Star Special

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MSIA ADVANCING SILICON MALAYSIA

# One industry, one voice

## Five years of strengthening Malaysia's semiconductor future

MUCH of the modern world runs on something most people rarely see – semiconductors.

The tiny chips power everything from smartphones to cars, medical devices, data centres, artificial intelligence and the communications networks that keep the global economy connected.

And for Malaysia, they have become something even more significant – a strategic pillar of the economy and a springboard towards higher-value technologies.

What began over five decades ago with labour-intensive assembly and testing activities, has since evolved into a sophisticated electronics and semiconductor ecosystem spanning assembly, testing and packaging (ATP), advanced packaging, equipment, materials, automation, research and development.

Now, it is increasingly moving into integrated circuit (IC) design, opening the door to more complex technology development and intellectual property (IP) creation.

Today, Malaysia is the world's sixth-largest semiconductor producer and commands 13% of the global ATP market.

Domestically, the electrical and electronics (E&E) sector now accounts for approximately 8% of the country's GDP and 48.2% of total exports.

Even more striking is the scale of that transformation. In 2025, the combined value of exports reached RM711bil, a several thousand-fold increase compared to 1972's figure of RM230mil.

Government and industry leaders pictured together during the Asean Semiconductor Summit 2025 in Kuala Lumpur.

Those numbers underline how critical the industry is to Malaysia's economic competitiveness and increasingly, to its aspirations of creating more globally competitive companies of its own.

It was against this backdrop that the Malaysia Semiconductor Industry Association (MSIA) was established in 2021. From just 68 members in the beginning, it now has 378 members and counting. More importantly, its role has also grown considerably.

### A unified voice

What began as an effort to give Malaysia's semiconductor and E&E industry a collective voice during one of its most disruptive periods has evolved into a broader mission of connecting companies with the government and other stakeholders.

Beyond that, it was also about strengthening the ecosystem, advocating for industry needs, supporting local capability development, and pushing Malaysia towards higher-value activities.

MSIA president Datuk Seri Wong Siew Hai said the association's emergence was closely tied to a defining period not just for the industry, but the world.

"Malaysia built a strong semiconductor foundation over decades. But the Covid-19 pandemic and resulting global semiconductor shortage exposed just how interdependent the industry was. Disruption within one segment could quickly ripple across the entire ecosystem," he explained.

At the time, there were industry players and organisations aplenty, but no single association bringing everyone together under one national voice.

"The need for a nationwide association had been discussed for years. Finally, there was urgency for industry players to organise and work more closely with the government," Wong recalled.

MSIA was registered in January 2021 and officially launched on April 6 that year.

Then Deputy Investment, Trade and Industry Minister, Datuk Lim Ban Hong, described it as an "important milestone for the nation and the E&E industry".

Wong was a driving force behind MSIA's formation, with support and encouragement from the Malaysia Productivity Corporation (MPC); the Economic Planning Unit (EPU); and the Malaysian Investment Development Authority (Mida).

The early Protem Committee identified four foundational objectives – strengthening and deepening Malaysia's semiconductor ecosystem; advancing R&D and technology capabilities; enhancing the country's global competitiveness; and providing a collective voice for the industry.

These objectives remain at the heart of MSIA's work today as the industry gears itself for the next chapter – from "Made in Malaysia" to "Made by Malaysia".

"MSIA was established at a time when Malaysia and the world faced an unprecedented crisis. Covid-19 tested our resilience, but it also brought our industry closer and showed us the importance of having one collective voice.

Today, we've grown from 68 members to 378 – a reflection of strength, trust and unity. Malaysia's semiconductor story continues to evolve. We're moving into advanced packaging, IC design, equipment, R&D and innovation. Our ambition is clear, to go from "Made in Malaysia" to "Made by Malaysia".

We want more technologies and intellectual property designed here, more Malaysian companies scaling globally, and more talent leading the industries of tomorrow. The road ahead is challenging but filled with potential.
MSIA will continue bringing stakeholders together to propel our ecosystem and country forward.

Five years ago, we came together because we needed a voice. Today, we stand united and ready to embrace tremendous opportunities.

Happy 5th Anniversary, MSIA.Together, let us shape Silicon Malaysia's future."

**Datuk Seri Wong Siew Hai**
*MSIA President*

"The Ministry of Finance (MOF) extends its warmest congratulations to the Malaysia Semiconductor Industry Association (MSIA) on its 5th Anniversary.

Over the past five years, MSIA has emerged as a strategic partner in Malaysia's industrial development by connecting Government and industry, strengthening ecosystem resilience, supporting investment and creating greater opportunities for Malaysian enterprises.

MSIA's contributions support the aspirations of Ekonomi MADANI and the Rancangan Malaysia Ke-13 (RMK13) to build a high-value, innovation-led economy. Our priority must be to ensure Malaysia's semiconductor growth translates into stronger domestic capabilities, home-grown innovation, globally competitive Malaysian enterprises and more high-skilled opportunities for the rakyat by advancing our ambition to create more high-value Made by Malaysia products and services.

As Malaysia strengthens its position in the global semiconductor value chain, our next leap must be towards becoming a greater source of innovation, intellectual property and technological leadership."

**YB Senator Datuk Seri Amir Hamzah Azizan**
***Minister of Finance II***

"My congratulations to MSIA on reaching this important milestone.

Since its establishment, it has played an important role in strengthening collaboration between government and industry, representing the industry's priorities and reinforcing Malaysia's position as a trusted destination for global semiconductor investment.

Looking ahead, our ambition must be to move Malaysia further up the semiconductor value chain – from established strengths in manufacturing and assembly towards higher-value activities such as IC design, advanced packaging and R&D. This requires us to build deeper local capabilities, develop world-class talent and strengthen linkages between multinational companies and our domestic ecosystem.

Malaysia has the foundation to become a global semiconductor powerhouse. Through strong government-industry collaboration, we can build an ecosystem that not only attracts investment, but also creates technology, intellectual property and high-value opportunities for Malaysians."

**Datuk Chang Lih Kang**
***Minister of Science, Technology and Innovation***

"I applaud MSIA on its landmark 5th anniversary.

In just five years, MSIA has grown from a platform to unite Malaysia's semiconductor industry into an important voice and catalyst for strengthening our ecosystem, enhancing industry capabilities and deepening regional collaboration.

Its role is increasingly important as Malaysia enters a new era shaped by AI, advanced electronics and next-generation technologies. Our ambition must go beyond expanding capacity to moving further up the value chain through innovation, stronger talent and closer collaboration across industry, government and academia.

As a state at the heart of Malaysia's semiconductor ecosystem, Penang is proud to stand alongside MSIA in this journey. Together, we can build a more resilient, high-value and innovation-driven ecosystem, while advancing Malaysia as a globally competitive technology hub.

Congratulations to MSIA on five remarkable years, and here's to many more years of partnership, progress and shared success."

**Chow Kon Yeow**
***Chief Minister of Penang***

"MSIA plays an important role in strengthening Malaysia's semiconductor ecosystem by bringing together industry players, government and stakeholders to address emerging challenges, promote investment and enhance Malaysia's position in the global semiconductor value chain.

Its advocacy and industry insights contributed to a stronger investment proposition and greater confidence in Malaysia as a strategic destination for semiconductor activities. Looking ahead, I envision the country moving decisively towards higher-value activities, driven by innovation, technology adoption, talent development and productivity.

We must strengthen our capabilities in areas such as advanced packaging, chip design, automation and emerging technologies, while deepening linkages between multinational companies and local firms. MPC remains committed to supporting the industry through productivity enhancement, modern management practices and industry-led transformation.

Together, we can build a more resilient, competitive and globally connected semiconductor ecosystem that creates greater value for Malaysia. Congratulations to MSIA on its 5th anniversary, and I wish it continued success in advancing Malaysia's semiconductor industry."

**Dr. Mohamad Norjayadi Tamam**
***Deputy Director General***
***Malaysia Productivity Corporation (MPC)***

# Made by Malaysia

MALAYSIA'S semiconductor story began in the 1970s, when export-oriented industrialisation and the establishment of Free Trade Zones helped lay the foundations for Penang's transformation into a manufacturing hub popularly referred to as the "Silicon Valley of the East".

Similar hubs also sprouted up in Kuala Lumpur, Selangor, Melaka and Kedah in the ensuing years.

Over time, the country accumulated capabilities across an increasingly broad portion of the semiconductor value chain. It moved beyond basic assembly and testing into areas including advanced packaging, equipment, materials, automation and research and development (R&D).

Homegrown integrated circuit (IC) design has emerged as another important frontier, because the next challenge is not simply to attract more investment or manufacture more products, but to capture more value.

This is reflected in the shift from the familiar "Made in Malaysia" proposition towards a more ambitious "Made by Malaysia" vision – one where local companies create technology, develop IPs and offer solutions for clients across the globe.

"Malaysia's future competitiveness will not be determined by manufacturing capacity alone, but by the collective strength of our semiconductor ecosystem.

"As we transition into Made by Malaysia, every state has a role to play. We want the country to become the brain of innovation," said MSIA president Datuk Seri Wong Siew Hai.

The association is positioning itself as a key enabler. With its membership spanning multinational corporations, Malaysian companies, small and medium enterprises (SMEs) and international partners, it represents the full breadth of the ecosystem.

MSIA's philosophy has always been about "One Industry, One Voice".

The idea behind it was simple. Fragmented voices weakened influence while a consensus provided greater authority and clarity when engaging policymakers or fellow stakeholders.

A landmark moment as the associations formalise five MOUs, witnessed by the prime minister, ministers and industry captains.

