



## FEATURED ARTICLES

Decisions Made Right: Investors See Huge Potential in Penang

Penang's Vibrant Machinery & Equipment Segment Garner RM520 Million Investment Boosts from Homegrown Companies

Simmtech's Entry Boosts Penang as a PCB and Package Substrates Manufacturing Hub

Bridging Technical Talent Demands: Collaborative Partnership with TVET Institutions

Local INsights

On the Ground

# About **INVEST** penang

InvestPenang is the Penang State Government's principal agency for promotion of investment. Its objectives are to develop and sustain Penang's economy by enhancing and continuously supporting business activities in the State through foreign and local investments, including spawning viable new growth centres. To realize its objectives, InvestPenang also runs initiatives like the SMART Penang Centre (providing assistance to SMEs), Penang CAT Centre (for talent attraction and retention) and i4.0 seed fund (a catalyst for the start-up ecosystem).



#### ATTRACTION, DEVELOPMENT & RETENTION OF TALENTS

- > Resource centre and point-of-contact for employers and talents
- > Policy advocacy on addressing talent gap
- > Secretariat for Penang Future Foundation (PFF)

#### TALENT ATTRACTION & RETENTION

- > Awarding scholarships to outstanding and deserving students from the field of Science, Technology, Engineering, Mathematics, Accounting & Finance
- > Upon graduation, recipients will become part of the diverse talent pipelines in Penang's workforce



#### ASSISTING SME TO MOVE UP THE VALUE CHAIN

- > Advisory for market intelligence and financial resources from state & national agencies
- > Assist in creating new business opportunities and capacity building initiatives to develop SMEs' value proposition

#### FUNDING EARLY STAGE TECH START-UPS

- > Assist high potential tech start-ups with innovative technology products & services to attain commercialization.
- > Enhance local tech start-up ecosystem, encapsulating 'Powered in Penang' capabilities.

## About **INspire**

**INspire** is a periodic newsletter produced by InvestPenang. This publication aims to give our stakeholders an update on the industry landscape and emerging opportunities in Penang, along with the State's initiatives to support industries. For more information, visit <https://investpenang.gov.my/> or contact us via email at [enquiry@investpenang.gov.my](mailto:enquiry@investpenang.gov.my) or call us +604-646 8833.

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## Decisions Made Right: Investors See Huge Potential in Penang

Crisis is said to be a litmus test of resilience, and Penang's ability to forge ahead amid the unprecedented challenges of the Covid-19 pandemic is testament to the State's robust and resilient industrial ecosystem. Leaning on a solid reputation that has been built on decades of manufacturing excellence and industrial experience, Penang garnered RM14 billion in approved manufacturing investments in 2020, the second highest ever on record for the State, despite the disruptions and uncertainties resulting from the Covid-19 pandemic.

As a state investment promotion agency, InvestPenang has and remains committed to facilitating and expediting the implementation of approved investment projects. The agency also strives to set the strategic direction for Penang's industries in a post Covid-era. Despite pandemic-related movement restrictions, we continued to engage our stakeholders through virtual dialogues and roadshows, including our investment promotion webinars.

We are gratified to have received positive feedback from stakeholders who have invested in Penang. This includes recognition of our efforts in facilitating the implementation of various projects to meet their respective original timelines, appreciation of the State's robust industrial ecosystem and acknowledgement of the well-developed infrastructure.

We are pleased to share abstracts of investor reviews and key takeaways from the speakers who presented in our investment promotion webinars, on their thoughts on why Penang is a preferred investment location with immense potential that is ripe for the picking.



PENANG

### Boston Scientific

**Industry:** Medical Device

**Current location:** Batu Kawan Industrial Park

**Year of establishment in Penang:** 2017

We (Boston Scientific) recognized the need to expand our production network in early-2015. After a global manufacturing location assessment, we finalised our site selection and obtained the board's approval for our Penang facility at the end of 2015. Thereafter, the project took off quickly - construction commenced in 2016 and was completed in a year. The speed in which we were able to establish our operations here was incredible, from construction to getting all the services set up. It was a quick, efficient process in terms of speed and value.

Penang has a vibrant medical device ecosystem, having witnessed continuous growth in the presence of multinational medical device companies, along with the local SMEs that support

them. Apart from the supply chain, Penang is also well-known for its world-class healthcare. From the medical technology perspective as a whole, Penang is capable of manufacturing high end medical devices, delivered across the globe and features a thriving medical tourism industry. In fact, we have doctors visiting our facility all the time to learn about the products designed and manufactured here. These demonstrate the depth and breadth of Penang's vibrant ecosystem.

*As a company, we set very aggressive targets, and our operations in Penang have not disappointed. Surpassing our targets is a great testament of doing business in Penang.*

**Mr Dave Mitchell,  
VP & General Manager,  
Manufacturing & Distribution,  
Malaysia**





**Industry:** Wafer Fabrication Equipment Manufacturing

**Current location:** Batu Kawan Industrial Park

**Year of establishment in Penang:** 2021

Despite the disruption to economic activities caused by the pandemic, Lam Research is on-track to meet the deadlines of our pre-COVID expansion plan, having broken ground on our Malaysia facility in May 2020 and opening the site in just 52 weeks. Lam Research's growth plans in Penang have been progressing well, enabling us to ramp up production.

Moreover, the availability of skilled labor and the use of English as a common language among Malaysians has enabled us to achieve our various milestone goals throughout the past year, with the latest being the successful opening of our new manufacturing facility.

*With its robust E&E ecosystem and regional hub for backend high technology machinery and equipment, Penang has played a vital role in our decision to expand our operations in Malaysia.*

**Mr Mike Snell,  
Corporate Vice President, Manufacturing**



## Smith+Nephew

**Industry:** Medical Device

**Current location:** Batu Kawan Industrial Park

**Year of establishment in Penang:** 2021

*From a medical device manufacturer's perspective, Penang is an ideal hub, as it already has an established ecosystem, complete with essential services that are critical to the industry.*

**Mr Mark Arthun,  
Managing Director &  
Site Leader**



The pace and continuity of development in Penang has been remarkable, particularly given the disruptions caused by the Covid-19 pandemic. InvestPenang has played no small part in the whole investment project. They helped with the site selection, integration with local manufacturers, local suppliers and educational institutions. They were with us through the entire process, and were proactive in trouble shooting and problem solving. It has been quite seamless. Personally, the experience in Penang has been very positive, and we have found things we love, and appreciate living in here.

