NAVIGATING THE 4TH INDUSTRIAL REVOLUTION

FOURTH LEAP

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INSIDE

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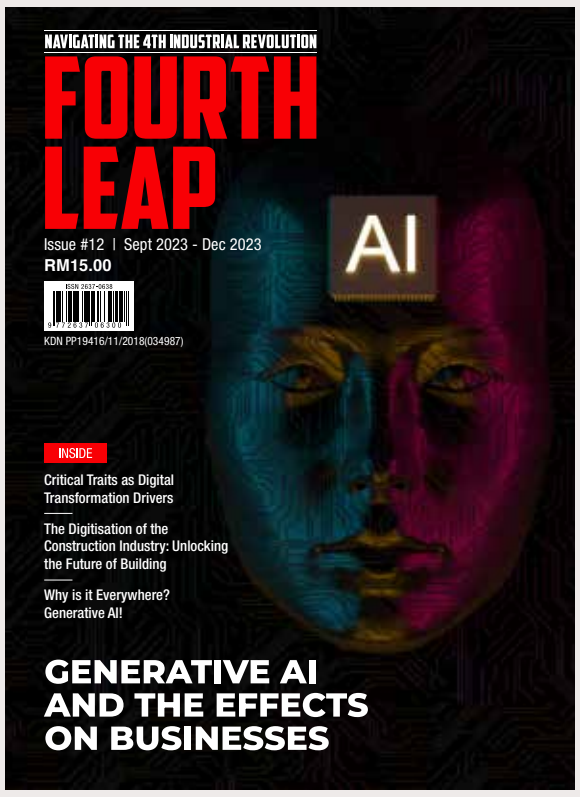

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OUR BIZ SERIES:
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In the digital age, the ability to connect and collaborate with people globally is the most significant skill we need."
– Jan Koum

IN today's fast-paced world, we find ourselves amid a digital revolution, and it is a thrilling time to be alive. Rapid technological advancements are transforming how we live, work, and play. Digitalisation and Artificial Intelligence (AI) are at the forefront of this revolution, reshaping industries, challenging the status quo, and opening up new horizons of possibility. It is an era of immense potential and profound transformation.

Digital transformation begins with individuals who possess the vision, curiosity, and adaptability to embrace the opportunities presented by AI and digitalisation. As individuals, we must cultivate a culture of lifelong learning. We should actively seek to understand the implications and possibilities of emerging technologies for our benefit and to contribute meaningfully to the communities and organisations we are part of.

Ethics and responsibility must be the guiding principles in our pursuit of digital transformation. The potential of AI is immense, but it must be harnessed with care and consideration for the societal impact. Organisations and individuals must adhere to ethical practices, prioritise data security and privacy, and actively engage in discussions about the ethical implications of AI.

In this issue of Fourth Leap, we curate the latest insights, innovations, and thought-provoking perspectives from experts and visionaries in the digital and AI realms.

The path to digital transformation is not without its challenges, but it is a journey filled with promise and potential. We can positively shape the future as individuals, organisations, and global community members. Let us approach this journey with purpose and precision, with an unwavering commitment to innovation, ethics, inclusivity, and collaboration.

Together, we can unlock the full potential of AI and digitalisation, transforming our world into a place where technology serves as a force for good, enhancing our lives, organisations, and society.

Our mission is to deliver a delightful feast of wisdom and insight from minds around the world. So, sink your teeth into thought-provoking contributions by ambitious leaders, bright scholars and innovative independent thinkers! We hope our content will ignite interesting conversations – be sure to let us know what you think!

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ELSA Raises $22.5M for Expansion, Launches Voice-Based AI Tutor

ELSA, a language learning platform based in the US and Vietnam, has raised US$22.5 million in a series C round led by UOB Venture Management. The startup, whose name means English Language Speech Assistant, will use the money for global expansion and other improvements to the platform.

In addition, the company has launched ELSA AI Tutor, a voice-based tool designed to boost learners' English skills.

Apple to Debut First Made-In-India iPhone 15

APPLE is set to sell its first made-in-India iPhone on launch day. The iPhone 15, produced at southern Tamil Nadu's Foxconn Technology factory, signifies a shift in practice, with Apple traditionally selling China-made devices. Despite potential minor delays, the move reflects India's increased production capabilities and Apple's diversification strategy amid Washington-Beijing trade tensions.

Indonesia-Based Hukumku Secures East Ventures Backing to Make Legal Aid More Accessible

DESPITE Indonesia's efforts to establish a national legal aid programme over five years ago, many low-income individuals still struggle to access legal representation in the archipelago.

The existing system falls short of meeting the public's demands for legal aid due to limited budget allocation and strict accreditation requirements for legal aid providers.

Hukumku, an Indonesian legal tech startup, aims to solve this problem by offering a platform that connects users with vetted lawyers, focusing on providing transparent and affordable legal aid.

The company has now raised an undisclosed sum in a new funding round led by East Ventures. It will use the capital to speed up the development of its products and marketing efforts as it gears up to launch its platform in November.

The platform, once released, will provide essential information about lawyers, including their profiles, practice licenses, areas of expertise, locations, and user ratings and reviews. It will also offer free educational content and seminars on legal topics and current legal cases to help users better understand legal terminology and processes.

The company was founded by Glorio Yulianto, Fritz Hutapea, and Michael Jagadpramana. Yulianto founded the advertising platform Ubiklan, while Hutapea is a legal consultant in Indonesia. Meanwhile, Jagadpramana has worked as a director at the animation firm Samville Studio and was a chief commercial officer at the design software company Pandatech.

Delivery Robots and Smart Glasses: Innovations Free Up Nursing Home Staff to Provide Better Care

FROM robots that deliver bedsheets to smart glasses that allow nurses to transmit what they see, nursing homes in Singapore are investing in new technology.

NTUC Health, for instance, is using self-guiding robots to deliver linen and meals to wards in its nursing homes.

At its Chai Chee branch, the autonomous guided vehicle resembles a trolley and is capable of carrying loads of up to 180 kg, helping the home save more than 4,000 person-hours last year.

The system can independently move around the nursing home, using either a scheduled timing or when activated by staff for deliveries.

Before the robot, nurses had to carry over 70 bags of dirty and clean linen to over seven levels of wards daily. Aside from being time-consuming, it was also physically demanding work.

Indonesia, Singapore Strengthen Cooperation in Digital Economy

HOME Affairs Minister Tito Karnavian highlighted state management success stories in Singapore for Indonesia to emulate, as conveyed at Singapore's Nanyang Technological University's (NTU's) first regional conference and reunion, Jakarta, with over 200 alum attendees.

"Indonesia can emulate how to use technology based on research from universities for many aspects of administrative processes and services for its citizens," Karnavian noted in a written statement from the Indonesian Embassy in Singapore received in Jakarta on Tuesday.

"Indonesia has over two thousand startups, two decacorns, and more than seven unicorns. Startups with the highest growth are in the on-demand services, financial technology, and e-commerce sectors," Suryopratomo remarked.

Suryo, familiarly known as Tommy, remarked that Indonesia's increasingly digital economy would grow by 52% in 2021, with a total of US$53 billion (around Rp807 trillion), and is projected to reach over US$124 billion (around Rp1.8 quadrillion) by the end of 2025.

In 2022, a research consortium was agreed between NTU and ITB, UI, UGM, and ITS, with the name INSPIRASI (Indonesia-NTU Singapore Institute of Research for Sustainability and Innovation), which focuses on sustainable development on the three main pillars of renewable energy, circular economy, and smart cities.

Asean Bloc Starts Work on Digital Economy Framework

THE Association of South East Asian Nations – the ten-country trade bloc that houses over 600 million people and accounts for around 6.5% of global economic activity – has started work on a Digital Economy Framework Agreement (DEFA) it hopes will result in seamless trade and data flows.

ASEAN's members include Indonesia, Singapore, the Philippines, and Vietnam. The bloc represents the world's fifth-largest economy and some of its brightest growth prospects.

The decision to develop the DEFA was made at Tuesday's summit of ASEAN leaders, which produced a Leaders' Statement that signalled agreement to develop the Framework. It set 2025 as the deadline to get it done.

The Economic Research Institute for ASEAN and East Asia (ERIA) considered the DEFA earlier in 2023 and described it as having the potential to "deepen existing digital economy cooperation and ensure the interoperability of digital economy systems" across the bloc.

Malaysia Can Roar as "Digital Tiger" of Asia: Fahmi Fadzil

MALAYSIA can be Asia's "Digital Tiger" once it achieves vital components to boost its digital strength and economy. Communications and Digital Minister Fahmi Fadzil said the government must focus on ensuring the last three per cent of urban and rural areas have connectivity accessible.

More private sector participation, including public-private partnerships in cybersecurity initiatives, can help lay out plans to elevate the standards of cyber protection and personal data security.

"The people can enjoy the benefits of these efforts, which we call success. Eventually, this could portray Malaysia as the Digital Tiger of Asia.

Many companies are considering expanding their operations in Malaysia, including increasing their workforce. This is very positive for the digital economic ecosystem in Malaysia," he said.

Fahmi said these efforts will indirectly position Malaysia as a hub for companies to grow in the Southeast Asian and broader Asian region.

FOURTH LEAP

By Vittorio Furlan

GENERATIVE AI AND THE EFFECTS ON BUSINESSES

IS IT TAKING OVER JOBS OR REVOLUTIONISING THE WAY WE DO BUSINESS AND LIVE?

TECHNOLOGY is forever evolving, and trying to keep up with all the new updates can be a real struggle. This article will specifically talk about generative AI, its use, and how this system may impact future businesses and society. However, before getting into the ethics as well as the advantages and disadvantages of using generative AI, let's first understand what generative AI means.

What Is Generative AI?

The concept of artificial intelligence is nothing new and can be originated back as early as 1956. Only in recent years, however, it is starting to take effect, with generative AI being the most current edition. This form of artificial intelligence can create a wide range of content, from text and images to synthetic data and audio.

The term generative is used because it creates something entirely new. How generative AI works is achieved through machine learning. It takes a huge amount of data and processes that information to develop algorithms that match the prompt it was provided with.

Some examples of generative AI include:

- ChatGPT: It serves as a free chatbot that instantly produces a response to practically any and every question it's asked.
- DALL-E: A system that can create realistic images or art just from a simple description.
- Sharly.ai: A productivity tool that saves time by summarising long documents for a more effortless reading experience.

This is only the tip of the iceberg of what generative AI can do. As the mass population and professionals begin to experiment with and adopt this new technology, it will likely continue to change how jobs are performed.

