

A DECADE  
OF IMPACT,  
A JOURNEY OF  
INNOVATION.

**IPI**  
SINGAPORE

**10**

2011 - 2021  
A Decade of Impact.  
A Journey of Innovation.



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# Celebrating Our Journey, Building on Our Achievements

*At IPI, we assist enterprises in matching enabling technologies and capabilities to meet their innovation needs. At the same time, we partner them to expand their geographical footprint in the region and the world. Guiding IPI as we advance innovation among companies and navigate the dynamic digital age are our Chairman Ted Tan and CEO Wong Lup Wai.*



IPI Chairman Ted Tan (left) and CEO Wong Lup Wai

## TED TAN

Back in the mid-2000s, Singapore was looking for ways to differentiate itself from other countries. Recognising that technology is the future, we were particularly interested in strengthening our innovation ecosystem. The aim was to build up businesses and the technology to solve domestic

challenges and compete on the global stage. This led to IPI being established in 2011 under the purview of the Ministry of Trade and Industry, with the intention of commercialising the intellectual properties (IPs) from the public and private sectors, both locally and overseas.

This role has evolved and expanded throughout the decade. Today, we focus on supporting industry needs, translating their innovation objectives into specific technology requirements so that enterprises can develop new processes, products and services.

Beyond looking at local partners, we also engage international partners to complement our expertise here. Following our participation in the Enterprise Europe Network (EEN), we gained access to more than 650 research institutes around Europe. In addition, as a subsidiary of Enterprise Singapore, we tap on the organisation's 36 overseas centres in a synergistic and symbiotic relationship.

**“ Buoyed by the trust that our clients and partners place in IPI, we look forward to supporting greater innovations and forging stronger collaborations in the years ahead. ”**

- Wong Lup Wai

Over the last 10 years, we have earned a reputation in international circles as a catalyst for innovation. A central part of this approach is being a neutral and trusted partner to bring together the right people and organisations for collaborations. With the aim of transforming innovation objectives into something marketable, our team of technology specialists facilitate the use of IPs from both public and private sectors.

Since our inception, IPI's Innovation Marketplace and TechInnovation have been the cornerstones of our efforts in supporting local enterprises. Together, these platforms empower technology seekers and providers in embarking on co-innovation projects. In 2018 and 2019, we unveiled the Open Innovation Challenges and Innovation Advisors Programme (IAP) respectively. Marking significant turning points in our history, these latest additions have paved the way for companies to go beyond their organisations and secure the technology and deep expertise they need to drive transformation and business growth.

**WONG LUP WAI**

One notable difference we have made is successfully changing the mindset of local enterprises to embrace open innovation as a key growth strategy. This has seen many small-and-medium enterprises (SMEs) benefit from the lowered barriers of entry as they gain access to technologies, innovation advisory and collaboration opportunities. Local enterprises have also bridged their knowledge and experience gaps in technology commercialisation and open innovation via successful collaborations with both local and overseas industry and research partners.

Our achievements to date are anchored in the trust we have nurtured between IPI and the companies we help. This has allowed us to accurately identify their pain points and translate their business needs into technology requirements. With firm milestones in place, businesses can then collectively search for appropriate know-how, solutions and partnerships.

Since we opened our doors, we have completed over 280 projects and technology matches. It has been especially rewarding that many local SMEs today see IPI as an extension of their innovation and technology acquisition teams.



**TED TAN**

In the last two years, we have seen a spike in the number of open innovation challenges, with local enterprises as well as government agencies engaging IPI and our Innovation Advisors who are experienced practitioners that can provide mission-critical insights and coach companies to achieve accelerated growth. I am confident that IPI will continue working closely with stakeholders in the local and global ecosystem to help Singapore businesses achieve innovation breakthroughs and thrive in a competitive world.

As we encourage businesses to innovate, we are also walking the talk. Currently we are developing artificial intelligence (AI) and machine learning technology to improve the efficiency and effectiveness of our matching process. My hope is for IPI to continue to stay relevant by adapting to the dynamic

changes in technology and markets and becoming an even more important bridge between technology providers and companies, while maximising our impact through collaborations.



#### WONG LUP WAI

We have been a strong advocate of the innovation community. Thanks to our many partners, we have made meaningful contributions to the ecosystem over the last decade.

These include local start-ups that have embarked on open innovation, technology multipliers and research institutes that have engaged IPI, collaborators who support our mission to enable enterprises as well as industry veterans who offer their time and experience to uplift SMEs. We are especially thankful to all who have journeyed with us since the beginning.

