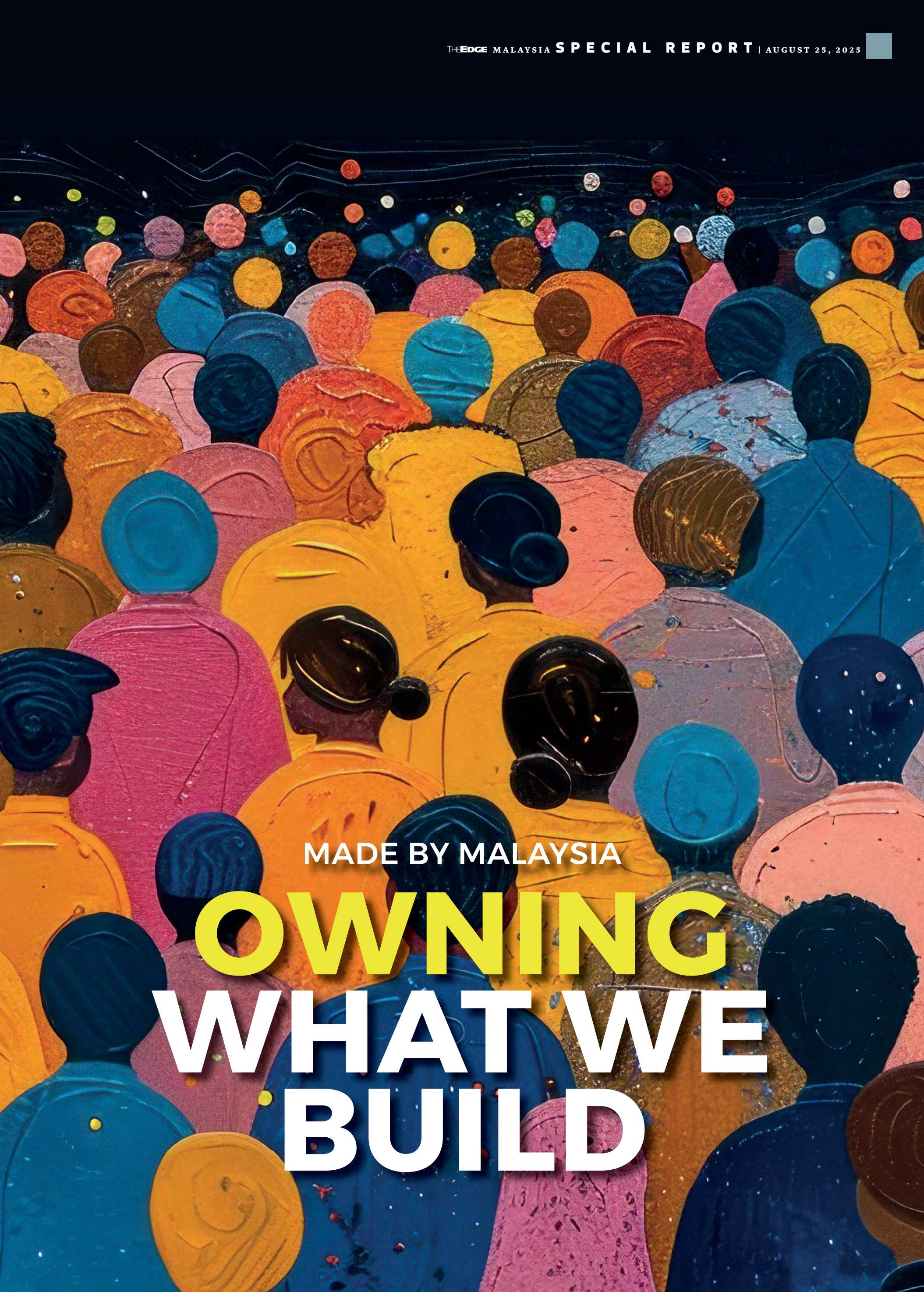




MADE BY MALAYSIA

OWNING WHAT WE BUILD

OWNING WHAT WE BUILD

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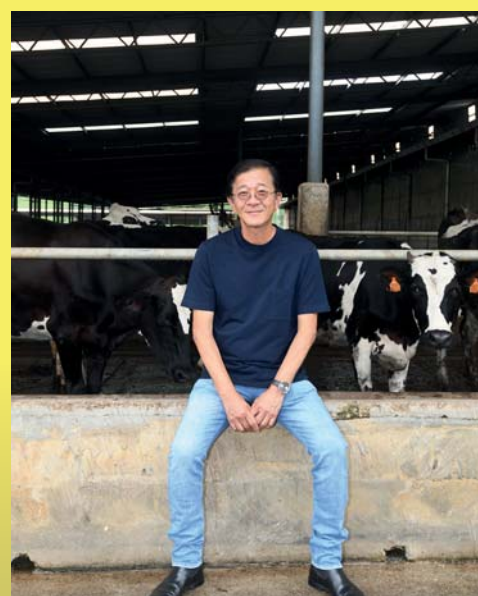
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EDITOR'S NOTE



SHAHRIIL BASRI/THE EDGE

Playing for keeps

When we first contemplated this special pullout, shifting from a "Made in Malaysia" campaign to the more nuanced call of "Made by Malaysia", one question stood out: Does semantics really make a difference? Could this be yet another impossible ambition for Malaysia to claim its place as a global challenger, surrounded as we are by mightier rivals with deeper pockets and longer track records?

The answer, we realised, lies less in policy or capital, and more in perception. Made in Malaysia has long meant being a cog in someone else's wheel, efficient in manufacturing and exports, but often at the cost of owning the very ideas and designs we help bring to life. As Minister of Science, Technology and Innovation Chang Lih Kang points out in the Cover Story (Page 32), a nation cannot rightfully be considered a true technology powerhouse if it does not own the intellectual property or design rights of its exports.

Made by Malaysia is different. It is a clarion call to build resilience against volatile global supply chains and to ground our economy in research, development, commercialisation and innovation. The 13th Malaysia Plan sets out the ambition of driving private investments averaging RM417.9 billion annually into high-growth industries such as semiconductors, pharmaceuticals, halal-certified goods, the creative sector and even future-defining technologies like hydrogen energy and sovereign artificial intelligence (AI) platforms.

The present reality, however, is sobering. Malaysia spends just 1.01% of gross domestic product on research and development (R&D) — well below South Korea's 5.21%, Japan and the US' over 3%, and China's 2.6%. More than 90% of patents filed in Malaysia are owned by foreigners. Talent gaps persist, with fewer than 3,000 companies engaged in R&D and only a quarter of researchers holding doctoral qualifications. Commercialisation remains another bottleneck, with too few accelerators or intermediaries to move promising technologies from lab to market.

Even so, we believe Made by Malaysia is the pathway to truly play for keeps — as the following pages illustrate, through enablers strengthening the ecosystem, financiers backing Malaysian names, and entrepreneurs who boldly blend tradition with modernity while proudly carrying the Malaysian identity.

Challenging? Undoubtedly. Late? Possibly. Yet, history reminds us that Malaysia has never shied away from daring ideas — none bolder than launching a national car in 1985. Today, aerial and electric vehicles, chip design parks and AI platforms are the new frontier.

In a few days, we will be celebrating 68 years of independence, and the time feels right. The true test now is whether we can create brands, patents and technologies that the world not only buys, but also recognises and respects for their ingenuity.

Selamat Hari Merdeka! **E**

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COVER PICTURE BY VECTEEZY

OWNING WHAT WE BUILD

ASPIRATIONS

Becoming the brand the world knows

BY ARIS RIZA NOOR BAHARIN

Malaysia wants to stop being the name behind the label and start being the label the world knows. The next phase of growth demands not just exports, but a brand identity as unmistakable as Apple's for the US or Samsung's for South Korea. While local players believe this is possible, many recurring challenges need to be overcome.

"Right now, 'Made in Malaysia' often signifies affordability or niche appeal rather than high design or cutting-edge innovation. The global audience lacks a unified perception of what Malaysian-made actually means," says Ahmad Azuar Zainuddin, CEO of Satu Creative, an innovation and entrepreneurship consultancy.

Drawing on his experience in training, marketing and branding for local enterprises, Ahmad Azuar believes this narrative can still change. "With the right storytelling, flagship success stories and ecosystem-wide alignment, Malaysian brands can create a halo effect where one brand's success lifts others. Brands like Apple, Nike and Singapore Airlines have built their global reputations through clarity, consistency and purpose."

To achieve this, Malaysian brands need to deeply understand their target markets, be single-minded about the big idea they represent and stay consistent in how they communicate the values behind "Made in Malaysia".

Shahid Bakar, chief operations officer of MInD Mechatronic Intelligent Design Sdn Bhd, better known as Mindnrobotics, reflects on how the company started as a customised solutions provider because it was genuinely trying to understand where and how tech can make a difference in the market.

"We've faced setbacks, especially when trying to compete with mature foreign technologies in markets that weren't ready for us or didn't need us. But through those failures, we found clarity: Malaysia doesn't need imported solutions pretending to fit — we need tech that understands us," says Shahid.

Mindnrobotics currently builds robotics, Internet of Things and automation systems specifically for plantation and farming, which can function in the mud, under the canopy or hot sun and more.

Meanwhile, Datuk Pua Khein-Seng, founder and CEO of Phison Electronics Corp and MaiStorage Technology Sdn Bhd, notes how Malaysia's history of producing goods and exporting for larger companies can itself be a major advantage.

As an example, Pua points to the launch of MaiStorage last year, to grow local talent by training graduates to become integrated circuit design engineers to enable the export of Malaysian-designed artificial intelligence and related technologies across the region.

"Historically, Malaysia has been known more for manufacturing than innovation. With MaiStorage, we aim to shift from simply 'Made in Malaysia' to truly 'Designed by Malaysia'. This not only enhances Malaysia's international brand image but



SATU CREATIVE

“A uniquely Malaysian brand identity can be a powerful expression of cultural intelligence, design sophistication and purpose-led innovation. Imagine brands that proudly express their Malaysian soul, whether through fashion, food, tech or wellness, but with global finesse — the result would be a Malaysian brand identity that is not just distinctive but desirable.”

Ahmad Azuar, Satu Creative

also helps anchor design and innovation locally," says Pua.

He adds that to truly realise this "Designed by Malaysia" future, government policies and procurement support are essential. Concrete plans and clear budgets, not just goals, are key to accelerating the local tech industry.

Many local players believe Malaysia can achieve this. Shahid highlights that the country's strategic geological location — at the crossroads of the developed and developing world — offers local companies a unique vantage point.

"We understand constraints, but we also understand ambition. We know how to stretch resources, but we also know how to dream big. That makes us flexible, adaptable and grounded in reality," says Shahid.

From this, Malaysia as a national brand already has its identity, he explains. It means that solutions developed locally are diverse, resilient and adapted to local challenges. It gives Malaysian brands credibility across Southeast Asia and beyond.



MIND MECHATRONIC INTELLIGENT DESIGN

“We have been shaped by a system that taught us to look outward. So rebuilding confidence in Made by Malaysia isn't just a branding exercise, it's changing mindsets. And we know it doesn't happen overnight.”

Shahid, MInD Mechatronic Intelligent Design



REUTERS

But sticking with what makes Malaysia unique, while it can help build a strong global image, it can also be limiting. Especially if companies go all-in, they lose that unique perspective, Shahid says.

Ahmad Azuar adds that one of the biggest struggles in establishing a strong national brand is that the ecosystem is currently fragmented. While there are efforts like grants, expos and media coverage to help build it up, they often work in silos, and efforts become disjointed and impact becomes limited.

Today, many Malaysian brands draw on rich local culture such as batik prints, traditional foods and multilingual storytelling. But often, these are presented in ways that feel localised or nostalgic rather than globally aspirational. There is a disconnect between authenticity and innovation, with few brands confidently exporting their cultural identity without watering it down.

"A uniquely Malaysian brand identity can be a powerful expression of cultural intelligence, design sophistication and purpose-led innovation. Imagine brands that proudly express their Malaysian soul, whether through fashion, food, tech or wellness, but with global finesse — the result would be a Malaysian brand identity that is not just distinctive but desirable [like] Tokyo, Dubai and London," says Ahmad Azuar.

Overcoming local biases

Beyond the need to be authentic and marketable, the biggest hurdle many players face in setting up a strong national brand for Malaysia as a designer is the mindset that locally made products are inherently inferior.

"Many Malaysian consumers still prefer international brands due to a long-standing perception that foreign products equal higher quality. Changing this mindset requires leadership by example," says Pua.

This is a sentiment echoed by Shahid, who has been on the receiving end of this conditioned to look outward, recalling how Mindnrobotics would build systems that work and are proven in the field, only for potential clients to be interested once a foreign partner's logo or validation is plastered on.

"We have been shaped by a system that taught us to look outward. So rebuilding confidence in Made by Malaysia isn't just a branding exercise, it's changing mindsets. And we know it doesn't happen overnight," says Shahid.

The success of Malaysian brands hinges on the collective support from the nation, and this is especially true for the government. "When the people see [public officials] using locally designed products, it allows the brand to grow organically," says Pua.



PHISON ELECTRONICS

“Many Malaysian consumers still prefer international brands due to a long-standing perception that foreign products equal higher quality. Changing this mindset requires leadership by example.”

Pua, Phison Electronics Corp and MaiStorage Technology

Shahid, meanwhile, sees good old-fashioned grit as a way through. He expresses how his company takes this perception as a challenge to prove everyone wrong and build global credibility.

"We believe that funding is important, but belief is even more powerful. We have shown up with everything we've got: real solutions, field-tested deployments and a deep commitment to solving national challenges. But deep tech doesn't grow in perfect conditions. It grows in the field. It takes time, mistakes and the kind of support that goes beyond capital," Shahid explains.

Another key issue Shahid sees within the ecosystem is that many Malaysians often wait for the "right time". But we need to stop waiting to be "ready". The tech in Malaysia is already there and solving real problems.

He says Malaysia is already building high-tech systems in palm oil plantations and small farms, and has been automating manufacturing processes for decades. The talent and technology are there; only the mindset needs to shift.

Ahmad Azuar agrees, noting that Malaysian brands have everything they need to lead. Malaysia holds a rich variety of cultural assets, and innovators have that entrepreneurial drive and creative ingenuity.

"When these strengths are aligned with a clear brand narrative, strategic positioning and the right market channels, Malaysian products can evolve into brands that command attention and trust beyond our borders. It starts with believing that Malaysian-made is not just competitive, but also compelling,

"What is exciting now is that we do not need to start from scratch. The talent, heritage, innovation and vision already exist. What we need is alignment between storytellers and strategists, policymakers and entrepreneurs, designers and investors," says Ahmad Azuar.

COMMENTARY



SUHAIMI YUSUF/THE EDGE

Building Malaysian MNCs

BY LIEW CHIN TONG

The greatest challenge I find in my work is not so much getting things done but rather convincing Malaysians of the true worth and great potential of our nation.

When I talk to the leaders of the semiconductor industry in China, especially those in their fifties and sixties, very likely they would have worked for Malaysian, Singaporean or Taiwanese bosses when they were young.

We started our semiconductor journey way back in 1972, at around the same time as Singapore, South Korea and Taiwan, and at least 20 years earlier than China.

But today, Malaysia has no Huawei, Samsung or Taiwan Semiconductor Manufacturing Co. Of course, Singapore is like us too, dependent on foreign companies.

China has surged ahead while South Korea and Taiwan maintain their technological edge in many ways.

Whether in semiconductor or furniture, Malaysia is stuck in an outsourced model and is still competing in a race to the bottom price war with firms in China and Vietnam.

We are also stuck with a foreign direct investment mindset, often competing with neighbouring countries in offering multinational corporations tax holiday packages in a race to the bottom.

As deputy minister of investment, trade and industry, whoever comes to tell me that Vietnam or Thailand offers a sweeter deal, I would tell them it is their choice to invest there because I want to see Vietnam prosper too. But more importantly, I am of

the view that Malaysia offers other value propositions, which means we don't need to compete with Vietnam but we could complement each other.

Malaysia must value its capabilities and harness them to command a higher price rather than racing to the bottom. We should not sell ourselves cheap.

Also, the world has changed. Between 2001 — when China joined the World Trade Organization — and the Covid-19 pandemic, China was the undisputed factory for the world. And the world believed that there was only one singular supply chain.

We are living in a very different time now. Supply chains are now diversified to de-risk and are often underpinned by geographical and geopolitical considerations.

Outside the US, China and Europe, there is hardly anywhere else that has such a comprehensive and sophisticated supply chain of Singapore-Malaysia-Vietnam combined. Asean economies should collaborate more, and forget about the competition ethos of an earlier age.

Malaysia is embarking on a paradigm shift. The model outlined in the 13th Malaysia Plan is meant for us to move from a "Made in Malaysia" approach to "Made by Malaysia".

In the National Semiconductor Strategy, the main aim is to create 10 Malaysian technology companies with revenues of US\$1 billion and another 100 companies with revenues of close to RM1 billion.

Malaysia needs to think about the following framing:

“Malaysia must value its capabilities and harness them to command a higher price rather than racing to the bottom. We should not sell ourselves cheap.”

Liew

- First, we should move beyond the trading nation mind frame to that of a technology nation;
- Second, we should aspire to be the indispensable middle in technology and supply chain, while holding on to a non-aligned geopolitical positioning, making Malaysian technology suitable to complement technologies from various sides;
- Third, our technology sectors such as semiconductors are highly vertically linked globally to multinational corporations (MNCs), but rarely linked horizontally to solve societal problems. For instance, the Malaysian semiconductor sector produces a very significant quantity of automotive chips for the global market but the automotive industry is not linked to the semiconductor industry in Malaysia;
- Fourth, in innovation and manufacturing, producing for whom is a key

concern. The more horizontal integration we have, the stronger the technology sector in the country would be able to bring a spillover effect to elevate our overall technological competencies. We should aim to create technologies for the bottom billions of the world's population; and

- Fifth, we need to discard the old mindset of believing that Malaysian companies are not competent enough, and can only operate as small and medium enterprises. While the government provides assistance to our SMEs, those who think that Malaysian companies are weak would continue to look to foreign companies to invest.

The reality is that we do not necessarily lack technology or even capital. We just need to have a bit more faith in the potential of our own local companies, workers and people. We should build the policy and financial ecosystem to support the objective.

The shift means that we will have to keep asking whether we already have Malaysian capabilities before looking for foreign solutions. It also means that we need to have a more rigorous localisation programme when foreign investment comes into the country.

With the right conditions, we will be able to build Malaysian MNCs that are based on technological prowess to execute the Made by Malaysia strategy. Strong Malaysian MNCs and Asean MNCs are good additions to the world in times of flux and a great engine to create a resilient middle class among the Asean population.

The time to start moving is now. **E**

Liew Chin Tong is deputy minister of investment, trade and industry

OWNING WHAT WE BUILD

ENABLER

Builder of cities and futures

BY KIRAN JACOB

The story of Sunway Group is inextricable from that of Malaysia. Over the past five decades, the home-grown conglomerate has matured alongside the nation, weathering challenges and contributing to its development.

This is perhaps why Sunway founder and executive chairman Tan Sri Jeffrey Cheah is one of the strongest believers in the Made by Malaysia ambition, which he sees as a timely call to propel the country up the value chain through innovation, design and talent.

"This will help us retain the best and brightest Malaysian talents to succeed and flourish within Malaysia instead of perpetuating the brain drain phenomenon," he says. "My optimism is grounded in facts, not speculation."

He adds that political stability and supportive policies, combined with low inflation and interest rates, have created an investor-friendly environment in the country.

"The government announced that Malaysia's investment figures for 1Q2025 alone stood at RM89.8 billion in approved investments, marking a steady 3.7% year-on-year increase. Foreign direct investments accounted for RM60.4 billion, while domestic investments contributed RM29.4 billion ... which is why I advise our young people who are thinking of emigrating to focus on opportunities at home instead, especially as it is becoming clear that the West is no longer as welcoming [as it was] towards migrants," he says.

Real progress depends, however, on building a local ecosystem that nurtures original ideas, breakthrough technologies and impactful solutions at scale, asserts Cheah.

He believes the ambition requires bold policy reforms, sustained political will and strong collaboration between academia and industry, alongside education reform that begins as early as primary school with a greater focus on science, technology, engineering and mathematics, as well as the humanities, which remain essential for cultivating critical thinking, empathy and ethics.

Cheah stresses that for the Made by Malaysia ambition to succeed, it must stand for excellence, inclusive innovation and the conviction that Malaysians can shape not only their own future, but also that of the world. He elaborates on his perspective below.

What does Made by Malaysia mean to you and what reforms would you like to see in our education system to support the country's aspiration to be an innovation powerhouse?

Cheah: To me, Made by Malaysia is about projecting a brand that reflects innovation and creativity. Many products labelled 'Made in Malaysia' are merely assembled here, with little value-add.

To move towards Made by Malaysia, the country must move up the value chain by conducting R&D, innovating, designing, manufacturing and automating production, driven largely by talent trained in our own education system.

This will help us retain the best and brightest Malaysian talents to succeed and flourish within Malaysia instead of perpetuating the brain drain phenomenon.

Many Malaysian-made innovations have gained international recognition, from technology to the medical field, including the invention of the USB flash drive by Pua Khein Seng, biometric passport chips by IRIS Corp and the N95 face mask by Dr Wu Lien-teh. Even global tech giants like Intel and Broadcom are led by individuals born in Malaysia, a testament to the nation's deep talent pool.

Made by Malaysia must signal that our country has built the ecosystem to generate original ideas, breakthrough technologies and impactful solutions that are produced by Malaysians and in Malaysian institutions.

The challenge now is to unlock that potential at scale at home. This requires bold policy reforms and the sustained political will to implement them. It also requires enlightened leadership to turn policy into impact, not just rhetoric.

It must represent a mindset of excellence, a commitment to inclusive innovation and a belief that Malaysians can shape not only our own future but that of the world.

In your view, what are the most pressing barriers Malaysian innovators face when trying to own and scale their IP and how is the Jeffrey Cheah Foundation/Sunway Education Group actively addressing them? How do you ensure the academic environment fosters not just academic excellence but also entrepreneurial thinking and IP creation? It is not just about the education system. It is also about developing an ecosystem that fosters an entrepreneurial and risk-taking mindset. This means amending some of our archaic laws that can promote such a change.

Take our bankruptcy laws, which impose a heavy burden on entrepreneurs taking on debts. According to official statistics, almost one in five bankruptcies stems from the failure of business ventures. Under our current system, with discharge often taking five years or more, the prolonged restrictions and reputational damage discourage risk-taking and delay any chance of starting over.

Bankrupt entrepreneurs face strict limits on borrowing, loss of travel privileges, disqualification from directorships and public stigma, making it difficult to regain trust or attract investors. All of

these deprive them of the opportunities to bounce back quickly and try again. As all of us know invention is 99% perspiration and 1% inspiration, not to mention a healthy dose of luck.

Perhaps the law can be amended to differentiate between genuine risk-taking entrepreneurs and spendthrifts with poor personal financial habits.

Which specific sectors do you believe Malaysian students and young entrepreneurs should be paying close attention to?

I believe young innovators should focus on climate technology, health and biotechnology, digital finance and artificial intelligence (AI), which align with our national priorities as outlined by the government in the 13th Malaysia Plan and the National Energy Transition Roadmap.

I would suggest that we also focus on agrotech [agricultural technology]. After all, we have vast experience in the agriculture industry and food shortage is a growing global crisis. Addressing challenges like food security and energy transition through integration of advanced technologies is the key. New green innovations can pave the way for more resilient and sustainable systems.

Digital financial services and fintech continue to drive financial inclusion, productivity and regional integration across Asean. This momentum extends to AI and data innovation.

Many argue that 'upskilling' no longer reflects the challenge of preparing talent for AI, deep tech and global competition. How can Malaysia move beyond this to produce true creators and innovators?

In the age of AI and deep tech, what we truly need is 'mindset transformation', cultivating curiosity, imagination and collaboration. The term 'upskilling' often implies marginal improvement, when today's world calls for a paradigm shift in how we think about talent.

Preparing Malaysians for AI, deep tech and a global economy requires such an entrepreneurial mindset.

For instance, through Sunway iLabs, students work with start-ups, build ventures and develop solutions to real market problems. [The tuition-free computer science school] 42 Malaysia, [an initiative] under Sunway Education Group, offers an entirely different model: no degrees, no teachers, no tuition — just talent proving itself through project-based challenges.

"I firmly believe that to be the best, we must work with the best and learn from the best."

Cheah

Looking beyond 2025, what is your strategic vision for the Sunway Education ecosystem? What would you want your legacy to be in terms of building capabilities for the Made by Malaysia ambition?

The Jeffrey Cheah Foundation has built active partnerships with some of the world's most prestigious institutions, including the University of Cambridge, University of Oxford and Lancaster University in the UK, as well as Harvard University and MIT Boston in the US.

The foundation has already established three Sir Jeffrey Cheah Distinguished Professorships at Harvard, four at Cambridge and two at Oxford universities, as well as one at MIT Boston and Universiti Kebangsaan Malaysia (UKM).

The Jeffrey Cheah Biomedical Centre at the University of Cambridge houses about 400 scientists and researchers from around the world who are coming up with breakthrough solutions and treatments in various medical fields, including genomics. It is my hope that researchers and clinicians from Malaysia will be part of the biomedical centre.

These collaborations enable us to bring cutting-edge research and world-class knowledge not only to Malaysia, but also the wider Southeast Asia region. I firmly believe that to be the best, we must work with the best and learn from the best.

Complementing these global linkages is our commitment to strengthening local institutions.

The foundation has endowed a professorship in medicine and public health research at UKM, one of the country's oldest and most respected universities. I hope this endowed chair will serve as a catalyst, inspiring more individuals and organisations to support philanthropy in higher education.

I am confident that more public-private partnerships of this nature will help accelerate our shared ambition to position Malaysia as a regional hub for quality education and impactful research.

This aspiration is closely tied to my lifelong dream for Sunway University to one day be known as the 'Harvard' or 'Cambridge' of the East. I am aware, of course, that this may not happen in my lifetime, but I'm laying the groundwork for this vision to be realised by those who come after me.

It is my hope that, in time, we will see more innovations proudly 'Made by Malaysia' and more companies making a mark on the world, and led by Malaysians. **E**





SELAMAT HARI MERDEKA

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OWNING WHAT WE BUILD

FINANCE

More growth and early-stage capital needed

BY KUEK SER KWANG ZHE

Venture capitalists (VCs) and banks funding the businesses of home-grown entrepreneurs observe that Malaysian companies need patience and growth capital to achieve the government's goal of "Made by Malaysia". Made by Malaysia means local firms owning the intellectual property (IP) for their products and services and growing into regional and global players.

Hive Ventures, the first dedicated data and artificial intelligence (AI) fund in Taiwan, according to its official website, sees potential in Malaysian start-ups. The firm has scoured the market and is aiming to deploy capital into some of them.

Of these start-ups, two stand out. One is Mesolitica, which builds large language models tailored specifically for Malaysia's diverse linguistic ecosystem. Its flagship model that supports Bahasa Melayu and 16 regional languages and dialects has been adopted by government agencies and corporations for customer service and data analysis, among others.

The other is Decube, a start-up that delivers AI-powered data governance and observability solutions and whose clients include MUFG Bank, Japan's largest bank and one of the largest in the world, and Indonesia-based Super Bank. According to PitchBook, the firm raised US\$800,000 last year from investors such as 500 Global and First Move.

"These companies exemplify Malaysia's ability to develop high-value, scalable solutions," says Yan Lee, founder and managing partner at Taiwan-based venture capital firm Hive Ventures.

Over the years, Malaysia has made significant strides in fostering a vibrant start-up ecosystem, driven by a combination of government-backed initiatives and private sector involvement. These efforts have been instrumental in nurturing the "0 to 1" phase, which means encouraging the launch of new ventures and fostering a culture of innovation.

However, Malaysia's ecosystem players must shift their focus towards addressing the financing needs of companies in the "1 to 10" phase, which means those that have gained market traction for significant growth moving forward, says Lee.

"We've seen many of these companies in Malaysia, with between US\$1 million (RM4.24 million) and US\$5 million in revenue derived from their products and solutions. They now require capital to scale their operations, expand to larger clients and enter broader regional or global markets," he says.

"Currently, the funding landscape for companies at this stage remains limited with heavy reliance on government agency investors and a small number of regional venture capital firms. To truly elevate Malaysia's start-ups onto the global stage, there is a pressing need for more venture investors with global resources, networks and expertise to support these scaling companies."

Lee says attracting more specialised investors with deep knowledge of specific sectors — such as advanced technology,

industrial digitalisation, AI, biotechnology and green energy — can unlock the full potential of local IP. These investors can provide local companies not only with capital, but also strategic guidance, mentorship and access to international markets.

"Malaysia must continue to cultivate an investor-friendly environment, incentivise cross-border partnerships and promote policies that attract global venture capital," he says.

Victor Chua, founding and managing partner at Vynn Capital, strongly believes that creating and owning high-value IP is essential for Malaysia to transition to a high-income nation. "If you look at what drives real economic transformation, it is local companies building brands and products that they fully own, which generate higher margins."

Chua says IP in the software space is particularly important and attractive as it enables companies to scale quickly and win "stickier customers", as these service providers are competing not just on cost, but on product innovation.

"The Made by Malaysia goal should not be limited to just physical goods. It should be about digital solutions, data, creative content and platforms designed and built by Malaysians for the local, regional and even global market," he says.



HIVE VENTURES

“We’ve seen many of these companies in Malaysia, with between US\$1 million and US\$5 million in revenue derived from their products and solutions. They now require capital to scale their operation, expand to larger clients and enter broader regional or global markets.”

Lee, Hive Ventures

Two portfolio companies under Vynn Capital, which have local IP and which have grown by leaps and bounds, are Carsome and DF Automation & Robotics. The latter develops and manufactures its own autonomous guided vehicles and robotics solutions for industrial and commercial applications.

"DF designed and built their own IP here in Malaysia, supplying their products to not just local clients, but South-east Asia and beyond. This shows that Malaysia can move up the value chain, not just in assembling or distributing, but inventing, building and exporting advanced robotics solutions under their own brand," says Chua.

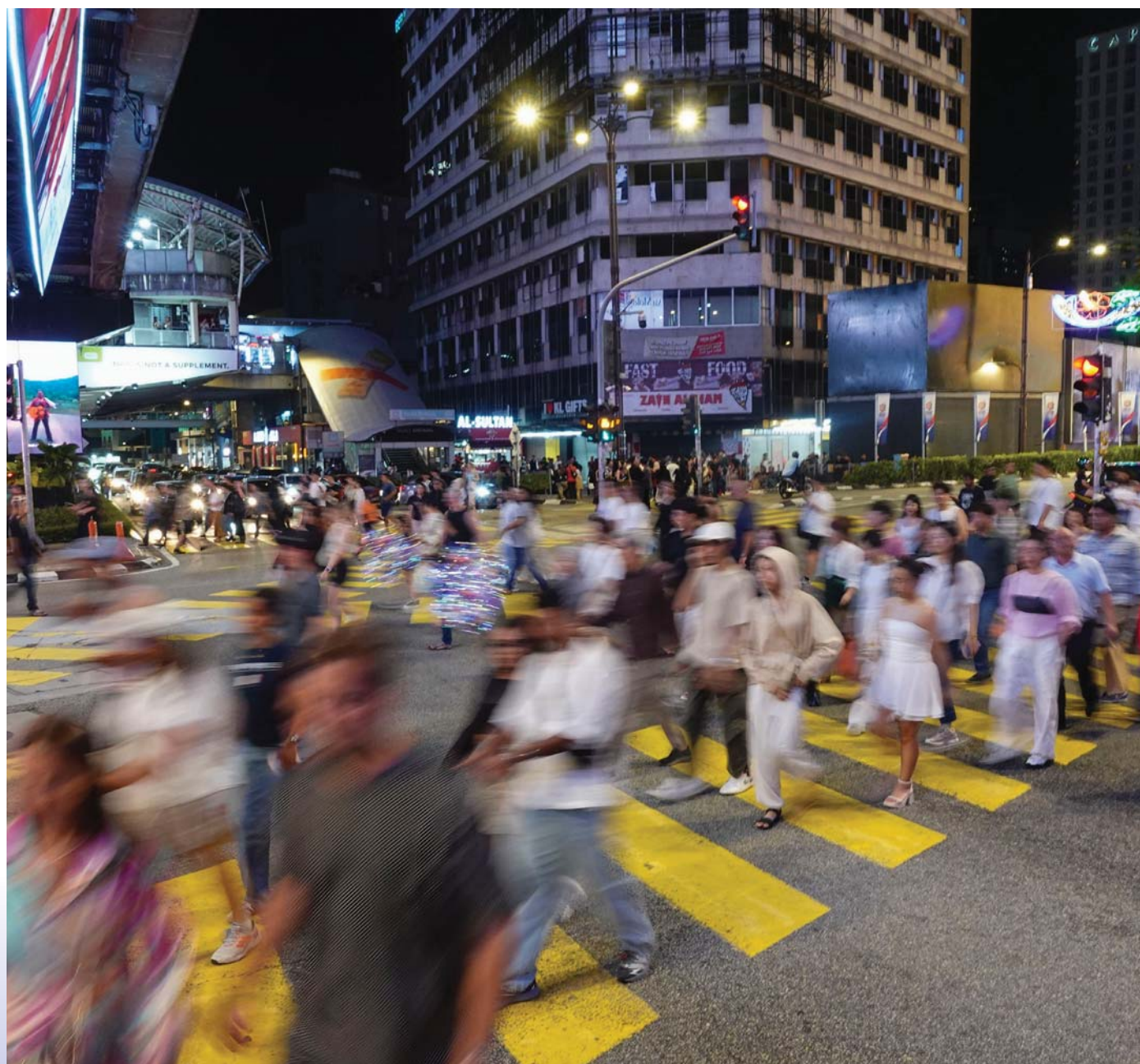
He concurs with Lee in that there is a funding gap for companies in the growth stage. Once a company has proved its product-market fit and wants to expand regionally, the cheque size required often exceeds what local VCs can provide.

"The growth stage gap means companies either scale more slowly than they can or move their headquarters abroad to access bigger pools of capital, which undermines the 'Made by Malaysia' vision," he points out.

Chua sees shortages in smart and strategic capital during the early stage. While many start-up founders can raise small seed rounds of funds or tap government grants, what they really need is capital that comes with hands-on guidance, market access and strategic partnerships.

"For Malaysia to truly support local champions, we need a healthy continuum of funding, which means smarter, early-stage capital like what we provide at Vynn, plus deeper and more diverse pools of growth-stage capital, venture debt and institutional participation. There's a real need for more growth capital, structured financing and institutional investors who are comfortable with the risk and return profile of innovative businesses," he says.

CONTINUES ON PAGE 10



REUTERS



A Legacy Built to Last, A Future We Continue to Shape

Picture this.

You were riding that school bus filled with excited classmates, wide-eyed as you passed the PETRONAS Twin Towers for the first time, wondering how something so magnificent could rise from Malaysian soil. Just a few decades earlier, the nation had stood shoulder to shoulder on a field in front of Sultan Abdul Samad building, voices united as the Federation of Malaya flag was raised for the first time on the eve of 31 August 1957. That moment sparked a promise, that independence would not only be cherished, but built upon.

Or perhaps you were one of the few walking through the heart of Putrajaya, which was magnificently designed ahead of its time, reflecting the progress and how far the country has come. It was designed not just for function, but to embody service, dignity and unity in governance.

Malaysia dreamt boldly. We imagined a future that was modern, confident and deeply rooted in our own destiny. At the centre of that dream was a conviction that small nations could achieve greatness, not by imitating others, but by paving our own way.

KLCC Group, the Nation Builders

KLCC (Holdings) Sdn Bhd (KLCCH) was born more than thirty years ago, not merely to develop structures, but to shape symbols of a better Malaysia. KLCCH was tasked with being the master developer of the 100-acre KLCC Precinct, former site of Selangor Turf Club while Putrajaya Holdings (PJH), who tended to over 12 thousand acres in Putrajaya, formerly known as *Prang Besar Estate*, a rubber plantation established in 1921. Rooted in these rich historical legacies, we heed the call with a bold vision, our Malaysian hands, and hearts full of hope.

The Legacy We Maintain

Visions were never easy to realise. Maintaining what we've built, from towering skyscrapers to seamless transport connectivity, came with countless challenges. But every inch of upkeep, every problem solved, every detail perfected was done by Malaysians, for Malaysians. From the hands of engineers and technicians to the care of landscapers and builders, we've kept our promise, to preserve the pride of our nation and pass it on to the next generation.

The Icons We Built

So, we built that vision. Not just with steel, concrete and glass, but with soul. When the PETRONAS Twin Towers rose into the sky in 1998, they did more than break records; they defied expectations. Its unique floor plan, based on the Rub el Hizb, a traditional Islamic motif of two interlocking squares, became a modern tribute to our cultural and spiritual roots, highlighting the importance of unity, stability, harmony, and rationality.

The Precinct that Welcomes the World

Today, the KLCC Precinct has evolved into a space where Malaysia greets the world. From international conventions to global concerts, from cultural showcases

to everyday memories. This is where Malaysians and visitors alike come to experience the rhythm of a vibrant, united city. It's proof that the original vision to create a beating heart for the nation, has not only endured but flourished.

Global Icons, Malaysian Spirit

From an unassuming Southeast Asian nation, Malaysia became the talk of the global architectural and engineering communities. The Malaysian spirit stood proud on the world stage, as the PETRONAS Twin Towers, on its 25th anniversary, was honoured with the Global Icon Award by the Council of Tall Buildings & Urban Habitat, a recognition shared only with the Burj Khalifa. Last year, the Twin Towers and KLCC Park were awarded TheEdge Malaysia's Best Managed & Sustainable Property Award, and over the years, our developments have been consistently recognised by FIABCI-Malaysia. What we build here continues to echo across the world, a long-lasting symbol of the spirit that lives in all Malaysians.

Local Ingenuity and Capability

Our legacy continued with Putrajaya, a city that carries a story built on homegrown skills and determination. It was imagined and realised by Malaysian hands with its architecture and engineering as proof of what our own people could achieve, marrying practicality with a sense of place that feels unmistakably ours, and bringing their knowledge beyond our borders. Even the lake reflected forward thinking, with a natural filtration system that placed sustainability at the heart of its design long before it became a global priority.

Tomorrow's Journey Together

Our journey did not end there. Ombak KLCC, a new arts and culture destination, is set to bring waves of experience and wonder to the heart of the city, offering a dynamic blend of retail, culture, and experiences unlike any other in the city.

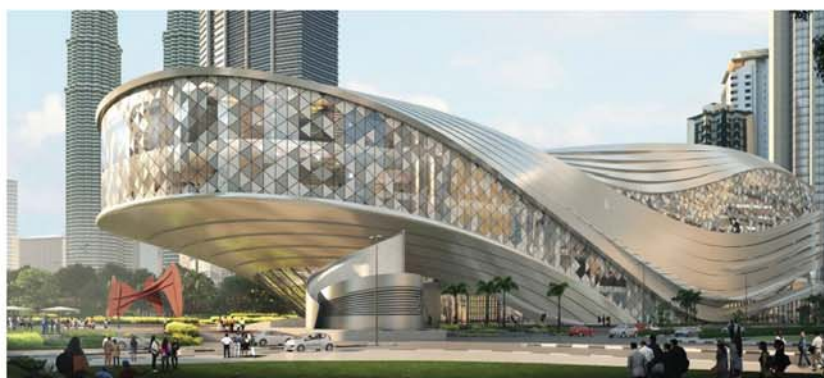
In Putrajaya, new developments like TERRA and Destina are carefully planned to nurture growing communities, with a focus on well-being, green living and human connection. On the historic grounds of the former Sungai Besi RMAF base, Tunku Abdul Rahman returned in August 1957 from London bearing the nation's independence agreement. With our new chapter, we carry that same spirit of service forward, envisioning the space to inspire and uplift generations to come.

KLCC Park, A Living Soul of the City

KLCC Park, a 50-acre green oasis, is home to our natural heritage; a reminder that even in a bustling capital city, nature can thrive. It is more than just a park. It is a place of connection: people to nature, and people to one another. Recognised by the International World Urban Parks Award 2020 and The Edge Malaysia-ILAM Sustainable Landscape Awards 2024, the park is a lasting tribute to our commitment to the Earth and our children who will inherit it.



From racecourse to a global icon, the PETRONAS Twin Towers stands as a symbol of Malaysia's ambition



Ombak KLCC, a new arts and culture destination located at Persiaran KLCC



TERRA Putrajaya, first integrated mixed lakeside development in Putrajaya



Destina Putrajaya, our transportation-oriented development

From untapped lands to national landmarks, KLCCH is proud to have played a part in shaping Malaysia's story. This Merdeka, we honour the past and embrace the future with the same love that began it all. A belief that our best chapters are still ahead.

