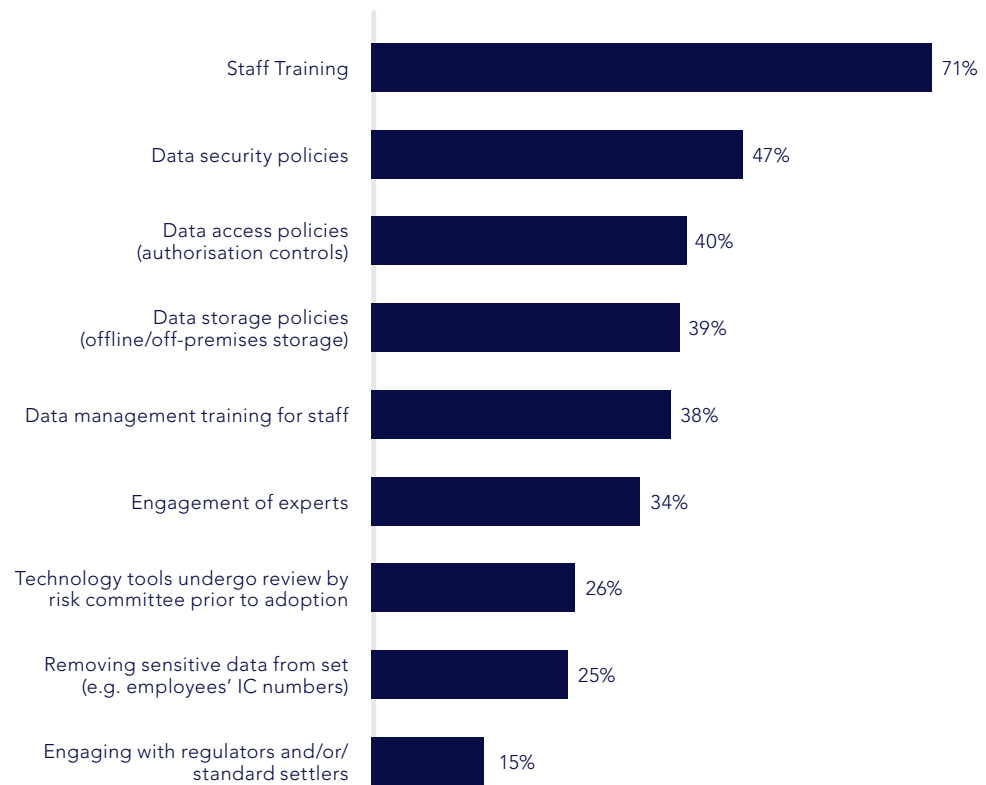


■ Big 4  
■ Other firms

## Mitigating factors

Most firms stated that staff training is important to mitigating the above challenges to technology adoption in audits. Further, policies on data management and governance were also key measures taken by firms of all sizes.

### Measures to mitigate challenges to audit technology adoption



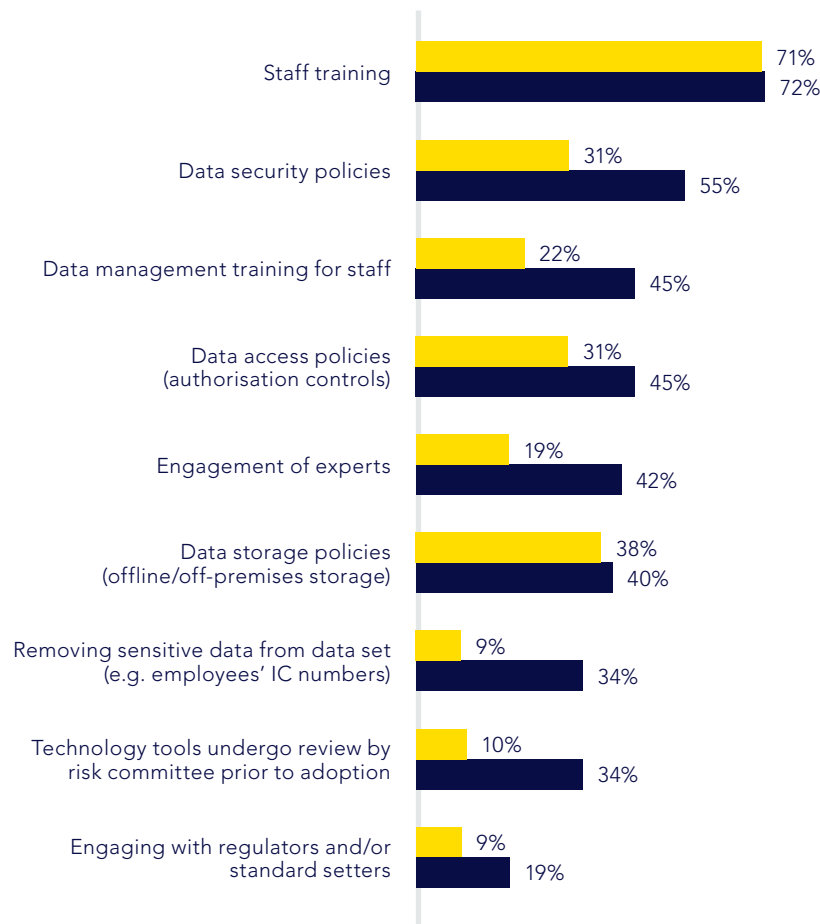
**Big 4**

Big 4 firms primarily used staff training to overcome challenges faced with technology adoption. Further, these firms indicated they have also worked on improving their data security policies. These firms also conducted data management training for staff.

