

TOP 10 TECH TRENDS THAT MALAYSIA SHOULD EMBRACE: THE EAC PERSPECTIVE

Technological revolution is cascading across every industry, causing wide-scale enterprise disruption and totally redefines customer experience.

WHAT would the future look like? What we know unequivocally is we stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to each other.

This technological revolution is cascading across every industry, causing wide-scale enterprise disruption and totally redefines customer experience. This revolution serves as a wake-up call to all traditional industry players from their slumber and face the technological challenges.

Here are the questions we need to ask: Are Malaysian

businesses and government leaders keeping up with the latest technology trends happening globally? What have we learnt and what have we missed out on so far?

Here are the top 10 tech trends that Malaysian businesses must not miss. We take insightful look at the latest technological inventions that will change the way industries and organisations work.

In this article, we get into the minds of one of Asia-Pacific's early practitioners of Artificial Intelligence (AI) and analytics, Nazri Muhammad to share his observations in the tech scene - in the future.

TREND NO. 1: ARTIFICIAL INTELLIGENCE (AI)

It is fair to say that Artificial Intelligence (AI) is a buzzword nowadays. It is a term that crops up seemingly everywhere, yet carries different meanings depending on the contexts. So, what is AI?

According to Kate Crawford and Meredith Whittaker, co-chairs of 2016 AI Now symposium: "Artificial Intelligence refers to a constellation of technologies, including machine learning, perception, reasoning, and natural language processing". Simply put, it is a sub-field of computer science in which its goal is to enable computers to do things that are associated with people acting intelligently.

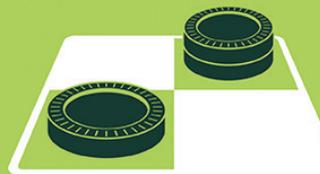
A lot of valuable work currently done by humans — examining security video to detect suspicious behaviours, deciding if a car is about to hit a pedestrian, finding and eliminating abusive online posts — can be done in less than one second via AI. AI once saved the life of a Japanese woman by correctly identifying her disease. This is notable because, for some time, her illness went undetected through conventional methods, and doctors were left stumped.

Nazri notes:

"AI definitely creates new opportunities for players across industries to increase their efficiencies. Tasks such as manually analysing and interpreting are proven to consume much of their time and efforts. This is the recipe for high efficiency."

ARTIFICIAL INTELLIGENCE

Early artificial intelligence stirs excitement.



1950's

1960's

1970's

TREND NO. 2: INTERNET OF THINGS (IOT)

Internet of Things (IoT) is a system of interconnected computing devices and digital machines that are embedded with electronics and software, which enabling these objects to collect and exchange data.

Simply put, this is a concept of basically connecting any devices with an on and off switch to the Internet. It includes everything from washing machines, headphones and almost everything that you can think of. According to analyst from Gartner's, 20.4 billion connected things will be in use in 2020.

Not only limited to micro-level application, IoT also has the potential to transform entire cities by solving real problems that citizens face in daily life. Say for example, you are on your way to an urgent meeting; your car could receive information from the traffic lights to drive you via the fastest route to your meeting location. In other occasions, what if streetlights of your city are adjusted to weather to increase drivers' visibility during specific time? The reality is that IoT allows for plethora of connections to take place in the future, many of which beyond our current limited imaginations.

Nazri makes the following observation:

"IoT opens up opportunities for consumers to take back control of their personal data and take advantage of the potentially low cost of mobile data communication through the IoT network. Certainly, there are many hurdles to overcome in the future but it is an interesting space full of promise."

TREND NO. 3: VIRTUAL REALITY (VR) & AUGMENTED REALITY (AR)

Virtual reality (VR) is an artificial, computer-generated simulation or recreation of a real-life environment. It is a platform that helps users to immerse themselves by making them feel like they are experiencing the simulated reality first hand.

On the other hand, Augmented Reality (AR) is a technology that layers computer-generated enhancement on top of an existing reality in order to make it more meaningful through the ability to interact with it.

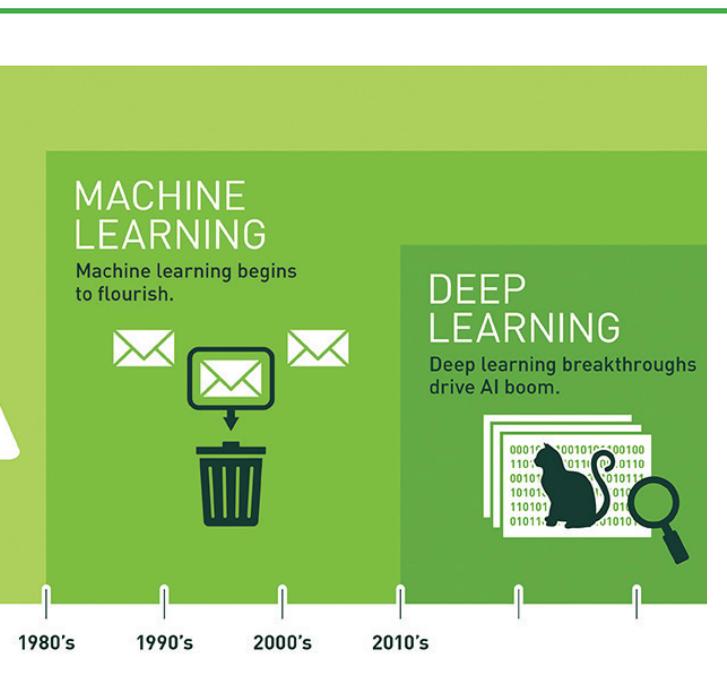
The pertinent question here is: what can VR and AR do to all of us? In order to answer the pertinent question, let's imagine this following scenario: An elementary-level science class has just begun and the teacher makes a surprise announcement – every student will be dissecting frogs for today.