The presence of established medical device manufacturers and supporting services in Penang creates the critical mass needed for medical device industry to thrive. Beyond this, the efforts of associations in championing the development of the industry have propelled it as a priority sector for the Federal and State Governments, which ensures formulation of supportive policies and initiatives. I would say the medical device manufacturing sector in Penang is poised for rapid and sustained growth in the years to come. We are satisfied with our investment here in Penang and we look forward to continuing our journey for many years to come.



**Industry:** Optoelectronics

**Current location:** Bayan Lepas Industrial Park

**Year of establishment in Penang:** 1972

Penang is home to the Group's biggest factory, and growth here has really been relatively easy because of resources available locally. First and foremost is the availability of talent. We have seen strong growth in the talent pool graduating from local universities. This has allowed us to grow from just having basic manufacturing activities, into a site with more than 300 R&D personnel, a 250-strong workforce in global shared services operations, and a full-fledged manufacturing facility.

Beyond this, Penang also boasts great logistics connectivity through its seaport and airport. The State's stable and supportive local government, well-developed industrial ecosystem and collaborative business community, have also nurtured an open and cooperative approach to business. This was clearly demonstrated during the Covid-19 pandemic.

*As an employer, one of the impactful initiatives is the opportunity to engage with local higher education institutions to groom graduates who are industry-ready. This is rarely seen elsewhere.*



**Mr Glen Brownlie,**  
Managing Director



**Industry:** Global Business Services (GBS)

**Current location:** GBS@Mahsuri, Bayan Baru

**Year of establishment in Penang:** 2020

Malaysia is becoming an education hub, and is increasingly producing suitable candidates for industries. I would say that from the shared services and engineering perspective, Penang has an advanced talent pool, based on technical expertise and linguistic skills available here. It is truly a gold mine, not just in terms of availability, but also the quality and depth of the talent pool that serves more than 350 MNCs and over 60 GBS organizations well.

When we first started our recruitment process, I was surprised by the availability and capabilities of the local talent pool, who are Malaysians and extremely proud about the value that they are creating in the global arena. With such human capital, we (Clarivate Penang) have been creating history within the group in terms of performance and we are thrilled.

Penang also boasts a supportive and effective government machinery, and I would urge every foreign direct investor to partner with the

government agencies here. It took us just three months to set up operations and we were able to get MSC-certified shortly after. It was an easy process.

*We continue to be very pleased with our operations in Penang, and continue to see robust opportunities and potential. As such, our leadership team aims to accelerate the growth of our GBS operations in Penang to serve customers across the globe.*



**Mr Shankar Nagalingam,**  
Vice President, Global Business Centre



**Industry:** Precision Machining

**Current location:** Batu Kawan Industrial Park

**Year of establishment in Penang:** 2006



*There is a “half an hour rule” in Penang, where you can reach the airport, port, main suppliers and customers in half an hour, thanks to the excellent infrastructure and connectivity here.*

**Mr Paul Morach,  
General Manager**

I came to Penang almost 20 years ago, and have seen first-hand, the development of a robust supply chain. Just 10-15 years ago, a lot of parts and components still needed to be imported, but over time local suppliers, who may have started as warehouse operators or sales agents, have evolved to manufacture these components locally. Now, Penang boasts a fully-developed and localised upstream and downstream supply chain.

Penang has well-established infrastructure and continues to improve on this through upgrades and expansion plans, particularly with connectivity to the country’s North-South highway. Internet connectivity and speeds are very reliable and fast, which facilitates connecting to our HQ in the Netherlands and suppliers and customers globally. Consequently, we have not seen significant impact on the upstream or downstream supply chain as well as operations, despite the Covid-19 pandemic. Moreover, the local authorities’ and State Government’s administrations are considerably digitalized.

InvestPenang is grateful and appreciative to our investors for all their reviews and constructive feedback. These acknowledge and reflect the concerted efforts of numerous government agencies, public institutions and private entities in working together to propel Penang as the Silicon Valley of the East.

We believe that Penang’s robust industrial ecosystem and high livability rankings justifies its placement as a top investment destination. The State has also put great emphasis on the development of digital network infrastructure (via the Penang Connectivity Masterplan) to meet investors’ fast-evolving needs in an increasingly digitalized era. Concurrently, the State government is also ensuring sufficient allocation and development of industrial land to support the needs of new investors, as well as existing investors’

expansion plans. Toward this end, State industrial park developer Penang Development Corporation (PDC) is currently developing two new industrial parks, namely Batu Kawan Industrial Park 2 and East Batu Kawan, that will collectively add 1,500 acres to Penang’s industrial land bank. The phased development of these two parks will come on stream from 2023 onwards, and once fully completed, will surpass the size of the existing Batu Kawan Industrial Park and serve Penang’s promoted sectors and prepare for a new wave of strategic investments into the State.

**As we race towards high vaccination rates and an endemic environment, InvestPenang is confident of a resurgence in investor sentiment, and we are banking on the proliferation of the view of Penang as a preferred investment location in driving further growth of our industries.**

## Penang's Vibrant Machinery & Equipment Segment Garnerers RM520 Million Investment Boosts from Homegrown Companies



From left to right: Mr. Chuah Choon Bin, the Executive Chairman of Pentamaster; Dato' Loo Lee Lian, CEO of InvestPenang; Dato' Mohd Bazid bin Haji Abd Kahar, CEO of Penang Development Corporation (PDC); Rt. Hon. Mr. Chow Kon Yeow, Chief Minister of Penang; Ms Ooi Hooi Kiang, Board Chair of Greatech; Dato' Ng Chai Eng, Executive Director & Group CEO of UWC; Mr. Muhammad Ghaddaffi bin Sardar Mohamed, Director of MIDA Penang, and; Dato' Seri Lee Kah Choon, Special Investment Advisor to the Chief Minister of Penang.