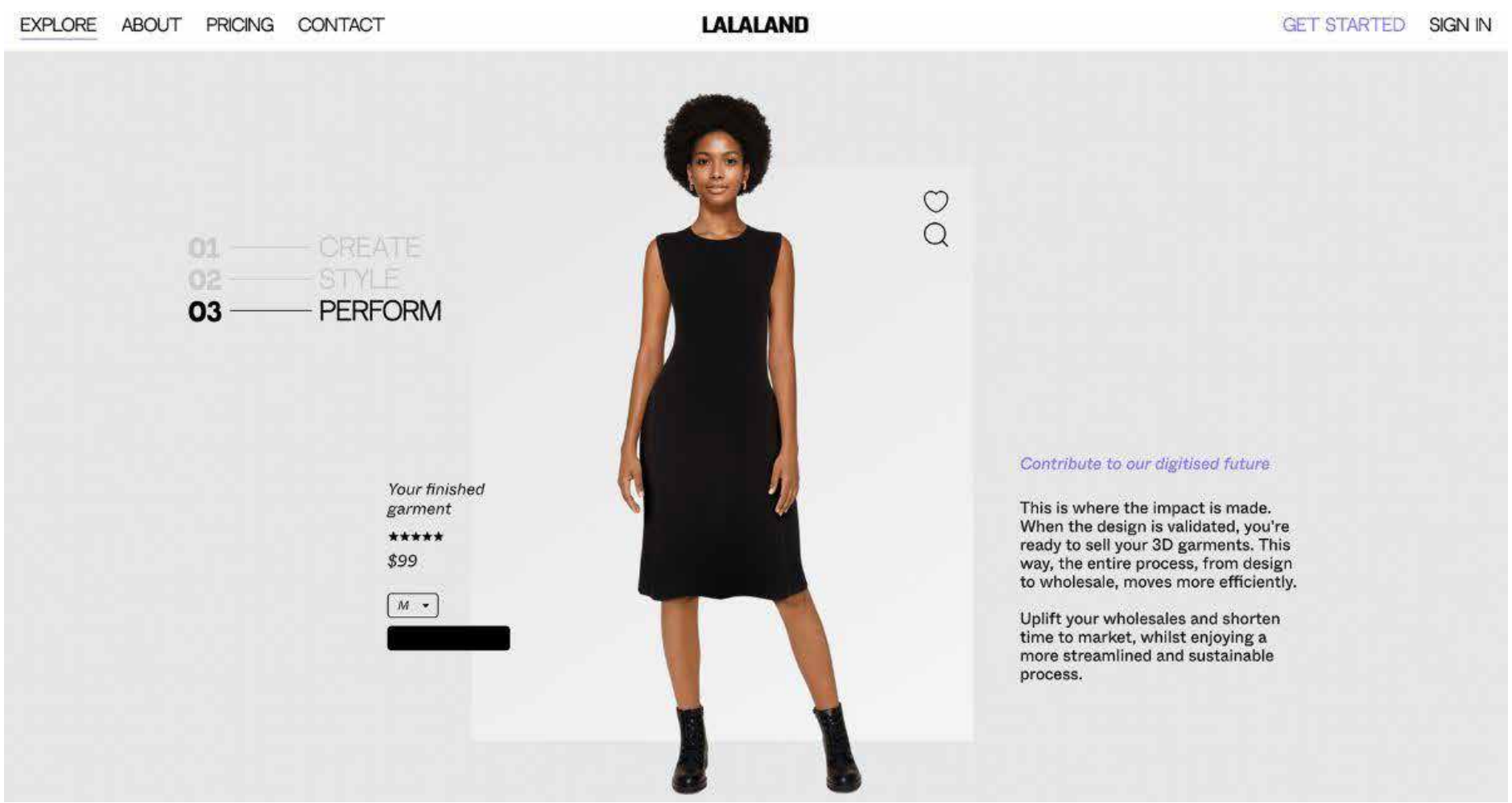
ChatGPT is an AI-powered language model that uses machine learning to generate human-like responses to text-based inputs.

How Generative AI May Impact Jobs and Businesses

In recent years, we have seen many brands and companies from various industries putting this new technology to work in their fields. Here are some examples of how Generative AI is shaking things up:

Just recently, Levi's announced their plans to introduce AI-generated models in place of real human models. Through their partnership with Laland.ai (a well-known service for its hyper-realistic AI models), the famous jeans brand claims this could create a new opportunity to improve diversity and body inclusivity in the fashion industry.

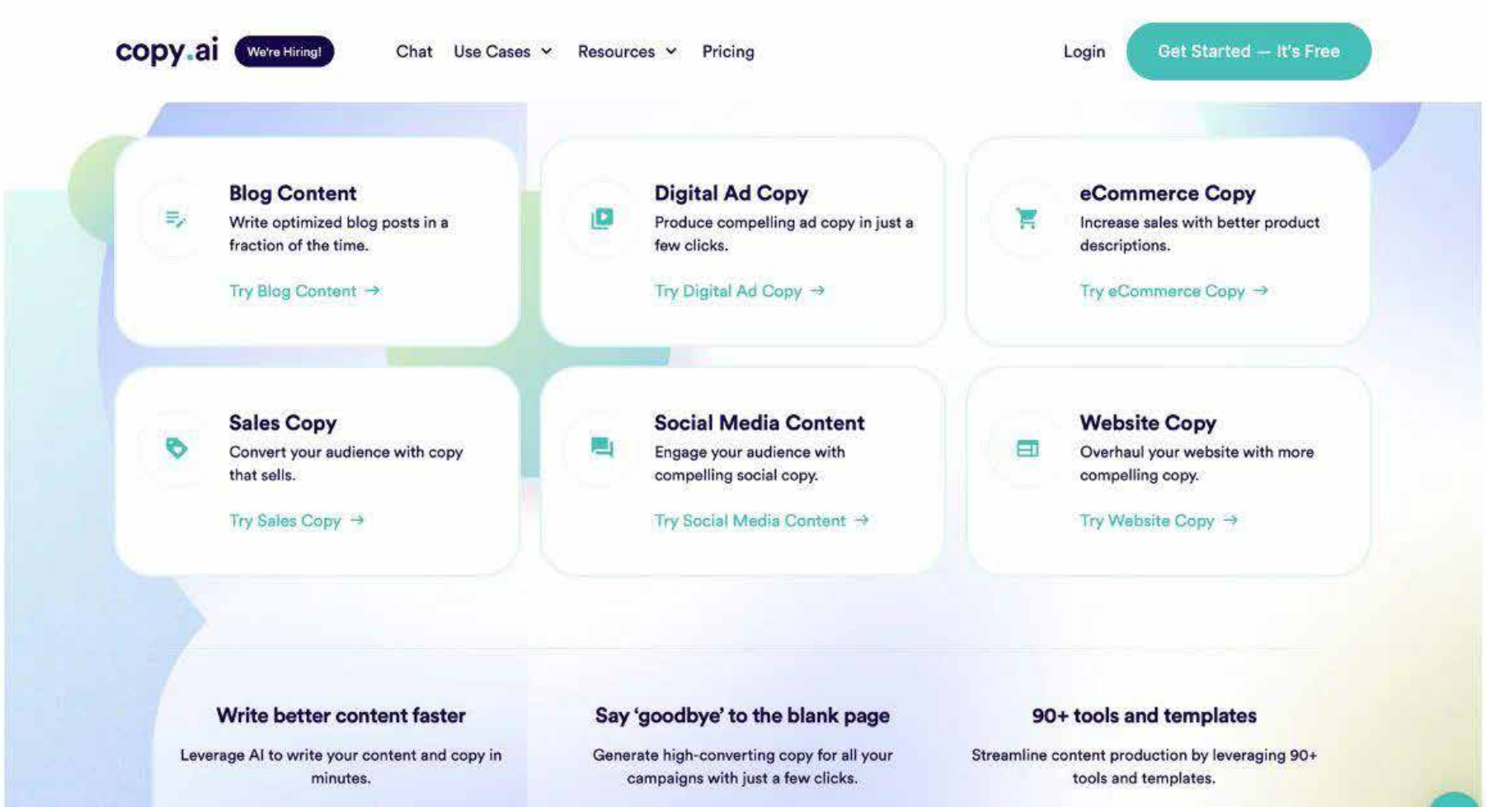
Fashion



Lalaland.ai, an AI-powered digital fashion studio, is known for its hyper-realistic AI models.

Credit: Screenshot of AI model from Lalaland.ai

Copywriting

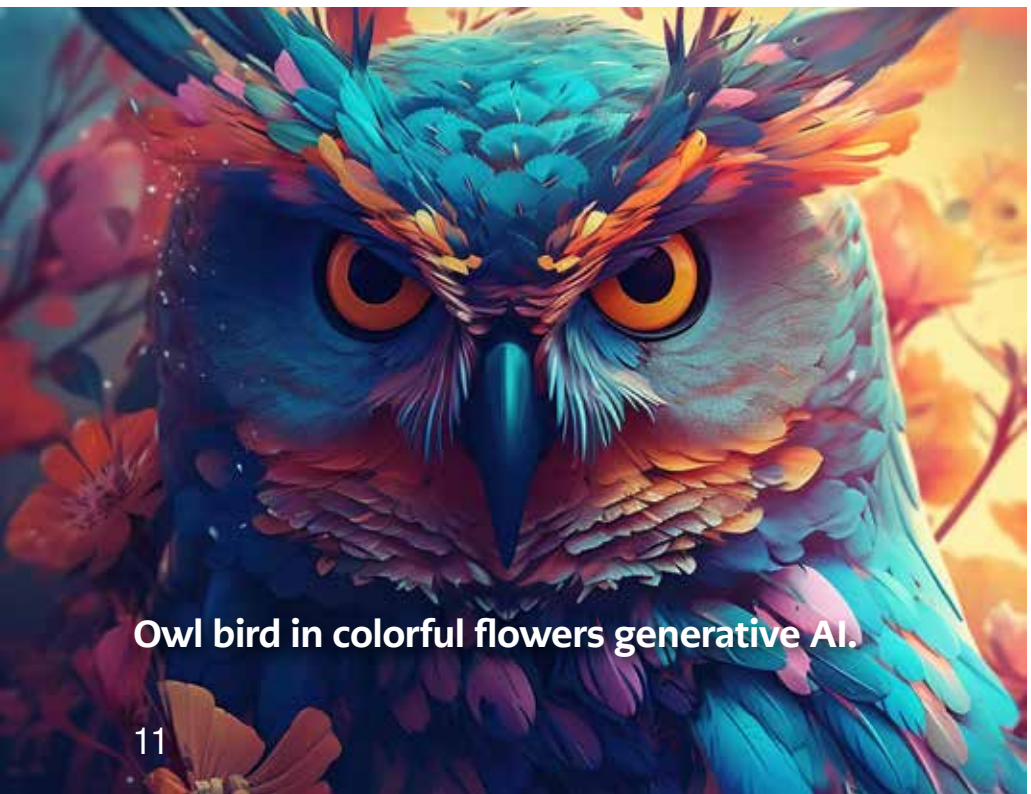


Copy.ai is one of the many text-generation tools designed to help users with copywriting.