It works closely with ministries and agencies such as Miti, Mida, the Ministry of Finance (MOF), the Ministry of Science, Technology and Innovation (Mosti) and the Ministry of Human Resources (MOHR).

It acts as a two-way bridge, conveying industry concerns and recommendations to the government, while helping members stay abreast of the latest changes in their operating environment.

"Our role is to identify challenges, consolidate recommendations and bring them to the appropriate policymakers. This ensures that industry perspectives are heard, understood and translated into meaningful action," Wong continued.

He highlighted one key example: "During the Middle East crisis, MSIA gathered feedback from stakeholders on emerging supply-chain and logistics disruptions.

"Rather than letting companies deal with the issue in isolation, we consolidated their recommendations and escalated them to PEMUDAH, a public-private task force to facilitate business, for government consideration and action."

## Future growth

For Malaysia to move further up the semiconductor value chain, it has to strengthen local capabilities.

To that end, MSIA has expanded its focus beyond advocacy to promote R&D, SME development, talent cultivation and enhancing global competitiveness.

People have always been one of the industry's key assets. To ensure they are equipped with the skills needed for emerging technologies, regular upskilling is necessary. MSIA often collaborates with academia and industry partners on workforce development initiatives.

"We must not only fill today's talent gaps, but also prepare the workforce for the demands of tomorrow's more technologically intensive industry.

"Advanced packaging, IC design, semiconductor equipment, R&D and digitally enabled manufacturing are areas that will shape Malaysia's next phase of semiconductor growth," he stressed.

This aligns with the broader direction of Malaysia's National Semiconductor Strategy (NSS), which seeks to strengthen the country's position in the global semiconductor industry and support the transformation to "Made by Malaysia".

The scale of it is already evident. The E&E industry attracted RM6bil in approved investments in the first quarter of 2026, the highest among Malaysia's manufacturing sectors.

Between 2021 and 2025 – the period since MSIA's formation – the overall figure for approved investments stood at RM319bil.

"This was more than the preceding 40 years combined," Wong pointed out.

Just last week, Deputy Minister of Investment, Trade and Industry Sim Tze Tzin also mentioned that E&E exports had risen to RM467.9bil in the first half of 2026, a rise of 42.5% on the corresponding period last year.

"Malaysia is no longer just a trading nation exporting palm oil, petroleum, gas, minerals or other commodities.

"We have now become a technology nation," Sim was quoted as saying.

## Building on solid foundations

The country's strategic importance within global supply chains was brought into stark focus in recent times as geopolitical issues between major economies intensified.

Export controls, changing trade rules, tariffs, and appreciation of the ringgit brought layers of complexity to global trade. So did the Middle East conflict which resulted in the closure of the Strait of Hormuz.

Though Malaysia's semiconductor industry was relatively insulated from its immediate effects – with many of key exports moving by air and raw materials sourced around Asia – it still underscored the importance of supply chain resilience and diversification.

The country's relatively neutral stance makes it an attractive location for global corporations seeking to diversify operations while maintaining access to major markets.

As such, Malaysia can enter its next phase of growth from a position of considerable strength.

"Our role has become more important than ever as the global semiconductor landscape evolves. Malaysia is no longer competing on its ability to provide cost-effective manufacturing.

"The bar has been set higher. We need to strengthen local companies, develop technologies and IP, move into more sophisticated segments of the value chain, and produce Malaysian companies capable of competing on the global stage," Wong said.

That transition will not happen through any single company, government agency or industry body, but continued collaboration across the entire ecosystem.

"The next chapter is about deciding how much further those capabilities can take us. As Malaysia seeks to capture greater value from one of the world's most strategically important industries, our story will no longer be only about what we can manufacture.

"Rather, it will be about what we can create, develop and own. The future is ours," Wong added.

"MSIA has played a vital role in strengthening Malaysia's position within the global semiconductor ecosystem over the past five years. By bringing together industry, government, and international partners, MSIA champions Malaysia's growing capabilities, attracts investment, develops talent, and reinforces the country's reputation as a trusted and competitive destination for semiconductor manufacturing.

Looking ahead, I see tremendous opportunity for Malaysia to play an even larger role in the semiconductor ecosystem. Through continued investment in design, packaging, R&D, and workforce, the country can position itself as an even stronger player in the broader chip ecosystem. The Semiconductor Industry Association in the United States very much looks forward to deepening our already warm partnership with MSIA."

**John Neuffer**
***President and CEO***
***Semiconductor Industry Association***

"MSIA has been instrumental in strengthening Austria-Malaysia semiconductor ties over the past five years. Their invaluable support during our recent Austrian Semiconductor Trade Mission to Malaysia showcased the country's true capabilities and reinforced Malaysia's position as an attractive investment destination for Austrian and global players seeking meaningful, long-term partnerships in the region.

Looking ahead, we envision Malaysia's semiconductor industry moving further up the value chain, with a strong emphasis on high-value activities and the expansion of skilled local talent. We are confident that Malaysia's dynamic ecosystem will continue to attract meaningful investment and cement its position as a key global player in advanced semiconductor development.

We also see increased interest from Austrian semiconductor technology and service providers to open activities in Malaysia thanks to this dynamic and successful evolution."

**Reinhart Zimmermann**
***Commercial Counsellor and Head of Advantage Austria***

"Congratulations to MSIA on five remarkable years! The relationship between MSIA and SSIA has always been more than a partnership between two associations. It is a friendship built on trust, shared purpose and a belief that our success is stronger when we grow together. Malaysia and Singapore bring different strengths to the semiconductor value chain, but together, we can create opportunities far beyond our borders. I deeply value the journey we have shared, and I believe we are only getting started. Our shared vision is clear, to develop ASEAN into a globally trusted, connected and indispensable semiconductor hub."

**Ang Wee Seng**
***Executive Director Singapore Semiconductor Industry Association (SSIA)***

"Congratulations to MSIA on its 5th Anniversary. The association has come a long way in strengthening Malaysia's semiconductor ecosystem and bringing industry stakeholders together to drive growth and innovation.

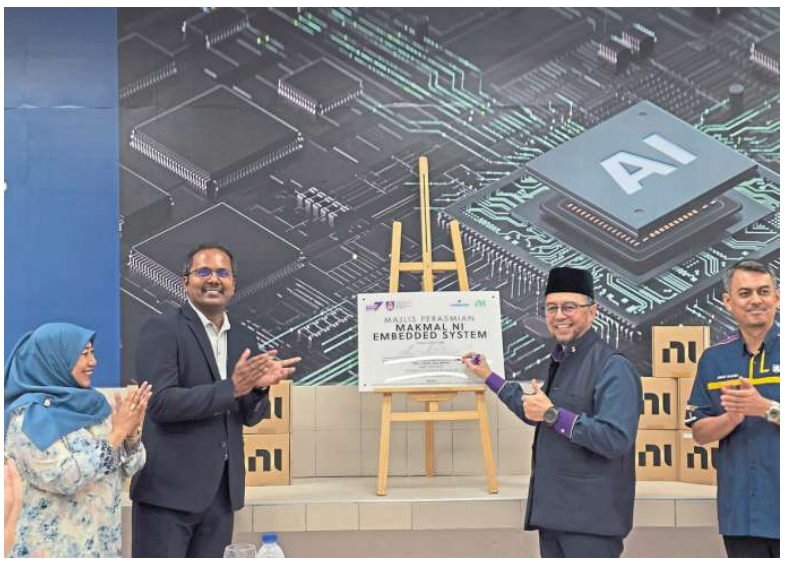
SEMI is proud to have been part of this journey and values the strong partnership we have built with MSIA over the years. We look forward to continuing our collaboration in supporting the industry's development and advancing Malaysia's position in the global semiconductor landscape. We wish MSIA continued success in the years ahead."

**Linda Tan**
***President of SEMI Southeast Asia***

# Leading progress through precision

Combining expertise with precision, NI transforms complex technologies into world-class solutions.

NI Malaysia's Bayan Lepas facility ranks among the company's largest global operations.




Through university collaboration, NI connects academia and industry to cultivate the next generation of engineering talent.

NI inspires the next generation of innovators through meaningful STEM outreach and engagement.

SEMICONDUCTORS underpin virtually every modern technology, from artificial intelligence and advanced communications to autonomous systems and electric vehicles.

Behind these innovations lies an equally critical capability – the ability to accurately test, validate and measure increasingly complex devices.

It is in this space that NI Malaysia, part of Emerson Test & Measurement, plays a pivotal role in supporting the global semiconductor industry.

Established in Penang in 2009, it combines NI's industry-leading excellence in testing with Emerson's leadership in automation and industrial technology.

The site in Bayan Lepas has grown into one of the company's largest global operations, serving as a multidisciplinary hub encompassing manufacturing, research and development, shared services and other strategic functions that support its worldwide operations.

It has also become a key centre for radio frequency (RF) and semiconductor test capabilities, developing and delivering software-connected test and measurement solutions.

These support customers across various fast-growing industries including semiconductors, electronics, transportation, aerospace and defence, and help address many of the world's complex technological challenges through innovation-driven solutions.

NI Malaysia's growth reflects Malaysia's emergence as a leading semiconductor hub and aligns closely with the Malaysia Semiconductor Industry Association's (MSIA) mission of strengthening the nation's semiconductor ecosystem.

Supported by decades of manufacturing expertise, a mature supply chain, world-class infrastructure and a highly skilled engineering workforce, the country has established itself as a strategic base for advanced manufacturing and technology development.

Much of it is underpinned by Penang's thriving semiconductor cluster, which brings together manufacturers, suppliers, customers, research institutions and universities in a collaborative environment that fosters innovation.

