

# Nest Garage

2023.09  
VOL. **18**

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## Feature Topics

### Renaissance of Manufacturing in Malaysia

Researching Into the Present for the Future

Roadmap to Success: Education Blueprints for Holistic Learning



# Nest Garage

## 2023.9.VOL.18



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### MESSAGE FROM THE CHIEF EDITOR

September is a month of transition in terms of season and also for Leave a Nest Group especially in the ASEAN region. Our series of DEMO DAYS would have finished by the end of August with TECH PLANTER ASIA FINAL in Kuala Lumpur. We will shift our gear to Education programs such as Tsunagu and Science Castle Asia happening in October. We also start to think about how to wrap up the year and what to plan for 2024. We have inked down the schedule for 2024 with a variety of initiatives to bring Global Happiness with our partners. In this volume we included some previews of the Hyper Interdisciplinary Conference in the Philippines, Indonesia and Thailand to allow you to plan. Looking forward to catching up with you at the venue.

Kihoko Tokue



## Roadmap to Success: Education Blueprints for Holistic Learning

Education is a fundamental human right and a powerful tool for personal, social and economic development. With Asia's marked emphasis on academic excellence compared to other regions, education takes cultural and societal importance as well. Careful thought toward education by global leaders is crucial for building a prosperous future for all. The availability of digital technology, the rise of artificial intelligence, and the increase of the world's connectedness are just some of the factors that necessitate adaptation by educators. Leaders in the field must make decisions for ASEAN on brand new situations such as balancing physical and digital interactions, and utilising different nations' strengths.

The next few pages of the magazine will feature, with particular emphasis on Malaysia, Philippines and Singapore, an overview of the initiatives in place by leading bodies, the history of ASEAN education systems, and Leave a Nest's current efforts with pursuit towards the future of education.



**TSUNAGU**  
RESEARCH  
PROJECT



**SCIENCE**  
**CASTLE**



# Empowering ASEAN Through Education: The Key Initiatives

Writer: Addi Ong

Education in the lives of ASEAN (Association of Southeast Asian Nations) peoples undoubtedly has a long-lasting impact on the regions' development. As the needs of the world changes, ASEAN human resources must continually be prepared as resilient, competitive and effective contributors to social and economic development. Consequently, ASEAN Plus Three (consisting of ten ASEAN Member States and the People's Republic of China, Japan and the Republic of Korea) has pushed purposeful initiatives that guide the education system. This article will briefly highlight a few of the directions and principles currently in place.

## Education for the Future - Embracing Innovation

A direction adopted by numerous countries around the world is the implementation of technology and digital skills into national education systems. In May 2018, the ASEAN University Network (AUN) presented a comprehensive action plan<sup>1</sup> to address challenges faced by youths, universities, and governments in the ASEAN Plus Three countries. As the needs for ASEAN youths to be equipped with technology-based skills continues to grow, various measures are proposed such as technical vocational education, online content sharing and Massive Open Online Courses (MOOCs). There are many variables that can arise such as the issue of disinformation in desiring greater digital education, addressed by ASEAN punctually<sup>2</sup>. Comprehensive examination of evolving systems is required to ensure continued harmony throughout progress.

## Education for All - Promising Inclusivity

Regardless of ASEAN pursuing its education's high prowess, ASEAN continues to ensure the accessibility of education to all demographics. It is ASEAN's commitment that every person has the right to education, that primary education shall be compulsory and available for free to all, that secondary education in its different forms shall be available and accessible to all through every appropriate means, and that higher education shall be equally accessible to all on the basis of merit. ASEAN aims to ensure the strict implementation of these principles<sup>3</sup> to limit the number of out-of-school children and youth (OOSCY), which may encompass individuals or demographics for various reasons. Deliberate planning is necessary for the education system in the ASEAN region to improve and adapt to new needs, whilst improving inclusivity for all youths.



## The Key to Optimal Progress - Implementing Collaboration

As the ASEAN Plus Three nations collaborate together on principles and initiatives, there is much to be anticipated for the future of education. A crucial contribution will continue to be knowledge sharing across borders in SEA and with China, Korea and Japan, so that each country, though distinct, may continue to grow with each unique and treasured batch of students.

[1] "The Relevance of Higher Education in the Digital Era"  
<https://asean.org/wp-content/uploads/2021/08/08Joint-Statement-on-the-18th-AUN-and-7th-ASEAN3-Educational-Forum-The-Relevance-of-Higher-Education-in-the-Digital-Era.pdf>

[2] "Training of Trainers Program to Address Disinformation and Promote Media Literacy"  
<https://asean.org/book/training-of-trainers-program-to-address-disinformation-and-promote-media-literacy-toolkit-for-educators/>

[3] "ASEAN Declaration on Strengthening Education for Out-of-school Children and Youth (OOSCY)"  
[https://asean.org/wp-content/uploads/2016/09/ASEAN-Declaration-on-OOSCY\\_ADOPTED.pdf](https://asean.org/wp-content/uploads/2016/09/ASEAN-Declaration-on-OOSCY_ADOPTED.pdf)

## Leave a Nest's Global Conference on Education Nurturing Future Leaders, Cultivating Innovation and Embracing Diversity

Writer: Mark Chiam

The Global conference was a rendition of the Annual 'Leave a Nest Global Summit' held annually in Tokyo. In this conference, representatives from Leave a Nest from Japan, Malaysia, the Philippines, and Singapore discussed educational topics and directions of four nations with the goal of raising awareness of current issues and educational progress.

### Proliferation of EdTech in Singapore

The education system has definitely impacted the diversity of Edtech Startups. The emphasis on exam performance has led to a proliferation of EdTech startups providing tutoring, both physical and online, as an alternative channel of education for students. These tuition classes utilise artificial intelligence to personalise learning, cater to individual weaknesses and create effective learning experiences.



Mark Chiam (Singapore)

### Progressing Towards a Steady Education Foundation

Three significant turning points marked Malaysia's education system. They are the introduction of formal education during the British-controlled Pre-Independence Era, the Education Act of 1961 emphasising holistic development and equitable access, and the government's emphasis on native languages and compulsory English. These policies have shaped Malaysia's education landscape.



Muhammad Basril Bin  
Muhammad Asri (Malaysia)

### Empowering Graduates for Lifelong Learning and Entrepreneurship

The importance of preparing graduates for tertiary education by mastering concepts and skills to promote lifelong learning cannot be overlooked. In addition, the Philippine government is pushing for entrepreneurship education which will foster creative thinking, problem-solving skills, and an entrepreneurial attitude that will prepare students not only for the workforce but also for a culture of innovation. While in Japan, the government emphasises on the importance of creativity and critical thinking.

Educational systems in Singapore, Malaysia, the Philippines, and Japan are crucial in influencing the development of their own education ecosystems. One potential idea was to collaborate between Singapore and Malaysia due to close proximity to improve cross country cultural learning.



Ronezza Delos Santos  
(Philippines)

To prepare the younger generation for the problems of the future, each nation has developed a distinctive strategy that is a reflection of its historical and cultural setting. These observations offer insightful viewpoints on how education and innovation interact in the context of a changing global environment. Moving forward, Leave a Nest is committed to provide students with an education platform to not only solve pressing issues in the world with their research but also provide an avenue for students to express their curiosity and creativity.

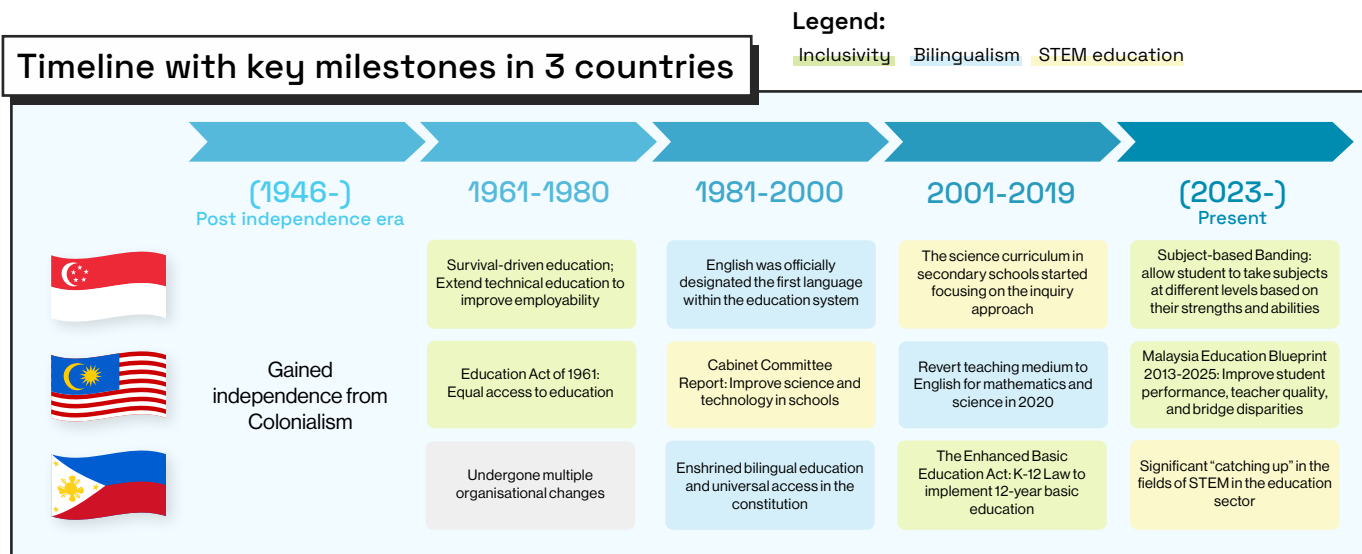


Shuheii Tanami (Japan)

# Singapore, Malaysia, and the Philippines From Past to Present: Alliance for Education Excellence

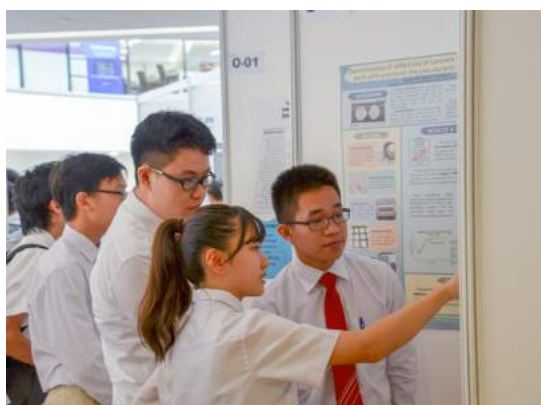
Writer: Jiao Zijin

Before delving into ASEAN's education topics, understanding its historical context, reforms, and factors shaping distinct education systems is vital. This introduction briefly outlines Singapore, Malaysia, and the Philippines, showcasing their unique educational approaches, shared objectives in **Inclusivity**, **Bilingualism** and **Building Up STEM Education** since independence.