**Selamat Hari Kebangsaan,
Malaysia!**

Follow us at @KLCCThePlace

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OWNING WHAT WE BUILD

Open data initiative will allow banks to finance SMEs more easily

FROM PAGE 8

Chua suggests that banks can be more innovative in offering venture debt or revenue-based financing for asset-light businesses, while VCs and private equity (PE) investors should collaborate more closely to bridge the gap between seed and growth funding rounds. Institutional investors, like pension and sovereign wealth funds, play a key role in backing local VCs and other growth investors, he adds.

"Singapore is a good example of a well-orchestrated ecosystem. It has clear policies to attract capital and talent, and its institutions actively co-invest with VCs. South Korea and Japan also show how coordinated support for research and development (R&D), domestic procurement and global market access can help local champions thrive," he says.

Incorporating alternative data through open data initiatives

Raymond Chui, group chief business and transaction banking officer at Alliance Bank, shares the views of Lee and Chua. The biggest challenge for many Malaysian start-ups, or even small and medium enterprises (SMEs), lies in accessing early-stage working capital and growth stage funding.

Banks can and do support businesses with proven revenue streams, but pre-revenue start-ups or SMEs with huge R&D outlay often fall outside the traditional financing parameters of the banks.



ALLIANCE

“What is needed for the ecosystem is better coordination and data sharing, so we can collectively make more informed and supportive decisions.”

Chui, Alliance Bank

The reach of financing solutions provided by banks is also limited as traditional banking models are designed to minimise risk, which limits their ability to fund high-growth, high-reward ventures, particularly in new or untested markets.

However, Alliance Bank isn't sitting idle. To close the gap, the bank is moving towards cash flow-based lending, where financing is based on real-time business performance instead of traditional collateral.

"We've also taken a bold step forward through ongoing collaboration with the Credit Guarantee Corporation (CGC), which enables us to support new companies as young as six months. Through this partnership, we offer financing based on simplified requirements, such as a six months of bank statements, making it easier for start-ups to access capital at a critical stage in their journey," says Chui.

Beyond capital, the bank introduced its Sustainability Impact Programme that plays a complementary role by helping SMEs strengthen their fundamentals and scale sustainably.

What is more interesting, perhaps, is that the bank is exploring open data initiatives to incorporate alternative data sources to assess SMEs' creditworthiness. It will benefit digitally active businesses that may not yet have conventional financial records to obtain a loan from banks, he says.

Yet, the financing of Malaysian companies for them to grow regionally or globally cannot be done in isolation. Other than banks, VCs, PE firms and angel investors play a critical role in providing the young, innovative companies with risk capital to commercialise their business. They need to work together.

Alliance's BizSmart Challenge exemplifies the collaborative approach between ecosystem players. The initiative sees the bank working with venture capital firm 1337 Ventures and PE firm 5X Capital to provide blended financing across the business cycle, from early-stage funding (where VCs and PE investors are more active) to the scale-up phase (where banks play a more prominent role).

Recent winners of the BizSmart Challenge are BioLoop, which uses Black Soldier Fly larvae to convert plant-based waste into high protein animal feed and organic fertiliser; Gula Cakery, a home-based bakery that has grown into a chain of more than 10 outlets; and Hivolt, which has started expanding its services in electric vehicle battery diagnostics and replacement.

Earlier winners include Christy Ng, today a full-fledged lifestyle company with international collaboration, and Amazin' Grace, a natural healthy snacks and breakfast provider that has expanded into regional markets like Singapore. Other alumni include myBurgerLab, Signature Market, Heal Nutrition, Salad Atelier, Bloom This, The Tapping Tapir and Offspring, all home-grown brands that have become household names, says Chui.

While start-ups and SMEs can access support from various agencies, financiers and incubators, this fragmented support sometimes confuses rather than enables entrepreneurs, he observes. "What is needed [for the ecosystem] is better coordination and data sharing, so we can collectively make more informed and supportive decisions," he says.

Another financing constraint comes from the capacity of SMEs themselves, says Chui, as many lack proper financial records, business planning or even awareness of the financing options available to them. "At Alliance Bank, we aim to bridge this through initiatives like our SME empowerment workshops and the #Support-Lokal platform, which provides visibility, guidance and connections for SMEs."

Lawrence Loh, co-CEO of group commercial and transaction banking at CIMB Group Holdings Bhd, says business accessibility to financing has improved in recent years, especially with the support of government guarantees such as those provided by Syarikat Jaminan Pembiayaan Perniagaan Bhd and CGC. They have helped bridge the gap between banks' risk appetite and the financial capacity of their customers.

"Many banks, including CIMB, have also adopted a credit scoring system to improve the turnaround times [of financing] and deliver more consistent credit decisions," he adds.

A key challenge for banks in financing start-ups and SMEs is encouraging them to embrace automation and digi-



HARIS HASSAN / THE EDGE

“The Made by Malaysia goal by the government should not be limited to just physical goods. It should be equally about digital solutions, data, creative content and platforms designed and built by Malaysians for the local, regional and even global market.”

Chua, Vynn Capital

talisation as essential tools to increase productivity, reduce costs and expand market reach.

Loh says many small businesses still operate without formal and proper financial records or credit history, making it difficult for banks to assess their eligibility for financing through standard credit programmes. "Beyond financing, businesses need to shift their mindset from competing on cost to building strong brands and scaling regionally or globally," he adds.

He says CIMB Group is committed to supporting SMEs' business expansion, not just through funding, but by connecting them with technology partners such as Exabytes, a homegrown web hosting provider, and Mesinkira, a retail support operation system provider.

"These partnerships help entrepreneurs digitise their operations, build stronger customer engagement and ultimately, expand their footprint. Our efforts are focused on building the capabilities and confidence of local businesses to become global players," he adds.

For CIMB Group, priority sectors are high tech, green and sustainable industries and agro-food, which encompasses all aspects of food production, processing and distribution.

"CIMB actively participates in Bank Negara Malaysia's targeted funding programmes, such as the Low Carbon Transition Facility, High Tech and Green Facility,



CIMB

“Beyond financing, businesses also need to shift their mindset from competing on cost to building strong brands and scaling regionally or globally.”

Loh, CIMB Group

as well as SME Automation and Digitalisation facility, enabling businesses with access to affordable financing rates of as low as 3.75% per annum. We also provide digital payment and cash management solutions, such as CIMB OCTOBiz app, QR payment services and reconciliation tools to streamline business operations," says Loh.

"We collaborate with government agencies, technology partners and educational institutions to deliver financial literacy, business scaling and export readiness programmes, especially for micro and small enterprises."

Perspective of a foreign investor

Hive Ventures' Lee received his pre-university education in Singapore and obtained his university degree and Master of Business Administration in Taiwan and China, respectively. Later, he launched Buzzinate, a data platform and service provider in China that was eventually acquired by iClick.

iClick Interactive Asia Group Ltd was listed on the Nasdaq and subsequently acquired by digital wealth management firm Amber DWM Holding Ltd. Today, shares of the combined entity, Amber International Holdings Ltd, are traded on the Nasdaq under the ticker AMBR.

Coming from such a background, Lee agrees that the Made by Malaysia goal is a critical step for the country to escape the middle-income trap. He himself witnessed how Taiwan transformed by prioritising innovation and industrial upgrading.

In the 1980s, Taiwan channelled over 90% of its substantial R&D spending into high-tech industries like semiconductor, enabling firms like the Taiwan Semiconductor Manufacturing Co (TSMC) to go from original equipment manufacturing to original design manufacturing to developing proprietary technologies. Malaysia, however, has leaned heavily on foreign direct investment and multinationals (MNCs), limiting local innovation and technology diffusion, says Lee.

To achieve the New Industrial Master Plan 2030's target of RM587.5 billion in manufacturing gross domestic product, Malaysia must significantly boost its R&D investment and private sector involvement, while prioritising talent development, including upskilling local workers and attracting foreign expertise to drive IP creation, he adds.

"Different from Malaysia's MNCs model, Taiwan nurtured domestic giants like TSMC and Acer by fostering home-grown technology and reducing dependence on external IP. That wasn't done in isolation," says Lee.

"Taiwan leveraged collaborative partnerships, joint ventures and joint research to gain critical know-how, enabling its firms to transition from assemblers to IP owners. Malaysia can emulate this by offering incentives like grants and tax breaks, establishing innovation hubs akin to Taiwan's Hsinchu Science Park and forging strategic partnerships to build local capabilities.

"Malaysia is now attracting the interest of global players to land on its shores. More joint ventures and deep technology collaboration can be fostered. These should be prioritised over pure financial investments and the establishment of fully owned foreign subsidiaries of foreign companies seeking to land in Malaysia."

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OWNING WHAT WE BUILD

ENABLER



SAM FONG/THE EDGE

Nurturing champions

BY PATHMA SUBRAMANIAM

Financial woes faced by small and medium enterprises (SMEs) are well known, and all financial institutions are cognisant of the challenges. Yet Alliance Bank Malaysia Bhd (KL:ABMB) stands out for its fervent support of what group CEO Kellee Kam fondly calls the “underdogs”.

“There’s a kinship there because we understand. We are considered the smaller guy in the industry, so the challenges of accessible capital and competing, we get those. We have always had a natural affinity for the entrepreneurs, the business owners, SMEs, the mid-market [businesses]. That is our core focus, our core market.”

When pressed on why the bank has a penchant for this segment, Kam says it is its *raison d’être*.

“The first thing we focused on, as a bank, was to find what [that reason] was going to be. In corporate speak, we say strategies, but in normal human speak, it is the reason to come to work. We are obviously the smallest Malaysian bank, right, so we always smile about the fact that we have a natural affinity for the underdogs, the smaller companies.”

That focus has led the bank to think differently about its role in the ecosystem.

Kam likens banks to fishermen who draw from the pond of economic activity when businesses seek loans. Alliance Bank has chosen to help restock that pond, replenishing it with healthy, growing SMEs so there is more for everyone to share.

“You just can’t keep being the guy who fishes. You need to also replenish the pool. Their success is our success. Banks do best when real activity happens, so you cannot just wait for it. You have to be part of the process that gets the ecosystem up and about,” he says.

SMEs make up 98% of registered businesses in Malaysia and contribute 38% to the country’s gross domestic product. Yet many still struggle to access financing.

In 2022, the National Chamber of Commerce and Industry of Malaysia reported that 52.3% of SME respondents encountered difficulties when applying for working capital loans, while applications from 78.6% of micro enterprises and 63.6% of small enterprises were rejected despite numerous efforts to boost the credit worthiness of these businesses.

However, Alliance Bank has carved out a strong position in SME lending, underpinned by a healthy funding profile and one of the industry’s most competitive net interest margins (NIMs). Its gross impaired loan ratio eased to 1.8% in March 2025 from 2.1% a year earlier, while the SME loan book performed even better at 1.9%, compared with the industry average of 2.8%.

Closing the gap

Many SMEs still fall into a “missing middle”, too small or too risky for traditional corporate lending, says Kam. Although private market financing instruments such as microlending and peer-to-peer lending platforms are expanding, uptake remains limited.

Stringent lending criteria aside, smaller enterprises often lack familiarity with banking processes and may not have the discipline to maintain clean credit records, he adds.

Factors such as irregular cash flow, incomplete documentation and delayed payments also affect application approvals as credit decisions, especially for small loans, often rely on scorecards that penalise even minor lapses, points out Kam.

Moreover, the process itself can be daunting as traditional approvals can take weeks and require business owners to spend hours on paperwork — time they cannot spare due to their daily operations.

“You would think that dealing with banks, everybody should know how to do it, but when you actually speak to them, you find that it is not as common as most people think. You have really passionate and resilient people who have to grind every

day just to keep the lights on. Our role is to help them channel that resilience into structured growth,” says Kam.

Considering these pain points, Alliance Bank has sought to address the barriers through its Digital SME financing solution, which allows businesses to apply online using only six months of bank statements and receive in-principle approval within 10 minutes. If all checks are satisfied, full approval can be given within a day. The product has grown from zero to RM500 million in loans in under four years, with minimal branch interaction.

But faster loan approvals are only part of the answer. Bridging the SME funding gap requires a wider ecosystem approach that brings together banks, investors, government agencies and support networks, stresses Kam.

“For the less bank-like start-ups, it’s venture capitalists and private equity investors who understand the risks. As companies mature, that’s where banks come in. But if you only wait until they’re mature, you’ve already missed an opportunity to help them grow into that space,” he says.

“We have always had a natural affinity for the entrepreneurs, the business owners, SMEs, the mid-market [businesses]. That is our core focus, our core market.”

Kam

So on its part, Alliance Bank embarked on the BizSmart Challenge in 2013. Initially planned as a competition to identify promising SMEs, it has evolved into a platform linking entrepreneurs, new start-ups and more established enterprises with venture capitalists and private equity firms as well as government agencies such as Cradle Fund Sdn Bhd and Credit Guarantee Corp Malaysia Bhd, and other partners.

Apart from having a chance to pitch their businesses, those who qualify receive mentorship, investor introductions and structured training on topics from financial projections to pitching. Last year, the BizSmart Challenge saw a record-breaking 593 submissions, the highest since its inception.

Some participants have gone on to raise significant funding and achieve export success. Alumni include burger chain My-BurgerLab, now with nine outlets across the Klang Valley; fashion accessories brand Christy Ng, which has grown 400% and is available in 70 markets worldwide; and healthy snack maker Amazin’ Graze, which has expanded into 10 countries. In the latest edition, winners and finalists include biotechnology firm BioLoop, which focuses on the circular economy, and artificial intelligence company MindHive, which has adapted stock forecasting tools for SMEs.

This year, the bank is organising its first BizSmart Conference as an anchor alumni engagement platform, providing a forum for past participants to exchange experiences and explore collaborations.

“You cannot build this network from the bottom up as a small business. Someone has to start the ball rolling,” says Kam.

Advocacy, advice and answers

Not only is the bank trying to plug financing gaps, it is also helping SMEs achieve sustainability compliance, recognising

that while large corporations can easily hire consultants to guide their growth, SMEs often cannot.

“Hiring two extra headcount to run their sustainability journey is not that big a deal for larger corporations. For SMEs, that is not the case,” says Kam.

The resources, time and technical know-how required to navigate environmental, social and governance (ESG) standards can be overwhelming and the challenge is even greater for SMEs. But these standards are becoming determining factors in market access, supply chain participation and funding eligibility.

“When you speak to SMEs, a lot of them tell you they have heard of ESG but do not know where to start. They worry about the cost, the manpower, and whether it is worth doing when their immediate priority is to survive and grow,” he explains.

Rather than treating ESG purely as a compliance burden, Kam says it helps to look at it as an “enabler of competitiveness”.

This involves helping SMEs recognise that sustainability practices can also support operational efficiency, market positioning and long-term profitability.

“A lot of them are already doing elements of ESG without calling it that, like reducing waste, saving energy or looking after their workers. We help them connect the dots and show how it can be formalised, measured and leveraged,” says Kam.

“In a small business, one person is already doing 10 things. [ESG compliance] will just become another encumbrance. Also we didn’t want to become a prescriptive thing, like, we know of their challenges better than they do.

“So, we set out to learn things from their perspective. We worked with Monash University Malaysia and Zurich Malaysia as our knowledge partners to understand the issues [SMEs] face and we structured our ESG outreach efforts around three As: advocacy, advice and answers.”

Advocacy raises awareness of why ESG matters and how it can open new business opportunities. Advice comes through tools such as the Progress Climate Assessment Tool, co-developed with the UN Global Compact, which allows SMEs to measure their ESG maturity and identify areas for improvement. Answers are delivered in the form of targeted financing, such as loans for installing solar panels or upgrading equipment to reduce emissions, with preferential rates for businesses that achieve higher ESG maturity scores.

The framework is designed to be practical, so that it can be easily implemented within the capabilities of small companies, says Kam.

“So, what we also found is that after running the survey for over two years, the advocacy level has jumped up significantly ... for example, for the question of how aware are you about ESG, it was initially only around 14%, but in the last survey, close to 80% Malaysian SMEs said they are aware.

“[This is why] we came out with the [framework]. We cannot expect SMEs to read a hundred-page ESG manual and then hire a consultant. What they need is a simple, actionable roadmap and a partner who can connect them to the right expertise and funding,” he explains.

“Their success is our success. If they grow, we grow. Helping them on ESG is part of replenishing the ecosystem of which we are part of,” says Kam. ■



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OWNING WHAT WE BUILD

ENABLER

From Beaufort to building a nation

BY JENNIFER GOMEZ

Rural development and women's empowerment, with digital tools, market access and global exposure for grassroots entrepreneurs often left out of Malaysia's start-up conversation, are top priorities for newly appointed Institut Keusahawanan Negara (Insken) CEO Viviantie Sarjuni.

Hailing from Sabah, Viviantie, or Vivi as she is popularly known, says her mission is to ensure that efforts to uplift communities cut across geographies, income levels and social divisions.

"The background of the people doing small enterprises in big cities like Kuala Lumpur differs from the entrepreneurs in the kampung. Here in KL, they have a lot more help and a good support network, but in the smaller towns and villages, the majority of them may not even have formal education," she says.

"And just because they are not sexy start-up stories, it does not mean we should leave them out of the conversation. It is our responsibility to go to these people and extend our assistance to them."

Insken is a government agency under the Ministry of Entrepreneur and Cooperatives Development (Kuskop), entrusted with nurturing Malaysia's landscape of micro and informal entrepreneurs.

Prior to joining Insken, the 44-year-old was the founding CEO of the Sabah Creative Economy and Innovation Centre (Scenic), which comes under the purview of Sabah's Ministry of Science, Technology and Innovation (KSTI).

Viviantie wants to go beyond merely providing training and coaching for these enterprises and instead aims to expose them to digital technology and a global ecosystem. "We want them to see what others are doing in this space, and we want to be able to shift the narrative globally, not just locally," she says.

This is why Viviantie is looking forward to the Rural Social Enterprise Gathering 2025 that will take place in Sabah from Oct 31 to Nov 4. Organised by Scotland-based Social Enterprise World Forum, Scenic will be the local host, with Insken as the strategic partner.

Viviantie's determination and enthusiasm for rural uplift is understandable. Born in Beaufort, Sabah, she spent much of her childhood moving across the state due to her father's work as a teacher.

"My dad used to knock on doors to ask why kids weren't in school. I didn't understand it back then, but realised later that he was trying to break them out of the poverty cycle," she says.

Viviantie's early exposure to both rural and urban Malaysia — in Sabah and Peninsular Malaysia — has become the compass for her leadership path, but it was not always so clear. She says that growing up she felt that she did not fit in well in both places (her father was from Johor while her mother is a Sabahan).

"When I came to KL from Sabah as a 17-year-old, I never felt local enough for Peninsular Malaysia. There was also a perception that people from Sabah or Sarawak aren't as competent. Someone even told me, 'For a Sabahan, you're quite

clever.' I have had to work twice as hard to prove myself," she says.

Viviantie is also candid about the challenges of being a woman in leadership, including her experiences with tokenism.

"There were moments when I felt I had a seat at the table, but not always a voice. We should be talking more about women's opinions being heard and taken into consideration," she says.

"People also expect a leader to be authoritative. But I believe in leading with empathy. A leader can be kind and still be effective. Kindness is not a weakness — it is a strength in a different form."

She credits her male allies for being part of her growth, mentors like Datuk Dr Ramzah Dambul, CEO of the Institute for Development Studies (IDS) in Sabah, and her husband Don, who was one of her first supporters in her quest for gender equity.

"I started by telling my husband, 'Support me'. Then I extended that conversation to my male friends. Many who helped me climb were men. But we, as women, need to initiate those conversations as well and support each other," she says.

“These are the voices that often go unheard, and we want to amplify them. We also want to introduce them to AI and digital technology, just enough to get them hooked on using these tools to scale their businesses.”

Viviantie

Viviantie's passion for uplifting women is deeply personal. The second of five daughters, she grew up acutely aware of how gender bias shaped opportunities. She says the day her youngest sister was born in 1997, her mother cried on the hospital bed. "Not because she wasn't happy, but because there was still that perception that girls weren't enough. Today, my youngest sister is a hydrogen energy scientist," she says.

"If a kampung girl like me, who grew up among oil palm plantations, can rise to a global stage, then so can any other girl. We're not behind because we're not smart. We're behind because of a lack of opportunity. That's what I'm here to change. And I don't think about not fitting in anymore. I am clear about where I stand."

She also found strength in Lean In Malaysia, a support network for women leaders. "It was a safe space to share struggles and learn from others. It reminded me I'm not alone."

Early, eager start to social advocacy

Years before joining Scenic, Viviantie used to make self-funded monthly trips back to Sabah to organise programmes for the rural community, including mentorship



SUHAIMI YUSUF / THE EDGE

and training in creative trade, innovation and technology.

Eventually, she got friends to join her cause, and they worked alongside government agencies, including those related to KSTI. One of her early social experiments involved a group of seven women coffee farmers in Kundasang.

"They were poor. They gave us dry biscuits and water when we visited. They wore torn clothes. But we saw potential. We bought 2kg of coffee beans initially, and taught them to roast organically. Now, their children go to school. They serve us pastries. They wear gold bangles. They've even become suppliers to other cafés," says Viviantie.

Over time, the Sabah government recognised the collective efforts and positive impact of advocates working to uplift rural communities there and established Scenic, appointing Viviantie as its first CEO in 2020. Under her leadership, Sabah was recognised as one of the top three states with social enterprises accredited by Kuskop and Insken.

"We turned Sabah into one of the top three social enterprise ecosystems in Malaysia. From 15 accredited social enterprises in 2020, it grew to over 200 in 2024, with 70% led by women," she says, her eyes lighting up. "That's not me alone, it was collective action."

The list of inspiring success stories has kept growing. In Tambunan, a woman involved with a social enterprise transformed the lives of local paddy farmers by turning their rice into premium, market-ready products. Another entrepreneur, who started by selling tempeh in simple plastic bags, has since expanded her business into a flourishing enterprise that exports to Hong Kong and Singapore. Additionally, a former journalist turned entrepreneur collected more than 800kg of plastic detergent bottles from the area surrounding Kayu Madang landfill to be upcycled into eco-friendly jewellery using 3D printing while simultaneously creating income opportunities for the urban poor in the vicinity.

At Scenic, Viviantie led efforts to foster grassroots innovation and uplift rural communities through creative trade and technology. Now at Insken, she is focused on turning the agency into a go-to hub for entrepreneurs, helping them shift their mindset and use real-world data and tools to build ventures that solve real problems.

During a recent visit to Langkawi to witness first hand a partnership effort between Insken and microcredit agency Amanah Ikhtiar Malaysia (AIM), she was admittedly taken up by a woman who had overcome mental illness, became a food delivery rider and now runs her own kerepek brand.

"These are the voices that often go unheard, and we want to amplify them. We also want to introduce them to AI and digital technology, just enough to get them hooked on using these tools to scale their businesses," says Viviantie.

While studying for her Master of Science in Social Innovation and Entrepreneurship at the University of Strathclyde in Scotland in 2023, she was invited to speak on Malaysian grassroots entrepreneurship at forums and universities in the UK, France and the Netherlands. "I shared stories on social entrepreneurship based on Sabah case studies, and they listened. They were moved."

Viviantie and team's contributions garnered recognition in 2024 when she was named one of the Kindness & Leadership 50 Leading Lights in the Asia Pacific, and honoured on the list of Sabah's 100 Most Inspiring Women. She was also awarded the Sabah Chief Minister's Special Award in 2024. A Chevening scholar, she currently serves as president of the Chevening Alumni Malaysia.

Looking ahead, Viviantie sees herself as a bridge, a connector of people, sectors and geographies. "I want to keep building bridges, between Borneo and Semenanjung, urban and rural, men and women, government and the people — until the gaps no longer exist." **E**

ENABLER

Beyond a seal of approval

BY GRACE YAP ERN HUI

Strengthening testing, certification and enforcement will be key to ensuring Malaysia's market values quality alongside competitive pricing, says SIRIM QAS International Sdn Bhd CEO Md Adha Rahmat, as such measures will also protect and elevate the country's best local products.

"For companies in any industry where safety and reliability are critical, TIC (testing, inspection and certification) plays a vital role in ensuring the right products are produced. Prioritising quality and compliance over cost alone leads to safer and more reliable outcomes," says Md Adha.

Yet not all businesses are willing to take this path. Some continue to bypass certification altogether, taking advantage of weak enforcement mechanisms. As a result, uncertified companies enjoy similar market access to certified ones, often competing on price rather than quality.

Md Adha stresses that without stronger enforcement, such practices undermine those who invest in certification and compliance. By tightening oversight, he argues, Malaysia can better safeguard consumers, boost trust in local products and improve the country's competitiveness in global markets.

"Businesses must go beyond meeting basic requirements by clearly defining quality standards within their organisation," says Md Adha.

He adds that it is essential for staff to fully understand and apply these standards consistently across all products and services.

Md Adha emphasises that it can be more challenging to verify product quality on online platforms. Flagship stores selling SIRIM-certified products are more reliable as they have undergone the necessary testing and inspection.

"Consumers need to be fully aware that certain products require safety and quality assurance, with certification serving as a key reference to help them decide whether a product is safe to purchase. This is an area the government should strengthen further," he says.



SIRIM QAS International aims to maintain a balance between aligning with international benchmarks and protecting local industries, while positioning Malaysia as a credible partner in quality assurance. Seen here is its Radio Frequency and Electromagnetic Compatibility Testing Laboratory at the Penang Skills Development Centre in Bayan Lepas.



“The greatest satisfaction is helping a business that once knew nothing about standards become

fully capable of implementing proper systems, meeting all requirements and even exporting its products. It is a long journey, but an immensely rewarding one.”

Md Adha

Certification and testing ensure that home-grown innovations meet safety, performance and regulatory requirements, he says, adding that it helps build confidence among buyers, regulators and end users.

SIRIM QAS International has predominantly been helping small and medium enterprises (SMEs) demonstrate compliance in safety and quality by offering digital submission systems, guidance and support in navigating certification processes.

"Common challenges [that we see for SMEs in meeting national standards] include limited awareness, documentation readiness and financial constraints. We aim to address these by providing training, streamlining processes and ongoing outreach to improve understanding and encourage greater participation," says Md Adha.

Beyond testing against national standards, he says that SMEs can also request evaluations against specific requirements of their target export markets. This ensures products comply before shipment, reducing risk of rejection abroad.

Notably, SIRIM QAS International is a member of IQNet, a network of 36 certification bodies worldwide, which means their processes align with international best practices. This can help SMEs gain globally accepted certifications.

"We assist SMEs through both online and offline application systems, ensuring they can easily access testing and certification services," says Md Adha.

In further support of local manufacturers, particularly SMEs in the electrical and electronics (E&E) sector, SIRIM QAS International has launched a new radio frequency and electromagnetic compatibility testing laboratory at the Penang Skills Development Centre.

The lab will enable companies to perform necessary compliance testing locally, saving time and cost while reducing reliance on overseas labs. Md Adha shares that the organisation is working closely with the industries and supporting them, especially in terms of testing as well as failure investigation and analysis.

Acknowledging that some companies prefer to send specialised products to its headquarters for testing due to confidentiality concerns, Md Adha assures clients of strict non-disclosure. "We have no interest in sharing confidential information. Our focus is on using our expertise to guide companies towards compliance."

He adds that compliance testing and certification may be behind the scenes and seem unimportant, but without it, a product wouldn't be able to grow or reach markets domestically and internationally.

Seeing increasing opportunities in environmental, social and governance (ESG) growth as well, SIRIM QAS International has also established the SIRIM 55 ESG Management System Certification to guide mid-tier companies (MTCs) and SMEs in adopting sustainable practices.

"For SMEs, the common perception is that ESG is only for big companies. 'I'm a small company, why should I care about ESG?'" they might ask. But what they don't

realise is that, along their supply chain, they may be supplying to giant companies and these giants want all their vendors to be ESG-compliant," says Md Adha.

He adds that SMEs would need to show that they are ESG champions, and that means their entire supply chain has to follow suit.

"We are seeing growing innovation in electric vehicle (EV) components, batteries and charging systems, alongside advancements in green technology and ESG-related initiatives. Certifications in these areas will equip local businesses with a strong framework and trusted reputation to develop and safeguard their unique innovations," says Md Adha.

Raising standards

SIRIM QAS International aims to maintain a balance between aligning with international benchmarks and protecting local industries, while positioning Malaysia as a credible partner in quality assurance.

"Personally, I hope every industry in Malaysia will treat standards as a basic requirement. Some companies approach SIRIM only because certification is mandatory, often without prior familiarity with or understanding of the standards," says Md Adha.

Rather than turning these companies away, he prefers to collaborate with them, guiding them to ensure their factories, products and services fully comply with standards.

"Often, companies just need a push and some guidance," he says. "For me, as an auditor, the greatest satisfaction is helping a business that once knew nothing about standards become fully capable of implementing proper systems, meeting all requirements and even exporting its products. It is a long journey, but an immensely rewarding one."

Md Adha also hopes that businesses will not limit testing and certification to a single department or non-core area, as this can hinder effectiveness across the organisation.

He reiterated that certification should be embraced by all and embedded as part of the organisational culture, rather than seen merely as a requirement to fulfil.

"If your goal is to achieve certification, begin with small, consistent steps towards meeting the required standards. Every challenge you embrace along the way will strengthen your capabilities, making the journey towards certification smoother and more rewarding," says Md Adha.

Overall, he believes Malaysia is progressing well in standardisation, maintaining a balance between protecting local industries and fostering an environment that encourages innovation and exports.

"At present, I think our government is doing a commendable job in this regard," says Md Adha.

SIRIM QAS International is supporting regional competitiveness through its expansion of certification services to markets such as China, Thailand, Vietnam and the Middle East, including through partnerships such as SIRIM Huasheng.

To keep pace with fast-evolving sectors and ease tension between regulatory compliance and innovation speed, SIRIM QAS International has introduced remote inspections, digitalised applications and clear certification pathways to reduce turnaround times.

CYBERJAYA'S ECOSYSTEM

NURTURING LOCAL TALENT TO ENGINEER MALAYSIA'S TECH FUTURE

Cyberjaya's tech ecosystem is spurring the growth of local start-ups by providing access to commercialisation and allowing them to scale. The ecosystem's ability to nurture local talent enables the creation of world-class indigenous technological solutions, positioning the smart city as Malaysia's leading innovation hub.

Cyberview Sdn Bhd, the developer of Malaysia's global tech hub that is Cyberjaya, aims to be a purpose-built catalyst for innovation that nurtures home-grown talent and technology.

"Cyberjaya, under Cyberview's stewardship, is more than just a smart city. It's a national innovation engine, home to Malaysia's highest concentration of tech companies and a test-bed for emerging technologies across smart mobility, digital creative, smart healthcare, digital economy, green tech and more," says Shafinaz Salim, head of the technology hub development division at Cyberview and acting CEO of Futurise Sdn Bhd.

As a government-owned entity, Cyberview plays a unique and strategic role in designing and developing infrastructure, as well as actively curating the entire tech ecosystem of Cyberjaya. This includes fostering collaborations between start-ups, corporations, academia and the government.

From digital creative content and smart mobility to AI applications and tech talent cultivation, Cyberjaya provides the infrastructure, policy support and collaborative environment necessary for local companies to thrive, says Shafinaz. She highlights the Living Lab framework through which Cyberview provides companies the space and support to trial solutions in real urban settings, thereby accelerating the validation process and solution refinement.

This ecosystem has enabled Malaysian brands to not only scale nationally but also compete on the global stage, demonstrating that Cyberjaya is not just producing technology made in Malaysia but made by Malaysia.

"Compared with our peers like Iskandar Malaysia or Penang, which are anchored by broader economic or industrial themes, Cyberjaya is singularly focused on innovation, with Cyberview acting as both developer and ecosystem builder," says Shafinaz.

Cyberview further ensures that innovation being nurtured in Cyberjaya is rooted in real local needs by designing programmes that are closely aligned with Malaysia's socio-economic context and community priorities. "Through the Cyberview Living Lab® Pilot Programme, companies are encouraged to co-develop and test solutions that directly address everyday challenges faced by residents, businesses and public agencies," she says.

A standout example would be the Cyberjaya Farmers Market, which was launched in 2017 under the Cashless Ecosystem Society initiative. Collaborating with Bank Negara Malaysia's Payments Network Malaysia Sdn Bhd

(PayNet) and backed by the DuitNow QR, the national QR standard, this programme sought to catalyse a cashless society and it became one of the first markets in the country to go fully cashless, Shafinaz highlights.

She adds that this project was beyond going cashless for the sake of going cashless. It has solved various hyperlocal issues such as financial inclusion, by allowing micro enterprises to accept digital payments, and public health, as this was further developed during the Covid-19 pandemic. It has also helped to increase digital literacy by encouraging the adoption of e-wallets and mobile banking.

"Today, 96.6% of merchants in Cyberjaya are cashless-enabled, proving that local-first solutions can lead to a widespread systemic change," says Shafinaz.

Further successful local-first pilot projects include the autonomous vehicle testing, or MyAV, route. This project allowed the company to tackle the issue of last-mile connectivity within the urban layout of Cyberjaya.

There are also the drone testing zones — areas where drone start-ups can test their technology — designed to support local agriculture and infrastructure maintenance over difficult terrain.

Shafinaz points out that what all these pilot projects have in common is the specific need for these technologies. "While global tech often focuses on scalability and profit-driven innovation, local solutions require contextual understanding of culture, behaviour, infrastructure and policy," she explains.

With technology evolving rapidly, Cyberview has to ensure that solutions and offerings in Cyberjaya stay future-ready by keeping its ecosystem agile, collaborative and grounded in real-world needs, she adds.

At the core of this approach is designing it so that a sector-focused master plan is aligned with Malaysia's Industrial Revolution 4.0 and government priorities, while being flexible enough to integrate emerging technologies such as artificial intelligence



“Already home to the highest concentration of tech companies in Malaysia, Cyberjaya has transitioned into a globally recognised smart city, known for its innovation, sustainability and community-centric design.”

— Shafinaz

(AI), integrated circuit (IC) design, quantum computing, Internet of Things (IoT) design and advanced robotics.

Home-grown innovators in Cyberjaya

Cyberjaya's goal of becoming a tech hub is beyond simple aspiration, but increasingly tangible through its success stories. The smart city is home to many local companies thriving because of the ecosystem, infrastructure, policy support, talent pipeline and collaborative culture developed by Cyberview.

To retain local talent and create a future-ready workforce, Cyberjaya companies are adopting multi-pronged strategies like investing in internal academies, bootcamps and certification programmes to upskill existing employees and reskill mid-career professionals. This includes partnerships with

Right and below: eMoovit became the first company to be tested on Malaysia's inaugural Autonomous Vehicle (MyAV) Testing Route in Cyberjaya.



universities and digital training providers to align curricula with industry needs.

One such company in Cyberjaya is Jazro Technology Robotics Sdn Bhd, which has trained more than 70,000 students nationwide through hands-on robotics and coding programmes.

"Its inclusive approach features specialised programmes for neurodiverse children, supported by occupational therapists. It recently expanded its academy in Cyberjaya to enhance robotics and coding education," says Shafinaz.

Another company is Chumbaka Sdn Bhd, which operates the Digital Maker Hub in Cyberjaya, offering hands-on, project-based learning in emerging technologies such as AI, IoT and augmented/virtual reality. Chumbaka's work has seen significant impact in STEM (science, technology, engineering and mathematics) education at the primary and secondary school levels by sparking curiosity early and nurturing that passion into tangible skills.

"This grassroots approach to talent development by both Jazro Robotics and Chumbaka is vital, not just for individual growth but for Malaysia's long-term innovation capacity and economic resilience," she says.

Meanwhile, WAU Animation, the studio behind the local franchise *Ejen Ali*, has grown into a powerhouse of 89 creative professionals. Its second film, *Ejen Ali: The Movie 2*, has grossed more than RM50 million to date, demonstrating how investing in creative talent not only fuels economic growth but also elevates Malaysia's presence on the global stage.

"WAU Animation leverages Cyberjaya's ecosystem to grow from a local animation house to an IP powerhouse behind *Ejen Ali*. Today, it is a talent magnet and exporter of Malaysian culture through animation," says Shafinaz.

She elaborates on how Cyberjaya has played a key role in WAU Animation's journey, pointing to the smart city's proximity to talent pipelines, particularly Multimedia University (MMU), which has been instrumental in its growth.

Most of WAU Animation's founding team, about 80%, are MMU graduates. While the challenge of finding top-tier talent persists, the studio actively collaborates with the university to explore new ways to upskill graduates and align academic training with real industry needs.

There is also TRYKE, a shared e-scooter service provider, which has benefited from Cyberjaya's infrastructure support and mobility testing environment in hiring local graduates trained within the Living Lab network.

"[The company] has consistently partnered with the universities in Cyberjaya to provide internship opportunities to young talents who have the opportunity to work with TRYKE to learn about its industry, while providing it with a platform to scout for potential future hires," says Shafinaz.

Over the past two to three years, TRYKE



Cyberjaya is Malaysia's designated Drone Testing Zone, providing a platform for drone enthusiasts and innovators to test technologies in a controlled environment.



Top and bottom: Jazro Robotics has trained more than 70,000 students nationwide through hands-on robotics and coding programmes

has had multiple cohorts of students who interned with the company as a result of the good fit between their skill set and the business requirements.

In the rising drone industry, there is Alphaswift Industries, a home-grown drone tech start-up based in Cyberjaya, which develops hybrid-powered drones and unmanned aerial vehicles tailored for real-world use, particularly in agriculture and rural logistics.

“By enabling precision crop spraying over larger areas with significantly less time and labour, Alphaswift helps farmers operate more efficiently. Its drones have also been deployed to deliver medical supplies in remote areas, addressing critical accessibility gaps and supporting community health outcomes,” says Shafinaz.

Meanwhile, at the enterprise level is Aerodyne Group, a global drone solutions provider headquartered in Malaysia. It is known for its large-scale, enterprise-grade drone services, supporting government and corporate clients through real-time surveillance, infrastructure inspections for the oil and gas sector, and even cross-border drone logistics between Malaysia and Singapore.

Aerodyne is currently exploring 5G-enabled drone networks to pave the way for broader smart city integration and real-time urban intelligence, she says. “Together, these companies reflect the growing strength of Malaysia’s drone ecosystem, where local ingenuity is translating into solutions with both regional relevance and global potential.”

These stories underscore Cyberjaya’s role

Cyberjaya's Made by Malaysia Ecosystem

Cyberjaya's tech ecosystem nurtures talent and enables the creation of world-class indigenous technology solutions.

>80000
jobs created by homegrown tech companies

>200
awards, locally & internationally



Durioo+ has successfully expanded its team to more than 80 employees, reflecting the company's steady growth in the digital creative industry

as Malaysia’s home for creative and innovative talent. Its deep ecosystem linkages between industry and academia drive both commercial success and talent development.

From exporting solutions to solving local challenges

By focusing on hyperlocal contexts over global scalability, many local businesses have greatly benefited from Cyberjaya’s ecosystem during Malaysia’s transition from purely exporting solutions to solving local challenges.

“The transition from exporting solutions to solving local challenges marks a powerful shift in Malaysia’s innovation narrative. When companies build for the nation first, their solutions tend to be more resilient, more relevant and ultimately more scalable, anchored in real-world impact,” says Shafinaz.

She highlights that for many companies in Cyberjaya, this shift unlocks several advantages. One is a deeper national impact, as companies can focus on solving problems that matter directly to local communities and sectors. Because of this, more meaningful innovations, grounded in the nuances of Malaysian life, markets and systems can be created.

This also opens doors for Malaysian businesses to have a stronger ownership of intellectual property as a form of national pride. “Made by Malaysia” carries a more patriotic connotation than simply “Made in Malaysia”, and it carries greater global weight behind local companies.

The biggest challenge that companies will need to overcome to capitalise on these advantages is the perception that locally made products are somehow inferior to imported ones. Local businesses need to work together to convince stakeholders that local innovations can be world class, and real case studies in Cyberjaya show that this is not only possible, but is happening right now.

Shafinaz highlights Animonsta Monsta Studios (Monsta), the creator of the BoBoi-Boy universe of cartoons. “Monsta has transformed Malaysian IP into a global animation powerhouse. Today, its content reaches over 70 countries across Asia, Europe and the Middle East, with recent expansions into Turkey,

Portugal, South Korea and Japan,” she says.

There is also Durioo, a home-grown creative tech company that has attracted US\$2.85 million in seed funding from the likes of Gobi Partners and international investors. It currently has a portfolio of more than 20 original titles, 1,500 licensed episodes and broadcasts to a global audience in over 70 countries.

