



MALAYSIAN INSTITUTE
OF ACCOUNTANTS

REPORT ON TECHNOLOGY ADOPTION BY THE ACCOUNTING PROFESSION IN MALAYSIA



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About the report

This report is based on surveys carried out on technology adoption by the accounting profession in Malaysia that were conducted in 2017, 2019 and 2022. The 2017 survey has served as input to the [MIA Digital Technology Blueprint](#) (Blueprint) that was issued in 2018. The 2019 survey was carried out in 2019 and its [findings](#) have been incorporated into the Blueprint's 3-year operational plan (2019 to 2022) which has 39 initiatives with more than 200 activities or outputs.

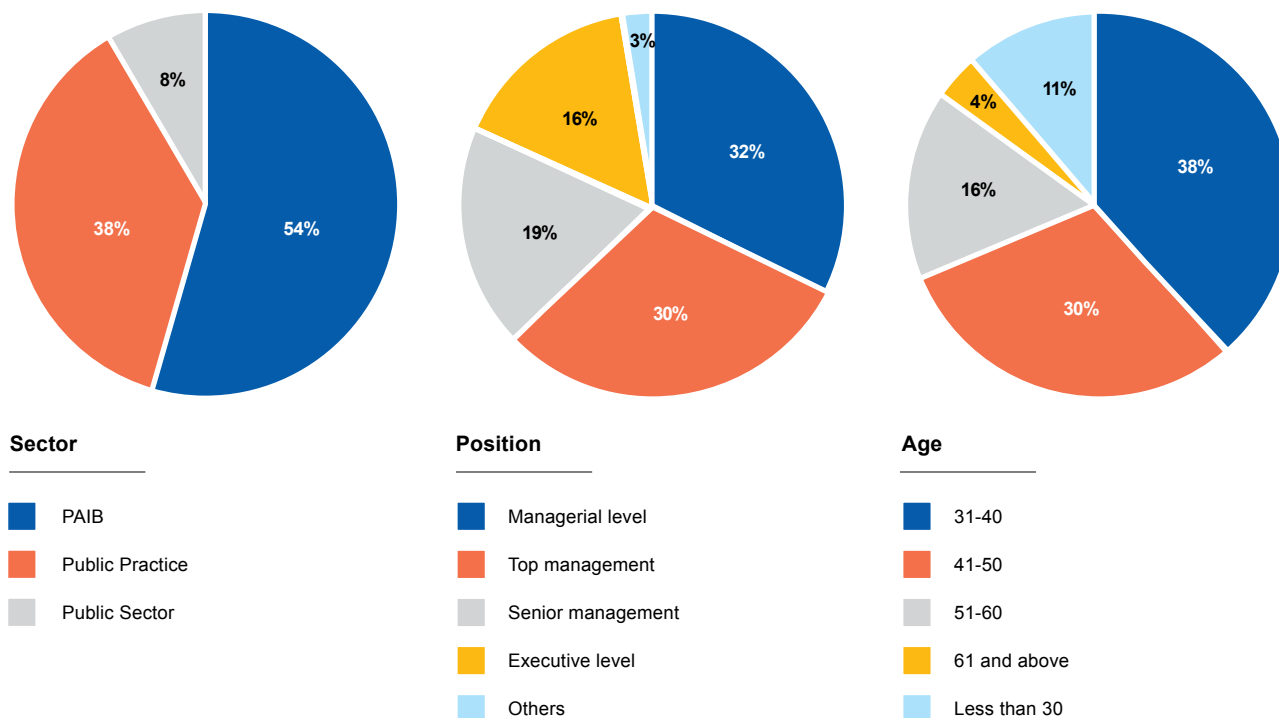
As digital adoption has been accelerated by the pandemic, the 2022 survey has provided insights on the impact of the pandemic on digital adoption of the accounting profession. It has also helped MIA in identifying further initiatives to move the profession forward where its results have contributed to the development of the 2-year digital economy operational plan (2022 to 2024).

The report's findings cover the following areas:

- Technologies impacting the profession
- Digital transformation landscape of the accounting profession
- Impact of COVID-19 on the digitalisation of the profession
- Way forward for the profession in digitalisation

Respondents of 2022 survey

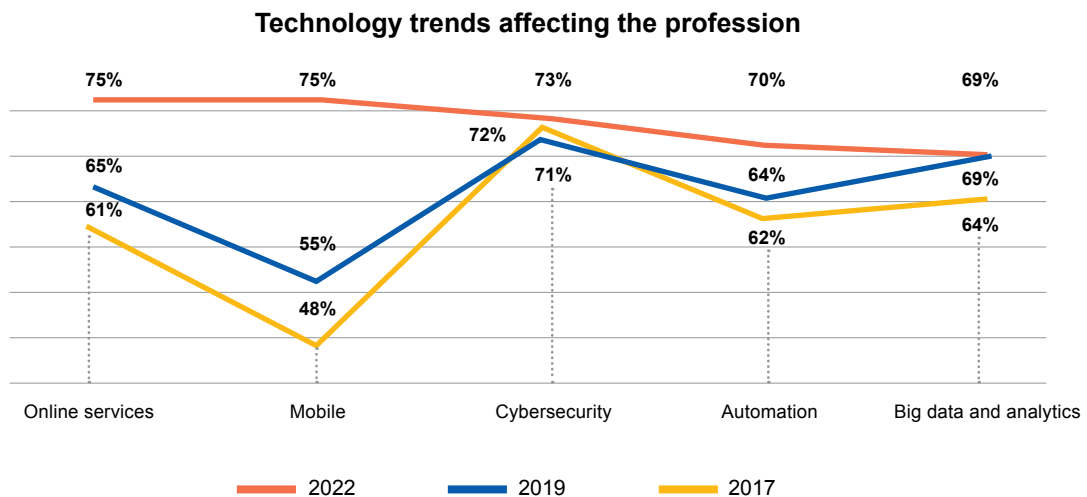
The 2022 survey was conducted in January and February 2022. A total of 887 MIA members responded to the survey and their profiles are indicated below in terms of sector, position and age.



MIA would like to thank all members who participated in all technology adoption surveys.

Technologies impacting the profession

Respondents ranked the following technologies as those having higher impact on the profession – online services, mobile, cybersecurity, automation and big data and analytics. The number of respondents who cited that these technologies are affecting the profession has also increased in 2022 in comparison to 2017 and 2019.

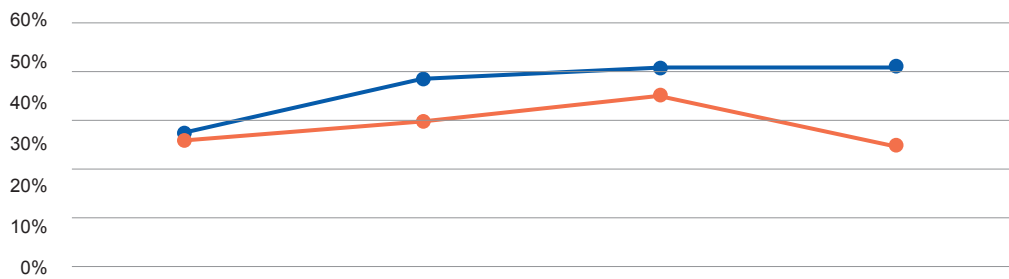


The World Economic Forum's Global Risks Report 2023 shows that cybersecurity failure is one of the top ten global risks of concern over the next two and ten years. In 2022, losses caused by cybercrimes in Malaysia were recorded at almost RM600 million¹. Accountants and financial institutions are perceived as attractive to cyber criminals because they are dealing with high-value commercial data and sensitive financial information on a daily basis. Globally, there have been several targeted attacks against the industry such as the Morgan Stanley breach that involved 900 of its high-net worth client's information. Find out more about the critical cybersecurity risks that plague organisations today and directly affect the profession as financial stewards and gatekeepers, including lessons learnt from high-profile cybersecurity failures [here](#).

As guardians of high-value financial and commercial data, accountants play a critical role in their organisations in strengthening cybersecurity. Accountants at different levels in organisations (either at Board level, C-suite level or at any level) have a vital role in managing cybersecurity risks. Gain understanding on the various roles of accountants in combating cybersecurity challenges [here](#).