Credit: Screenshot from Copy.ai

Presently, most clothing can be viewed on one model. However, with generative AI, consumers will see these pieces on a model that reflects their body shape and skin tone more accurately.

From social media and blog posts to email marketing content, copywriting tools like ChatGPT, CopyAI, and Jasper are on the rise for their ability to generate multiple formats of copy efficiently. The use of natural language processing (NLP) helps optimise the copy in a way that can easily meet objectives like boosting traffic, increasing brand awareness, and improving conversion rates.



Owl bird in colorful flowers generative AI.

Generative AI can assist in the production of art and offer additional design ideas to choose from. The system can also recognise the specific graphics that companies best prefer and provide a customised design that closely fits the brand's image.

Furthermore, it can better streamline specific processes, such as scaling, colour correction, and cropping, so that graphic designers can focus their energy on other more pressing areas of their work.

Chatbots or similar generative AI systems can provide 24-hour customer service by instantly generating human-like responses to many customer inquiries. From their data input, they could then identify if there's a consistent pattern of customer behaviour, preferences, or trends and tailor their recommendations or responses accordingly.

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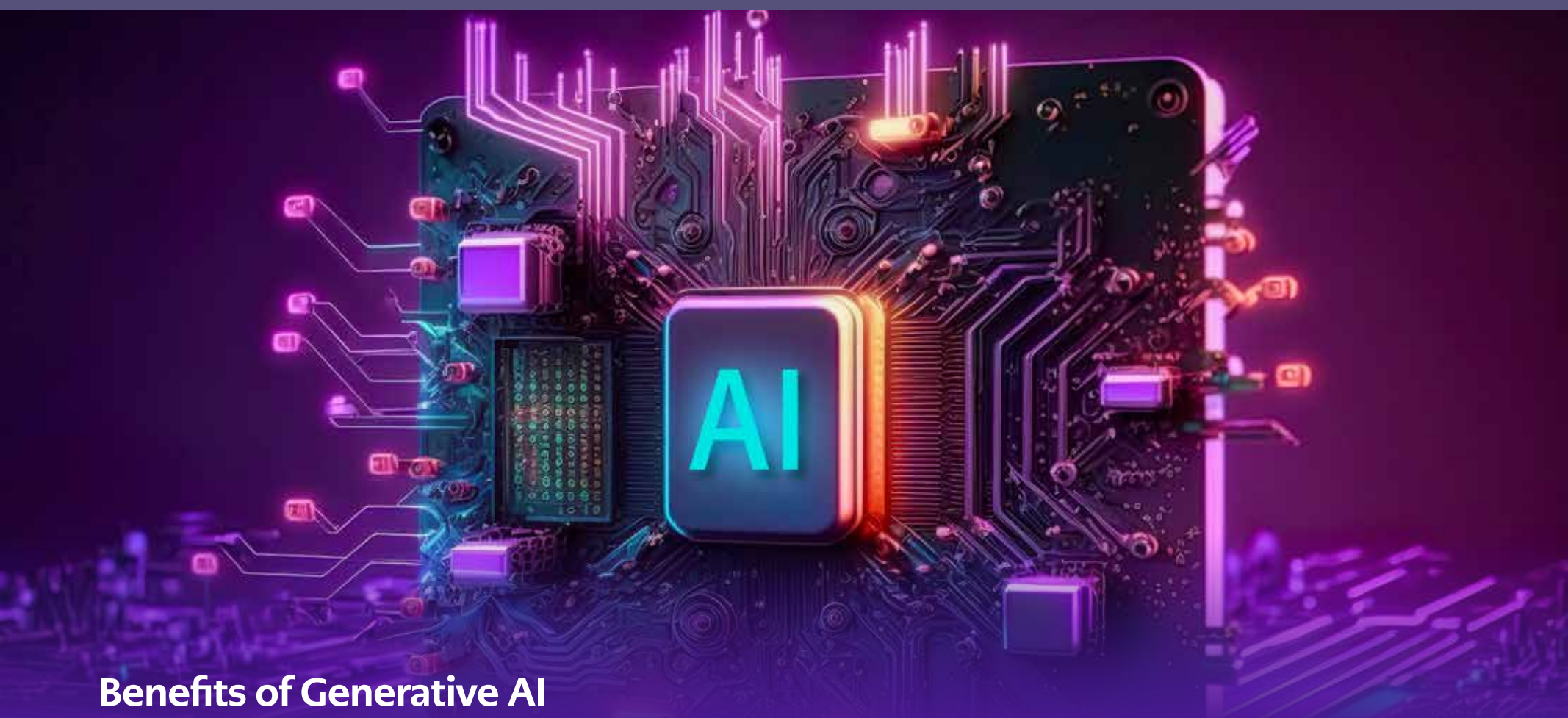

Benefits of Generative AI

There is no denying that the use of generative AI presents some major benefits to businesses and the workplace.

- Efficiency: Certain business processes, like customer service, data analysis, and basic content creation, can be automated with generative AI. This may help companies save time and allow them to concentrate their resources on other crucial sections.
- Cost-Saving: Automating menial and repetitive tasks can simplify unnecessary work structures, allowing businesses to reduce costs and improve their productivity.
- Personalisation: As generative AI is trained to learn from user data, it can produce personalised content that specifically caters to customers' interests. Curating content more closely aligned with customers' wants may boost engagement and sales.
- Innovation: With the benefit of efficiency and automation, many existing business models will face disruption. This would drive innovation of newer ideas or product designs that have not been explored in the market with traditional methods.
- Flexibility: Generative AI can create a wide range of content, which enables businesses to apply this system to multiple formats, especially in marketing and advertising.
- Data Augmentation: Can improve current datasets by generating synthetic data to enhance the performance of machine learning.

Risks of Generative AI

There's always a flip side to every coin. While generative AI can be an essential asset to businesses, several potential risks must be considered.

- Accuracy and misinformation: The content produced by generative AI might present inaccurate information, as the system cannot differentiate between truth and falsehood. Spreading false information may affect a business' reputation negatively.
- Bias: Machines can also have prejudice and biases in the training data. This might lead to discriminatory and biased outcomes. For instance, this viral tweet demonstrated how ChatGPT has already displayed sexist and racist content through its prompts.
- Malicious content: As with everything, generative AI can also be used with malicious intent. The images of organisations may be at risk, as cyber-criminals can increase their phishing attempts to create false imitations through scams and deep fakes.

Ethics and Data Protection in AI

Besides the risks mentioned, there's also the question of intellectual property (IP) theft. The conflict of copyright comes into play when there is no clear distinction of ownership to the creative works generated by AI. Some would justify that because the output created did not result from human creativity, it shouldn't be eligible for copyright protection.

Others may strongly argue otherwise, as they stem from the processes of complicated algorithms, programming, and human input. Regardless of where one stands on this debate, the issue remains, and the ambiguities surrounding it may lead to plagiarism allegations further down the line if they are not addressed. Before utilising AI-generated works, companies must conduct frequent IP clearance searches to prevent clashes with existing IP rights.

Another issue that has been highlighted is in the area of security and data protection breaches. There is bound to be some sensitive information about users and organisations contained within the copious amounts of data that AI processes for machine learning. Without proper security regulations, this private data could be leaked or misused by unauthorised parties.

As such, businesses that plan on introducing AI into their work structure must be aware of the risks and start planning how to alleviate these issues. This might involve implementing even more robust privacy and data security protocols, such as regular security audits, conversation encryptions, and stricter access controls.

Where to Start with Generative AI?

Generative AI is undeniably a significant component that will powerfully transform how we work and interact with the world around us. That said, there remain risks to manage and ethical decisions to make.

Companies should start addressing three points:

1. Decide how they will start with Generative AI and communicate it to the organisation.
2. Understand how their immediate and future business models can change and intentively embark on experimentation.
3. Fully understand and address their risks, including intellectual property, data protection, and cybersecurity. o

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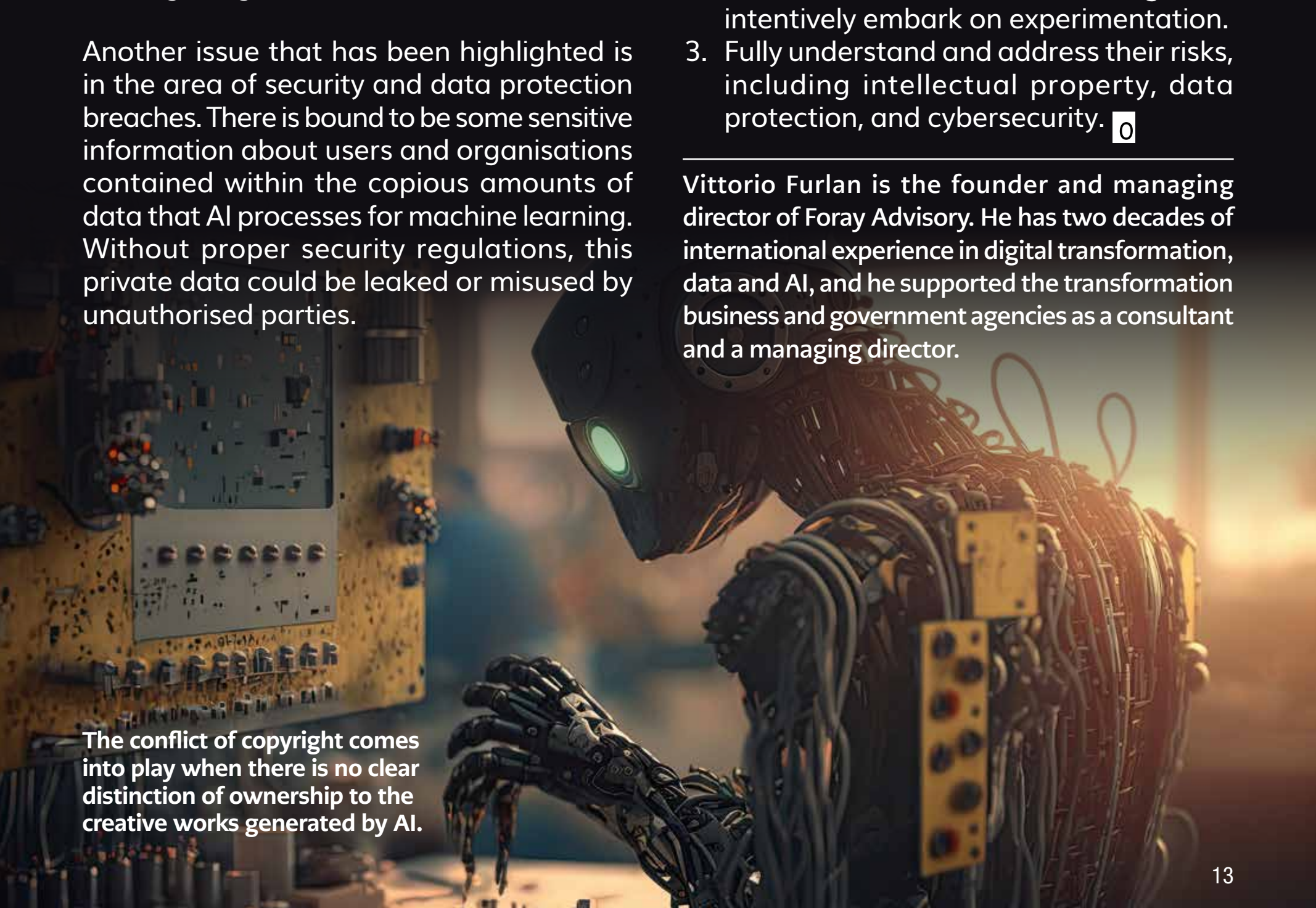
Vittorio Furlan is the founder and managing director of Foray Advisory. He has two decades of international experience in digital transformation, data and AI, and he supported the transformation business and government agencies as a consultant and a managing director.