As Singapore, Malaysia, and the Philippines gained independence, they aimed to build a concrete education structure. One common goal was accessibility for all children, including those with special needs and from diverse backgrounds. Education inclusivity has been extended, diversifying choices with specialised tracks and vocational programs for personal development.

Throughout the development process, bilingualism was highly valued. Due to historical influences, the countries have been under the impact of colonialism, leading to a strong focus on bilingualism. This can be seen in the implementation and reversal of Malaysia's English education policies, the Philippines' Bilingual Education Program (BEP), and Singapore's English medium for education. These policies prioritise teaching mathematics and science in English to help students gain an international language advantage, especially in the STEM field, with the expectation of improving employability and facilitating cross-border collaborations. However, these policies have also raised questions about national identity.



Student Poster Presentation at Science Castle Singapore.

As time progresses in the 2000s, the countries recognize the vital role behind STEM education. They equip students with critical thinking and innovation skills, preparing them to tackle challenges and seize opportunities in the global economy. Some of its success can be measured by the improving scores of students enrolled in the Programme for International Student Assessment (PISA).

Proceeding to the present, with shared education goals of accessible and diverse education, bilingualism, and a strong focus on STEM education paved beforehand, countries are tailoring their approaches to meet local demands. Singapore adopts subject-based banding, allowing flexibility in subject levels based on capabilities. Malaysia strives to achieve the Education Blueprint target, while the Philippines enhances its STEM capabilities. These objectives aim to develop well-rounded individuals capable of contributing to their countries' growth in an interconnected world.

# Education Evolution in ASEAN: Past, Present, and Future Perspectives

Writer: Chia Shu Sheng



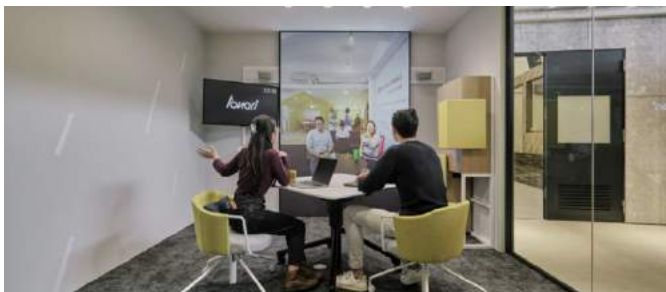
ASEAN, even with its diverse culture and languages, has seen each country approach the education of their future generation in the same direction. Being a Science Education Company at its core, overcoming future barriers and bringing students together is a mission of Leave a Nest.

**Dr. Satomi Maeda** is currently a director at Leave a Nest's Education Research Institute. Having been part of Leave a Nest's education initiatives, Science Castle (Reference P8 Volume 18) and Tsunagu (Reference P9 Volume 17), she shared from her experience and work, on how the education programs that Leave a Nest have created may have brought the education ecosystem of ASEAN and Japan where we had a chance to offer such opportunities. Science Castle and Tsunagu have brought students from ASEAN and Japan together and allowed them to learn from each other and how each countries' students approach STEM.



## Physical Interaction Versus Digital Interaction

As the world is pushing to embrace digitalization of education, towards making it more accessible in remote places, as well as cross border education programs a reality, however, Dr. Maeda explained, "Young researchers with firsthand experience in research, directly communicating how interesting science and technology, students will get interested in science and technology." The value of having a discussion or brainstorming without an intermediary medium, such as a computer screen, is that it promotes a better learning environment, exchanges of ideas and holistic presentation skills. Body language conveys passion and enthusiasm, which promotes positive discussions and exchange of ideas and experiences, which is not fully achievable by current digital means.



*tonari* in action, connecting Japan and Singapore.

## Bridging the Differences in Native Languages and Ideology

Even with English being taught in schools in ASEAN and Japan, it is not truly considered a native language. Students may struggle expressing their ideas and passion through one common language. Furthermore, due to the culture and upbringing in each country, the ideology in STEM is different. To have cross culture learning and sharing, bridging the differences in their approach to problem solving is needed.

In the world of science, Dr. Maeda shared that language barriers can be overcome with the scientific language of data, can be understood by those who may not be proficient in English and still can be presented to an audience of another native language.

Another difference is each country's approach to solving world issues. From Singapore's research based, Malaysia's physical prototyping, Philippine's mixture of both to Japan's passion driven approach. Leave a Nest serves as a bridge by bringing students from different countries together by events that they organize and having them interact, present their ideas and learn from each other.

## Into a New Future

Dr. Maeda firmly believes that with each new generation, the pedagogy to education changes. The blend of both physical and digital is necessary to keep the critical physical essence of the student experiments, research and knowledge sharing alive, and also closing the physical distance between students through digitalisation, allowing better cross border interaction and networking.

Once such innovations striving to balance the physical and digital is *tonari* will allow for the pedagogy of hybrid education delivery to be realized, not just match the past and also going to higher levels in the future.

**SCIENCE CASTLE** is an international conference that provides a platform for high school students aged 13-17 to share their research and innovative projects related to science & technology.



**DATE**  
21-22 October, 2023



**TIME**  
8:00 AM - 5:30 PM



**VENUE**  
RekaScape. Cyberjaya, Malaysia

## RESEARCH PRESENTATION

ORAL / POSTER

Students can present their research on topics related to Space Exploration, Sustainable Development, Innovation, Water & Food Crisis, Environmental & Energy Conservation. This presentation helps students develop their scientific communication skills and provides them with the opportunity to exchange ideas with experts in various fields. Based on the submitted abstracts, a total of 9 finalists will be selected for the oral presentation. Research grant awaits for selected teams!

### SCIENCE CHALLENGE



A science challenge that allows students to design, build, and launch model rockets. It aims to teach students about rocketry, encourage an interest in STEM, and promote teamwork, communication, and problem-solving skills. Students will work in teams to go through the stages of designing, building, testing, and launching the rockets.



A science challenge that teaches students about sustainable cities and allow them to create their own using a 3D model. Students learn about the elements of sustainable cities and the challenges facing cities today, and work in teams to design a sustainable city and present their ideas to judges. The challenge promotes creativity, problem-solving skills, teamwork, and communication, while also providing students with valuable knowledge and skills in science, engineering, and sustainability.

### FOR TEACHERS



A platform for teachers and parents to discover effective and innovative approaches to enhance STEM education. We invite speakers from local and international organisations to discuss and share their expertise and knowledge on ways to encourage students to be interested in STEM Education.

## MAIN PARTNERS



Register and submit your abstract



## SUPPORTING PARTNERS





A group of students in school uniforms are shown in a classroom setting. In the foreground, a female student wearing a black hijab and a dark blue uniform is smiling and looking towards the right. Behind her, several other students in light blue and white uniforms are engaged in conversation. The background is slightly blurred, showing a white corrugated metal wall and a blue ceiling.

# Our Shared Responsibility: Nurturing a Mindset of Sustainability

‘Sustainability’ is the buzzword today. Despite the availability of many technologies to support the concept of a circular economy, are we heading towards sustainability? What can we do as individuals to be sustainable?

Now, as we enter into an era of green and sustainability living, the concept of sustainability is a foreign concept to most people, leading to many perspectives on how sustainability education can be taught to the younger generations. However, inculcating a mindset of sustainability at a young age is vital for the longevity of the planet and the human race. Thus, some clarity on the ‘right’ actions to be taken is desperately needed. In this section, we will feature an interview with a subject matter expert to increase our understanding to work towards a sustainable citizen.

# From Education to Action: Environment's Present-Day Safeguard

Writer: Bryan Angelo Foronda

Worldwide calls to create a sustainable world have been headlining until now with the appeal for an *all-hands-on-deck* approach by experts and global organizations. Ranging from public agencies to mere individuals, the mandate of living sustainably was ushered in the society and more time has been dedicated to acts like assessment of produce source, consumption practices, and persistence of repurposing some “waste” resources, among many others. However, achieving sustainability in its realest form has been a process much less undertaken by the public since it needs time, effort & resources to live sustainably. However, it is believed that sustainability education can be key to solving this. Together in this pursuit, Dr. Takeshi Takama, the Founder and Chief Executive Officer of su-re.co, a sustainability and climate change-focused company, creates education initiatives about sustainability for a fitted approach.