¹ Perimbanayagam, Kalbana. "Fighting Crimes in Age of Cybersecurity Needs Cooperation at All Levels: MACC" News Straits Times, 19 May 2023; <https://www.nst.com.my/news/nation/2023/05/911326/fighting-crimes-age-cybersecurity-needs-cooperation-all-levels-macc>

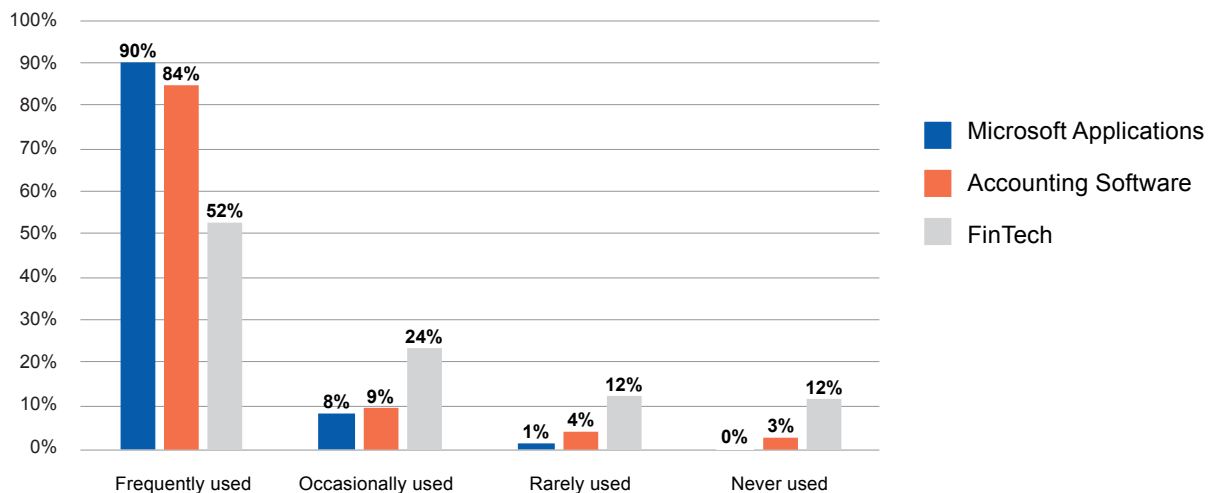
Intention to deploy one or more technologies within the next 3 years



	Microsoft Applications	Cloud Applications	Accounting Software	Data Analytic Tools
2017	36%	40%	46%	35%
2019	38%	49%	51%	52%

In 2017, respondents indicated that the top three technologies that were frequently used by the respondents are accounting software, cloud applications and Microsoft applications. In 2019, the respondents voted data analytic tools, accounting software and cloud applications as the top three (3) technologies that will be deployed in the next three (3) years.

Technologies use or have deployed in the last 3 years

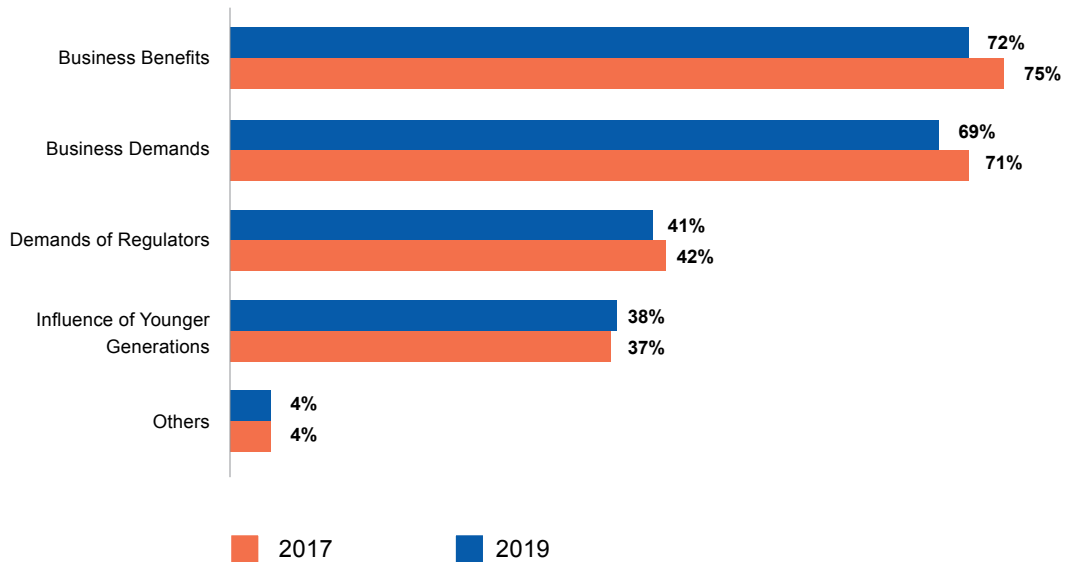


Interestingly, the latest findings in the 2022 survey illustrated that Microsoft applications, accounting software and FinTech as the top three technologies deployed in the last three surveys. The significant changes in 2022 responses may be due to the COVID-19 pandemic as accountants significantly relied on the Microsoft Office Suite tools to achieve productivity and serving their clients.

Digital transformation landscape of the accounting profession

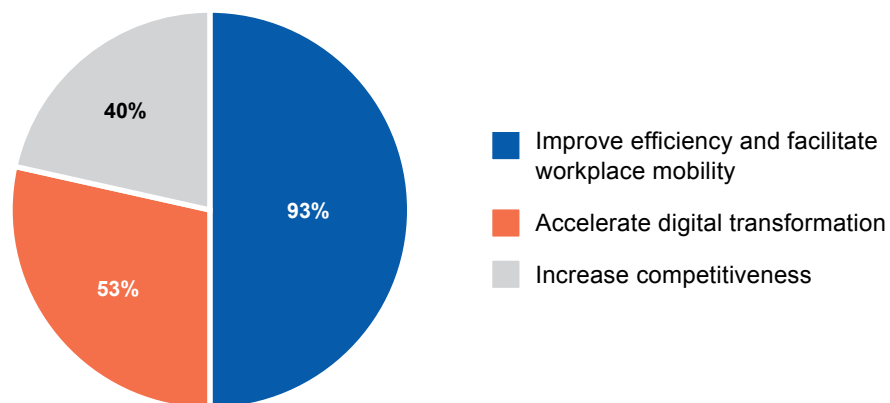
Motivation for technology adoption

In 2017 and 2019, the respondents indicated the following as the drivers for adoption of technology.



In 2022, respondents perceived the following top three reasons for adopting technology:

Reasons for technology adoption



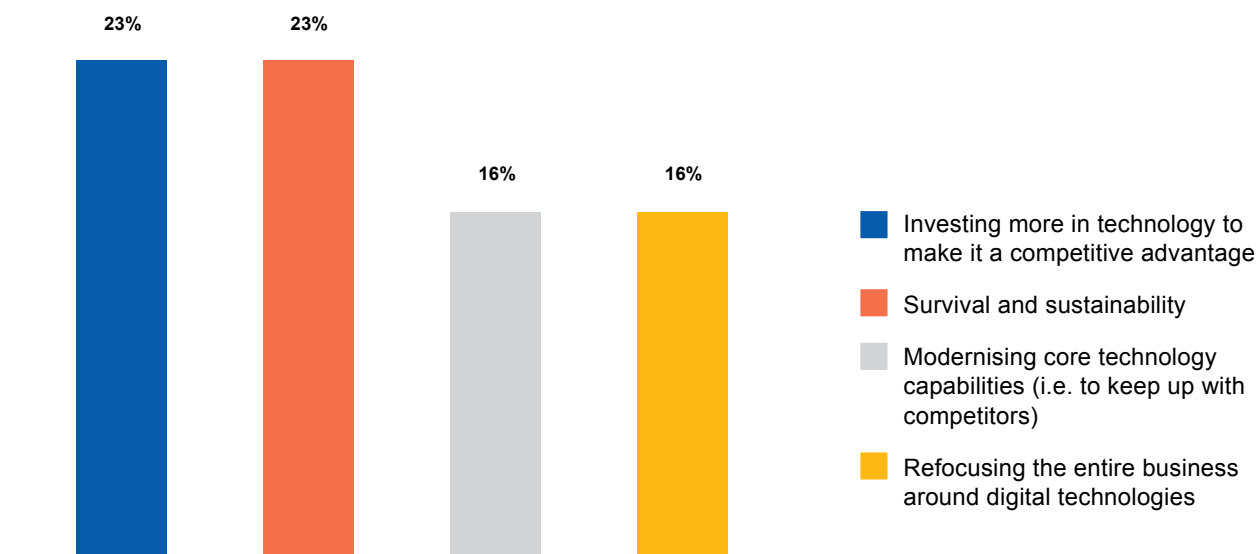
Such findings are aligned with the findings from Gartner² which indicates that 55% of organisations are offering remote days to the employees as it will give employees more autonomy over their work and personal lives as they can schedule activities and commitments in accordance with what works best for them. The survey also found that the best hybrid models offer three or more remote days per week on average.