With such successes, Cyberjaya hopes to act as a launchpad for home-grown innovation and become the epicentre of indigenous technology development for Malaysia. This ambition takes a major leap forward with the establishment of the country’s second IC Design Park in Cyberjaya, designed to attract leading local and global IC design firms.

Shafinaz notes that this park will anchor a high-value ecosystem of chip design, R&D and prototyping, creating thousands of knowledge-based, future-facing jobs. “This positions Cyberjaya as a national centre for semiconductor education, upskilling and innovation, directly contributing to Malaysia’s goal of producing 60,000 skilled engineers by 2030,” she says.

She adds that with this, Cyberjaya is not just keeping up, but setting the pace for Malaysia’s next leap in tech leadership. All of this is part of Cyberjaya’s long-term master plan, aimed at having the city contribute RM250 billion to Malaysia’s GDP, create 87,000 jobs and attract 1,200 companies by 2045.

Already, Cyberjaya is evolving into a springboard for regional and global tech expansion for Malaysian businesses, thanks to the country’s access to other Asean markets. Shafinaz says this is especially true in certain high-impact sectors such as AI, robotics, cloud computing, green technology, system integration, advanced mobility and semiconductors.

“Already home to the highest concentration of tech companies in Malaysia, Cyberjaya has transitioned into a globally recognised smart city, known for its innovation, sustainability and community-centric design,” she adds.

Looking ahead, Cyberjaya is envisioned as the go-to place where start-ups, multinational corporations, researchers and talent converge to build and export solutions to the world and a testbed where indigenous technologies can be nurtured, validated and scaled globally.



TRYKE launched its e-scooters in 2019 at RekaScape in Cyberjaya. It expanded its fleet with e-bicycles in 2020 and introduced e-motorbikes in 2024.

OWNING WHAT WE BUILD

TALENT



SAM FONG/THE EDGE

Surface-mount technology (SMT) lines operating in a high-volume electronics manufacturing facility

Building a future-ready tech workforce

BY GRACE YAP ERN HUI

Malaysia is moving towards realising its ambition of becoming a digital-first economy, but as artificial intelligence (AI) adoption accelerates, industry players warn that without inclusive, continuous upskilling efforts, many Malaysians risk being shut out of the very future the country is trying to build.

According to industry players, readiness is uneven across industries. While some industries are actively building their digital capabilities, others are still playing catch-up.

Based on PricewaterhouseCoopers' (PwC) 2025 *Global AI Jobs Barometer* report, which analysed job advertisements, the information and communication sector stands out as a front runner, indicating a strong push towards digitalisation.

In contrast, sectors such as manufacturing and construction have been slower in adopting AI. Although manufacturing saw a recent rise in AI-related job postings — from 1.4% to 2.9% between 2023 and 2024 — the sector's overall share of job postings has declined since 2021.

"This suggests that while interest in AI skills is growing, many foundational sectors still face challenges in preparing their workforce to meet the digital and AI-driven demands. The challenge now is not just creating demand for AI skills but ensuring the workforce is equipped to meet it," says Kartina Abdul Latif, workforce leader at PwC Malaysia.

According to Roshan Thiran, founder of leadership development firm Leaderonomics, some research and development centres and fintech hubs show readiness for meeting the demands. However, traditional sectors such as small and medium enterprises in the manufacturing space as well as those in government-linked companies and public limited companies are still grappling with ensuring there is basic digital literacy and data-driven mindsets.

"I have seen cases in various places where an organisation proudly shows off its new enterprise resource planning system or other 'super tech'. Yet, we see many parts of its operations and admin team still using pen and paper for various activities," says Roshan.

Frontline and middle-skilled workers are among the most vulnerable in Malaysia's digital transition, says Kartina. While their roles are evolving, many lack

access to the training and tools needed to keep pace with automation, platform technologies and even basic digital tools.

"This challenge is especially pronounced in sectors like construction and agriculture, where digital adoption is slower and workforce development efforts are less coordinated," she adds.

To ensure Malaysia's tech transformation is equitable and sustainable, Kartina says there must be empowerment for all workers regardless of their skill level, with the tools, training and support they need to adapt and thrive.

More importantly, the issue isn't just about job displacement; it is about job transformation. Employees risk being left behind not because their roles have disappeared, but because the skills required to perform these roles are changing rapidly. "Reskilling and upskilling must be continuous, inclusive and aligned with real industry needs. A skills-first approach is focusing on both technical and non-technical competencies, which is essential to close these gaps," says Kartina.

Rather than relying solely on qualifications or job titles, there is a need to assess and build the actual skills needed to thrive in a digital economy. In this context, qualities such as critical thinking, creativity and emotional intelligence are becoming increasingly valuable as technology automates routine work.

Human-centric skills, alongside the development of technical skills, will be critical for enabling employees to adapt and excel to meet the evolving demands of the market, Kartina adds.

Balancing hard and soft skills

Large tech companies such as Google and Meta have seen major layoffs this year. Jaffri Ibrahim, founder and CEO of Collaborative Research in Engineering, Science and Technology (CREST), acknowledges that while tech layoffs are real, their immediate impact is more significant for service-oriented roles such as those involved in documentation, knowledge management and iteration, rather than core engineering roles.

"Although engineering may eventually be affected, the impact will be less immediate," he says.

Jaffri predicts a correction in the future, where companies originally planning to hire large numbers — say 400 people — might scale down to 300, but there will still be demand for engineers to handle manufacturing, analysis and other essential functions.

He stresses that while AI can aid analysis, there are still tasks it cannot fully replace and engineering remains a crucial skillset.

However, engineering faces a perception problem because a lot of times, people — particularly those in the younger generation — may think that being an engineer is very difficult, he says. "It sounds like you have to get your hands dirty."

Jaffri observes that many in the younger generation prefer the gig economy, seeing it as an easier way to earn decent money — such as becoming a Grab driver — without a need for formal quali-

CONTINUES ON PAGE 18



LOW YEN YEING/THE EDGE

“Lifelong learning is no longer optional, but a core capability required to remain relevant and resilient in an AI-driven economy.”

Kartina, PwC Malaysia

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Collaboration across government, industry and education crucial

FROM PAGE 16

fications. However, he warns that this approach lacks a fall-back plan in case of unexpected setbacks.

"So, what we try to do to address that is [to advocate] for stackable capabilities or micro-credentials. You can earn your wages as a Grab driver but put aside a few days a week to try to pick up some [basic technology skills]," says Jaffri.

These can later be built upon to reach intermediate or advanced levels, creating a safety net where they can pivot towards technical roles, like a technician, or even progress further at their own pace, he adds.

However, there is risk of burnout if they try to juggle studying for multiple micro-credentials at the same time, which is why Jaffri stresses the need for proper guidance. "We also need an infrastructure that allows people to try something new and for people to give young talent a chance. But of course, it should be merit-based and not because you know somebody. You are there because you are skilled, and you worked hard to get that particular skill, and you want to have a career in that area."

While gaining micro-credentials and technical skills is crucial in today's job market, formal academic degrees, though valuable, are no longer sufficient on their own. Future tech talent will also need strong soft skills to truly thrive and stand out.

"As rapid macro trends and internal organisational changes continue to reshape industries, individuals and organisations must embrace a mindset of unlearning, relearning and continuous learning. Life-long learning is no longer optional, but a core capability required to remain relevant and resilient in an AI-driven economy," says Kartina.

Roshan points out that collaboration, adaptability and curiosity are the key elements that make high-performing agile teams work. "The most valuable employee today is not the one with the deepest technical skill, but the one who can bridge worlds, who can translate a customer's need into a technical requirement, who is curious enough to ask 'why' before building the 'what', and who is adaptable enough to pivot when customer feedback demands it."

Industry players serve a crucial role in reshaping Malaysia's curriculum and training systems to meet the demands of an AI-driven economy. As skill requirements evolve rapidly, traditional academic cycles and static workforce models are struggling to keep pace.

"Malaysia must transition from centralised, classroom-based training to flexible, site-specific and hands-on learning," says Kartina.

At Leaderonomics, preparing the youth for hybrid roles isn't just an economic necessity but a responsibility to the next generation. Roshan says the firm does this through a deeply integrated, hands-on approach, particularly within its Making a Difference (MAD) Clubs.

"Our approach is to start this in schools and community hubs with project-based learning. But here's the key difference: we give every student a 'real client' challenge. We don't ask students in our MAD Clubs to simulate a project; we connect them with local communities to solve actual problems," Roshan explains.

This could be designing a simple app for a local farmer to track their produce or building a social media campaign for a small charity that needs to raise funds.

"Doing the project is only half the battle. In a hybrid world, you must be able to communicate your ideas, give and receive

feedback, and collaborate effectively with a diverse team," says Roshan.

Leaderonomics' model pairs every project with peer coaching circles. Within its MAD Clubs, as teams work on their real-client challenges, they regularly present their progress and are trained to act as coaches.

"Finally, we need to lift our children's aspirations. We need to teach them not just to be competent employees, but to be audacious dreamers and creators. This is the work we do through our incubator programmes," says Roshan.

Creating a real impact

Perhaps the main challenge with tech adoption and upskilling talent is translating that momentum into meaningful workforce transformation. Kartina says most companies have already embedded upskilling and reskilling into their strategic roadmaps. However, the challenge now lies in execution and turning intent into impact.

"Technology is evolving faster than many workforce strategies can keep up. Without frameworks built for the pace of AI, companies risk falling behind in aligning talent with tools. To realise the full potential of digital transformation, organisations must treat human capital as a strategic enabler in embedding agile, future-ready workforce plans at the heart of business strategy," says Kartina.

She explains that such plans must be dynamic, with regular reviews and adaptations — echoing the necessity for today's workforce to remain flexible and continuously upskilled. "In an era where tomorrow's technology can render today's frameworks obsolete, an agile approach instead of a one-size-fits-all approach to workforce strategy is imperative. Only then can organisations navigate the complexities to change."

Roshan often sees companies buying the latest automation tools while expecting their staff to "figure it out".

"It's like handing a toddler a power drill — lots of noise, questionable results and potential for pain. Real tech adoption means coupling every licence purchase with a learning road map such as role-based training, mentoring circles and in-



SUHAM YUSUF / THE EDGE

“We need an infrastructure that allows people to try something new and for people to give young talent a chance.”

Jaffri, CREST

centives for digital champions,” he says.

He explains that role-based training cannot be just a one-off webinar, but a continuous learning journey tailored to how different roles will use the technology. Furthermore, identifying and empowering early adopters to become internal coaches and mentors is important as peer-to-peer learning is extremely beneficial, he stresses.

"Companies will benefit from creating sandbox environments where employees can experiment, fail and learn without fear of breaking the 'live' system. Senior leaders must be the first to be seen fumbling with the new tools, asking questions and sharing their own learning journeys to model vulnerability," says Roshan.

A key misconception is that future-proofing the workforce is mainly about deploying new technologies, rather than developing the human capabilities needed to use them effectively, says Kartina.

She sees many companies that still treat AI as a tool for efficiency, overlooking its potential to enhance human expertise and unlock new forms of value. "Moreover, many still view implementation as the final step, rather than the beginning of a continuous journey. In reality, technology evolves rapidly, even post-deployment, requiring ongoing adaptation, enhancement and learning."

Roshan says digital transformation is a culture project and every single leader must own it. He explains that when transformation is treated solely as an IT project, it is doomed to fail from the outset and becomes siloed, with other parts of the business perceiving it as "that tech thing" and resisting change.

"We are doing quite well with regard to securing the attention and investments. We have to work hard to prepare the workforce to meet those plans but the entire scene is changing now with tariffs very hot in discussion again. The question is, how do we work around that to be able to be above that situation?" says Jaffri.

To truly build a future-ready tech workforce, collaboration across government, industry and education is crucial.

"In the light of the geopolitical war, in terms of trying to be dominant in the technology space, Malaysia is positioning itself as a neutral economy that will accept investments from both sides and we want to work with everybody," says Jaffri.

Despite the risks and challenges that come with doing so, he opines that working with everyone will give Malaysia a unique advantage as a trusted partner that contributes meaningfully back to society. **E**



LOW YEN YING / THE EDGE

“Companies will benefit from creating sandbox environments where employees can experiment, fail and learn without fear of breaking the 'live' system.”

Roshan, Leaderonomics



SAM FONG / THE EDGE

A worker carefully operating machinery to ensure accuracy and quality in production

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OWNING WHAT WE BUILD

SPOTLIGHT

Young minds with big ideas aiming for global impact

STORIES BY **ARIS RIZA NOOR BAHARIN**

While there are frequent complaints about a lack of talent in Malaysia, recent achievements tell a different story. Successes at innovation awards, both at home and abroad, point to a rising generation of home-grown innovators — individuals who are not waiting for the future to happen, but are building it themselves.

New technologies, from digital tools to artificial intelligence (AI) systems, are reshaping not only businesses but classrooms as well. Early engagement with these shifts gives students valuable exposure and lays the groundwork for future innovation.

The Edge speaks to three young Malaysians whose award-winning projects demonstrate that the infrastructure and opportunities to nurture the next generation are not only in place, but already yielding results. ■

Turning a childhood science project into reality

Since his teens, 23-year-old Sean Lee has been dedicated to developing his augmented reality (AR) glasses project, using youth innovation contests as platforms to test his ideas and push both technical and creative boundaries.

Lee's AR glasses resemble ordinary eyewear but connect wirelessly to a smartphone, with the lenses functioning as a private, transparent display of the device.

"In 2018, I was shortlisted as a finalist out of 634 teams across six countries at the Young Inventor's Challenge (which held its final round in Kuala Lumpur); awarded Best Technology at LevelUp@Schools for my Unity-based game design; and crowned champion at the National Instruments Advanced Robotics Competition [in Penang in 2018], where I mastered advanced control systems using MyRio," says Lee. A MyRio is a portable configurable input/output (I/O) device for tertiary education students to develop applications and experiment with systems used in the real world.

But rather than continuing to chase trophies, Lee took a different path. He interned at start-ups such as Reevo Bikes and pursued engineering roles at global corporations such as Ambu and Dyson, determined to deepen his understanding before building his own venture.

"In 2025, my path came full circle when I was named a Grand Finalist at the HNSE Asia AI Hardware Battle [in Hainan, China,] for my AR glasses start-up, Zero, a project that embodies years of learning, iteration and vision. These milestones have taught me that awards open doors, but sustained innovation builds legacies," he says.

Today, Lee is a mechanical engineering student at Tunku Abdul Rahman University of Management and



SEAN LEE

Technology (TARUMT), but his fascination with science and technology dates back to childhood.

The spark that inspired the invention of his AR glasses happened at a school science fair in 2017, when, as a Form 2 student, Lee began imagining what could come after the smartphone. That moment became the blueprint for the next decade of his life.

"The core issue I wanted to solve was mobility and privacy in the digital age, especially for people whose work depends on flexibility. My target users are creatives who need a more virtual workspace," says Lee.

Trends such as the rise of remote work and digital nomadism, as well as growing concerns about data security in public spaces, have only strengthened his conviction. Meanwhile, AR hardware has become smaller, lighter and more capable, making his vision more feasible.

Lee credits Malaysia's diverse cultural environment for fostering his adaptability and innovation, teaching him to stay open-minded and resourceful.

To him, winning the HNSE Asia AI Hardware Battle is not simply about proving Malaysia's competitiveness against other countries.

"It's about showing that innovation can come from anywhere, and Malaysia has the talent, grit and creativity to stand on its own," he says.

Putting Malaysia's AI capability on the global stage

At the International Olympiad in Artificial Intelligence (IOAI) 2025 in Beijing, China, Yong Zi Hong clinched a silver medal, improving on the bronze he won at the competition's inaugural edition in 2024. He was among the first participants globally when the Olympiad was introduced.

The IOAI is a two-day international competition for secondary school students, who are selected through national-level contests and agencies to represent their countries and connect with peers from around the world.

Students are tested across six tasks. On the first day, they face three challenges based on a project assigned a month in advance. The second day introduces three entirely new problems, unveiled on the spot and to be solved within the same day.

Yong had originally applied for the Informatics Olympiad at the recommendation of a friend, who told him that pushing himself by competing at the global stage would be an invaluable experience.

"That advice really stayed with me, and now I'm always eager to participate in international competitions — not just to compete, but also to meet people from around the world and learn from them," says Yong, 18, who hails from Puchong, Selangor.

Although circumstances led to his disqualification from the Informatics Olympiad, he soon discovered the IOAI and decided to pursue it, given his growing interest in AI.

Looking back, Yong admits he was nervous at the first IOAI, competing against students from larger countries with more established AI ecosystems. Over time, however, he came to view the Malaysia Artificial Intelligence Olympiad's (MAIO) limited resources as an advantage.



YONG ZI HONG

"We were trained to focus heavily on technical skills and to think creatively, finding patterns, identifying opportunities rather than just applying AI models directly. It pushed me to think outside the box and understand the core problem before working on the solutions."

After earning a bronze medal last year, Yong was determined to requalify for the MAIO team to return to the IOAI in 2025. Despite the difficult selection process, his focus and preparation paid off, securing him a spot and eventually the silver medal in Beijing.

The victory was especially meaningful, as he represented Malaysia on stage, flag in hand. Later, he learnt how close he had come to winning gold.

"Maybe in the future, I'll train the juniors, and they will bring home Malaysia's first IOAI Gold," he says.

Yong recently completed studying for his A-Levels on his own after completing his IGCSE at MITstem International School in Shah Alam, Selangor, and has begun his first year at Nanyang Technological University in Singapore, where he is pursuing a degree in data science and AI. He hopes to build his career in the field of AI or data analytics.

Smart glasses made by a school club

When Khor Wei Heng, 18, is not studying for his UEC exams, the Simpang Ampat-born Penangite serves as vice-president of Chung Ling Private High School's Creative Electronics Club and works alongside his teammates, Yim Min Zong and Edelyn Teoh Su Theng, on developing their version of smart glasses.

These smart glasses are designed to support the hearing-impaired by transcribing speech in real time, projecting the text directly onto the lenses like live subtitles.

Khor's inspiration for the project came from a personal place. His grandmother, who is in her early 80s, was struggling with hearing loss, and when his family explored hearing aid options, they found many barriers, from ill-fitting devices to prohibitively high prices.

"Most hearing aids and smart glasses available here are imported, highly sophisticated and packed with advanced features. But they often come with an equally advanced price tag, sometimes in the thousands of ringgit," he says.

Determined to create a practical alternative, Khor and his team focused on making their smart glasses simple, lightweight and affordable, stripping away unnecessary features while keeping them functional.

Each unit costs under RM130 to produce, a fraction of the cost of conventional hearing aids and branded smart glasses, which can range from RM170 to RM500.

"When my grandmother tried our prototype and said it was useful and promising, it was a defining moment for me. It proved that our idea could genuinely make a difference," says Khor.

Their innovation has already earned recognition. The team won the Gold Award at the Sime Darby State Young Innovator's Challenge 2024, claimed the grand winner title at the ViTrox Tech 4 Good Challenge 2024, and secured silver at the 19th Soong Ching Ling Award for Children's Invention in China.

Khor credits the strong support he received from his school, including his headmaster, club coach and teacher-advisers, who provided both guidance and access to essential facilities.

"Having access to tools for soldering and 3D printing was invaluable, as it allowed us to prototype, test and refine our designs," he says.

With their prototypes already showing promise, Khor and his team are continuing to refine their smart glasses, working on challenges such as improving transcription speed, with the hope of making the device even more accessible for the community it was designed to help.



KHOR WEI HENG

(From left) Khor, Yim and Teoh

HALAL TRADE

Tapping into global demand

BY RAVINYAA RAVIMALAR

Malaysia's halal industry is projected to contribute 10.8%, or RM231 billion, to the economy by 2030, but industry experts warn that the country could lose its first-mover advantage unless it tackles key bottlenecks, including fragmented governance and the lack of a centralised certification system.

While Malaysia has strong growth prospects, it cannot afford to rest on its laurels, as countries such as Thailand are building leaner, more export-ready halal ecosystems, says Prof Dilip S Mutum, professor of marketing at Monash University Malaysia's School of Business.

"Malaysia has the potential because it is a Muslim-majority country [but] one of the issues is fragmentation. While we have the Halal Development Corp (HDC), which is trying to implement the Halal Industry Master Plan (HIMP) to position Malaysia as a halal hub, and the Department of Islamic Development Malaysia (Jakim), which is the governing body, it is still not clear about who controls what," says Dilip.

Malaysia's halal product exports rose to RM61.79 billion in 2024, up 15% from RM53.72 billion in 2023, according to the Malaysia External Trade Development Corporation (Matrade).

Food and beverage remains the country's dominant halal export sector, while cosmetics, pharmaceuticals, modest fashion and emerging Islamic financial products are also showing strong growth, says Matrade chairman Datuk Seri Reezal Merican Naina Merican.

Matrade estimates that food and beverage will contribute RM34.03 billion to halal exports, followed by halal ingredients at RM19.05 billion, cosmetics and personal care at RM3.84 billion, palm oil derivatives at RM2.95 billion, and industrial chemicals at RM1.03 billion.

To address industry fragmentation, Dilip suggests that Malaysia adopt a centralised agency or system. "Halal promotion is fragmented between Jakim, the Ministry of Investment, Trade and Industry, SME Corp and others. A national halal development road map — integrated across trade, education and enterprise policy — is needed," he says.

Malaysia's halal certification ecosystem is led by Jakim, the federal authority overseeing certification for products and services ranging from food to cosmetics and pharmaceuticals.

Jakim works with state Islamic religious authorities, which issue halal certificates within their jurisdictions under federal oversight.

Complementing this initiative is HDC, which drives industry promotion and development, while the Department of Standards Malaysia (JSM) accredits bodies that verify halal compliance. The system is underpinned by the Trade Descriptions Act 2011, which regulates halal certification and production to ensure authenticity and integrity.

This fragmentation, say stakeholders, contributes to the low uptake of halal certifications, especially by small and medium enterprises (SMEs), which dampens Malaysia's position as a global halal trade hub.

The low uptake is driven by cost perceptions, regulatory complexity and lim-

ited awareness, says Dr Ezlika M Ghazali, associate professor at the faculty of business and economics at Universiti Malaya.

"First, many small bumiputera businesses perceive halal certification as costly and time-consuming, though application fees for micro enterprises are relatively modest. Second, the process is seen as overly bureaucratic, with complex documentation and inspection stages. Third, there's a persistent assumption that Muslim-owned automatically means halal. So, some feel formal certification is redundant," she says.

Ezlika notes that many SMEs have the impression that halal certification benefits only large exporters, not local food stalls or cafés. This mindset discourages smaller businesses from participating, resulting in an ecosystem where informal practices prevail, limiting scalability and undermining consumer trust.

Reezal concurs, adding that SMEs often also face difficulties in scaling up production and entering new markets largely because of resource limitations, price competitiveness and the complexity of navigating foreign regulations.

"Exporters must continuously adapt to the evolving landscape of international halal standards. Issues such as lack of harmonisation, along with the introduction of new import tariffs in key markets, pose significant barriers to entry and expansion," says Reezal.

On the other hand, Ezlika notes that the result of this fragmentation is slow decision-making, policy inconsistency and confusion for businesses.

"Fragmentation creates redundant processes, gaps in enforcement and weak cross-agency data flow. For SMEs, it means bouncing between ministries just to get certified, apply for grants or attend training," she says.

Moreover, fragmented priorities can derail national strategy. One agency may focus on exports, another on religious compliance and yet another on SME development — all without synchronisation.

"This hinders Malaysia's ability to respond swiftly to scandals, tech shifts or global competition. A streamlined, centralised authority would remove friction and allow for unified action," she says.

In 2023, the Halal Industry Master Plan 2030 (HIMP 2030) was launched under Deputy Prime Minister Datuk Seri Dr Ahmad Zahid Hamidi, in his capacity as chair of the Majlis Pembangunan Industri Halal (MPIH), to enable oversight and streamlined operations across the halal ecosystem.



DILIP S MUTUM

“Malaysia has the potential because it is a Muslim-majority country [but] one of the issues is fragmentation.”

Dilip, Monash University Malaysia



MATRADE

“Exporters must continuously adapt to the evolving landscape of international halal standards.”

Reezal, Matrade

While some coordination has been achieved, there is still room to strengthen collaboration between agencies. Ezlika suggests that the MPIH could play a stronger coordinating role. “Three steps that would help include [and] mandate MPIH as the apex authority [are] let it set targets, resolve inter-agency conflicts and track national halal performance. [Next] is to launch a one-stop halal portal — SMEs should access certification, funding, training and market info from a single digital platform. The upcoming National Halal Digital Platform could be that portal, if well executed,” she says.

This approach would harmonise laws, eliminate duplication and align incentives across ministries.

Stringent rules a double-edged sword

Counterfeit logos and misuse of certifications have necessitated even more stringent rules from Jakim, leading to difficulty in obtaining certification. For example, recent incidents have highlighted cases of manufacturers misusing the halal logo. A *kaya* factory in Perak was raided for using an uncertified halal logo on its products last year. The factory's halal certification had expired, but it continued to use the logo, misleading consumers into believing the products were still certified.

According to news reports, the government has intensified its enforcement efforts. In 2024, the Ministry of Domestic Trade and Cost of Living (KPDN) reported 56 halal fraud cases, with seizures valued at more than RM1.8 million. The penalties for such offences are significant, with fines of up to RM100,000 for individuals and up to RM500,000 for companies, along with possible imprisonment.

On its part, Jakim had revoked a total of 3,068 Malaysian halal certifications (SPHM) as at October 2024, owing to non-compliance issues with halal certification requirements and standards.

The revocations stem from serious violations of shariah or technical standards at certified premises, as outlined in Clause 32 of the Malaysian Halal Certification Manual 2020.

“From what I have discussed with other experts, what they are saying is that Malaysia's [halal] certification is quite difficult to get. I agree that it needs to be [not very easily attainable]. But, it is a lot of paperwork; Malaysia needs to make it easier,” says Monash University Malaysia's Dilip.

To tap into Malaysia's potential as the global halal trade hub, the country needs to leverage technology, notes Universiti Malaya's Ezlika.

“Malaysia should focus on the halal food sector while embedding technology across the value chain. The food segment already contributes close to 10% of national gross domestic product (GDP) and Malaysia is globally recognised for its strong halal regulatory framework and product quality. This is the country's comparative advantage,” she says.

She believes technology integration in traceability, automation and compliance should be scaled across food production, logistics and certification. Beyond the supply chain, she notes, positioning Malaysia as a Muslim-friendly destination will require a visual and digital revamp to enhance global appeal. For example, blockchain technology could be used to track halal status across supply chain nodes, while QR codes could allow consumers to easily verify halal certification.

“Malaysian start-ups like Serunai Commerce are already offering blockchain-based halal traceability tools. The challenge is integration and scale,” Ezlika says.

This vision aligns closely with Matrade, which has made expanding market access, fostering innovation and enhancing the sector's economic contribution central to its strategy — primarily through its flagship annual event, the Malaysia International Halal Showcase (MIHAS).

“Mihas serves as a platform for business growth, international market entry and global networking. It supports established companies, SMEs and start-ups by enabling them to scale operations, explore new markets and engage directly with international buyers,” says Reezal.

Matrade drives growth through targeted trade missions, business-matching programmes and promotional efforts, both at Mihas and on other international platforms.

“In collaboration with key stakeholders, we also help local halal companies adopt sustainable practices, leverage digital technologies and comply with international standards,” he says.

Reezal stresses that these efforts are essential in keeping Malaysian halal products competitive, high in quality and ethically produced. The organisation is also embracing digital transformation in its own initiatives.

“Mihas is harnessing the artificial intelligence (AI)-powered Madani Digital Trade (MDT) platform to achieve a target of RM4.5 billion in global halal sales for 2025. At the core of this innovation is the integration of the MDT platform into Mihas' flagship International Sourcing Programme (INSP), a business-matching initiative that generated RM2.53 billion in sales last year alone,” says Matrade CEO Datuk Seri Mohd Mustafa Abdul Aziz.

By leveraging AI algorithms, the platform can match Malaysian halal exporters with targeted international buyers using real-time data, market trends and business preferences.

“The AI-powered MDT platform, as part of the INSP, is designed to empower micro, small and medium enterprises to access international markets more seamlessly and efficiently. Despite ongoing global trade tensions, we are committed to driving Malaysia's export initiatives with a particular focus on high-growth and emerging markets such as Africa, the Middle East and Latin America,” says Reezal.



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OWNING WHAT WE BUILD

PROFILE

New cooking oil hits shelves

BY JENNIFER GOMEZ

For the first time, palm kernel oil is being sold in Malaysian supermarkets as bottled cooking oil — an innovation that could be a global first, according to its producer, Medella Malaysia.

Launched in June, the product is already gaining attention for its nutritional benefits, versatility in the kitchen and potential as a cost-effective alternative to premium oils.

Packaged in bold, unconventional colours and positioned beside familiar brands in major supermarkets, this new product is part of Medella's broader plan to scale production tenfold within five years after making its entry with coconut cooking oil 12 years ago.

The founder of this home-grown brand, Edwin Ong, shares that while he was looking to diversify from his coconut cooking oil range, he stumbled upon the high nutritional benefits of palm kernel oil, which possesses 90% of coconut oil's fatty acid composition, and is half the cost.

According to the 42-year-old, palm kernel oil is about 150% cheaper than olive oil, 50% cheaper than coconut cooking oil and about 10% cheaper than canola oil.

Ong wasted no time in doing his research and got his product onto supermarket shelves within six months, partnering with Jaya Grocer for the initial launch.

"When I first started buying palm kernel oil, suppliers were curious — 'What are you doing with it?'"

"I couldn't reveal much before the launch, but once we hit the market, they were shocked to learn I was bottling and selling it as a cooking oil alternative," says Ong.

"Palm kernel oil is a game changer — heat stable, perfect for deep frying, baking and even as a butter substitute, thanks to its fat profile. It's incredibly versatile and, best of all, economical. We found something with the benefits of premium oils, but at a fraction of the cost."

Ong combined the launch with a social media campaign that received high engagement due to general curiosity among consumers, who thought it was no different from palm cooking oil that is widely available on the market.

"The number one question that was being asked was, 'Isn't this palm cooking oil?' But we love these questions because it's an opportunity to educate."

According to Ong, palm cooking oil is made from palm olein, which is extracted from the flesh (mesocarp) of the oil palm fruit. In contrast, palm kernel oil comes from the seed or kernel of the same fruit, and has different properties.

Another differentiating factor is that Medella oils come in brightly coloured bottles that stand out on retail shelves.

"I took a bold step and a risk," Ong says, adding he believed it would encourage shoppers to take a closer look.



SHAHRI BASRI/ THE EDGE

Medella had also introduced a new product in February this year combining two raw ingredients — red palm and coconut — to come up with a red palm coconut cooking oil, which Ong claims is another world first.

According to him, red palm oil is derived from the flesh of the palm fruit, just like palm olein, but in its unrefined form, known as crude palm oil, adding that it is exceptionally rich in Vitamin E and beta carotene (Vitamin A).

Currently, Medella holds just under 10% of market share, while the majority of the local market remains dominated by generic or widely available palm cooking oil brands.

Malaysia's vegetable oil market reached US\$841.5 million in 2024, says Ong, highlighting the substantial opportunity for his company to capture a larger share of the edible oils market.

With double-digit sales increases every year, and a record 30% growth in 2024, Ong is looking to scale Medella's sales volume by 10 times over the next five years.

His factory in Puchong processes around 60 tonnes of cooking oil per month, serving both Medella's own products and original equipment manufacturer (OEM) clients from markets such as Guam, South Korea, China and Hungary. The company also exports to Brunei, Singapore and Mongolia, and to bulk importers in the Middle East.

Ong explains that Medella, which means "healing" in Latin, was founded with the vision of helping people make healthier choices. Staying true to that mission, he keeps his products reasonably priced.

A one-litre bottle of palm kernel oil retails at RM20.40, while the premium red palm coconut cooking oil is priced at RM28.90 per litre. The standard coconut cooking oil is available on supermarket shelves for RM28.90 a litre as well.

How it began

Ong first entered the edible oils space more than a decade ago with coconut cooking oil. His original motivation was personal — his mother had been diagnosed with pre-diabetes and prescribed medication to manage the symptoms.

Ong meanwhile began researching nature-based alternatives to manage her condition. That led him to the nutritional

“Palm kernel oil is a game changer — heat stable, perfect for deep frying, baking and even as a butter substitute, thanks to its fat profile. It's incredibly versatile and, best of all, economical. We found something with the benefits of premium oils, but at a fraction of the cost.”

Ong

potential of virgin coconut oil, especially its medium chain triglycerides (MCTs), a type of saturated fat.

After a month of adding coconut oil to her daily routine, his mother returned to her doctor and discovered her blood sugar levels had returned to normal, without any medication.

"The doctor was stunned and assumed she had been diligently following his prescription," Ong says. "But my mum told him, 'No, I haven't taken a single pill ... I've only been consuming coconut oil.'"

What started as a personal health experiment quickly turned into a mission. Ong began importing coconut oil from the Philippines, as it was not readily available in Malaysia, and began sharing it with friends and family.

By 2012, Medella Malaysia was set up as a trading company, exporting the oil to Singapore and Brunei. It quickly went on to become the top coconut cooking oil brand in these export markets and Malaysia, Ong says.

The Covid-19 pandemic in 2020 marked a turning point. When supply chains broke down, Ong made the bold decision to stop relying on imports and start local manufacturing. "We had to make a very scary and exciting decision. We set up our own factory to start producing the product ourselves."

The move gave Medella full control over production, including a proprietary refining process that removes impuri-

ties without chemical additives.

He adds that during the pandemic, demand for coconut cooking oil surged as people looked for natural ways to boost their immunity, especially before vaccines were available.

Car parts to cooking oil

Ong's entrepreneurial journey started in garages. At just 17, he began trading car parts and quickly discovered a strong overseas demand for local performance components. By 19, he was running his own workshop and even racing competitively at Sepang.

His next pivot came unexpectedly during a stint in information technology (IT), particularly in automotive rescue services. Spotting a gap in the market, he teamed up with a software engineer friend to build a mobile app called EARS (Emergency Assistance and Response Services), which allowed users to request roadside assistance via GPS.

The app went on to win several awards, and that early exposure to digital tools later proved invaluable in marketing his products, educating consumers and building trust when he entered the edible oil industry.

Experiences from his business journey led Ong to start a new initiative called Medella+, which supports a handful of early-stage Malaysian food technology and health product start-ups.

"We advise them in terms of branding, marketing strategy and distribution and, where possible, support their entry into retail and onto supermarket shelves," he says.

Rather than charging a fee or taking equity stakes upfront, Ong prefers to collaborate through shared back-end operations, because for him, Medella+ isn't just a business strategy, but a way to pay it forward.

"If we want better food, better health products made in Malaysia, then someone has to help these founders survive that early phase. There are so many good ideas in Malaysia, but no proper platform for them to grow," says Ong.

For now, he remains focused on building Medella into a regional benchmark in healthier cooking oils. But, as someone who has repeatedly reinvented himself — from selling car parts to IT, then edible oils — he expects change is always possible. **E**

FOOD

A game changer in the dairy industry

BY JENNIFER GOMEZ

Given the landscape of fragmented smallholder farms and lack of local industry precedent to rely on 15 years ago, Farm Fresh Bhd founder and managing director Loi Tuan Ee had to trust his instincts and was determined to be a game changer by providing Malaysians with truly farm fresh milk — in a market in which about 95% of fresh milk was actually being reconstituted from powder.

Starting out with producing chilled milk with a shelf life of just 25 to 30 days in the initial years, Loi was determined to prove to consumers that milk farmed and produced locally was nutritious and wholesome. He went to the extent of personally promoting the milk in supermarkets on weekends.

By staying true to its promise of preservative-free chilled milk and empowering a rural community-based home dealer network, Loi and his team eventually won over not only the taste buds but also the trust of Malaysian consumers.

“We were and are still greatly encouraged by the support from Malaysians, and testimony that we are the brand of choice is being named the Platinum winner in the beverage-dairy category of the Putra Brand Awards for four consecutive years,” Loi says.

With annual milk production expected to hit 30 million litres this year, up from 23 million litres in 2024, Farm Fresh now commands 60% of Malaysia’s chilled milk market and accounts for 35% of the country’s total fresh milk production.

Loi credits the government for its support when he was just starting out. “We’re very grateful to the government, to Khazanah Nasional; they funded us when funding was not easy to come by. We are thankful for the trust and confidence placed in us,” he says.

Now, with an inventory of 13,000 dairy cows spread across farms in Kota Tinggi (Johor), Muadzam Shah (Pahang), Serdang (Selangor) and Taiping (Perak), Farm Fresh is setting its sights on something bigger: becoming a pan-Asian dairy powerhouse over the next decade.

The company’s flagship farm and processing hub in Muadzam Shah, developed under the East Coast Economic Region initiative, spans 1,200 acres and houses more than 4,000 dairy cows — making it the largest integrated dairy complex in the country. Just next door, Farm Fresh is expanding into a 500-acre plot, known as Muadzam Shah 2, which has already received its first shipments of livestock. Farther north, in Taiping, the company operates another major processing facility focused on UHT milk production. Together, these sites form the operational backbone that allows the dairy company to maintain freshness, scale sustainably and serve both domestic and international markets with speed and consistency.

“These expansions are part of a broader capital investment plan that underscores our aspiration to become a pan-Asian dairy leader. You can’t raise production without being equally ready to process and distribute. It’s all about building an integrated supply chain that’s efficient, agile and close to the consumer. Still, Malaysia will always remain our main growth market. We have developed a lot of expertise here, in terms of dairy farming, processing and product development,” Loi asserts.

Setting new standards for local consumption

What set Farm Fresh apart was its refusal to compromise on ingredients. While others opted for longer shelf life by adding preservatives, Farm Fresh kept its chilled milk natural and preservative-free — a decision that tested its supply chain but aligned with its values.

Similarly, in a market in which many flavoured dairy drinks were laced with synthetic colours and excessive sugars, Farm Fresh chose to use real fruit purées and a bare minimum of sugar. It understood that dairy, especially for children, was a staple product — not an occasional indulgence — and it should be as safe and healthy as possible.

Loi points out: “Many of the big brands your mothers used to trust have changed. They’ve reduced quality and increased sugar content. It’s no longer about nourishment — it’s about margins. I want to ensure that our products are safe and nutritious for my own granddaughters. As a business, we want to do well by doing good.”

In line with its preservative-free approach, Farm Fresh has, since the early years, invested efforts in educating its distributors and consumers on proper milk storage, explaining why chilled milk should be transported in cooler bags and refrigerated promptly to maintain freshness and avoid spoilage.

As part of its commitment to uplifting rural communities, Farm Fresh developed a grassroots home dealer distribution model — powered mostly by housewives. These home dealers were also responsible for delivering milk to schools under the government’s Program Susu Sekolah (PSS), which Farm Fresh has been part of since 2015.

“Through PSS, we believe we are able to contribute to reducing stunting and malnutrition among children, especially in low-income groups. Our most recent five-year renewal under the PSS contract covers five of the six national zones in Peninsular Malaysia and will involve 85 million packs of nutritious milk annually. It’s one of the most meaningful forms of public spending — investing in the health and development of the next generation,” Loi says.

“And the social impact is significant. Our home dealers are able to sell products to the larger school ecosystem, including parent-teacher associations, cooperatives, canteen suppliers as well as neighbouring communities. It’s a sharp contrast to the distribution models of multinational dairy giants, which rely on large warehouses and centralised fleets.”

Sustainable inputs to dairy outputs

Loi explains that dairy farming is inherently land-intensive, requiring large, contiguous tracts to support sizeable herds and on-site processing facilities. Achieving economies of scale demands integration across farming and production, with circular systems — such as nutrient cycling and energy recovery — being paramount to operational efficiency and cost management.

“In all our farms, waste is treated and repurposed. Solids are composted and used as organic fertiliser, eliminating the need for two million kilograms of chemical fertilisers on a yearly basis. Liquids are



PATRICK GOH/THE EDGE

filtered and reused for irrigation. Manure is converted into biogas, which powers the boilers for the processing plant, saving more than 670,000 litres of diesel and reducing 9,800 tonnes of carbon dioxide emissions annually,” he says.

The company also practises rainwater harvesting and has invested in irrigation to mitigate the risks of drought — a growing concern in the face of climate change. These efforts earned Farm Fresh regional recognition, with the company named a recipient of the Steward Leadership 25 (SL25) listing by Temasek and INSEAD for its leadership in sustainable dairy farming.

Beyond the environmental achievements, Farm Fresh is also the first Malaysian dairy farm in Asia to receive the Certified Humane® certification by US-based non-profit organisation, Humane Farm Animal Care. “Our cows have been with us for nearly a decade. They deserve tender, loving care,” says Loi.