## Uncovering Real Issues the Right Way

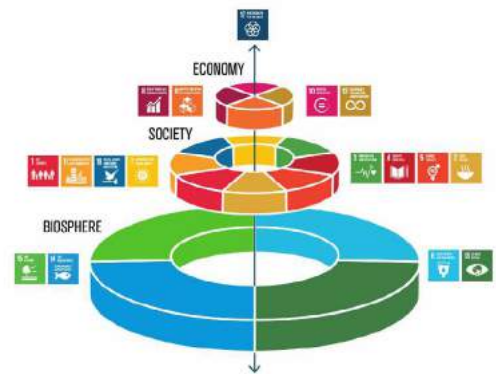
“*Don't just study, do something*” — a striking comment from an African woman who he worked with before, served as one of Dr. Takama's wake-up call to continue working on sustainability matters. As an environmental science expert, Dr. Takama believes that educating about sustainability is an integral part of creating a sustainability-driven citizenry. With that, the Oxford-educated founder emphasized that sustainability as a concept will be more relatable through the utilization of the “Wedding Cake” model, created by the Stockholm Resilience Center, as a representative model of sustainability. Through this model, wherein environmental goals encapsulate both the societal and the economic aspects of sustainability, it guides each person to prioritize the real issue of the overlooked fundamental environmental protection. Infamously, economic and political factors became the primary factors driving sustainability efforts. For example, some businesses that concern themselves with green marketing were driven by economic reasons and believed in aggressive marketing strategies featuring *eco-friendliness* to incorporate a sense of sustainability. The model essentially prioritizes real environmental challenges (like climate change mitigation) to set a bigger stage for both social and economic improvements in the long run.

In addition to this, sustainability's effective implementation has been difficult due to unique issues for each community. Based on his experience in Indonesia, as a developing country, many policies and authorities are geared towards serving different mandates which don't necessarily integrate sustainable practices. Consequently, this contributes to the greater public not paying serious attention or, in some cases, “ignorance” of the environmental and societal issues at play. This is where sustainability education comes into the picture.

Driven by his personal quest Dr. Takama prioritizes educating various groups of people, like farmers, high school and university students, on what sustainability is and how to apply it in their businesses and daily lives. As part of these sessions' concepts, he shared a few highlight points that he believes is important in cultivating a sustainable mindset. Firstly, he hopes to remove the common notion that those who champion sustainable practices are “heroes”. His emphasis on this advocates that anyone is capable of contributing to the cause and believes that it is imperative for the society to take personal initiatives towards the collective progress. Secondly, he also believes that sustainability education should allow regular citizens to “do the easiest environmentally sustainable thing” that a person can do. Simple ways within one's capability should not be undermined. In avoiding the association of ‘heroism’ to sustainability experts, more people may be motivated to contribute to environmental sustainability. Lastly, recognizing that achieving sustainability takes a long time will be helpful to manage expectations and ensure that strategies are in place. In the long run, these pointers may further sustainability education.



As part of his expertise, Takeshi Takama, D.Phil. dedicates his time dealing with climate change adaptation planning and vulnerability assessments and sustainability efforts in Indonesia and nearby areas.



The “wedding cake” model of sustainability from Stockholm Resilience Center, which Dr. Takama believes better encapsulates the essence of sustainability (Photo credit: Azote for Stockholm Resilience Centre, Stockholm University CC BY-ND 3.0)

## Sustain to Act, Act to Sustain

In general, sustainability education can be provided in two different routes: the academic route and the hands-on route. As Dr. Takama stressed, both routes improve society's state of sustainability awareness with the former providing up-to-date theories, concepts, and latest insights. Consequently, venturing in a hands-on approach to sustainability education creates avenues for individuals to first-handedly realize the challenges and apply sustainable solutions to better fit each situation.

To maximize education, we need to act. Through his company, they create different synergistic initiatives with the Think-Do-Be tank philosophy. As an example, this is exhibited by their full-circle approach where they donate biogas digesters to Indonesian coffee, cacao, and vanilla farmers as their energy source and su-re.co develops their business through exportation to businesses and other countries. With the business profit, they use it for operational expenses including the conduct of farmer training, education initiatives or provisions for new biogas digester donations. Concurrently, su-re.co's thrust in involving policymakers envisions a system for sustainability to flourish, especially with the current systems giving sub-standard support for environmental sustainability.



Dr. Takama and his team engages with groups from varying ages to provide educational opportunities to learn sustainability practices appropriate to their line of work and backgrounds.



As mentioned in the article, they continuously donate biogas digesters (left) to Indonesian farmers to enable them to sustainably power their operations. Together with the Meteorological, Climatological, and Geophysical Agency (BMKG), they conduct Climate Field School (right) that assists in selecting biogas digester recipients

According to a study by Hiroshima University, the younger generation, specifically Millennials and Gen Zs, have a positive tendency towards advocating and implementing sustainability strategies. Dr. Takama expressed that “If everyone including the current generation won't care and solve this, they [younger generation] will have to [solve] it by themselves since they will inherit this problem. Hopefully, the current population will take this issue seriously”, which he predicts a bigger toll and challenge will fall on the next generation citizen. It is with strong belief that Dr. Takama's legacy will lie in enabling the youth with appropriate skills and mindset to create a globally sustainable society and it is in the efforts of the youth to translate this mindset into hands-on action to achieve greener living for a future well-sustained.

# Nurturing Future Leaders: Building the clock with Universities and Students

In today's society and economy, leadership and self-autonomy from each individual is highly valued as society becomes more and more interconnected due to the widespread use of social media and the shifting ways of how companies are operating to survive post-covid.

Hence, entrepreneurship mindset and skills are important to each individual and what better time to build up these skills than in university life, before each student begins their working life in society?

To that end, Leave a Nest Singapore collaborated with Ateneo de Manila University to launch a pilot programme called the Ateneo University Singapore Startup Engagement Programme aiming to build these skills in University students, in partnership with:



Students working in Handplus Robotics



Students networking in ATX.SG

Gain experience and knowledge of working in a startup environment in Singapore and the startup mindset which will boost their grit and help them be more confident in their future endeavors.



Students experiencing PR and branding



Students enjoying the local cuisine

Immerse themselves in the culture and leisure that Singapore has to offer, enriching their stay in Singapore.

# Immersion Programme Overview

## Pre-Program

### Program Development

Understanding the needs and expectations of Leave a Nest, undergraduate students and Singapore Startups.

## Day 1



### Orientation

Learning about Leave a Nest and the startup ecosystem in Singapore. Introduction to QPMI cycle. Introduction to LVNS support ecosystem

- Tech Planter
- Glocalink Singapore

## Day 2

### Working at Startups

16 days of internship with Leave a Nest's partner startups. Learning from startup founders about the industry, domain knowledge and work culture.



## Day 18

## Day 19

### Presentation

Students presented and shared:

- Learning takeaway from the internship
- Proposal to Startups



## Day 20

## Post Program

### Program Improvements

Gathering the feedback of students and startups to improve the internship program for future students and startups.

# Embracing the Ethos of Leave a Nest

Writer: Latrell Laurio

My stay with Leave a Nest Singapore as an intern was nothing short of memorable. In what felt like such a short period, I was allowed to glimpse Singapore's startup ecosystem and Leave a Nest's philosophy and mission of "Advancing Science and Technology for Global Happiness".

## Value as a Science Bridge Communicator

Leave a Nest facilitates two-way learning. Creating a knowledge-based platform fosters ideas to be presented, exchanged, and combined from different fields to create new knowledge that solves the world's problems.

Through different exposures to startups during TECHPLANTER interviews, visits to the Singapore Expo and Echelon Asia Summits, I realized that the skills (human talent) and advanced technology was already available. What was lacking was connecting these to passionate individuals and deep issues. These gaps are what Leave a Nest addresses. I hope a similar ecosystem will be emulated in the Philippines to encourage innovation and support Filipinos in general.

## Emphasis on Passion & Character

Looking back on the orientation day, our group was posed with a simple question - "What are your passions?". Little did I know that the term "passion" would be reiterated throughout my stay. It is just evident how the company puts utmost importance on this value, as seen in its decision-making and team building.

I can still recall when a mentor told me that one's passion and character can be one's greatest assets. Throughout the program, Leave a Nest instilled in me the importance of passion. My interactions with my mentors and startup founders have made me reflect on why I chose to pursue a business course in the first place. Soon, I hope to rediscover what I genuinely love doing and start following my dreams - not anyone else's.

## Multiple Opportunities for Growth

There is a Japanese Mantra that Leave a Nest lives by - "When are you gonna do it? Now!". Perhaps I found it amusing because I saw how everyone embodies it in the office.

Even as someone new to the company, I was considered an actual team member. My mentors did their best to get me involved as much as possible. The fact that all team members have the opportunity to spearhead projects reflects how the company values the involvement and growth of its people. Seeing individuals coming from various fields of study and exchanging ideas with one another just proves that having differences is not a disadvantage, but an opportunity to grow and learn.

## Finding a Nest at Leave a Nest

In a short time, Leave a Nest embraced me like I'm part of its family - from casually talking in the office about our cultures, traveling to events, eating together, and even parting our ways as we finish work. These seemingly trivial moments are something that I will forever cherish. I thank all my mentors who have inspired me to look back and rediscover my dreams and passions, no matter how absurd they may be. I am beyond grateful to the Leave a Nest team for making an impact and giving me an experience of a lifetime.



# Leave a Nest Singapore Introduces New Startup Engagement Programme with University

**TO ALL UNIVERSITIES, STUDENTS AND STARTUPS, LEAVE A NEST SINGAPORE IS PROVIDING A NEW PROGRAMME FOR THOSE OF YOU WHO ARE FACING:**



**Lack of opportunities to meet right members**



**Lack of knowledge of the startup community and job markets**

**THE STARTUP ENGAGEMENT PROGRAMME IS A NEW INITIATIVE BY LEAVE A NEST SINGAPORE TO:**



Boost mindset & life skills of University students after graduation by giving its students an experience in working with Singaporean startups.