Focusing on digital transformation, based on Gartner Board of Directors Survey³ conducted from June to July 2022, 89% of board of directors indicated that digital is embedded in all business growth strategies. This has clearly shown that digital transformation is crucial to conquer competition and to remain relevant in the business.

Strategic posture towards technology

When it comes to organisation's current strategic posture towards technology, most of the respondents indicated that they would invest more in technology to make it a competitive advantage. This is followed by survival and sustainability, modernising core technology capabilities and refocusing the entire business around digital technologies. The findings indicated that respondents have initiated their pathway in digital transformation in order to stay relevant in the industry.

Current strategic posture towards technology

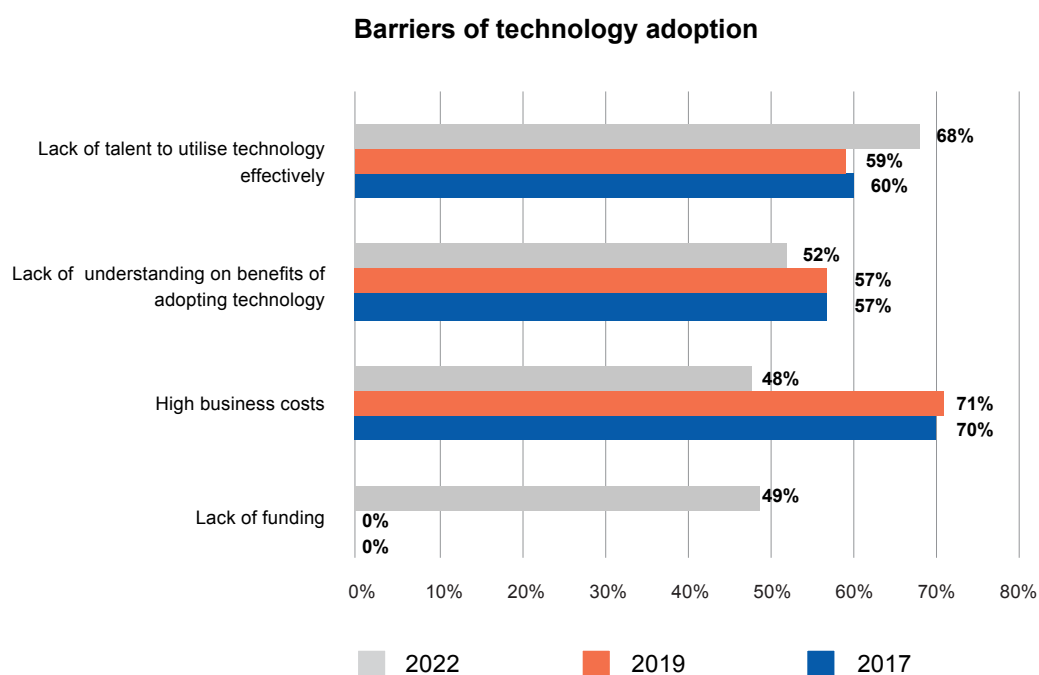


² Gartner, 17 April 2023, *Gartner Says Employees Are 12% More Likely to Leave Their Workplaces if Employers Don't Establish Explicit Hybrid Work Norms*, [Press release], <https://www.gartner.com/en/newsroom/press-releases/04-17-23-gartner-says-employees-are-twelve-percent-more-likely-to-leave-their-workplaces-if-employers-dont-establish-explicit-hybrid-work-norms>

³ Gartner, 19 October 2022, *Gartner Says 89% of Board Directors Say Digital is Embedded in All Business Growth*, [Press release], <https://www.gartner.com/en/newsroom/press-releases/2022-10-19-gartner-says-89-percent-of-board-directors-say-digital-is-embedded-in-all-business-growth-strategies>

Barriers of technology adoption

There was a change in the perception of barriers to technology adoption over the years. Lack of talent to utilise technology effectively is ranked as the top barrier compared to 2019 and 2017. This is followed by the lack of understanding the benefits of technology adoption and lack of funding. Although 'lack of funding' appears for the first time in 2022, it was only ranked third by the respondents which indicate that in order to move forward, they need to invest in technology.



As lack of talent to utilise technology effectively has been in the top three barriers of technology adoption since the 2017 survey, the Institute carried out a study on technology adoption within the accounting courses and programmes by the universities in Malaysia in 2019. A report documenting the study and its finding was issued in 2021 where it puts forward six recommendations where a number of those recommendations have been incorporated in the revised curriculum of accounting degree programme i.e. Halatuju 4.

The Report on a Study of Emerging Technology Adoption within the Accounting Programmes by the Higher Learning Institutions in Malaysia addresses the future skillsets of accounting graduates in Malaysia and the incorporation of emerging technologies in the accounting programmes to ensure future relevance.

The study conducted explores the following areas:

- the future skillset of accounting graduates in Malaysia
- emerging technologies for accounting programmes
- incorporation emerging technologies into the syllabus of accounting programmes
- teaching and learning of emerging technologies in accounting programmes
- mode and/or types of training on emerging technologies for accounting lecturers
- implementation strategies

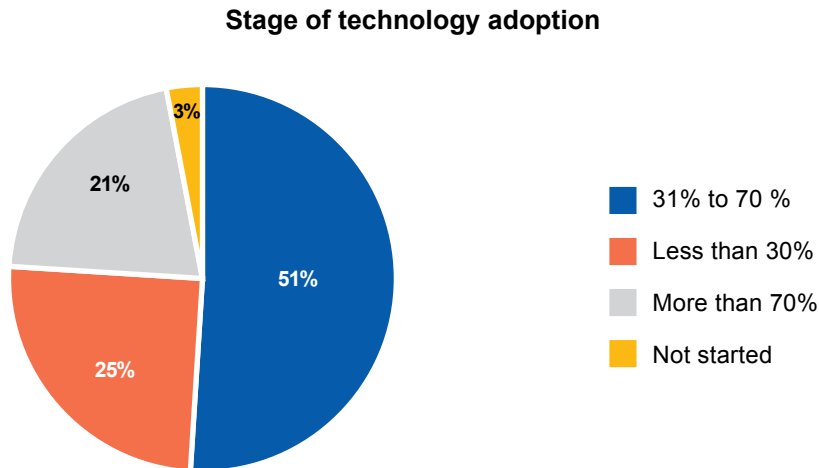
The recommendations of the Report are as follows:

1. The future skillset of the accounting graduates in Malaysia should be based on the three proficiency levels as set out in the MIA Competency Framework – foundation, intermediate and advanced.
2. Critical emerging technologies for the accounting programmes are artificial intelligence (AI), blockchain, cybersecurity, cloud computing and data science/data analytics.
3. Possible approaches to incorporate emerging technologies into the accounting programmes:
 - As core subjects
 - As elective subjects
 - Included in various subjects
4. Study should be carried out in determining who best to deliver the technology topics being incorporated in the accounting programmes.
5. Various teaching and learning approaches could be used in the accounting programmes to accommodate emerging technologies.
6. A collaborative effort is required among stakeholders, as well as taking into consideration technology infrastructure and funding.

The Report can be accessed [here](#) and a video summarising the Report can be viewed [here](#).