The next decade for IPI will see us building on our achievements. In scaling the success of our IAP, we seek to benefit more local enterprises and build stronger synergy across our platforms to leverage expertise from our global innovation network. At the same time, our upcoming AI and machine learning matching will accelerate our clients' innovation processes and support more companies in reaching their technology goals.

Buoyed by the trust that our clients and partners place in IPI, we look forward to supporting greater innovations and forging stronger collaborations in the years ahead.

Established IPI and Innovation Marketplace.

connecting  
enterprises to  
innovation



# A Decade of Championing Innovation

Over the years, we have evolved to meet the needs of enterprises from diverse industries, catalysing their innovation processes and enabling them to grow beyond boundaries through our global network.

2011



Jointly established the Enterprise Europe Network (EEN) Singapore with IE Singapore (now known as Enterprise Singapore) and Singapore Manufacturing Federation.



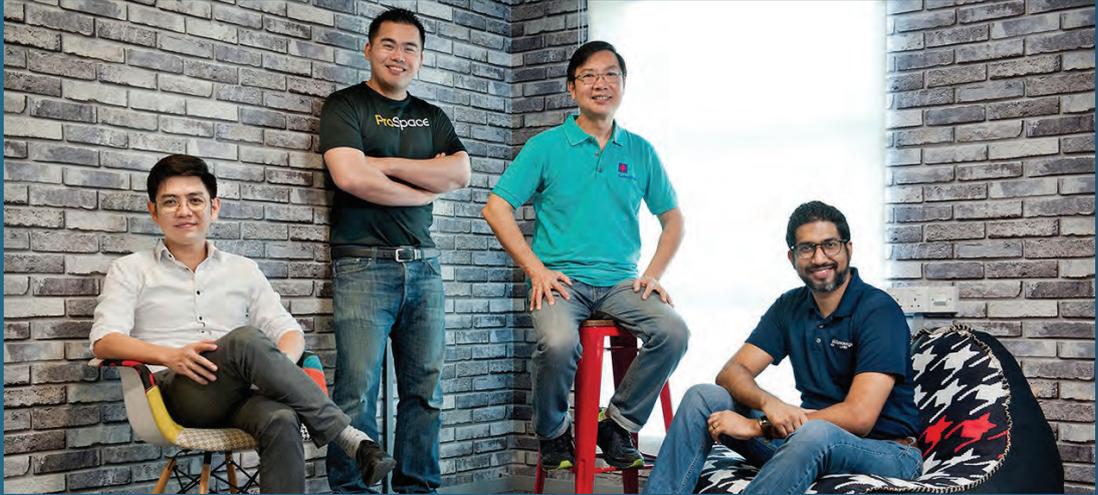
2016

2012

Launched TechInnovation, IPI's flagship technology brokerage event.



Launched two new IPI Services — the Open Innovation Challenges and Tech Experts platform. Some companies that have benefitted from the Open Innovation Challenges include the IoT Innovation Challenge finalists.



2018

2017

Kickstarted the Innovation and Enterprise Office Forum (IEO Forum).



Introduced training programmes to enhance enterprises' internal capabilities in open innovation management – Technology Commercialisation Workshop and Open Innovation Workshop.



# LEARNING

2019

Started the Innovation Advisors Programme (IAP). Besides innovation advisory services, the team also collaborated with partners to host events on the latest industry trends. One of these events is a seminar with Singapore Food Manufacturers' Association in 2021.



Launched the Emerging Technology Forum.



Converted the Technology Commercialisation Workshop to a webinar series, in light of the pandemic.

Rebranded IPI's Corporate Identity which was revealed at TechInnovation 2020.



2020

INNOVATION

Hosted our first AgriFood Innovation Webinar.



Launched the Abu Dhabi-Singapore Smart Cities Open Innovation Challenge.



# 2021



Hosted our first Aquaculture Innovation Webinar.



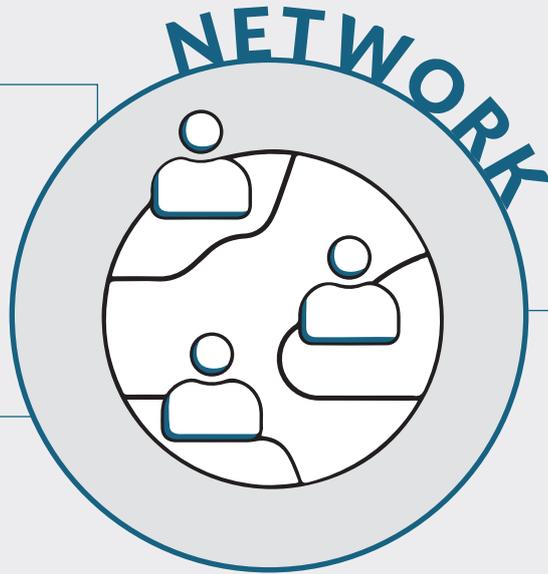
Celebrated the 10th anniversary of TechInnovation with a brand refresh.