Help startups seeking talent to gain ties to proactive talents in various universities through Leave a Nest.



**THROUGH THIS PROGRAMME, STUDENTS WILL GAIN:**



An entrepreneurial mindset by working and learning alongside the newest generation of startups that they are attached to in Singapore.

Experience of the hardships and understand what is needed to grow a business under the mentorship of their startup partners, gaining the tenacity and grit that founders need to flourish in their career and achieving life mission



Leave a Nest Singapore is now opening this programme to Universities that would like their students to have similar eye-opening experiences in the future. Leave a Nest Singapore will also be promoting this programme to both local and overseas Universities that would like to send their students overseas to areas such as Malaysia, Philippines and Japan for similar programmes.

We look forward to bringing learning through an immersion programme which allowa us to address the deep issues of the startup ecosystem with fresh graduates. Nurturing an entrepreneurial mindset will equip students to excel in their career regardless of the type of jobs they have. Contact us if you are interested to explore future programs with us.

# Renaissance of Manufacturing in Malaysia

In today's fast-paced and highly competitive world, manufacturing is experiencing a transformative shift, including in Malaysia. The country's manufacturing landscape has undergone a profound transformation, fueled by strategic initiatives and innovative approaches to foster industry growth. A pivotal collaboration between academia and industry, facilitated by the university technology transfer office, has led to groundbreaking research and a smooth transition from prototyping to mass production. This progress has enabled companies to expand and seize market opportunities, overcoming persistent challenges. Recognizing the significance of startups in driving innovation, Malaysia has offered substantial support for their ideas and prototyping endeavors. With a vision to become a global manufacturing hub, Malaysia strategically establishes a robust foundation to enhance its manufacturing capabilities. In this section, we will examine the challenges encountered by various stakeholders and their corresponding strategies to overcome these hurdles. The progress achieved in 2023 reflects Malaysia's dedication to transforming its industrial landscape and nurturing an environment conducive to innovation and knowledge. As Malaysia continues to embrace knowledge manufacturing, it holds the potential to become a key player in the global economy.





# Revolutionizing Industries Through Knowledge Manufacturing

Writer: Aisyah Abdul Hamid

In the ever-evolving landscape of industry and technology, the concept of knowledge manufacturing has emerged as a powerful catalyst for innovation and growth. Knowledge manufacturing is a way to solve deep issues by integrating disparate knowledge, thereby adding value for the existing one. This dynamic process involves the transformation of scientific and technological information into tangible components, which, when skillfully interwoven, breathe life into ambitious projects. The amalgamation of knowledge fuels the emergence of novel schemes and ideas, setting the stage for a transformative journey.



Bridging the gap to unleash industry's complete potential

## Building on the Past, Forging the Future

The extensive history of the manufacturing industry has cultivated a diverse range of knowledge, distinct from other sectors. This wealth of expertise emerges as a valuable resource for embarking on the journey of knowledge manufacturing. Knowledge manufacturing amplifies intellectual assets to elevate production's caliber, effectiveness, and eco-friendliness. The symbiotic relationship between knowledge manufacturing and physical manufacturing ensures that both elements work in tandem to create a more robust and resilient production ecosystem. Infusing knowledge-centric wisdom, it empowers conventional factories to adapt to evolving market demands, drive innovation, and remain competitive in an increasingly digital world.

## Knowledge Manufacturing and R&D in Modern Industry

The challenge of Research and Development (R&D) and innovation lies in its high risk, prolonged gestation period, and significant investment for machinery and testing equipment. Embracing a risk-taking culture fosters creativity, driving economic growth. The symbiotic relationship of R&D with knowledge manufacturing not only spawns pioneering products and services but also steers industries towards an era of perpetual advancement and competitive edge. Bridging the chasm between theoretical R&D results and practical implementation, knowledge manufacturing swiftly transforms inventive concepts into viable prototypes, products, or services, expediting their market entry. Knowledge manufacturing encourages interdisciplinary collaboration, thus it facilitates the exchange of ideas among diverse experts, igniting creativity and catalyzing inventive solutions to surface.

## Crafting Wisdom into Innovation

Originating from industry, the concept of knowledge manufacturing extends its influence to benefit diverse stakeholders, providing solutions to address the deep issues. Its significance lies in its ability to bridge the gap between theoretical knowledge and practical application, leading to enhanced efficiency, accelerated innovation, and sustainable development. Creating a comprehensive platform for knowledge manufacturing that encompasses technology, collaboration, education, and support has the power to unleash its complete potential. Consequently, this fosters a culture of inventive thinking and sustainability, propelling us into a new era where ideas seamlessly evolve into impactful realities.



Crafting tomorrow's excellence across diverse sectors

Knowledge manufacturing heralds a transformative shift with profound potential to reshape industries and production approaches. As stakeholders universally adopt this concept, it opens doors to innovation, collaboration, and growth. Stemming from prototyping and now addressing manufacturing hurdles, knowledge manufacturing promises an efficient, sustainable, tech-advanced future.



# Fostering Industry Progress through Academic Innovations

Writer: Dr. Arief Izzairy Zamani

In the pursuit of technology commercialization from academic innovations, the Centre for Innovation and Consultation (CIC) at Universiti Sains Malaysia (USM) plays a vital role. Dr. Muaz Bin Mohd Zaini Makhtar, Deputy Director of CIC, highlights their strategies enabling researchers to propel their innovations towards industry advancements.

## Driving Innovation into Industry: CIC's Mandate

CIC, a hub for innovation and consultation, bridges bench technology to practical industry implementation. Dr. Muaz highlights how CIC aids researchers in navigating the journey from lab to market. Initiatives such as training in pitching and entrepreneurship equip researchers with the skills required to make their ideas a commercial reality. CIC facilitates global engagement through avenues such as the International Invention (MTE, ITEX, PECIPTA, etc.) events. Moreover, the platform of "Coffee with CIC" (CwC) is established, wherein industries converge at USM to present challenges, subsequently addressed by researchers through innovative solutions. This commitment to enhancing visibility is further realised via "The Petri Dish" platform. Additionally, active collaboration with various governmental agencies is undertaken, strategically propelling technology penetration into the market.

## Addressing Challenges: Creating a Conducive Research Ecosystem, Nurturing Technopreneurs & Facilitate Spin-off Companies

Dr. Muaz addresses challenges in Research Universities (RUs) in Malaysia, underscoring the importance of meeting Key Performance Indicators (KPIs) for funding and research prospects. CIC steps in by cultivating industrial partnerships and leveraging double tax exemptions to secure funding. University-based support like Short Term Grants, APEX Era, RU Team, RU Trans, PID, and Industrial Matching Grants strengthens the support network. Dr. Muaz's success in bioremediation demonstrates the effectiveness of these grants. Collaboration with Indah Water Konsortium (IWK) led to waste bioremediation and renewable energy breakthroughs, highlighting CIC's role in fostering university-industry partnerships. CIC aids aspiring entrepreneurs in establishing spin-offs, streamlining licensing and deferring fees for three years. The centre offers nurturing incubation spaces and skill programs. The SUSO (Startups & Spin-offs) committee evaluates startup feasibility. CIC encourages external collaboration and participation in platforms like TECH PLANTER, reaffirming its dedication to holistic growth.

## Prototyping and Manufacturing: Future Collaborations

Despite all the support, CIC currently has limited capabilities in manufacturing facilities, Dr. Muaz expresses openness to collaboration in prototype development, a crucial step in innovation realisation. He envisions the potential of innovation hubs akin to Japan's Centers of Garages (COG), proposing a partnership between CIC and COG in Malaysia to expedite impactful academic-to-industry transitions. Taking inspiration from Japan's COG model, a unified hub encompassing industry corporations, SME manufacturers, startups, and venture capitalists, this collaborative approach holds the potential to ignite a wave of technological innovation ready for practical implementation and meaningful societal impact.

In parting, Dr. Muaz accentuates the centrality of commercialization in realising the potential of academic innovations. The need for academia and industry collaboration, facilitated by the university technology transfer office, could maximise the impact of academic innovations on industry and society at large.

# Navigating Challenges in Malaysia's DeepTech Ecosystem: Paving the Path to Innovation

Writer: Mahirah Basri

The Malaysia DeepTech ecosystem has been steadily evolving, driven by a growing focus on advanced technology and innovation. With a strong emphasis on research and development, Malaysia has been nurturing startups and companies delving into cutting-edge technologies. In this ecosystem, the drone industry has emerged as a prominent player, witnessing remarkable growth and finding applications in various sectors like agriculture, mapping, forestry, transportation, and more.

## From Humble Beginnings to Uphill Battles: Alphaswift's Journey

One of the startups in the drone industry is Alphaswift, a local drone manufacturer that emerged during the pandemic to aid farmers facing lockdown restrictions. Its autonomous agriculture drones, capable of carrying up to 15 kg, facilitate the efficient application of agricultural inputs with minimal human intervention. Gaining traction, the company secured contracts with corporations like Sime Darby Plantation Berhad.

Despite its success, Alphaswift faces a trifecta of challenges in its growth journey in Malaysia's relatively young DeepTech ecosystem. Firstly, securing funding poses a significant hurdle, as venture capitalists are cautious post-pandemic. Secondly, local drone service providers prefer foreign-made drones, making gaining new business and market share an uphill battle. Leave a Nest's financial support offered collaboration opportunities, yet Alphaswift grapples with limited office space, hindering drone testing and automated manufacturing. The manual assembly process due to space constraints leads to extended lead times, impacting customer demand fulfilment.