The conflict of copyright comes into play when there is no clear distinction of ownership to the creative works generated by AI.

CRITICAL TRAITS AS DIGITAL TRANSFORMATION DRIVERS

DIGITAL TRANSFORMATION DRIVERS ACTIVELY LEVERAGE TECHNOLOGY AND INNOVATIVE STRATEGIES TO RESHAPE THEIR PROCESSES AND INDUSTRIES WHILE UNLOCKING NEW OPPORTUNITIES FOR GROWTH, EFFICIENCY, AND CONNECTIVITY IN THE INCREASINGLY DIGITAL WORLD.

FOURTH LEAP

By Elsie Low

WHEN you talk to someone about Digital Transformation, the first reaction is they have already upgraded or automated their systems or adopted specific tools. But I was talking about Digital Transformation and not Digital or Technology Adoption. This perception led us to determine the right fit to drive the digital transformation journey.

Because of this perception, many assume the digital driver should be technically inclined. I beg to differ, so I spoke to some industry experts, and the consensus told me that digital transformation should be driven by someone who has blended technology savvy and human-centric skills, and I couldn't agree more.

I, therefore, reference my favourite book, "*Think Like Amazon*" by John Rossman. Similarly, he asked his audience, "What is digital?". Some suggested that it's about investing in mobile experiences, e-commerce, cloud computing, on-demand capabilities, and even application programming interfaces (APIs). He added digital transformation is about "being digital".

Then, I researched and came across an article, "*Twelve reasons why digital transformation failed*," written by Dr Corrie Block, an organisational behavioural expert. He said digital transformation is 80% soft skills and 20% technology. He realised it when he was tasked to lead and execute dozens of Artificial Intelligence and Digital Transformation initiatives.

The fact is that digital transformation is a broader version of leading IT solutions and services. Still, the difference is that the digital driver requires an understanding of the multi-facets of the business and the innovation that can induce growth for the industry to be competitive in this digital era.

The Ideal Traits

John Rossman also wrote that Jeff Bezos specifically wanted people dissatisfied with the existing ways of working to fit into the digital transformation team. These people are inspired to fix those little things. Those little things happen when organisations are mature, efficient, and profitable. However, innovations have been compromised. So, how do we justify these characteristics?

But digital transformation is not solely about adopting technologies. Digital Transformation is about a strategic shift to a new business model or a new way of work. To do that, businesses must innovate and leverage digital technologies to deliver value to their business with speed and agility. This will eventually change how the business operates; to do that, they will need to prioritise the four key pillars to execute it.

The four pillars are the People, Platforms, Processes, and Partnerships. Ultimately, digital transformation drives towards business outcomes. It is more beneficial to "Day Two" companies. "Day One" organisations primarily focus on their new solution and innovation. They strive to become the unicorn to disrupt the industries and have a footing in the market. Most of them are hungry for growth; hence, their priorities defer. Whereas "Day Two" organisations have been in operation for many years and are mature and structured, due to market shifts, some may become complacent, losing their glory and market share and even becoming bureaucratic.

DEFINITION OF TERMINOLOGIES

- **Digital Adoption** is about utilising digital tools, applications, and platforms. Digital adoption helps to integrate digital technologies into their existing processes to achieve the desired outcomes. It helps align the tools with the business goals to ensure the technology is fully used.
- **Technology Adoption** is about updating, upgrading, or modernising existing technology systems, tools, software, hardware, or the IT infrastructure. They focus on the technology capabilities, capacities, and processes, including assessing the benefits and drawbacks of the technology and integration with other technologies.
- **Digital Transformation**, on the other hand, is about innovations and integration of digital technologies across all aspects of the organisation and to the extent they can deliver new values to their stakeholders, customers, or even employees. This will fundamentally change their business model, including how the organisation and business operate.

These organisations need to reimage and explore new business models with innovative solutions to add value to their customers and businesses to stay competitive for survival and growth. Therefore, to fit into the traits, the four pillars became priorities to look at.

FOUR KEY PILLARS TO PRIORITISE:

1. People are the core of digital transformation initiatives. It focuses on encouraging mindset and adaption to the new way the business operates and the practice of work. As digital drivers, they must lead, guide, and inspire organisations in this digital transformation effort. They will serve as the catalysts of change, driving innovation and enabling the organisation to apply digital technologies to achieve the business outcome.
2. The platform is about selecting and implementing suitable digital media and technologies that align with the business outcome. Today, vast platform providers and a marketplace provide quick and easy access to cloud applications, platforms, data analytics tools, computing, the Internet of Things (IoT) devices, and many other digital solutions. Hence, a technologically savvy driver will help them to explore, experiment and apply different technologies that can be embedded into the new business model.
3. The process involves reimaging and remodelling the organisation's operational processes to customer interactions and other business processes. Therefore, the digital driver needs to evaluate the existing business ecosystems, redesign and automate manual tasks, reengineer workflows, and use data analytics and business intelligence tools to help them drive better data-driven decisions. They must ensure the appropriate measurement is in place to protect the organisation's digital assets, sensitive data, and other operational, regulatory and security risks.
4. Partnerships. Many did not realise that collaboration is imperative to digital transformation. Businesses need a full-suite solution and resources to complement the new business model and its ecosystem. Quick access to resources to accelerate transformation is imperative. Therefore, collaborating with external partners for specialised skills, industry experts, or even innovative solutions is the easiest and fastest approach. Partnership collaboration is one of the cost-effective solutions to help the organisation scale its digital transformation journey faster with lesser risk. Therefore, the digital driver must be able to influence key stakeholders, foster cross-functional collaboration, and leverage internal and external resources for diverse perspectives and expertise.

Understanding that utilising digital transformation drivers extends beyond technology, the initial step involves analysing what requires alteration.

Having those priorities, being technology-savvy with a good understanding of various types of technology, and blended human-centric skills are the fundamental traits to lead the digital transformation journey. Digital transformation aims to drive towards the business outcome the organisation wants to achieve.

Whether we like it or not, we still need human intervention; hence, a human-centric driver with a strategic thinking mindset, a change advocator, and a collaborator will successfully navigate the change for the organisation.

Elsie Low is the Consulting Director and Agile Coach for DXGIG@Valuelab, a Digital Transformation and Gig Economy Consulting and Coaching hub to help businesses and organisations bridge the gap and the digital divide. Elsie believes that digital transformation will impact the traditional way of work. Hence, she encourages organisations to set the pace for tomorrow by leading, thinking, and governing the digital transformation journey.

THE DIGITISATION OF THE CONSTRUCTION INDUSTRY: UNLOCKING THE FUTURE OF BUILDING

THIS ARTICLE EXPLORES THE IMPACT OF DIGITISATION ON THE CONSTRUCTION INDUSTRY, ITS BENEFITS, CHALLENGES, AND THE FUTURE IT PROMISES.

FOURTH LEAP

By Martin Conboy

THE construction industry is one of the global economy's oldest and most essential sectors. However, it has been relatively slow to embrace technological advancements. In recent years, the integration of digital technologies, also known as digitisation, has started to revolutionise the construction landscape.

Understanding Digitisation in Construction

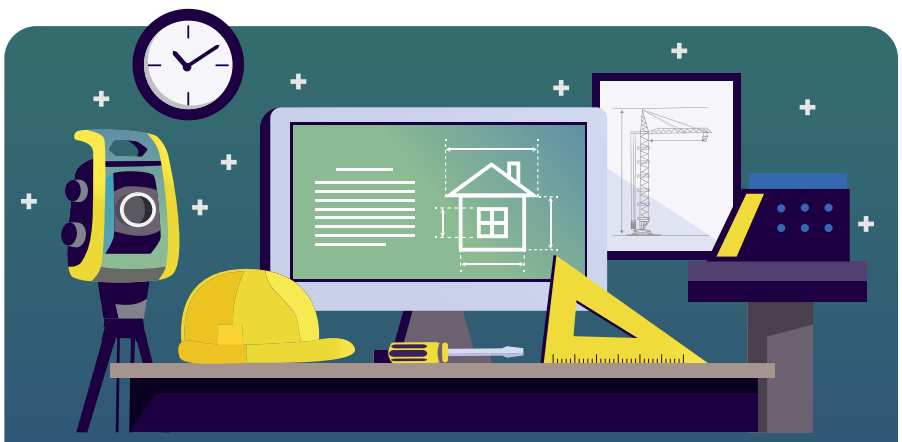
The onset of Industry 4.0 (faster, smarter, more sustainable productivity) is affecting all sectors of the economy, and construction is no exception. The McKinsey Global Institute report (Manyika et al., 2017) identified construction as the second least digitalised industry globally. The architecture, engineering, and construction (AEC) sector is responding to these pressures, and the Australian industry is keen to adopt (Gajendran & Perera, 2016).

Many construction companies will look to digitisation to be more efficient and better manage their businesses.

Industry 4.0 is the face of the 4th Industrial Revolution, which has occurred since the start of the 21st century. Its transformational power comes from marrying advanced production and operations techniques with digital technologies to create connected enterprises that use data to drive intelligent actions in the physical world.

A recent report produced in 2021 by the Office of the New South Wales Building Commissioner and Western Sydney University's Centre for Smart Modern Construction revealed some interesting findings.

Then, the report surmised that the industry will take about ten years to reach 'digital maturity'. This is where the use of Building Information Models (BIM) and Digital Twins is standard. Just over 50% of builders and designers are at the basic stage of digitisation.



KEY FINDINGS OF THE REPORT

Top drivers of digitalisation:

- Achieving greater accuracy and trustworthiness (70%)
- Improving quality and standards (66%)
- Delivering on time, budget, and quality (61%)

Top barriers to digitalisation:

- The cost of software and licenses (67%)
- The cost of hardware (57%)
- Inadequate design fees (55%)

Notwithstanding the findings from the report mentioned above, there has been a significant change in the construction landscape. Like an uncontrolled demolition, Australian construction companies have been collapsing at a rate that has not been seen for almost a decade. As of late June 2023, Australian Securities and Industry Commission (ASIC) data shows that over two thousand construction companies have been liquidated since mid-2021.