Complementing these advantages is a highly capable talent pool that ensures the industry's long-term potential and competitiveness.

Looking ahead, NI Malaysia sees strong growth opportunities driven by the rapid adoption of artificial intelligence, high-performance computing and advanced connectivity technologies.

Driven by engineering excellence, NI transforms complex technologies into innovative solutions.

As semiconductor devices become increasingly sophisticated, manufacturers require higher levels of precision, reliability and flexibility throughout the product development cycle.

At the same time, Malaysia's National Semiconductor Strategy (NSS) is accelerating the industry's shift towards higher-value activities such as advanced packaging, integrated circuit design and innovation-led manufacturing, beyond traditional assembly and back-end testing.

This strengthens the country's position in the global semiconductor value chain – as seen with growing investments in the sector by leading semiconductor firms.

Its long-term sustainability requires not only continued investment in technology but also in people.

Towards that end, NI Malaysia works closely with universities and industry partners to strengthen Malaysia's STEM ecosystem through engineering education, industry collaboration and workforce development initiatives that prepare future talent for the demands of an increasingly digital and automated industry.

As semiconductor complexity continues to grow, NI Malaysia is well poised to help customers streamline design-to-production workflows.

Its modular, software-centric platform and connected test strategy across R&D, validation and manufacturing reduces time-to-market and minimises rework, allowing customers to adapt quickly to evolving device requirements without costly redesigns.

All of these support MSIA's vision of building a resilient, innovative and globally competitive semiconductor ecosystem that will drive Malaysia's next chapter of technological growth.

# Growing through innovation

AS a global leader in electronic manufacturing services (EMS), Plexus helps create the products that build a better world.

Driven by a passion for excellence, the company partners with its customers to design, manufacture and service highly complex products in the aerospace and defence, healthcare and life sciences, as well as industrial (semicap) sectors.

As the APAC regional headquarters, Plexus Malaysia in Penang represents the company's largest and most integrated operational footprint globally.

From its humble beginnings in a 147,000sq ft facility, Plexus Malaysia has expanded significantly to a total footprint of 2.5 million sq ft in the last three decades.

Backed by 12,000 dedicated employees, the vast space comprises six manufacturing facilities, a specialised design centre and centralised shared services that encompass supply chain, finance and legal functions.

Its growth was made possible by highly competent technical talent, advanced research and development (R&D) capabilities, world-class infrastructure and a vast network of local supply chains within the country.

Plexus' guiding philosophy of "people are the heart of who we are and what we do" is reflected in its deep commitment to growing its people, building belonging and delivering positive impact to local communities through STEM education, volunteerism, sustainability initiatives, charitable programmes, and local supplier development.

Plexus also takes immense pride in being a workplace of choice. Driven by a continuous effort to foster a supportive and engaging workplace, it has been honoured as one of HR Asia's Best Companies to Work For in Asia for four consecutive years.

For four straight years, Plexus has been recognised as one of HR Asia's Best Companies to Work For in Asia.

Additionally, all six of its Penang sites are powered by solar photovoltaic systems and operate on 100% renewable energy. This commitment to environmental stewardship earned it the Gold Award in Renewable Energy at the ESG Positive Impact Awards 2025, along with several other sustainability-related customer accolades.

Looking ahead, Plexus Malaysia remains focused on growing its semiconductor capital equipment, medical devices and aerospace business in Penang.

It remains committed to being their customer's most trusted partner, redefining excellence with unmatched quality and delivery.

Plexus' Gold Award for Renewable Energy at the ESG Positive Impact Awards 2025.

ASM, a Netherlands-based semiconductor equipment and materials company, honours Plexus with the 2026 Supplier Excellence: Overall (left) and PRISM: Sustainability – Circularity awards.

TWENTY years ago, Infineon Technologies' Kulim site began with a single ambition – to build a world-class semiconductor manufacturing operation in Asia.

Today, as it celebrates its 20th anniversary, it holds the distinction of being the world's largest 200mm silicon carbide (SiC) power semiconductor fab.

That milestone and honour represent more than two decades of world-class operations. Rather, it is a story of continuous transformation – in technology, capabilities, people and vision.

The journey began in 2005, when construction broke ground on the site. It was the company's first manufacturing footprint in Asia.

Just a year later, the first silicon wafers with good yield quality were coming off the factory floor.

By 2016, a second module was built in Kulim, further expanding its manufacturing capabilities.

The opening of Kulim 3 in 2024 made the site the largest of its kind in the world.

Developing local expertise was also a key ambition from the outset, according to Infineon Technologies (Kulim) Sdn Bhd senior vice-president and managing director Ng Kok Tiong.

Infineon Technologies' Kulim site is the world's largest 200mm SiC power semiconductor fabrication plant.

"Back then, we sent pioneer employees for on-the-job training in Europe, building the capabilities of our people and establishing a strong know-how in front-end manufacturing to operate a highly sophisticated semiconductor facility," he shared.

"We set a goal to become a benchmark fab, and I must say we have successfully achieved this mission now that we're the world's largest 200mm SiC power fab.

"Our team's dedication and commitment were what made it all possible. And I couldn't be prouder of them," Ng added.

The investment and expansion strengthened Infineon's role as a key manufacturer of energy-efficient power semiconductors serving industrial and automotive applications.

Over 300 employees from Kulim were sent to Europe to develop the specialised skills required for wide-bandgap technologies.

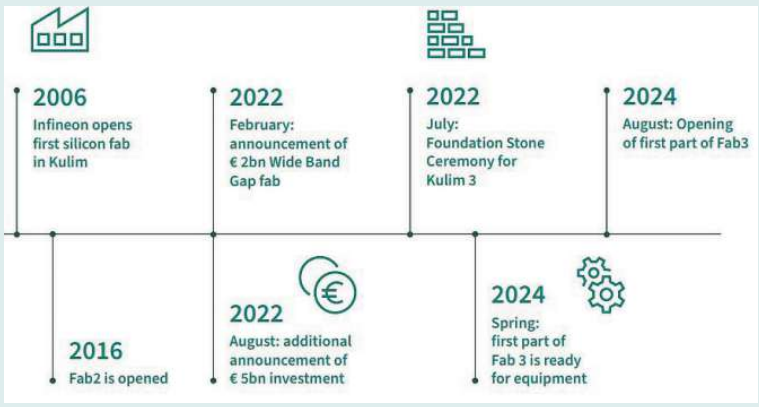
The site's progress was also driven by close collaboration with Infineon's Villach operation under the "One Virtual Fab" model.

SiC is increasingly important in applications where energy efficiency and high power density are critical, including electric vehicles, fast-charging infrastructure, renewable energy systems and industrial applications.

Its ability to improve power-system efficiency makes it a key technology in the global transition towards more sustainable energy use.

Today, Infineon Kulim stands at the forefront of the global transition towards more efficient power semiconductor technologies.

The shift to 200mm SiC wafers also brings manufacturing advantages, allowing more semiconductor chips to be produced from each wafer and supporting greater efficiency as demand for SiC-based power solutions grows.




A timeline of Infineon Technologies' strategic milestones in Kulim.

For a site that started its journey 20 years ago, this transformation stands as a remarkable achievement. It is a testament to the trust and confidence placed in Infineon Kulim, whose world-class infrastructure and skilled talent underpin a consistent track record of delivering excellence at scale.

Generations of employees have played a vital role in building, operating, and transforming Infineon Kulim into an advanced wafer fabrication facility of this scale – from engineers to technicians, operators, leaders, and business support teams.

This transformation has also created opportunities for continuous learning, enabling its people to acquire new capabilities and competency, embrace new ways of working, and build the expertise needed to shape the future for the next generation.

Ng: 'Our team's dedication and commitment over the past 20 years made it all possible. And I couldn't be prouder of them.'

"From Kulim to the world" is the vision as the company shapes the future, staying true to Infineon's vision of Driving Decarbonisation and Digitalisation. Together.

# Transforming manufacturing, empowering people globally

JABIL

Penang was Jabil's first manufacturing site in Asia.

THE Malaysia Semiconductor Industry Association's (MSIA) fifth anniversary offers a timely moment to reflect on Malaysia's growing role in global technology and manufacturing supply chains, and on the companies helping to strengthen the country's industrial capability.

Over the past three decades, manufacturing has undergone one of its most significant transformations.

Globalisation in the 1990s shifted production to more competitive regions. Lean manufacturing in the 2000s raised standards for quality and efficiency.

The past decade brought automation, the Internet of Things, artificial intelligence (AI) and connected factories into the mainstream.

Today, the focus has moved toward resilient supply chains and smart, sustainable manufacturing.

As a global leader in engineering, supply chain and manufacturing solutions, Jabil has contributed to this progress.

Headquartered in St Petersburg, Florida, in the United States, Jabil established its first Asian manufacturing facility in Penang in 1995.

This laid the foundations for a long-term presence that has grown alongside Malaysia's industrial development.

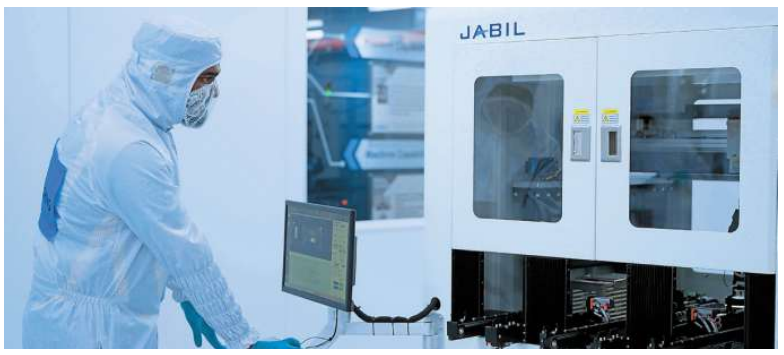
Today, the company employs more than 14,000 people in Malaysia.