But dealing with actual animal blood and using sharp scalpels may not be the best experience you want to give to elementary students. With special AR & VR glasses and styluses, they can harmlessly dissect the specimens while at the same time quench their curiosity.

The presence of AR & VR will become a golden opportunity for us to enhance our customer engagement. For example, under a finance vertical, clients can use AR & VR glasses to visualise and analyse large clusters of financial data. This will help them to understand complicated concepts and new patterns visually.

**Frank Biocca, Director
of Newhouse School's
M.I.N.D. Lab and World
Class University Professor
at Sunkyunkwan University
shares:**

*"Virtual reality is the first step
in a grand adventure into the
landscape of imagination"*



TREND NO. 4: INSURTECH

When you think of insurance, what are the things that come to your mind? The overbearing smell of coffee when meeting your own insurance agent for one, or the ink fumes after filling in the long insurance plans? For better or worse, convoluted insurance plans are a feature in our daily lives.

Insurtech, a relatively new buzzword, is making its mark in the technology industry. It refers to a term applied to the many segments of new technology that are disrupting the insurance space. In 2015 alone, Insurtech startups managed to acquire funding about US\$2.56 billion.

In the near future, everyone can expect a rise in usage-based insurance and dynamically adjusted premiums, moving away from conventional static premiums.

Health apps such as Health2Sync and GOQii could generate useful information for insurance companies that ultimately benefit the customer through lower premiums. On top of that, more customers will significantly rely on mobile channels and apps to reach their insurance brokers over the next five years.

On this note, Nazri adds:

"In a glut of changing trend, insurance companies must be prepared to embrace the revolution and start to seriously consider embracing the revolution caused by the rise of InsurTech. Consumer habits are evolving rapidly, and more clients expect the insurance companies to cater to this latest trend."

TREND 6: DIGITISATION OF ENERGY

The energy sector has been hit by a new wave of technology. The creation of smart infrastructure with in-built digital intelligence is transforming the way energy is generated, distributed, managed, and stored. One way to move forward: Maximise the opportunities presented by the onset of big data and smart systems.

The future of energy will increasingly rely on digital intelligence and the use of data analysis, which will serve to produce a more efficient use of resources. One example is the application of smart grids, where it enables a real-time analysis of customer demands trend. The digital intelligence integrated into these models allows them to autonomously react to energy demand and adjust distribution accordingly.

Apart from that, the invention of Smart Meters allows a two-way communication between the points of generation and consumption which reduces costs and conserve environment.

Nazri opines that there will be challenges:

"New skills will be required and data security will become even more important in energy industry. Energy industry dynamics will continue to be shaped by demand and supply. But digital represents a powerful catalyst for those companies that can harness its capabilities."

TREND 5: TECHNOLOGY ENABLED CARE (TEC)

The term 'technology enabled care' (TEC) refers to the use of technologies such as telecare and telehealth, to help people to manage and control chronic illness and sustain independence. Simply put, it involves the convergence of health technology, digital media and mobile devices.

A study conducted by Accenture illustrates the number of patients in Singapore who know exactly what they can access in their electronic health increased 45% over the last two years. This illustrates how massive the web of TEC could be.

An example of TEC is in the form of healthcare wearables. From fitness bands to smart watches to Google Glass, wearables are being widely adopted by consumers.

Understanding your body and health has become easier for individuals by using mass data collected on a daily basis from wearable devices. The data then can be delivered to doctors, and ultimately shifting from an encounter-based healthcare to continuous care.

Undeniably, it is as a platform that can empower patients and carers by giving them more control over their health and making them less dependent on the traditional healthcare industry.

They can use digital technology to research information online, share experiences and identify treatment options. We also believe that innovations in technology will keep on transforming healthcare tomorrow in areas such as digital imaging and improved digital sensors.

According to Senior Advisor of Health Analyst and expert in healthcare data warehousing & analytics, Dr. John Haughom:

"All of this will result in making vast amounts of new health and wellness data available to healthcare providers. This will further fuel the need for health systems to implement robust analytical and data-drive improvement systems that allow providers to optimally manage the health and well-being of populations."

TREND NO. 7: TECH ADVANCEMENT IN SPORTS

While fan passion alone could almost certainly keep the industry going, leagues and sporting franchises have decided not to rest in their comfort zone.