Alphaswift C-72 "Anna" it can carry a max payload of 20 kg



Alphaswift C-75 "Fregata" it can carry a max payload of 50 kg

## Inspiring Possibilities: Dr. Shian's Optimistic View of the DeepTech Industry



Dr. Shian Lee of Alphaswift

On the other hand, Dr. Shian Lee, one of the minds behind Alphaswift, believes that Malaysia's DeepTech ecosystem holds significant potential. He posits that the lack of popularity in the DeepTech industry is not due to a shortage of expertise but rather stems from the perception that the DeepTech industry is less trendy and attractive to the younger generations. Instead, they tend to favour pursuing businesses related to mobile apps, which require much less capital and can gain traction easily. Despite this perception, Dr. Shian Lee remains optimistic about the

untapped opportunities and possibilities that DeepTech offers for the future of technology in Malaysia. "By advancing science and technology, humanity will continue to flourish. I'm optimistic that our scientific community and technology industry will work together to produce more fundamental deep tech and create new opportunities together."

In Malaysia's thriving drone technology landscape, Alphaswift shines as an innovative and resilient company. Their autonomous agriculture drones have revolutionised farming practices, aligning regulations with farmers' needs. Additionally, the Centre of Garage (COG) plays a vital role in supporting startups like Alphaswift, providing a nurturing environment for their ideas and innovations. COG not only provides networking opportunities with fellow startups and industry experts, but also furnishes startups with access to small manufacturing equipment for their use. With Alphaswift's continuous growth and the COG providing valuable resources, the future looks promising for Malaysia's drone industry and the overall development of the DeepTech ecosystem.

# From Concept to Creation: How Malaysia's Manufacturing Sector Fuels Innovation

Writer: Muhamad Basril Bin Muhammad Asri

## Passion-Driven Inception of Micro Precision Machining Sdn. Bhd. (MPMSB)

Fueled by a passion for machining and mechanical work, Mr. Ja'afar founded MPMSB in 2005. Initially centred around engineering machining trading, MPMSB expanded to include machinery acquisition and rentals for various projects. Before establishing his business, Mr. Ja'afar gained invaluable insights through the Japan tech transfer program from his previous working experience. He saw how well-established the manufacturing ecosystem and community in Japan and this experience led him to infuse Japanese cultural principles into Malaysian operations, emphasising discipline's role for success. While Japan has a strong industry-academia collaboration, Mr. Ja'afar sees this as an opportunity for growth in Malaysia.



Explore Malaysia's manufacturing innovation with Mr. Ja'afar Othman, the Founder and Directing Manager of Micro Precision Machining Sdn. Bhd. (MPMSB). With 23 years of machining and operations management expertise, he envisions Malaysia's potential as an ASEAN manufacturing hub. This article will share his insights on nurturing startups, MPMSB's journey, and advancing the manufacturing ecosystem in Malaysia.

## Global Enrichment through Collaborations

Mr. Ja'afar envisions MPMSB as a unique manufacturing entity embracing IR4.0, R&D commitment, and a culture of exploration. The company collaborates as a consultant for academic research, exemplified by projects with SIRIM for product development. MPMSB also partners with TVET institutions, including polytechnics, fostering skilled local talent. From his Japan experience, Mr. Ja'afar emphasises the role of such programs in local manufacturing growth. He guides TVET students in building prototypes like a coconut husking machine. MPMSB further aids university researchers in mechanical design and testing, particularly for oil and gas-related projects. While Indonesia and Vietnam may offer cost-effective labour, Malaysia's edge comes from its skilled workforce developed through these endeavours.



## Crafting Tomorrow, Unfolding Malaysia's Manufacturing Landscape



From his observation and experience for the past 23 years, local startups and researchers lack industrial expertise and struggle with materials and processes for quality products. On top of that, existing manufacturers were only focusing on mass production and could not cater for single prototypes and manufacturing. Hence, a suitable ecosystem and industrial partners are crucial. According to Mr Ja'afar, MPMSB envisions more facilitation focusing towards collaboration with local and international parties. As local experts, MPMSB assists in product development, raising value and maximising Technology Readiness Levels (TRL). However, numerous high-quality Malaysian innovations remain untapped globally. Mr. Ja'afar views Malaysia's industrial capabilities already good enough and could demonstrate skills similar to advanced countries like Japan while being more cost-effective. Eventually, it will enhance sharing of technological knowledge with other developing countries.

Considering the challenges confronted by local researchers and manufacturers, a distinctive incubator is necessary, bringing together deeptech startups, manufacturing firms, and a business accelerator ecosystem. Mr. Ja'afar believes such a platform can foster global collaboration, utilising MPMSB's expertise to enhance value for researchers and startups in product development. This contributes to elevating the market value of innovative products. Last but not least, he said, "Strategic partnerships with the right allies are pivotal for substantial progress and success in Malaysia's manufacturing sector."

# Building a Stronger Community through DIY and Maker Culture

Writer: Dr. Sharifah Nabihah Binti Syed Othman



KakiRepair community is helping on repairing people broken items.

KakiDIY is an online platform dedicated to DIY (Do-It-Yourself) enthusiasts in Malaysia. It serves as a community and resource hub for individuals who enjoy crafting, designing, and making things on their own. It provides a wide range of content, including tutorials, project ideas, and forums for DIY enthusiasts to share their knowledge, experiences, and skills. This amazing platform was founded by Mr Johnson Lam, who recognized the need for life skills and vocational skills in the younger generation with the aims to inspire creativity, encourage learning, and foster a sense of community among DIY enthusiasts in Malaysia.

## Empowering Individuals to Mend Society

The story started when Johnson, a street racer, chronicled his car modification venture on public forums and in automotive magazines. His innate ability to independently modify cars sparked inspiration among fellow car enthusiasts, leading to widespread recognition across Malaysia and the moniker “DIYKing”. Although he appreciated the title, Johnson aspired for the DIY spirit to be universally embraced. This motivation drove him to establish KakiDIY in late 2010, a venture to foster self-repair culture by empowering individuals to mend their belongings. KakiDIY is shifting from automotive modification to sustainable practices like upcycling, recycling, and reusing resources. These values remain central to their endeavours, driving diverse projects, startup mentorship, collaborations, and DIY content creation.

At the beginning of the establishment, his biggest challenge was shifting people’s mindset from dependency on others for repairs. To overcome this, he introduced KakiRepair as a movement encouraging people to fix their broken items and established a vibrant DIY community where members shared their expertise. This initiative also extended its impact by empowering an underprivileged segment through training and employment at the repair centre, offering services for fixing broken items. Additionally, a noteworthy achievement emerged from their community, culminating in the successful inception of Poladrone, a thriving drone startup that originated within the same community. The COVID-19 pandemic amplified the community’s drive for self-reliance and independent learning, compelling KakiDIY to pivot online, which resulted in substantial membership expansion. Mr. Johnson envisions a community platform that nurtures collaboration, support, and innovation among like-minded individuals, fulfils community needs, creates employment opportunities, and serves as a hub for talent discovery.



Johnson Lam chosen as the first Innovator of The Year winner in Tech Innovation Award 2021.

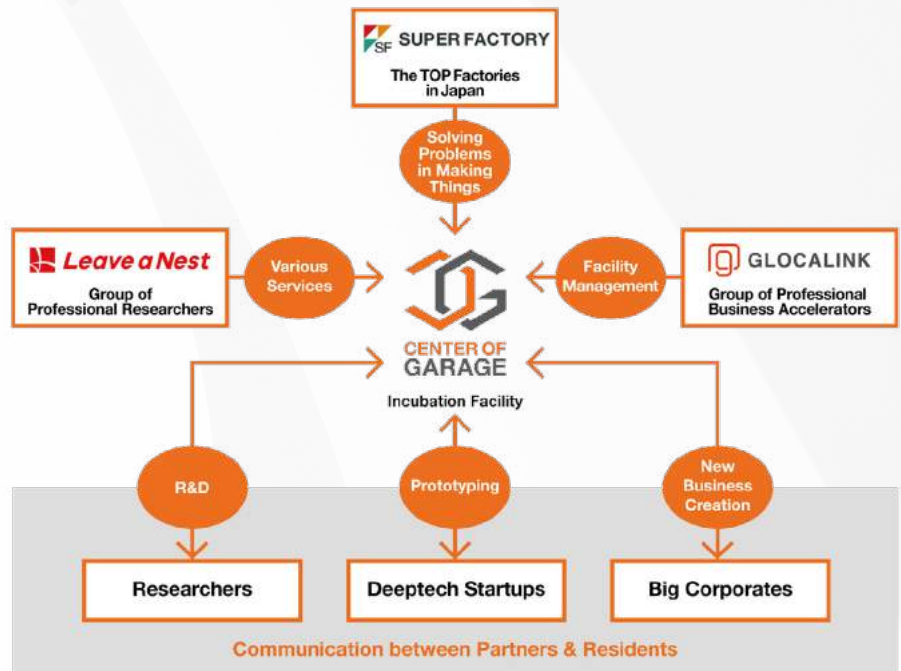
## Transforming Malaysia’s Deep Tech Startup Ecosystem

Community-based platforms like KakiDIY and KakiRepair are pivotal in fostering emerging talent in manufacturing and startups within Malaysia’s startup ecosystem. These platforms address similar needs in the deep tech landscape. A comprehensive platform that facilitates collaboration, mentorship, and knowledge-sharing is crucial for nurturing young talent, driving innovation, and spurring economic growth. By shifting mindset, promoting unity, embracing maker-spaces and the startup culture as educational avenues, Malaysia could propel its Deep Tech startups to international prominence, thus advancing the entire national startup ecosystem. Collaboration and concerted efforts are imperative for realising Malaysia’s ambition of becoming a leading hub for manufacturing and startups.