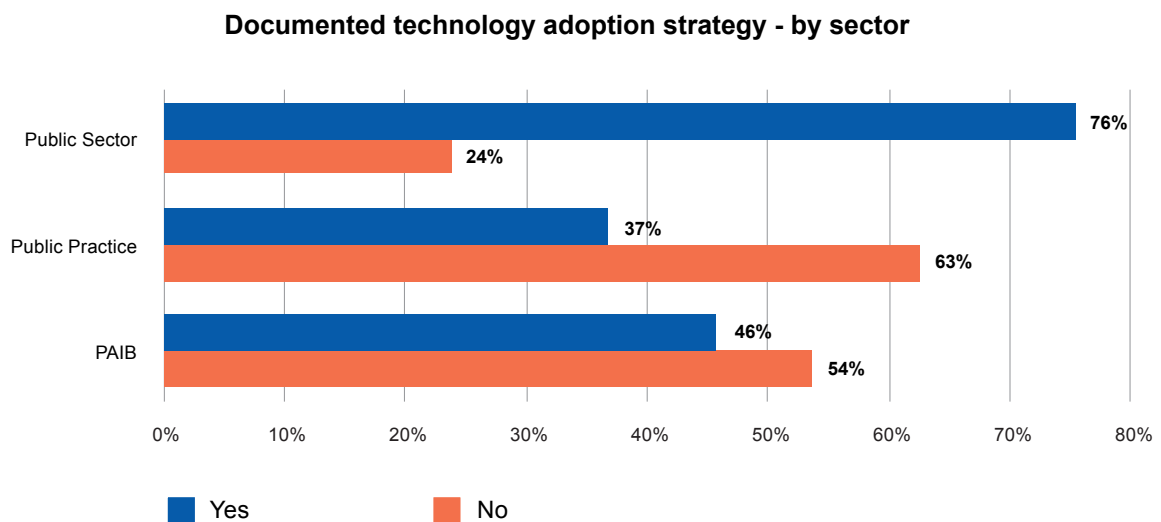
Stage of technology adoption

93% of respondents in the 2019 survey ranked technology as either very important or important for the accountancy profession. Accompanied by the COVID-19 pandemic, 97% respondents indicated that they are at various stages of technology adoption.



Technology adoption strategy

When asked if their organisation has a documented technology adoption strategy, 45% of respondents have such document while the remaining do not, although they are currently adopting technology. The 2022 survey further revealed the following by sector:



Most respondents in public practice and PAIB sectors did not have a documented technology adoption strategy as compared to public sector respondents. It is important to align the technology adoption strategy with the long-term strategy of the organisation as well as ensuring that the adoption is carried out with necessary care and planning.

The [MIA Digital Technology Blueprint](#) has outlined five principles to be considered in developing a strategy to adopt technology in an organisation. The five principles are as follows:

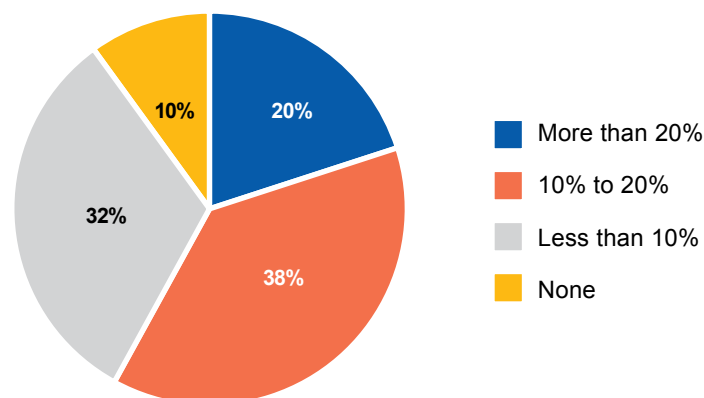


1. Be aware of digital technology trends and assess how they affect their role.
2. Identify capabilities, build differentiated skills, and innovate in responding to the change.
3. Capitalise on the use of appropriate digital technology.
4. Determine funding needs and identify financing options.
5. Adhere to good governance practices through adoption of industry and regulatory requirements⁴.

Technology investment

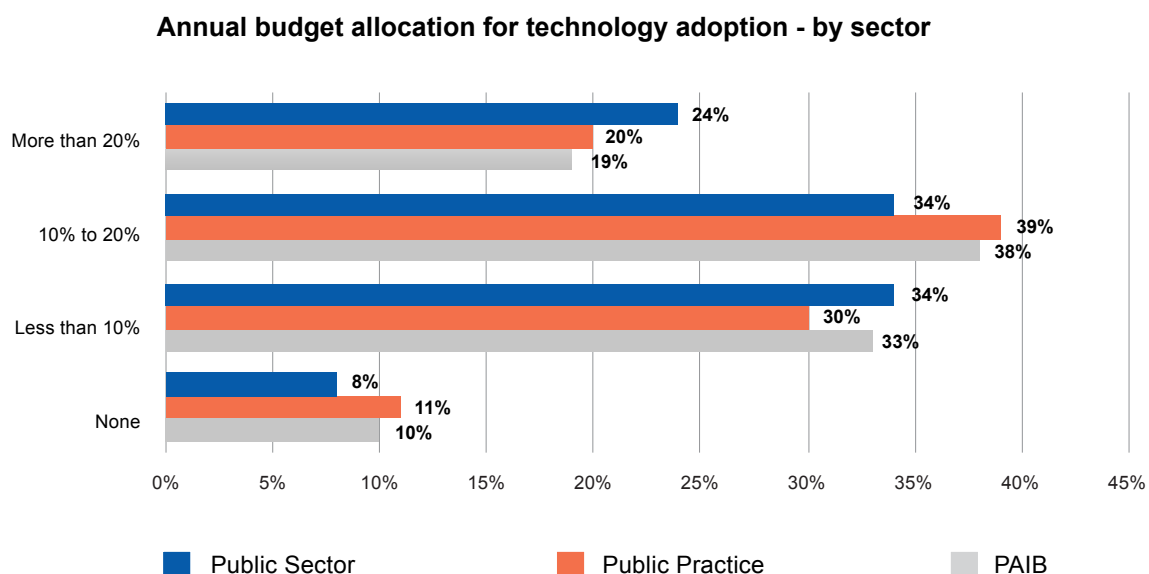
In terms of technology investment, respondents were asked about their annual budget allocation for technology adoption in their organisation. The annual budget allocation comprises capital expenditure (CAPEX) and operating expenses (OPEX).

Annual budget allocation for technology adoption



⁴ Malaysian Institute of Accountants (MIA), 2018, *MIA Digital Technology Blueprint*

More than 50% of respondents allocated 10% or more of their annual budget allocation to technology spending. 20% have even allocated more than 20% of their annual budget, which is aligned with earlier findings where many respondents indicated that they would invest more in technology to make it a competitive advantage.



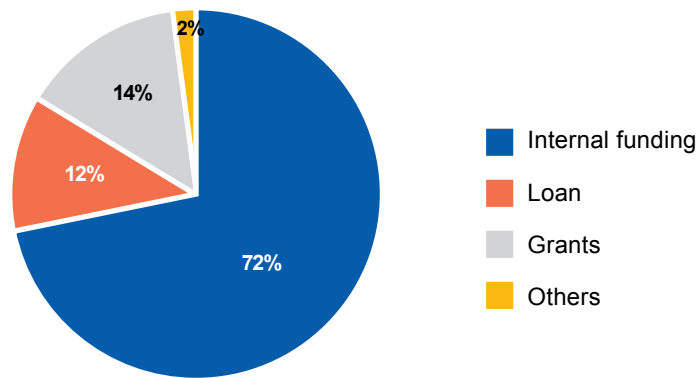
When analysed by sector, it was revealed that close to 60% of the respondents for each sector have allocated 10% or more to technology spending. Public sector respondents have the highest percentage (at 24%) for allocation of more than 20% of their budget to technology, followed by public practice at 20% and PAIB at 19%. All sectors have placed higher importance on investing in technology where only 11% or less of respondents from each sector (public sector – 8%; public practice – 11%; PAIB – 10%) did not allocate any budget for technology adoption in their organisation.

This is in line with the recent article by Gartner, Inc. which projected that IT spending to grow 5.5% in 2023 worldwide. Despite global economic turbulence, IT spending is expected to have growth in all regions. Setting priorities will be essential as Chief Information Officers (CIOs) work to reduce costs while transforming the company’s value proposition, revenue, and client interactions with digital technology. Specifically, the software market is expected to expand by double digits this year as businesses prioritise their spending to gain a competitive edge through improved productivity, automation, and other software-driven transformation projects⁵.

