



## **TECHNICAL INSIGHTS**

### **NEW AGE OF TECHNOLOGY FOR ACCOUNTANTS**

Technology disruption sounds like a scary thing. Maybe the word 'disruption' is what makes things so chilling. Technology has become an important enabler to businesses and is now a critical success factor for enhancing their value and ensuring their continuity. Many believe that the integration of technologies makes a product or service increase its market competitiveness.

The emerging and established technologies such as artificial intelligence, augmented and virtual reality, big data analytics, cloud computing, cybersecurity, mobile technology, payment gateways, robotics and social collaboration are changing the ways in which businesses and accounting professionals consume information technology resource, share knowledge and resources, and access products and services. These technologies are now rapidly reshaping businesses and have become the 'new normal'.

As part of The Malaysian Institute of Certified Public Accountants ("MICPA") efforts to prepare members to be future fit professionals, MICPA wishes to highlight that accountants have roles to play in this area and need to be agile in adapting to the new normal in which they communicate and collaborate with those in the businesses they work with and for, and shaping new approaches to work. Leveraging on the emerging and established technologies to run businesses will help them eliminate time-consuming and repetitive work and enhance the efficiency of processes.

No business is immune to technological advancement. Accountants, as trustworthy advisers to businesses they work with and for, are expected to be cognisant of emerging and established technologies, consider cost benefit perspectives of technologies, assess their implications to the finance function of businesses and advise employers effectively. This article shares the types of emerging and established technologies and their potential implications to accounting professionals with a focus on:

- Artificial intelligence
- Augmented and virtual reality
- Big data and analytics
- Cloud computing
- Cybersecurity
- Mobile technology
- Payment gateway
- Robotics
- Social collaboration

## **Artificial Intelligence**

Artificial intelligence (AI) is commonly used to refer to intelligence exhibited by machines that mimics human intelligence. Through AI, a system is created to learn from its surroundings and typically demonstrate some of these attributes associated with human intelligence, such as planning, learning, reasoning, problem-solving, knowledge representation, perception, motion, social intelligence and creativity.

Common repetitive tasks can be taken over by AI which improves efficiency and performance in the workplace and frees up the human workforce to do what they are better equipped for. AI is widely used in industries such as automotive, security and surveillance, retail, ecommerce, and fashion, and is being used to analyse large volumes of data at high speed, which is beyond human capability.

Accountants should be open to the concept of utilising AI and leverage on it to perform complicated tasks, reconcile data, respond to enquiries and other tasks. AI can collate data from various sources, consolidate, and merge it. This will speed up the monthly processing and will also ensure accuracy. With the help of AI, accountants can easily track changes in prices among multiple suppliers. AI also makes it much easier as machines can check receipts, review expenses, and alert accountants if there is any contravention to rules set.

## **Augmented and Virtual Reality**

Augmented Reality (AR) and Virtual Reality (VR) are relatively new technologies which are built to enhance the interactive experience of users. Following the rise of IR4.0, one of the technology recommendations is to utilise VR which provides visual information in a virtual format and AR which combines the physical world with the virtual world. AR and VR are rapidly gaining traction in manufacturing and other industries. Currently, VR is being used by forward-thinking manufacturers to improve their approach to predictive analytics. AR and VR allow businesses to spot a design flaw quickly whereas finding flaws in a product design manually could take weeks of analysing data. Safety is another area where VR can be successfully applied. It is possible to identify dangerous manoeuvres in advance if businesses simulate the production processes digitally.

Accountants are expected to be cognisant on how AR and VR works so as to determine whether it fits the business models of businesses. Both technologies allow enhanced ways to connect remotely. By providing context to each user's setting and allowing for realistic collaboration, AR and VR become better ways to communicate with employees and business partners.

## **Big Data and Analytics**

Big Data and Analytics (BDA) has gained traction lately. It can be defined as a new generation of technologies and architectures which are designed to extract value economically from enormous volumes of data. BDA software generally comes with comprehensive capabilities that are able to deliver powerful data mashing functionality, multi-source connectivity, customisable interactive dashboards and mobile optimisation. BDA software is able to provide high-velocity capture, discovery and analysis and also helps businesses create a systematic way of working in this age of technology. In the current market, BDA software includes Helical Insight, Power BI, Sisense, SuiteAnalytics, Tableau, QlikView and many others.

Accountants have increasingly been making use of big data capabilities. The exploitation of BDA allows us to expand and deepen the understanding of businesses' operations. In addition, accountants can exploit BDA to help businesses automate manual processes to prepare and transform financial data to improve operational efficiencies and spend more time on strategic analysis.

## **Cloud Computing**

Cloud computing technology has progressively grown through the years and is changing the way businesses operate. It has become an indispensable component to some businesses. A simple description of cloud computing technology is the use of computer resources such as server storage databases, without direct active management by the user. Cloud computing technology provides an alternative to the on-premise data centres. Rather than owning or leasing their own physical data centres, businesses can opt to rent access to a space from a cloud service provider. The space is commonly used as storage of data of businesses. The cloud has gradually replaced the traditional way of storing data in physical data centres which have helped businesses avoid the high cost of building and maintaining data centres that are costly and might not be suitable to businesses.