**Other firms**

Other firms were also likely to provide staff training to overcome technology adoption challenges. Other firms also emphasised proper data storage policies (offline/off-premises storage).

**Measures firms have in place to mitigate the challenges identified to audit technology adoption - size of firm**



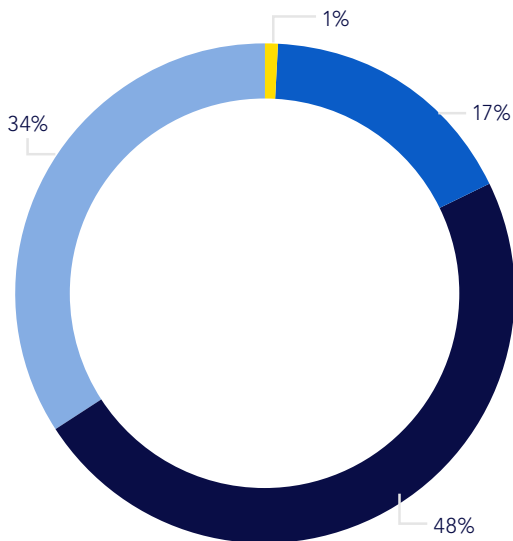
■ Big 4  
■ Other firms

## Improving audit efficiency

Depending on the digital/technology maturity of the audit firms, the use of technology to achieve audit efficiencies differs significantly from firm to firm, especially when performing substantive testing as part of audit procedures.

Over a third (34 per cent) of participants stated that technology improves audit efficiency to a large extent, 48 per cent claimed it enhances audit efficiency to a moderate extent and 17 per cent claimed it has limited enhancement to audit efficiency.

**Impact that audit technology has on improving audit efficiency**



- Not at all
- To a limited extent
- To a moderate extent
- To a large extent

17 per cent of participants stated that technology improves audit efficiency only to a limited extent and one per cent do not believe technology improves audit efficiency. The reasons given included:

“increased effort in data extraction, (re)testing of exceptions, and additional analysis when using technology for the first time”

“increased staff’s working hours as they feel obliged to double-check whether the analytics or automation tool worked correctly”

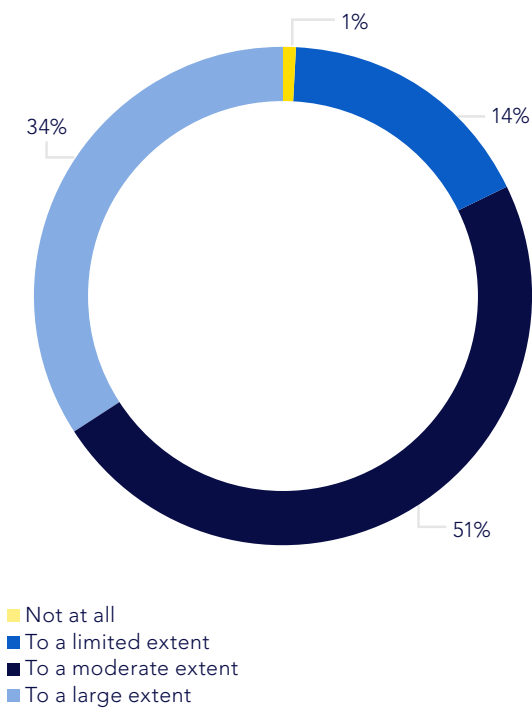
“manually reperforming some digital audit procedures due to lack of confidence in audit procedures performed using technology tools”

## Improving audit quality

Regarding audit quality, 34 per cent of participants agree that technology improves audit quality to a large extent whilst 51 per cent were of the opinion that it improves audit quality to a moderate extent.

Only 13 per cent say that technology has a limited effect on improved audit quality and 2 per cent do not believe technology improves audit quality. The reasons given included:

Impact that audit technology has on improving audit quality



"Technology tools do not replace auditor's scepticism and professional judgement."

"Technology only supplements auditors' work and allows them to focus on more important issues."

Participants from both the big 4 firms and other firms have similar views on how technology impacts audit quality and audit efficiency. Most participants felt the use of technology has a consistent impact on the improvement of audit quality and audit efficiency.