Principle 4 of the MIA Digital Technology Blueprint 4 stresses the importance of funding and calls for organisations to allocate the appropriate amount to spend on adopting new technology and to identify available financing options. Respondents financed their digital transformation as follows:

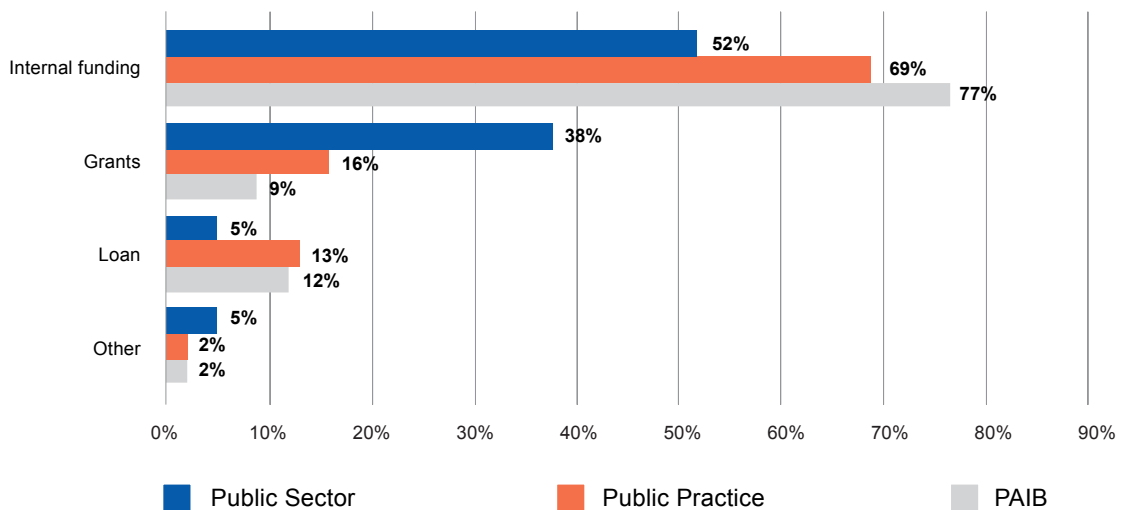
⁵ Gartner, 6 April 2023, *Gartner Forecasts Worldwide IT Spending to Grow 5.5% in 2023*, [Press release], <https://www.gartner.com/en/newsroom/press-releases/2023-04-06-gartner-forecasts-worldwide-it-spending-to-grow-5-percent-in-2023>

Sources of funding for digital transformation



72% of respondents opted for internal funding as their main source of funding and this is aligned with the findings where more than 50% of respondents have allocated 10% or more of their annual budget allocation for technology spending.

Sources of funding for digital transformation - by sector

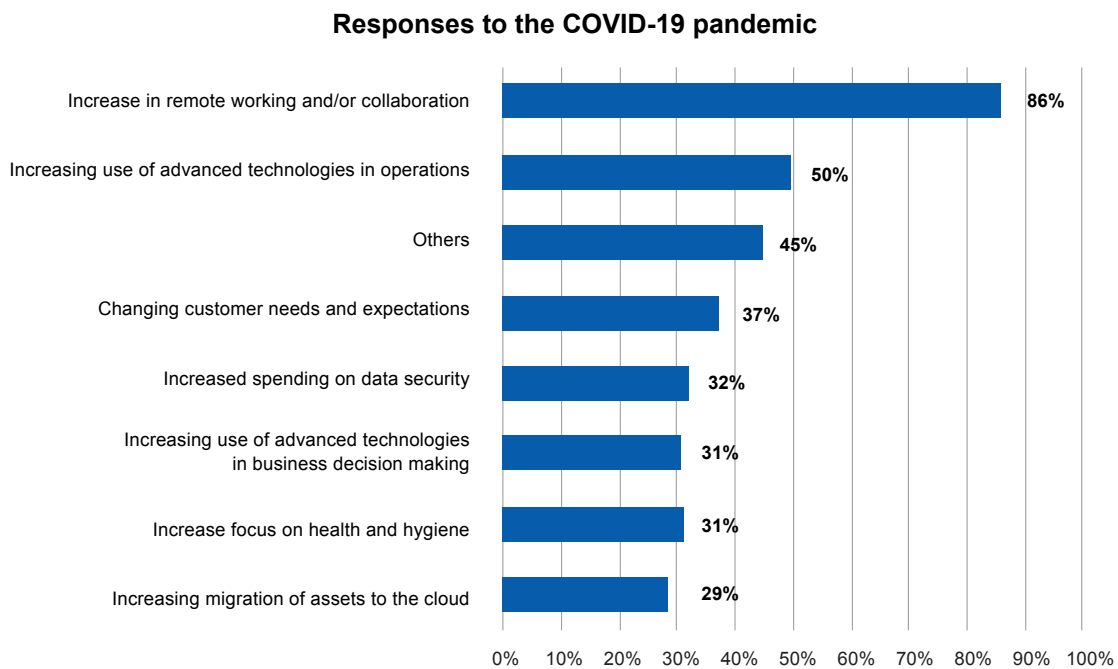


Despite lack of funding being one of the barriers to adopting technology, organisations across sectors display commitment to their technology investments by funding it internally as shown above. More than 60% of the respondents for PAIB and public practice fund their digital transformation internally followed by loans, grants, and others. While public sector respondents mainly use internal funding (52%) and grants (38%) for their digital transformation.

Impact of COVID-19 on the digitalisation of the profession

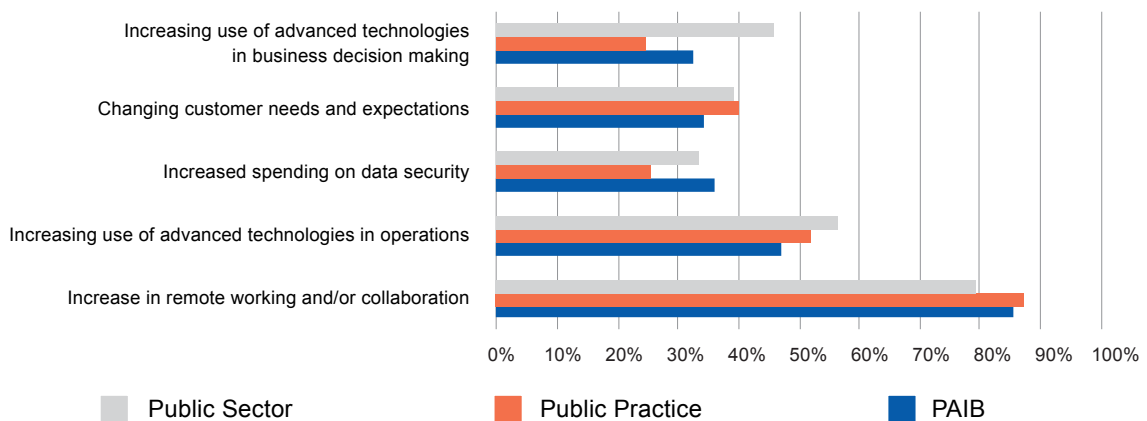
The COVID-19 pandemic has transformed the world significantly and the accounting profession was not exempted. The pandemic has modified business models, way of working and doing things and shifted the focus of accountants. Accountants must remain steadfast and assist their clients to manage business continuity. The members of the profession also need to be flexible in transitioning to remote working setups where this requires adjustments in communication, collaboration, and workflow management. The 2022 survey findings further highlight the impact of COVID-19 on the digitalisation of the profession.

Responding to the pandemic



Respondents indicated the top three responses to the pandemic are increase in remote working and/or collaboration, increasing use of advanced technologies in operation and changing customer needs and expectations. This is consistent with the findings where more than 80% of respondents indicated that the pandemic has accelerated their technology adoption.