Pan-Asian vision for the future

While Farm Fresh remains rooted in Malaysia, its eyes are firmly set on regional growth and expansion plans are well underway — a pan-Asian dairy company serving more than 500 million people across Southeast Asia. With its expertise in dairy farming, supply chain management and product innovation now well tested in Malaysia, Farm Fresh is ready to replicate its model in markets such as Vietnam, Cambodia and even Indonesia.

The brand has been present in Sin-

“We’re very grateful to the government, to Khazanah Nasional; they funded us when funding was not easy to come by.”

Loi

gapore for several years and is now available in major supermarkets island-wide. With more capacity coming online at home, Farm Fresh is poised to significantly grow its supply for the market there from 2026. In the Philippines, the company recently launched a new processing plant two hours north of Manila — entering a market in which UHT milk dominates and fresh milk is rare. Loi adds that the country’s booming coffee culture presents a timely opportunity for fresh, quality milk.

Loi says further land access will be key to increasing fresh milk production locally in the Philippines, owing to national land ownership restrictions. In the meantime, Australian farms continue to support raw milk supply for the market there.

Product-wise, the company has also evolved. What began as a chilled milk brand has grown to include UHT milk, nutritional powders for children, yoghurt and, more recently, a frozen ice cream line developed in partnership with Inside Scoop. As Farm Fresh expands its product range to become a full-spectrum dairy brand, cream cheese could be on the cards. **E**

OWNING WHAT WE BUILD

PROFILE

A magical bean-to-bar discovery

BY JENNIFER GOMEZ

What began as a small kitchen experiment for Ong Ning Geng a decade ago has grown into a thriving small-batch bean-to-bar chocolate-making enterprise. Today, the 45-year-old founder of Temper & Sense Sdn Bhd, which owns the Chocolate Concierge label, spends much of his time seeking new markets for his expanding supply of cocoa beans, partly fulfilling a promise he made to growers 10 years ago.

Ong had assured them that he would purchase their entire cocoa harvests to give them lasting income stability and confidence. That promise, combined with surging global cocoa prices, has now resulted in increased production from his partner growers, leaving Ong with more beans than ever before, and he is now “feeling the pressure”.

“I started by making super-small batches of chocolate at home. I would sell one batch, use that money to make the next, and so on,” he recalls, adding that his customers were mostly friends, baristas and independent cafes.

“I made that commitment so the farmers could count on a secure future. So we continue to take in whatever they produce at a premium price.”

Where Orang Asli communities once supplied 80% of his beans, today two-thirds of his supply comes from other partner growers. Ong’s partner farms are spread across the country — Sabah, Sarawak, Johor, Melaka, Kelantan, Pahang, Perak and Perlis — a network that supports his brand’s single-origin proposition.

But with rising costs of cocoa, rent and storage and production outpacing current demand, Ong is focused on growth, not just for profitability, but to ensure he keeps his promise.

“Stock is piling up. Our commitment to farmers hasn’t changed, but we need to find new ways to increase demand to survive and to continue doing well, especially for the communities we serve.”

Part of that plan includes expanding into Japan over the next two years, a move he is currently assessing.

His two retail outlets under the Chocolate Concierge label at Bangsar Shopping Centre and The Exchange TRX currently generate about RM1.6 million in annual sales. The bulk of his revenue, however, comes from business-to-business (B2B) sales, amounting to RM5 million a year.

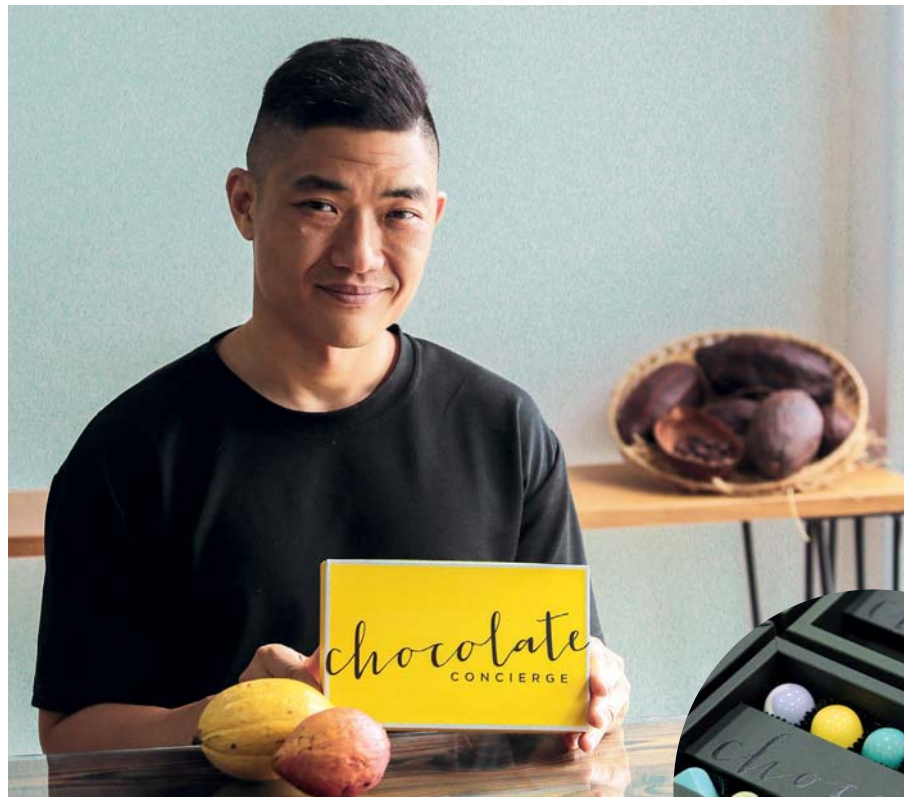
Elsewhere, RM1.5 million comes from semi-finished products including cocoa beans, blocks, flakes and other derivatives. For the current year, Ong expects a 25% increase in sales, given the price increases for finished products.

“Our B2B clients include restaurants, hotels, bars, cafes, corporates, and even luxury and fashion brands that want customised chocolate for events. We also cater for weddings and bespoke gifting.”

Written in the stars

Growing up in Subang Jaya, Selangor, Ong would get up to all sorts of antics to fill his time, and would wonder into parts of the neighbourhood, which were still made up of oil palm estates.

One day, he came upon a tree with low-hanging golden yellow fruits. See-



“You don’t have to be a purist to enjoy our chocolate. But if you are, this is something you’ll truly appreciate — the ability to tie flavour back to a specific place and time.”

Ong

ing no one around, he reached for one, cracked it open and ate it.

“It did not cross my mind that the tree belonged to anyone. When I laid eyes on the golden yellow fruit, the only thought that came across my mind was to try it, and I thought to myself, this is my own magical secret. Only years later did I find out that it was a cacao tree,” he says.

In 2009, when Ong returned from his studies in the US, he looked around for something to do and remembered the golden yellow fruit.

“The sense of magic and personal treasure stayed with me for a long time. And when I got back, I thought of utilising something that was grown in Malaysia yet under-appreciated, and the idea of going into the chocolate industry was sparked in me.”

That set the stage for his next adventure: As he looked for cocoa beans, he called up the Malaysian Cocoa Board to ask if they had a listing of farmers.

“They told me they did not have a listing, but that I could attend an upcoming basic cocoa cultivation class and get connected with farmers there. I signed up, I was the only paying student. The rest were from the Orang Asli community. In hindsight, had the Cocoa Board introduced me to commercial farmers, I think my motivation would have been quite different.”

Ong made connections with the Orang Asli and visited their farms in the jungle. His first visit was to the Semai tribe at the foothills of the Titiwangsa range in Pahang. Naturally, the indigenous commu-

nity was sceptical about the city boy and his intentions.

To earn their trust, Ong requested for permission from the village head to stay with them for two weeks. “There was no phone signal, no lights, no TV, only storytelling and stars. I learnt a lot about them, their motivation and their struggles, and their spirit of sharing and generosity shone through. They did not care about possessions, only sustenance. And I got a 101 on foraging and hunting.

“It felt like the continuation of a story I had started as a boy. That same sense of discovery and magic returned,” says Ong, adding that he was deeply moved by the Orang Asli’s way of life and their natural approach to cultivation.

Unlike commercial farms that depend on pesticides, irrigation and fertilisers, the Orang Asli cultivate cocoa organically and sustainably, without clearing land or planting in rows. While cacao trees are not native to Malaysia, they have been naturalised and grown here for hundreds of years, fruiting once or twice a year.

“The trees grow naturally within the forest ecosystem. There’s no artificial input. Even though cocoa farming is labour-intensive, one person is enough to manage several acres,” says Ong.

He also points to emerging research that suggests cocoa grown in natural environments may be more nutrient-rich, due to the plant’s need to defend itself against pests and fungi.

Additionally, in the past six years, only the inner shells with the beans have been transported out of the farms, while the thick outer pods are left under the trees to decompose. This reduces the weight and volume of what’s transported, making the process more energy-efficient.

Cacao trees, which can grow up to 6m tall, are well-suited for conservation efforts. Ong says that as shade-loving plants, they thrive beneath taller trees, so there is no need to clear jungle canopy to cultivate them.

He worked with just 100 Orang Asli families then. Today, that number has grown to over 300 families from the Semai, Temiar and Temuan communities across Peninsular Malaysia.

To date, he has distributed more than 150,000 fruit trees, including cacao, to support and grow their farming efforts. He also collaborates with a Dusun couple in Sabah and, in recent years, has expanded his network to other partner growers to ensure consistent supply.

Moreover, Ong runs his own agroforestry farm in Raub, Pahang — a hybrid model that blends commercial practices with naturalistic, regenerative methods, and his processing lab, where the beans are fermented, dried and roasted for making chocolate, is located in Kepong, Kuala Lumpur.

“We’ve introduced hundreds of plant species apart from cacao in our farm in Raub to encourage biodiversity, and we avoid the use of weedicides and fungicides entirely.”

An original experience

Unlike mass-produced chocolate, which often blends beans from various sources — suppliers are changed based on price — Ong uses only local, single-origin beans from specific farms, without mixing regions or harvests.

His dedication is rooted in the idea of provenance, a concept that first captured his interest through his fascination with how the flavour of coffee is shaped by origin.

“It started with personal curiosity. I always wanted to know where a particular coffee blend came from. In the same way, I wanted to know what cocoa from each Malaysian state tasted like.”

As such, the chocolate Ong produces are named after the region they come from. “Most chocolates out there do not even list their origin — let alone maintain it as single origin.

“What we offer comes from very small plots. We don’t even blend beans from different parts of the same state.”

He explains that in blind tastings involving more than 1,000 chocolate lovers, none of them found that chocolate from any two regions tasted the same.

“You don’t have to be a purist to enjoy our chocolate. But if you are, this is something you’ll truly appreciate — the ability to tie flavour back to a specific place and time.

“And if cocoa is harvested today, that’s one batch. If it’s harvested tomorrow, that’s another. We don’t blend across locations, and we don’t blend across time for most of our origins,” he stresses.

As for the perception that imported chocolate is always superior, Ong believes it stems from the limited quality of local offerings in the past. “The real challenge is shifting the mindset that chocolate is just confectionery. Most commercial chocolates contain 55% to 60% sugar. What we’re offering is something else entirely. Flavour-first, high-cocoa-content bars where you can actually taste the difference. It’s not just about being better, it’s about being authentic.”

At his outlets, bars typically retail at between RM13 and RM28. Gift boxes of 12 pieces are priced at RM108, and whole cakes are currently available at a promotional price of RM150. The range of offerings include bon bons, beans and nibs, brittles and drinking chocolate. **E**

ZAHID IZZANI/THE EDGE

MPOGCF: LEADING PALM OIL GREEN CONSERVATION IN MALAYSIA



MPOGCF remains steadfast in its commitment to championing biodiversity conservation and environmental sustainability within Malaysia's palm oil sector. These initiatives are in line with the broader national aspiration to position palm oil as a carbon-neutral industry.

Key programmes under the foundation include the Forest Rehabilitation of Orangutan Habitat, Malayan Tiger Conservation, and Borneo Elephant Sanctuary Project. MPOGCF also actively partners with local universities to support research on biodiversity management within plantation landscapes. Its leadership in these critical areas plays an instrumental role in safeguarding the long-term viability and global competitiveness of Malaysia's palm oil industry."

Dato' Yusran Shah bin Mohd Yusof
Chairman MPOGCF



REFORESTATION



Forest Rehabilitation of Orangutan Habitat at Lower Kawag, Ulu Segama Forest Reserve, Lahad Datu, Sabah (SFD)

- Restoring of degraded forest in Lower Kawag, part of Ulu Segama-Malua Forest Reserve in Lahad Datu to be planted with fast-growing indigenous forest tree species and native fruit trees for the orangutans habitat.
- Engaging the nearby local communities which also offers them an opportunity for an additional income stream and at the same time helps preserve the forest landscape.



Development of Peat Rehabilitation model for Sarawak Region (SDG)

- The Peat Rehabilitation Project aims to create a model to restore unproductive ex-oil palm peatlands into functioning peat ecosystems.
- Essential ecological services and strengthen landscape connectivity particularly with the adjacent Labang Forest Reserve with our collaboration partners Sarawak Tropical Peat Research Institute (STROPI), UPM Sarawak, and Forest Department Sarawak.
- The project takes a holistic approach involving peat soil investigation, tree planting programme across 50 hectares, water and fire management, biodiversity assessments, stakeholder engagement and carbon removal initiative.



SUSTAINABILITY PRACTICES



Oil Palm Plantation Landscape As Wildlife Refuge: A Way Forward For Wildlife-Friendly Plantations (UKM)

- This research aims to conduct a biodiversity inventory for groups of wildlife such as mammals, birds, and herpetofauna.
- Collaborative effort between the Malaysian Palm Oil Green Conservation Foundation (MPOGCF) and UKM involves sampling in oil palm plantations owned by FGVM.
- The selected study areas represent three different landscape types which is plantations adjacent to forests, forest fragments/patches within plantations High Conservation Value areas and plantations without any forest located across four states Pahang, Terengganu, Johor, and Kelantan.
- The output of this research is crucial in designing sustainable and wildlife-friendly plantations and to provide guidelines for wildlife-friendly plantation models to be adopted in other plantations.



Sg. Ara Human-Elephant Coexistence Project (EF)

- The Achieving Coexistence with Elephants in Sungai Ara, Johor project supports smallholders in managing human-elephant conflict through training, physical barriers, and simple technology like the Early Warning System (EWS).
- The project empowers smallholders to lead patrols, respond to elephant alerts, and take part in workshops and decision-making through the Human-Elephant Coexistence Committee promoting safer and more sustainable coexistence in oil palm areas.

Guidelines for Biodiversity Friendly Plantations (UPM)

- The project was initiated by MPOGCF to address issues regarding compliance of oil palm plantations with regards to biodiversity and conservation.
- The main thrust of the whole project was to provide a simple but impactful guideline that would help stakeholders to deal with issues of human-wildlife conflicts specifically in oil palm plantation.
- UPM's role in this project is to provide an academically sound science based orientation in the whole verification and write up processes, collation of data and composition of the final publication.



WILDLIFE CONSERVATION



Feasibility Study on Establishing an Elephant Corridor in the Jeli District, Kelantan (UMK)

- The conflict between humans and elephants stems from the diminishing and fragmented habitats caused by land-use activities, including agriculture and settlement.
- Aims to assess the feasibility of establishing an elephant corridor in Jeli District.

Malayan Tiger Conservation Program (PERHILITAN)

- The Malayan Tiger Conservation Programme is a five-year collaboration between MPOGCF and PERHILITAN focused on increasing tiger numbers through ex-situ conservation.
- The programme combines natural breeding efforts, guided by hormone profiling and genetic assessments with Assisted Reproductive Technology (ART) such as artificial insemination and cryopreservation to overcome breeding challenges.

Malayan Tapir Conservation Initiatives (UPM)

- This preliminary study seeks to understand the communities residing in palm oil plantations, focusing on their knowledge, attitudes, emotions, and behaviors toward the Malayan Tapir and related issues.
- It will explore their experiences with Human-Malayan Tapir conflict situations, their perceptions of the ecological and economic value of the Malayan Tapir and their willingness to participate in conservation initiatives.

Borneo Elephant Sanctuary (SWD)

- Establishing a dedicated Borneo elephant clinic, new enclosure facilities and an elephant raceway inside the Borneo Elephant Sanctuary at Kinabatangan.

Tabin Sun Bear Program (BSBCC)

- The Tabin Sun Bear Project (TSBP) is a long-term, field-based initiative focused on researching, rehabilitating, and reintroducing wild and rescued sun bears in the Tabin Wildlife Reserve (TWR) and nearby oil palm plantations.
- This project is part of BSBCC's broader wildlife conservation efforts in these areas. BSBCC plans to build a Sun Bear Rehabilitation and Research Field Station at the TWR Headquarters to serve as a permanent base for the project.

OUR PROJECTS 2025

- Napier Grass Cultivation For Elephant (UPM)
- Modelling the impact of nocturnal wildlife on oil palm production (UMS)
- Forest mosaics within small scale oil palm plantations (UNIMAS)



OWNING WHAT WE BUILD

TECH TALK

Strengths, roadblocks and the shifts needed to make 'Made by Malaysia' a reality



REVAMP GRANT APPROVAL PROCESS

For retail technology start-up Retailitics Sdn Bhd, the barrier is not innovation but recognition. The company, which develops AI-powered smart shopping carts and holds patents in the US and Malaysia, has seen repeated government grant applications rejected.

"We want to see committees that approve government grants consist of professionals that have start-up experience and successful experience. This would be more effective compared to relying on academics and bureaucrats who lack the experience to support local start-ups and drive patentable innovation," says chief operating officer and co-founder Shaji Rajappan.

Despite securing letters of intent from three local retailers and a major Saudi Arabian retailer as early as 2019, Retailitics has struggled to secure funding.

Retailitics launched its smart carts in a local super-market in 2023 with the backing of angel investors — only to see another grant application rejected. Frustrated, the founders have considered moving their headquarters to Singapore for better access to capital and markets, though operations would remain in Malaysia. For now, Retailitics is pursuing funding and partnerships abroad, a strategy that Shaji says reflects a system "still not built to recognise or reward real innovation."

AT A GLANCE

Name of company: **Retailitics Sdn Bhd**
 Founded: **2018**
 Industry: **Retail technology**
 Valuation as at December 2024: **RM20 mil**
 Latest investment round: **RM3.3 mil**
 Total investment raised to date: **RM5 mil**
 Company footprint: **Malaysia, with channel partners in Saudi Arabia (covering Middle East and North Africa), Singapore, the Philippines, South Africa and, soon, India and Australia**



FASTER APPROVALS AND LONG-TERM CAPITAL NEEDED

Malaysia has strong talent and ideas, but slow regulation and limited funding — particularly in healthtech — continue to hold back innovation.

Dr Kev Lim, CEO and co-founder of Qmed Asia, says change must begin with global ambitions. "If we want Malaysian products to succeed globally, we need to design and build for global standards from the very start. I would like to see faster regulatory approvals for digital health and AI; investors with longer-term outlooks to support high-impact solutions. These changes would help Malaysian companies scale faster, expand overseas and compete with the best internationally," he says.

Still, Lim notes Malaysia retains advantages. "Operating costs are competitive and public agencies are increasingly open to working with local innovators," he says. The country's infrastructure, skilled professionals and strategic Asean location also provide a solid base.

Qmed Asia has developed digital health solutions to streamline operations and improve patient care, and is now expanding into AI, from medical scribing to clinical decision support.

AT A GLANCE

Name of company: **Qmed Asia**
 Founded: **2019**
 Industry: **Healthtech**
 Total investment raised to date: **RM6.5 mil**
 Company footprint: **Headquarters in Kuala Lumpur, operations across Malaysia, pilot projects in Singapore and Indonesia**



DOUBLING DOWN ON R&D

Made by Malaysia can become a respected global brand if it tackles four areas: funding, research alignment, sandbox usability and export support.

"A lot of grants right now focus on short-term projects or quick returns. But real innovation takes time. At IGL, we have exploratory projects that may only show results five to 10 years from now," says IGL Coatings Sdn Bhd founder Keong Chun Chieh. "[These projects] don't get much support because they don't fit into the usual funding cycles. We need capital that backs future technology, even if it takes longer to pay off." Keong adds that supply chain gaps and limited export support compound the challenge. "For certain things, we still have to import, which increases costs and slows things down. That makes it harder to fully build something that's truly Made by Malaysia, end to end. Getting products into global markets is also hard, especially when you are going up against established



CLEARER REGULATIONS REQUIRED

Malaysia's elderly care industry is still in the early stage, particularly in non-medical support, where families often seek help only in crises.

For Teman Malaysia, a social enterprise founded in 2020, the absence of a clear policy for community-based providers hampers progress. "This can make it challenging to maintain quality standards across the industry," says CEO and co-founder Ezzati Nasir. Retaining trained companions, many of them freelance, is another challenge.



FUNDING NEEDED TO HELP FILL THE GAPS IN SPACETECH SUPPLY CHAIN

Malaysia's growing spacetechnology sector faces a critical barrier: gaps in the supply chain that limit the industry's ability to scale.

Norilmi Amilia Ismail, CEO and founder of SpaceIn Sdn Bhd, argues that more decisive government backing is needed.

She points to the "Buy Malaysian" campaign as a starting point. "The Buy Malaysian campaign should be broadened beyond consumer goods to include advanced technologies like satellites, electronics and IoT systems," she says.

Norilmi believes such policies could help reduce reliance on imports while strengthening confidence in local products. She also calls for stronger procurement rules. "Adopting a 'Malaysian-first' procurement policy for government agencies and corporations, making it mandatory for these agencies and companies to prioritise Malaysian-made products or collaborate with local start-ups" would, she says, create early market opportunities and credibility for domestic firms.

SpaceIN is already building partnerships with local electronics manufacturers and universities to develop satellite components and establish a complete local supply chain.

For Norilmi, the equation is simple: Malaysia has the talent and cost advantages, but without systemic support to plug supply chain gaps, homegrown spacetechnology will struggle to gain global traction.

AT A GLANCE

Name of company: **SpaceIn Sdn Bhd**
 Founded: **2020**
 Industry: **Space technology**
 Valuation as at December 2024: **RM8 mil**
 Total investment raised to date: **RM375,000**
 Company footprint: **Penang**

The 'Made by Malaysia' ambition requires more than just innovative ideas. The determination demands a supportive ecosystem that can nurture local technologies from concept to global market success.

However, start-ups and local companies still face hurdles in terms of funding, regulation and market access that are hindering their growth.

To understand the challenges and opportunities in this journey, *The Edge* spoke to local companies across industries about the strengths they see in the ecosystem, the roadblocks holding them back, and the changes they hope to see.

BY **RAVINYAA RAVIMALAR, KIRAN JACOB** AND **ARIS RIZA NOOR BAHARIN**

international brands. Trade missions, branding support and export grants could really help push Malaysian innovations into more markets."

Despite these hurdles, IGL is investing heavily in R&D to develop longer-lasting, greener coatings, while partnering with local researchers to commercialise home-grown materials. "There is a lot of potential in using locally developed materials and turning them into real products for the global market. Instead of just importing everything, we want to scale home-grown compounds and put them into practical use. If we can commercialise local innovation, that's real value creation under the Made by Malaysia brand," says Keong.

AT A GLANCE

Name of company: **IGL Coatings Sdn Bhd**
 Founded: **2015**
 Industry: **Advanced materials**
 Latest investment round: **RM300,000 via angel investment**
 Total investment raised to date: **RM300,000**
 Company footprint: **Shah Alam, Selangor**

Ezzati argues stronger regulation would raise standards, improve access and affordability, and "not only improve quality of life for the country's ageing population but also position Malaysia as a regional leader in innovative, people-first ageing solutions." Teman is leaning on technology with booking, monitoring and communication tools to make services more transparent.

AT A GLANCE

Name of company: **Teman Malaysia (Teman My Ventures PLT)**
 Founded: **2020**
 Industry: **Elderly care / social enterprise**
 Funding from: **Yayasan Hasanah**
 Company footprint: **Klang Valley**



LOCAL INNOVATION OVER IMPORTS

Malaysia's strong trade links make imported technologies easily accessible, often at the expense of local innovation.

"Enterprises often default to well-known international brands or the cheapest available option, and local solutions must prove both technical merit and cost advantage before they are considered," says George Lee, founder and director of MyNasional eKYC Holdings Sdn Bhd. Founded in 2011, the company develops digital identity, eKYC verification and AI-powered fraud prevention.

Lee argues that local technologies remain undervalued. "In the private sector and mass consumer space, there is still a lingering perception that local solutions are 'good enough' but not on a par with international brands. The reality is that Malaysian technologies vary in quality, just like in any other market, and many are capable of competing globally in both performance and reliability." He adds that the private sector must match the public sector's willingness to adopt local tech. "To ensure Malaysian-made products gain greater recognition and trust, the private sector must show the same willingness to adopt local technology as the public sector, which has been an early supporter."

For MyNasional eKYC, breaking this bias is central to the Made by Malaysia ambition.

AT A GLANCE

Name of company: **MyNasional eKYC Holdings Sdn Bhd (formerly known as innov8tif Holdings Sdn Bhd)**
 Founded: **2011**
 Industry: **AI fraud prevention and eKYC solutions**
 Valuation as at December 2024: **RM78.43 mil**
 Company footprint: **Malaysia, Cambodia, Singapore, Indonesia**

OWNING WHAT WE BUILD



SCALING CLOUD GAMING BEYOND MALAYSIA

For Nebula Technologies Sdn Bhd, the challenge is not profitability but scaling in a funding climate that undervalues risk-taking. The cloud gaming start-up became profitable on pre-seed funding and now serves gamers in Indonesia, India, Brazil and across Southeast Asia.

Founder Dary Wong sees this as proof of untapped demand. “Gamers who couldn’t afford powerful gaming hardware and only watched others play, can now enjoy the most exciting games themselves with any device they already have — all they need is good internet,” he says.

Yet, like many start-ups, Wong has faced programmes and grants that were “slow, tedious and bureaucratic, often trying to minimise risk”, leaving many founders reliant on venture capital. Nebula’s pre-seed came from 1337 Ventures, while the Sarawak Digital Economy Corporation’s Digital Village Accelerator helped Wong scale. “A founding team is best, but in the age of AI, there’s no better time than now for solo founders to start building and it would be a waste to not empower them with resources to have a fighting chance,” he says.

Now profitable, Nebula aims to take cloud gaming mainstream worldwide. But Wong’s experience reflects a broader problem: Malaysia’s ecosystem remains risk-averse, pushing more founders to look abroad for growth.

AT A GLANCE

Name of company: **Nebula Technologies Sdn Bhd**
 Founded: **2022**
 Industry: **Gaming**
 Valuation as at December 2024: **RM1.5 mil**
 Latest investment round: **Nov 2023, pre-seed round by 1337 Ventures**
 Total investment raised to date: **RM300,000**
 Company footprint: **Based in Kuala Lumpur and Kuching, Sarawak. Serving gamers in Southeast Asia, India and Brazil.**



DIGITAL INSURANCE NEEDS A BIGGER PUSH

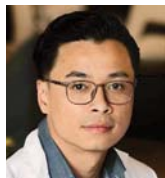
Malaysia’s insurance and takaful sector continues to struggle with low penetration, particularly among B40 households. Shazy Noorazman, CEO of digital-first insurance platform Ouch!, believes Bank Negara Malaysia’s Digital Insurers and Takaful Operators (Dito) framework could change that.

“Many of the existing products are complex, expensive and not well understood by the average consumer,” says Shazy. “Dito, which provides comprehensive guidelines for digital insurance operators, can solve this by opening the market up to new, digital native consumers. This will encourage simpler, more affordable products that can use AI to reach underserved communities.”

Founded in 2019, Ouch! has built its business by cutting out agents and paperwork, offering “simpler and more accessible products and plans”. The company now hopes to leverage local talent to deliver personalised, transparent and shariah-compliant solutions. With Dito in place, Shazy argues, Malaysia could set a global benchmark. “I hope this is a step towards big changes that can make Malaysia a true leader in insurance.”

AT A GLANCE

Name of company: **Ouch!**
 Founded: **2019**
 Industry: **Financial services (takaful)**
 Valuation as at December 2024: **RM50 mil**
 Latest investment round: **RM5 mil**
 Total investment raised to date: **RM14.3 mil**
 Company footprint: **Kuala Lumpur**



CONNECTING A FRAGMENTED HEALTHCARE SYSTEM

Malaysia’s healthcare system is among the region’s most accessible, but remains hampered by fragmentation, with patient data often siloed between hospitals, pharmacies and clinics.

“There is often no interconnectivity between different healthcare settings, from hospitals to pharmacies, resulting in patient information sitting in silos with no way to share,” says Kevin Ong, CEO and co-founder of MyScripts Sdn Bhd.



FUNDING AND TALENT STILL IN SHORT SUPPLY

Early stage blockchain companies in Malaysia face two hurdles: limited funding and a shortage of technical talent. For Hata.io, a Kuala Lumpur-based digital asset exchange founded in 2023, the lack of local support has meant looking overseas for capital.

“We had to look abroad for funding,” says CEO and co-founder David Low, whose company has secured US\$4.2 million from US-based investors including Cadenza Venture. He argues Malaysia’s ecosystem must move faster. “Establishing targeted grant programmes, co-investment funds or government-backed venture capital schemes for these industries would help Malaysian start-ups access the capital they need to build sophisticated products locally without having to rely solely on overseas funding.”



BUILDING TRUST FOR LOCAL INNOVATION

When MInD Mechatronic Intelligent Design Sdn Bhd (Mindrobotics) was founded eight years ago, one of its biggest hurdles was convincing customers to take local innovation seriously.

“There is a cautious mindset when it comes to adopting local, early stage technologies, especially in industries where reliability is non-negotiable. The preference often leans towards established and foreign tech, seen as more mature and proven,” says chief operating officer and co-founder Shahid Bakar. He argues that structured pathways are needed to build trust and adoption in sectors such as agriculture, public infrastructure and sustainability — without which scaling globally remains difficult. Despite this, Mindrobotics has gained traction. It has



BANKS MUST EMBRACE NEW TECHNOLOGY

Malaysia’s fintech sector has grown quickly, but gaps remain in how banks and start-ups access and use transaction data. This limits innovation in areas such as cash flow underwriting, which could support small and medium enterprise (SME) loans.

“Gaps in banks’ and fintechs’ access to transaction data hinder the development of cash flow underwriting models that could support SME loans,” says Kee Hui Jiang, co-founder of Finory.tech.

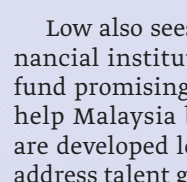
Kee argues that progress depends on stronger collaboration between traditional institutions and start-ups. “Collaborating with start-ups like ours would be the fastest way to achieve this integration.”

Finory, founded in 2023, recently raised funds from Malaysia-based venture capital firm 1337 Ventures. The company is expanding its in-house document parsing and transaction enrichment technology and aims to extend its reach across Asean, including Indonesia and Singapore.

For Kee, the ecosystem’s challenge is not a lack of ambition but hesitation among incumbents. Until banks are more willing to adopt new technologies, fintech start-ups will remain underutilised in solving long-standing gaps in financial access.

AT A GLANCE

Name of company: **Finory.tech**
 Founded: **2023**
 Industry: **Fintech**
 Company footprint: **Kuala Lumpur**



TAKING HALAL TECH GLOBAL

Malaysia’s halal certification is internationally recognised, but the technology platforms built around it often lack global visibility. For Serunai Commerce Sdn Bhd, founded in 2009, this limits the ability of local halal tech to shape the global market.

“We hope Hata can be a role model for how a home-grown Malaysian company can succeed globally while contributing to the country’s digital economy ambitions,” says Low.

AT A GLANCE

Name of company: **Hata.io**
 Founded: **2023**
 Industry: **Fintech and blockchain**
 Latest investment round: **US\$4.2 mil**
 Total investment raised to date: **US\$4.8 mil**
 Company footprint: **Kuala Lumpur**

deployed CanopyNet, a plantation mesh communication system for areas with poor connectivity, and is expanding its AIoT-based irrigation and fertigation systems to advance smart farming. Shahid credits government agencies including MRANTI, MDEC and MCMC for opening doors. “These agencies have opened many doors for companies like ours,” he says.

Now based in Cyberjaya, Mindrobotics has deployments nationwide and early collaborations in Indonesia and Japan.

AT A GLANCE

Name of company: **MInD Mechatronic Intelligent Design Sdn Bhd**
 Founded: **2016**
 Industry: **Robotics, Internet of Things (IoT) and agriculture technology**
 Total investment raised to date: **RM1.2 mil (revenue-driven, investment discussions ongoing)**
 Company footprint: **Based in Cyberjaya, with deployments across Malaysia and early stage collaborations in Indonesia and Japan**



TAKING HALAL TECH GLOBAL

Malaysia’s halal certification is internationally recognised, but the technology platforms built around it often lack global visibility. For Serunai Commerce Sdn Bhd, founded in 2009, this limits the ability of local halal tech to shape the global market.

“This calls for a wider mandate for digital halal tools, push to promote Malaysian halal digital platform as exportable tech, and the integration of halal tech into national policies such as the Halal Industry Master Plan 2030,” says Amnah Shaari, group CEO and founder of Serunai.

Serunai offers a suite of digital halal solutions, including VH SMART, a digital Halal Assurance System for businesses seeking certification, and Verify Halal, a mobile app and search engine for consumers. It also runs the Serunai Halal Centre of Excellence, offering training and consulting. The company is enhancing its platforms with AI and blockchain to boost transparency. “This is through integrating more AI-based fraud detection and blockchain-enabled traceability tools in halal supply chains, especially in the food and beverage, pharmaceutical and cosmetics sectors,” says Amnah.

For Malaysia to capitalise fully, Serunai believes that halal tech must be recognised as a national export strength.

AT A GLANCE

Name of company: **Serunai Commerce Sdn Bhd**
 Founded: **2009**
 Industry: **Technology and halal**
 Valuation as at December 2024: **RM21 mil**
 Total investment raised to date: **RM19,264,429**
 Company footprint: **Kuala Lumpur**

proven locally, Ong hopes to scale the model across the region, arguing that connecting fragmented systems could allow Malaysia not only to meet global standards but also to export its solutions.

AT A GLANCE

Name of company: **MyScripts Sdn Bhd**
 Founded: **2023**
 Industry: **Healthtech**
 Valuation as at December 2024: **RM2.8 mil**
 Total investments raised to date: **RM333,000, including grants**
 Company footprint: **Kuching**

OWNING WHAT WE BUILD

ISSUES

Securing AI sovereignty

BY CHELSEA LEE JIA SHI

Although Malaysia has yet to formalise artificial intelligence (AI) laws and regulations, the country is taking charge by developing a robust foundation for AI sovereignty, with efforts already underway.

In an age when borders are being blurred by digital lines, developing the nation's AI sovereignty will reduce reliance on external entities, create a steady landscape amid shifting regulations and produce a Malaysian DNA for AI.

"AI sovereignty goes beyond data localisation and digital sovereignty. It lays a foundation for strategic autonomy in an AI-driven world and it gives Malaysia the ability to shape our own AI destiny so that Malaysians can adopt AI in a way that is secure, inclusive and aligned with our national goals," says Shamsul Izhan Abdul Majid, head of the National AI Office (NAIO).

AI sovereignty is the ability to develop, operate and govern AI systems in a way that fully aligns with the country's legal, cultural, economic and national security, he explains.

NAIO, as the nation's established AI agency, spearheads the governance of AI policies, guidelines and standards for operations in sectors.

"It is about making sure that the technologies that we use have the ability to cater for Malaysia's specific needs, values and priorities. Therefore, we anticipate that via sovereign AI considerations, we will be able to manage what should be Malaysia's perception or values or version of AI and reflect who we are as a nation," says Shamsul.

On Aug 12, YTL AI Labs unveiled Malaysia's first home-grown large language model (LLM) at the Asean AI Malaysia Summit 2025, trained on local languages and data to reflect the country's cultural context and needs.

Another LLM, called NurAI, developed by Zetrix AI Bhd was also unveiled at the summit, showcasing the world's first shariah-aligned AI. Mesolitica Sdn Bhd's MaL-Lam, a multilingual and Malaysia-centric LLM, had a preview of its 2.5 version reasoning released late last year.

These innovations have come under the spotlight in representing Malaysia's endeavours to achieve AI sovereignty, spurring the need for proper frameworks to develop alongside emerging technologies.

The Ministry of Science, Technology and Innovation (Mosti) published the National Guidelines on AI Governance and Ethics, in support of the Malaysia National Artificial Intelligence Roadmap 2021-2025, in September 2024. Such frameworks will serve as a way for NAIO to build up to the release of the AI Action Plan 2030 in a few months' time.

The next step will be to focus on making Malaysia a producer and creator of AI, rather than remaining as a consumer and end user.

Governing safe and responsible AI use

Navigating the lines between AI innovation and societal responsibility is a key pillar of AI sovereignty by ensuring that AI developments and deployments



ZAHID IZZANI / THE EDGE

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Shamsul

move forward in a trusted, secure and ethical manner.

During a panel discussion at the Asean AI Summit Malaysia, Datuk Dr Fadhlullah Suhaimi Abdul Malek, former executive chairman of the Malaysian Communications and Multimedia Commission (MCMC), stressed the need to support technological advancements without stifling innovation.

"Innovation must happen without any controls for you to pursue anything you can dream of. But at the same time, as we run, we probably will trip. The question is, do we want to fall hard on our face or do we want to fall without injuring ourselves?" he said.

Rather than opting for a restrictive and controlling environment, there should be guard rails to steer the country's direction in using AI responsibly, said Fadhlullah.

From a regulatory perspective, providing guidance will be a better approach to ensuring that the country has safe and responsible information available alongside pre-existing laws such as the Personal Data Protection Act (PDPA) and the recently announced National Cloud Computing Policy (NCCP), he added.

"[Guard rails] can change over time, and it's a recursive way of managing things. No law will ever be ahead of technology, it always lags behind."

"Personally, I don't think you need

any more laws. What you want is actually to convene both the government and industry, and look at it from a perspective of what the risk would be and how we could then protect ourselves.

"That usually comes from guidelines that could be reviewed on an annual basis if need be, because that allows you to provide room for innovation without the stringency of a law, which requires parliament."

Shamsul says NAIO has had interactions with countries like the US, the UK, Thailand and Singapore to exchange observations on how each country is moving forward with regard to AI sovereignty.

NAIO was recently at a Unesco meeting in Bangkok, where the organisation was able to look at South American countries and the ways in which they are working on regulations and AI governance.

Shamsul also addresses foreign AI influences such as DeepSeek and ChatGPT, and shares that these platforms will still be accessible to Malaysians.

He stresses that there are no plans to ban external AI. Instead, it will work to set up an AI safety task force under the Ministry of Digital to look at how AI model safety can be evaluated. This is being proposed by NAIO for domestic governance and safety enforcement.

Going sector by sector

Each sector has its own unique AI challenges and there cannot be a one-size-fits-all solution for every industry. NAIO is currently looking at having more sector-based policies, standards and guidelines, which may be more organised for some fields.

To facilitate this, NAIO has been focused on multi-stakeholder engagements across various industries in Malaysia to approach policymaking with updated knowledge on the various permutations of governance.

Shamsul, drawing on his engagements with the music industry, highlights concerns about AI's impact on copyright. While some industry players acknowledge the benefits that AI can bring, many are fearful of the loss of profit through phantom AI artists and songs.

Discussion between NAIO and sector leaders will be key to address these concerns in a way that balances the protection of industry players and the use of AI in innovation.

Another example of the unique challenges each sector faces can be seen through MCMC's recent announcement on labelling AI-generated images in Malaysia. Shamsul explains that labelling and watermarking images is the natural course for multimedia, but the same cannot be done for the healthcare or transport sector, for instance.

Constant back and forth with the industry also helps NAIO stay on top of trends in AI and technology. This will allow it to embed opportunities and challenges into the AI action plan for the country and ensure that the organisation does not operate in a silo.

"We established seven working groups back in February, and this is crucial because it gives us that outside-looking-in perspective on what industry players are doing and saying, then that becomes direct feedback for NAIO," says Shamsul.

Developing domestic capabilities

Data and AI are heavily intertwined, and having AI-ready infrastructure that is locally owned and operated will be crucial in protecting sensitive information and systems.

"This includes ensuring that AI usage, particularly in critical infrastructure of the country, takes into account security considerations such as local operation and governance," says Shamsul.

The infrastructure must also be designed to align with AI applications, whereby data considered as high-risk use cases for AI will be subject to higher compliance in terms of sovereignty.