Three large local companies (LLCs), namely, Greatech Technology Berhad (Greatech), Pentamaster Corporation Berhad (Pentamaster) and UWC Berhad (UWC), are expanding their respective footprints in Penang. The three renown companies in the equipment manufacturing supply chain are collectively taking up 35 acres in Batu Kawan Industrial Park, Penang, and will invest a total of RM520 million in their expansion projects. All three projects are slated to commence in 1Q 2022, and are expected to create up to 1,300 new job opportunities for local talent. The investment announcements were made in a joint press conference held in Penang Development Corporation (PDC) on 5 November 2021.

With a combined market capitalisation of almost RM20 billion, the three LLCs have grown tremendously in the last five years in terms of revenue, clientele as well as their respective product portfolios to include higher value add and upstream activities. Leaning on their core expertise in equipment and module fabrication know-how, the companies continue to seize opportunities arising from global technological megatrends to broaden their respective total addressable markets.

Greatech is an automation systems provider and integrator serving the electric vehicles (EV), solar energy and semiconductor segments, while Pentamaster specialises in automated test equipment (ATE) for the semiconductor industry as well as automation solutions for the medical industry, factories and warehouses. UWC, on the other hand, provides integrated engineering and manufacturing services for customers specialising in ATE who serve the semiconductor and life science industries.

Greatech, Pentamaster and UWC's domestic expansion plans prove that Penang's industrial ecosystem not only confers operational advantages to multinational companies, but also provides a conducive environment for local players to scale-up and thrive. This is further evidenced by the exponential rise of many agile and enterprising local SMEs in emerging and frontier technologies, as well as the broader global technology supply chain in the past 10 years. The growing strength of LLCs continues to groom local SMEs for bigger and brighter ambitions through increased business opportunities and knowledge transfer. This creates a new generation of emerging local companies, and

enhances the local ecosystem.

Penang continues to thrive as a regional high-technology manufacturing hub, particularly for the machinery and equipment (M&E) subsector. The state accounted for the lion's share of Malaysia's direct investments in M&E, garnering RM10.3 billion or 56% of Malaysia's total approved M&E manufacturing investments from 2016 to June 2021. More recently, despite the pandemic, Penang secured a record RM5.7 billion or 81% of the country's total direct investment inflows in M&E in 2020.

Penang already boasts a comprehensive supply chain in the M&E and automation subsectors. Aside from Greatech, Pentamaster and UWC, the State is also home to renown ATE and automation players such as Aemulus, Cortex Robotics, Elsoft, Ideal Vision Integration, MI Technovation, MMS Ventures, NSW Automation, SRM Integration and Vitrox; and companies that specialise in precision machining and engineering, die casting, fabrication of sheet metal and/or sub-modular assembly, include Coraza Systems, Engtek Group, Kobay Technology, Prodelcon, Professional Tools & Dies, SFP Technology, Walta Group, among others. These local companies operate alongside prominent equipment manufacturing multinationals and their supply chain, which include Advanced Energy, Agilent, Comet, Bruker Corporation, Keysight Technologies, Lam Research, National Instruments, UCT and VAT Engineering.

As the world races to build IC capacity amid the prolific growth of 5G, IoT, cloud computing services, high performance computing applications and other technological advancements, both the front- and back-end semiconductor equipment segments are expected to experience rapid expansion. According to SEMI, global semiconductor equipment sales are expected to surpass US\$100 billion in 2022, after a 34% hike to US\$95 billion in 2021. Penang, which is already a regional hub for back-end equipment and automation solutions, marked another milestone in 2020 with the arrival of wafer fabrication equipment heavyweight Lam Research. These developments, together with the emerging LLCs in the M&E industry, has further advanced the equipment supply chain and positioned **Penang on a strong growth trajectory as a global front-to-backend equipment manufacturing hub.**



*"With a total built-up area of 265,000 sq ft, the new facility, Batu Kawan IV, will house high-value designing and assembly activities for new products that cater for the emerging industries, namely life science and semiconductor. We target to complete the construction by 3Q 2022."* - Ms Ooi Hooi Kiang, Board Chair of Greatech



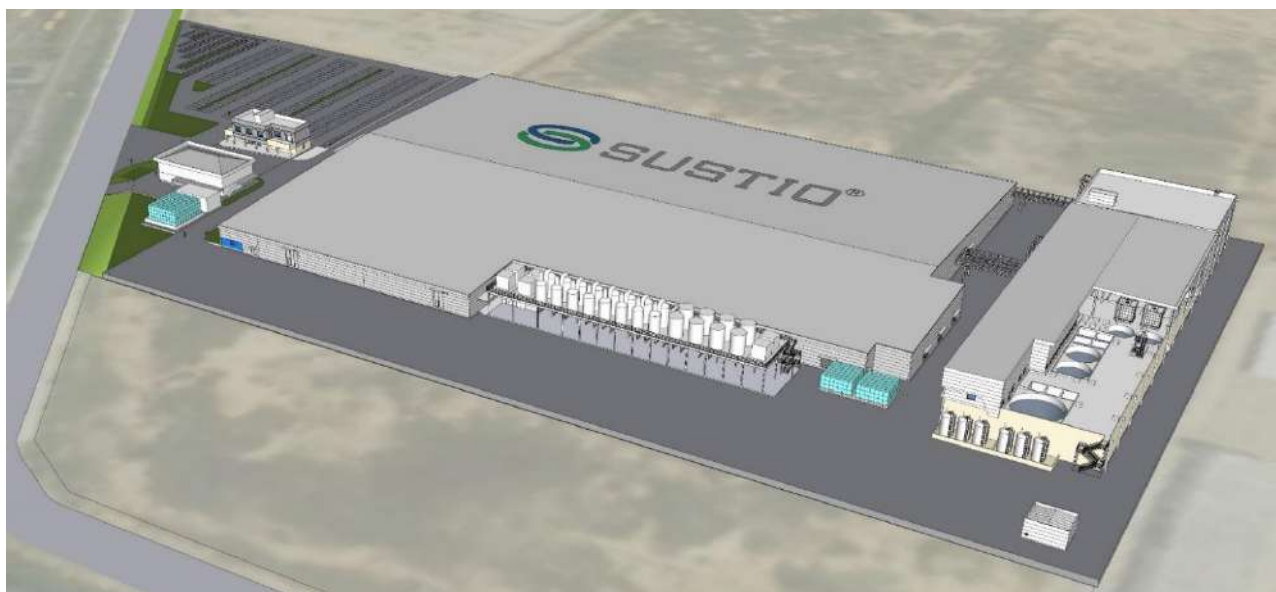
*"To be supported by 300 new engineers, this expansion is to accommodate our automation solutions for the medical industry, factories and warehouses as well as test farm for wafer burn-in, optical sensors testing and contract manufacturing of equipment."*- Mr. Chuah Choon Bin, the Executive Chairman of Pentamaster