# Center of Garage: Inspiration and Transformation in the World of DeepTech Manufacturing

Writer: Dr. Suzianti Iskandar Vijaya

Center of Garage (CoG) was launched in 2019 when a group of passionate entrepreneurs, industry leaders, and technology enthusiasts recognized the need for a dynamic platform that could nurture and support deeptech startups all over the world. CoG is more than just a physical space; it is an innovative incubation hub that brings together deeptech startups, researchers, Japanese Super Factories, and prominent corporations with established networks under one roof. By bringing together these dynamic entities, CoG catalyses collaboration and co-creation that supports R&D, prototyping, and new business creation.

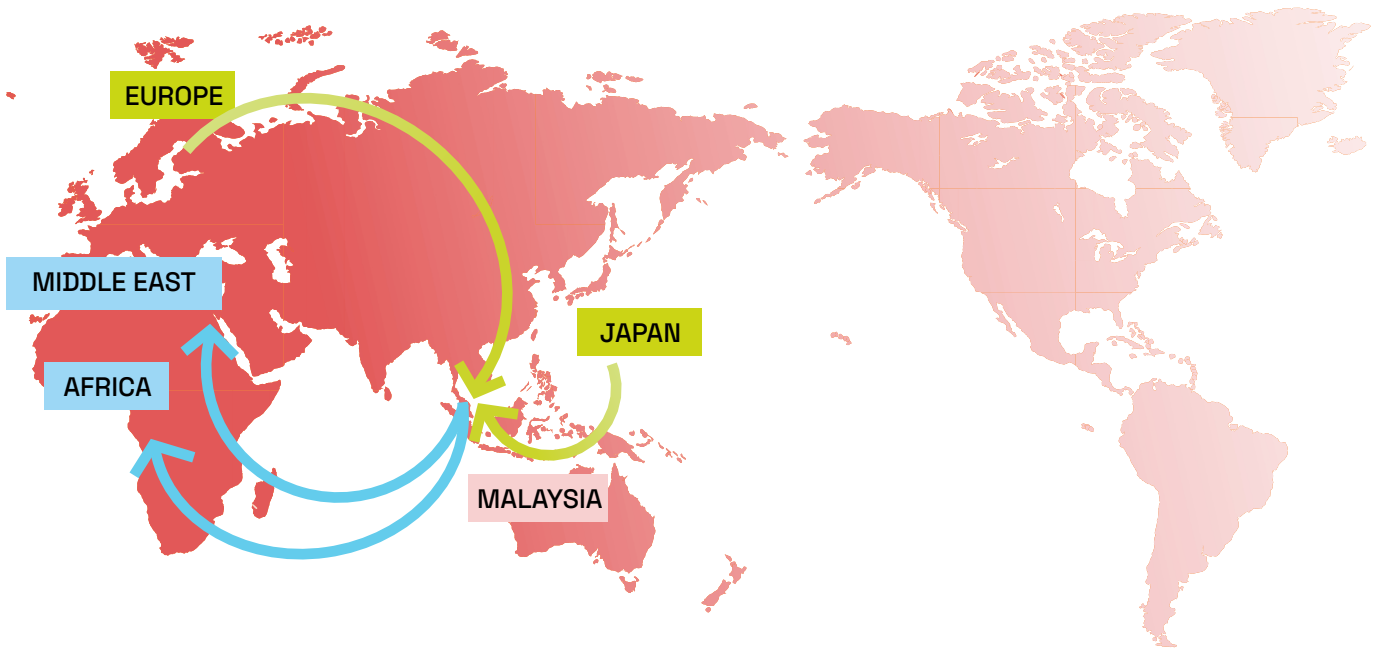


Through this powerful amalgamation of expertise and innovation, CoG showcases the “Re-Renaissance of Japanese Monozukuri.” In essence, CoG is at the forefront of revitalising the traditional Japanese concept of “Monozukuri” – the art and philosophy of craftsmanship and manufacturing excellence to solve problems in the manufacturing world. Collaborative projects between startups and Japanese Super Factories led to advancements in manufacturing processes, incorporating cutting-edge technologies and sustainable practices.

## Center of Garage is coming to Southeast Asia!

The deeptech ecosystem in Southeast Asia has experienced rapid growth, however, there is a pressing need to provide further support that prioritises extensive research and development. Realising the need for a hub that combines the two wheels of manufacturing environment construction and business emergence in Southeast Asia, Leave a Nest is proud to announce that the first CoG in SEA will be established in Cyberjaya, Malaysia. Utilising the geographical advantage of Cyberjaya as a special economic zone, CoG will support the expansion of deep technology and business to various parts of Malaysia, Southeast Asia, the Middle East, Africa, and the world.

Center of Garage (CoG) is a unique incubation place where deep-tech startups, Japanese Super Factories, and big corporations come together. We provide all the possible supports to accelerate the innovation of deep-tech startups all over the world.



### Why Choose COG Malaysia?

- Malaysia: Heart of Tech Development for ASEAN, Middle East, Africa.
- Top 3 in Innovation (Global Index 2022), Univ. Tech Growth.
- Rich Talent Pool Fosters Innovation.
- Cost-Effective Business Environment.
- Malaysia's Strong Global Reputation.

### Services Offered


 Tech Gallery	 Research & Development Facilitation	 Event Space
 Prototyping support	 Office Space	 Business Facilitation



Pumped to leverage COG Network and manufacturing support for massive growth!



Excited for top-notch networking, tech, and info access - sky's the limit!



Thrilled to expand into SEA with a Malaysia office - new horizons await!



## Researching into the Present for the Future

Doing research is a tedious process that may have different purposes. Some are being done just for curiosity's sake, while others are pursuing it to create something with a clear purpose.

Regardless of the goal however, it is a fact that in order to further the progress of a certain research, looking into the current status is quite important - maybe it be through actual investigatory projects, or through a thorough discussion.

This November 2023, we will be opening this year's ASEAN round of the Hyper Interdisciplinary Conference, to be held consecutively in the Philippines, Indonesia, and Thailand. We will be bringing together experts from different sectors to talk about present-day realities and issues in each country, ranging from generalist topics such as how technologies are being developed, or field-specific ones such as health or transportation issues.

Witness different exchanges from these experts who are going to be talking about the present - with the goal of making way for a brighter future.



# Empowering Philippine Innovation: Collaborative Strategies for Global Competitiveness

Writer: Hannah Balisi

The Global Index Innovation (GII) is an annual publication by the World Intellectual Property Organization (WIPO) that evaluates and ranks countries based on their achievements and capabilities in the field of Innovation. Among the important elements that the Global Index Innovation looks into, is the Innovation Input Sub-Index and Innovation Output Sub-Index of the countries being ranked. Innovation Input Sub-Index involves the components of the economy that fosters and supports creative endeavors and innovative actions. While the Innovation Output Sub-Index is the result of the creative actions and endeavors carried out within the economy. The Innovative Input Sub-Index has 5 pillars and the Innovative Output has only 2 pillars. The overall score of Global Index Innovation ranking is produced by combining the average of the two aforementioned elements.

INNOVATION INPUT SUB-INDEX PILLARS
Institutions
Human Capital and Research
Infrastructure
Market Sophistication
Business Sophistication

INNOVATION OUTPUT SUB-INDEX PILLARS
Knowledge and Technology Outputs
Creative Outputs

Innovation Input Sub-Index Pillars and Innovation Output Sub-Index Pillars (from: *The Global Innovation Index Conceptual Framework*)



## HYPER INTERDISCIPLINARY CONFERENCE IN THE PHILIPPINES 2023

Overall Theme: Convergence of Reformative Technologies for Localized Solutions	
<b>Date:</b> November 11, 2023	<b>Time:</b> 9:30 - 17:30
<b>Venue:</b> Within Metro Manila (TBA)	
<b>Keynote Session:</b> Convergence of Reformative Technologies for Localized Solutions	
<b>Panel Session 1:</b> The Outlook of Education: Exploring the Integration of Cyber Technology <i>(Provisional Session Title)</i>	
<b>Panel Session 2:</b> Dormant Resource Utilization for Health and Well-being <i>(Provisional Session Title)</i>	
<b>Panel Session 3:</b> Reimagining Production Systems for the Environment <i>(Provisional Session Title)</i>	

According to the Philippine News Agency, the Philippines' Global Innovation Index rank in 2022 dipped 8 notches down, from being 72nd in 2021 to 76th in 2022. Simultaneously, the country's Innovation Input and Innovation Output ranking also slid down to 76th and 51st in comparison to 2021's 72nd and 40th ranks, respectively. A few angles are usually looked into as to why a country's Global Innovation Index rank dips, one reason may be due to an oversight to prioritize and sustain technological innovation efforts within the country but according to Department of Science and Technology, the Philippines' GII 2022 deranking was due to the reduced performance scores in Knowledge and Technology Outputs which primarily arise from factors related to knowledge creation, knowledge impact, and knowledge diffusion.

It's equally important to highlight that even though there has been a decrease in the country's GII rank, the Philippines continues to exceed the regional average when compared to neighboring countries in Southeast Asia, East Asia, and Oceania. This shows the nation's determination to generate technological advancements that offer local solutions. Given the chance to engage in open discussions with individuals across diverse fields and disciplines, the Philippines aims to foster collaborative brainstorming. Through this process, the goal is to arrive at well-informed decisions for implementing tailored solutions effectively.

With this issue at hand, this year's Hyper Interdisciplinary Conference Philippines overall theme is "*Convergence of Reformative Technologies for Localized Solutions*" which will tackle the aims to combine transformative technologies to address unique challenges in the Philippines, driving sustainable development, enhancing efficiency, and improving local communities' lives.

This conference will serve as an avenue to discuss concerted efforts and strategic approaches to strengthen innovation which can help the Philippines to position itself for enhanced competitiveness and progress on the global innovation stage. Through collaboration, research, and the effective implementation of innovative solutions, the nation can strive to make significant strides in its innovation journey and secure a more promising future for its citizens.