He uses social media as an example of a zero sovereignty model, where much data is being fed into public platforms on a daily basis. Although individual data may be stored outside the country, the trade-off in the information requested would be considered low risk.

However, the healthcare sector would be a high-risk use case, as usage of personal data for the sake of AI can result in leakage of sensitive details. Thus, this will require a high level of compliance to keep private data and AI systems within the country's borders to ensure sovereignty.

Domestic capability in the form of talent will also be crucial in securing AI sovereignty as this will ensure a more responsible approach when using AI on a day-to-day basis.

"We must equip our people and grow our AI ecosystem, establish AI academies and centres of excellence with industry partners," said Charlie Foo, vice-president and general manager of enterprise and ecosystem business at Nvidia Asia Pacific, during his presentation at the Asean AI Summit Malaysia.

He stressed that AI literacy should be embedded across the education system and not be limited to technical courses, and that collaboration with academia will be key to democratising AI education to increase expertise in the country.

This is to ensure that AI knowledge is inculcated among the youth in preparation for a future workforce, supported by AI-savvy start-ups, researchers, developers and even policymakers. **E**



MADE IN MALAYSIA: HOW PAYNET IS POWERING THE NATION'S CASHLESS FUTURE



Malaysia's shift towards cashless payments was not an advancement that happened out of the blue. What many may not know is that at the heart of this transformation is Payments Network Malaysia Sdn Bhd (PayNet), the backbone of the country's digital payment infrastructure.

"Evolving from a national payments infrastructure provider to an innovation enabler, fintech accelerator and security advocate, PayNet has played a central role in advancing Malaysia's financial services landscape. Our integrated, forward-looking approach continues to support a dynamic, inclusive and secure digital economy for all Malaysians," says chief technology officer Teh Lip Guan.

One of PayNet's most integral innovations is the DuitNow ecosystem, which includes DuitNow Transfer, DuitNow QR and DuitNow Pay. Phrases such as "scan or tap?" and "I'll transfer via DuitNow" have been seamlessly integrated into the everyday vernacular of Malaysians, highlighting the impact of these services both at a societal level and in the financial realm.

By unifying Malaysia's once-fragmented QR landscape under the national DuitNow QR standard, PayNet has brought together banks, e-wallets and non-banks onto a single rail, simplifying payment gateways for the nation.

"The introduction of the DuitNow ecosystem was a major milestone in our cashless journey. Launched in 2018, DuitNow revolutionised payments in Malaysia through instant transfers using only a mobile or MyKad number. This simplification has revolutionised how the rakyat and businesses pay, and enhanced operational efficiency for financial institutions. In partnership with the industry, use of Malaysia's real-time retail payments platform (RPP) DuitNow has skyrocketed 30-fold from 110 million transactions in 2019 to 3.5 billion transactions in 2024," says Teh.

PayNet is also responsible for Financial Process Exchange (FPX), a foundational platform for internet-based payments; JomPAY, a centralised bill payment platform; and MyDebit, the country's domestic debit card system.

PayNet has been playing a pivotal role in advancing the country's digital economy and driving financial innovation ever since it was established through the merger of the Malaysian Electronic Payment System (MEPS) and the Malaysian Electronic Clearing Corporation Sdn Bhd (MyClear) in 2017. This merger laid the foundation that has enabled PayNet's progress in high-value payment systems under one roof, creating a more integrated and resilient national payments infrastructure.

Building from its history as MEPS, the company introduced the country's first shared ATM network in 1996. Over the years, MEPS went on to expand its offerings with the launch of Interbank GIRO (IBG) in 2000 and chip-based ATM cards in 2004, laying the groundwork for fintech growth within the country.

Reflecting on this journey, Teh says these very innovations have paved the way for the company's standing today, with trust at its core.



"By combining robust safeguards with seamless interoperability, we're not just making things easier for the rakyat; we're strengthening the foundations of a trusted, efficient digital economy that works for everyone."
— Teh Lip Guan



social impact initiative designed to nurture unserved and unbanked communities into financial inclusion.

At the heart of this programme is its five-stage framework Cambah Wheel: sponsor education; train and develop; support community initiatives; digitalise; and reinvest. Through strategic collaborations with banks and e-wallet providers, PayNet equips communities with digital payment tools, financial literacy and sustainability-focused economic models. PayNet Cambah was launched in Langkawi in 2023, with zero-waste fashion produced by B40 single mothers.

"We sponsored sewing skills, taught financial management and worked with high-end resorts to upcycle discarded fabrics into boutique-worthy fashion pieces," says PayNet senior director and head of strategy and ESG Azleena Idris. "By February this year, 134 households had graduated to bankability and are now supported by Hong Leong Islamic Bank under the iTEKAD programme with Bank Negara."

Principles of security and efficiency are engineered into every layer of PayNet's systems, from inception to execution, ensuring both longevity and resilience.

"We work closely with regulators, banks, fintechs and technology partners to ensure that Malaysians can transact with ease and confidence, whether at home or across borders in neighbouring countries such as Singapore, Thailand, Indonesia and Cambodia," Teh explains.

"By combining robust safeguards with seamless interoperability, we're not just making things easier for the rakyat; we're strengthening the foundations of a trusted, efficient digital economy that works for everyone."

Protecting Malaysians from scams and fraud is a critical part of that mission. In 2024, Bank Negara Malaysia, PayNet and financial institutions launched the National Fraud Portal. Developed with the National Scam Response Centre, the platform has slashed the time to trace stolen funds by 75% and increased mule account detection by 45%.

EMPOWERING COMMUNITIES THROUGH DIGITAL PAYMENT INCLUSION

PayNet's mission is rooted in a simple, powerful ethos: Shared prosperity must reach everyone in Malaysia. From urban centres to remote villages, across all walks of life, PayNet wants to ensure no one is left behind. Its services are built to empower the rakyat, financial institutions and fintechs. Where gaps persist, PayNet complements the ecosystem with PayNet Cambah, a



"Cashless Boleh 4.0 — involving 20 federal agencies and statutory bodies — recorded a total of 138.8 million digital payment transactions, achieving an 86% penetration rate."

— Firdaus Ghani

Since then, PayNet Cambah has scaled nationwide, with ESG-focused programmes running in every region, covering food production and farming, with plans to upskill participants with cloud-based skills and tools through PayNet's partner Amazon Web Services.

In Sabah and Sarawak, PayNet is working with the Gates Foundation, Mojaloop Foundation, the Yono app and several fintech partners to bring stable internet access to underserved areas by pioneering an offline digital payment proof-of-concept.

Beyond these community-driven projects, PayNet is also championing nationwide initiatives to accelerate digital adoption, such as its Cashless Boleh campaign.

"The fourth instalment, Cashless Boleh 4.0 — which ran from December 2023 to November 2024, involving 20 federal agencies and statutory bodies — recorded a total of 138.8 million digital payment transactions, achieving an 86% penetration rate," says PayNet senior director of government digitalisation Firdaus Ghani.

In addition, PayNet's partnerships with entities such as Agrobank have transformed places such as Pulau Sri Tanjung in Kelantan into fully cashless zones. Micro, small and medium enterprises (MSMEs) and rural fishing communities at the floating market in Tumpat are now fully digitalised, having embraced the cashless shift.

FORTIFYING THE FINANCIAL INFRASTRUCTURE

PayNet's journey is far from over, with more innovation in the pipeline that aims to continue transforming the nation's digital payment landscape and strengthen its payment infrastructure.

One upcoming area of particular interest to PayNet lies in emerging technologies that advance financial sovereignty. This will be conducted through a payment network that will be fully governed, hosted and operated within the country's borders.

"PayNet is currently exploring further developments in areas such as open finance, tokenisation, digital onboarding, payment switch resilience and leveraging quality data to grow artificial intelligence (AI) capabilities to ensure national resilience and digital sovereignty," Teh explains.

Future projects include developments in cross-border payment interoperability within and beyond Asean to further promote financial inclusivity and to support Malaysia's role in regional economic integration.

PayNet is also committed to cultivating the local talent pool to bridge the digital divide. Program Akar, in collaboration with Amazon Web Services and re/Start, was launched in 2024, with a focus on building foundational digital skills for the financial services industry.

In April 2025, the second phase of Program Akar expanded into AI and data science, in partnership with Microsoft, reflecting PayNet's commitment to developing future-proof talent aligned with evolving industry demands.

Ongoing projects, such as the PayNet Fintech Hub, continue to charge forward. Launched in May 2025, the hub is a platform designed to support and scale Malaysia's fintech sector. Start-ups under the hub's COMMUNITY are already benefiting through access to funding, mentorship and strategic partnerships to scale their innovations for both local and regional markets.

In short, PayNet's story is Malaysia's story — one of resilience, innovation and inclusion. From cashless adoption at home to cross-border connectivity abroad, PayNet continues to shape the nation's financial future while safeguarding its digital sovereignty.

OWNING WHAT WE BUILD

BY KIRAN JACOB

Malaysia has set its sights on moving beyond an assembly-based economy into one that creates and owns innovation. The “Made by Malaysia” push is key to this transformation, as it seeks to position the country as a creator, owner and exporter of home-grown intellectual property (IP), product and services.

The country has put this ambition firmly in the spotlight. In the recently tabled 13th Malaysia Plan (13MP), the federal government aims to have the country rapidly emerge as a technology leader and produce “world-class made by Malaysia” products and services by 2030.

This goal is reinforced by the New Industrial Master Plan 2030 (NIMP 2030), which outlines the strategy for the country to transition into a high-income, technology-driven and globally recognised economy.

Made by Malaysia is a path to “strategic autonomy”, enabling the country to capture greater economic value through IP, branding and control of its innovation ecosystem while reducing reliance on imports and mitigating the risks of technological dependence on other countries or corporations, industry players say.

“In an era marked by geopolitical instability and increasing competition in high-tech industries, owning innovation is vital to economic sovereignty and national resilience,” says Minister of Science, Technology and Innovation Chang Lih Kang.

This move comes at a critical moment as geopolitical tensions, trade restrictions and shifting supply chains are reshaping the global technology landscape. This urgency is reinforced by global trends, which increasingly reward ownership of design and software IP over sheer production volume, says Yong Kai Ping, CEO of the Selangor Information Technology & Digital Economy Corporation (Sidec).

Yong warns that the country risks stagnating if it continues to be assembly- and manufacturing-focused, stressing the need to build and own home-grown technologies to reduce reliance on foreign technologies and strengthen economic resilience. This means exercising control, ownership and leadership over home-grown innovation and manufacturing to serve the global market.

This will require a coordinated shift across all facets of the innovation ecosystem. Stakeholders point to the need for a re-conceptualisation of research and development (R&D), significant financial investments, high-quality talent development, a clear path to commercialisation, and a strong domestic market for local innovations.

Yong stresses the need to shift from a “factory mindset” to founder-led innovation, adding that industry experience must be channelled into technological advances and product ownership.

It is equally important to enhance IP creation and monetisation pathways, ensuring that locally developed technologies are not only protected but also effectively brought to market and scaled, says Chang.

Yet, the road to a Made by Malaysia economy is hindered by systemic gaps that cut across policy, funding, talent and execution.

Policy fragmentation leaves too many agencies pulling in different directions, with no clear ownership of innovation outcomes or alignment to a single national vision, says Yong.



COVERSTORY

SETTING THE STAGE FOR THE COUNTRY'S NEXT CHAPTER

Structural weaknesses extend across the research, development and commercialisation landscape. Malaysia spends just 1.01% of its gross domestic product (GDP) on R&D, which is below leading innovation-driven economies, and much of it remains confined to academia with limited translation into commercially viable applications, says Chang. Fewer than 3,000 companies nationwide are engaged in R&D.

In contrast, China has a gross domestic expenditure on research and development (GERD) of 2.6% in 2023, according to the Organisation for Economic Co-operation and Development. GERD for countries such as Japan, the US and Belgium range between 3% and 3.5%, according to the World Bank.

South Korea's GERD surpasses the rest reaching 5.21% of GDP in 2022.

Commercialisation continues to be a bottleneck within the innovation pipeline. Chang says Malaysia's post-research commercialisation system is fragmented as there are few dedicated innovation brokers, accelerators or intermediaries to guide promising technologies from prototype stage to market readiness.

To add to this, Malaysia faces a number of talent challenges that hinder its ambition to become “a hub of original innovation”. Among the most pressing issues is the relatively low share of researchers

with doctoral qualifications — only 26.2% — and a declining pool of students pursuing science, technology, engineering and mathematics (STEM) disciplines at the tertiary level, says Chang.

“This is compounded by a misalignment between academic training and industry needs, particularly in rapidly evolving fields like artificial intelligence (AI), robotics and biotechnology. Another key barrier is the geographical and infrastructural imbalance in access to science, technology and innovation (STI)-related careers and training,” he adds.

“Many regions lack the necessary educational institutions, laboratories or career opportunities to cultivate a local innovation base.”

Moreover, IP ownership remains worryingly low, with over 90% of patents in Malaysia held by foreign entities.

“A nation cannot rightfully be considered a true technology powerhouse if it does not own the intellectual property or design rights to its exports. While a country may exhibit high volumes of exports or host advanced manufacturing capabilities, lacking ownership of the underlying technologies relegates it to the lower-value segments of the global value chain,” says Chang.

‘Something needs to be done’

These gaps mean the Made by Malaysia vision remains aspirational until they are rectified. Key areas requiring urgent action include refocusing R&D toward commercial outcomes, shifting industrialisation from assembly to innovation, and nurturing a high-tech talent pool.

Steps are already underway to address these structural weaknesses and lay the groundwork for a high-tech, innovation-driven economy. Malaysia aspires to become a high-income nation and be among the world's top 30 economies by 2030.

The 13MP provides a strategic road map for realising the Made by Malaysia vision, emphasising R&D commercialisation, robust innovation ecosystems, agile regulatory frameworks and targeted talent development to drive the shift from a production-based economy.

The plan aims to raise GERD to 2.3%



ZAHID IZZANI / THE EDGE

“A nation cannot rightfully be considered a true technology

powerhouse if it does not own the intellectual property or design rights to its exports.”

Chang, Mosti

of GDP as well as intensifying the rollout of key industrial blueprints such as the NIMP 2030, National Semiconductor Strategy (NSS) and National Energy Transition Roadmap (NETR). These frameworks aim to position Malaysia as a competitive player in advanced manufacturing, semiconductors and clean energy.

For instance, the NSS is designed to accelerate the country's climb up the semiconductor value chain, from its current strength in assembly, testing and equipment to higher-value activities such as integrated circuit (IC) design.

But industry players caution that turning these ambitions into reality hinges on execution and implementation.

To achieve the long-term aim for Malaysia to be a critical part of the global supply chain with internationally recognised products and brands, the country must first focus on building capacity, developing the right infrastructure and nurturing the necessary ecosystem, says Rushdi Abdul Rahim, president and CEO of the Malaysian Industry-Government Group for High Technology (MiGHT).

To begin with, Malaysia must shift from fragmented, academically driven research towards coordinated, outcome-focused programmes that prioritise commercial viability to bridge the R&D gap, says Chang of the Ministry of Science, Technology and Innovation (Mosti), adding that local establishments must also



SHAHIRIN YAHYA / THE EDGE

“Local technology development needs a ‘test bed’ to gauge product capability and standards. This is part of the learning curve as no products can be successful upon first deployment.”

Yong, Sidec

OWNING WHAT WE BUILD



SUNWAY ILABS

“There needs to be a more efficient way to scout for complementary technologies and IP from elsewhere and co-create full solutions, but with ultimate ownership in Malaysia.”

Van Leeuwen, Sunway iLabs

make sustained investments in deep-tech R&D.

This involves targeting high-impact sectors, fostering stronger industry-academia partnerships and ensuring that research funding is tied to clear pathways for bringing innovations to market.

A critical part of this shift is recognising IP such as IC design as strategic national assets much like South Korea's approach to semiconductors or Germany's protection of its industrial machinery, says Sidec's Yong.

“[For example], Taiwan Semiconductor Manufacturing Co (TSMC) has showcased its global prowess due to its ownership of key technological innovation in semiconductor manufacturing and advanced packaging technology.

“Malaysia is a contractor, not a creator, without IP,” he points out.

Institutionalising IP creation incentives such as tax breaks, licensing support and R&D subsidies tied to patents filed will be equally important, adds Yong. Financial institutions must also be educated to prioritise IP valuation as legitimate collateral for funding.

This means reforming the private investment and funding mandate given to institutional funds and sovereign wealth funds such as Khazanah Nasional Bhd, Retirement Fund Inc (KWAP) and the Employees Provident Fund to support deep tech instead of chasing hype-driven start-ups by taking higher risks with patience to secure higher rewards, he says.

On top of this, national policy must go further by prioritising the generation and protection of IP through robust training for researchers and entrepreneurs, targeted funding for patent filing and clear commercialisation pathways, says Chang. Only then can Malaysia shift from a production-based economy to one that actively creates and monetises technology.

However, not all innovation must originate domestically. Industry players say Malaysia should also adopt a pragmatic approach to co-creation by scouting for complementary technologies and IP from abroad, then integrating them into full solutions with ultimate ownership retained in Malaysia.

“There needs to be a more efficient way to scout for complementary technologies and IP from elsewhere and co-create full solutions, but with ultimate ownership in Malaysia. This can be done through clever licensing strategies of technologies. Reinventing the wheel does not make sense,” says Matt Van Leeuwen, CEO of Sunway iLabs.

When it comes to developing the necessary talent, the solution is clear. There must be concerted efforts to align education with industry needs, expand hands-on training in high-tech fields, and create incentives

MADE BY MALAYSIA, FOR WHOM?

Exports are central to the Made by Malaysia ambition, given the country's relatively small domestic market. According to the 13th Malaysia Plan, the country aims to grow electrical and electronics exports to nearly RM1 trillion and increase halal export value to RM80 billion by 2030.

Malaysia has always been an open economy dependent on international trade, which makes the export market a fixed element of the economic equation, says Andrew Kam Jia Yi, associate professor and senior fellow at the Institute of Malaysian and International Studies at Universiti Kebangsaan Malaysia (UKM). For the Made by Malaysia goal to succeed, domestic products must be globally competitive, and meet international standards and reputational benchmarks.

To overcome its small domestic scale, the country must leverage agility, policy coherence, regional connectivity and sharp focus on export-driven innovation, says Minister of Science, Technology and Innovation Chang Lih Kang.

“This approach allows the Made by Malaysia vision to thrive beyond geographic constraints. Crucially, diversifying export markets and supply chains reduces over-reliance on any single region and cushions against volatile trade dynamics,” he says.

This is where Asean plays a pivotal role. Although the traditional markets of Europe and US are appealing, supply chains and geopolitical diversification are increasingly directing investments and trade flows toward regional markets, says Rushdi Abdul Rahim, president and CEO of the Malaysian Industry-Government Group for High Technology (MIGHT).

Asean, which currently has a market of 665 million people, is projected to become the fourth-largest economy in the world.

To seize this opportunity, Malaysia must position itself as a bridge between East and West and act as a launchpad for Southeast Asia by connecting with international talent, capital and regulatory ecosystems, says Matt van Leeuwen, CEO of Sunway iLabs. He says companies must design with Asean's 600 million-strong market in mind and build globally scalable products from day one.

Considering Malaysia's strategic location and integration within Asean, these factors open up vast regional opportunities, Chang says.

By positioning itself as an innovation hub for Southeast Asia, Malaysia can serve as a bridge for cross-border

commercialisation and partnerships. This regional orientation will allow Malaysian companies to test and scale innovations beyond national borders, adds the minister.

But the policymakers and industry pundits concede that success needs to begin at home.

Chang says the public sector can play a pivotal role in validating and adopting Malaysian technologies, offering early-stage revenue and enhancing market credibility.

When combined with export incentives, branding support and access to international networks, such support can help local firms scale and compete globally.

To make this happen, government leadership is vital, not just in policymaking but also as an active market player, says Chang. Local innovations, when certified and supported by government initiatives, provide a stable foundation for the economy even during periods of global uncertainty.

Through the Malaysian Science, Technology and Innovation Policy (MySTI), the government facilitates the adoption of domestically developed technologies using public procurement as a commercialisation mechanism.

Sidec's Yong concurs, stressing that domestic demand through initiatives such as adopting local technology in government project deployments and prioritising it in sectors such as semiconductors, electric vehicles and renewable energy is imperative.

Local content mandates such as Selangor's proposed 30% local content policy for data centres creates domestic market demand, infusion of local technology into local projects deployment and provides a technology test bed for global market outreach.

“Local technology development needs a 'test bed' to gauge product capability and standards. This is part of the learning curve as no products can be successful upon first deployment. The government should play a role to support and help alleviate some risks from private and government machinery that adopts these local tech or products,” says Yong.

Companies must go global

The ultimate goal for the Made by Malaysia vision is to create globally recognised, competitive companies whether they be Fortune 500 firms or unicorn start-ups, says MIGHT's Rushdi.

For Sidec, that means a company owning core IP such as central processing units, application specific integrated circuits, or AI architecture powering semiconductor solutions for global industries, from data centres and electric

vehicles (EVs) to aerospace.

This company would design and manufacture chips domestically, license its technology to overseas players, and integrate its products into Malaysia's own high-growth sectors like data centres, EVs and satellites.

“Ultimately, a Malaysian innovation giant would be characterised by end-to-end capabilities, from IP ownership and in-house R&D to global distribution and branding. It would be embedded within a vibrant innovation ecosystem, deeply connected to research institutions, start-ups and global markets, symbolising the full realisation of the Made by Malaysia vision,” says Chang.

It is crucial to have a large anchor company to inspire, invest in, and nurture the next generation of businesses, says UKM's Kam. Without these anchor players, start-ups face uncertainty, limited joint venture opportunities, and fewer pathways to scale, especially under the current contract manufacturing model in semiconductors.

Such companies will not appear “out of thin air”. Large Malaysian companies are well-positioned to lead the transition with their financial stability, customer bases and market presence, he says. New players can also leverage the strengths of established firms.

“Made by Malaysia is not pulling a rabbit out of a hat. Existing players are in a [good] position [to take the lead] because financially they are much more secure, they have the customer base and they are already established. It's time for them to take leadership,” asserts Kam.

However, Malaysia's over-reliance on organic growth is a key limitation to building global giants, says Sivapalan Vivekarajah, co-founder and senior partner at the Scaleup Malaysia Accelerator. Companies must adopt strategies such as mergers and acquisitions to accelerate scaling and secure entry into global markets.

To place Malaysia on the map, Sivapalan recommends a targeted national strategy that identifies 10 of the most promising start-ups and backs them with substantial funding, market access and globalisation support.

This approach could produce global success stories, creating a ripple effect that catalyses wider ecosystem growth, he says.

“Find 10 of the best companies on a meritocracy basis and make sure they all have products that can go global and back them all the way. We shouldn't be shy about doing that and if we do that, even if we can get three out of the 10 to be successful global players, that will then [pull] everybody else along,” Sivapalan adds.

to retain and attract skilled Malaysians.

“It is also essential to implement strategies to retain local talent while encouraging Malaysians working abroad to return and contribute,” says Chang.

However, the country should not rush to recall talents who have gone abroad, MIGHT's Rushdi says. Instead, he suggests it collaborate with them to advance its national ambitions.

“Malaysians are supplying talents to the world. Our space engineers are working in the Emirates, Dubai and Abu Dhabi. Our space experts are working in the US's National Aeronautics and Space Adminis-

tration (Nasa). We have actually suggested to the Malaysian government to create a science and technology attaché where this [tech liaison] will act as a market intelligence person in terms of science and technology development [which we could bring back to the country with Malaysian expertise] or collaborate with them to co-create [the technology],” says Rushdi.

“I think this is something that we don't talk about enough in regard to leveraging the Malaysian connection and diaspora.”

Getting the ball rolling

Malaysia needs an “all-of-nation” strate-

gy, where every stakeholder contributes towards the realisation of the national innovation aspiration, says Rushdi. This involves collaboration between state and federal governments, industries and universities.

On its part, Mosti is working through targeted policies and strategic programmes. For example, The National Technology and Innovation Sandbox (NTIS) and the Malaysian Science, Technology and Innovation Policy (MySTI) are designed to close the gap between research and market application.

CONTINUES NEXT PAGE

OWNING WHAT WE BUILD

The country must be a magnet for innovation

FROM PREVIOUS PAGE

The ministry has set out three strategic priorities. They are to expand MySTI into a national certification and procurement platform for Malaysian innovations, grow talent in critical areas like AI and boost Malaysia's presence on the global innovation stage.

MiGHT focuses on developing home-grown technological solutions and fostering strategic R&D partnerships. For example, its Industrial Technology Innovation Centre, which was developed in collaboration with the Malaysia Rail Industry Corporation and Malaysia Smart Cities Alliance Association, seeks to accelerate the development and deployment of home-grown technological solutions in the rail and smart city sectors.

At the state level, particularly in Selangor, Sidec advocates new policies that align market pull with design capability and create domestic market demand, infusion of local technology into local projects deployment and provide a technology test bed for global market outreach.

For example, Sidec is steadfast in advancing the concept of Malaysia's sem-

iconductor IC design parks, envisioned as hubs for IC design companies to grow and drive chip and product innovation with a founder-led mindset.

It is crucial to have a measurement and monitoring mechanism to evaluate, analyse and rank Malaysia's innovative capabilities relative to other countries, says Rushdi. The aggregation of information, data and analyses will allow Malaysia to systematically tackle the many facets of innovation and to implement modifications as needed.

For Sidec, measurable success would include growth in Malaysian-owned patents, rising export value of Malaysian-designed chips contributing directly to GDP, increased valuations of local IC design firms, and positioning Malaysia as a magnet for both local and global innovators.

Yong wants the country to have its very own ARM Holdings plc or TSMC that is owned, designed and led by Malaysians.

"By 2040, under the full realisation of the Made by Malaysia vision, the country would stand as a recognised regional innovation powerhouse, synonymous



MIGHT

“Malaysians are supplying talents to the world ... We have actually suggested to the Malaysian government to create a science and technology attaché where this [tech liaison] will act as a market intelligence person.”

Rushdi, MIGHT

with quality, creativity and sustainability. Malaysian-designed technologies would be exported and integrated into global supply chains across a variety of high-tech sectors,” says Chang. **E**

MADE BY MALAYSIA, FOR WHAT?

The Made by Malaysia shift must build on existing strengths while targeting high-tech opportunities. The country's established expertise in the electrical and electronics (E&E) industry positions it well to provide opportunities in other high-value-added industries, says Rushdi Abdul Rahim, president and CEO of the Malaysian Industry-Government Group for High Technology.

For example, the space sector relies heavily on advanced electronics, precision engineering and high-value manufacturing. The sector is essential for communications, disaster management, agriculture, environmental monitoring and national sovereignty.

Malaysia's Space Exploration 2030 and Space Industry Strategic Plan 2030 aim to develop the country's space ecosystem by advancing capabilities in secondary payloads, ground segments, printed circuit boards and sensors.

Other industries that can leverage E&E include electric vehicles (EVs) and medical devices. EVs require high-performance power electronics, sensors and battery management systems, all grounded in E&E engineering. On the other hand, medical devices utilise precision electronics, sensors and microprocessors.

Among the most promising moonshot technologies that Malaysia should bet on are hydrogen-based energy systems and sovereign artificial intelligence (AI) platforms, says Minister of Science, Technology and Innovation Chang Lih Kang. He says hydrogen technology offers the potential to revolutionise energy storage and transport.

Manufacturing still needed

Malaysia has long served as a manufacturing and production hub for foreign companies. Transitioning from a "Made in Malaysia" label to a "Made by Malaysia" economy does not mean abandoning Malaysia's manufacturing base but rather moving it up the value curve, says Andrew Kam Jia Yi, associate professor and senior fellow at the Institute of Malaysian and International Studies at Universiti Kebangsaan Malaysia (UKM).

The Smile Curve model shows that the greatest value lies at the ends of the chain in design and intellectual property or in marketing and services, with manufacturing in the lower-value middle. Malaysia must aim to shift towards the high-value ends while also making existing manufacturing more advanced, automated and technology-driven.

Malaysia will also continue to need and pursue foreign direct investments with a focus on attracting high-technology, value-adding investments. Kam notes that foreign investors can contribute to Made by Malaysia through two forms of technology transfer — vertical technology transfer within a joint venture, and horizontal spillovers where former employees of foreign companies start their own businesses.

PAVING THE WAY FOR 'MADE BY MALAYSIA'

MALAYSIA aims to become an inclusive and sustainable artificial intelligence (AI) nation, serving as a regional hub for digital technology production, innovation and Made by Malaysia products and services.

This ambition aligns with the 13th Malaysia Plan (13MP), which seeks to position the country as a consumption powerhouse driven by home-grown products and services.

To achieve this, the plan outlines efforts to strengthen the ecosystem through advanced technology adoption and digitalisation, research, development, commercialisation and innovation (R&D&C&I), productivity growth, as well as enhanced competitiveness and global linkages. It also emphasises attracting quality investment, improving the business environment and empowering talent.

The 13MP identifies Made by Malaysia as a national pathway towards achieving developed nation status by 2030.

High-growth industries

The 13MP emphasises strategies under the National Industrial Master Plan 2030, National Energy Transition Roadmap, National Semiconductor Strategy (NSS), Natural Gas Roadmap and Hydrogen Technology and Economy Roadmap to support the creation of high value Made by Malaysia products and services.

For instance, strategic collaborations under the NSS will be implemented with global and local semiconductor companies along the value chain to accelerate the industry's transition towards more complex, high-value production. This is expected to produce global-standard local champions in integrated circuit design, elevate high-value, high-tech Made by Malaysia production capacity and enhance the pool of highly skilled talent.

There will also be a focus on accelerating the creation of technologies and production of Made by Malaysia products such as chemicals, pharmaceuticals and medical devices, high-value halal products and agri-based goods, sports equipment as well as electric and aerial vehicles.

The creative ecosystem will be strengthened to enhance Malaysia's "orange economy" by producing works with global commercial appeal. Meanwhile, the sports industry will be positioned as a new growth driver, backed by improved financing, incentives and R&D for competitive Made by Malaysia sports brands.

Digital and AI shift

Products and services under the Made by Malaysia umbrella will enable the country to emerge as one of the world's leading AI nations and consumption powerhouses. To realise the national aspiration of producing Made by Malaysia goods and services, the development and adoption of advanced technologies including AI and augmented reality, is required, states the 13MP.

This means the currently immature R&D&C&I ecosystem must be strengthened, according to the 13MP. "A culture of creation will also be nurtured to diversify the production of high-value Made by Malaysia products. This ambition will be supported by initiatives to develop skilled talent across diverse fields, from science and technology to arts and the creative industries," it states.

Increased global engagement

Malaysia's global engagement will be expanded to attract strategic investments and strengthen trade ties, enabling Made by Malaysia products and services to penetrate new markets. The National Trade Blueprint 2.0 will be introduced to guide trade policies and strategies, while private investments in high-growth, high-value industries are projected to grow 6% annually, averaging RM417.9 billion a year.

At the same time, the government will improve market access through initiatives like the "Buy Social" campaign, supporting small and medium enterprises and social enterprises aligned with the Made by Malaysia brand.

PROFILE

Independence-X aims for orbit and beyond

BY KIRAN JACOB

Local aerospace company Independence-X Aerospace is focused on developing innovative space technologies rather than replicating existing products for commercial gain. Founder and CEO Izmir Yamin believes conventional solutions will not survive in the space industry, which is dominated by players with deep pockets.

“If we want to do a space product, it has to be groundbreaking. If it’s a common product, that is not going to sell because the Europeans [for example] will just buy from the market next door,” says Izmir.

“We do not like to make products that already exist; we like to make products that are new and relevant, with better tech.”

Independence-X develops its core technologies such as satellites and launch vehicles entirely in-house, and aims to deliver fully integrated, space-grade solutions that are developed, designed and built in Malaysia.

In April this year, Izmir Technology Industries Sdn Bhd, parent company of Independence-X, entered into a collaboration agreement with PJ Bumi Technologies Sdn Bhd, a wholly-owned subsidiary of PJ Bumi Bhd. Under the agreement, PJ Bumi Technologies acquired commercial rights to market and deploy IzmirTech’s proprietary technologies.

This has allowed Independence-X to accelerate commercialisation, scale up its production capacity and strengthen its position as a key Malaysian player in the global aerospace and energy technology sectors.

PJ Bumi Bhd, a public-listed Sarawak-based group, has decades of experience in engineering, construction services, environmental management and industrial technologies.

A flagship product of Independence-X

is the Microgravity Experiment Re-Entry Capsule (Mercap). As its name suggests, Mercap is a re-entry vehicle designed for microgravity experiments in low-earth orbit. It enables biotech research for pharmaceutical and biomedical processes such as vaccine and antibiotic development in microgravity conditions.

Microgravity has become a commodity for industries, says Izmir. The microgravity environment enables better protein crystallisation for pharmaceutical research, which significantly shortens the vaccine development timeline compared to Earth-based synthesis.

This process also applies to the semiconductor industry, where growing crystals in microgravity can improve their quality and even enable the conversion of cheaper materials into semiconductors, leading to more cost-effective chips and faster turnaround times.

“If big pharma uses earth-based samples, it will take five to six or seven years to complete one vaccine. But if you use space-based material, where you take the protein crystal and grow it up there in microgravity and bring it back, the turnaround time is less than a year. That’s a huge difference,” says Izmir.

Microgravity eliminates sedimentation, allowing for the homogeneous mixing of substances, which leads to better

“If we want to do a space product, it has to be groundbreaking. If it’s a common product, that is not going to sell because the Europeans [for example] will just buy from the market next door.”

Izmir

and faster protein growth, explains Izmir.

Mercap’s value lies in its ability to return high-quality, microgravity-grown biological samples that can dramatically reduce research and development cycles. To do this, the re-entry capsule floats in low earth orbit (LEO) for 14 to 30 days carrying biotech samples. After orbiting, Mercap uses onboard rocket thrusters to re-enter Earth’s atmosphere.

“Mercap will prepare re-entry at a certain angle and position, where rocket thrusters will be fired, and it will start to descend into the atmosphere at the speed of Mach 27. There will be plasma build-up underneath the capsule because of friction. You’re talking about 1,500 to 2,000 degrees Celsius, depending on the shape. If the shape is conical, you get a higher temperature. A blunt shape like [Mercap] gets a lower temperature,” says Izmir.

Mercap is not yet in orbit but is currently undergoing testing, with a projected launch date set for February next year. A drop test has been successfully completed, and thermal protection system testing is ongoing in collaboration with the French Space Agency.

“All this needs to be fully tested before we can send it to space,” says Izmir.

Projects in the works

The company is also working on satellites. One project is GerhanaSAT, which Izmir describes as the world’s smallest satellite under the femto class — a category of ultra-small satellites that weigh less than 100g. GerhanaSAT is a cube measuring about 35mm on each side and is scheduled to launch in either September or December this year.

Independence-X is developing two other advanced satellites. The first is PurnamaSAT, an LEO communication satellite that offers low-latency services and augments positioning, navigation and timing systems using a compact atomic clock.

The other is InderaSAT, which is an earth observation satellite with electro-optical and infrared imaging for industrial clients that can detect gas flares and carbon-dioxide emissions.

GerhanaSAT is scheduled for launch in September, and InderaSAT is expected to be launched by the end of next year.

The company also has a dedicated nano

launch vehicle (DNLV) programme. The DNLV is designed to carry payloads of up to 200kg into space and is powered by hydrogen fuel cells, which offer a lighter and faster-to-refuel alternative to traditional turbo pump rockets and newer battery-powered systems, says Izmir.

Independence-X has developed a solid-state hydrogen storage and reactor technology that enables safe, pressure-free hydrogen storage in solid form, and on-demand hydrogen generation without electricity or electrolysis. Izmir says it is a purely chemical process that results in a highly stable and lightweight power source.

“Our hydrogen technology is the arc reactor that powers up our rockets, drones, spacecraft, ground units and so on,” he says.

The company is building a 20,000 sq ft space manufacturing facility in Sen-dayan Tech Valley, Negeri Sembilan, which will include clean rooms, integration and testing labs as well as assembly facilities.

Rocket propulsion systems will be handled separately, with different stages being tested in collaboration with the Malaysian Space Agency at the National Space Centre in Banting, Selangor.

Independence-X also has a branch in Toulouse, France, to facilitate final assembly and product qualification for clients. The company has secured RM8.1 billion in business orders from 14 clients, says Izmir.

Breaking it down into small pieces

Independence-X has come a long way. In its early years, the company focused on developing “me-too” products and acquiring foundational aerospace knowledge, says Izmir. Today, it fully designs and builds its own satellites — including hardware and software, such as onboard flight systems and ground mission control.

Izmir views large space products such as satellites as a combination of smaller commercialisable components. For example, the satellite’s onboard computer can function as a drone autopilot, and its communications system can be adapted for ground use. This spin-off strategy allows each subcomponent to be upgraded and applied across broader markets.

By designing, building and commissioning all subcomponents in-house, the company ensures rigorous testing and full control over quality.

“For example, if I want to take the onboard computer and use it on a drone, I will have the best of both worlds. I will have space tech and drone tech. For space, it needs to be robust and resist radiation, vibration and all the physical phenomena during the launch. Imagine taking that technology and putting it on the drone ... It’s the best of both worlds, which makes the whole product even more superior,” says Izmir.

The company has a four-phase commercial plan. Phase one focuses on commercial unmanned LEO missions; phase two involves unmanned lunar missions, including sending its Mercap lander to the moon for sample return; and phase three involves manned LEO missions.

“We will begin developing our first orbital spacecraft capable of carrying astronauts and supporting space station functions — similar to the International Space Station, but at a much lower cost,” says Izmir.

Phase four is the most ambitious: manned lunar missions. “We plan to go even further — to Mars eventually. For now, these four phases are already a hand-ful. So, we’ll do this and everything will be commercial projects,” he says. **E**



SUHAIMI YUSUF/THE EDGE

OWNING WHAT WE BUILD

PROFILE

From Penang shopfront to global brand

BY SREEREMA BANOO

Electrical home appliance brand Pensonic is often cited as one of Malaysia's most successful home-grown names, and with good reason. Four decades on, it has a nationwide distribution network of more than 1,000 dealers and over 1,500 retail outlets. Leveraging this reach, Pensonic Holdings Bhd runs a multi-brand platform anchored by its core Pensonic brand, selling across all market segments and exporting to more than 30 countries in Asia, including the Middle East.

Listed on the Kuala Lumpur Stock Exchange in 1995, Pensonic has won multiple accolades, including the Ministry of International Trade and Industry's Brand Excellence Award for four consecutive years (2007 to 2010) and the Silver Award for top brands in the Personal, Household & Outdoor Appliances Category at the 2023 Putra Brand Awards.

Although the brand has come a long way from its humble beginnings, its growth over the decades is a testament to the vision, perseverance and tenacity of its founder Datuk Seri Chew Weng Khak. In 1965, he established Keat Radio and Electrical Co in Balik Pulau, Penang, to sell accessories, repair appliances and provide wiring services. The business eventually grew to include the distribution of home appliances from Europe and Japan.

Group CEO Datuk Dixon Chew, the son of the founder and chairman, says it was in the early 1980s that his father recognised a gap in the market. Although international brands were widely available, he saw that Malaysia lacked a strong, homegrown brand that people could truly relate to and take pride in. There was also a risk of relying too heavily on agency brands because if they were to exit the market, Malaysia would be left without a local home appliance brand to call its own.

"We believed Malaysia deserved a brand that truly reflected its identity, values and

aspirations. Creating our own brand was like having our own child, any investment we made would still belong to us," says Dixon.

The name "Pensonic" honours the company's home state (Pen) and its early roots in selling radios ("sonic"). The first batch of audio-visual products debuted in 1982. By 1984, Pensonic was officially registered as a Malaysian trademark.

Launching a local brand at a time when Japanese and European products dominated was daring, but the timing was right, Malaysia was industrialising and the government was promoting homegrown brands.

"The biggest hurdle was perception. Japanese brands had already established global trust, while Malaysian products were still in the process of gaining recognition. Many consumers assumed that quality and reliability came exclusively from Japan. We had to work much harder to challenge that mindset and prove that Malaysian-made products could stand shoulder-to-shoulder with international competitors in terms of reliability, inno-

vation and user experience," says Dixon.

So, Pensonic worked to prove that Malaysian-made products could match international standards in reliability, innovation and user experience. After-sales service was paramount.

"We ensured that if we made a mistake, we would rectify it and keep the customer experience positive ... if you bump into problems, settle the problem. Once you consistently provide quality and improvement to the customer, then over the years, you will build the trust, and this group of customers then become your ambassadors, sharing their experience of supporting a Malaysian brand," Dixon elaborates on the long-term nature of building trust.