*"This expansion ties with our venture into the higher end of the value chain such as front-end semiconductor, autonomous chips tester, 5G tester and V2V tester. I am delighted that this project will create 300 engineering positions and 200 technician vacancies for the local talent, further boosting Penang's position as a talent magnet in the northern region."*- UWC Executive Director & Group CEO, Dato' Ng Chai Eng



# Simmtech's Entry Boosts Penang as a PCB and Package Substrates Manufacturing Hub



Source: Simmtech

Simmtech Holdings Inc. (Simmtech), South Korea's leading printed circuit board (PCB) and packaging substrate manufacturer, has selected an 18-acre site at Batu Kawan Industrial Park, Penang, for its new manufacturing facility. Established via locally-incorporated subsidiary, Sustio Sdn. Bhd. (Sustio), Phase 1 of the facility entails a US\$120 million investment, with operations expected to commence in 2022. The greenfield facility in Penang is expected to create 1,200 high-value jobs in engineering, manufacturing and quality management by the first half of 2023.

Awarded "World Class Products" by the Korean Government, Simmtech is also recognized as the "Best in Class Supplier" among its global tier-1 semiconductor customers. With US\$1 billion revenue in 2020, Simmtech recorded a CAGR of 11% in 2016-2020.

"The state-of-the-art facility in Penang will further strengthen Simmtech's dominant market position, and meet the heightened demand from DDR5 DRAM (Double Data Rate 5 Dynamic Random-Access Memory) as well as data storage devices and packaging substrate products," said Jeffery Chun, Managing Director at Simmtech Southeast Asia. "Notably, our presence in Penang will be an added advantage for Simmtech, given the proximity to our major customers in this region, thereby enabling greater value creation. Once in full swing, our production capacity in Penang will equal 20% of Simmtech Group's current combined capacity at its facilities in Korea, China and Japan."

At a press conference held on 30 July 2021, the Chief Minister of Penang, Rt. Hon. Mr. Chow Kon Yeow, expressed his appreciation to Simmtech for choosing Penang. "I am excited to welcome Simmtech to Penang. Simmtech is Penang's first major Korean semiconductor investor and I believe that Simmtech's arrival marks the beginning of a new chapter of investments from Korea, one of the leading countries in the global technology sphere," Chow said.



Top: (from left) Rt. Hon. Mr. Chow Kon Yeow, Chief Minister of Penang; Mr. Jeffery Chun, Managing Director of Simmtech SE Asia; Mr. Lee Ung Hun, Chief Architect of Simmtech Penang Project team.

Middle: (from left) Dato' Abdul Halim Hussain, Penang State Exco for Trade, Industry and Entrepreneurial Development; Dato' Loo Lee Lian, CEO of InvestPenang.

Bottom: (from left) Ms. Yusni Md Yusop, Former Director of MIDA Penang; Ms. Umarani Muniandy, Director of MIDA Singapore; Ms. Noor Suziyanti Saad, Sr. Deputy Director of MIDA HQ (Electrical & Electronics Division).

“As part of efforts to cement Penang’s position as a hub for advanced manufacturing, the State government has placed emphasis on attracting companies with strong commitments in developing cutting-edge technologies and sustainable investing. I am pleased that Penang’s well-developed ecosystem is recognized by leaders across the semiconductor value chain. Simmtech’s Sustio project will bring Penang’s industry to greater heights and further integrate Penang into the global semiconductor supply chain,” Chow added.

In an interview with The Edge, Jeffrey disclosed the company’s plan to localise as much of its machineries and supply chain as possible. “There will be a lot of automation in our manufacturing lines. Penang is especially well developed in the area of automation. The state has quite a number of competitive local equipment suppliers specializing in automation. We are looking forward to engaging these local suppliers and adding value to our processes with more efficient equipment and automation solutions,” he said.

“For us, the higher the localization, the better. Penang is well known for having semiconductor equipment manufacturers, which are also expanding their operations in Batu Kawan. I am sure there will be more resources available to us in the future. For the equipment vendor’s portion, we have more than 50% localization in China and Japan. We expect the same in Penang,” he added.

Simmtech’s strategic investment will reinforce Penang’s status as a semiconductor hub, which already houses prominent players such as ASE Electronics, Broadcom, Infineon, Intel, Microchip, Micron, Renesas Electronics, TF AMD and Western Digital, among others. As a renown global player in memory-use PCB technology with the biggest market share in the memory module PCB and packaging substrate BOC (board on chip) segment, Simmtech’s presence will be a boon to Penang. The State currently houses a number of PCB manufacturing players, including Ibiden, ELNA PCB and homegrown companies QDOS Flexcircuits and GUH Holdings. Simmtech’s entry is a great testament to the State’s ecosystem, which continues to gain traction among global leaders in PCB manufacturing.

### **PCB market sees positive growth with accelerated technological advances**

According to World Semiconductor Trade Statistics (WSTS), the global semiconductor market is forecasted to grow by 25.1% in 2021 and a further 10.1% in 2022 to reach US\$606 billion. The memory sub-segment is expected to experience the fastest growth, rising 37.1% and 18.4% this year and next respectively, to reach US\$191 billion in 2022 and account for about 31% of the total global semiconductor market.