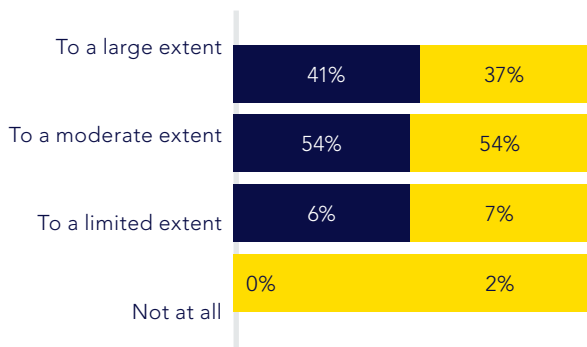
The participants from the big 4 firms felt that the use of technology made a difference to a moderate extent (54 per cent) to a large extent (41 per cent) in improving audit quality. Participants also rated technology as a contributor to improving audit efficiency at 37 per cent to a large extent and 54 per cent to a moderate extent. Only a small cohort from the big 4 firms have a view that the use of technology has a limited impact on audit quality (6 per cent) and audit efficiency (7 per cent). Notably, all participants from the big 4 firms agreed the use of technology improved audit quality but not necessarily improved audit efficiency.

The participants from other firms have more diverse views. Only 20 per cent felt that using technology has improved audit quality to a large extent. 28 per cent felt that using technology has improved audit efficiency to a large extent.

Close to half of the participants from other firms felt technology has moderately improved audit quality and a third felt technology has limited impact on audit quality.

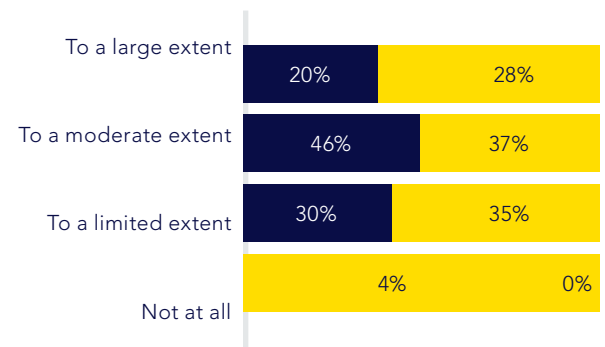
Over two-thirds of the participants from the other firms are of the view technology has a limited to moderate impact on audit efficiency. In contrast to the big 4 firms, participants from the other firms agreed the use of technology improved audit efficiencies but not necessarily improved audit quality.

**Big 4 - Improving audit quality vs. audit efficiency**



■ Audit quality  
■ Audit efficiency

**Other firms - Improving audit quality vs. audit efficiency**





## Auditors are looking to learn more about technology

The most popular technology that auditors wanted to learn more and upskill is data analytics. The below diagrams summarised the responses from participants in the areas of technology they are interested in learning more and looking to upskill.



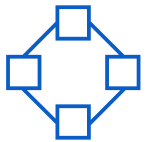
### 73%

Of the participants want to learn more about **Data Analytics**



### 56%

Of the participants want to learn more about **Data visualisation**



### 52%

Of the participants want to learn more about **Blockchain**



### 41%

Of the participants want to learn more about **Cloud technology**



### 27%

Of the participants want to learn more about **Natural language processing**



### 57%

Of the participants want to learn more about **Robotic process automation**



### 54%

Of the participants want to learn more about **Artificial Intelligence and machine learning**



### 46%

Of the participants want to learn more about **Cybersecurity**



### 35%

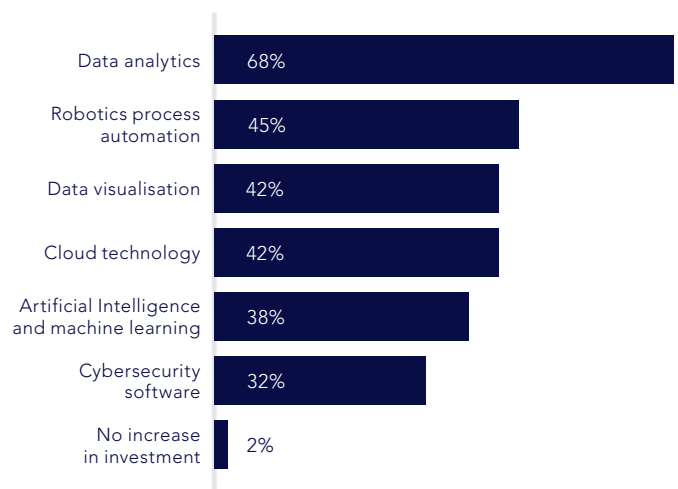
Of the participants want to learn more about **Process mining**



### 24%

Of the participants want to learn more about **Drones**

### Firms planning to invest in technology in the next 12 months



Nearly 70 per cent of firms are looking to increase investment in data analytics in the next 12 months.