# Highlights of Our First 10 Years

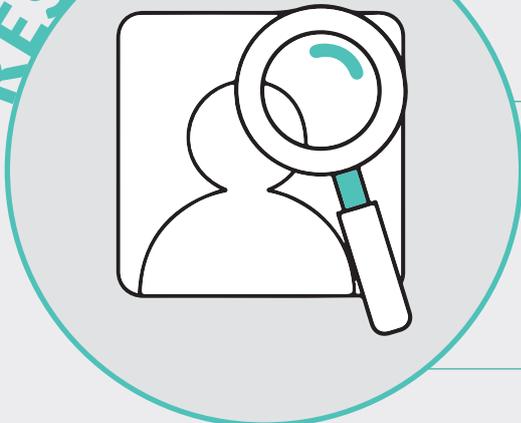
Completed over **280** projects and technology matches

Engaged with over **2,000** partners across **50** countries



Worked with more than **1,420** companies, comprising mainly local SMEs and start-ups

## RESOURCES



Published **4,000** Tech Offers and Tech Needs

Onboarded more than **20** Innovation Advisors and over **100** Tech Experts

Published **10** technology white papers and reports

# OPPORTUNITIES



• Open Innovation Challenges officially commenced in **2018**

• Over **180** problem statements

• More than **90** participating corporates and public agencies

• Received more than **770** proposals and solutions from local SMEs and start-ups

• EUREKA and Innovation Calls since **2019**

• More than **50** collaboration projects for the commercialisation of new products and innovations

Organised **10** TechInnovation events

• Showcased **2,500** technologies

• More than **20,000** tech seekers and tech providers, partners and enterprises from more than **50** countries

# KNOWLEDGE



• Organised and supported **147** conferences, innovation forums, seminars and workshops

• Hosted over **31,860** participants

• Welcomed more than **115** international partners

# THINK BIGGER

In today's dynamic environment where technology advances at breakneck speed, innovation cannot be achieved in silos. We surround businesses with both knowledge and opportunities to stay on top of the latest developments, while forging meaningful connections and collaborations. Through this, we support them to think bigger and achieve new heights.

Faces of IPI

# Accelerating Innovation Through Technologies and Partnerships

*IPI's Innovation Marketplace offers a rich resource of curated technology opportunities, allowing entrepreneurs to stay informed of the latest innovation developments from researchers, while facilitating connections between Singapore SMEs and technology owners for greater business growth. Our flagship*



*technology-to-industry matching event, TechInnovation, brings together international technology providers to accelerate the commercialisation of emerging technologies, seed licensing opportunities and foster open innovation collaborations.*

**Dr Sze Tiam Lin**  
Head, Innovation  
and Technology  
IPI

*These initiatives fall under the purview of the Innovation and Technology (I&T) division headed by Dr Sze Tiam Lin. The open innovation and technology commercialisation veteran looks back on his team's efforts over the last 10 years and shares the secrets to successful innovation partnerships.*

The IPI you see today is a recognised player in the national innovation ecosystem and the go-to organisation for global innovation partnerships. However, when we first opened our doors in 2011, the concept of open innovation was still at a nascent stage. Right from the start, we recognised that building trust among our tech partners was central for all parties to achieve positive outcomes through open innovation collaborations. For 10 years, we have painstakingly established a vibrant network of innovation partners, through which we surround local SMEs, multinational corporations (MNCs) and research institutes with the expertise and opportunities to accelerate the co-innovation process.

**“ Building on our legacy of trust and professionalism, we expect to welcome more companies on board the open innovation journey and support them in creating more products. ”**

- Dr Sze Tiam Lin

In shaping partnerships, we actively engage local businesses to understand their innovation needs, and scout for enabling technologies that can drive business growth. The SMEs we have seen that benefit from collaborations the most are those that embrace an open mindset and understand that not all talents reside in a single given company. They value collaborations as avenues to enhance their capabilities, speed up their products'



From left: Dr Sze Tiam Lin; Dr Lee Pui Mun, Technology Manager, Science and Engineering; Dr Poon Kee Chun, Technology Manager, Science and Engineering; Yvette Chek, Technology Manager, Food and Biomedical

time to market and even transform the future of business. I have personally witnessed companies on the verge of closing that rise up as innovators and create new products to stay relevant and competitive – all thanks to such partnerships.