As products become more complex, manufacturing companies like Jabil have evolved from assemblers into innovation partners, working closely with customers to co-develop advanced products, manage costs and optimise supply chains.

With AI accelerating the next wave of transformation, manufacturing roles are also becoming more knowledge-intensive, aligned with the broader shift toward advanced manufacturing.

Jabil's production teams operate highly coordinated manufacturing lines, combining scale, discipline and technology to deliver for customers.

Through teamwork and active knowledge-sharing, Jabil empowers employees to exchange ideas, challenge thinking and drive innovation together.




Inside Jabil's cleanroom environment, advanced automation and skilled technical oversight come together to support complex manufacturing solutions.

## Creating pathways for the workforce of tomorrow

In preparing its workforce for the era of AI, Jabil has invested in upskilling in the areas of digital literacy, robotics, AI and data analytics capabilities, while promoting a culture of continuous learning.

SJ Tan, vice-president and managing director of Jabil Malaysia and Japan, said: "Upskilling is built into our career pathways because our approach has always been people-first. We view automation as redefining manufacturing work, not replacing it, and technology should serve people."

At Jabil, this transformation is already reshaping the nature of work on the factory floor.

Repetitive tasks such as pick-and-place operations, vision inspection, manual soldering and basic assembly are increasingly handled by machines.

This allows employees to move into roles requiring greater technical judgement, including troubleshooting, process control, and digital fluency.

But preparing people for such changes requires more than introducing them to new technologies. It requires clear pathways for employees to acquire new skills and progress in their careers.

Jabil enables this through a range of structured development initiatives for early-career talent, frontline employees and future leaders.

Its Employee-in-Training (EIT) programme gives fresh graduates a one-year pathway combining hands-on rotations, mentorship and regular performance reviews as they transition into professional roles.

For those moving into management, the Manager-in-Training programme provides on-the-job learning, coaching and milestone-based assessments to prepare candidates for frontline and functional leadership positions.

Meanwhile, the Jabil Emerging Leaders (JELs) programme offers early-career employees rotational assignments across functions including manufacturing, materials, planning, quality and engineering, supported by mentoring and project-based learning.

The company also works with external partners to strengthen leadership capabilities.

Its Leadership & Learning Development Programme (LLDP), delivered at Jabil Penang in collaboration with the Penang Skills Development Centre (PSDC), provides a structured pathway for developing frontline leaders and building an internal promotion pipeline – particularly among women and under-represented groups.

## Turning skills into innovation

Beyond developing its own talent, Jabil is also involved in broader industry efforts to prepare the country's workforce for the digital economy, including the Penang GBS Industry Academy 2.0: #GenAI Talent Ready initiative, which focuses on developing practical AI and GenAI capabilities for higher-value digital roles.

The company's people-first approach is further reflected in its culture of empowering employees to innovate from the ground up.

Its annual Deliver Best Practices (DBP) programme, launched in 2009, surfaces and celebrates impactful ideas and operational practices from teams worldwide.

Structured as a friendly but rigorous competition, it culminates in a global final at the company's headquarters in the US – reinforcing employee-led innovation, collaboration and a strong culture of learning and replication.

As an active participant of the DBP, the Penang team was most recently recognised as finalists in the competition.

The team's project was also named a finalist in the 22nd Annual Manufacturing Leadership Awards (organised by the Manufacturing Leadership Council in the United States), underscoring Jabil's commitment to advancing Industry 4.0 through the ingenuity of its people.

With AI being used to automate work processes and improve individual productivity, Jabil balances innovation with accountability by empowering employees to explore its potential while ensuring responsible use.

Clear governance frameworks, policies and guardrails provide a safe environment for experimentation, enable teams to test new ideas, identify efficiencies and develop innovative solutions with confidence.

Together, these initiatives reflect a broader principle at Jabil – as manufacturing becomes more automated and intelligent, people remain central to its competitiveness.

For more than 30 years in Malaysia, Jabil has helped nurture generations of local talent.

And now, by giving employees further opportunities to learn, adapt and advance, it is helping ensure the country's manufacturing workforce keeps up with the technologies transforming the industry and indeed the world.

Looking ahead, Jabil remains committed to collaborating with partners such as MSIA to advocate for innovation and industry competitiveness and to promote broader conversations on workforce readiness to shape initiatives that strengthen Malaysia's position as a leading manufacturing and technology hub.

# Uplifting communities through care

## MSIA CARES (2021 - 2026)

MSIA Cares is MSIA's community impact initiative, bringing the semiconductor industry together to support education, nurture future talent, and contribute meaningfully to communities in need.

**12** programmes

**RM3.828M+** Total reported donations

1. **2021** — MSIA members donated over RM2mil to purchase 1,552 laptops to enable needy children to attend online classes during Covid-19 pandemic
2. **2022** — MSIA CARES: PIKAS (Program Imunisasi Industri COVID-19 Kerjasama Awam-Swasta)
3. **2022** — Donation of medical equipment to Penang GH ICU - RM1.6mill
4. **2022** — 700 units of stoves and 600 units of regulators donated for flood victims in Selangor - RM70,000
5. **2022** — 2,500 oximeters for PgCare Alliance Program - RM75,000
6. **2024** — MSIA Donates to ST Gems X SULAM - RM5,000
7. **2025** — Johor IoT STEM Final Competition 2025 - RM5,000
8. **2025** — MSIA Members donates to Future Heroes: CPR-AED Training Program 2025 - RM40,000
9. **2025** — Empowering Communities: MSIA donates to Yayasan Amal TYT Pulau Pinang - RM20,000
10. **2025** — Netherlands Southeast Asia Semiconductor Talent Programme 2025 - RM5,000
11. **2025** — UniMAP Alumni Wakaf & Endowment Fund for the Empowering Future Engineers - RM3,000
12. **2026** — Netherlands Southeast Asia Semiconductor Talent Programme 2026 - RM5,000

# Innovation and technology accelerate industries towards greater growth

## BECKHOFF

WITH semiconductor manufacturing growing increasingly sophisticated, automation has become essential in delivering precision, flexibility and efficiency.

Beckhoff Malaysia has established itself as a trusted technology partner, providing PC-based open automation solutions that help companies embrace smarter, more connected operations.

It is part of the global Beckhoff network, whose comprehensive product portfolio includes industrial PCs, I/O and fieldbus components, drive technology, automation software, machine vision hardware and innovative transport systems such as XTS and XPlanar – which can be deployed as standalone or fully integrated systems.

After establishing its Malaysian HQ in Petaling Jaya in 2010, Beckhoff further expanded its presence with offices in Penang, Kuching and Johor Baru.

Led by managing director Daniel Tay, it works closely with machine builders and system integrators across semiconductor, electronics, automotive, pharmaceutical and infrastructure sectors.

Beyond supplying automation technologies, the company supports customers throughout the entire project lifecycle, from concept development and proof-of-concept to training and after-sales service.

Looking ahead, Beckhoff remains committed to enabling the next generation of semiconductor manufacturing through its open, scalable and future-ready automation technologies.

By improving machine performance, production efficiency, connectivity and system flexibility, the company continues to help multinational manufacturers and local enterprises accelerate innovation, meet evolving industry demands and stay competitive.

Beckhoff's northern office in Batu Kawan, Penang.

## SANMINA

SANMINA has been a long-standing contributor to Malaysia's electronics manufacturing industry since establishing its first Penang facility in Bukit Tengah in 1991.

To support growing customer demand, the company expanded operations with a second manufacturing plant in the Bayan Lepas Free Industrial Zone in 2016, further strengthening its presence in one of the country's leading technology hubs.

Today, Sanmina Penang provides advanced electronics manufacturing services centred on Surface Mount Technology (SMT) and box-build solutions for a diverse range of industries.

Its manufacturing capabilities support a wide range of electronic products, including communication devices, sensors, set-top boxes, modems and critical medical equipment, serving customers with stringent quality and reliability requirements.

In addition to its hardware manufacturing expertise, Sanmina also provides end-to-end product lifecycle services that extend beyond production.

These include product configuration, software updates, inventory and returns management, as well as product screening, repair and refurbishment, enabling customers to streamline operations throughout the product lifecycle.

Penang continues to play a strategic role in Sanmina's global operations, offering a well-established electronics ecosystem, dependable infrastructure, supportive government policies and a highly skilled workforce.

These strengths have enabled the company to deliver innovative manufacturing solutions while maintaining the flexibility to meet evolving customer needs.

Looking ahead, Sanmina sees strong growth opportunities driven by the rapid adoption of artificial intelligence and increasing demand for advanced electronic devices that enhance everyday life.

By continuing to invest in manufacturing excellence, operational efficiency and customer-focused solutions, Sanmina Penang aims to strengthen its position as a preferred global manufacturing partner while supporting the continued growth of Malaysia's electronics and semiconductor ecosystem.

Sanmina's Penang site plays a strategic role in its global operations.

Cohu Malaysia serves as Cohu Inc's strategic global centre.

## Cohu

FOR nearly three decades, Cohu Malaysia has played a key role in powering Malaysia's rise as a global semiconductor hub.

Established in Melaka in 1996, Cohu Malaysia is part of Cohu Inc. (NASDAQ: COHU), a global technology leader providing semiconductor test, inspection, automation and connectivity solutions that enable the production of chips powering today's digital world.