The growth in the memory subsegment will be buoyed by surging demand for cloud and 5G communications, other wireless devices, as well as the miniaturization of devices. Due to the rapid technological advancements in semiconductor memory devices, demand for new generation memory devices such as fifth-generation DDR5 DRAM has increased. Such dynamics open up opportunities for all industry players within the supply chain, including advanced PCB and substrate manufacturers.

### **Penang, a key pillar to the country’s E&E industry**

Driven by its position as the country’s leading E&E hub, Penang continues to be a key pillar to Malaysia’s external trade. In 2020, Penang recorded a commendable RM310 billion in exports with a RM110 billion trade surplus. This accounted for 32% and 60% of the country’s said totals respectively. In the E&E segment, Penang’s exports were valued at RM231 billion in 2020 – more than half of the country’s total. External trade momentum in Penang has persisted into 2021, with exports worth RM256 billion recorded from January to September (yoy:+13%), representing 29% of the country’s exports and generating a trade surplus of RM75 billion or 43% of the country’s total, further entrenching the State’s position as the Silicon Island of the East.

# Bridging Technical Talent Demands: Collaborative Partnership with TVET Institutions

The arrival of the fourth industrial revolution is transforming how industries operate, as automation, robotics, artificial intelligence (AI), machine to machine (M2M) and the internet of things (IoT) become the norm. With this, Penang, being the Silicon Valley of the East, is seeing an accelerated need for Technical and Vocational Education and Training (TVET) talent, given the momentum of strategic direct investment inflows into the State.

In anticipation of this, the Penang STEM Focus Group (comprised of Penang STEM, InvestPenang, Penang Science Cluster (PSC) and Penang Skills Development Centre (PSDC)) had proactively conducted a 3-month study from March to June 2021 to determine the State's TVET landscape, and formulate strategies to ensure that TVET institutes could meet the demands of industries, in terms of both the volume and capabilities of graduates.

Following the study, a comprehensive two-phased approach has been proposed to address the current and future needs of industries. The immediate or

first phase focuses on cultivating an interest in TVET through workshops and career fairs that raise awareness of opportunities in the field. Concurrently, the first phase also provides solutions for financial assistance, particularly among the B40 group, where TVET institutions collaborate with industries to offer work-study programmes, which allow students to earn while studying. In the medium to long term, Phase 2 will kick in, concentrating on proposed measures to increase the capacity of TVET institutions.

Through a collaborative partnership with Penang STEM Focus Group, three TVET institutions have shared their initiatives and solutions to proactively address technical talent requirements with industry players. These are the PSDC, the Japan-Malaysia Technical Institute, and the Fourier TVET Centre. **These three TVET institutes have been imperative in the growth of Penang's industries since the 1990s, through the development of TVET skillsets that meet the ever-evolving needs of Penang's industries.**



## Penang Skills Development Centre (PSDC)

Established in 1989, PSDC is the first tripartite, industry-led skills training and education centre in Malaysia. The centre has seen over 6,000 students graduated from its skills-based programmes, and another 3,700 successfully complete its academic programmes. To-date, both programmes have attained 100% employment.

For skill-based programmes, PSDC currently runs two training models in collaboration with private sector, namely the "Train & Place" and "Place & Train" models.



### **“Train & Place” Model**

Under “Train & Place”, students are selected by host companies to be trained for Precision Machining or Automation (skill-based) careers. Students will undertake full-time study in PSDC and receive a monthly stipend, and tuition fees will be borne by the host company. Upon completion, graduates will work for the host company. The “Train & Place” programme has proven effective in supporting host companies’ talent seeding programmes, catering to their headcount planning strategy. PSDC had successfully enrolled 60 students in this programme.

#### *“Train & Place” Model (Skill-based Programmes)*

<b>Programmes:</b>	<ol style="list-style-type: none"> <li>1. Certificate in Precision Machining Technology</li> <li>2. Certificate in Industrial Automation Technology</li> </ol>
<b>Target Audience / Minimum Qualifications:</b>	School leavers with at least three passes at SPM level (Mathematics, Science and English)
<b>Certificate Body:</b>	Jabatan Pembangunan Kemahiran (JPK)
<b>Programme Duration:</b>	<ol style="list-style-type: none"> <li>1. Certificate in Precision Machining Technology (21 Months)</li> <li>2. Certificate in Industrial Automation Technology (18 Months)</li> </ol>
<b>Minimum Intake:</b>	25 students (combined across several companies)
<b>Programme Arrangements:</b>	<ul style="list-style-type: none"> <li>• Participants join as full-time students at PSDC and undertake on-the-job training with host companies</li> <li>• Students are bonded to work with host company upon graduation</li> </ul>
<b>Investment from Host Company (per student):</b>	<ul style="list-style-type: none"> <li>• Monthly allowance (RM300 per month)</li> <li>• Tuition fees: <ol style="list-style-type: none"> <li>a. Certificate in Precision Machining Technology: RM16,800 (RM800 per month x 21 months)</li> <li>b. Certificate in Industrial Automation Technology: RM14,810 (RM823 per month x 18 months)</li> </ol> </li> </ul>
<b>Service Bond:</b>	2 years

### **“Place & Train” Model**

The “Place & Train” model is available for both skills-based and academic programmes. Students are selected by host companies and join the host companies as full-time, paid employees, while attending PSDC classes as part-time students. Classes are scheduled in the evenings or during weekends. The host company has the option of bearing the programme fees or deducting the fees from students, who receive monthly salaries as full-time employees of the host company.