# Healthcare System Challenges in Island Nation Indonesia

Writer: Dr. Hadi Akbar Dahlan

Indonesia is an island country with a population of 270 million people <sup>1</sup>. The population is scattered across several major islands of Indonesia (Sunda Islands, Maluku Island, New Guinea) which also includes around 18,000 smaller islands. This actually stretches the Indonesian healthcare infrastructure to the point that essential healthcare services were severely limited in rural locations. This aspect is clearly shown during the COVID19 pandemic <sup>2</sup>.

In order to alleviate and reinforce the Indonesian healthcare system, there are key challenged areas that need to be focused and improved. The key challenging areas that need to be addressed are unequal access to healthcare including facilities and medical supply <sup>3</sup>, Shortage of medical workers <sup>4</sup>, low health literacy in rural areas <sup>5</sup> and undernutrition issue as well as food security <sup>6</sup>.

The access to healthcare in Indonesia is heavily influenced by socio-economic factors, leading to a significant disparity in healthcare services among the population. Urban cities have easier access to well-equipped hospitals and specialised medical professionals. Such facilities are rather limited in rural areas or less urbanised areas <sup>4</sup>. However, the problem of unequal access is not only due to geographical reasons alone. Lower income people usually could not afford necessary medical treatment which resulted in delayed or inadequate treatment <sup>3</sup>.

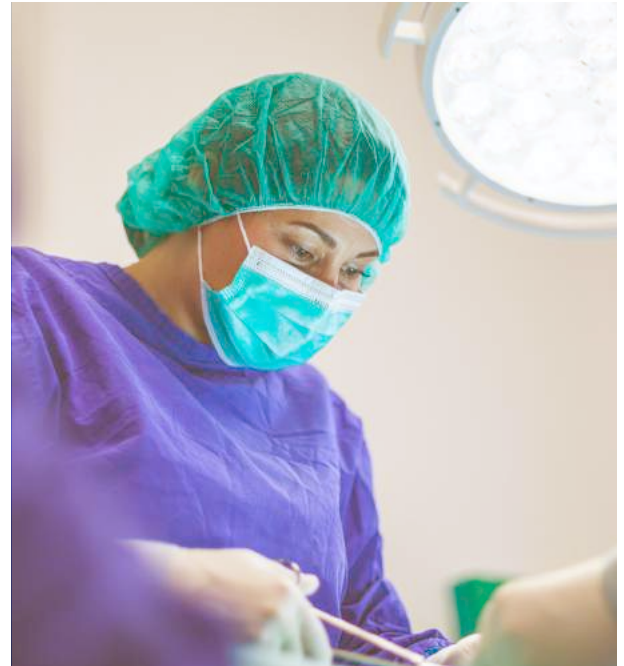
Besides medical facilities, shortage of medical workers is also one of the challenged areas. The country's vast population and geography exacerbate the issue, making it difficult to meet the increasing demand for healthcare services. The shortage is particularly acute in rural and remote areas, where qualified medical professionals are scarce, leaving many communities underserved <sup>4</sup>.

To make matter worse, the population in rural and remote areas is also the population with low health literacy and food security. Limited access to quality education and healthcare information hinders these population's ability to understand and make informed decisions about their health <sup>5</sup>. Added together with lack of nutrition knowledge and food security lead to lack of awareness about disease preventive measures and proper disease and nutrition management. As such modern preventable healthcare issues such as children growth stunting and stillbirth are still an issue in these populations <sup>6</sup>.

In an effort to tackle these challenging areas, Leave a Nest Malaysia is organising a Hyper interdisciplinary Conference (HIC) in Indonesia. The theme of HIC Indonesia 2023 is Transforming Healthcare Horizons in Indonesia. This conference is envisioned to gather participants from academia and industry that will be the main player for resolving and making a better future for the Indonesian healthcare system. The objective of this conference is to have participants network and collaborate with each other to formulate ideas and efforts to combat these challenges of Indonesia healthcare. We very much welcome researchers, entrepreneurs and changemakers that want to make a change in the healthcare system in Indonesia to join us in this conference.

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## HYPER INTERDISCIPLINARY CONFERENCE IN INDONESIA 2023

<b>Overall Theme:</b> Transforming Healthcare Horizons in Indonesia	
<b>Date:</b> November 18, 2023	<b>Time:</b> 9:30 - 18:00
<b>Venue:</b> Universitas Indonesia	
<b>Keynote Session:</b> Transforming Healthcare Horizons in Indonesia	
<b>Panel Session 1:</b> Advancing Healthtech Towards Medical Inclusivity	
<b>Panel Session 2:</b> Safeguarding Our Communities: Spreading Awareness on Infectious Diseases in Indonesia	
<b>Panel Session 3:</b> Quality Food in Shaping Indonesia's Next Generation	

# Thailand: The Amalgamation of Culture and Technology

Writer: Cheah Hee

Thailand, also called the Land of the Smiles, has a vibrant culture and is the destination of choice for many tourists. The country attracts 39.8 million tourists in 2019 before COVID-19 hits, currently, it is on a rise again and is expected to reach 25 million tourists in 2023<sup>1</sup>. Similar to other countries, Thailand comes with their own set of challenges such as traffic congestion<sup>2</sup>, poor air quality<sup>3</sup> and coastal erosion<sup>4</sup>, making it difficult for people to maintain their smiles.

## Technological Advances with Unique Culture

Traffic congestion problems remain unsolved in Thailand. Bangkok ranks 11<sup>th</sup> globally as the most congested city in 2019<sup>6</sup> and rose in ranks to 8<sup>th</sup> in 2022<sup>7</sup>, however, leveraging its waterways through technological innovations/advancements could be the key. Thailand is unique geographically due to its many natural waterways that run in the country and was hailed as the 'Venice of the East'. Interestingly, from the 2000s, water-based transportation was gradually replaced by land-based transportation, with roads being paved over waterway networks<sup>8</sup>

Aside from the waterways, Thailand should also leverage on their rich culture to promote technological advancement. As the world continues to enjoy technological advances, cultural changes are observed in different parts of the world. Culture shapes the way an individual perceives, on the other hand, technology improves the accessibility of global perspective often leading to the dominance of one culture. Much of digital technology and mass media sectors came from the western society and they dictate the principles and rules of the web, leading to a universal cultural homogenisation, dominated by the western culture<sup>8,9</sup>. However, Thailand should not lose its position as a land rich in culture, instead, should set an example to advance the country in technology, without compromising its culture.



### HYPER INTERDISCIPLINARY CONFERENCE IN THAILAND 2023

#### Overall Theme:

The Emulsification of Culture and Technology, Building Global Hub the Thai Way

#### Date:

November 25, 2023

#### Time:

9:30 - 18:30

#### Venue:

Bangkok (TBA)

#### Keynote Session:

Building Global Hub the Thai Way

#### Panel Session 2:

Culture, Innovation, Collaboration: Thailand's Pillars for a Revolutionary Space

#### Panel Session 3:

Unlocking Thailand's Potential: Digitalizing Transportation System Through Integration

#### Panel Session 4:

Beyond the Stars: Unleashing the Potential of Space Technology for a Thriving Planet

Hyper Interdisciplinary Conference (HIC) Thailand 2023, aims to leverage Thailand's unique culture and natural resources, to create solutions to overcome those challenges. With that, we are inviting passionate young researchers, experts from industries to discuss in the various panel sessions. Join us to maintain Thailand's position as the Land of Smiles and bring back the 'Venice of the East'!

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# Embracing the Future: The Legacy of Possibilities

Writer: Edilyn Otero



Leave a Nest, as a Knowledge Manufacturing Company, remains dedicated to the mission of bridging the existing gaps between academia, industry, and society. The organization consistently orchestrates a diverse array of science-oriented workshops, events, and programs tailored for both students and communities. One of the platforms that gives incentives to participants from different fields to have the opportunity to learn about advancements and research in other studies, leading to the cross-fertilization of ideas, is the Hyper Interdisciplinary Conference. The objective of this conference is to cultivate collaborative innovation and enable the sharing of knowledge across a broad spectrum of disciplines and domains, through interactive discussions and informative presentations.

The Hyper Interdisciplinary Conference (HIC) was inaugurated in the Southeast Asian region, specifically in Malaysia and Singapore in 2019, followed by the Philippines in 2020. Its footprint has expanded further in 2022 encompassing Indonesia, Thailand, and Vietnam. This impactful event encloses a wide spectrum of discussions across diverse domains such as water, environment, energy, healthcare, sustainability, culture, technology, waste management, and more, drawing robust engagement from hundreds of attendees and garnering support from esteemed industry partners and sponsors. Collaborating closely with researchers hailing from each of these nations, our collective aspiration is to embrace the complexities presented, unravel the intricacies, and commence on a collective journey to envision potential futures, meticulously crafted through the transformative power of hyper interdisciplinary collaboration. In our previous articles, we've already detailed the forthcoming events for November in the initial three countries: the Philippines, Thailand, and Indonesia. Now, we're here to provide you with a sneak peek of what's in store for Singapore, Malaysia, and Vietnam in the coming year.



## BUILDING KNOWLEDGE HUB

In the upcoming year, Singapore's hyper-interdisciplinary setting will harness the flow of knowledge throughout the nation's ecosystem, spanning businesses, universities, industries, and stakeholders alike. This theme stands as a testament to the pervasive understanding of how knowledge profoundly shapes societal vision and its people's aspirations. Set to unfold on **January 27, 2024**, at the esteemed National University of Singapore, this conference is poised to transcend the achievements of its predecessors. This conference sets its sights on surpassing the previous event's impressive turnout, drawing a diverse congregation of over a hundred attendees, notably in the engaging sessions. As Singapore stands resolutely as a center of knowledge and innovation, the conference's overarching mission to ignite transformative change and sculpt a luminous trajectory for the future reverberates resoundingly, destined to resonate powerfully across generations to come.