The last few years have seen the steady introduction of technology into the world of sports - amplifying fans' appreciation of games, enhancing athletes' public profiles and informing their training methods, even influencing how contests are waged. To portray an example, a large number of brokerages have developed mobile versions of their websites.

Have you ever heard of Smart Helmet before? Smart helmets have been designed to help massively reduce the risk of brain injury. Its sensors detect and disperses the force of collisions, while the magnet will help by spreading and absorbing the force.

Besides that, big data has rendered unprecedented impacts in sports industry. It makes it possible for professional sports organizations to analyse huge amounts of data and appropriately determine the skill set of players.

While it is not always instantly apparent, the impact that technology has had on sports is vast. Many processes are now easier and quicker, and the industry has seen an increase in attention and revenue because of it. It is definitely time for different players in sport industry to consider how technology can be utilized to enhance everyone's experience.

On this note, Pete Giorgio who is currently Deloitte Sports Consulting Leader adds:

"We believe these are the topics (technology) that are going to impact the business of sports, both on and off the field, over the next 12 months. But invariably new stories, trends, and themes will emerge that further disrupt the industry, derail the game plan for industry executives, or delight us as sports fans."

TREND NO. 8: ADVANCED LEGALTECH

As advances in law technology revolutionize today's legal landscape, the role of the legal professional has evolved. The automation of legal processes has prompted lawyers, paralegals, legal secretaries and other legal professionals to become proficient at an ever-increasing array of works.

In other words, law technology has impacted every aspect of the legal field, from law firm and corporate practice to courtroom operation and document management.

For example, law firms, electronic billing ("e-billing") is gradually replacing traditional paper invoices. Technology has also become an important legal marketing tool and new law firm websites and legal blogs spring up daily in cyberspace.

Firms are now storing voluminous case files electronically and employing databases to track, edit, search, distribute and archive documents. 8

It is crucial for every law firm to embrace this phenomenon and embark on the technological journey. This will lead to relentless changes in configuration and reconfigurations of legal affairs.

What will not change is the importance of good judgment and creativity in making decisions. Failure to embrace technology will render the current legal firms to become irrelevant in the near future.

Current Fellow for Stanford Law School CodeX, Monica Bay makes the following observation:

"As computational technology and artificial intelligence become matured, more people will be able to have better access to justice."

TREND NO. 9: INNOVATIONS IN REAL ESTATE (PROPTECH)

Today, smartphones and tablets are in abundance, with many operators being self-proclaimed geeks. Technological advances of the internet have changed the way real estate is delivered to buyers and investors is completely different from the old days.

Just as the internet affected the real estate industry, improvements in mobile access, as well as newer and smarter mobile devices, will continue to have an impact in the coming years.

To portray an example, a large number of brokerages have developed mobile versions of their websites. In fact, many brokerages are going a step further by developing mobile applications. According to a study conducted by Google and National Association of Realtors, 90% of homebuyers and renters start their search with web tools and apps.

On top of that, cutting-edged technology also allows smart phone apps to scan a room's dimensions and then create an exportable floor plan in multiple format.

Technology's impact on the real-estate industry has played a major role in improving communication, storage and accessibility of information and will continue to do so. As real estate is a customer service focused industry, businesses that fail to adapt to change risk losing touch with customers. It is clear that technology has the capacity to cause changes in almost every industry; real estate is no exception.

Andrew Baum, Visiting Professor of Management Practice at Oxford Saïd and real estate industry veteran, says:

"2017 seems to mark a turning point. PropTech has been building such mass and momentum that it will change the world."

TREND NO.10: ON-DEMAND ECONOMY

What is On-Demand Economy? It is the economic activity created by technology companies that fulfil consumer demand via the immediate provisioning of goods and services.

The On-Demand Economy is said to be growing at an astronomical pace and the influential effects of this expansion will be experienced in every industry. The Harvard Business Review reports the On-Demand Economy has over 22.4 million customers annually and \$57.6 billion in spending.

The strength of On-Demand Economy lies in its ability to meet the demands of an emerging demographic. With services such as Uber, Grab, and Airbnb can be acquired through mobile phones, the On-Demand Economy is accessible to anyone.

On top of that, On-Demand Economy allows spirit of entrepreneurship to permeate every level of business world.

For example, UrbanClap in India has allowed thousands of local service professionals in India to increase their earning potential by providing new avenue for business.

On top of that, John McAfee, founder of global security software company McAfee, says:

“The gig economy is empowerment. This new business paradigm empowers individuals to better shape their own destiny and leverage their existing assets to their benefit.”

Nonetheless, policy and regulations are among the salient subjects that need to be tackled amidst the rise of On-Demand Economy. With the rise of startups such as Uber, Grab, and Airbnb, there will be greater grey area to be catered by the government. Hence, getting the right balance between regulations and innovations will be the best recipe to create a win-win situations for all parties. **mb**

Top 10 Tech Trends Malaysia Should Embrace



Internet of Things

Virtual Reality (VR) & Augmented Reality (AR)

Artificial Intelligent

On-Demand Economy

Advance LegalTech

Digitization of Energy

Technology Enabled Care (TEC)

Insurtech

Innovation in Real-Estate

Advancement in SportTech