*“Place & Train” Model (Skill-based Programmes)*

<b>Programmes:</b>	<ol style="list-style-type: none"> <li>1. Certificate in Mechanical &amp; Manufacturing (Machining) Tech</li> <li>2. Diploma in Mechanical &amp; Manufacturing (Machining) Eng</li> </ol>
<b>Target Audience / Minimum Qualifications:</b>	<ol style="list-style-type: none"> <li>1. Certificate - School leavers with at least three passes in SPM level (Mathematics, Science and English)</li> <li>2. Diploma – Certificate in Mechanical &amp; Manufacturing (Machining)</li> </ol>
<b>Certificate Body:</b>	City and Guilds
<b>Programme Duration:</b>	3.5 years (42 months) – Certificate (18 months) & Diploma (24 months)
<b>Minimum Intake:</b>	25 students (combined across several companies)
<b>Programme Arrangements:</b>	<ul style="list-style-type: none"> <li>• Students work 4-day week with host companies</li> <li>• Students attend either two weekday evening classes, or one weekday evening class and one Saturday class</li> <li>• Classes can be arranged based on work shift schedules if all students come from the same company</li> </ul>
<b>Commitment from Host Company (per student):</b>	<ul style="list-style-type: none"> <li>• Monthly salary</li> <li>• Tuition fees: <ul style="list-style-type: none"> <li>○ Certificate: RM11,500</li> <li>○ Diploma: RM17,500</li> <li>○ Total: 29,000 (~RM690.50 per month x 42 months)</li> <li>○ Companies have the option of deducting tuition fees from students’ salaries</li> </ul> </li> </ul>

*“Place & Train” Model (Academic Programmes)*

<b>Programmes:</b>	<ol style="list-style-type: none"> <li>1. Diploma in Electronic Engineering</li> <li>2. Diploma in Mechatronic Engineering</li> </ol>
<b>Target Audience / Minimum Qualifications:</b>	School leavers with at least three credits (Mathematics and at least one science subject) as well as passes for BM, Sejarah and English at SPM level
<b>Certificate Body:</b>	Malaysian Qualification Agency (MQA)
<b>Programme Duration:</b>	3.5 years (42 months)
<b>Minimum Intake:</b>	25 students (combined across several companies)
<b>Programme Arrangements:</b>	<ul style="list-style-type: none"> <li>• Students work 4-day week with host companies</li> <li>• Students attend either two weekday evening classes, or one weekday evening class and one Saturday class</li> <li>• Classes can be arranged based on work shift schedules if all students come from the same company</li> </ul>
<b>Commitment from Host Company (per student):</b>	<ul style="list-style-type: none"> <li>• Monthly salary</li> <li>• Tuition fees: RM24,000 (~RM571 per month x 42 months)</li> <li>• Companies have the option of deducting tuition fees from students’ salaries</li> </ul>

# JMTI

INSTITUT TEKNIKAL JEPUN MALAYSIA



Founded in 1998 as the result of Malaysia's technical cooperation with Japan, JMTI offers technical study programmes to meet the country's skilled manpower needs. JMTI has designed a pilot program using the "Earn & Learn" model, targeted at raising awareness of the opportunities in TVET careers among SPM school leavers.

The programme is divided into two phases, with Phase 1 being a one-month apprenticeship on basic vocational ability. The course content is based on employers' needs and can be customised for groups with 15 or more students. Students will undergo 25 days of full-time training at JMTI with a fee of RM1,750 per pax borne by HRD Corporation grant. Upon completion of training, students will be offered employment opportunities and proceed to Phase 2 of the "Earn & Learn" model.

The second phase is carried out under the National Dual Training System (SLDN) mode, where 70% of the course is delivered through practical training with a host company, and the remaining 30% is class-based coursework conducted by JMTI. Companies need to register themselves under the SLDN programme and appoint a coordinator and coach to ensure proper monitoring and reporting of students' progress.

## "Earn & Learn" Model Phase 2

### Machining Operation

Malaysian Skills Certificate (SKM) Level 2

1,200 hours (360 hours of class-based coursework at JMTI and 840 hours of practical training with a host company)

Course fee: RM1,000 per pax (grant by Department of Skill Development (JPK))

### Industrial Automation Engineering Services

Malaysian Skills Certificate (SKM) Level 2

800 hours (240 hours of class-based coursework at JMTI and 560 hours of practical training with a host company)

Course fee: RM750 per pax (grant by Department of Skill Development (JPK))





## Fourier TVET Centre (FTC)

Founded in 1996, FTC was established to provide preparatory courses for the Engineering Council (UK) and The Institution of Engineers, Malaysia (IEM)/ Board of Engineers Malaysia (BEM) professional examinations. Since its inception, FTC has trained more than 800 professional engineering graduates who have successfully qualified and registered as Chartered Engineers (CEng) and Professional Engineers (PEng).

FTC launched its talent development and retention program in 2014 through its **Dual Vocational Skills Employment Programme**. The programme is structured in two levels: the first is a Certification by City and Guilds (UK), an 18-month programme offered to SPM school leavers. Selected participants will work for a corporate sponsor, by doing so, gain on-the-job training, while attending one to two evening and/or weekend classes per week, conducted by FTC. Upon completion of the course,

participants will receive a Certificate. The programme costs RM500 per month, which is partly subsidised by corporate sponsors and the remaining paid by employees using the salaries received from working full time (reimbursable). To date, FTC has trained nearly 2,000 students under this programme, which has received positive feedback from the industry.

Participants who successfully complete the Certificate-level programme are eligible to progress towards attaining a Diploma through a similar programme. For the Diploma, students will take two to three classes per week while working full-time for a duration of 24 months. The programmes are designed to equip students with the necessary industry-related skills and experience, and upon completion of both certificate and diploma programmes, students can expect to earn a basic salary of at least RM2,500 per month as a senior technician.