Today, Cohu Malaysia serves as the company's strategic global centre for advanced manufacturing, engineering, supply chain management, and customer support operations.

The company manufactures semiconductor test handlers, inspection systems, device kits, and related solutions for leading customers across the Americas, Europe and Asia. It also plays an important role in product engineering, technology transfer and customer-focused innovation.

2026 marked two significant milestones for Cohu Malaysia: its 30th anniversary and the shipment of its 7,000th machine. These achievements reflect a strong legacy of innovation, operational excellence and long-term growth.

Malaysia remains a strategic hub for Cohu, thanks to its mature semiconductor ecosystem, highly skilled workforce, robust infrastructure and investment-friendly policies. These factors enable the company to expand operations, localise advanced technologies and create more high-value career opportunities.

Looking ahead, Cohu sees significant opportunities driven by artificial intelligence, high-performance computing, automotive electronics, data centres and advanced connectivity technologies.

A greater emphasis on R&D, automation, and innovation will allow Malaysia to move further up the value chain. Continued investment in talent development, digitalisation and industry-academia collaborations will be critical to enhancing Malaysia's global competitiveness.

As a long-standing member of the Malaysia Semiconductor Industry Association (MSIA), Cohu remains committed to helping Malaysia reinforce its position as one of the world's most important semiconductor hubs.

# Shaping the semiconductor future

SANDISK™

SANDISK Storage Malaysia (SDSM) operates one of the country's most advanced semiconductor manufacturing facilities in Batu Kawan, Penang.

As a fully vertically integrated site, it runs on an industry-first "Lights-Out Manufacturing" model that leverages intelligent automation to enhance efficiency, precision and sustainability.

It was recognised by the World Economic Forum as Malaysia's first Advanced Industry 4.0 Lighthouse and Asia's first Sustainability Lighthouse.

The site's end-to-end manufacturing ecosystem, from wafer processing to finished products, supports Sandisk's global supply chain.

Through its proprietary PRiSMS DnA framework, Sandisk integrates artificial intelligence, robotics, automation, data analytics and system integration to drive operational excellence, transform its workforce and advance its vision of a "Factory of the Future".

Malaysia continues to be an integral node in Sandisk's global manufacturing network, thanks to its well-established semiconductor ecosystem, skilled workforce and robust supply chain infrastructure.

Coupled with Penang's well-established semiconductor cluster, it enables the company to operate a resilient, scalable and globally competitive operation.

Looking ahead, Sandisk sees significant opportunities arising from the rapid growth of artificial intelligence, cloud computing and digitalisation.

As global supply chains diversify and demand for advanced manufacturing capabilities increases, the company believes Malaysia is well positioned to strengthen its leadership in Industry 4.0 and Industry 5.0 technologies, automation and sustainable manufacturing.

Sandisk also remains committed to supporting the nation's semiconductor ecosystem by investing in future-ready talent, accelerating intelligent manufacturing and embedding sustainability across its operations.

Through these efforts, the company aims to enhance Malaysia's competitiveness while contributing to the continued growth of the global semiconductor industry.

An aerial view of Sandisk Storage Malaysia's state-of-the-art manufacturing facility in Batu Kawan, Penang.

AT&S' Malaysian operations help reinforce the country's position as a leading semiconductor hub.

AT&S

AT&S is a leading global manufacturer of high-end integrated circuit (IC) substrates and printed circuit boards (PCBs), providing advanced interconnect technologies for key industries ranging from mobile devices to automotive, medical, industrial and high-performance computing for artificial intelligence (AI).

Headquartered in Austria, the company operates six production facilities across Europe and Asia, employing around 15,000 people worldwide.

Malaysia marks AT&S' first expansion into South-East Asia and represents the largest investment in the company's history. The facility in Kulim Hi-Tech Park, Kedah, held its official ground-breaking ceremony in 2021.

As part of AT&S' Business Unit Microelectronics, the plant was officially opened in 2024 and commenced high-volume manufacturing in early 2025, producing advanced IC substrates for AMD that power next-generation data centre processors, accelerators and AI applications.

The facility is the only advanced packaging substrate provider in Malaysia capable of supporting heterogeneous integration technologies, reinforcing the country's growing position within the global semiconductor value chain.

The investment has also created more than 3,000 high-skilled jobs in its first phase, with ongoing recruitment across engineering, manufacturing and administrative roles.

As a contributing Core Member of Malaysia's National Semiconductor Strategy (NSS) and a member of the CREST Malaysia Board of Advisors, AT&S works closely with government agencies and industry stakeholders to help shape the nation's semiconductor ecosystem.

The company is also driving vendor localisation initiatives to strengthen Malaysia's electrical and electronics supply chain.

With global demand accelerating for AI and high-performance computing technologies, AT&S, as one of the top three manufacturers of high-end IC substrates, is supporting future growth while reinforcing Malaysia's position as a leading semiconductor hub in South-East Asia.

TEXAS Instruments (TI) has been part of Malaysia's semiconductor journey for over 50 years, establishing its first factory in Selangor in 1972 and later expanding to Melaka in 2011.

Over the decades, it has played a key role in advancing the industry while also contributing to the country's economic growth and technological expertise.

Texas Instruments has played a key role in advancing the nation's semiconductor industry over the past 50 years.

Today, these assembly and test sites continue to build on that legacy by delivering innovative semiconductor products and advanced packaging solutions to meet demand.

The opening of a new Melaka facility, TIEM2, in late 2025 further enhanced TI's internal manufacturing capabilities, strengthened supply chain resilience and enabled it to deliver products more efficiently to customers worldwide.

The chips assembled and tested in Malaysia power a broad range of applications across the automotive, industrial and personal electronics sectors.

Continued investments in Malaysia, including TIEM2, align with the company's long-term strategy of bringing more than 90% of its assembly and test operations in-house by 2030.

Looking ahead, TI believes the country is well positioned to strengthen its role in the global semiconductor industry.

Continued focus on education, infrastructure and advanced manufacturing will strengthen an already robust ecosystem underpinned by skilled talent and resilient supply chains.

As semiconductor processes become more complex and automated, adaptability will be a major factor in enabling the country's next phase of growth.

To that end, TI constantly upskills its workforce and actively collaborates with leading universities and technical institutions to strengthen talent pipelines.

This creates the right environment for sustained innovation and long-term competitiveness, ensuring Malaysia remains a preferred destination for advanced semiconductor manufacturing and technological innovation for decades to come.

TEXAS INSTRUMENTS

**Scan the QR code to find out more.**

Keysight Malaysia's vast Bayan Lepas campus serves as one of the company's largest global operations.

KEYSIGHT

FEW companies have witnessed and contributed to the evolution of Malaysia's semiconductor industry as closely as Keysight Malaysia.

Established in Penang in 1972, it was among the pioneering "Eight Samurai" of multinational corporations that helped transform the state into one of Asia's leading electronics manufacturing hubs.

Today, it continues to play a key role in advancing the country's high-tech capabilities and innovation.

Keysight Malaysia's 42-acre, 1.2 million sq ft campus in Bayan Lepas is one of the company's largest global operations, employing a workforce of 3,200, of whom 90% are skilled professionals.

Core operations include manufacturing, R&D, engineering and testing, global supply chain management, global customer operations, as well as sales, service and infrastructure support.

At the heart of these capabilities is Keysight's role as a mission-critical design enablement partner, helping customers accelerate innovation by enabling them to design, develop, validate and manufacture breakthrough technologies with greater speed.

Looking ahead, Keysight Malaysia sees significant opportunities arising from the rapid growth of AI, high-performance computing, 5G Advanced and 6G communications, as well as rising global demand across key sectors such as automotive, energy, and aerospace and defence.

As these technologies converge and become more complex, accurate measurement, simulation and validation become increasingly critical to ensuring performance, reliability and security. This is where Keysight enables customers to navigate these challenges with confidence.

Beyond technology, the company remains committed to developing Malaysia's future engineering workforce through graduate programmes, university collaborations and STEM initiatives while working closely with government agencies, research institutions and industry partners to strengthen the nation's semiconductor ecosystem.

By combining innovation, talent development and smart manufacturing, Keysight Malaysia supports the goals of the National Semiconductor Strategy (NSS) and the Malaysia Semiconductor Industry Association's (MSIA) vision of positioning the country as a globally competitive, high-value semiconductor and technology hub.

# Taking innovation to new heights

## SILTERRA®

SILTERRA Malaysia Sdn Bhd is Malaysia's only pure-play semiconductor foundry and a strategic front-end manufacturing platform for the global semiconductor industry.

Headquartered in Kulim Hi-Tech Park, it specialises in 200mm wafer fabrication across a broad portfolio of CMOS-based technologies, including logic, mixed-signal, RF, high-voltage, power management integrated circuits (ICs), Micro-Electro-Mechanical Systems (MEMS) and silicon photonics.

The company serves a diverse base of global fabless semiconductor firms, providing both design enablement and high-quality manufacturing solutions for applications spanning consumer electronics, data communications, industrial automation, medical devices, and mobility.

It operates one of Malaysia's most advanced wafer fabrication facilities, with a production capacity of up to 40,000 wafers per month and a highly skilled workforce of more than 1,200 employees.

Over the past decade, SilTerra has also established a strong position in silicon photonics through sustained investments in technology development, ecosystem partnerships, and commercial-scale manufacturing capabilities.

Its MEMS platform integrates micro-scale mechanical structures with semiconductor manufacturing processes, enabling the development of advanced sensors and miniaturised devices.

In the life sciences sector, these capabilities extend to applications such as DNA sequencing, biosensing, and semiconductor-enabled healthcare technologies, allowing customers to progress seamlessly from technology development and prototyping to wafer-scale production.