The building sector is a testament to the struggles that ensued when Covid-era economic stimulus packages were ended, contractual arrangements that saw builders tied to a fixed contract price as material and labour costs subsequently soared, and a lack of supply for new homes nationally.

This is sobering news; however, as the phoenix rises from the ashes, many construction companies will look to digitisation to be more efficient and better manage their businesses. Companies realise that they must move rapidly into a digital-first model — or risk getting left behind.

Digitisation in construction refers to adopting and integrating digital technologies and data-driven processes throughout the entire building lifecycle.

From initial planning and design to construction and facility management, digitisation brings about efficiency, productivity, cost savings, and improved safety. Key components of digitisation include Building Information Modelling (BIM), Internet of Things (IoT) devices, drones, robotics, virtual reality, and artificial intelligence (AI).

THE BENEFITS OF DIGITISATION IN CONSTRUCTION

Enhanced collaboration and communication

Digitisation fosters better collaboration and communication among all stakeholders involved in a construction project. With BIM, architects, engineers, contractors, and clients can work in a virtual environment, reducing errors and rework while streamlining decision-making processes.

Improved efficiency and productivity

Digital tools and technologies automate various tasks, optimising workflows and reducing manual labour. IoT devices on construction sites collect real-time data on equipment, materials, and worker performance, enabling project managers to identify inefficiencies and make data-driven decisions.

Enhanced safety measures

Safety is a paramount concern in the construction industry. Digitisation brings improved safety measures by utilising AI and IoT to monitor working conditions and identify potential hazards. Wearable devices and smart helmets can track workers' vital signs and detect hazardous situations.

Cost savings and waste reduction

Digitisation helps minimise material wastage and reduce project delays, leading to substantial cost savings. BIM enables better resource management, and real-time data analytics aids in predicting potential budget overruns.

CHALLENGES AND OBSTACLES

Industry-wide resistance

The construction industry, traditionally rooted in conventional practices, may encounter resistance to adopting new technologies due to cultural barriers, lack of awareness, and perceived risks associated with implementation.

Data privacy and security concerns

Data privacy and cybersecurity have become critical concerns, with increasing reliance on digital platforms and interconnected devices. Construction companies must prioritise safeguarding sensitive information from cyber threats.

Skilled workforce shortage

The successful integration of digitisation in construction relies heavily on a skilled workforce capable of operating and maintaining these advanced technologies. There is a need for training and upskilling programs to address this shortage.

Initial investment costs

While digitisation promises significant long-term benefits, the initial costs of implementing and integrating digital technologies can be substantial for some construction companies, particularly smaller ones. (Note: 80% of the industry is a small business (less than 20 employees).

REAL-WORLD APPLICATIONS OF DIGITISATION

Building Information Modelling (BIM)

BIM is a central component of construction digitisation. It allows stakeholders to create a 3D model of a building, integrating all relevant data such as design, materials, cost, and construction schedules. BIM improves coordination, reduces conflicts, and enhances overall project efficiency.

Drones and robotics

Drones equipped with high-resolution cameras and LiDAR technology (which can survey construction sites more quickly and accurately than traditional methods). Conversely, robots can potentially automate repetitive tasks such as bricklaying, reducing labour time and cost.

Internet of Things (IoT) in construction

IoT devices, like sensors and wearables, enable real-time data collection, monitoring equipment health, tracking materials, and ensuring the safety of workers. IoT enhances operational efficiency and helps in preventive maintenance.

Augmented Reality (AR) and Virtual Reality (VR)

AR and VR technologies enable architects, engineers, and clients to visualise projects in a virtual environment, enhancing design reviews and stakeholder engagement and facilitating decision-making. The future of the construction industry lies in embracing digitisation fully. As technology continues to evolve, so will the benefits and possibilities of digitisation.

HERE ARE SOME POTENTIAL FUTURE DEVELOPMENTS

Increased automation

Automation will become more prevalent in construction, with robotic machinery taking on tasks currently done manually. This will not only enhance productivity but also minimise risks to workers.

Integration of AI and machine learning

AI and machine learning algorithms will analyse vast data sets to predict and prevent potential issues, optimise construction schedules, and suggest design improvements.

Sustainable and green construction

Digitisation can contribute to sustainable and green construction practices. With accurate data and analysis, construction companies can make informed decisions to reduce energy consumption and waste, leading to more environmentally friendly buildings.

Modular construction

Digitisation will enhance the efficiency of modular construction, allowing for seamless assembly and disassembly of building components. This will lead to faster construction timelines and improved flexibility in design.

The digitisation of the construction industry transforms how we build and manage structures. Embracing digital technologies can contribute to increased collaboration, improved safety, cost savings, and enhanced productivity. Though there are challenges to overcome, the potential benefits far outweigh them. As the industry continues to evolve, digitisation will play a pivotal role in shaping the future of construction, unlocking new possibilities and opportunities for growth. 0

Martin is well recognised as one of the leading voices of the outsourcing / shared services industry and its role in facilitating outsourcing success throughout the Asia Pacific. Martin was voted among the top five most influential and respected people in the global call centre outsourcing industry in 2014.

WHY IS IT EVERYWHERE? GENERATIVE AI!

REFLECTING ON THE TRANSFORMATIVE IMPACT OF GENERATIVE AI, DIVE INTO THE SHIFT OF THE WORKFORCE DYNAMICS, THE AUTOMATION OF WORK AND ITS ROLE AS A VERSATILE TOOL IN DIFFERENT BUSINESS FUNCTIONS.

FOURTH LEAP

By Helen Selvanathan

DID we ever think there would be a period in our life when humans would supervise, and machines would generate? I did not. I knew somewhere down the pathway, it would come. But, NOW that it is revolutionising my socioeconomic engagements, it makes me think of equitability for the larger community in Malaysia. A total paradigm shift is dawning or has dawned upon us.

So what is so exciting about Generative AI compared to other artificial intelligence that embarked into our work ways? Generative AI is specifically designed to generate new content as its primary output. Whether this is text, images, product suggestions, or whatever, that is what generative AI is designed to do. Other artificial intelligence focuses on identifying or classifying based on existing data or information.

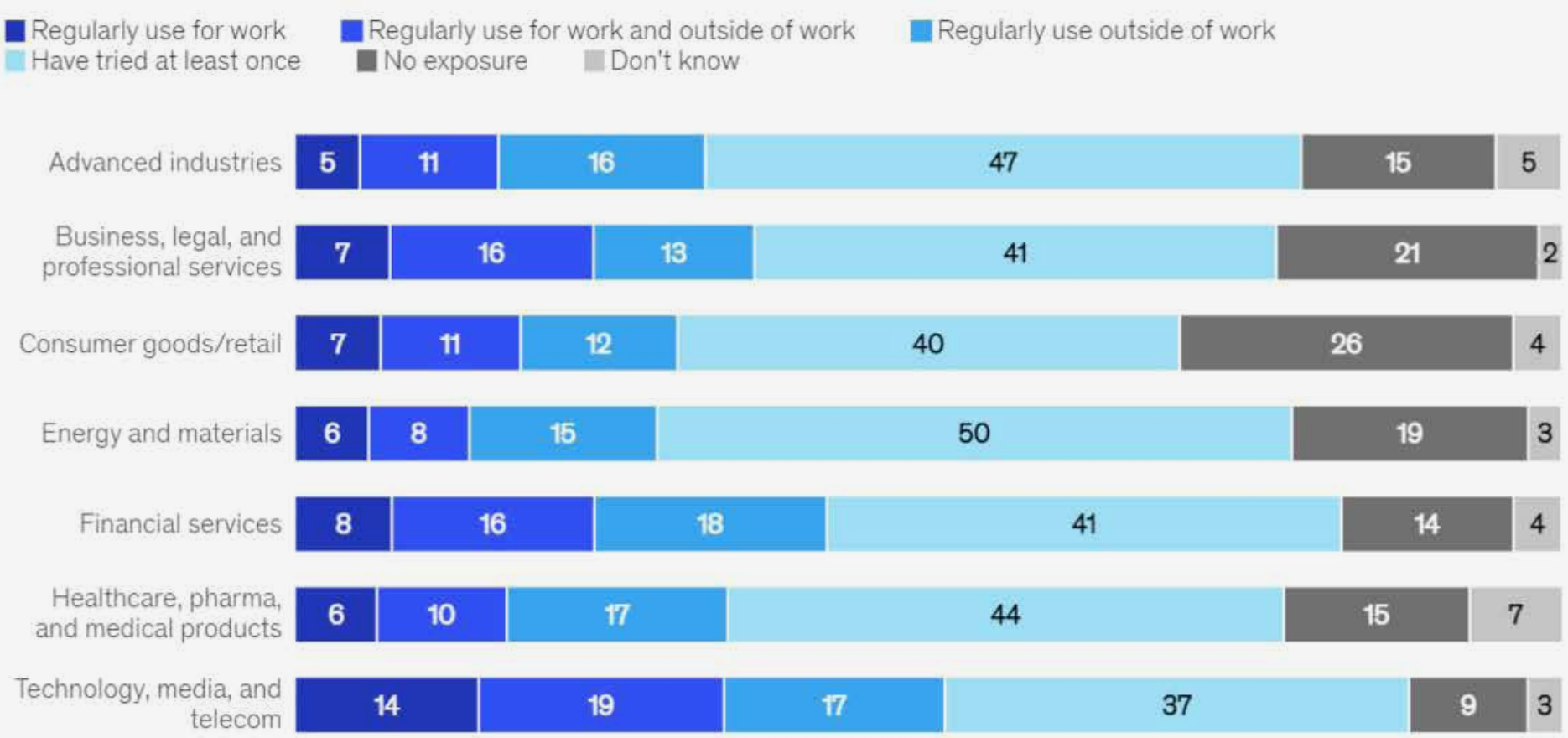
While our lives are made easier with monotonous workloads moving out of our zone and giving way for more time for our vision, our purpose and our focus to be the core drivers of our business with the advent of AI, the workforce transformation acceleration is alluded as highly potential for technical automation. At least 50% of our current work activities could be automated in the next 20 years, much earlier than the transformation in our previous industrialisation.

The degree of disruption that generative AI will impact industries will likely vary. The industries that rely primarily upon knowledge-based workers will probably see more disruption and have the potential to gain more value, too. Many scholars of Generative AI have provided feedback that technology companies, not surprisingly, will see the most significant impact from Gen AI. A recent survey commented that the technology industry would see an estimated 9% global revenue impact.