In the case of the dealers, although there were challenges, the trust that his father had built in the years spent distributing foreign brands was an advantage, he adds. So, when his father embarked on building the Pensonic brand, dealers who were already familiar with him and trusted him decided to take a leap of faith in the new endeavour.

"Today, basic acceptance is not a problem and we have a multi-brand strategy to coax hard-core believers of foreign brands," says Dixon, adding that the awareness, acceptance and trust inculcated enabled the group to grow and eventually become a public-listed company.

'Made by Malaysia' ethos

Dixon says consumer attitudes towards Malaysian-made products have evolved significantly. "Today's consumers are more discerning and value not just affordability, but also authenticity, reliability and local relevance. Malaysian consumers now have greater trust in locally made products, and I believe Pensonic has played a meaningful role in that transformation. By demonstrating that a Malaysian brand can uphold international standards and provide excellent customer support, we have helped raise the profile and confidence in Malaysian-made home appliances."

The company focuses on quality and innovation, supported by strong local partnerships and strict compliance with safety standards like Sirim.

"Our goal has always been to be the preferred brand, not just the most affordable option. 'Made in Malaysia' is something we are proud of. It represents innovation, quality and national pride. We work hard every day to live up to that standard and to raise the profile of Malaysian-made products, both locally and globally," he says.

Designs are tailored to local needs, from blenders with blades robust enough for herbs and spices to limited-edition Batik Series appliances that celebrate the Malaysian heritage.

In the 1990s and early 2000s, Pensonic expanded its product line to include a wide range of small and large appliances. Each new release was tested for both performance and cultural fit, ensuring that the products resonated with Malaysian households. The Batik Series, introduced later, is one example of how the brand blends function with local pride and embeds heritage into everyday life.

While Pensonic is a champion of Made in Malaysia, Dixon prefers Made by Malaysia as it reflects ownership, creativity and control across the value chain.

"It represents our evolution from assembling products locally to shaping them with a Malaysian perspective. We are crafting



PENSONIC

Pensonic's first manufacturing plant, located in Bukit Tengah, Perai



PENSONIC

Pensonic's first shop, located in Balik Pulau

OWNING WHAT WE BUILD



PENSONIC



PENSONIC

Dixon (right) with business partners from Thailand at the 2001 Homepro Expo in Bangkok

experiences designed, developed and led by Malaysians,” he says.

Since Dixon took the helm in November 2023, Pensonic has focused on restructuring its operations, which includes its OEM/ODM (original equipment manufacturer/original design manufacturer) business. He points out that because of the US tariff uncertainties, Pensonic is seeing a “big opportunity for us to become a production house for the world market”.

He describes this segment of the business as being very real. The growth of its OEM/ODM business was 300% in 2003 and 50% in 2024. “We see this as a way to grow given the small size of the domestic market, so we’re betting on this,” he says, adding that enquiries are on the rise as countries look to mitigate risks emanating from the tariff uncertainties.

Growing the OEM/ODM business, which today makes up 30% of total sales, does not pose a risk of dilution to the Pensonic brand, says Dixon. “The manufacturing is a business unit by itself, and Pensonic remains a trusted brand.”

What’s more, the group’s contract manufacturing ambitions strengthen the Made by Malaysia ethos because it isn’t just a statement of origin.

“Made by Malaysia reflects the pride, creativity and capability behind every product. It plays an important role in building long-term customer loyalty and sustaining our growth, and it remains central to our long-term vision,” he says.

Pensonic’s priorities include regional growth, digital transformation and strengthening its product range through deeper consumer insights. New categories

“‘Made by Malaysia’ reflects the pride, creativity and capability behind every product. It plays an important role in building long-term customer loyalty and sustaining our growth, and it remains central to our long-term vision.”

Dixon

such as personal care and lifestyle products are being planned, alongside high-value appliances featuring smart technology and premium design.

With competition from brands in the US, Europe, Japan, South Korea and, increasingly, China, Dixon says Pensonic competes strategically. “We don’t go head-to-head where rivals are determined to take market share. We focus on strengths like after-sales service and understanding the local culture.”

The brand is also ramping up digital engagement. Campaigns like Pensonic Friends on TikTok target younger audiences, while e-commerce channels such as Shopee, Lazada and TikTok Shop reach consumers directly.

The goal is to position Pensonic as a leading Malaysian brand in the global consumer appliances market, he says. To that end, he believes there is a role to be played by the government. “To build a strong local brand requires more than just short-term support. We have come a long way from being a distributor to becoming a home-grown brand with a regional footprint.”

Although the government has introduced many good initiatives over the years, and Pensonic has benefited from some of them, Dixon believes there is still room for improvement when it comes to helping local companies go global.

Encouraging government agencies and departments to buy Malaysian products would give local brands a boost. “Brand building takes time. Support programmes need to be more consistent and long term. It is not just about funding a trade show or two. It is about helping companies grow their brand presence overseas and stand out in competitive markets,” he says, pointing out that the process of accessing grants or incentives can be a bit complicated.

“Many SMEs (small and medium enterprises) find it hard to navigate the system. If the application process were more streamlined and transparent, more local businesses would be able to take advantage of these opportunities.

“Another big area is talent. As we expand into new product categories like personal care, and continue our digital transformation, we need skilled, passionate people. More programmes that connect industry with local universities or offer upskilling would really help to close that gap.

“And finally, we would love to see even stronger support for local branding efforts. We have been promoting Malaysian culture through initiatives such as our Batik Series appliances to preserve and celebrate who we are. National campaigns such as *Kempen Beli Barangan Malaysia* are great, and with more visibility and public engagement, these can have an even bigger impact. At the end of the day, building Malaysian champions takes a shared commitment, from both the government and businesses like us, to grow something meaningful, not just for profit, but for the country’s economic transformation.” **E**

OWNING WHAT WE BUILD

PROFILE

Curating enterprise solutions for companies

BY VANESSA GOMES

Enterprise solutions platform company MACROKIOSK was born out of a hobby of tinkering with computers — both hardware and software — and three brothers with a shared vision to facilitate communication for enterprises.

The trio had a passion for HTML coding back in the 1990s and understanding the inner workings of software, and it was this passion that led to the company celebrating its 25th anniversary this year. Over the decades, MACROKIOSK has risen to become one of the world's leading enterprise solutions platform companies, helping entrepreneurs engage with clients on multiple delivery channels.

"We are not technology creators, but users. We embrace technology and turn it into solutions that fit our customers' business aspirations, whether it's to acquire customers or communicate with them," explains MACROKIOSK co-founder and CEO Datuk Kenny Goh.

But starting out in the midst of the dot-com bust was not the easiest of journeys. In order to raise the capital they needed to get the company off the ground, they went to the media, told their story about the lack of support for tech companies and landed Goldis Bhd as the company's first corporate investor.

According to news reports, at the time, Goldis invested RM105,000 for a 70% stake in MACROKIOSK in 2002. But in 2013, the brothers forked out RM22.4 million to buy back the stake.

Today, about 90% of any mobile or digital engagement in Malaysia involves the company in one way or another. One of MACROKIOSK's pioneering services was the one-time password (OTP) authentication process, and Malaysia was one of the first countries in Southeast Asia with access to this technology. Local banks started to adopt OTP authentication technology and from there, other

“We are not technology creators, but users. We embrace technology and turn it into solutions that fit our customers' business aspirations, whether it's to acquire customers or communicate with them.”
Goh

countries in the region followed suit.

The first to use MACROKIOSK's services was a French hypermarket chain to inform customers of its latest deals via SMS, but the company got its real break when it onboarded a bank.

The brothers also wanted to develop something that would put Malaysia on the global tech map. In their Kuala Lumpur office, the words “Ciptaan Malaysia” are emblazoned under the company's logo on the wall, a constant reminder of its roots.

"It's not just to remind us [where we started], but also for us to carry the Malaysian name wherever we go. It is also a reminder that the tech industry here is at the forefront in a lot of areas and has what it takes," says Goh.

From a core team of three people, the company now has more than 200 employees at its office in Kuala Lumpur and more than 5,000 customers across 37 countries and 24 industries. It also has offices in 12 countries.

"Asean and Asia are still our main focus, but we also have an outpost in Serbia to service European customers," he says.

When asked why they chose to keep their office in Malaysia, Goh says he and his brothers are of the opinion that if they cannot do well on their home turf, they will face a bigger challenge when trying to enter foreign markets.

"I think this is also an Asian value, where everything should start at home first. We learn, we grow and we perfect ourselves here before we venture out," he says, adding that the management will always be based in Malaysia.

Nevertheless, in every country that has a MACROKIOSK office, the locals are hired, says Goh. This is to ensure their offices are able to adapt to the cultural nuances of each country as well as to learn from them.

"We also see this as an opportunity to share our culture, and we can learn from them too. It makes us all a bit more aware and mindful of each country's diversity," he adds.

Tailoring enterprise solutions for companies

MACROKIOSK's integrated enterprise solutions platform — BOLD. — is customisable to help entrepreneurs engage with clients on multiple delivery channels. Its four core platforms and services provide notification services for companies, payment gateways, engagement solutions and actionable marketing, which was added about six years ago.

The company also added an overarching component called Journey, which will tie the core services together, allowing its clients to acquire, grow and retain customers. It acts as a customer relationship management (CRM) tool as well.

Goh says they added this component to better guide businesses when embracing technological solutions.

"It's great that companies are doing this but the real problem is that they don't know what to do with it. They know what artificial intelligence (AI) is, but do they know how to use it? There is no point telling a company to use SMS to engage with customers when they don't need it," he points out.

Goh says the platform is intuitive and uses the "drag and drop" method for their customers to customise the platform according to their needs. However, he emphasises that the company does not want its customers deploying technology because it is a trend, but because there is a genuine need for it.

"When companies come to us, they don't have to tell us which vertical they want to subscribe to. Instead, they tell us their business aspirations and we tell them how the platform can serve them," he elaborates.

Building and future-proofing

MACROKIOSK evaluates itself every five years, and 2020 was one of the milestone years, says Goh. The Covid-19 pandemic was unexpected but it catapulted the company to prominence, as most enterprises decided to have an online presence to keep their business relevant and running. This also prompted the team to enhance its actionable marketing vertical further.

MACROKIOSK just concluded its most recent evaluation this year with promising results. The company has been posting double-digit growth of 19% for its revenue year on year over the last five years, and is looking to grow further, not just in terms of revenue but presence as well.

In the next five years, it will be looking to complete the Asean loop by establishing offices in Cambodia and Laos. In terms of solutions, it aims to make AI the centrepiece of the BOLD. platform.

"With AI, we can bring on more capabilities, such as curation, prediction, visualisation and automation. It will be built into the platform and our customers' capabilities will be elevated as well," Goh explains.

"For example, if a bakery is one of our clients, it can put in a prompt like, 'Please curate a message for my customers in three different languages: I have discovered a new type of sourdough', and the platform can create a message based on that, send it out and track it as well."

He says the company is making inroads into two new industries as well: electric vehicles (EVs) and robotics. "We're not building EVs or robots but merely managing the communication in those industries," he clarifies.

"The EV providers will focus on the hardware and we provide the software, like communication with customers, payments and loyalty programmes. For example, an owner will need to be notified when his or her vehicle has been fully charged or payment needs to be made," he explains.

"As for robotics, it is with providers of self-delivery services. Again, they focus on the hardware and we provide the communication and authentication. For example, if a vehicle arrives at your home to drop something off, it will notify you and authenticate your identity so that you can access the goods."

One of the biggest challenges is talent, says Goh. This is not new because while Malaysia and Asia at large produce a lot of highly skilled engineers, most lack the right mindset and soft skills to do the job, he adds. There is also a mismatch of talent in the market.

"We have great talent here too, but there seems to be a slight mismatch between the skills the graduate has and what he does as work. For example, students become engineers because their parents asked them to. But after graduating, they decide that they want to be a chef instead," he notes.

"The graduate would have already undergone years of studying already, but then the industry loses one great talent. That is also why we always retrain and upskill our people, so as to manage their mindset as well. The challenge is not IQ, but EQ."

SHAHIRIN YAHYA / THE EDGE



Sunway Lagoon: Malaysia's Heritage Theme Park

For over 30 years, Sunway Lagoon has stood as a beloved local icon, made by Malaysia for Malaysians and the world. As one of Southeast Asia's longest-running theme parks, it embodies the Malaysian spirit through its home-grown attractions, reflecting Sunway Group's vibrant diversity and steadfast ambition in building world-class attractions.

Sunway Lagoon's achievement is its ability to cater to diverse audiences, from families seeking bonding experiences to corporations fostering teamwork and international travellers craving unique moments. The park has consistently delivered unforgettable and awesome experiences that keep guests returning year after year. This enduring success is further underscored by its numerous accolades and prestigious partnerships, including being named Asia's Best Attraction by the International Association of Amusement Parks and Attractions (IAAPA) for four consecutive years. Such recognition speaks volumes about Sunway Lagoon's excellence and is proof of Malaysia's ability to compete and excel on the global stage.

Founded by Tan Sri Dato' Seri Sir Dr Jeffrey Cheah KBE AO, founder and chairman of Sunway Group, Sunway Lagoon tells a story of vision and perseverance. The driving force that is the philosophy of sustainable development came to the visionary founder after witnessing first-hand the environmental, social and economic degradation resulting from unchecked industrial activity. Thus, began the rehabilitation of a barren tin mining land.

"The idea of a water park came from the belief that joy should be a part of everyday life. We wanted to create a community where fun and wonder were as essential as roads and rooftops. Because a good life isn't just about comfort, it's also about laughter, adventure, and just moments that keep you feeling alive. This theme park was created to fulfil that belief," says Professor Calvin Ho, executive director of Sunway Theme Parks.

Cheah firmly believes that "doing well by doing good" is the cornerstone



Back in the 1990s, Sunway Lagoon started out with only two park experiences, the Water Park and the Dry Park

of lasting success. This principle has guided Sunway Lagoon's growth, driving every innovation to enhance guest experiences while embedding education, cultural preservation and environmental stewardship into the foundations of the theme park. Over the years, this commitment has cemented Sunway Lagoon as an enduring symbol of Malaysia's excellence in tourism and hospitality.

The Journey to Becoming a Home-grown Icon

Unlike global franchises, Sunway Lagoon represents something uniquely Malaysian, envisioned and realised by Malaysians for Malaysians and the world. And as Malaysia has grown, so too has Sunway Lagoon.

Nestled in the heart of Sunway City Kuala Lumpur, Malaysia's first green integrated city, Sunway Lagoon first opened its doors back in 1992 with only two parks, the Water Park and the Dry Park (now the Amusement Park). Over the years, new attractions were introduced with the earliest addition being Extreme Park (now the X Park) in 2006 and the latest being the reintroduction of the Sunway Lagoon Night Park, Captain Quack Land in 2024. Sunway Lagoon now spans 88 acres and features more than 120 attractions across a total of seven park experiences.

Every new attraction introduced at Sunway Lagoon was done with the aim of enriching guest experiences.

Sunway Lagoon has always been envisioned to be more than just an entertainment hub and in recent years, it has effectively evolved into an edutainment hub, inculcating the spirit of learning and heritage appreciation, which leaves guests with not only unforgettable memories but also knowledge and an appreciation for Malaysia's rich culture.

"Our guests are very eager to learn. They're always asking our Wildlife Rangers questions about the animals. Their eyes seem to sparkle during times like these," shares Timothy, a veteran presenter who has been spearheading the interactive tours in Wildlife Park.

The Wildlife Hospital is one of the latest educational attractions introduced in the theme park and is a fully functional facility where guests can observe live procedures and learn about animal care and conservation. The crown jewel of Sunway Lagoon's educational offerings, the Explorer Rangers Programme, is an exclusive, children-only educational membership programme that sets learning against the backdrop of a theme park. In this programme, kids learn about wildlife and nature with content curated by in-house zoology professionals. In April 2025, the programme introduced a new segment: the Discovery Class, which diversified learning topics into the industries that make up our world.

The programme has formed prestigious partnerships with esteemed organ-

isations, including Bomba dan Penyelamat, Polis Diraja Malaysia, Universiti Malaya, FarmFresh, as well as some of Sunway's business units, Sunway XFarms and Sunway Medical Centre. Encouraging children to interact with industry professionals helps them envision themselves as future leaders, fostering a generation capable of driving positive change and shaping Malaysia's tomorrow.

This year, Sunway Tiny Toys will take the vision further by reimagining Malaysia's rich heritage through a modern retail experience. From ideation, manufacturing, and retailing, this project celebrates home-grown ideas and craftsmanship, transforming iconic local scenes, landmarks, and artifacts into collectible pieces of culture and history. This is not just nostalgia, this is preserving Malaysia's stories for future generations. Poised to represent Malaysia in the global toy industry, Sunway Tiny Toys will demonstrate how entertainment can also be meaningful.

"The vision for Sunway Tiny is for it to [not only] be more than just a simple toy store, but for it to also be a collector and chronicler of Malaysia's history. Every piece is meant to be a reminder of where we came from and a gift to the next generation," shares Kong Beng Kuin, chief financial officer and head of business development of Sunway Theme Parks.

A Malaysian Legacy: Connecting Generations Through Time

In the last three decades, Sunway Lagoon has been a storyteller, a teacher, and a keeper of memories. Like an intricately woven songket, its legacy is stitched into the fabric of the nation's history, with past and present connected through moments created. It is a place where childhood dreams are made, where bonds are strengthened, and where lifelong memories are created. Sunway Lagoon has remained a constant in an ever-changing Malaysia, uniting the people through joy, laughter and a deep sense of belonging.

"As a PJ [Petaling Jaya] kid, Sunway Lagoon has always been part of my life," shares Cellina, a membership owner for more than 10 years. "I came here as a child and it's grown so much, just like me! Still, that excitement I felt as a kid, I feel it even when I visit nowadays."

The people are the heart of Sunway Lagoon and have been keeping its spirit alive across generations. From wide-eyed kids experiencing their first ride to parents passing on the tradition of a family day visit to the theme park. As Malaysia marches confidently into the future, Sunway Lagoon will continue to stand as a celebration of Malaysian identity, honouring tradition while embracing the future.

"Sunway Lagoon is alive because the people keep it alive," emphasises Ho. "Our team embodies Malaysia's warm hospitality; the same kindness we show guests in our homes, we extend here, to a family from Johor Bahru but also visitors from overseas. We want everyone to feel at home here, to feel the heartbeat of Malaysian culture. We're weaving heritage into every experience we offer because Sunway Lagoon isn't just a theme park, it is a celebration of who we are."



The Explorer Rangers and Abang Bomba are all smiles after a fun, educational day at the Subang Jaya Fire and Rescue Station

OWNING WHAT WE BUILD

PROFILE

Full-stack drone solutions for farming

BY ARIS RIZA NOOR BAHARIN

When Cheong Jin Xi, founder and CEO of local drone developer Aonic, first encountered drone racing in Melbourne as a teenager in 2006, he found himself immediately drawn into the world of drone technology.

“Back then, drones weren’t available off the shelf — you had to build, programme and test everything yourself,” says Cheong. That experience sparked both a passion for unmanned systems and his decision to pursue his degree in Aerospace Engineering at Monash University.

After graduating, Cheong already knew he wanted to start his own company. He returned to Malaysia because he knew Southeast Asia was filled with untapped potential because of its “abundance of real-world problems just waiting for the right solution to come along”.

After 16 months in Intel’s research and development (R&D) division, Cheong applied his experience in managing project costs, budgets and product life cycles to setting up his own company, Poladrone, in 2016.

Poladrone was named from Cheong’s passion for aerial drone photography, blending “Polaroid” and “drone”. He quickly realised, however, that drones offered far more than just photography — they had the potential to transform entire industries.

“What began as an industrial drone services company soon evolved into something bigger. Customers weren’t just looking for drone services; they needed analytics, financing, training and end-to-end support,” says Cheong.

This growing demand prompted Cheong to rebrand Poladrone as Aonic in 2022 — a name inspired by the words “aeonic”, meaning timeless, and “action”, reflecting the company’s dynamic mindset and evolution beyond drones.

Today, Aonic operates across six key sectors: agriculture, industrial, services, retail, academy and lifestyle — with agriculture remaining its core market.

“Most drone companies stop at selling hardware. For us, however, that is just the beginning. From day one, Aonic has focused on building a full ecosystem that supports users at every stage — before, during and well beyond the delivery of a drone,” says Cheong.

Among Aonic’s offerings is the Mist Drone, its flagship spraying drone built specifically for Southeast Asia’s terrain and crops such as oil palm and banana plantations. This model found success beyond local shores by focusing on technology that solves real-world problems.

“We didn’t just build another drone; we solved practical challenges like spray drift and uneven coverage with a cost-effective, user-friendly system. Today, more than 80% of Mist Drone sales are exported globally, proving we can compete on the world stage with Malaysian innovation,” says Cheong.

In addition, knowing that hardware alone is not enough in today’s market, Aonic has developed proprietary software platforms such as the Mist Drone Flight App and Airamap Desktop, which delivers actionable insights to compa-



“From day one, Aonic has focused on building a full ecosystem that supports users at every stage — before, during and well beyond the delivery of a drone.”

Cheong

nies through artificial intelligence (AI) mapping and analytics.

Beyond technology, Cheong highlights offerings that focus on the company’s core mission: solving real-world problems in the region — shaped by years of conversations and collaboration with partners.

“Through Aonic Flex, we offer financing so small farmers and SMEs (small

and medium enterprises) can access automation without an upfront cost strain. And through the Drone Academy Asia, we have trained thousands of certified [drone] pilots, ensuring every drone is used safely, effectively and in line with CAAM (Civil Aviation Authority of Malaysia) standards,” he says.

Proving local quality

Building a business around drones in Southeast Asia is not without its hurdles. Cheong says most people in the agricultural space do not see drones as tools. They are more likely to treat them as toys or as just remote cameras.

It was this lack of awareness that led to the development of the Drone Academy Asia, which also works to help more Malaysians understand how drones can transform their operations.

Another major challenge Aonic continues to face is scepticism towards local

innovation, he says, noting that many Malaysians still perceive locally made products as inferior to those from overseas.

Aonic is tackling this perception head-on by focusing on product quality, user feedback and after-sales service, he adds.

“We stayed close to the ground, worked directly with users, iterated fast and ensured strong after-sales support to prove that world-class solutions can come from Southeast Asia.”

For Cheong, being based in Malaysia has proven to be a major strategic advantage. His innate understanding of the local terrain, climate, crops and the people has provided Aonic engineers with the ability to work directly with the farmers they hope to help.

Most importantly, this has allowed Aonic to gather and apply feedback directly to its solutions. Their proximity to large oil palm plantations meant that Aonic could quickly test its technology across the desired terrain and improve its products in real-time.

Cheong’s long-term vision for Aonic is to become the backbone of Southeast Asia’s agriculture ecosystem by driving growth, enabling automation and uplifting local communities. To meet this, he acknowledges that drones are just the foundation, not the endgame.

Aonic is currently looking into broader automation solutions across agriculture, infrastructure, inspection and more.

“We see this as more than just a market. It’s a chance to make a meaningful impact: improving productivity, empowering farmers and contributing to food security in the region. It’s an evergreen sector, and we’re building for the long term,” says Cheong.



Starting out in drone services in 2016, Aonic has expanded to financing, training and end-to-end platforms

PROFILE

Developing world-class semiconductor components

BY VANESSA GOMES
AND KIRAN JACOB

After nearly a decade at a multinational firm, TT Vision Holdings Bhd CEO Goon Koon Yin founded a company in 2001 with husband-and-wife business partners Joe Wong Yih Hsow and Jennie Tan Yen-Li to develop their own solutions for semiconductor companies.

They did not set out to develop cutting-edge solutions nor to become a world technology leader, but along the way as the industry became more competitive, so did TT Vision.

"We also grew and learnt how to compete better locally and regionally. We became a better company along the way," he tells *The Edge*.

TT Vision is a technology-driven company specialising in the development of automated machine vision solutions, offering one of the most cost-effective PC-based vision systems through innovative solutions that are developed in-house. Its high-speed, high-accuracy and highly repeatable system is the result of years of

research of refinement from field tests.

Its equipment, which is equipped with its vision inspection module, is primarily used for the inspection of optoelectronics (LEDs), solar wafers and cells, discrete components and integrated circuits chips as well as vision-guided robotic equipment. Additional functions such as reject handling, testing and sorting are also integrated in some of its machine vision equipment.

"The kind of product we build, it's called smart manufacturing solutions or inspection solutions. On one hand, it

replaces human inspections because no human likes doing it, but on the other hand, it improves the quality of the product," Goon explains.

These areas have a high barrier of entry technology-wise, says Goon, as companies need to invest in research and development (R&D) to come up with a good product. But that didn't deter other players from entering the market.

"Competition is heating up, due to the fact that the semiconductor and electric and electronic sectors are also growing. Everybody, including us, is thinking about how to survive in this fast-moving artificial intelligence-driven world," he says.

Most of TT Vision's products are made in Malaysia, but there are components that have to be imported. However, the intellectual property (IP) is still owned by the company, and this kind of operation is not uncommon.

Earlier this year, the Ministry of Human Resources outlined a vision to move beyond the conventional "Made in Penang/Malaysia" branding to a new paradigm — "Made by Penang/Malaysia" — stressing homegrown innovation, technology ownership and talent development.

“We want to move up in complexity by doing more work in-house or outsourcing it within Malaysia. This will also increase the 'Made by Malaysians' objective.”

Goon



From left:
TT Vision was
founded by Goon
and his husband-
and-wife business
partners Tan and
Wong in May 2001

PATRICK GOH/THE EDGE

Goon says this means that everything, from the talent to the IP, has to be owned by Malaysia so that the benefits are also kept within the country.

"Of course, even for us, we don't build everything in Malaysia and substantial products are made from imported components, but we still can move up the value chain," he says.

"There are two ways to go up the value chain: by increasing the number of components made by Malaysians; and moving up in technological complexity. Making a product more high tech also makes it more competitive and these products also have a higher profit margin, which inadvertently increases its value.

"We want to move up in complexity by doing more work in-house or outsourcing it within Malaysia. This will also increase the 'Made by Malaysians' objective."

Localisation is key to securing a "Made by Malaysians" supply chain. When a company invests in R&D to develop its own IP or collaborates to co-develop IP to stay competitive, cost management becomes critical.

Goon says Malaysia is at a disadvantage because we rely a lot on imported goods and services because we are a small market. "When a country is able to produce everything itself, the cost will become competitive. We may create our own IP and have our own know-how, but when it comes to materials and components, we have to import a lot. And because we import, there are a lot of layers that increase the cost, from logistics to tax which would not make us competitive.

"We need to have more companies producing raw parts, so we can grow our supply chain even more. Otherwise, no matter how high tech a company is, if most of the materials are imported, eventually it will no longer be competitive."

The focus of the "Made by Malaysians" concept should not be limited to IP ownership, but also the composition of the material, components and services, which will also secure the supply chain.

Product innovation and marketing are foundational to a company's growth, says Goon.

One of the first things the founders held on to is the belief that product innovation is the most important pillar as it involves investing in R&D, people, investments and training. This, Goon adds, is what will set the company apart from competitors.

"We have to take on the pain of investing in R&D, even during tough times. It cannot be something that we only do during good times, and that's the philosophy that we've stuck with."

Marketing is another area to focus on, he says, because it is important to look for new customers and areas of growth. This is important to keep expanding its market footprint as well.

Currently, TT Vision has customers in the semiconductor industry from all over the world, exporting to South Korea, Hong Kong, Germany, China, the Philippines, Singapore, Thailand, the US and Japan.

"Deep customer relationships are also important because it will also reflect on how much of a chance they are willing to take on the company. If you've got a close and good relationship with customers, the chance for collaboration and to explore new technologies will be higher," Goon says.

"This part is important to us. We invest in giving them good solutions driven by the belief in R&D investment. These are our fundamentals which have kept us at par with other players."

E



25 Years of Shaping Malaysia's Rubber Industry for a Sustainable Future

Building a Legacy of Quality, Innovation and Sustainability

As Malaysia celebrates its 68th Merdeka Day, the nation reflects on industries that have carried its name worldwide. Among them is the rubber industry, which has grown from its humble beginnings as a producer of raw rubber into a driver of higher value manufactured rubber product exports. The rubber industry has become a symbol of Malaysian capability. This year, the Malaysian Rubber Council (MRC) marks its 25th anniversary of shaping the rubber industry.

Established in 2000 as the Malaysian Rubber Export Promotion Council and rebranded in 2020, MRC has evolved from promoting exports to shaping a vision where Malaysian-made rubber products are synonymous with quality, innovation, and sustainability. Since its inception, MRC has strengthened the standing of Malaysian rubber products as a source of national pride and global competitiveness.

"Over the past 25 years, MRC has been working with our industry members to strengthen Malaysia's presence in global markets. Our focus has always been on building a reputation for Malaysian rubber products that stand for quality, reliability and sustainability" said YBhg. Dato' Sri Mohamad Suparadi Md Nor, Chairman of MRC.

Malaysia's rubber industry today reflects this vision in scale and diversity, with 329 manufacturers producing over 1,000 types of products — from consumer and healthcare goods such as gloves, latex mattresses and medical devices to industrial uses like automotive components, mining hoses, dock fenders, structural bearings, and seismic isolators. The testament to our achievement is the rubber gloves industry, where, as the world's largest exporter, we have exported gloves to 195 countries worldwide.

From Local Expertise to Global Recognition

Given this breadth, MRC has adopted a holistic branding approach, positioning Malaysia as the preferred source for quality rubber products under the brand **Made in Malaysia Quality Rubber Products**.

The tagline **No One Knows Rubber Like Malaysia Does** reflects over 140 years of experience in the sector, a depth of knowledge that few can claim. More than a marketing slogan; it underscores Malaysia's commitment to ensuring the industry meets international standards such as ASTM, EN, and ISO while continuing to remain competitive in the global arena.

MRC actively promotes Malaysia's branding through continuous participation in leading international trade shows such as WHX Dubai, AAPEX, A+A, CMEF Spring, and Medica, alongside its MRC Global Branding Campaign in key markets that include the USA, Europe, China, and India.

What sets our branding apart is that Malaysia's claim of quality is backed by the industry players' technical expertise and decades of experience, ensuring Malaysia not only tells a compelling story but also consistently delivers on its promise to buyers worldwide.



Over the past 25 years, MRC has been working with our industry members to strengthen Malaysia's presence in global markets. Our focus has always been on building a reputation for Malaysian rubber products that stand for quality, reliability and sustainability

YBhg. Dato' Sri Mohamad Suparadi Md Nor
Chairman of MRC

Strengthening Industry Capability and Innovation

MRC's rubber industry development initiatives help strengthen the competitiveness of Malaysian manufacturers and accelerate the sector's shift into higher-value segments. Aligned with the New Industrial Master Plan 2030 (NIMP 2030), these efforts also advance Malaysia's drive towards Industry 4.0 and sustainable manufacturing.

The key initiatives facilitate technology adoption and product innovation through targeted funds and grants, and build workforce capabilities through training, seminars and workshops. MRC's Fund for Automation and Green Technology (FAGT) helps manufacturers upgrade production facilities with energy-efficient machinery, adopt cleaner technologies, and reduce reliance on foreign labour. It aims to boost efficiency while supporting the industry's shift towards Industry 4.0 and low-carbon, sustainable manufacturing in line with global aspirations.

MRC bridges the gap between product R&D and commercialization through funding programmes such as the Industry Linkage Fund 2.0 and Commercialization Fund. "Through MRC's ILF programme, I'm proud to inform that a new green precured tread has already reached commercialization stage. Using palm oil in place of petroleum-based materials, the tread is 70% greener than existing products, with stronger performance and durability. The green precured tread project shows how our strategic development funding programme turns innovation into marketable product for the Malaysian rubber industry," said Dato' Sri Mohamad Suparadi.

Beyond funding, the MRC Commercialization Matching Platform, a one-stop online hub, is connecting manufacturers with technologies, expert networks and facilities to bring high potential innovations to market.

MRC also promotes market growth with branding incentives, international trade show participation, market visits and business matching. Through its research and market intelligence services, MRC helps manufacturers to anticipate emerging trends, stay informed and agile in a rapidly evolving global landscape.

Driving Sustainable Industry

In an era where buyers increasingly demand proof of environmental, social, and governance (ESG) responsibility, sustainability has become a competitive advantage rather than a compliance burden. MRC's 25th anniversary theme, "Driving Sustainable Industry", reflects this shift and signals a long-term commitment to embedding ESG principles into the industry's growth.



MRC drives sustainable practices for the rubber industry through a wide range of ESG-related capacity-building programmes covering areas such as circular economy principles, greenhouse gas and waste management. MRC also provides advisory support, particularly for SMEs, to meet ESG requirements and stay informed about new regulations such as the EU Regulation on Deforestation-Free Products and EU Corporate Sustainability Due Diligence Directive.

To advance this agenda, MRC recently organized the Malaysian Rubber Industry ESG Conference (MREC) 2025, which introduced three key sustainability initiatives including the ESG Guidelines and Self-Regulated Checklist, Low Carbon Transition Roadmap and the Sustainable Transition for Rubber Industry Development and ESG Fund (STRIDE Fund), a financing mechanism to help SMEs appoint sustainability officers and engage ESG consultants.

Looking Ahead

MRC's milestone is more than an anniversary; it reflects the spirit of Merdeka - the resolve to grow, compete, and contribute globally. From its early days as a producer of raw rubber, Malaysia has grown into an important global hub for rubber products manufacturing. The COVID-19 pandemic underscored this importance, as Malaysian-made gloves served as a lifeline for frontline workers worldwide.

As MRC enters its next chapter, the mission is clear — to uphold its reputation for quality and drive the rubber industry towards resilience, competitiveness, and sustainability.

"We are working to build an industry that not only meets today's demands but is equipped to adapt, innovate, and lead well into the future," added Dato' Sri Mohamad Suparadi.





A GLOBAL REPUTATION

TRACED FROM EXPERIENCE AND EXPERTISE

Rubber is more than just a plant or a product in Malaysia. It is a way of life, deeply ingrained within the history and DNA of our country. For over 100 years, we have cultivated, industrialised, advanced and globalised rubber and rubber products. This journey through time has equipped us with an exceptional degree of experience illustrated by our deep knowledge, evolution and expertise in rubber.

What makes Malaysia unique is that we do not just produce high-quality rubber products, we have also earned an enduring reputation and international standing in the global rubber industry. When it comes to Made in Malaysia rubber products, it is the quality you can count on.



Manufacturer's
Directory



Find out more about Malaysia's long-standing experience and expertise with rubber and rubber products.

OWNING WHAT WE BUILD

ESG



LOW YEN YING / THE EDGE

CRTM: Rethinking concrete reinforcement with glass fibre

BY SREEREMA BANOO

Steel has long been the backbone of construction and a major source of carbon emissions. As pressure to use greener alternatives mounts, CRT Manufacturing Sdn Bhd (CRTM) is turning to aerospace-grade composites to offer a lighter, stronger and non-corrosive replacement.

CRTM has developed a glass fibre reinforced polymer (GFRP) bar with a spiral ribbed profile designed for concrete reinforcement. This material is more commonly used in aircraft than on building sites.

Constrained by legacy materials and entrenched practices, the construction sector has often been slow to embrace new technologies. That's what makes CRTM's GFRP bar, called Strong Tensile Anti-Rust BARS (STARBARS), innovative.

Designed as an alternative to steel rebar, STARBARS are non-corrosive, four times lighter and have twice the tensile strength. They also offer three times the bonding strength to concrete and demonstrate superior fire performance due to their lower thermal coefficient, meaning they expand or contract less with temperature changes.

Compared with steel, which accounts for around 7% of global greenhouse gas emissions, and the construction sector, which is responsible for nearly 38% of CO2 emissions, STARBARS emit up to 70% less carbon thanks to their lightweight composition and efficient manufacturing. They also align with circular economy principles, as they can be recycled and reused.

For co-founder and inventor Huang

Mei Si, the idea began with a personal experience. "When I was a student some 20 years ago, the rented room I lived in had a leaky roof, which I was told was because of rust on the steel bars that caused the concrete to give way," she recalls.

Trained in IT and with an interest in material science, Huang felt that if given the opportunity she wanted to change the steel world and address the shortcomings that led to the predicament she faced in the leaking rented room.

As fate would have it, she was introduced to Steven Ong who, following a stint in the construction industry, had ventured into the aerospace industry. Through collaborations with German and Russian aircraft manufacturers, he was exposed to cutting-edge composite materials used in aircraft.

Ong, who is the founder and managing director of CRTM, believed that if carbon and glass fibre composites could fly higher, lighter and stronger, the same principles could be applied to construction. This realisation led to the idea of replacing traditional steel rebar, a material vulnerable to corrosion and high in embodied carbon.

"I realised that this was a material that had the potential of disrupting the construction industry," he says, adding that this opinion was reinforced after the signing of the Paris Accord, which put greater attention on the efforts made by countries to tackle climate change.

Homegrown innovation

It was after more than 10 years of research and pilot tests, which began in 2011, that STARBARS were born.

“CRTM is open to exploring strategic alliances with partners on the development of an integrated supply chain within Malaysia or Asean.”

Ong (left) with Huang

The innovation, patented by CRTM, was designed for local conditions, tested to international codes, including those of the US, Canada, Europe, Japan, Indonesia, China and Australia.

The company is also actively involved in standardisation efforts, having contributed to Malaysia's draft GFRP design code, and continues to work closely with the Department of Standards Malaysia and the American Concrete Institute's Non-Metallic Centre of Excellence. Certified by Sirim, the product is backed by the Construction Industry Development Board.

Despite the advantages of the new material and the fact that it outperformed traditional steel bars in many tests and benchmarks, turning a breakthrough into a business was not without challenges.

"When CRTM started commercial production in 2019, the unfamiliar appearance of the material initially deterred engineers. Many were hesitant to adopt a new material and unfamiliar design codes," says Ong.

To build confidence, CRTM worked with consultants to design actual buildings using STARBARS, covering engineering costs to demonstrate feasibility and cost-effectiveness. The proof of the pudding, as they say, is in the eating, and positive feedback from established developers that used STARBARS in their projects were a big plus for CRTM. Another turning point came with the onset of the Covid-19 pandemic, which saw steel prices double.

In Malaysia, STARBARS are priced 10% to 30% lower than steel thanks to CRTM's proprietary chemical fusion processes, in-house machinery development and local optimisation. The competitive pricing means more than one-third savings compared to the cost of steel, making STARBARS a practical option for green construction projects, says Huang.

To date, the company has completed over 300 residential and mixed-use developments, including high-rise projects.

Engagement with the industry is an ongoing process, Huang says, adding that the company actively promotes STARBARS at various construction and property related seminars and conferences. CRTM also had the opportunity to present and pitch the innovation at the Malaysia Pavilion at Expo 2025 in Osaka.

Privately financed and profit-generating since 2024, the team at CRTM takes pride in its holistic development approach. "Our formulation, our machine, our design — everything was done ourselves," says Huang.

The team at CRTM sees their work as a contribution not just to business growth, but also to nation-building through innovation. "We have created something that works for our climate, our developers and our future," she adds.

And while many companies promote the "Made in Malaysia" tagline, CRTM's achievement is certainly remarkable. It has engineered, manufactured and certified a product entirely within the country. Recognised by organisations including the Institution of Engineers Malaysia (IEM), Institution of Civil Engineers UK (ICE UK), and Surveyors Congress of Malaysia, STARBARS are now recognised as a pioneering green construction material that meets both local and global standards.

Looking ahead, with global carbon taxes on steel expected by 2026, Huang says making the shift to alternative materials is not a matter of preference but an economic imperative.

As word of STARBARS has spread, so too has demand, and to meet the rising demand, CRTM is currently making a substantial investment to expand its manufacturing capacity in Malaysia. There are plans to expand into Sarawak and the company is currently in advanced negotiations to establish manufacturing facilities in Indonesia, aligning with its goal to serve the broader Asean region.

What's more, although the company currently imports raw fibreglass rovings from China, it sees strong potential in sourcing these materials domestically given Malaysia's rich reserves of high-quality silica.

Such a move, says Ong, could serve as a foundation for a locally integrated supply chain, provided the right technological investments are made. "CRTM is open to exploring strategic alliances with partners on the development of an integrated supply chain within Malaysia or Asean," he adds. **E**

PROFILE

Stepping into the unknown

BY SACHA CHRISTOPHER

Jabo Plantation Sdn Bhd is Malaysia's first large-scale producer of jaboticaba, also known as the Brazilian grapetree. Like grapes, the fruit is dark purple but has a more tangy taste. While grapes grow on vines, the jaboticaba flowers and fruits straight out of the trunk.

Jabo Plantation, which started growing the trees in 2010, has moved downstream, producing several jaboticaba-based products such as Jaboticaba Winzyme Drink, Jaboticaba Peptide Drink, Jaboticaba Energetic Vinegar and Jaboticaba Stingless Bee Honey. Apart from the domestic market, the company also exports to the Philippines. It is currently exploring other overseas markets.