### *Dual Vocational Skills Employment Programme*

	Certificate Level	Diploma Level
<b>Course Fee</b>	RM500 per month for 18 months	RM700 per month for 24 months
<b>Recommended Fee Structure</b>	<ul style="list-style-type: none"> <li>Company - RM350/month: Student - RM150/month</li> <li>Companies to reimburse students upon successful completion of the course.</li> </ul>	<ul style="list-style-type: none"> <li>Company - RM400/month: Student - RM300/month</li> <li>Companies to reimburse students upon successful completion of the course.</li> </ul>
<b>Recommended Reimbursement Structure</b>	<p>RM2,700 (being the amount paid by students, i.e. RM150 x 18 months), to be reimbursed by companies to students, paid in stages as a retention incentive / strategy:</p> <ul style="list-style-type: none"> <li>RM1,500 lump sum payment, paid on completion of 18 months of service post-graduation;</li> <li>The balance of RM1,200 amortised and paid over 6 months (RM200 per month).</li> </ul>	<ul style="list-style-type: none"> <li>RM3,600 lump sum payment, paid on completion of 12 months of service post-graduation;</li> <li>The balance of RM3,600 amortised and paid over 12 months (RM300 per month).</li> </ul>

For **collaborative partnerships with TVET institutions**, please contact:



Contact person: Tham Kok Kee

Phone & Email: 012-555 9550 /  
[thamkk@psdc.org.my](mailto:thamkk@psdc.org.my)



INSTITUT TEKNIKAL JEPUN MALAYSIA

Contact person: Mohamad Azlan bin  
 Khalili

Phone & Email: 013-397 8440 /  
[azlan@jtm.gov.my](mailto:azlan@jtm.gov.my)



Contact person: Pau Kew Chong

Phone & Email: 012-418 9158 /  
[ftc1010@ftc.org.my](mailto:ftc1010@ftc.org.my)

For companies wishing to participate in **TVET schools outreach programmes**, please contact [aimy@pscpen.com](mailto:aimy@pscpen.com)

For more info on the **Bridging Technical Talent Demand initiative by the Penang STEM TVET Focus Group**, please contact [richardchung@penangstem.com](mailto:richardchung@penangstem.com)



# LOCAL

## INsights

### At a Glance

#### Allen Healthcare Products (M) Sdn Bhd



<b>Principal activities:</b>	Design, Development, Manufacturing and Marketing of Rapid Test Kits (RTK)
<b>Locations:</b>	Perai, Penang, Malaysia
<b>Manufacturing floorspace:</b>	11,000 sq. ft.
<b>Core Competencies:</b>	<ul style="list-style-type: none"> <li>• Colloid Gold Lateral Flow Immunoassay</li> <li>• Point of Care tests</li> <li>• Rapid Test Kits (RTK)</li> </ul>
<b>Number of employees:</b>	15 employees
<b>Revenue (2020):</b>	RM2.3 million
<b>Certifications:</b>	<ul style="list-style-type: none"> <li>• ISO 13485:2016</li> <li>• MDA (Medical Device Authority)</li> <li>• Class B, C and D product certification</li> <li>• CE</li> </ul>
<b>Brands:</b>	Easysure, Sureplus, Accupack, Uripro, O.P.T, Quikscrin, AHP Diagnostics
<b>Website:</b>	<a href="http://www.ahpbio.com">www.ahpbio.com</a>
<b>Contact person:</b>	Siti Wahidah Bt. Abu Baker Email: <a href="mailto:ahpbiotech@gmail.com">ahpbiotech@gmail.com</a>

**Local INsights** is a periodic e-publication by InvestPenang with the aim of creating awareness among the industry players on the capabilities of homegrown companies. This is part of InvestPenang's initiative to enable companies in Penang to explore supply chain localization opportunities.

Read more at

<https://investpenang.gov.my/local-insights/>

#### Coraza Systems Malaysia Sdn. Bhd.



<b>Principal activities:</b>	Integrated Engineering Supporting Services Provider
<b>Locations:</b>	3 manufacturing facilities in Nibong Tebal, Penang & Kulim, Kedah, Malaysia
<b>Number of employees:</b>	500+ employees
<b>Revenue (2020):</b>	RM84 million
<b>Certificates:</b>	<ul style="list-style-type: none"> <li>• BS OHSAS 18001:2007</li> <li>• AS9100C</li> <li>• ISO 9001:2015</li> <li>• AS9100D</li> <li>• ISO 45001:2018</li> <li>• ISO 14001:2015</li> </ul>
<b>Core Competencies:</b>	<ul style="list-style-type: none"> <li>• Fabrication of Sheet Metal</li> <li>• Precision Machining</li> <li>• Sub-Modular assembly</li> </ul>
<b>Website:</b>	<a href="http://www.corazasystems.com.my">www.corazasystems.com.my</a>
<b>Contact person:</b>	Rozanne Ng Email: <a href="mailto:rozanne.ng@corazasystems.com.my">rozanne.ng@corazasystems.com.my</a>

## Engtek Group



**Principal activities:**

- CNC Machining
- Aluminum High Pressure Die Casting

**Locations:**

- Bayan Lepas, Penang, Malaysia (Head office & manufacturing plant)
- Bukit Minyak, Penang, Malaysia
- Senai, Johor Bahru, Malaysia
- Laguna, Philippines
- Dongguan, China

**Manufacturing Floorspace:**

- Bayan Lepas: 150,000 sqft
- Bukit Minyak: 75,000 sqft
- Senai: 80,000 sqft
- Philippines: 65,000 sqft
- China: 165,000 sqft

**Number of employees:** 1,300 employees

**Revenue (2020):** RM174 million

**Certifications:**

- ISO 9001
- IATF 16949
- ISO 14001
- OHSAS 18001

**Core competencies:**

- Precision machining & die casting
- Assembly / sub-assembly
- Precision cleaning

**Website:** [www.engtek.com](http://www.engtek.com)

**Contact person:** Teh Wuan Yee  
Email: [wytch@engtek.com](mailto:wytch@engtek.com) / [info@engtek.com](mailto:info@engtek.com)

## MMS Ventures Berhad



**Principal activities:**

- Integrated Test Equipment
- Automated Visual Inspection (AVI) Solutions
- Custom Designs
- Build-To-Print (OEM/ODM)

**Locations:** Bayan Lepas, Penang, Malaysia

**Number of employees:** 120 employees

**Revenue (2020):** RM23 million

**Certifications:** ISO 9001:2015

**Core competencies:**

- Vision System Technology
- Mechanical Design Engineering
- Software Programming Technology
- Control Engineering and Technology
- Lumeresoft LED Tester Software
- Project Management