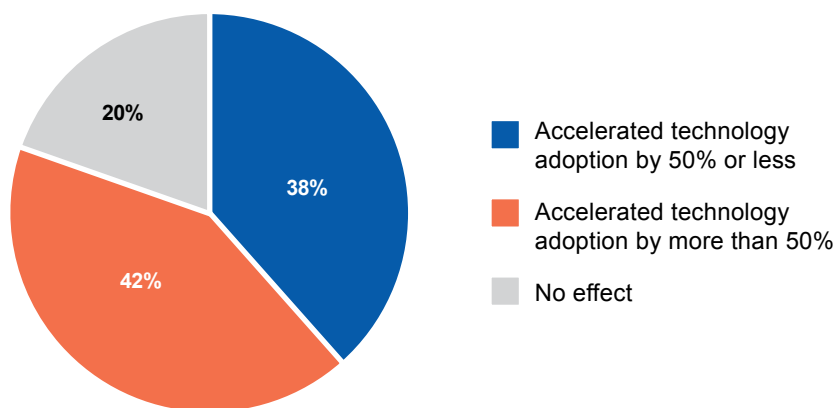
Responses to the COVID-19 pandemic - By Sector



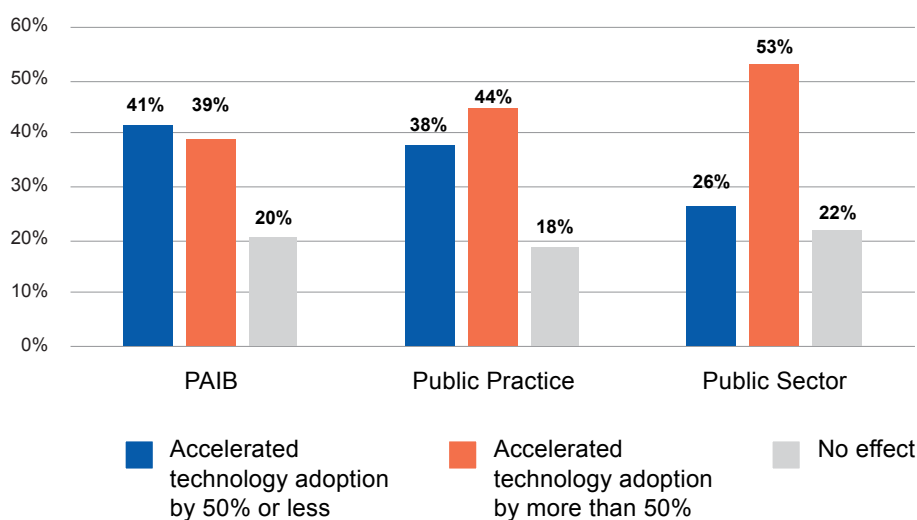
However, individual sectors perceived differently on the third top response. PAIB respondents ranked “increased spending on data security” third as they have higher concern over data security. While many public practice respondents ranked “changing customer needs and expectations” third. As for the public sector, the third highest factor is the increased use of advanced technologies in business decision making.

Accelerating digitalisation

Effect of COVID-19 Pandemic on Technology Adoption



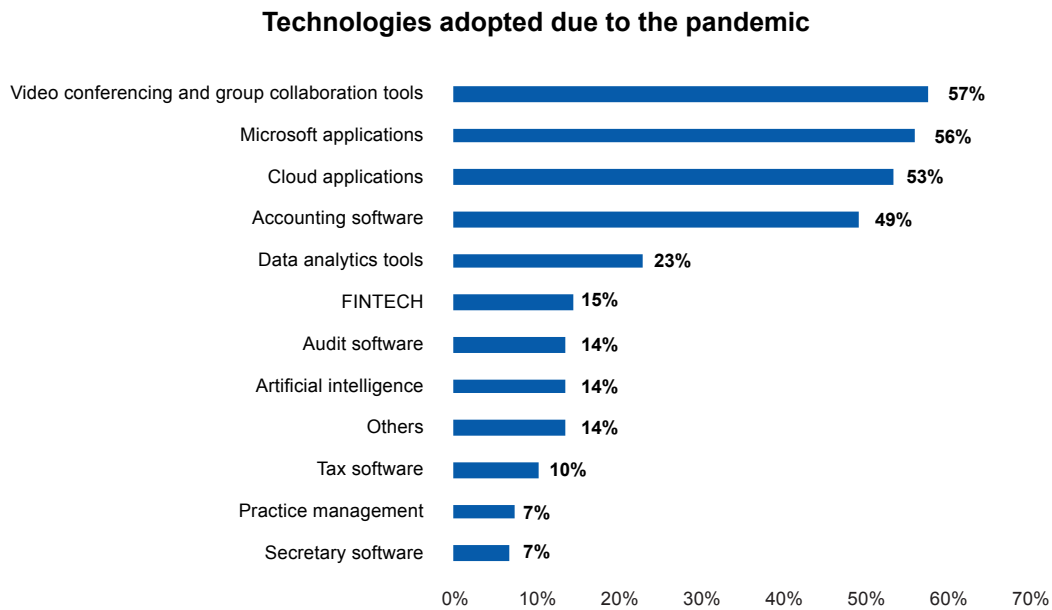
Effect of COVID-19 Pandemic on Technology Adoption - By Sector



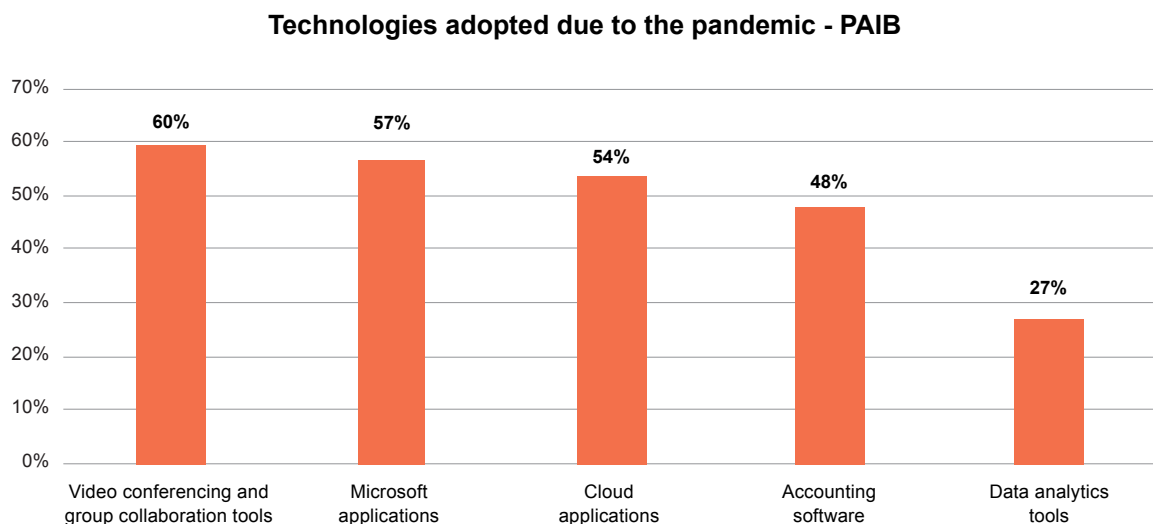
Based on the above, 80% of the respondents indicated that COVID-19 pandemic has accelerated their technology adoption. This is aligned with the findings from McKinsey Global Survey, that illustrated globally, technology adoption has been accelerated by several years due to the pandemic⁶. The findings from individual sector illustrated that public practice and public sector is slightly advanced than PAIB since majority of the respondents indicated that the pandemic has accelerated technology adoption by more than 50%, while majority of PAIB respondents indicated that the pandemic has only accelerated technology by 50% or less.