In comparison, related industries with knowledge-based workers like medical products/pharmaceutical and banking financials will be 5%, and the education sector is estimated to be about 4%. The Gen AI effects in segments of manufacturing, aeronautics and electronics tasks have been gradually seen rising in the past, and the contrast to the impact previous technology waves did in these sectors would be less disruptive.

In an interview with a Gen Z recently, I was asked by the interviewee how much AI is used in the organisation that would need the employees to perform their work at optimum. I told the interviewee that in multiple ways and depending from role to role, Generative AI can be applied in various ways, avoiding giving a % as generative AI could produce different benefits to different business functions in any organisation. Given that Generative AI serves as both a virtual expert and a virtual collaborator, it is imperative as catalysts of our organisation for us to derive notable tasks that our daily work requirements may influence.

The below shows responses in an April McKinsey Global survey.



Note: Figures may not sum to 100%, because of rounding. In Asia–Pacific, n = 164; in Europe, n = 515; in North America, n = 392; in Greater China (includes Hong Kong and Taiwan), n = 337; and in developing markets (includes India, Latin America, and Middle East and North Africa), n = 276. For advanced industries (includes automotive and assembly, aerospace and defense, advanced electronics, and semiconductors), n = 96; for business, legal, and professional services, n = 215; for consumer goods and retail, n = 128; for energy and materials, n = 96; for financial services, n = 248; for healthcare, pharma, and medical products, n = 130; and for technology, media, and telecom, n = 244. For C-suite respondents, n = 541; for senior managers, n = 437; and for middle managers, n = 339. For respondents born in 1964 or earlier, n = 143; for respondents born between 1965 and 1980, n = 268; and for respondents born between 1981 and 1996, n = 80. Age details were not available for all respondents. For respondents identifying as men, n = 1,025; for respondents identifying as women, n = 156. The survey sample also included respondents who identified as "nonbinary" or "other" but not a large enough number to be statistically meaningful.
Source: McKinsey Global Survey on AI, 1,684 participants at all levels of the organization, April 11–21, 2023

Our workload can be augmented and productivity accelerated by Generative AI that can rapidly digest data and derive methodological conclusions that can highly enhance knowledge of our work. This way, we can devote our time and energy to more impactful tasks and speed up our response time, especially for much-needed industries. The highly expected changes can be seen in some of the following areas:

EXPECTED CHANGES BY GENERATIVE AI

Enhanced customer experience

Our very own expectation of customer service has always been high. We expect to be served within minutes of walking into any store or assured that someone will look into our needs. With Generative AI, this experience is enhanced with digitalised self-service. We would have found more than enough information before walking into the store through its' app and may have even tried on the product through interactive automated channels.

Many types of research showed that with Generative AI, companies with extensive customer service assistants could resolve issues in less stipulated periods than before. One company even shared that time spent handling a customer issue was reduced by 9%. In addition, the entire work process improvement was seen, and there also was a reduction in workforce attrition and management of these persons.

We must continue educating our marketplace that Generative AI assistance helps with a less experienced workforce and can increase productivity overall while raising the standards of the required higher-skilled workforce in Malaysia.

A recent shopping experience surprised me when I was not only greeted by my name, but the seller also knew that I had bought a similar product of a different brand and could even indicate why I would need another unit. It is more than just a must-have; the digital identity and data usage between the digital and physical worlds is an imperative strategic business matter.

Boosting marketing and sales

The advent of utilising Generative AI in increasing marketing techniques and tactics has helped many organisations make a mark to leaving higher conversational impressions at much lower cost through leveraging search engine optimisation (SEO). Today, our world is in a search mode. Product discovery supported by text and image personalisation has given us the authority to make faster and better choices.

Potential operational benefits with so much data at hand allow companies to ideate and bring forward new experience that supports the buying behaviours of our consumers.

The reality is how soon our Malaysian companies garner the strength of Generative AI into their strategy to change our effective outreach and bring additional revenue to strengthen our overall economy.

Speeding and spreading software engineering economy

Most companies have leveraged software engineering as a significant function, especially as it has become a growth area for giant corporations. Much of the array of services provided, from parking assistance to connectivity to the value of new vehicles, needs the advancement of software engineering.

Leveraging Generative AI in making a better workplace environment could also be achieved as software engineering teams can generate, activate, and modify code with reduced time compared to working without using the tools, as it would then allow more time to fulfil other needed work or personal matters. However, the final product of a quality architecture still largely depends on software engineers as Generative AI produces what may initially be required. Many large technology companies are already selling Generative AI for software engineering used by millions of coders. This itself is speeding up the engineering economy indirectly.

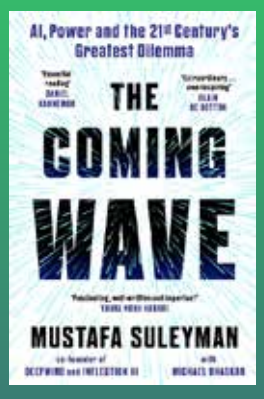
Global reports have indicated that deploying Generative AI and related improved technologies will continue to help accelerate productivity, possibly even compensating for declining employment growth and improving the overall economic status.

The need to keep the human touch, interaction, and the human in the loop is still crucial. We need continuous room for new quality checks on the shift from humans to Generative AI, more so that in Malaysia, we are in a highly service-oriented nation. The increasing need to improve our service levels, whether generated content is based on fact or inference, is imperative.

With the increasing automation of work, Gen AI can contribute to the equitable development of the larger community by creating new job opportunities and driving economic growth.

Are we ready to modernise and break down data silos in Malaysia? I am sure more than 90% of our Malaysian executives already believe data is the differentiator within the industries and organisations, but our actions need to speed up more than just an indication in our strategy document as a "call/need to action" to "do it now" attitude.

BOOK RECOMMENDATIONS



The Coming Wave: Technology, Power, and the Twenty-First Century's Greatest Dilemma

- Mustafa Suleyman (with Michael Bhaskar)
- Penguin Random House, September 2023 (expected date)

I am looking forward to getting my hands on this book. Content is subjected to include how to maintain control over powerful technologies.

The Age of AI: And Our Human Future

- Daniel Huttenlocher, Henry A. Kissinger, and Eric Schmidt
- Hachette Book Group, November 2021

The book gives a perspective of how AI will change our relationships from personal to political, from knowledge to societies we live in. It presents a guided roadmap to the future with AI in our everyday lives.

This article is Helen Selvanathan's observation, Senior Director, Partner Go-to-Market, Software Partner Solutions, SAP Asia Pacific & Japan. She supports business partners who innovate, build and extend solutions that leverage SAP products. Helen also chapter leads for a global SAP employee engagement initiative - SAP Business Women's Network (BWN), and supports the company's efforts towards building a more sustainable and socially responsible world.

THE CHALLENGES AND BENEFITS OF ARTIFICIAL INTELLIGENCE

THE ADOPTION OF AI PRESENTS BOTH THE PROMISE OF ENHANCED EFFICIENCY AND INNOVATION AND THE CHALLENGE OF ADDRESSING ETHICAL CONCERNS AND HUMAN VALUES.

Countries with the highest rates of automation and robotics, such as Japan, Singapore and South Korea, have the least unemployment issue.

FOURTH LEAP

By Dr Thomas Tang

AI or Artificial Intelligence is in the headlines for possibly the wrong reasons. Concerns about replacing humans with machines abound, together with the possibility of false information being generated by computers. It is worth bearing in mind AI pioneer Stuart Russell's principles of human-compatible AI: a robot's only objective is to maximise the realisation of human values; the robot is initially uncertain about what those values are, and human behaviour provides information about human values. In other words, robots (and AI) depend on interpreting human behaviour to learn from what is right and avoid repeating what is wrong.

AI is not destined to replace human functions entirely. **Countries with the highest rates of automation and robotics, such as Japan, Singapore and South Korea, according to a recent article in the Economist, have the least unemployment.** However, we must be cautious about where we are going with AI, regardless of its contribution to the global GDP of US$15.7 trillion, as predicted by PwC to happen by 2030.

The role of technology was referenced in SDG9, being one of the targets to be accomplished in order to provide a sustainable future for the planet and society.

Recent breaches in IT systems, such as the ransomware attacks on corporate companies, present a new challenge to cybersecurity. In 2021, a water treatment plant's management system in Florida was remotely accessed by an unknown entity that released a large amount of sodium hydroxide into the public water supply, intending to harm people. Thankfully, the situation was contained before anyone was harmed. Earlier in 2017, in the wake of a Russian cyber-attack on Ukraine, a global logistics system was offline for weeks due to a cyber-weapon known as NotPetya, which disrupted supply chains worldwide and impacted thousands of other companies.

"The real risk with AI isn't malice but competence. A superintelligent AI will be extremely good at accomplishing its goals, and if those goals are not aligned with ours, we're in trouble."

Sam Altman, the CEO of Open AI, which produced ChatGPT

There is a linkage of AI to these episodes; the latter were all generated by human malevolence, but what would happen if an AI programme mutated and caused the attack? Realms of Hollywood and Terminator movies may seem close to reality.

We have no absolute protection against AI going berserk, but on the other hand, we can pay attention to how AI can be successfully harnessed. In 2015, the UN established the Sustainable Development Goals or SDGs as targets to accomplish in order to provide a sustainable future for the planet and society. The role of technology – whether in the form of clean technology equipment or digital services – was referenced in SDG9 to "*significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in the least developed countries by 2020.*"

Digital technologies can benefit certain sectors crucial for low-income nations. Around 45% of deaths of children under five are linked to undernutrition. AI, sensors, robotics and synthetic biology can improve crop productivity and resilience. For example, machine learning and genetic sequencing can identify and sequence optimal gene profiles to enhance crop performance, and IOT optimises crop production by delivering information to farmers' smartphones.

Other developments are advancing human medicine and healthcare information. Some 18,000 healthcare startups have attracted US$145 billion in investment since 2010. Smart energy is also available through intelligent blockchain networks that can distribute clean energy to an underserved population of about 290 million, leading to economic and social opportunities.

As promising as these prospects sound, there is still the problem of how to provide access to digital technology for all. Market forces and self-interest may sometimes prevail, resulting in prosperity for some instead of opportunities for all.

The result is that the use of citizen data that governments utilise to build better communities may be incomplete due to the absence of the views of the actual users, i.e. the vulnerable who do not have access to digital channels.

This 'digital divide' is the challenge that populations face even in modern cities like Hong Kong. The situation is exacerbated further through ageing populations as elderly citizens struggle to master technologies designed for a younger generation.

This is where AI can make a difference by establishing systems that are focused on data accuracy as well as data protection. AI algorithms can evolve based on data sets; they are trained to deliver comprehensive and representative data sets, which are critical to reducing the probability of algorithmic bias and potential harm. Techniques to improve the transparency of AI decision-making should also be developed.