The common services offered by cloud service providers in Malaysia can be categorised into three main forms, i.e. software as a service (SaaS), platform as a service (PaaS) and infrastructure as a service (IaaS). SaaS is software that is hosted by a service provider in the cloud and customers are given access to it over the Internet. PaaS is similar to SaaS but instead of offering software, PaaS offers a platform (combination of software and hardware) which allows customers to develop applications over the internet. Lastly, IaaS is the more basic service that normally offers the cloud facility for data storage and networking. Accountants are expected to understand the availability of cloud computing services so as to provide the appropriate advice to businesses to exploit this technology.

## **Cybersecurity**

In today's world, every facet of our lives has become dependent on electronic devices and data. Though businesses enjoy instant access to data via technology, this inevitably exposes businesses to cyber risks, such as cybercrime, cyber fraud and cyber terrorism. Computer viruses, hacking and phishing are common types of cyber threats which are prevalent in Malaysia in this age of technology. To address the risks of business disruption arising from these cyber threats, businesses have begun to look into security protection to prevent their systems or networks from being accessed by hackers.

Accountants are expected to recommend that businesses carefully manage cybersecurity risks and ensure that policies and procedures are in place, enforced, and are regularly reviewed against new cyber threats. Proper policies and procedures should consist of but not limited to identifying emerging and existing cybersecurity risks, developing plans to address cyber risks, establishing a management system to manage and detect targeted cyber risks, forming a cybersecurity incident response team to tackle cybersecurity matters, and developing relevant procedures in preparation for damage due to cyber incidents.

## **Mobile Technology**

Mobile technology is technology that follows the user's whereabouts. The global network that connects billions of electronic devices called the Internet has now become essential to people around the world to access any information they need and connect with other people, be it their colleagues, clients, stakeholders, and loved ones at any time. There are no more geographical boundaries as people are interconnected in their professional and personal lives using a laptop, tablet or smartphone where they can communicate virtually.

Accountants are expected to utilise mobile technology to maintain their business relationships with colleagues, clients, stakeholders, and employers and stay connected with them whether they are in or out of office. Netsol conducted research which shows that the adoption of mobile technology gains productivity and flexibility for employees resulting in cost saving for businesses. In recent years, enterprise mobility solutions are gradually welcomed by businesses as it allows employees to work remotely through the use of mobile devices for business purposes. Simultaneously, cloud services and other technologies can be easily accessible with the exploitation of mobile technology. Enterprise mobility solutions can be tailored to suit the needs of businesses.

## **Payment Gateway**

Thanks to technology advancements, people have shifted from making payments manually to electronically. The traditional payment method, like cheques or bank transfers are slowly being phased out. With the emergence of electronic payment gateways, it has fuelled the rise of e-commerce in Malaysia, as online transactions can now be made timely, efficiently and safely. The electronic payment gateway is a payment platform that accepts digital payment like credit or debit cards online or via an automated clearing house. It provides greater convenience to businesses, customers and other stakeholders and hence appears to be the most revolutionary method that changes how businesses operate today. There are many electronic payment gateways available in Malaysia such as GHL ePayments, iPay88 Malaysia, Stripe, Paypal, m2upay, Razer Pay, Mpay, e-pay and many others. In fact, payment through e-wallets, such as Boost, Gkash, GrabPay, Touch n Go and many others, are gaining traction in Malaysia.

Accountants as trusted advisers to businesses should consider embracing an electronic payment gateway as part of their financial system so as to simplify and ease their business transactions. Businesses can either set up their own in-house payment systems or subscribe to payment solutions from external vendors. The latter is the more popular option as it is easier to adopt and more cost effective for most of businesses.

## **Robotics**

Robotics is an interdisciplinary sector of engineering dedicated to the design, construction and use of mechanical robots. One of the technologies highlighted in IR4.0 is robotic process automation (RPA), which is the software embedded in machine learning capabilities to mimic people, however it can perform high-volume and repetitive tasks.

Accountants play a significant role in the adoption of RPA. First, we are expected to understand business processes and identify those suitable for automation. Second, we can either engage an external service provider to build bots or purchase builder software off the shelf to programme it themselves. A bot is generally designed to perform routine tasks that were previously performed by an employee. Accountants are also expected to monitor and maintain the bot and ensure that it operates as intended.

## **Social Collaboration**

Social collaboration is commonly used to refer to stakeholders working together via the Internet. A common platform for social collaboration is social media, which has become a part of our lives. Apps such as Facebook, LinkedIn, Instagram, Messenger, Snapchat, Telegram, Twitter, WeChat, WhatsApp and many others provide a platform for interacting with stakeholders, soliciting community-based input, sharing content, marketing content, providing a means of collaboration and communication. Businesses also leverage on social media as a marketing platform to promote products and services. The exploitation of social media has become the 'new normal' to businesses, government bodies, charities and other organisations or groups.

Accountants are expected to embrace the changes in the way we communicate and collaborate, and are encouraged to make efforts to exploit social media to achieve their goals. Social media can be used to engage with clients, reconnect with colleagues and solicit community-based input, marketing content for business and development opportunities. In fact, businesses should leverage on social media to increase their brand through a meaningful social media presence.