The rapid growth of AI, cloud computing, high-performance computing and advanced networking has also accelerated the adoption of silicon photonics and optical integration technologies which deliver ultra-high bandwidth and low-latency optical transceivers for data centres, AI clusters and telecommunications networks.

By enabling the production of compact, energy-efficient and cost-effective optical interconnect solutions, SilTerra has become a key contributor to next-generation computing infrastructure and advanced digital connectivity.

A section of Silterra's wafer fabrication cleanroom.

## PENTAMASTER

THE ability to create smarter, more powerful technologies begins not with the chip itself, but with the advanced manufacturing systems that make its production possible.

Pentamaster Corporation Berhad has been developing these critical technologies since 1991, evolving from a homegrown Penang company into a globally recognised provider of advanced automation and intelligent manufacturing solutions.

The company's campuses in Bayan Lepas and Batu Kawan handle the design, development, manufacturing and deployment of such systems.

These support customers across key business sectors such as semiconductors, electronics, automotive, medical devices, renewable energy and industry.

As semiconductor technologies continue to advance, Pentamaster remains at the forefront of innovation. It constantly expands its capabilities to meet the evolving needs of global technology manufacturers, developing ever more sophisticated assembly, inspection and test solutions for advanced packaging.

This is an increasingly critical segment driven by artificial intelligence (AI), high-performance computing (HPC), cloud computing, data centres, 5G communications and electric vehicles (EVs).

Pentamaster's advanced manufacturing systems pave the way for smarter, more sophisticated technologies.

Pentamaster has also expanded into factory automation solutions for AI server manufacturing through its Industry 5.0-based i-Flex platform, integrating intelligent automation, advanced robotics, digital connectivity and human-machine collaboration to deliver highly flexible and scalable production systems.

Beyond technology development, the company also helps strengthen Malaysia's semiconductor ecosystem through strategic industry collaborations, engineering excellence and talent development.

It is an active participant in the Penang Automation, Test and Equipment (ATE) Campus, and a member of the Malaysia Advanced Packaging Consortium (MAPC).

Such initiatives spearhead talent development, enhance technological capabilities, foster innovation and reinforce the country's position as a global hub for advanced manufacturing.

## JFTECH

We Bring Possibilities

HOMEGROWN companies are playing an increasingly important role in pushing Malaysia's semiconductor industry further up the value chain.

JF Technology Berhad, an innovator and manufacturer of precision test contacting and test interface solutions for global IC manufacturers, is among those leading the way.

Founded by group managing director Datuk Foong Wei Kuong in 1999, it is listed on Bursa Malaysia's Main Market and has a strong R&D base with over 100 patents filed in multiple countries and a customer base spanning three continents.

The company's GreenRE Silver-certified headquarters in Kota Damansara, Selangor, houses its Test Contacting Centre of Excellence and sprawls 121,000sq ft after a recent expansion.

Current chief executive officer Andy Goh Joo Hwa is driving the next phase of growth with the JF 4.0 Transformation. This saw it expand beyond individual products into vertically integrated semiconductor test solutions.

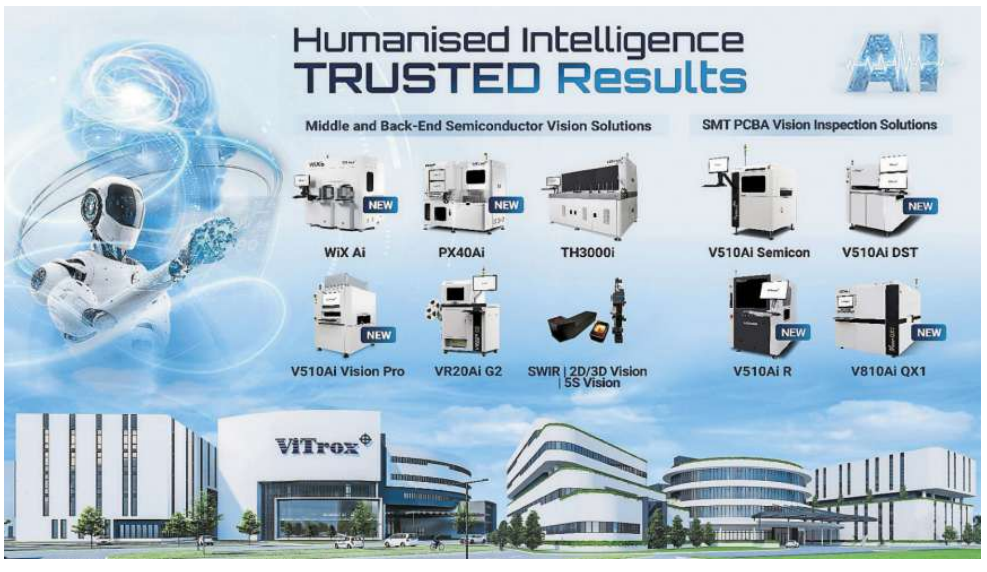
It is now one of the most comprehensive, one-stop test solutions providers – from front-end wafer probing to back-end final testing for a wide spectrum of devices and applications – in Malaysia and South-East Asia.

The company has also expanded its service footprint from two locations (Malaysia and China) to six (adding one in the United States, two in Singapore and another in the Philippines), alongside sales-channel partners across the United States, European Union, Japan, Taiwan and Thailand.

At the same time, JF Technology continues to strengthen Malaysia's semiconductor ecosystem through university collaborations, talent development and partnerships with global leaders.

As an active member of MSIA, it remains committed to advancing innovation, building local capabilities and supporting the collective efforts to position Malaysia as a resilient, globally competitive semiconductor hub.

A bird's-eye view of JF Technology's headquarters in Kota Damansara, Selangor.




## ViTrox®

VITROX'S journey from a homegrown Malaysian start-up to a global technology player is a testament to the strength of locally developed innovation.

Founded by three young engineers in a 100 sq ft student bedroom in Penang in 2000, it is now a developer and manufacturer of automated machine vision inspection systems and embedded electronics for the semiconductor and electronics manufacturing industries.

Today, ViTrox's entire operation – from R&D to product design, system integration, manufacturing and global technical support – is anchored at its 1,000,000 sq ft Batu Kawan campus.

Its capabilities now span semiconductor middle and back-end processes, surface-mount technology printed circuit board assembly, advanced robotic vision (ARV) systems, and Industry 4.0/5.0 manufacturing intelligence for customers across the automotive, telecommunications, computing, industrial, medical/healthcare, semiconductor, aerospace and mobile device sectors.

ViTrox is listed on Bursa Malaysia's Main Market (MYX:0097) and is now the largest company by market capitalisation in Bursa's technology sector with a valuation of RM17.5bil.

At the heart of the company's growth is its mission to contribute to the advancement of society and the well-being of humankind through compassionate innovation. This philosophy extends beyond developing machines.

It is also investing in the capabilities Malaysia needs to move further up the value chain, with R&D on increasingly complex technologies, nurturing future engineering talent through ViTrox Education, investing in tech startups through the RM150 million Cambrian Fund, and an upcoming expansion spanning 50 acres of land.

This will create lasting value for the nation while contributing to technological progress around the world.

# Innovating across global electronics

MALAYSIA'S semiconductor industry has long been recognised for its strength in outsourced semiconductor assembly and testing activities.

But it is increasingly building capabilities further up the value chain, particularly in integrated circuit (IC) design – and leading the way is SkyeChip Berhad.

SkyeChip specialises in advanced silicon intellectual property (IP) and silicon products for artificial intelligence (AI) and high-performance computing (HPC) applications.

Commencing operations in 2020 and led by chief executive officer Datuk Fong Swee Kiang and chief technology officer Teh Chee Hak, it has since grown into a global IC design firm with over 415 employees across offices in Malaysia, Vietnam, Singapore, China and the United States.

SkyeChip Berhad was also listed on the Main Market of Bursa Malaysia (SKYECHIP: 5357) in May 2026 and had a market capitalisation of RM5.8bil as at Aug 18.

As a fabless company, SkyeChip focuses on the design and development rather than manufacturing the chips itself.

Its capabilities span the entire IC development cycle including architecture, micro-architecture, logic and circuit design, design-for-test (DFT), physical design, custom layout, new product introduction (NPI) engineering and high-volume manufacturing (HVM) enablement.

Its silicon IP portfolio includes high-performance memory interface IP such as High Bandwidth Memory (HBM) IP and Low-Power Double Data Rate (LPDDR) IP, Network-on-Chip (NOC) IP and Die-to-Die (D2D) interface IPs.

SkyeChip specialises in IC design and development, driving Malaysia's semiconductor industry up the value chain.

Meanwhile, its silicon products' business develops custom Application-Specific Integrated Circuits (ASICs) for AI inference, the Internet of Things (IoT) and HPC.

Malaysia is central to SkyeChip's operations. SkyeChip has maintained its headquarters in Penang since establishment and also expanded to the Malaysian IC Design Park in Puchong, Selangor, in 2025.

Notably, close to 99% of its workforce comprised Malaysians as of March 31 this year, highlighting the importance of local engineering talent.

SkyeChip believes that the policy environment and initiatives put in place by the Malaysian government are supportive to the country's ambitions in IC design.

The Malaysian government's Silicon Vision initiative saw it committing US$250mil (RM1.01bil) over 10 years in a collaboration with United Kingdom-based Arm Holdings Plc for the licensing of its ARM Compute Sub Systems (CSS) and ARM Flexible Access (AFA) tokens.

SkyeChip has received conditional approvals for both tokens. In June 2026, it also entered into the definitive agreement for access to the AFA token.