Ethics-based digital technology strategies should be fostered in line with these measures to ensure that inequality gaps and social injustices do not arise. Machines and algorithms must be ethically controlled to eliminate biases that may make people feel unfairly impacted by technology and AI. The jury is still out on AI's future, but we would do well to see how it can best serve the interests of the have-nots as well as those who have.

Dr Thomas Tang has over 25 years of experience advising public and private sector organisations in sustainable change and innovation. He has been a consultant, corporate director and volunteer in different fields of sustainability, including climate change, green technology, urban design, stakeholder engagement, low-carbon living and social impact. He has written books and numerous articles, as well as spoken on his views at international forums on topics related to sustainability.

The proper use of technological advancement can help those in low-income nations prosper and give them better access to development.

THREE, TWO, ONE: YOU'RE ON LIVE!

DISCOVER THE TRANSFORMATIVE POWER OF LIVE STREAMING, AS IT CONNECTS PEOPLE IN REAL-TIME AND OFFERS NUMEROUS BENEFITS, FROM INTERACTIVE ENTERTAINMENT AND ENHANCED E-COMMERCE TO GLOBAL SOCIAL CONNECTIVITY.

FOURTH LEAP

By Sam Kon

IN recent years, live streaming has emerged as a powerful force within the digital landscape, reshaping the way we interact, consume, and conduct business online. Recognising its potential, leading e-commerce platforms such as Lazada, Shopee, and TikTok have made significant investments to bolster their livestream capabilities.

So, is live streaming for your brand? Live streaming is not just another channel—it is a revolution in how we connect, communicate, and convert in the world of e-commerce. It is the golden ticket to expanding your reach, engaging with your audience in real-time, and building relationships that go beyond mere transactions. So, if you are hoping to achieve these goals with your brand, then it is a resounding yes that livestream is for you.

The success of tiktok shop

In 2022 alone, it generated a Gross Merchandise Volume (GMV) of USD 4.4 billion, and it is on track to triple that figure in 2023, targeting a GMV of USD 12 billion. As of May 2023, TikTok reportedly boasts 135 million users in Southeast Asia, offering an enormous potential audience for brands and businesses.

While each platform offers unique advantages and challenges, Beyond Infinity Consultancy (BIC) would like to take this opportunity to share some of our experiences from helping various clients.

Structure your livestream

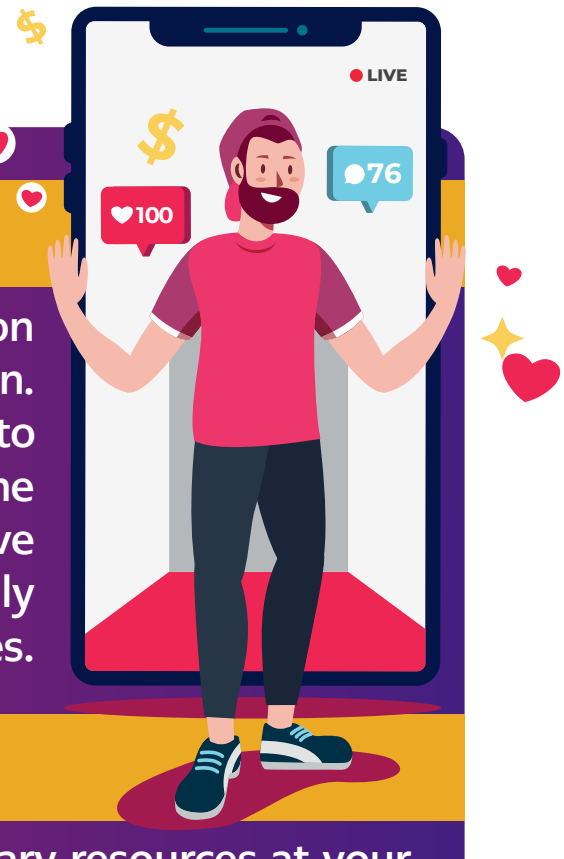
Preparation is crucial to ensure a smooth live stream. It comprises understanding your audience, their behaviours and interests, and tailoring your content to suit their preferences. Creating a storyboard is one of the most effective ways to structure your livestream.

A storyboard for a livestream might seem superfluous, but it is a strategic tool with numerous advantages. It allows you to visually plan the sequence of your live stream, ensuring you have a clear structure and flow. It serves as a guideline for the content you wish to present. Not only does it help you be clear on what to do, but it also helps to prevent awkward pauses or content gaps during the live stream. You can fill your storyboard with interactive segments, Q&A sessions, or product demos in advance, ensuring a more engaging experience for your viewers.

Moreover, a storyboard encourages consistency across your live streams, strengthening your brand image and making your content more recognisable to viewers. Thus, planning time and using a storyboard are key ingredients for a successful livestream session.

Create a catchy title

The title of your live stream is the first thing potential viewers see, so make it count. It should be compelling, concise, and relevant to the content of your stream. Experiment with using emotive language or posing a question to spark curiosity. For example, if you are a food-related brand, instead of "Cooking Tonight," you might title your stream "Can I Cook a 3-Course Meal in 30 Minutes?" This poses an intriguing challenge and is likely to draw in more viewers. Additionally, do not shy away from utilising relevant hashtags in your title to improve the visibility of your live stream. However, avoid overdoing it, as excessive use of hashtags can appear spammy and deter potential viewers.



Connect with your audience

Interacting with viewers during your live stream can make your session livelier. The beauty of live streaming is that it can be a 2-way communication. So, respond to comments, ask for suggestions, and encourage viewers to share your live stream. On top of that, engage your audience with real-time promotions during your livestreams. This could be a flash sale, exclusive discounts for viewers, or interactive quizzes with prizes. This not only increases viewer engagement but also encourages immediate purchases.

Strategic influencer collaboration

If you have a distinct objective to expand your reach and the necessary resources at your disposal, forming strategic partnerships with influencers can yield positive outcomes. It is essential to approach influencer collaborations as reciprocal partnerships rather than simple transactions. An influencer's endorsement can serve as a powerful testament to your product, making it more appealing to their loyal followers.

Consider partnering with verified influencers whose content style, tone, and voice resonate with your brand's persona. Their authentic engagement with your product during a live stream can significantly influence their followers' perceptions and purchasing decisions. Through these partnerships, you can create engaging livestream content that resonates with your audience and drives your brand forward.

Livestreaming indeed offers brands an invaluable opportunity to connect authentically with their audiences, expand their reach, and drive higher engagement and sales. The above-recommended approaches will serve as a powerful launchpad for brands and businesses. However, navigating this dynamic landscape successfully requires expertise, strategic planning, and a deep understanding of the psychology of the digital ecosystem.

Sam Kon is an e-commerce consultant from Beyond Infinity Consultancy (BIC) with 12 years of e-commerce experience. He is a Shopee Certified Enabler and a certified trainer by Alibaba Business School & Taobao University; Enabling and empowering businesses to boost their revenues by going from offline to online (O2O). To learn more, do email samkon@beyondinfinity.asia.

LEADERSHIP FOR TECHNOLOGICAL TRANSFORMATION

TO ACHIEVE GREATER ECONOMIC STABILITY IN THIS AGE, IT IS VITAL TO LOOK INTO DIGITISATION AND THE SUSTAINABLE ASPECT OF DIGITAL ADOPTION.

FOURTH LEAP

By Ir. Dr Mohd Shahreen Madros

It has been said and accepted by many that Malaysia must now progress into a high-income nation. Since our independence, we have consciously shaped and developed our economy from one that depends on agriculture and minerals towards one that depends on the manufacturing-based industry. Today, with over one million enterprises and an economy of over 80% manufacturing-focused, we have certainly achieved our initial intent. Despite our good economic progress, we are stuck in an economic quagmire today.

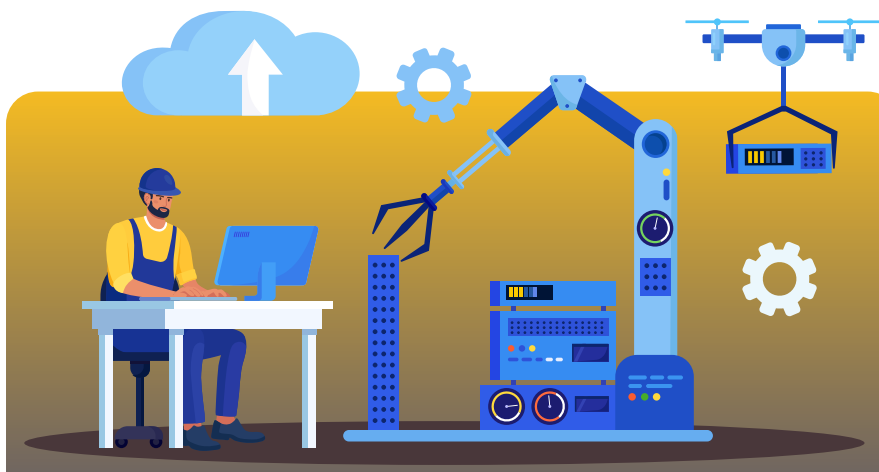
Our initial success has created more than 98% of small and medium-sized industries and enterprises (SMI/SME), which mostly rely on low-skilled labour and manual processes. While this is sufficient for their immediate need to address local demand, it is neither efficient nor enables them to grow and compete in an increasingly globalised market. The country's increasing demand for human resources has aggravated the situation, leading to the importation of more low-skilled foreign labour.

The country's increasing demand for human resources has resulted in an influx of low-skilled foreign labour.

The scenarios for the medium and larger corporations are slightly different. These corporations have the financial capacity to tackle their requirement differently, and the options they are presented with will determine which ones they will pursue. Will they embrace digitalisation and automation over labour-intensive solutions? It must also be understood that not all large corporations are the same. While some do high-skilled technology-intensive work, many large corporations are here only to outsource mass manufacturing using low to semi-skilled cheap labour.

The continuous dependency on cheap, low, and semi-skilled labour over technology adoption by either the SMI/SME or more giant corporations has become an Achilles heel for Malaysia to progress into a high-income nation. This has kept Malaysia in the vicious cycle of a middle-income trap. It has enormous social and political implications. To get out of this dependency on low-skilled labour and adopt appropriate technology would require technology-aware leadership at all levels to assist in the transformation needed.

Many bigger corporations opt for labour-intensive solutions instead of fully embracing digitisation and automation, contributing to falling behind the industry.



The choice between continued reliance on cheap labour versus automation will be subject to whichever gives the best economic returns. A short-term evaluation tends to push for more inexpensive capital outlay, thus favouring cheap labour solutions compared to expensive high-capital investment in automation.

Aggressive technology adoption will not happen laissez-faire. Leaving the industry on its own to adopt technology will take a long time, especially when business priorities are based on short-term economic survival. The transition from the older generation leadership that is technology averse to younger leaders who are more technology savvy will only happen gradually. The inherent inertia to change cannot be overestimated. Worst still when the younger generations succumb to and accept the corporate culture of not embracing change. Instead of progressing with time, we end up with the newer generations maintaining the old culture.