At the same time, many large enterprises and research institutes have joined in the co-innovation process. Some leverage our Innovation Marketplace. Others reach out to us with their technology needs or suggest projects to work on with suitable enterprise partners. In doing so, they create opportunities for smaller businesses to showcase their capabilities.

Every year, local and global industry players, technologists and business owners congregate at TechInnovation, our signature technology-to-industry matching event that unites local businesses and global enterprises to drive engagement, foster collaboration and create multiple networking opportunities. Since our inception, TechInnovation has grown beyond just hosting 28 exhibitors and 500 delegates in a physical venue. When TechInnovation celebrated its 10th anniversary digitally in 2021, we received over 160 exhibitors, more than 2,400 participants as well as 11 national innovation agencies and technology consortia. It remains the region's not-to-be-missed innovation

and technology brokerage event that allows Singapore SMEs to leverage external partnerships and global opportunities to innovate and grow.

Many SMEs have stood on stage at TechInnovation to share their open innovation journeys. Their testimonies are a personal encouragement to my team and I, as they validate our efforts in sowing the seeds of open innovation and reaping successful outcomes.

As we close one decade, I look forward to what lies ahead in the next one. Building on our legacy of trust and professionalism, we expect to welcome more companies on board the open innovation journey and support them in creating more products. At the end of the day, we want to celebrate alongside our partners as they multiply their revenues and achieve new growth by leveraging technology and innovation.



From left: Lynne Loh, Senior Manager, Partnerships;  
Ben Tan, Senior Innovation Manager, Open Innovation;  
Paula Sng, Technology Manager, Science and Engineering;  
Dr Maggie Cai, Technology Manager, Food and Biomedical

Success Stories

# Preventing Corrosion in Buildings Everywhere



Nipo International's Director Amanda Khoo (right) and NTUitive CEO David Toh

**Nipo  
International  
&  
NTU**

A chance encounter with IPI in 2015 evolved into a unique opportunity for Nipo International to collaborate with Nanyang Technological University (NTU) on a groundbreaking innovation which can potentially help save money, lives and the environment. As a manufacturer of coating systems for the construction industry, Nipo is always exploring new technologies to bridge technology supply and demand.

Nipo's Director Amanda Khoo had initially approached IPI through their Innovation Marketplace to explore possible collaborations. "IPI listened intently to our wish list and made many introductions," says Khoo. "Our initial intent was to find a paint solution that provided electromagnetic interference (EMI) to protect buildings from X-ray radiations."

One introduction was to a research team in NTU, which had formulated an inorganic coating technology to contain EMI waves. Khoo zeroed in on a small feature of the EMI coating, hoping that there was potential to expand on its corrosion protection property. "The global cost of corrosion is estimated to be as much as US\$2.5 trillion," explains Khoo. "Finding a suitable coating can have a significant financial and environmental impact. It can also possibly save lives."

With that, their partnership was cemented with NTU. Three years on, the collaboration has birthed a system that chemically bonds with the metal substrate to form a self-healing coating. The result is a

unique technology that eclipses current solutions in terms of materials needed, protective capabilities, cost efficiency and environmental sustainability.

Along the way, Nipo also became a bridge between different research institutions through this project. "As part of the research, we needed to conduct some tests. But there are very few experts for this unique technology. Hence, we had to rope in the Singapore Institute of Manufacturing Technology (SIMTech) and Agency for Science, Technology and Research (A\*STAR)," shares Khoo.

Besides the creation of a stable coating technology, both organisations have also reaped other benefits from this collaboration. While Nipo gained the much-needed resources and expertise for the research and development (R&D) of the new product, NTU was able to tap Nipo's abilities to scale up production and access global markets through their customer base. "The great thing about working with a local SME is that their senior management and roots will always

**“ IPI exposes SMEs to the latest technology and trends to tackle challenges in our respective industries. ”**

- Amanda Khoo



be in Singapore,” says David Toh, CEO of NTUitive, the innovation and enterprise company of NTU.

“We can build a long-term relationship with the company without worrying about losing touch with the management.”

The experience was also a lesson in how an original idea or intent can build, grow and evolve through co-innovation. “IPI was able to seek an innovative solution for Nippo from a researcher. We were later able to expand

on that relationship further and find other innovative solutions to address their needs,” explains Toh.