At the state level, initiatives such as Selangor's Malaysian IC Design Park and Penang's Silicon Design @5km+ are also helping to strengthen the ecosystem and fast track innovation.

Looking ahead, SkyeChip sees strong opportunities arising from the continued adoption of AI and HPC, which is driving demand for AI accelerators, high-bandwidth memory IP and advanced computing platforms. Automotive electronics, industrial automation and robotics are also expected to create new avenues for growth.

Beyond its commercial ambitions, SkyeChip is also looking to contribute to Malaysia's broader semiconductor transformation and fully intends to work closely to support the Malaysian government's ambitions to advance Malaysia's semiconductor industry.

As a Mission-based Project Champion under the New Industrial Master Plan (NIMP) 2030, it supports the development of globally competitive IC design capabilities in the electric vehicles, renewable energy and AI sectors.

The company is also investing in the next generation of local talent through university final-year project sponsorships, internships, academic collaborations and pathways into the IC design industry with multiple local universities including Universiti Teknologi Malaysia, Universiti Putra Malaysia and Universiti Sains Malaysia, amongst others.

In doing so, SkyeChip is charting a path forward for Malaysia's semiconductor future, beyond manufacturing and into the creation of sophisticated technologies and IPs of its own.

NationGate leverages its advanced manufacturing capabilities and engineering expertise to meet the needs of global customers.

THE rise of AI, data centres and high-speed connectivity has placed electronics manufacturing at the centre of many nations' economies.

Malaysia-based NationGate has positioned itself at the forefront of this shift by combining advanced manufacturing capabilities with engineering and supply-chain expertise to support the increasingly complex requirements of global technology customers.

Its end-to-end electronics manufacturing services (EMS) cover printed circuit board assembly (PCBA), systems integration, box-building, testing and supply chain management.

The company's capabilities also extend into photonics manufacturing.

Together, these capabilities allow the company to serve a range of high-growth technology segments such as AI servers, network switches, data centre solutions, photonics, high-speed communication and high-performance computing.

These sectors are being propelled by increasing demand for AI, cloud computing and digital infrastructure, creating growth opportunities for manufacturers capable of supporting increasingly sophisticated and integrated systems.

Malaysia, with its established semiconductor and electrical and electronics (E&E) ecosystem, remains an important manufacturing base for NationGate.

Besides strategic access to key Asian markets, such strengths also provide the company with a solid platform to support global customers while expanding its capabilities into high-value technologies.

NationGate will continue investing in advanced manufacturing capabilities, technology, talent and infrastructure, while expanding its electronics and photonics operations to meet the ever-evolving needs of global technology customers.

Through these efforts, it will contribute to Malaysia's development as an advanced manufacturing and technology hub, creating value across the entire ecosystem.

MALAYSIA'S rise as a global semiconductor hub has been driven not only by multinational corporations, but also by homegrown companies that continue to push the boundaries of manufacturing and innovation.

Among them is Qdos Malaysia, a leading advanced interconnect technology provider specialising in Flexible Printed Circuits (FPC) and Integrated Circuit Substrates (ICS).

Established in 1993 and headquartered in Malaysia, Qdos provides end-to-end solutions spanning circuit design, prototype fabrication, manufacturing and assembly.

Since its founding, the company has evolved from a local flexible circuit manufacturer into a global technology provider serving customers in more than 30 countries.

Its solutions support a broad range of industries, including telecommunications, automotive, medical devices, semiconductors, consumer electronics and industrial applications.

In addition to FPC and ICS design and manufacturing, Qdos also provides prototype development and high-volume production, in-house Surface Mount Technology (SMT) assembly, and advanced interconnect solutions for multinational original equipment manufacturers (OEMs).

These cover applications like AI data centres, electric vehicle battery management systems, medical imaging equipment, humanoid robotics, low Earth orbit satellites, industrial automation systems and semiconductor equipment.

Qdos Malaysia is a leading provider of advanced interconnect technologies.

Malaysia remains central to Qdos' growth.

The country's mature semiconductor ecosystem is conducive to high-tech manufacturing, while its strategic location in South-East Asia enhances Qdos' ability to serve international markets efficiently.

The company continues to invest in advanced manufacturing technologies, expand its capabilities and develop local talent, all while prioritising quality, reliability and customer partnership.

Backed by over three decades of industry experience, Qdos continues to deliver advanced interconnect solutions that support the next generation of electronics and semiconductor applications worldwide.

# Charting Malaysia's E&E landscape

An overview of Malaysia's leading semiconductor companies and key technology hubs.

## Homegrown technologies meet rising global industry demand

CABLES play a critical but often overlooked role in technologies that shape modern life, connecting sectors from manufacturing to infrastructure.

Swift Bridge Technologies provides the high-performance cable solutions that keep essential operations functioning and performing reliably.

The company, which has its corporate head office and Centre of Excellence (COE) in Penang, specialises in radio frequency (RF) cables, cable assemblies, wire harnesses and EV charging solutions for a wide range of global customers in the advanced technology and semiconductor-related industries.

Swift Bridge maintains a strong focus on R&D and new product development, such as advanced RF cable technologies targeting 145GHz applications for next-generation 6G connectivity.

Its expertise in ultra-low-loss RF cable solutions also uniquely positions it to support the semiconductor industry, particularly within the test and measurement (T&M) sector, where signal integrity, reliability and performance are critical for increasingly sophisticated and automated systems. This is timely, as the current geopolitical climate has created significant opportunities for neutral Malaysia to broaden and strengthen its position in the supply chain.

As manufacturers diversify and build greater resilience into their operations, Swift Bridge's solutions help power their growth. It is what keeps Malaysia's expanding high-tech ecosystem connected, productive and ready for what comes next.

Swift Bridge's corporate head office in Penang.

BEHIND many of the technologies driving today's AI and semiconductor industries are highly specialised polymer components and equipment engineered for precision, reliability and performance.

This is where KoniX Malaysia (formerly known as Texchem Polymer Engineering) plays a role, building on four decades of manufacturing excellence.

KoniX offers cutting-edge expertise in polymer processing and engineering.

As a part of Texchem Resources Bhd Group headquartered in Penang, it serves multinational customers across high-tech industries such as data storage, data memory, and medical and life sciences.

Today, KoniX is focused on three strategic growth pillars – AI data-driven high-tech industries, medical and life sciences, and sustainability.

For the high-tech sector, it designs, develops and manufactures automation-assisted transport and process equipment for applications spanning mass-capacity hard disk drives, network devices, semiconductor equipment, advanced wafers, HBM/DRAM and data-processing units such as GPUs and CPUs for AI chips and data centres.

With seven manufacturing facilities across Malaysia, Thailand and Vietnam, KoniX combines regional scale with Malaysia's strong industrial ecosystem.

As demand for semiconductors, AI technologies and advanced electronics accelerates, KoniX aims to strengthen its role as a globally trusted polymer processing technology and engineering partner for high-tech industries.

FROM energy management to autonomous manufacturing, BioEnergy Projects has spent 20 years developing technologies that solve real-world challenges on the factory floor.

Established in 2006, the Penang-based company is now leveraging its expertise to advance AI-powered manufacturing.

Its capabilities span Agentic Edge AI and autonomous manufacturing, industrial automation and digitalisation, smart manufacturing systems, energy management, software and AI development, as well as engineering and system integration. At the forefront of its innovation is UNYSIS, an Agentic Edge AI Controller also known as the Virtual Operator.

Designed to see, sense, think, decide and act in real time, the intelligent system can monitor equipment, identify operational issues, analyse conditions and initiate corrective actions.

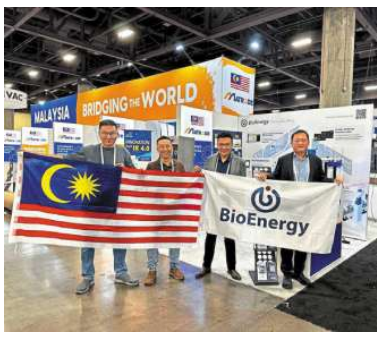
This reduces repetitive operator intervention, shortens response times, reduces downtime and enhances manufacturing efficiency.

BioEnergy also develops its own "Buatan Malaysia" technologies, including the Sonik Smart Oven and Andon Watch, alongside customised solutions for semiconductor manufacturing applications.

As AI and automation become increasingly important to industrial competitiveness, the company's solutions allow manufacturers to modernise and future-proof their operations.

Beyond technology development, the company also believes in collaboration and co-innovation with industry stakeholders, to ensure solutions are developed according to actual industry needs, while strengthening local capabilities.

It demonstrates that Malaysian companies can do more than adopt technology – they can create it, and deliver sophisticated and practical solutions for the global manufacturing market.




BioEnergy participated in the Semicon West convention in the US last year.

MSIA
MALAYSIA SEMICONDUCTOR INDUSTRY ASSOCIATION

5 ANNIVERSARY
& MERDEKA CELEBRATION

## Congratulations to Malaysia Semiconductor Industry Association on its 5th anniversary

Wishing MSIA continued success as it marks this milestone.

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# Record export growth boosts global supply chains

MALAYSIA'S E&E industry has entered a new phase of growth, with strong export performance underscoring its importance to the country's economy and global technology supply chains, said Deputy Investment, Trade and Industry Minister Sim Tze Tzin (*pic*).

He said the sector remained one of Malaysia's most important export engines, with E&E exports surging 42.5% in the first half of 2026 to a record RM467.9bil, accounting for almost half of the country's total exports.