⁶ (LaBerge et al., 2020), How COVID-19 has pushed companies over the technology tipping point-and transformed business forever, <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever/>

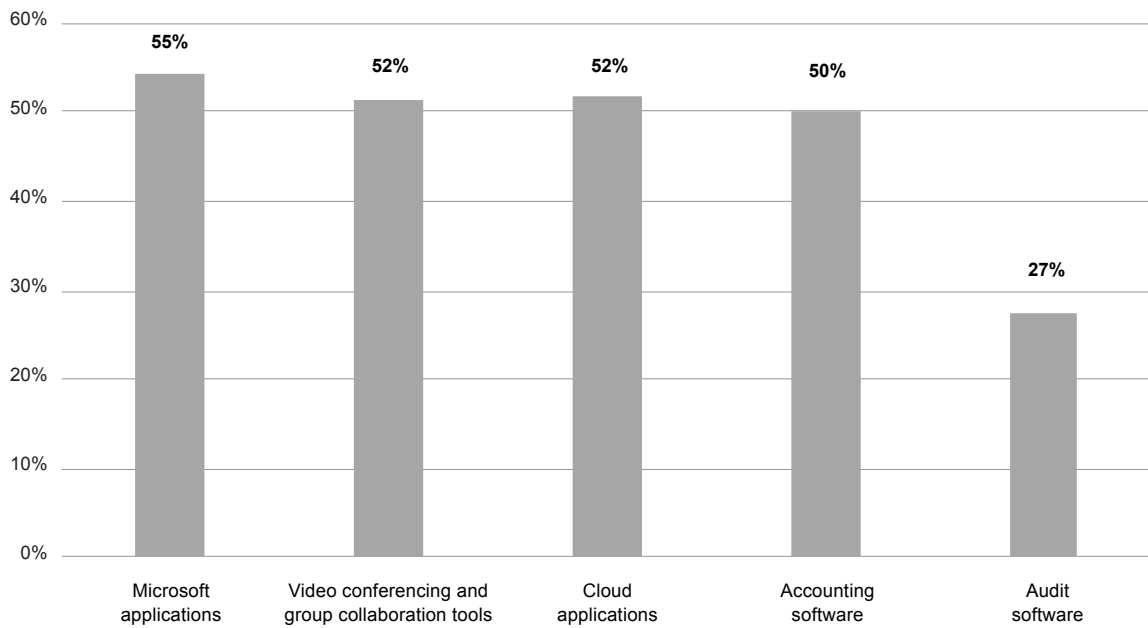
Technologies adopted during the pandemic



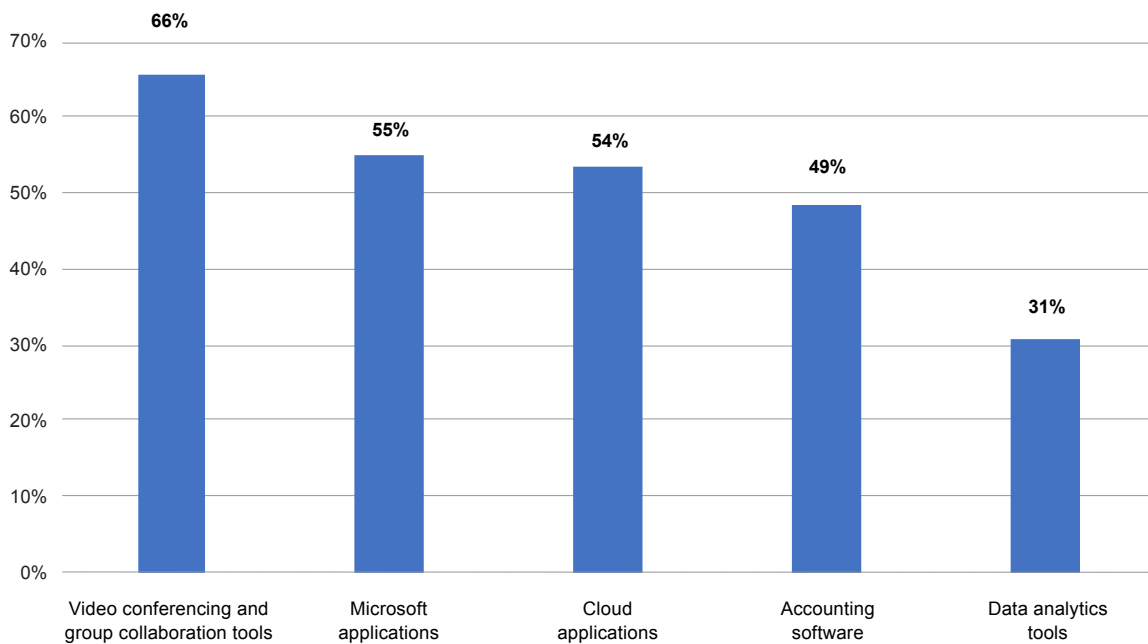
Overall, the top five technologies being adopted due to the pandemic are video conferencing and group collaboration tools, Microsoft applications, cloud applications, accounting software and data analytics. The public practice sector shows that they have been using more audit software following the pandemic as audit software was ranked fifth by the public practice respondents compared to other respondents.



Technologies adopted due to the pandemic - Public Practice



Technologies adopted due to the pandemic - Public Sector

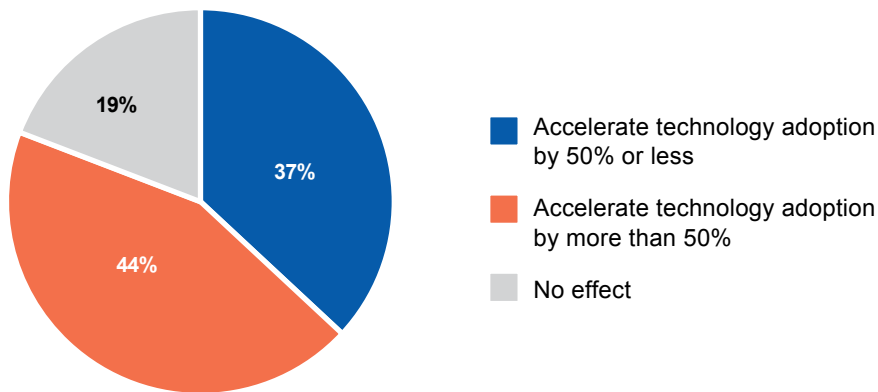


Digital transformation for SMPs

Digital transformation is imperative for the Malaysian accounting profession as implementation of key technologies are revolutionising the accounting industry by making tasks quicker, more accurate, and more efficient⁷. [Developing a technology adoption strategy](#) is crucial for the small and medium practices (SMPs) to ensure the required outcome is achieved and smooth implementation.

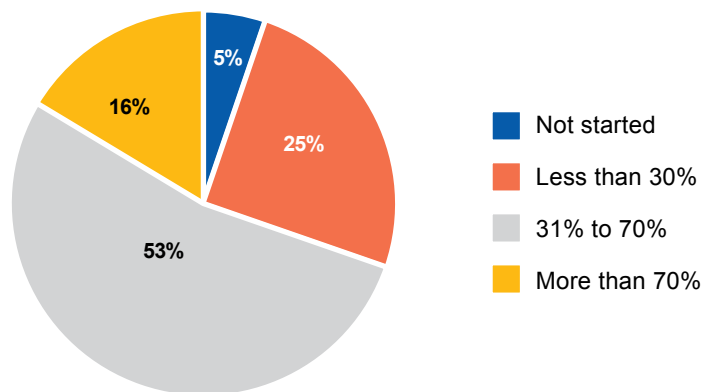
The SMPs⁸ which form majority of public practice population in the accounting profession in Malaysia have also moved forward with digitalisation.

COVID-19 impact on technology adoption by SMPs



The COVID-19 pandemic has resulted in accelerating technology adoption for 81% of the SMP respondents for survival and sustainability as well as gaining competitive.