### SINGAPORE



## RESILIENCE AND INGENUITY

### VIETNAM



Embark on an inspiring journey as Vietnam unfolds its narrative of resilience and ingenuity, poised to become the defining theme of this year's HIC. Enveloped in the spirit of innovation and unconventional thinking, this transformative conference, scheduled for **February 3, 2024**, beckons participants to immerse themselves in the rich tapestry of Vietnam's history, a testament to unwavering determination. Empowering individuals to emerge as dynamic change agents, the conference's focal points span across the environment, agriculture, and pioneering IT solutions, encapsulating the essence of Vietnamese potential. As we chart a visionary course for Vietnam's future, this event embodies the promise of prosperity, fortified by the limitless potential that stems from the remarkable spirit of creativity and the boundless opportunities it unveils.

## CULTIVATING CHANGE

Mark your calendars for **February 24, 2024**, as Malaysia spearheads an impactful initiative centered around its abundant natural resources, particularly crop commodities, to forge a transformative bridge between agriculture and diverse sectors, fostering a vibrant ecosystem poised for both sustainability and remarkable economic expansion. Highlighting the historical significance and economic prowess of Malaysian rubber, the Keynote Session promises unparalleled insights into its multi-industry applications. Complementing this, an eminent panel is being curated, delving into the realms of the coconut industry and energy sustainability. Envisioned to draw 250-300 enthusiastic participants, Malaysia's 2024 HIC is set to ignite riveting discussions, facilitated by engaging sessions, culminating in a September launch that will cultivate an atmosphere abuzz with innovation and seamless collaboration.

### MALAYSIA



Embrace a thrilling invitation to engage on a journey of growth and enlightenment! Don't miss the opportunity to expand your horizons and immerse yourself in a legacy of knowledge and innovation. Join us in the eagerly anticipated Hyper Interdisciplinary Conference (HIC), where boundaries blur and ideas converge from across nations. Get ready to be captivated by an electrifying exchange of insights and ideas that transcend disciplines. Your path to discovery awaits!

For more information about the Hyper Interdisciplinary Conference, you can email us at: [https://info-asia@lne.st](mailto:https://info-asia@lne.st) with attention to: Hannah Mae Balisi (PH), Hadi Akbar Bin Dahlan (IDN), Cheah Hee (TH), Suzianti Iskandar Vijaya (MY), Edilyn Odero (VN), or Chia Shu Sheng Ambrose (SG).

HIC Website: <https://hiconf.lne.st>

# Epitome of Innovation: Project SET's Grand Demo Day at the Inaugural NYSTIF

Writer: Ludhovik Luiz Madrid



Leave a Nest Philippines and the Department of Science and Technology - Science Education Institute kicked off the inaugural Project SET: Scholars' Entrepreneurship Training last January 28, 2023. It is a 10-month program where 80 handpicked scholars from Region 4A and the National Capital Region under DOST-SEI were trained on the Leave a Nest's mindset of creating business. Leave a Nest's mindset is built upon the QPMI (Question, Passion, Mission, Innovation) cycle in order to generate ideas that solve deep issues in Philippine society.

Participants of Project SET formed teams based on their passion and the issue that they want to solve. These teams attended monthly modules learning idea generation, business and research planning, comparison of technology, intellectual property, ways of collaboration, and effective presentation. They also learned valuable insights from different startups and research teams by viewing a series of guest lectures from Leave a Nest's network and the Demo Day of TECH PLANTER in the Philippines 2023.



Team Creation



Series of Lectures



Series of Workshops



TECH PLANTER Immersion

Upon culmination of the program, a pitching competition, Project SET Demo Day, will be held. Seven finalist teams, using the skill sets and perspective that they learned from the modules, will pitch their ideas to a panel of local and international judges. The Demo Day will be on October 25, 2023, and is the first prestigious event of the inaugural National Youth Science, Technology, and Innovation Festival, a festival organized by DOST filled with activities dedicated to imparting science and technology to the youth. The Demo Day is patterned after TECH PLANTER, and the teams will be judged by the following criteria: novelty, feasibility, passion, and impact to society.

FINALIST	THEME
<b>Agricycle Solutions</b>	Pioneering the Crop Waste-to-Product Evolution
<b>KonekTaniman PH</b>	Transforming and Cultivating Resilient Agriculture Together
<b>Prima Block</b>	Aerated Concrete Blocks made of Pulverized Glass reinforced with Plastic Fibers
<b>VitalRadar</b>	Diabetes Monitoring
<b>Heimdall</b>	Foot Traffic App
<b>Chibone</b>	Chicken bone waste as a food product and an additive on other food products.
<b>Lifetality</b>	Anti-Diabetic Capsule From Latô Sea Grapes Extract

LIGHTNING TALK	THEME
<b>Wavelet Solutions</b>	Brain Tumor Detection
<b>Tahan Tahanan</b>	Philippine-based Family Planning Application
<b>AgriBento</b>	Biodegradable Food Containers from Agricultural Waste
<b>KOMKOM</b>	Komportableng Komyut 4 All
<b>DagBa</b>	Shrimp shell-based Water Filter
<b>PUNLA</b>	Kabu-Hay: Fungi treated Rice Straw feeds for Ruminants
<b>FarmBridge</b>	Optimization of profit and improvement of the farmer's productivity through AI Technology (Mang BAI)



Detailed summaries about the teams' ideas, can be accessed through this QR Code.













DOST-SEI plans to continue this program with Leave a Nest Philippines and expand it to other regions. For further details of Project SET and its future editions, you may contact Edilyn Grace Otero from Leave a Nest Philippines (eds@lne.st) and Robby Reyes from DOST-SEI (rreyes@sei.dost.gov.ph).

## Leave a Nest Group Calendar of Events in 2023

### SEPTEMBER



**ED Education Development**

**To know more/register**

- 10<sup>th</sup>**  Science workshop focussing primary school students.  
- 16<sup>th</sup>**  Exciting Science Workshop for primary and secondary school students  
- 23<sup>rd</sup>**  Exciting Science Workshop for primary and secondary school students  
- 23<sup>rd</sup>**  Exploring scientific curiosity in Nature  

**HD Human Development**




**To know more/register**

- 6<sup>th</sup>**  Career Discovery Forum  

### NOVEMBER







**ED Education Development**

**To know more/register**

- TBD**  RoboNest Workshop  










**FD Frontier Development**

**To know more/register**

- 1-2<sup>nd</sup>**  Support Japanese startups and SMEs to expand to Singapore.  
- 1-3<sup>rd</sup>**  Support Malaysian startups and SMEs to expand to Japan and vice versa.  

**RD Research Development**

**To know more/register**

- 11<sup>th</sup>**  Platform for corporations, startups and researchers to come together to solve deep issues.  
- 18<sup>th</sup>**  Platform for corporations, startups and researchers to come together to solve deep issues.  
- 25<sup>th</sup>**  Platform for corporations, startups and researchers to come together to solve deep issues.  

### OCTOBER







**ED Education Development**

**To know more/register**

- 21<sup>st</sup>**  Fostering a Culture of Innovation and Creativity in STEM Education  
- 21<sup>st</sup>**  An international conference for school students sharing their research and innovative projects  
- 22<sup>nd</sup>**  An international conference for school students sharing their research and innovative projects  
- 22<sup>nd</sup>**  Connecting students across apac to solve real world problems through research  

**FD Frontier Development**

**To know more/register**

- 10<sup>th</sup>**  Create new steps for the startup to find potential partners to bring them to next phase.  
- 31<sup>st</sup>**  Support Japanese startups and SMEs to expand to Singapore.  

**HD Human Development**

**To know more/register**

- 25<sup>th</sup>**  Scholars' Entrepreneurship Training  

### DECEMBER




**ED Education Development**

**To know more/register**

- 3<sup>rd</sup>**  Science workshop focusing primary school students.  
- 16<sup>th</sup>**  Science Festival for children to explore the wonderful world of science  

**FD Frontier Development**

**To know more/register**

- 8<sup>th</sup>**  Utilising the knowledge through Leave a Nest eco system  

# We're Hiring!

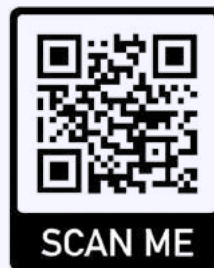


Are you keen to pursue your passion? Leave a Nest has connections all around the world with academics, researchers & startups working in various areas of science & technology. Embark on projects that you are passionate about to Advancing science & Technology for global happiness!

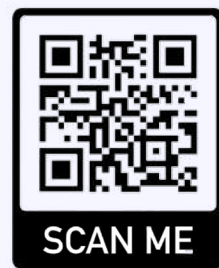
## BY JOINING LEAVE A NEST YOU WILL BE ABLE TO:

- Conduct educational workshops in schools and institutions to spread the knowledge and significance of your research to young talents
- Write and publish articles of different areas of research in our magazine
- Travel overseas for business opportunities
- Be a leader from the get go and realise your ideas in company projects
- Widen your connections by getting to know up and coming business owners

## CHECK OUT OUR PROGRAMMES HERE:



TECH PLANTER



HIC

## WHO WE ARE LOOKING FOR:

- Passionate researchers looking to use their research and passion to advance science for global happiness
- Preferably have a scientific or engineering background (positions are available for non-STEM applicants as well)
- Creative minds to form new ideas and initiatives from existing and future upcoming science/innovation breakthroughs.

**CONTACT US**

**Email:** [info-asia@lne.st](mailto:info-asia@lne.st)

**Website:** <https://global.lne.st/>