Sim said the performance demonstrated Malaysia's established strengths in areas including semiconductor assembly, testing and packaging, while also highlighting opportunities to broaden the country's capabilities across emerging technologies.

"The E&E sector is one of the important fields contributing to Malaysia's position in the global supply chain, including high-tech semiconductors, advanced sensors and telecommunications," he said.

Sim also pointed to Penang and the northern region as particularly important hubs, given their concentration of world-class technology manufacturers and established industrial capabilities.

The next priority, he said, was to build on these foundations by strengthening the wider technology supply chain and creating greater opportunities for local companies to participate in higher-value activities.

Sim also noted the progress made under the National Semiconductor Strategy (NSS), which had attracted more than RM91bil in approved investments as of the first quarter of 2026.

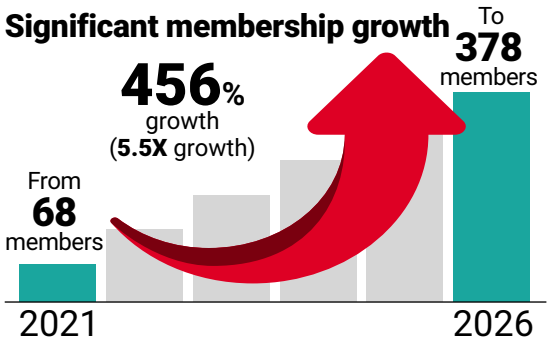
The strategy has also developed more than 18,000 highly skilled workers towards its target of producing 60,000 talents for the semiconductor and related industries.

For Sim, these developments reflect Malaysia's ability to remain relevant as global technology supply chains evolve.

"With our established industrial base, skilled workforce and concentration of technology companies, we are well positioned to strengthen our role as a key technology supply-chain partner while creating more opportunities for domestic companies to grow alongside global industry leaders," he added.

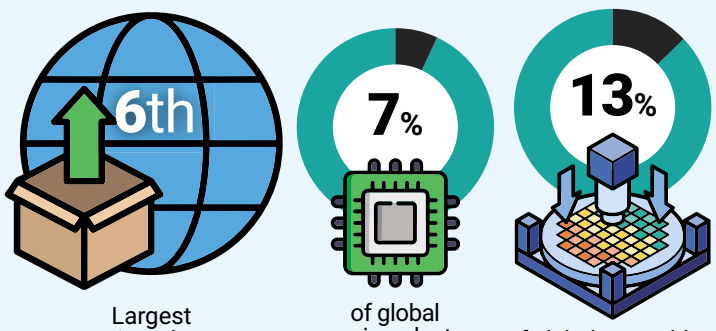
## Malaysia's Semiconductor Industry: Rising Global Influence

### Significant membership growth

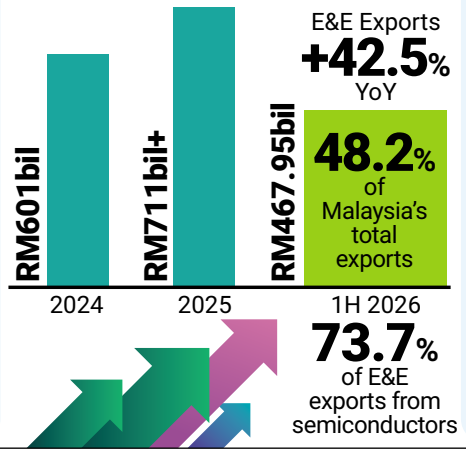



### Connecting Malaysia's semiconductor ecosystem to the world

### Malaysia: a critical link in the global semiconductor ecosystem

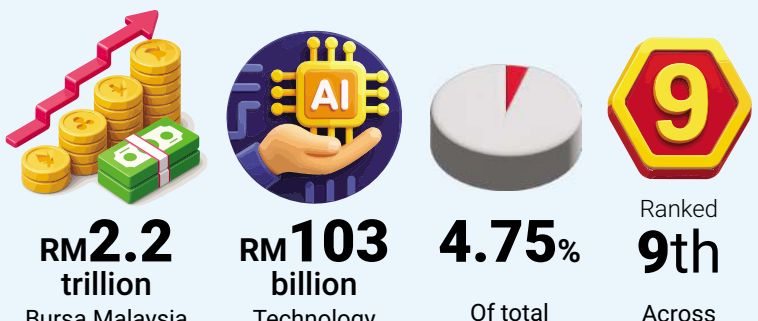



### The momentum continues




### Technology's next growth opportunity

For the Bursa statistics:



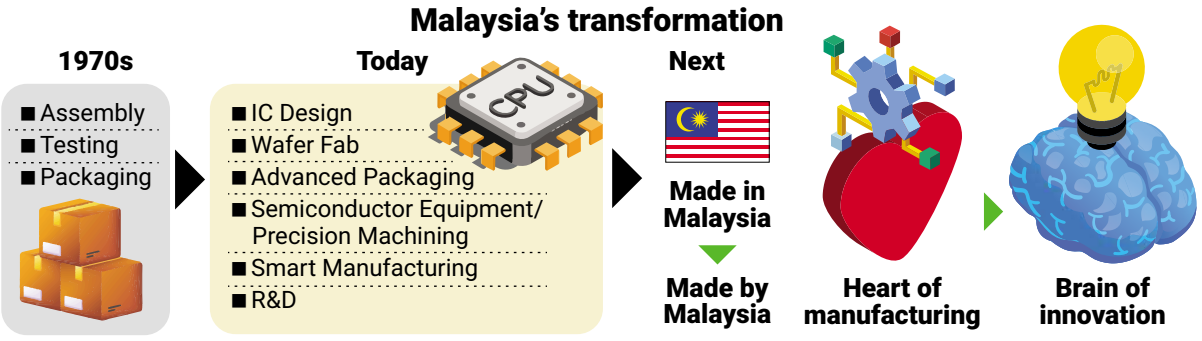

RM2.2 trillion — Bursa Malaysia total market capitalisation

RM103 billion — Technology sector market capitalisation

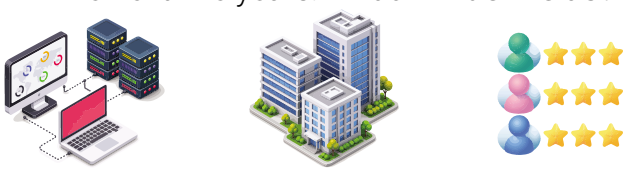
4.75% — Of total market capitalisation

Ranked 9th — Across 13 sectors

### Malaysia's transformation




### The next five years: What will define us?



**More technology/IP** — How much more technology we create

**Grow local, compete global** — How many more companies we take to the world

**More talent** — How many more Malaysians we nurture to lead

The Star graphics
Source: MIDA, MSIA (Illustrative Data)

"Congratulations to MSIA on its 5th anniversary. It has played a pivotal role in strengthening Malaysia's position as a trusted and globally connected semiconductor hub. By bringing together industry, government, academia and international partners, MSIA has helped build a stronger ecosystem, support talent development, promote innovation, and reinforce Malaysia's attractiveness as a destination for high-value investment and collaboration.

Its leadership has also been instrumental in advancing Malaysia's ambitions under the National Semiconductor Strategy. Looking ahead, I see significant opportunities for Malaysia to move further up the value chain in chip design, advanced packaging, R&D and skills.

The UK is proud to support this journey through partnerships in innovation, research, advanced manufacturing, and talent development. Together, we can deepen collaboration between our industries and institutions to strengthen resilient semiconductor supply chains and drive the technologies that will power future economic growth."

**Ajay Sharma**
***British High Commissioner to Malaysia***

"Warmest congratulations to MSIA on its 5th anniversary. Malaysia has firmly established itself as a critical powerhouse in the global semiconductor supply chain. MSIA plays an indispensable role in this success, driving national strategy, fostering innovation, and attracting immense foreign investment under the visionary leadership of President Wong Siew Hai.

For Pakistan, MSIA remains a highly valued partner. We deeply appreciate our ongoing engagements, highlighted by our productive dialogue. As Pakistan scales its tech sector, we see promising potential for B2B partnerships between Pakistani IC design and software houses with MSIA members.

This emerging synergy pairs Malaysia's advanced manufacturing infrastructure with Pakistan's growing engineering talent. We're confident that our deepening collaboration will drive mutual growth, reinforcing Malaysia's ecosystem while integrating Pakistan into the global high-tech value chain."

**Syed Ahsan Reza Shah**
***High Commissioner of Pakistan to Malaysia***

"THE MSIA has been an indispensable guide and partner for Dutch stakeholders that work to strengthen the ties and synergies between the semiconductor ecosystems of our two nations even further.

Thanks to sound public and private investments, these ecosystems have provided fertile ground for many fruitful partnerships between Malaysian and Dutch high tech companies and knowledge institutions.

If both our countries continue to wisely invest in serving the needs of our ecosystems, we can ensure that Malaysia obtains a bigger share of the value chain by becoming a global cornerstone for advanced manufacturing for the semiconductor and medical tech industries."

**Pieter Blusse**
***Deputy Ambassador of the Kingdom of the Netherlands to Malaysia***

"MSIA has been a crucial partner in supporting American companies, particularly in the E&E sector, by strengthening supply-chain resilience, advocating for a conducive business environment, and building investor confidence.

The organisation's thought leadership and focused efforts have helped U.S. companies pursue long-term growth and investment in the country. To build on this success and become globally competitive in high-value semiconductor manufacturing, advanced packaging, chip design, R&D, and next-generation technologies, we will continue working with Malaysia to improve the business climate, invest in workforce development and foster a supportive infrastructure."

**Feleke Assefa**
***Commercial Counsellor, Embassy of the United States of America to Malaysia***