Stages of technology adoption



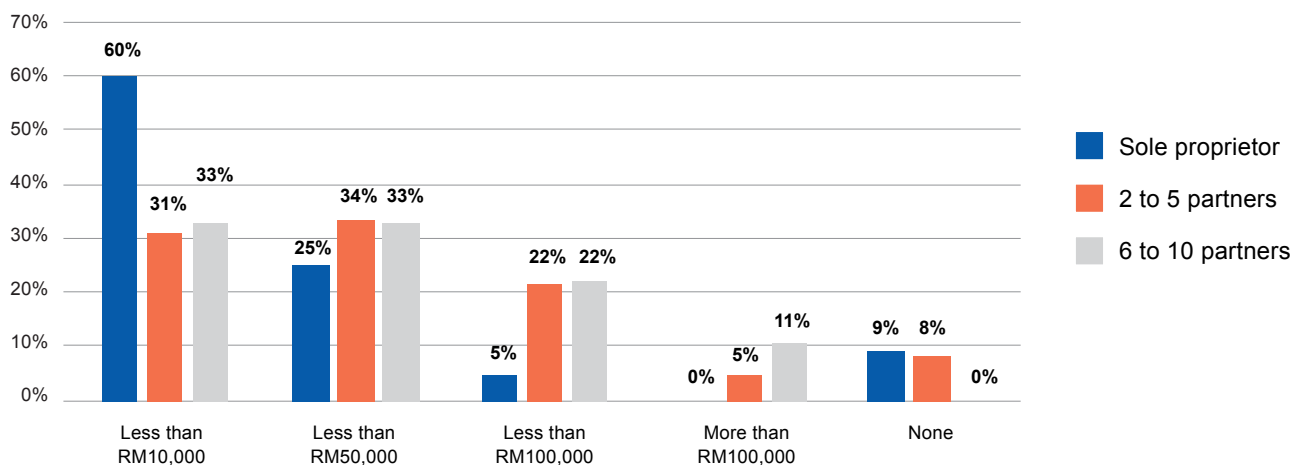
At the time of the 2022 survey, 70% of the SMP respondents are at more than 30% progress of their technology adoption. However, 5% of them have not started any adoption. This may link to the findings of the top three barriers to adopting technology which may hinder them to begin their digital transformation journey.

⁷ MIA, 2023, *Digital transformation remains priority for MIA*

⁸ The Report defines SMPs as public practices with less than 10 partners.

Based on the earlier findings, internal funding has been the primary source of funding to adopt technology for the public practice sector. The SMPs have allocated or will allocate the following for their technology adoption:

Allocation for technology adoption



25% of sole proprietors will allocate or have allocated a budget of less than RM50,000 given the smaller size of their practice. While SMPs with 10 partners and below tend to have higher allocation on technology spending. Close to 60% for SMPs with 2 to 5 partners and 6 to 10 partners respectively have allocation between RM10,000 and RM100,000 with a number of them are looking at more than RM100,000. Interestingly, 17% (9% for sole proprietors and 8% for 2 to 5 partners) of the SMPs have not allocated or will not allocate any amount which is aligned with the findings on lack of funding.

For the SMPs to move forward with their technology adoption, it is important that they consider the following⁹:

Technology adoption is a long-term investment that requires planning

Using assessment tools is a good first step in pointing out the blind spots that SMPs might have in their operations. It is not about the digital buzzwords or advanced systems. It could be as simple as automating a manual process.

Technology adoption must start from the top

The management or the leadership of any organisation must be committed to adopt technology. This includes providing a core budget for technology adoption, putting processes in place, and having the mindset of seeing technology as beneficial for streamlining processes within their organisation. This buy-in from the top will trickle down to other employees.

Get started on your digitalisation journey now and keep up with the latest advancements

SMPs need to start adapting to technology or risk becoming obsolete and being left behind.

⁹ MIA, 2021, *A Journey of Digital Transformation: The Mark of a Changing Landscape*

The [MIA Digital Technology Blueprint](#) aspires for members in public practice to retain, reimagine and innovate practices and services¹⁰. In supporting the SMPs on their digital transformation, the Institute has carried out various initiatives which includes the following:

Grants for technology adoption

There are a number of grants available to support SMPs with their digital transformation journey. The Institute has identified and engaged with Malaysia Digital Economy Corporation (MDEC) on the following grants, which are available for application by SMPs:

	SME Digitalisation Grant	Smart Automation Grant
Eligibility	Small and Medium Enterprises (SMEs) from any sector	SMEs, mid-tier companies (MTCs) from the services sector as well as SMPs
Maximum grant amount	RM5,000	RM250,000
Mechanism	Matching basis based on identified digitalisation area	Matching basis of up to 50% of the total cost
Availability	Currently available	Pending announcement for the next submission

Capacity building efforts

The Institute also provides various professional development programmes for members on technology topics which can be accessed at <https://pd.mia.org.my>.

Digital competency assessment tools

In addition, the Institute encourages members to use the PwC's Digital Fitness App – a free self-assessment tool that assesses one's digital fitness and EFAA¹¹ Digital Competency Maturity Model (DCMM) to determine the level of digital maturity of their practice. For more information on the App, check out the article on [Why Self-Assessments Should be the First Step in Building Your Digital Skills](#).

Meanwhile, the DCMM tool can be accessed [here](#) and a brief overview on the tool can be found in our article [here](#).

¹⁰ MIA, 2018, *MIA Digital Technology Blueprint*

¹¹ European Federation of Accountants and Auditors for SMEs

Guidance and database

Results from surveys conducted by MIA in 2017 and 2019 on technology adoption by the accounting profession and members in public practice have shown that high business costs are the top barrier of adopting technology. SMPs and SMEs typically do not have the resources for a dedicated function to tackle technology and its adoption. They are therefore unlikely to develop technology on their own and will favor adopting established technologies over those that are still in their infancy. In addition, SMPs and SMEs are also unlikely to establish their own guidelines and policies to assist them in the selection of software due to the lack of internal resources¹².

As a result, the Institute has developed [Guidance on Software and Software Vendor Selection](#) to assist SMPs and SMEs in selecting software vendors by setting out the key factors to be considered for a successful software implementation. The Institute has also developed a Software Vendor Database based on extensive research with a specific focus on five areas which are accounting, tax, audit, practice management and systems integration¹³. The database aims to assist SMPs and SMEs in terms of selecting software needed as well as selecting the right vendor for the implementation.

Ultimately, in the journey to transform digitally, SMPs are required to adhere to good governance practices which includes setting a proper governance in technology adoption plan such as getting appropriate approval from top management on the adoption plan and budget with interval reviews and updates as well as adopting relevant policies and procedures such as an IT Policy¹⁴. The Institute is publishing a guideline on technology usage for public practitioners where potential risks of using technology, ethical principles, mapping of the guidelines to the fundamental principles are identified and discussed in order to address the issue on good governance in technology adoption. The guideline can be accessed [here](#).

¹² MIA, 2021, *Guidance on Software & Software Vendor Selection*

¹³ MIA, 2021, *Software Vendor Database*

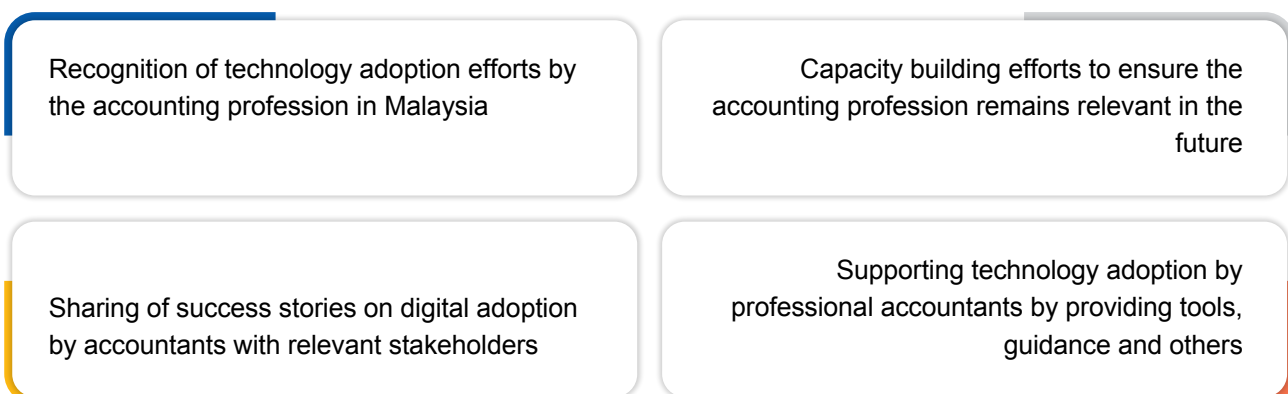
¹⁴ MIA, 2021, *Developing a Technology Adoption Strategy for SMPs*

Way forward

The state of technology adoption by the accounting profession in Malaysia proves that the profession has evolved in tandem with the changing nature of business and economy as well as way of working. The evolution will continue and should move faster as the digital world is moving forward rapidly for the accounting profession remains relevant. As a way forward, the accounting professionals should:



As the regulator and developer of the accounting profession in Malaysia, the Institute will continue to advocate digitalisation of the accounting profession as well as support the profession on its digitalisation which includes the following:



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