Jabo Plantation's journey started in Johor 15 years ago. Founder John Soo's decision to grow jaboticaba was a step into the unknown. And as with most things new, it was arduous from the outset.

Soo first saw the fruit in Taiwan and was fascinated. After tasting it, he was captivated and almost immediately started asking around for the opportunity to get his hands on some seeds, seedlings or even a tree.

"I was very curious. I wanted to try planting it. I didn't care how long it would take for me to see any returns. I just wanted to have a chance to try," Soo recalls.

"Normal grapes have flavour and taste, sweet and a little bit sour. But for jaboticaba, there is an additional something on the skin and the seeds. There is an additional taste that is tart and tangy — they add something. So, the fragrance or flavour is so much better than conventional grapes."

Soo, who is an accountant by training, is no stranger to farming as he grew up in an agricultural household. Many in his family were small-scale vegetable farmers, with some even venturing into fertiliser production. So, when he received some jaboticaba seeds from friends in Taiwan, it was only natural for him to sow them and reap what he could. That was the start to his journey.

"I had hoped to get the fruit and sell it. But after the first harvest, we found that the fruit cannot be kept long. That was our

hurdle at that time. After giving it some thought, we decided to make value-added products because the jaboticaba fruit, apart from vitamins and minerals, contains anthocyanin, which is an important antioxidant," he says.

As an accountant with an agricultural background, Soo knew he did not possess the expertise to fulfil his vision but he was determined to find a solution. "Since I decided to plant this tree that no one else had planted in Malaysia at that time, there was no one here who could help me. It was very tough. You must have a mentor or have guidance from an expert," he says.

Hence, a collaboration agreement between the National Pingtung University in Taiwan and Jabo Plantation was eventually struck. The university possesses the research and technology to guide and mentor Soo on his journey.

"The trees in Taiwan are now around 60 years old. Although their largest farm is about 30 acres, they have been researching this fruit for a long time. We are still working with them because from time to time, there is a lot of up-to-date technology that we need to acquire," he says.

On the home front, Soo is collaborating with Universiti Teknologi Malaysia (UTM) on the research into nutrient extraction methods and the development of value-added jaboticaba products. This relationship is symbiotic as the patents from the research conducted by UTM are jointly shared by the university and Jabo Plantation.

With just a few hundred trees in 2015, Soo started the development of value-added products derived from his harvests. Unfortunately, within a year of releasing his first products, the Covid-19 pandemic struck and like most businesses, he faced an incredibly tough challenge of keep-



SAM FONG/THE EDGE

“I was very curious. I wanted to try planting it. I didn't care how long it would take for me to see any returns. I just wanted to have a chance to try.”

Soo



Like grapes, but better — jaboticaba bursts with sweet, tart and tangy notes from its skin and seeds, giving it a fragrance and flavour far richer than conventional grapes



ing his enterprise alive. As a testament to his perseverance, he did not give up even when he was on the brink of bankruptcy.

Jabo Plantation's turning point came in 2022 when potential investors visited the farm. Fascinated by the fruit, they were quickly sold on the idea as they could envision the long-term potential of jaboticaba in Malaysia.

"That was a good year for us," says Eric Teoh. It was also around that time that he joined Jabo Plantation as director of strategic planning.

With capital injections giving the company a lifeline, Jabo Plantation was not only able to continue in Malaysia, but also penetrate the Philippine market. Teoh was optimistic. "It's quite fast-moving in the Philippines. From there, we could see the potential of our products, and that we could do more."

The company turned a profit for the first time in 2023. "Our efforts locally are through our direct distribution channel — direct sales and direct-to-customer. Many of those customers return to us repeatedly," says Soo.

"We have Winzyme, which is an extraction of some of the active ingredients in the jaboticaba fruit and mixed with fruit fibre for gut health and intestinal digestion. This is one of our best-selling products," he beams.

The company's products are marketed under a subsidiary called Neuro Health Bio Sdn Bhd. Jabo Plantation currently has in development jaboticaba juice and jaboticaba bio-enzymes.

Soo was encouraged by member of parliament for Kulai Teo Nie Ching to venture into ecotourism. That was three years ago, and major changes have been made to the farm to accommodate this.

"Although we are an ordinary farm, we have camping and glamping facilities. But

it is a costly endeavour. The security of the tourists is our main concern. As with any farm, there are insects and wild animals like monkeys and snakes. Also, people might get lost wandering around 100 acres of farmland," says Soo.

Visitors to the farm are invited to taste jaboticaba directly from the tree, if they wish to do so. They also have an opportunity to try their hand at extracting Kelulut honey from the beehives.

Work on 500 acres of newly acquired land has started. "The land in Pahang was awarded in February 2024, and 10% of it is allocated to ecotourism," he says.

On international expansion, Soo's obvious choice would be to penetrate the Singapore market. But its stringent laws and customer satisfaction rates mean Jabo Plantation would have to complete a number of certifications to convince potential consumers. The plan is to use the jaboticaba juice that is currently under development for its foray into the city state.

"Once we produce the juice, we will have to market in Malaysia first, with a full analysis report, recognitions and nutritional facts. Once we have all these, that is when we take it to Singapore," says Teoh.

An aspect that is closely tied with climate change is the requirement by the international community to have companies publish their carbon footprint before being allowed to export their products. For Jabo Plantation, the first step is carbon storage. Soon, a soil carbon calculation of the new farmland in Pahang will be done and an estimate of how much carbon can be stored over the coming years will be reported.

Teoh looks at it from a management point of view. "What's important is how we actually govern our company, because that will give us the key to sustainable performance," he says.

To that end, Jabo Plantation practises environmental farming and good governance, for which it has received the Malaysian Good Agricultural Practices (myGAP) certification.

For those who would like to have a tree of their own, Jabo Plantation sells seedlings and trees. But for the quickest harvest, a nine-year-old tree would be a better choice, says Teoh.

Jabo Plantation has signed a memorandum of understanding with renowned blockchain solutions provider Masverse Sdn Bhd for commitment to advance agricultural activities through blockchain technology, focusing on smart farming, traceability and the tokenisation of the jaboticaba plantation.

"We will, in due time, fully practise blockchain technology as we are aiming for an initial public offering," says Teoh. **E**

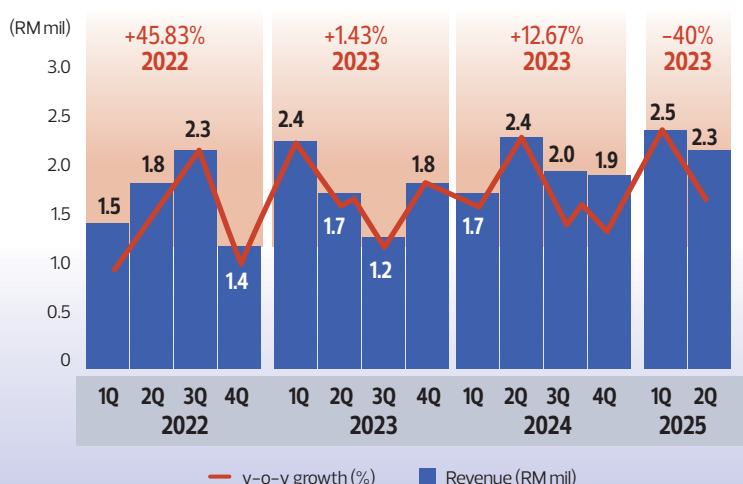


SAM FONG/THE EDGE

“We will, in due time, fully practise blockchain technology as we are aiming for an initial public offering”

Teoh

Revenue growth



Basis Bay: Powering the Future with the World's First Eco-Green Data Centre

Basis Bay is set to mark a historic milestone with the launch of the world's first Eco-Green Data Centre in Cyberjaya, a revolutionary facility developed through a strategic joint venture, with Basis Bay holding the controlling interest and leading its design and construction. This unique initiative addresses sovereignty concerns while redefining mission-critical operations to meet the highest standards of excellence.

This new flagship data centre will embody Basis Bay's core pillars — Data Sovereignty, Cyber Availability, Security, and Eco-Green Sustainability, offering BFSI institutions a unique proposition: uncompromising performance paired with the highest environmental standards.

Since pioneering Asia's first green data centre in 2009, Basis Bay has led the charge in clean IT, sustainable innovation, and ethical governance. The Cyberjaya DC2 facility is the next leap forward, ensuring clients benefit from regulatory compliance, carbon-conscious operations, and resilient infrastructure.

BFSI leaders seeking to future-proof operations, safeguard sensitive data, and align with ESG commitments are invited to explore this game-changing facility, where security meets sustainability without compromise. Basis Bay delivers Clean IT and Green IT services, including Third-Party Maintenance, providing sustainable infrastructure solutions that enhance efficiency, strengthen security, and uphold environmental responsibility.



A Strong Stand on Data Sovereignty

As global data flows grow exponentially in both volume and complexity, the question of where and how data is stored has become a critical national concern. Basis Bay has long championed the principle that sensitive and strategic data, particularly belonging to government agencies, financial institutions, and critical national infrastructure, must be stored, processed, and protected within Malaysia's borders.

This stance is more than policy, it is a safeguard against the risks of foreign data jurisdiction, where information stored in overseas cloud platforms may be subject to external surveillance laws, data subpoenas, or even political leverage. For example, global events have shown how geopolitical tensions or regulatory changes in another country can suddenly impact access to data, disrupt services, or compromise confidentiality. In the financial sector, the unauthorised transfer or exposure of personal financial data abroad could lead to significant economic and reputational damage, eroding public trust.

Basis Bay's data centre operations are engineered to comply with stringent local regulatory frameworks, including Bank Negara Malaysia's Risk Management in Technology (RMiT) policy and ISO 27001 standards. The facilities are also designed with strong data residency principles, ensuring critical information remains within Malaysia's jurisdiction for compliance, performance, and client assurance.

By upholding the highest levels of compliance and resilience, Basis Bay not only safeguards its clients but also advances Malaysia's broader vision for digital independence, where the nation retains full control over its most valuable digital assets in an increasingly interconnected and uncertain world.

Uncompromising Physical Security

At Cyberjaya DC2, physical security is designed to the highest standards of mission-critical resilience. The facility adopts a multi-layered defence-in-depth strategy, ensuring that every entry point and perimeter is safeguarded against both physical and environmental threats.

The perimeter is reinforced with anti-climb and electrical fencing, bollards, and bulletproof windows, while a dry moat further deters unauthorised access.

Entry into the building is strictly controlled through mantraps, biometric authentication factors, x-ray baggage scanners, walkthrough metal detectors, and secure private lifts, creating multiple verification layers before gaining access to sensitive areas.

Inside, the environment is continuously monitored by an extensive CCTV network with 90-day retention, supplemented by the presence of armed guards for round-the-clock protection. Complementing these measures, pandemic preparedness protocols ensure business continuity and operational safety under unforeseen health emergencies. Together, these measures provide clients with the highest level of assurance that their mission-critical operations are hosted in a facility where security is not an afterthought, but a foundation.



Cyber Availability as a Non-Negotiable

In today's hyperconnected economy, even a few seconds of downtime can have cascading consequences. From halted financial transactions to disrupted healthcare systems and delayed government services. For Basis Bay, cyber availability is not merely a feature of its services; it is a fundamental obligation to its clients, ensuring resilience even against denial-of-service (DoS) and broader cyberwarfare threats targeting critical data.

The company's facilities are built on an architecture with multiple layers of redundancy in power, cooling, and network connectivity, ensuring uninterrupted operations even in the event of equipment failure or external disruption. Beyond physical infrastructure, Basis Bay integrates advanced cybersecurity frameworks that detect, mitigate, and neutralise threats before they can escalate into incidents.

Real-world scenarios have proven the value of such preparedness. For example, during periods of regional power instability and surges in global cyberattacks, Basis Bay's data centres have continued to operate without disruption, safeguarding mission-critical systems for banks, financial services, insurance and public sector agencies. By combining robust uptime guarantees with proactive threat intelligence, Basis Bay enables its clients to maintain business continuity and customer trust — no matter how the threat landscape evolves.

Pioneering the Eco-Green Data Centre Movement

Basis Bay's upcoming Cyberjaya DC2 facility is poised to set a new benchmark for sustainable digital infrastructure in the region. Conceived with environmental stewardship at its core, the project — already GBI Gold and LEED Gold certified, and currently progressing toward Platinum recognition, demonstrates how data centres can expand capacity without compromising ecological responsibility.

The hypergreen data centre in Cyberjaya moves beyond the conventional model of energy-intensive facilities. It operates as a regenerative system that integrates architecture, environment, and technology into a cohesive whole.

At its core, the building embodies ecological design through a layered composition of vertical planting, circulation, and shading. The living facade reduces solar heat gain, supports biodiversity, and mitigates the urban heat island effect, while also achieving both technical robustness with an iconic visual identity.

Performance and sustainability are inseparable throughout the design. A rooftop canopy, with over 70% of its area covered by photovoltaic panels, is expected to generate more than 630,500 kWh of clean energy annually, contributing to a Power Usage Effectiveness (PUE) of 1.49 — exceeding global benchmarks.

Rainwater harvesting systems, permeable paving, and efficient plumbing fittings reduce potable water consumption by 60%, saving more than 1,100 cubic metres annually. Stormwater is absorbed and filtered through bioswales, enhancing groundwater recharge while reducing surface heat. Together, these innovations ensure DC2 not only meets the demands of a hyperconnected era but does so with minimal environmental impact, a continuation of Basis Bay's pioneering role in green IT since launching Asia's first green data centre in 2009.

Malaysia's First Data Centre Foundation Certificate

In a pioneering step for the nation's digital infrastructure talent pipeline, Basis Bay has partnered with Universiti Malaya to launch the Basis Bay Data Centre Foundation Certificate (BBDCFC), the first programme in Malaysia to be designed and delivered by a data centre operator. Fully accredited as an HRD Corp training provider and HRD Corp claimable, the course is tailored for the demands of Industry 4.0, addressing the urgent need for skilled professionals in the rapidly evolving data centre and digital infrastructure sector.

The curriculum blends technical training, experiential learning, and ESG principles, giving participants not only a deep understanding of mission-critical facility operations but also the opportunity to gain first-hand exposure to Asia's first green data centre. This hands-on component reinforces Malaysia's position as a forward-looking player in the global data economy.



Driving Social Impact Through ESG

True to its ethos of responsible innovation, Basis Bay has embedded social impact into the very fabric of the programme. Under its ESG-driven initiatives, the company fully sponsored the inaugural batch of 20 students from the MySkills Foundation, ADTEC Kuala Langat (JTM). Targeting underserved communities and TVET graduates, the initiative equips participants with industry-relevant skills while linking them to employment opportunities nationwide through Basis Bay's extensive partner network.

By combining world-class technical expertise, leading research and development, sustainability leadership, and an unwavering commitment to inclusivity, Basis Bay is not only setting global and regional benchmarks for data centres built in tropical climates but also shaping the next generation of talent that will power Malaysia's digital future.

Basis Bay
Leading Clean IT

Malaysia's Sovereign Eco-Green Data Centre

Pioneering Sustainable
Digital Infrastructure

Basis Bay is a Malaysian-led, operated and managed facility, purpose-built with the highest-rated data centre architecture to deliver unparalleled Sustainability, Sovereignty, Security and mission-critical resilience.

This launch marks a significant milestone not just for Malaysia, but for the region, highlighting the growing importance of addressing data sovereignty and enabling cross-border collaboration in digital infrastructure.



Redefining Industry Excellence



Sovereign Digital Infrastructure
Protecting national data autonomy



Sustainable by Design
Eco-architecture & renewable energy



Mission-Critical Resilience
No single point of failure



End-to-End Security
Multi-layered physical & cyber defense



Remote Hand Services
On-demand operational support

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OWNING WHAT WE BUILD

PROFILE

Modernising a traditional business while keeping the old-school charm

BY CHONG POOI KOON

In a world dominated by fast-manufactured goods, banker-turned-soy sauce artisan Shirley Chia wants to build a Malaysian brand focusing on the slow, traditional method of production handed down by her grandfather.

Mu Artisan Soy Sauce, a brand she started with a cousin when they took over the family business in 2019, has gained a loyal following among urban consumers with its naturally brewed sauces that take six to nine months to age. This is done in small pottery urns placed under the sun, just as it was done in the old days. In comparison, industrialised processes can churn out soy sauce within a few days, often with additives to make up for the lack of aroma and flavour that comes from long fermentation.

Mu Artisan's first-draw soy sauce is priced at RM18 per 290ml bottle. It also sells an organic bean light soy sauce at the same price for a 400ml bottle. While her products are more expensive than others in the supermarkets, Chia says they appeal to a younger, more discerning group, including young mothers who want safer condiments for their children. Many high-end restaurants and popular eateries are also fans, including Beta KL, Eat & Cook and Kenny Hills Bakers. Corporate gifting is another growing market segment for Mu Artisan.

Carving out a niche as a gourmet soy sauce producer in Malaysia's relatively small and fragmented domestic market comes with its own challenge. Without the scale and financial muscles of the big players, Chia became a pioneer of lo-

cally made artisan soy sauce, inspired by small-batch producers in Japan, Taiwan and Hong Kong.

"I realised the business could not continue to stay at this artisanal, small-scale level. It has to grow. For us to be competitive, we need to have certifications. We want to be halal-, HACCP (Hazard Analysis and Critical Control Points)- and organic-certified. All this requires money," Chia tells *The Edge* in an interview at Mu Artisan's factory in Selangor.

"As an artisanal, small, niche brand, you can't get the volume. So, I need to bring [in] other things to support the business so that we can achieve the dream and mission of building a Malaysian-made artisanal soy sauce company."

About 70% of the business' revenue still comes from supplying a much cheaper and thinner version of soy sauce to local restaurants at wholesale prices, a legacy of the family business started by her grandfather in 1956 that remains a major sales driver today. The remaining 30% of revenue is contributed equally by the Mu Artisan range and products that the team developed for other clients, either as an original equipment manufacturer or a co-brand owner.

Chia, 39, is a former corporate and investment banker who understands that establishing a clear brand positioning is crucial for both growth and profitability. She is steadfast in ensuring that Mu Artisan is not headed in the direction of mass production even as it works on meeting certain industry benchmarks.

"I used to struggle when people commented, 'You said you want to be artisanal, but you also said you want to be halal-cer-



SUHAIMI YUSUF / THE EDGE

“As an artisanal, small, niche brand, you can't get the volume. So, I need to bring [in] other things to support the business so that we can achieve the dream and mission of building a Malaysian-made artisanal soy sauce company.”

Chia

tified, you want HACCP. Then you are not artisanal anymore,” she says.

“Actually, no, artisanal is a spirit. We still use the traditional method of fermenting in small pottery urns. We still have the founder's spirit in the busi-

ness; we still have the creativity. And I'm still very much hands-on.

“We are not a mass producer, but we want to be an artisanal producer with certifications. That's how people will have confidence in you.”

The local traditional soy sauce-making business is a sunset industry. Dominated by small and medium enterprises operated by the older generation, many producers may gradually disappear when the owners retire without successors. The closure of Gopeng's Hup Teck Soy Sauce Factory earlier this year after more than a century in operation is a classic example.

Chia wants to reverse that declining trend and help reshape the lacklustre perception of the industry while helping preserve Malaysia's rich heritage of taste. Mu Artisan has agreed to acquire several traditional producers without succession plans, ensuring their skills and “secret sauce” recipes are preserved, she says.

“We just took over a small producer of spicy fermented black bean sauce, which complements our product range. The owner is probably in his 70s, and communication is the harder part of taking over the operations because all the formulas are in his head, with no accurate measurement of ingredients. It is all based on his years of experience and trained senses,” she says.

“So, we had to work side by side him for days, observing and documenting the processes and setting up standard operating procedures to modernise the business.

“This whole process is very precious. If no one inherits this, it will be gone forever. Of course, doing this business doesn't make a lot of money compared to investment banking, but the journey is beautiful.”

Looking to the future, Chia hopes to break into the exports market. It exports a small volume to Singapore and is set to move into a larger facility, which will triple its current monthly capacity of 35 tonnes.

She hopes to see a greater appreciation of home-grown artisanal products among Malaysians.

“Malaysians should have more pride in our own products. I'm seeing an improvement now, and some customers even bring our gula Melaka soy sauce overseas as a souvenir. The challenge remains in shifting consumers' appreciation for artisanal products and convincing them that the quality justifies the price,” she says.



Mu Artisan's soy sauce is brewed the traditional way in clay urns under the sun

PROFILE

Two woks to IPO

BY JENNIFER GOMEZ

Cherry Ding was already dabbling in business in high school, selling mooncakes made by her tutor to classmates. Years later, after earning a degree in business and IT followed by an MBA, and gaining work experience, she ventured into three different businesses on her own — all of which ultimately failed.

She then moved back to Sabah and operated a homestay, but when the Covid-19 pandemic hit and the homestay was forced to close its doors, it unexpectedly opened up a new opportunity when Ding, a vegetarian, began experimenting with creating plant-based meals for her friends.

Today, at 44, she is preparing to take her tempeh snack business under Tem Tem Bhd public, with plans for an initial public offering (IPO) within the next six years.

The brand has only two main varieties of chips: Protein Tempeh Chips - Original Flavour made from GMO-free soy beans from Canada, and Protein Tempeh Chips - with Tadong (red rice). She also has a ready-to-eat steamed variety for her business-to-business (B2B) customers in the hospitality sector.

Widely available online, Tem Tem tempeh chips have made their way to international markets, including Australia, Singapore, South Korea and Hong Kong, and orders continue to roll in from large supermarket and hotel chains.

As such, Ding, a director of Tem Tem, is looking to scale up. She explains that the company will need to expand from one production line now to five lines so it can produce two containers of chips per day, which will be an important step in preparing for listing.

It all began with a pitching competition her friends encouraged her to join. At the time, during the pandemic, she and her friends were preparing plant-based meals and selling them on a small scale.

The competition required her to come up with a business plan, and Ding's first choice was the food business — in particular plant-based food to cater to demand from vegetarians like herself. After extensive research, she saw a gap in the market for vegetarian-friendly snacks.

"I did some sample testing among my friends and ended up getting them on board, aunts included, to help me with the pitch project. We then started to make soybean-based tempeh chips using two woks in my kitchen," explains Ding.

The pitch did not require participants to actually create the product but Ding decided to do so on her own volition.

She got to the finals. "I had four weeks before the finals, so I wanted to make and sell the chips to prove that there was a market for it. I even set a goal to sell RM9,000 worth of chips," she says.

At the time, Ding had no prior knowledge of the production process, fermentation or packaging, and taught herself everything through YouTube videos, focusing mostly on traditional Indonesian methods of making tempeh chips.

Despite the setbacks, she eventually hit her sales target. That experience motivated her to start her chip-making business at her homestay premises, beginning with just 20 packs a day. Through online marketing, sales picked up, with

The Protein Tempeh Chips with Tadong won an agro-based industry innovation award from Mardi

demand coming from Peninsular Malaysia and even as far away as Australia. There was also interest to invest in her start-up.

"There was a good review about the chips online, and after that, my phone rang non-stop for four days in a row. I knew the food business would be a lot of work but I was encouraged by the amount of interest among potential investors, including from my incubator. And I knew I had to scale up from two hands and two woks to a factory," she shares.

Still, after three failed business ventures, Ding was determined to get it right this time, and enrolled in a course to learn about setting up a company, equity funding, share structure and more.

"I told them, hang on, let me learn up about this first. Then two years after I started, my incubator, Vilor Group, approached me with an investment offer and plans to prepare me for an IPO within six to seven years."

Engineering sustainable growth

Upon moving her operations to a 1,600 sq ft factory in Kota Kinabalu, Ding invested in an industrial-grade snack processing machine and went from producing 20 packs to 1,200 packs today.

Once again, she turned to online resources to learn how to scale up production of similar products, like potato chips. With no background in food science or engineering, Ding had to start from scratch, learning concepts like product shelf life and preserving nutritional value, among others.

"I went back to YouTube tutorials, journals and publications to learn how big manufacturers produce these snacks. At the time, the manufacturer of the machine from China had not heard of tempeh," she says.

Soon enough, Ding was clear on processes she needed the machine to handle, and guided the manufacturer on the modifications needed for the tempeh snack. She was also determined to eliminate wastage and take the lean manufacturing route instead.

"We needed to modify the machine for our snack. Unlike potato chips, tempeh chips are fried piece by piece, and they need to be dipped in a water-based seasoning before being fried in boiling oil. You can imagine what happens in that process," she laughs.

The machine had to be capable of de-oiling, a process that spins out excess oil from the highly absorbent tempeh to ensure a longer shelf life and maintain its freshness.

Scaling up from 20 to 1,200 packs a day meant increasing oil usage from just 5kg per week to over 250kg currently. The oil, used for a maximum of three times per batch, is then sold to recyclers that export it for biodiesel use. Meanwhile, the waste from slicing the tempeh is sold to oil palm plantations to be used as fertiliser.

Ding's tempeh chips use only 10% of the water required compared with the traditional method, which involves boiling



TEM TEM

“After attending international expos, I realised I was on the right track — out of the top 10 global food trends, I was aligned with seven of them. Post-pandemic, the market favours grassroots, heritage products where authenticity is valued above all else.”

Ding

the beans for dehulling and then rinsing them in running water to separate them from their skins.

In the *tadong* version, Ding blends the nutritious red rice native to Sabah with soybeans for a distinctive flavour. This idea emerged after she was approached by a social entrepreneur group — representing 75 paddy farmers from Tambunan — that wanted to promote this superior variety of red rice, known for its low glycemic index and high fibre content.

"After doing R&D for six months, we came up with the red rice version, known locally as *tadong*, which means mountain. Once fermented with soybeans, it has a unique taste. I purchase this rice at a fair price from farmers, at RM13 per kg — we are still supporting them. The farmers are very happy that I am aggressively marketing this variety. They are good at growing the rice, but their produce can

sometimes be undervalued. We started small, and now they are trying to keep up with sales demand," Ding says.

She adds that after she introduced the tempeh snack idea, other start-ups quickly followed suit by creating flavoured versions using barbecue sauce, cheese and salted egg, but she stuck to her original flavours.

"I went the other way, kept it original. When you taste Tem Tem, you can really experience the rich umami that comes from fermentation. After attending international expos, I realised I was on the right track — out of the top 10 global food trends, I was aligned with seven of them. Post-pandemic, the market favours grassroots, heritage products where authenticity is valued above all else."

As a social enterprise recognised by Kementerian Pembangunan Usahawan dan Koperasi (KUSKOP), Ding credits Sabah Creative Economy and Innovation Centre for knowledge sharing and market outreach.

"KUSKOP has invited us to Nanning, China, in September, for B2B matching and a chance to introduce our products to the Chinese consumers. This assistance by the government is very helpful as it frees up our cash flow by covering costs we would otherwise have to cover ourselves," she says.

Given her journey in setting up businesses, Ding has a simple yet powerful message for others looking to start out: "Don't underestimate your idea. Don't undervalue your product. Do your research. Find a compatible partner. And, most importantly, don't be afraid."

Clearly, she is redefining the narrative around local innovation and craftsmanship — one chip at a time. **E**

OWNING WHAT WE BUILD

ISSUES

Manufacturing woes challenge local skin and beauty industry

BY VANESSA GOMES

International beauty and skincare labels may dominate pharmacy shelves, but products tailored to Southeast Asian consumers are rapidly gaining momentum.

Malaysian brands in particular are proving their global potential, with locally formulated products that draw on home-grown ingredients and expertise. However, gaps in the manufacturing supply chain remain a hurdle, making it difficult for production to stay fully local.

Skincare-infused make-up brand Velvet Vanity founder Adlina Nadirah, who started the company close to a decade ago in 2016, says that while it is doing its best to bring the "Made in Malaysia" tag front and centre, industry limitations do not allow it, specifically when it comes to manufacturing, as there is a lack of facilities with the right technologies.

"As we grew our product range, we realised that some products required advanced manufacturing technologies to produce, which is unfortunately lacking in Malaysia," she says.

"This is specific to stick products [like lip liners] that can be quite complicated to produce because it needs specific moulds and advanced machinery to produce it, which is readily available in established manufacturing hubs such as China, South Korea and Italy."

Koh Li Tim, co-founder of local culture-infused skincare brand Paloma, faced a similar challenge. He had initially engaged with manufacturers in South Korea to produce the end product. However, he then decided to keep the brand Southeast Asian-focused and moved some of the production to Indonesia instead, since the brand develops skincare products with traditional ingredients found in Southeast Asian rainforests.

"We still wanted to stay true to the brand and keep it within the region, although we would love to [have kept] manufacturing here to [make] the brand truly 'Made in Malaysia'. Depending on how the brand goes, we will need to assess which would be better for us moving forward."

Adlina explains that Malaysian manufacturing companies have a strength in producing liquid products like lipstick and cushion foundations. Last year, she made the decision to produce some of Velvet Vanity's products in China to fill the manufacturing shortcomings locally.

"There were many factors to consider — including the production volume, manufacturing technology, formulation, hero ingredients, and logistics. But the most important factor was time."

"If we produce locally, it takes about four to six months to go from ideation and formulation to the finished product. When producing overseas, the process can take up to a year — and time is money," she says.

"Just taking that into account, I would prefer to fully produce locally because it also gives us a shorter lead time to cater to customer's needs and industry trends. There is also less risk throughout the sup-



PATRICK GOH/THE EDGE

“I would prefer to fully produce locally because it also gives us a shorter lead time to cater to customer's needs and industry trends.

There is also less risk throughout the supply chain from manufacturer to customer.”

Adlina, Velvet Vanity

ply chain from manufacturer to customer.”

The alternative was to invest in building a manufacturing facility, which is what sustainable personal care brand HYGR did. As the company grew, it needed better facilities to manufacture its products but none of the manufacturers could replicate what it wanted. Co-founder and CEO Chew Hoi Meng says that was when it decided to construct its own facility.

Its first facility of 1,500 sq ft was not easy to build as there were many elements to consider, such as the registration with the Ministry of Health, whether the space



SHAHRIYAH YAHYA/THE EDGE

“We still wanted to stay true to the brand and keep it within the region, although we would love to [have kept] manufacturing here to [make] the brand truly 'Made in Malaysia'. Depending on how the brand goes, we will need to assess which would be better for us moving forward.”

Koh, Paloma

Velvet Vanity's Peptide Hydra-Matte Lipstick is the brand's first product and has since seen an uplift to include an infusion of hydrating peptides

it wanted was allowed to be turned into a factory and the infrastructural requirements.

They also had to invest a lot of time in learning and getting knowledge on good manufacturing practice (GMP) compliances, sourcing alternative raw materials with full set of documents and workflow setup, especially with a limited space.

As demand for its products increased, it needed a new space and built its current facility, which is 10,000 sq ft. The daily output now is 200kg for deodorants and 80kg for lip balms.

"Our facility is catered to stick and liquid products and we have invested in the machinery for them. For other types of products, like creams, we need to invest in more machinery. We will need to look at other manufacturing sources, but we always look at Malaysia first before looking overseas," he says.

"Producing locally is better because, logistically, we get to see the production if we wanted to, and everything in the supply chain is more reachable.

"Local manufacturers also understand local market conditions better."

"If there are other businesses out there that want to use the facility and are aligned with us, we are open to letting them use the facility as well."

Expanding out of Malaysia

Currently, all three brands have a strong local presence. For HYGR, about 90% of its customers are based in Malaysia, while the rest are in Singapore and Brunei. Its co-founder and chief marketing officer Ivor Lim says the brand has also been getting interest from people in India, Pakistan and Indonesia.

Currently, HYGR is looking to penetrate the Middle Eastern market, says Lim, and it is ironing out some logistical challenges. The company has received good feedback and interest from customers in Saudi Arabia, who have found that HYGR's deodorant works for them.

"When we formulated the deodorant, we had Malaysians in mind, ensuring that it's non-sticky and can keep the body odour away for a whole day, considering the hot Malaysian weather and that most of us sweat throughout the day.

"We're also getting our halal certification this year, which will not just strengthen our brand locally but also help us enter the Middle East. We have customers from Saudi Arabia who have used our deodorant and really like it because it works well with their climate as well," she says.

As for Velvet Vanity and Paloma, about 80% of their customers hail from Malaysia. For Velvet Vanity, the balance 20% comes



HYGR

“We're also getting our halal certification this year, which will not just strengthen our brand locally but also help us enter the Middle East. We have customers from Saudi Arabia who have used our deodorant and really like it because it works well with their climate as well.”

Lim, HYGR

from Singapore, and a handful from Malaysians living abroad in countries like Australia and Brunei.

"Right now, we want to aggressively penetrate the Singaporean market and, since last year, we have been doing that. We have actively joined pop-ups in Singapore, especially during festive seasons, and are going to Singapore again in October," says Adlina.

Meanwhile, 20% of Paloma's customers are in Singapore and the US. Koh says it is currently focusing on strengthening its presence in these three markets, considering that Paloma has a presence in three boutique retail outlets in Singapore and has Amazon as its fulfilment centre for the US.

Locally, the brand has a presence in R Pharmacy and Koh says its offline sales have been very good. "I think people are more open to trying different brands and, also, the price point of these products in pharmacies is accessible, with the most expensive being RM80 or so."

Taking into consideration market demand, economic challenges and trends in the industry, both Velvet Vanity and Paloma are working to establish themselves in the "masstige" market.

Masstige refers to a marketing strategy where brands aim to blend mass-market appeal with a touch of prestige, offering products that are more accessible and affordable than traditional luxury items, but still perceived as higher quality or aspirational.

In the skincare space, masstige brands include The Ordinary and La Roche-Posay, while in the beauty space, Maybelline and L'Oréal Paris fall in this category. **E**



VELVET VANITY

PROFILE



SUHAIMI YUSUF/THE EDGE

Creating value beyond likes and follows

BY GRACE YAP ERN HUI

Malaysian content creators are grappling with vague deliverables, delayed payments and limited legal protections as the Gig Workers Bill is still pending. Seeing an opportunity to close these gaps, Shermaine Wong and Lina Esa founded Cult Creative, a platform that connects creators with brands while equipping them with the tools to manage and monetise their work professionally.

Cult Creative began at the end of 2021 as a community-based networking app for creative professionals to apply for jobs. Today, it operates as a creator tech marketplace designed to solve industry pain points.

"Depending on the life cycle, a lot of creators do not know where to find the work. They might have a portfolio ready but most of the time, they don't know where to find the job and they will direct message (DM) clients one by one," says Wong.

Looking for the right brands is also a challenge, especially for nano and mi-

cro creators. Wong says bigger brands might not want to deal with them directly, causing them to lose out on larger opportunities.

"Then it goes back to the whole business side of things, where they don't know that they have to protect themselves. Even though they have to build a personal brand, they have to also know their worth. How to do agreements and invoicing," she says.

Cult Creative positions itself as a creator-led agency tech platform, distinct from the brand-first approach common in the industry.

"We realised that a lot of times, brands like to impose the direction on creators but from our experience, the best ones come from collaboration and input from creators," says Wong.

She adds that data also plays a role, with the team analysing watch times to understand performance. "Sometimes, a creator who has only 5,000 followers can bring in 500,000 views because the content is so strategic."

"Creators and storytellers — they are also people on the ground and consumers

“Creators and storytellers — they are also people on the ground and consumers as well. They know what makes people tick.

So, while clients have boardroom ideas of what would work, creators are the ones who know how to package it and tell a story to their target audience.”

Wong (left) with Lina

as well. They know what makes people tick. So, while clients have boardroom ideas of what would work, creators are the ones who know how to package it and tell a story to their target audience.”

Wong stresses that content creation is a pathway to entrepreneurship. “So [when creators work] with us, we say document, don't just create,” she says, adding that working with brands they genuinely like results in more authentic content.

Malaysian creators, Wong adds, have a unique edge in experimenting with formats and humour. “The lightheartedness and soft selling of brands is what makes a great video.”

As creators grow, some branch out into building their own companies and man-

aging teams. Wong cites examples such as Owlet, a perfume brand by influencer Caddy Ang and his manager Joey; and Motherchuckers and Chuck's, founded by fashion, beauty and lifestyle influencer Jane Chuck.

“So, it is not just an overnight success. It is work and hustle. It is about time blocking your schedule for shootings and editing. You basically have to pitch a whole business.

“You have to show up the same way you show up for work. We will support you and help you thrive but you have to also treat this with the utmost respect, work ethic and hard work,” explains Wong.

To address the business knowledge gap, Cult Creative is launching Creator Academy in partnership with Open Academy at the end of August.

“We will have Caddy Ang coming in to educate creators more on monetisation, agreements, analytics, invoice and the business side of things we feel that is important,” says Wong.

“Learning to build your brand and persona is also important because you have to stand out as a creator,” adds Lina.

Wong says technology can also help creators work smarter. “For us at Cult Creative, we are starting to look into artificial intelligence (AI). Some of the things we are looking at is AI for the creative campaign brief section and the campaign report section. Sometimes, brands give us these very corporate briefs. So, what we do is we rejig it ourselves and make it more digestible for creators.”

The platform is also building an algorithm to track social trends and recommend content ideas, such as trending beauty videos, to keep creators relevant.

When Cult Creative introduced the concept of creator-generated content (CGC), Wong and Lina found it challenging to educate the market. CGC focuses on creators embedded in online communities, producing authentic, collaborative and cost-effective content.

They are driven by stories like that of Adam Hamid, a creator who started with 300 followers. “He came to us to understand better what his focus should be, what his niche should be and how he was performing in the industry. Right now, he has 4,900 followers on Instagram and he started with us only six months ago,” explains Wong.

She adds that Adam's earnings can reach RM4,000 a month from brand deals, and he has even hired his own manager.

“[As creators grow like Adam], they could be doing [about] 10 brand deals at the same time. With the platform, creators can actually manage their time a lot better,” she says.

Wong's vision is for Cult Creative to be a Malaysian-based but international company, with cross-border brand-creator exchanges in Singapore and Indonesia. “Bigger brands are starting to move away from influencers with big followings because the algorithms don't support that anymore. They support engagement and impact. Samsung is one of the big brands that moved from influencers to content creators,” she says.

While expanding regionally, Lina says the company maintains a focus on internal culture. Wong concurs adding that “I think oftentimes, most leaders overlook that happy teams build productive people. So, a lot of empathy is involved with our leadership.”

She acknowledges there are trade-offs and tough moments, but says the passion for building something meaningful keeps them going.

OWNING WHAT WE BUILD

PROFILE

‘Drastic rebrand’ to put Malaysia on world stage

BY CHONG POOI KOON

Earlier this year, local streetwear designer Pestle & Mortar Clothing wiped its website and Instagram clean, leaving only a teaser hinting at a new chapter.

Founded in 2010, the company is entering its 15th year with a market repositioning for the next growth phase.

The men’s apparel maker, whose products are crafted in the region to showcase Southeast Asian heritage and experiences, has intentionally archived its past work in preparation for a grand reveal of its new direction.

Co-founder and chief vision officer Hugh Koh says the 1½-decade milestone prompted a timely rethink of its journey thus far and the path ahead.

“What has brought us to these 15 years will not bring us to the next 15. So, we are going through a complete rebrand and repositioning,” Koh says in an interview with *The Edge*. “When I started it, I was 25; now, I’m 40. Things that I used to like obviously have changed and evolved over time. Whatever we do, we do want it to

reflect the lifestyle that we live. So, that is like the next chapter.”

Pestle & Mortar started as a passion project among Koh and his school friends. It later became a full-time career for Koh, a trained architect who has always enjoyed working with design.

For years, the founders were consumers of international streetwear shaped by

“Much of the rebranding still reflects the DNA of who we are, just in a different light.

Over the past few years, we have gained a better understanding of what we are good at and what we need to [focus] more on.”

Koh



Pestle & Mortar’s designs pay homage to its Southeast Asian roots

Western subcultures. Pestle & Mortar was born to fill that gap — with a mission to use apparel as a canvas for storytelling and to spark conversations about Southeast Asia: its culture, lifestyle and creative talent. The brand’s designs pay homage to what is familiar to those who grew up here, resonating with regional consumers by reflecting their own identities.

“Today, when people ask us who Pestle & Mortar is, we always say we are a story-telling brand, and the stories we tell are about who we are and what we love,” Koh says, explaining that the brand’s first collection was called “Malaysia Through Our Eyes.”

“The first five designs we put out were things that when Malaysians looked at them, they went, ‘Oh wow, I’ve seen that before.’ It is very much like a common image — the first one was a plate of Indomie with a telur mata (sunny-side-up egg) on a mamak’s (Indian Muslim eatery) orange plate.”

Among the first iconic designs was the roti man — a bread seller on a motorbike, once a familiar sight in 1980s neighbourhoods — created to evoke a sense of belonging and spark conversation.