**Website:** [www.mmsis.com](http://www.mmsis.com)

**Contact person:** Valerie  
Email: [info@mmsis.com](mailto:info@mmsis.com)

## NationGate Solution (M) Sdn. Bhd.



**Principal activities:** Electronics Manufacturing Services (EMS) provider

**Locations:** Perai, Penang, Malaysia

**Manufacturing Floorspace:** 585,000 sq ft

**Number of employees:** 1,750 employees

**Revenue (2020):** RM566 million

**Certifications:**

- ISO14001:2015
- ISO9001:2015
- AS9100:2016
- ISO13485:2012
- IATF16949:2016

**Core competencies:**

- High precision SMT (Surface Mount Technology)
- High level assembly
- Semiconductor process
- High precision moulding
- Advanced laboratory

**Website:** <http://www.nationgate.com.my/>

**Contact person:** David Lim  
Email: kblim@nationgate.com.my; corporate@nationgate.com.my

## Prodelcon Sdn. Bhd.



**Parent Company:** Globaltech Formation Bhd

**Principal activities:**

- High precision machining & assembly of RF microwave parts & modules, surgical instruments implants, laboratory automation & photonics components
- Design & production of customized integrated automation equipment
- Design & manufacturing of precision semiconductor moulds & die sets

**Locations:** 2 Manufacturing facilities in Bayan Lepas & Bukit Minyak, Penang, Malaysia

**Built Up Area:** 110,000 sq ft

**Number of employees:** 265 employees

**Revenue (2020):** RM53 million

**Certifications:**

- ISO 9001:2015
- ISO 13485: 2016
- RoHS Compliant
- REACH Compliant

**Core competencies:**

- Design & Manufacturing Services
- Project Transfer & Management
- CNC Milling & Turning of Complex Parts
- Metrology
- Mechanical Assembly

**Website:** [www.psb.com.my](http://www.psb.com.my)

**Contact person:** CS Khor  
Email: cs\_khor@psb.com.my

## Professional Tools & Dies Sdn. Bhd.



- Principal activities:**
- Contract Manufacturing
  - Tool Making (Plastic Injection Molds & Sheet Metal Stamping Dies)
  - Plastic Injection Molding
  - Sheet Metal Stamping

**Locations:** Butterworth, Penang, Malaysia

**Manufacturing Floorspace:** 340,000 sq. ft.

**Number of employees:** 250 employees

**Revenue (2020):** RM 50 million

- Certifications:**
- ISO 9001:2015
  - ISO13485:2016
  - IATF16949:2016
  - ISO14001:2015
  - ISO45001:2018

- Core competencies:**
- OEM Contract Manufacturing of Complete Product with compliance to C-TPAT, SMETA & FCCA-SCS
  - In-house 3D CAD/CAM Tool Design and Mold & Die Fabrication
  - Engineering Support in Product Design Development (DFM / DFA & FMEA)
  - Precision Engineering Plastic Injection Molding (from 40 Ton - 1,300 Ton machine)
  - Sheet Metal Stamping & Robotic Welded Assembled Chassis & Frames (up to 300 Ton Machine)

**Website:** [www.professional-tools.com](http://www.professional-tools.com)

**Contact person:** Max Lee – Managing Director  
Email: maxlee@professional-tools.com; sales@professional-tools.com

## UWC Berhad



- Principal activities:**
- Integrated Engineering Service Provider providing module to full turnkey assembly manufacturing automated test equipment, ranging from semiconductor to life-science industry.

**Locations:** Manufacturing facilities in Batu Kawan, Penang & Taiping, Perak, Malaysia

**Manufacturing Floorspace:** 540,144 sq. ft.

**Number of employees:** 1,031 employees

**Revenue (2020):** RM285 million

- Certifications:**
- ISO 9001:2015
  - ISO 14001:2015
  - ISO 13485:2016

- Core competencies:**
- Mechanical engineering design
  - Full turnkey manufacturing
  - One-stop solution (sheet metal fabrication, precision machining, full assembly, high-level assembly, box build)
  - System integration/automation test equipment
  - Project management

**Website:** [www.uwcberhad.com.my](http://www.uwcberhad.com.my)

**Contact person:** Matin Ng  
Email: matin.ngcl@uwcberhad.com.my

# On the Ground

## InvestPenang's Regular Engagement with Stakeholders

### Walk the Floor

Company visits to engage and keep abreast with our stakeholders' operations/ latest developments.



Walta Group – Plant Visit



Western Digital – Plant Visit



Hotayi Electronic – Groundbreaking Ceremony

### Hear from the Experts

Creating the avenue for industry leaders and experts to impart knowledge and sharing of insights.



SME Workshop with DHL



i4.0 Seed Fund Workshop with MDEC



i4.0 Seed Fund Fireside Chat with EasyParcel



SME Workshops on EHS Control Plan & Procedure Best Practice Sharing



CEO Speaks with Western Digital



i4.0 Seed Fund Workshop with KPMG

Note: InvestPenang's industry engagements are not limited to the pictures showcased above.

Stay Connected

Engaging and sharing of current business and industry landscape with our stakeholders.



GBS 1.5 Talk Series #2 organized by InvestPenang



GBS 1.5 Talk Series #3 organized by InvestPenang



MoU Signing between InvestPenang and HSBC



GBS 1.5 Talk Series #4 organized by InvestPenang



Industry Dialogue with Penang's Chief Minister organized by InvestPenang



Dato' Seri Lee Kah Choon as panelist in HSBC webinar



Dato' Loo Lee Lian as moderator in MICCI Northern Branch Annual Dialogue



Onwards & Upwards: Explore New Careers #3 organized by InvestPenang



Courtesy Visit to Yang di-Pertua Negeri of Penang



Industry Dialogue with Steven Sim (Bukit Mertajam MP and Penang-Federal Covid-19 coordinator) organized by InvestPenang



Dato' Loo Lee Lian as panelist in MDEC's Malaysia Tech Month



Participate in SEMI SEA 2021

Note: InvestPenang's industry engagements are not limited to the pictures showcased above.



# INVEST penang



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