As much as there are government incentives and support to promote technology adoptions in our industry, it will only happen with real industry leadership commitments towards this end. The industry cannot become over-dependent on government nudges alone. Thus, real change towards greater technology adoption can only become a reality if current industry leaders understand why we must embrace technology adoption and be committed towards this agenda.

While much is demanded from leaders of any industry today, the two most significant considerations are sustainability and digitalisation. Global market trends drive these two factors. The global economic community demands fair treatment and social welfare of workers. It also requires that economic activity would not lead towards environmental degradation. To ensure that social and environmental interests are protected, good governance systems and processes should be in place in all global enterprises. Ignoring all these will make any business not accepted in most developed markets and its supply chain, ensuring its eventual demise.

The travel lockdown posed by the recent pandemic has also affected enterprises the world over to reassess the way we do business. The impact on the business supply chain and the ability to source either product components or services had industry leaders scrambling for solutions. The pandemic has undoubtedly acted as an accelerator towards technology adoption, especially towards digitalisation.

The primary challenge in transforming our economy into a high-income nation is not buying the latest technology hardware but adopting a changed mindset among our industry leaders.

The double whammy of globalisation and the pandemic has made it necessary for industry leaders the world over to adapt. Digitalisation has now become a necessity if any global businesses were to survive. The physical market has been replaced with virtual platforms, and product development is integrated into the business supply chain ecosystem. You either have it, or you are out of the game.

With all these changes happening, our local enterprises can no longer not change the way we do things. Dependency on low and semi-skilled labour will not help us to compete in the global arena. It will not help us in any way if we are not in the global supply chain digital ecosystem. Cheap, low-skilled labour is a red herring that keeps us focused on the wrong thing. The hard work of more than a million SMI/SMEs that we have today will not be able to survive far into the future if our only competitive advantage is cheap labour.

Communicating and empowering staff in all divisions and departments towards these common goals of embracing technology in all facets of the business to improve efficiency and comply with global trends is key towards a successful transformation.

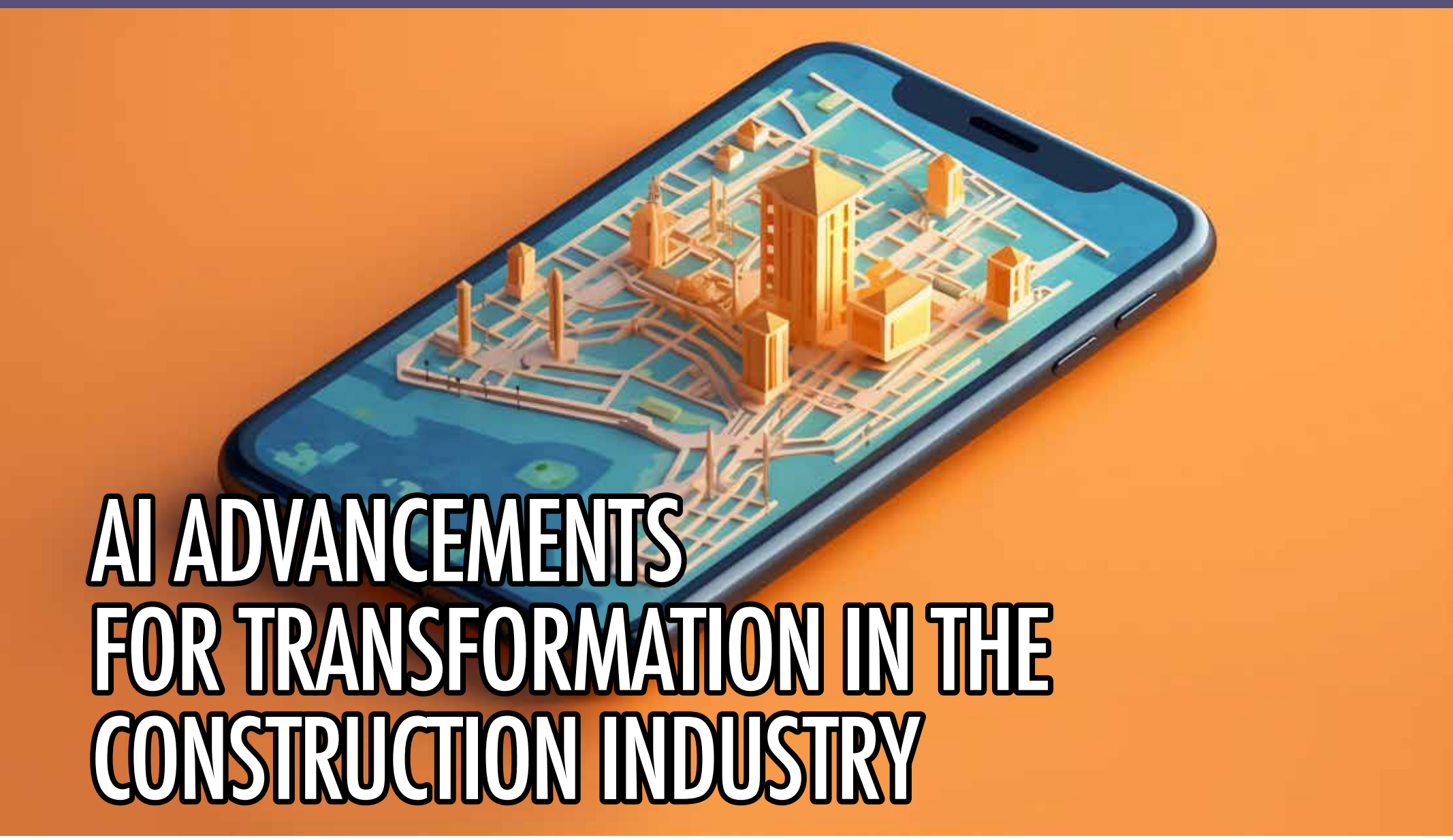
The primary challenge in transforming our economy into a high-income nation is not about buying the latest technology hardware. Far from it, we must instead adopt a mindset change among our industry leaders. We need leaders who are cognizant of the changing economic landscape and can move and inspire the entire organisation to adapt to the current demands.

A committed leader towards technology adoption is crucial. This change can only happen from the industry leaders who understand the urgency of this change. Balancing short-term profitability against long-term strategy to survive the changing economic landscape is a daunting challenge every business leader must endure.

We now need leaders at all levels to embrace technology adoption fully. To achieve this, current business leaders must have a clear strategy. A clear statement of the purpose of technology adoption is needed and communicated to all employees in the organisation. It is equally important that this statement of intent be translated into strategy and goal-setting by every organisation's division. Heads of the division must be empowered to propose and develop a viable initiative to realise the objectives.

The government's role is to assist, not be the primary mover for technology adoption. No matter how much the government and its agencies wanted the change to happen, without the willingness and commitment from the industry leaders, it will not translate into real, lasting change. This constant syndication between government and businesses is necessary to move forward. 0

Ir. Dr Mohd Shahreen Madros has over 30 years of working experience in various capacities. He was a lecturer at Universiti Kebangsaan Malaysia (UKM), with over 20 years of experience in the Oil & Gas industry. He was also the appointed CEO of MATRADE from early 2017 until Feb 2019, during which he represented Malaysia in many international trade missions. Dr Shahreen is currently an independent advisor to industries, a board member of a publicly-listed company, a certified coach, and an Adjunct Professor at the Graduate School of Business, UKM.



AI ADVANCEMENTS FOR TRANSFORMATION IN THE CONSTRUCTION INDUSTRY

EXPLORE THE UNTAPPED POTENTIAL OF AI-DRIVEN ADVANCEMENTS IN THE CONSTRUCTION INDUSTRY TO PAVE THE WAY FOR A DYNAMIC IR4.0 TRANSFORMATION ULTIMATELY.

FOURTH LEAP

By Jerry Durant

I routinely challenge whether our pursuits are practical or simply a whimsy to benefit visionaries. Nothing goes without sparking an interest in probing these advancement postulations. IR4.0 is without exception as I contemplate that deployment has tended to rely more on digitisation than on constructed cohesion. In some cases, this occurs because we simply lack digital maturity. Others are still trying to understand and unscramble the many dissimilarities that exist between stakeholders.

The construction trade is one example where there is a reasonable degree of digital advancement. At the same time, there remains a rich set of opportunities to bridge gaps internally within operational segments and externally to participating stakeholders.

THE CAST OF CHARACTERS:

- General Contractor
- Subcontractor
- Material Suppliers
- Project Owner/Customer
- Regulators
- Labor/Trades
- Clerk-of-the-Works/Oversight
- Special Interest Groups

WITHIN THESE BROAD CATEGORIES, WE HAVE A NUMBER OF SPECIALISTS:

- Design Architects (conceptual. HVAC, electrical, plumbing, structural)
- Procurement
- Health & Safety
- Estimators
- Project Planning & Scheduling
- Public Relations
- Change Order Management
- Cost Accounting Control
- Logistics
- Labor Relations
- Human Resources

Every company will have their own style and structure to fit its needs, whether big or small, local or international, single or multi-specialisation. What is not uncommon is that there are pools of digitisation, and it is these pools that remain untapped in so far as advancing an IR4.0 vision.

Let's start by challenging whether the construction trade should. We can speculate on economic advantages, accuracy and speed. But this would require us to put our value motivators to be further guesstimated. Today's dynamics then require close examination of dynamic disruptions, and given the length of construction engagement, this becomes an ambitious undertaking. As an added dimension, let us consider risks and the reliance on human invention as our present stopgap.

When we consider such adversities as catastrophic failures, cost overruns and project interruptions, the practicality of moving in an IR4.0 direction is much more desirable.

In our specific case, our IR4.0 awareness was not sparked by advancement but by the failure opportunities to which we were engaged to solve.

CAUSES OF FAILED PROJECTS

- Structural anomalies caused by material testing and differences from the specification.
- Project overruns resulted from supply chain variations that contributed to added labour investment.
- Public sentiment volatility is fueled by the abnormal degree of regulatory oversight.
- Material shortages and waste that involved scheduling and demand challenges.
- Design changes caused by schedule demands and influenced/impacted by labour trade availability.

The opportunities exist for a cohesive operating model where the participants operate from a unified basis. This comes with the need for definitive security, not so much for privacy as for control of authorised changes. Transparency is essential, predictive analytics a must and a positive, proactive behaviour that mimics construction dynamics. ◻

Jerry Durant is Chairman and Founder of The Clarity Group Global, an established advisory consultancy committed to technological and organisational advancement. Clarity Group also engages in various progressive ventures involving recovering challenged enterprises, intelligent philanthropic investments, and greenfield research.

"The key to successful leadership is knowing how to make people follow you. Leave a trail of doughnuts."

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