The creativity that has become the bedrock of Pestle & Mortar opens doors, leading to more than 100 collaborations with internationally known brands such as KFC, Petroliaam Nasional Bhd (Petronas), Touch ‘n Go, and pop culture franchises Ghostbusters, Ultraman and Looney Tunes. Pestle and Mortar also worked on co-branded products with carmakers such as Subaru, Honda and Toyota, as well as beverage labels such as Pepsi, Tiger Beer and Jameson whisky.

“In the last 15 years, we have built a lot of partnerships; we have a good network, and a lot of it is also not here in Malaysia but global. So, the new Pestle & Mortar will embody that: We are going to do more international collaborations. The idea here is, how do we take Malaysia now to a global stage?” Koh says.

“Once we re-introduce this new collection in August when we launch, we will do something in London and then Italy. All of that will showcase the Pestle & Mortar brand.

“Much of the rebranding still reflects the DNA of who we are, just in a different light. Over the past few years, we have gained a better understanding of what we are good at and what we need to [focus] more on.”

Growing the brand has given Koh and his partners an opportunity to scale up

and expand beyond its core business, which proved to be a short-lived distraction.

Given the retail space Pestle & Mortar has in its Klang Valley stores, the founders agreed to feature other brands’ complementary items such as watches and sunglasses, offering customers a wider selection. This expansion led them into distribution, launching Major Drop — a multi-label store that carried more than 50 international brands and grew to eight outlets at its peak.

Koh and his friends were growing Major Drop alongside Pestle & Mortar until they realised the challenging nature of apparel distribution.

“That was a big lesson for us,” he says. “It was a tough business — very cash-intensive. We were buying all our products in US dollars, and with the ringgit’s fluctuating exchange rate, it wasn’t easy to sustain.

“In the end, we asked ourselves: Why are we focusing on building other people’s brands when our essence is really Pestle & Mortar? That’s what our customers want. So, we made the decision to gradually wind down Major Drop, close the stores and refocus on our own brand.”

Since then, Pestle & Mortar has worked over the past two years with brand owners and institutions seeking to tap into its pool of young, urban and cool followers for synergy. For example, it designed a jersey for Sabah FC’s AFC Cup campaign and collaborated with the Olympic Council of Malaysia on a lifestyle collection launched in conjunction with the 2024 Paris Olympics.

Its core customers are English-speaking, urban Malaysians — 60% of whom are between 25 and 35, having grown with the brand since its early days, while the rest fall between 18 and 25.

Koh acknowledges that Malaysia’s market, though loyal, is small and fragmented, prompting the brand to look abroad for future growth.

“For the past 15 years, Pestle & Mortar focused on very local stories,” he says. “But if I showed our products to someone who has never been to Malaysia, they couldn’t relate to it. So, while we’ve built a strong base in Malaysia, we have also set a ceiling for ourselves.

“This rebrand is about breaking that ceiling. We’re still proudly Malaysian, but the stories we tell from now on will be more global,” he says.



SAM FONG / THE EDGE

PESTLE & MORTAR

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Happy Merdeka Day and Malaysia Day from all of us at EcoWorld!

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OWNING WHAT WE BUILD

PROFILE

Building a homegrown fashion enterprise

BY CHELSEA LEE JIA SHI

Having her shoes and bags recognised not just as her work but also as a Malaysian product was an eye-opening moment for Christy Ng, founder and CEO of the eponymous brand, who feels proud representing the country on the fashion stage.

It all started when Ng noticed how the climate and culture of Southeast Asia had a lot of influence on the types of shoes that the locals wore. In Malaysia, located along the equatorial belt, sandals and other open-toed footwear are a natural preference for many, worn as part of everyday life.

"[Malaysians] tend to have feet with a broader and bigger girth compared with women who live in colder countries who always have to wear boots. Their foot structure tends to be a little narrower than ours, so I realised that shoes made in Italy, for example, may not be comfortable and can really hurt sometimes. This was an issue when I was hunting for shoes and everything I bought caused me so much pain that my skin started peeling," she says.

The issue extended to other segments in the footwear market, where niche areas, such as the customisation of wedding shoes, did not cater to women with broader feet. From there, Ng sought to provide a solution for comfortable footwear to stand out in the sea of competition. The brand "Christy Ng" has become a household name known for its shoes and bags, with more than 10 outlets across the country.

"I thought of trying something different to position myself and stand out, especially back in the early days when you might need to be known for at least one or two speciality items as a new brand to stand out among the noise. You cannot be known for everything. It doesn't happen overnight, so I went on that path and I think it really paid off," she says.

The company also recently opened its first branch in Indonesia, an achievement that Ng is personally excited about.

"I feel very proud to be able to have Christy Ng recognised as a Malaysian brand in Indonesia. It's not easy to penetrate that market, and the fact that we made it shows that it's possible. I hope to see more Malaysian brands step out of the country as well," she says.

The journey for Ng began when she quit her job in 2012 and was determined to start a company with a capital of only RM10,000. Having no prior experience in fashion design, she leveraged her background in biotechnology to create the materials needed for Christy Ng's shoes.

The materials used in the shoes are made from synthetic leather constructed with microfibre to mimic the feel of genuine leather and maximise comfort. Ng says it is also sourcing recycled materials such as ocean plastic or wastage.

The designs are developed in Malaysia with local talents who are encouraged to apply scientific fundamentals when creating new ideations.

Christy Ng's shoes are, for the most part, made in Malaysia to control the specificities in girth and width. The company



CHRISTY NG

“Every time we launch something, we ask ourselves, ‘Would we buy this? Is it worth the money? Will they come back and buy again?’ That’s the thought process that goes through our mind. It’s not about launching what I like, but what people and consumers want.”

Ng

has factories in the country and China to support the production volume of the bags.

"We still maintain our factories in Malaysia, but we also have to supplement our production because of the surge in volume. So, a significant portion has to be made in China. Everything is designed here, we just rely on them for labour," she explains.

Having multiple touchpoints with consumers is a big factor in the longevity of the business. Ng took a multi-channel approach to running Christy Ng, even back when digital commerce was considered a new technology. This helped her immensely, especially during the Movement Control Order at the height of Covid-19 pandemic, when foot traffic to retail stores ceased.

"To my surprise, our e-commerce sales increased 400% during the pandemic, so it actually cushioned the lack of sales and our expenses at our brick-and-mortar sites. The rationale is, because everyone was locked in at home, people had nowhere to go, so our offline customers were naturally converted to being online customers," says Ng.

She came to the realisation that brands that started online like Christy Ng back in the early 2010s had benefited through the phenomenal growth during the MCO lockdowns, whereas traditional retailers that refused to embrace digital or just built a website started to lag behind.



PICTURES BY LOW YEN YENG / THE EDGE

It is also through e-commerce that Ng was able to gather a wealth of data to pinpoint and figure out business strategies, such as the price points that sell better, geographical tastes and the kind of products and sizes that capture the market. "With all the data that we have, I wouldn't say that we didn't make any mistakes, but it's much harder to make a mistake," she says.

Christy Ng also uses a multi-channel approach in Indonesia through popular e-commerce sites in the country such as Tokopedia.

Above all, the company strives to provide value for consumers in order to build trust and grow its customer base.

"Every time we launch something, we ask ourselves, 'Would we buy this? Is it worth the money? Will they come back and buy again?' That's the thought process that goes through our mind. It's not

about launching what I like, but what people and consumers want. And we are very data-driven, given my background as a scientist," says Ng.

Christy Ng has been in business for 13 years, and Ng has been operating the company through a multi-channel approach by being present in both e-commerce and retail marketplaces.

Looking forward, Ng says she hopes for the company to one day be able to open an outlet in Malaysia's central business district in places like Suria KLCC or Pavilion Bukit Bintang.

Currently, the business is largely focused on expanding the brand into the Indonesian market, and consequently the Philippines market. The business expansion strategy will target reputable shopping malls throughout Indonesia to maximise the economies of scale. **E**

OWNING WHAT WE BUILD

PROFILE

Art in tiles

BY GRACE YAP ERN HUI

Feruni Ceramiche Sdn Bhd is transforming tiles from a functional material into a canvas for Malaysian culture. Founder and CEO Datuk C C Ngei sees this as an opportunity to embed the nation's arts and heritage into ceramic and porcelain designs, adding local identity to an otherwise conventional industry.

Ngei, who left school at an early age and entered the family tiling business, eventually branched out on his own to pursue a different vision. He wanted more than the “boring things”, and saw the potential in weaving artistic expression into everyday surfaces.

“We are still in a very niche sector and this concept is still very new. Everything needs time and someone has to take the lead to change. It is definitely not going to be an easy journey but it is going to be a very exciting one,” he says.

But his attempt at doing something different within the industry was not met with enthusiasm. Many dismissed the company's early ambitions as a crazy idea but Ngei persisted on his journey.

“Of course, you wouldn't have everybody believe in what you do but I think there's a lot of people who have started to appreciate what we do and really want to be part of it.”

The challenge remains steep, with Ngei acknowledging that much of the industry is still price driven. For business-to-consumer (B2C) customers, he sees it as a matter of perceived value.

“At the end of the day, it just comes down to whether it is within the customer's budget or not. Most of them come into our store already knowing what they are looking for, which is something different [than your usual tiles].”

For business-to-business (B2B) customers, however, the challenge is in working with property developers who often operate within tight budgets to keep their projects profitable.

“So now, what we want to do is to add value to their properties so that they can sell it for much better.”

Ngei believes collaborations with property developers can create long-term value. Incorporating artful tilework gives projects a stronger unique selling proposition, helping them stand out and offer greater value to buyers in a market of rising expectations.

For him, the focus is on addressing customer pain points and delivering meaningful value in building dream homes. Rather than competing on price, the aim is to ensure buyers feel that their investment is worthwhile.

Redefining tiles

What drives Ngei today in his journey with Feruni is more than commercial ambition. He views his work as a calling to create an impact that goes beyond profits.

“Of course, profits are important. But being an entrepreneur is also about taking a leap to change how things are done. If you do things right, the results will follow. It may take longer, but it's more sustainable,” he says.

One of Feruni's key aims is to transform tiles into works of art rather than treating them as mere functional pieces. Among its efforts is a collaboration with Novak Batik founder Farah Mohan, who com-



bines Malaysia's textile heritage and batik traditions with modern ceramic design.

In pursuit of pushing the boundaries of artistic expression within the industry, Feruni has recently launched its latest collection in collaboration with Farah called Tutar Alam. The collection reimagines traditional batik with a modern twist, inspired by Malay folk song *Bangau Oh Bangau*.

By translating cultural symbols into tactile, contemporary designs, Feruni's collaborations demonstrate how Malaysian heritage can be reimagined on walls and floors.

“It's about doing something people never imagined could exist in tiles and proving that it can,” says Ngei.

In *The Art and The Artist*, in collaboration with Lisette Scheers of Nala Designs, Feruni had introduced the Mandi Bunga collection, which showcased hand-drawn illustrations inspired by the flowers of 15 Malaysian fruit trees on large-format porcelain tiles.

Building on the strong reception to its concept tiles, Feruni is now expanding through partnerships across industries and exploring new markets, beginning in Southeast Asia, before taking its vision global.

At the same time, the company is reinventing how people experience its brand with a new retail store 2.0 concept, to be launched first at its headquarters.

“In store, [Feruni 2.0] has six key ex-

“Of course, profits are important. But being an entrepreneur is also about taking a leap to change how things are done. If you do things right, the results will follow. It may take longer, but it's more sustainable.”

Ngei (right, with Farah)

periences. Our solution consultant will be full-time with them. One way we can imagine is that we try to cut short the whole buying process, you know, to make it simple, easy,” says Ngei.

Like many industries, tiling is not immune to the rise of artificial intelligence (AI) as well as the concerns that come along with it. While he recognises AI's potential to create efficiencies and even accelerate design, Ngei does not believe it can replace human creativity.

He points to Feruni's collaboration with Malaysian creative brand, Loka Made, and the carving artists' work which consists of intricate hand-carved details,



A modern kitchen in the retail store in Petaling Jaya

noting that beauty often lies in small imperfections of handmade craftsmanship that gives the designs authenticity.

“I think AI can actually do a lot of wonderful things but I think somehow people still need to have that personal touch about the story and why people are creating it. It is not just about creating tiles or designing it but it is a combination of the story and experience within the design and process that matters.”

Honing talent

Fifteen years ago, Ngei never imagined Feruni would become what it is today. For him, the future of Feruni is not only about pushing for innovative solutions but also about the people within the company and in the wider community.

“When we worked with all these designers, they never thought that their designs could actually be put on tiles. With our collaborations, we want to also showcase [the art] that all these local designers can make as well.”

Despite being able to collaborate with local designers, Ngei says that another of Feruni's ongoing challenges lies in talent development within the tiling profession itself. He shares that he sees a lack of recognition and pride among tilers, who are often overlooked when actually, they play a crucial role within the industry.

This is why every year, Feruni allocates 10% of its profits into how they can actually help the community. “God already gave each of us very different talents so I think it is our job to put them in the right place and create a platform to really let them grow and reach their potential.”

This philosophy applies beyond tilers for Feruni's internal team. Ngei shares that most of his employees are not from the tiling industry, yet he believes in unlocking their potential.

One of the initiatives that Feruni's foundation has started is its campaign titled *A Piece of Joy*. “The whole idea [for the campaign] is that we want to transform orphanages. But it's not only about transforming the place where they [orphans] stay but also about instilling confidence in them and developing and nurturing talent within the industry,” says Ngei.

This campaign is an offering under Feruni Foundation's overall income independence initiative in which it will partner with eight children's homes around Klang Valley. The children produce a variety of artworks based on two themes. The coasters, paperweights and decorative items will then be sold through Feruni.

“The process is to first identify the talent they have. Second, show them that their design can make a difference and third, let them experience making money from it. Instead of depending on subsidies, now 100% of the revenue goes to these children,” says Ngei.

The initiative is not being carried out by Feruni alone. Leveraging its wide network of developers, architects and customers, the company brings together partners who contribute in different ways.

“We often say there isn't enough talent, but I believe the real question is whether we're investing enough time in people to unlock their potential. Of course, this is not easy, because everyone is under pressure to deliver short-term results,” says Ngei.

Over the next five to ten years, success will not be measured by chasing another million in sales, he says. “It's about influence. If people work with us, hopefully they will apply what we practice and be an inspiration beyond Malaysian borders.”

OWNING WHAT WE BUILD

PROFILE

Batik legacy breathes tradition into fashion

BY RAVINYAA RAVIMALAR

What began as a personal setback became the catalyst for Fern Chua's design journey. At age 22, a car accident left her with severe injuries to her hands, requiring extensive rehabilitation. Instead of returning to a career in public relations, she transformed her recovery process into the foundation of FERN, her artisanal batik brand.

"It was about 16 years ago. I had a major car accident that changed everything," she recalls. "There was a deep gash across my left palm, and I had to relearn hand movement. My doctor suggested crafts as therapy to activate my hands again."

This harrowing experience set the now 38-year-old founder on her path to fashion. As Chua slowly and painfully regained movement in her hands, sewing became both therapy and escape — ultimately leading to a lasting love for batik.

"[Now, the accident] feels like a blessing in disguise," she says.

"I was in Central Market in Kuala Lumpur when I came across this blue and white batik with vine-like patterns — I instantly fell in love with it," she recalls. "I bought the fabric and made myself a sundress. That's when it hit me: This is something I could do. Until then, I had always thought of batik as limited to traditional wear, and I wanted to change that perception."

FERN was officially founded in 2015, but Chua first gained recognition after

winning the Fashion Pitch 2013 by MyCreative Ventures, a government investment arm set up to spur the country's creative industry. The initiative, in collaboration with Fashion Valet Sdn Bhd, offered fashion enthusiasts the opportunity to pitch their business ideas and apply for loans of up to RM2 million.

From the outset, the brand has been dedicated to redefining batik by blending traditional craftsmanship with contemporary design. Chua's entrepreneurial journey began online.

"We started selling in Singapore [first] before returning to Malaysia, but now we are looking at expanding the brand again," she says. "Our main focus has always been to preserve this traditional art form by having it made locally while ensuring the quality [is up to] standard before considering expansion."

"We're in discussions across various locations in Malaysia and Singapore, and we are also exploring opportunities in Australia."

In 2019, she opened her first flagship store, FERN — Batik + Artisanal Collective, in Bangsar Village, Kuala Lumpur.

Combining modern and traditional

While big luxury brands will always dominate the world of high fashion, small and independent labels defined by their commitment to local craftsmanship, ethical sourcing and mindful production are also silently gaining traction.

This shift has taken on a unique form in Malaysia, where it has sparked a resur-



Most commercially available batik today is printed, but Chua uses traditional techniques to preserve its craftsmanship and cultural value

gence of interest in traditional textiles and techniques, says Chua.

Batik is a perfect example of this return to heritage, demonstrating how ancient art forms can be made relevant and even fashionable for a new generation. Revered as a traditional textile dyeing technique, it holds a special place in Indonesia, Malaysia and across Southeast Asia, she adds.

Batik is a fabric dyeing technique that uses a resist method, applying a dye-resistant substance — typically wax — to parts of the cloth to prevent them from absorbing colour.

The technique is believed to be more than 1,000 years old, with historical evidence of its use in Africa, the Middle East and parts of Asia in the early centuries. While the exact origin of batik is unknown, many historians believe it was brought to Asia by travellers from the Indian subcontinent.

“I had always thought of batik as limited to traditional wear, and I wanted to change that perception.”

Chua

Each pattern often holds deep cultural significance, telling stories of history, nature and folklore. While traditional batik is made through a meticulous process of wax-resistant dyeing, Chua says the production of each piece at FERN is an amalgamation of traditional canting and modern brushing techniques.

"We try to go beyond traditional canting work," she says. "We use brushes and sponges, and experiment with different techniques to create something more unique than what conventional batik typically offers."

Most commercially available batik today is printed rather than hand-drawn or stamped, but Chua uses traditional tech-

niques to preserve its craftsmanship and cultural value.

"Designing involves extensive sampling and collaboration with our designers and artists to get the colours and patterns just right. The cut of the clothing is very important," she explains.

Her batik motifs are inspired by nature but are rarely just established floral patterns. Sprays of leaves, clusters of coral, cresting waves or blown-out blooms are her signature.

"For us, every print, motif and design is exclusive to the brand. Some are inspired by nature, culture or heritage," she says.

To reimagine the traditional notion of wearing batik as sarongs and shirts, and to appeal to younger customers, most of her pieces are simple items such as shift dresses, scarves, blouses and wrap skirts.

Navigating challenges

One of the most difficult hurdles Chua faced was assembling a team of skilled local artisans. Finding and hiring craftspeople who could consistently meet the brand's quality and design standards proved to be time-consuming.

"There are fewer and fewer skilled artisans left — they are really rare," she says. "That has always been a challenge, along with breaking into the market. But I was lucky to find the right target audience that allowed me to keep moving forward."

Initially, Chua struggled to understand her target market's needs, but she stayed open to feedback, which helped her business survive.

"We always listen to [our customers'] feedback and understand better how each piece serves its purpose," she says.

As FERN is a home-grown brand, Chua believes authentic batik must be handcrafted using wax in the dyeing process, rather than simply printed.

"I want people to see that Malaysian designs and our artisanal craftsmanship are not just beautiful but also thoughtful, sustainable and capable of setting trends rather than just following them." **E**





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OWNING WHAT WE BUILD

PROFILE

Author and illustrator wins hearts with books inspired by Malaysia

BY SACHA CHRISTOPHER

As Beatrice Oh settles into her seat in a front corner of Snackfood, a boutique gift shop nestled in Centrio in Kuala Lumpur, she flips lovingly through *Dumpling the Tiger*, the first of two children's picture books she has written and illustrated.

"This book is really a love letter to Malaysia. I wanted my first book to evoke Malaysian scenes and environment. For my first book, I wanted to make a statement — that I'm a Malaysian author," she says.

In Snackfood, Oh's books *Dumpling the Tiger* and *Peel*, her second title, are everywhere — on the shelves and tables. There is also a traffic cone in the shape of a banana peel on the floor next to us while on the shelves are mid-sized pouches with prints of banana peels and framed art of a typewriter. These are original artwork she hopes to sell with her new book. Oh's books are not just found in Malaysia but also sold to overseas markets, of which Singapore is the biggest.

She points out some illustrations in her book — there is an Indian grocer with a shop filled from top to bottom, a shop manned by a Chinese male and a food cart pushed by a Malay woman. "This is what I think is the life and heartbeat of our Malaysian businesses."

When asked to pick her favourite, Oh hesitates a moment. "I would say *Dumpling the Tiger* is an all-time favourite for everybody, for my audience. When I read this story in schools, most kids would go really quiet and curious. But I personally love the writing and concept of *Peel* a lot. It's so much more interesting and nuanced."

Amid soft background music, Oh gives this writer a quick reading of her new book, *Peel*. She flips the pages swiftly, but also lovingly. Her face beams with pride and her words drip with passion and enthusiasm. She is all smiles as she recalls her inspiration for this publication.

"*Peel* is a story dedicated to those who have yet to discover their calling or purpose," says Oh. "I would argue that our purpose is in our experiencing and observation of the world, and our value to others. Sometimes we may have questions, or be in pain, but that doesn't mean we cannot help others or provide value to those around us. Sometimes, even after we have passed, people may recognise us in others. It's a very nuanced perspective and interpretation depends on the reader."

To research this book, Oh made a list of all the things a banana could do, then a list of what banana peels could do. "I realised I couldn't list anything a peel could do. People do eat it, but most only think of it as rubbish or compost."

She contrasts a banana peel with an octopus. "Visually, a banana peel can be so interesting! You can't really do the same with an orange peel or a watermelon!"

Nobody thinks of peels, as we are focused on the bananas they hold. So, what makes peels interesting on their own? Hence, the essence of *Peel*. The book goes on an adventure with Peel, the main char-

acter, through his wonderings and wanderings of the world.

"Banana people might be in the lime-light always, but this book never throws shade on Banana [the character] for it. Some people are 'Fruit of the Year', always popular and always in front, while others are Peel, behind the scenes working hard. It is just what it is." She thinks this book can encourage discussions between children and adults about these themes. She hopes to continue writing in this way.

She explains her inspiration for being fascinated by simple, ordinary, unnoticed things: "I saw a banana peel that looked really sad. I asked all these questions like why does it look so upset. That's how I came up with this story."

Oh embarked on her career as an author during the outbreak of Covid-19. While the pandemic was ruthless to many parts of society, Oh found herself in a unique position of being cooped up alone for many days on end. For most, this was torture, but not for Oh. It proved to be a more conducive environment for her to achieve her dream. "I had no jobs, no events, no income, no excuses, so I really dove into this at that time," she recalls.

The decision to make picture books came almost naturally to Oh. As an artist with an affinity for illustrations that tell a story, Oh's goal is to produce Studio Ghibli-type stories that both children and adults can enjoy time and time again. At the same time, she hopes to break the perception that picture books are only meant for very young children.

"Some Disney shows, especially the classic ones, may speak of death or discrimination, like in *Mulan*, and family honour.

“**[Dumpling the Tiger] is really a love letter to Malaysia. I wanted my first book to evoke Malaysian scenes and environment. For my first book, I wanted to make a statement — that I'm a Malaysian author.**”

Oh

It's such a deep concept but the children enjoy it even though they don't understand some themes. When you watch it as an adult, you gain a new understanding of it."

In line with her target of being timeless, she avoids inserting modern trends into her stories. "That's also why I wanted it in hard cover, because it's meant to last. If you read the book again in five years, you might still find it fresh."

Oh concedes that children weren't her intended audience when making her picture books. Most adults' first thought might be to read a picture book to a toddler they know, but Oh's wonderful creations were originally meant for art collectors and the like.

"I was never really naturally good with kids ... it wasn't obvious to me to have them as an audience." But she now feels a connection with them whenever they react to her readings and books. "Now I feel like such a natural because we are the same in a way. I get them!" Oh's aspiration for younger bibliophiles is to be able to understand the world better with her books.

She finds the Malaysian publishing industry a bit lacking, but her readers are supportive. "The real support I get is from the audience, not from the industry. The industry or publishing houses have no confidence in picture books. They would rather publish more examination-based exercise books."

two pages of *Peel*. One is filled with colour, while the other page is only half-filled with the other half left blank. "The illustration has to supplement the words."

However, not having been trained professionally in illustration meant that Oh was free to make her own rules for her projects. On top of that, her education helped her as a self-published author in terms of the marketing aspects. "I'm so glad I learnt public speaking during my degree because as an artist, you'd never think you'd need to speak to anyone. But in my job, I need to go out to schools and meet kids, talk to teachers."

Alongside her books, Oh creates supplemental art like the cone-shaped banana peel as an extension of her stories and as a way of creating and selling original artwork. Many who buy her work are touched by it in some way or other. "I know someone who was touched by one of the poems in *Peel*, because it was about leaving everything behind and ex-

ZAHID IZZANI / THE EDGE



Many of her fans are teachers from the expatriate community in Kuala Lumpur. "Many of the expats I meet are teachers. They like my work and want to buy it. They buy it for their friends and family back home. Even though they are the minority of my audience, they are one of the most supportive ones," Oh beams.

Not everyone who purchased her books is from Malaysia. "Some grew up in Malaysia but their children are growing up elsewhere, like in Australia," says Oh. "Singapore is my biggest export market, but I've also had orders all the way from the US, Iceland and many parts of Europe. Because of my presence on the internet, I get to ship to many places."

Oh says smaller bookshops are actually quite supportive of her work, even if they can only accept small shipments each month.

Not having had traditional training in illustrations, Oh had to teach herself everything, from creating a story to designing pages that allow for breathing space and natural eye movement. "The thing about picture books is that there is always a lot of non-verbal storytelling happening," she says as she gestures at

perceiving the world. She had just been through a break-up, so she bought [an artwork with the poem] for her room."

Oh pleads for Malaysians to support local works. "I know a lot of really, really good artists who have books as well! If you want Malaysians to appreciate better art and to have better art in your environment, then support local artists with your money. But if you can't, then support by sharing and telling others about the books and products. It means a lot to us!"

She dreams of making authoring her sole focus in her career. "Now I still have to supplement my book career with other things like design work for others. But my dream is to just focus on books: once I finish one, I move on to the next."

Her third yet-untitled self-published work, which she plans to release later this year if all goes well, seems to be a departure from *Peel*. "The new book is about a boy who, even though he is not the luckiest kid, always finds a way to see life as a lucky experience, and because of that, he becomes a very lucky child," says Oh, looking thoughtful. "I've not worked out the marketing message yet." **E**



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OWNING WHAT WE BUILD

PROFILE

SAM FONG / THE EDGE



Creating tiny pieces of home

BY VANESSA GOMES

When Ling Hooi Yin started her stress-relieving hobby of making things out of polymer clay 15 years ago, never did she imagine that she would

be making Malaysian- and Asian-themed trinkets that would be sold across the globe.

Having enrolled as a multimedia student at The One Academy in 2010, her assignments were abundant and she needed an outlet to de-stress. As she was a crafty person from a young age, she scoured the internet for a new hobby to pick up and stumbled upon polymer clay. One day, a classmate asked Ling to make something for her, and that was how she got the idea to sell miniature polymer clay art pieces.

"College was really expensive and my parents gave me just enough to go to and from campus. I needed some extra pocket money for myself and also to fund some of the work we do in class because we needed to buy a lot of materials and do printing as well," shares the 33-year-old miniature artist behind TinyPinc Miniatures.

Her business started to grow and in 2015, she decided to leave her full-time job at a digital agency to pursue her business full time. Jewellery that took on the shape of popular Malaysian and Asian food was a design that resonated with

her customers, not just locally but around the world as well.

"I used to watch YouTube videos of Caucasian children making things like cupcakes and biscuits using polymer clay. I wanted to make something different and thought about what would bring Malaysians together and there was only one answer: food."

The first item she made was a pair of earrings in the shape *ang ku kueh*, a soft, chewy glutinous rice cake with sweet mung bean filling, where she focused on getting its intricate design right. Ling says it took her some time to figure out how to craft the piece, but it did not take long for her to get the hang of it and master the art.

"Back then, there weren't many artists embracing Malaysian culture and using it as inspiration in their work. There weren't many miniature artists who made Malaysian food trinkets too. It was my second piece that pushed me into the spotlight, when I made a plate of *nasi lemak*."

Her first real experience exposing her work was when she took up a booth at an art market. While she did not feel like she was ready to sell her pieces in public like this, the experience proved otherwise.

"I thought my pieces were ugly," she quips. "But people really liked them and actually bought them! From there, I started doing more art markets to showcase everything I'm doing."

From a miniature's ideation to the final

“I wanted to make something different and thought about what would bring Malaysians together and there was only one answer: food.”

Ling

product, it typically takes Ling anything between a couple of hours to a few days, depending on the technique and components needed. "I am a very imaginative person. What I do is, I sketch it out in my head, break down the components of the piece and figure it out one by one."

"If a piece requires a technique I've done before, it's very fast. But if it is a new technique, it might take a while. Mixing different clay colours to get the right colour is the most difficult because sometimes it doesn't sit right and I need to go back to the drawing board and that whole process can take up to a week."

Another challenge, she says, is replicating the pieces for distribution. Not only does TinyPinc have an online presence, it also has items placed at retail outlets across the country and around the world on a consignment basis. Ling also has a miniature food Patreon page, where fans

of her work can subscribe to it from US\$1 to US\$22 per month for different types of trinkets that will be sent to subscribers every month.

When asked how many countries TinyPinc has shipped to, Ling says she has lost count, but noted that some of the more regular orders come from the US, UK, Hong Kong and various countries in Europe.

"Foreigners really like the more generic Asian food pieces, like *dim sum*, but when I travelled to other countries to participate in pop-up markets, some people [saw] my pieces and wanted to take home a piece of Malaysia with them," she shares.

Navigating global economic challenges and barriers

Currently, most of her business comes from consignment sales, which is about 60% to 70%, followed by online sales that make up 10% to 20% while her Patreon page contributes to 20% of her business. While she is grateful that her business is still alive and thriving, it is still a challenge in the face of global economic challenges.

About 30% of her business is from international customers, but it used to be more, says Ling. International sales were affected during the pandemic when the cost of shipping rose drastically. What used to cost RM20 to RM30 to ship to the US had risen to RM70 to RM80. These prices are not just for the US, but globally.

"I used to supply my items wholesale to an American store in Chinatown, New York City, and if I send another shipment to them, they definitely will be tariffed. I wouldn't be surprised if they find another artist who supplies locally to fulfil their orders instead," she says.

"The shipping fee is the real issue because right now, if I were to ship to other countries internationally, the smaller the package, the more expensive, and I sell miniatures."

As for her Patreon members, they have the option to have their monthly miniature rewards sent to them in bulk every three months or every 12 months to save on the shipping costs.

Taking into consideration the tariff imposition by US President Donald Trump on countries, including Malaysia, Ling is unsure if the US will be a market she would continue to focus on moving forward.

When asked if she is re-strategising to regain her American customers, Ling says the barriers and obstacles are too big at the moment and it would make better sense to pivot and find other means to sell her products.

"I don't want to struggle any more than I need to with this. If things get better and it's easier to do business, I will revisit it, but for now, I'm finding other avenues," she says.

While Ling's TinyPinc brand has carved a name for itself in the miniature food trinkets industry, there are new artists entering the market as well. Ling is happy to see more artists in the landscape; however, she advises artists to know the worth of their hard work.

"It's no secret that Malaysians like a good bargain and want things cheap, but when it comes to art, the price needs to be on par with the quality and skill, as well as the time taken to make the piece," she says.

"Some people have asked me from two ends of the spectrum: whether my products are made in China and why is the price higher than others. To both, I just put my iPad in front of them and show them the videos of the production process. I let my work speak for itself and that is the best I can do."

E



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Today, that same legacy powers M+Global, a tech-driven trading platform proudly built by Malaysians, for Malaysians. Backed by deep local experience and driven by innovation, M+Global is designed to guide investors into global markets with clarity, confidence and care.

"Less Guessing, More Guiding' isn't just another tagline — it's how we design every feature, support every customer, and build long-term trust," says Lim Chia Wei, Managing Director of M+Global.

"Most people don't lack the willingness to invest — they lack the clarity," she adds. "M+Global exists to turn investing from hearsay into a guided experience. Whether it's easy access to Bursa Malaysia, the US or Hong Kong markets, or beginner-friendly courses to help kickstart your investment journey, we're here to guide Malaysians every step of the way."

That guiding spirit is also why M+Global offers new investors a head start through its free stock campaigns. "We wanted to give Malaysians more than just a welcome gift — it's about giving them an additional resource to power their journey," says Lim. "We'll start you off with your first stock, but more importantly, we'll help you learn how to invest yourself. It's the difference between giving someone a fish and teaching them how to fish — a principle that's always been at the heart of our approach."

This isn't the first time the company has been at the forefront of change. In 2016, they were among the first in the industry to introduce Shariah investing on their platform — a move Lim describes as "essential, not optional." "Back then, Shariah investing was hardly seen in the market," she recalls. "Today, it's everywhere, and we take pride in paving the way for a more inclusive investment landscape that reflects Malaysia's values." Since then, they have grown to become the leading name in Shariah investing, consistently recognised by Bursa Malaysia as the No. 1 Shariah broker in the country.

Their commitment has also been proven in times of uncertainty. During the height of the COVID-19 pandemic, when trading activities faced unprecedented challenges, M+Global ensured zero downtime — keeping systems running and facilities ready so Malaysians could continue investing without disruption. "We've been through market highs and lows for over 60 years," says Lim. "Through it all, our focus has always been the same: putting our clients first and standing by Malaysians, no matter the market conditions."

Looking ahead, Lim says the next chapter for M+Global is all about building connections and experiences. A referral campaign is coming soon, designed to reward users who invite friends into the M+Global community — turning investing into a shared journey rather than a solo venture.

And the journey doesn't stop here. With new innovations on the horizon, M+Global is preparing to unveil its first concept store, a first-of-its-kind physical space where local investors can explore and learn about investing hands-on — guided by our experienced team of licensed experts. This marks another step forward in making investing more accessible, relatable, and confidence-driven for all Malaysians.

"As much as we're a tech platform, we're also about people," Lim says. "From our roots in 1963 to the launch of M+Global, our mission has never changed: Less Guessing, More Guiding. With a heritage built on trust and a future driven by innovation, M+Global will continue to guide Malaysians. We've been around for 60 years — and we're here to stay for the next 60 and beyond."

Lim Chia Wei
Managing Director

From manufacturing to innovation hub

1970

Foreign direct investment (FDI) poured in, driving export-led industrialisation. To sustain this momentum, the government invested heavily in supporting infrastructure such as expanding roads, ports and industrial estates to create an enabling environment for manufacturing.

1980

By 1987, Malaysia was on the rebound. Rising global demand for semiconductors and textiles boosted exports, while foreign investment reignited private-sector growth. Manufacturing regained momentum, firmly cementing its role in the national economy.

1990

The 1997 Asian Financial Crisis hit the region hard. While East Asian powers expanded into foundries and design, Malaysia reinforced its niche in semiconductor assembly, testing and packaging, attracting Western firms for back-end operations.

**Tun Dr Mahathir
Mohamad reads the
Seventh Malaysia
Plan at parliament
in 1996**

Penang's Bayan Lepas Free Trade Zone

WIKIMEDIA COMMONS

The GDP by industry of Malaysia listed in the Sixth Malaysia Plan

[illegible]

Intel's first assembly site in Penang in 1972

**National Car Project
was launched in 1983**

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OWNING WHAT WE BUILD

SOURCE: VARIOUS | COMPILED BY CHELSEA LEE JIA SHI | INFOGRAPHIC BY THE EDGE

2000

SUSTAINING THE MOMENTUM

By the early 2000s, Malaysia had firmly established itself as a significant player in the global semiconductor industry. The Eighth Malaysia Plan (2001–2005) placed greater emphasis on advanced manufacturing technologies, positioning innovation as a cornerstone of economic development.

Automation began transforming production processes, enabling the industry to move into more complex and higher-value semiconductor packages. This shift marked Malaysia's growing ambition to climb further up the global value chain.

In 1995, Wafer Technology Malaysia Sdn Bhd was founded and was later renamed SilTerra Malaysia Sdn Bhd in 1999. The company commenced operations in 2001 focusing on wafer fabrication and front-end chip manufacturing. As one of Malaysia's earliest ventures into this space, Silterra symbolised the country's aspiration to go beyond assembly and testing, venturing into higher-value segments of the semiconductor ecosystem.

The latter half of the decade was guided by the Ninth Malaysia Plan (2006–2010), which carried forward the goals of upgrading economic competitiveness, building innovation capacity and addressing social inequalities.

In 2006, the Third Industrial Master Plan was introduced. It outlined long-term strategies to leverage growing semiconductor demand in the Asia-Pacific region and to strengthen integration of Malaysian firms into global production networks, ensuring the industry remained connected and competitive.

REUTERS

2010

A GLOBAL STAGE

By this period, manufacturing had become Malaysia's fastest-growing sector with a registered growth rate of 13.5% and a 27.6% contribution to the sector's GDP, according to the Malaysian Investment Development Authority. Within it, semiconductors emerged as the largest contributor to electrical and electronics exports, accounting for a 39.7% share as reported by Bank Negara Malaysia.

Globally, the landscape was shifting. Around 2010, China overtook the US as the world's largest manufacturer. At the same time, the rise of smartphones, internet connectivity and rapid technological advances placed semiconductors at the centre of global connectivity.

Penang remained a crucial hub, hosting multinational giants such as AMD, Infineon, Intel and Unisem to meet soaring semiconductor demand.

Yet Malaysia's industry continued to depend heavily on Western firms, highlighting the challenge of building indigenous capabilities.

The 11th Malaysia Plan (2016–2020) carried forward the ambition of making Malaysia a high-value, knowledge-driven economy. Services and manufacturing were at its core, with innovation promoted as the key to raising productivity and sustaining long-term growth.

Rafizi said Malaysia must evolve from 'Made in Malaysia' to 'Made by Malaysia' — a phrase that quickly gained traction



JIA SHI LEE/THE EDGE

2020 AND BEYOND

A TURNING POINT

The Covid-19 pandemic brought the world to a standstill. Malaysia's semiconductor industry struggled to meet soaring global demand as nationwide lockdowns forced factory closures.

By 2022, stability returned, though new challenges emerged. That year, then US president Joe Biden signed the CHIPS and Science Act to secure America's supply chain and counter China. Malaysia, a neutral player, found itself balancing between two giants. In the same year, OpenAI's launch of ChatGPT marked the start of a new wave of artificial intelligence adoption worldwide.

The semiconductor rivalry reshaped global supply chains, creating openings for new roles. Acting fast, Prime Minister Datuk Seri Anwar Ibrahim's administration aimed to move upstream both vertically and horizontally in the value chain, placing strong emphasis on high-technology industries, digitalisation, and positioning Malaysia as a strategic hub in the global semiconductor supply chain.

In September 2023, the government unveiled the New Industrial Master Plan 2030, targeting Malaysia's position as a hub for advanced integrated circuit (IC) design through five local design parks. By then, Malaysia was ranked as the sixth-largest country for IC exports as reported by the International Trade Centre.

Momentum built further in 2024. The National Semiconductor Strategy, launched in June, set goals to move up the value chain and train 60,000 highly skilled engineers by 2030. In August, then economy minister Datuk Seri Rafizi Ramli said Malaysia must evolve from "Made in Malaysia" to "Made by Malaysia" — a phrase that quickly gained traction.

In December that year, the National Artificial Intelligence Office was introduced, setting a road map for Malaysia to become an artificial intelligence (AI)-enabled nation. With an emphasis on ethics, governance, innovation and talent development, it aimed to embed AI across industries — from healthcare to manufacturing — reinforcing the country's role in the digital economy.

The first IC design park opened in Puchong, Selangor, fully occupied by global players including MaiStorage, Skyechip, Weeroc, AppAsia ChipsBank and SensoremTek.

By 2025, Malaysia was pressing forward, calling for global investors to accelerate its semiconductor ambitions and signing a US\$250 million deal with Arm Holdings to acquire the UK-based design firm over 10 years.

Most recently, the 13th Malaysia Plan (2026–2030) was announced, positioning "Made by Malaysia" as a pathway to developed nation status. The plan highlights advanced technology adoption, innovation, research and development and commercialisation and innovation, productivity growth, and global linkages, framing semiconductors and digitalisation as critical to Malaysia's next phase of growth.

PATRICK GOH/THE EDGE

BERNAMA

BLOOMBERG



Tun Abdullah Ahmad Badawi presenting the Ninth Malaysia Plan in 2006

The National Artificial Intelligence Office was introduced in December 2024



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