Khoo agrees. “It is important to give every research a chance, even if the original intended pitch was for a different application. IPI exposes SMEs to the latest technology and trends to tackle challenges in our respective industries. We look forward to future cooperation with IPI and their team of dedicated officers.”

## Success Stories

# Creating Value from Shrimp Waste through Collaboration



ARB Technologies CEO Robin Low

## ARB Technologies & Mitsui

When Robin Low, CEO of ARB Technologies (ARB), stepped through the doors of TechInnovation 2018, he was full of anticipation about meeting an innovation scout from Mitsui. It was his first time presenting his company to such a large MNC and one that could open new doors for the business.

**“ IPI’s role in matching local enterprises with large multinationals is critical in growing SMEs like us into larger companies with stronger value propositions. ”**

- Robin Low

Following its inception in 1995, ARB evolved from focusing on electronics to specialising in innovative, cost-effective solutions in biotechnology and life sciences. For several years, it had been researching and commercialising novel technologies in green chemistry, transforming them into quality, market-ready products for global markets. While ARB had the experience and expertise, they needed to connect with like-minded strategic partners, locally and overseas.

The meeting with Mitsui, set up by IPI, was designed to do just that. Confident of his company’s in-house research and manufacturing capabilities, Low introduced ARB’s anti-microbial composition to the trading and investment firm, which immediately recognised its potential to create high-value products.

Around the same time, Mitsui was looking to convert shrimp waste from its farm and processing plants in Vietnam into the higher

value product, chitin. ARB’s core technology could convert this into chitosan, an even higher value biopolymer which has multiple applications. At IPI’s urging, Mitsui began talks with Low to tap ARB’s experience in handling and processing biopolymer materials. “IPI played a crucial role in bringing together Mitsui and ARB. This development project gave us the opportunity to showcase our R&D capabilities and demonstrate what we are capable of,” says Low.

Both parties kickstarted negotiations on the agreement to invest in this project, with IPI offering ARB advice related to IP along the way. With the research collaboration agreement signed in July 2020, work on the project began.

Beyond benefiting Mitsui, the partnership was also useful to ARB. “We use chitosan in our final products so the project is quite synergistic. Our work in this area offers multiple licensing opportunities as well as

Shrimp powder (left) is processed to the demineralised form of chitin, which is the last stage before chitosan is created.



potential commercialisation of the green chemistry manufacturing process, creating value from waste for a sustainable and resilient future. We expect new revenue streams as a result of this project,” explains Low, confidently.

The experience of teaming up with a large MNC from R&D to commercialisation also gave ARB important insight into understanding their customers’ requirements, mindset and company culture while honing their skills to meet their expectations.

Inspired by the success of the collaboration, Low is even more excited for the future of ARB. Plans are underway to make ARB a

leading global player in sustainable natural biomaterials upstream and excellent finished products downstream, thus fulfilling their goal of becoming a vertical one-stop shop for sustainable living – all expected to complete within the next five years.

As Low and his team press on towards their dream, they have plans to further tap on IPI’s network and expertise too. “We are always on the lookout for new technologies and potential technical collaborations,” he says. “IPI’s role in matching local enterprises with multinationals is critical in growing SMEs like us into larger companies with stronger value propositions. I look forward to engaging their assistance in the future.”

## Success Stories

# Putting the Shine on Automobiles Worldwide



From left: Dr Gabriel Lee, Senior Lecturer (Industry), Republic Polytechnic; Yow Jia Hong, Co-founder, Artdeshine; Lai Linke, Research Staff, Republic Polytechnic

## Artdeshine & Republic Polytechnic

Yow Jia Hong is highly passionate about cars and it shows. Despite not having the relevant technical or industry experience in product formulation, he and his fellow co-founder of Artdeshine (ADS) set up the car detailing business and transformed it into a producer of experiential detailing products. Entirely self-taught, the duo's emphasis on quality has made ADS a go-to brand for automotive care, with a strong portfolio of in-house formulated products favoured by discerning automotive aficionados across the globe.

**“ IPI’s broad network introduced the right partner to us. Without their support, we would not have known we could tap the expertise of educational institutions to develop and enhance our products. ”**

- Yow Jia Hong

The SME’s success, in part, comes down to the founders’ insistence on constantly developing products that help detailers solve problems in their trade, such as unsightly blemishes on automotive paint caused by corrosive substances. The desire to enhance the efficiency and effectiveness of their work and raise confidence in ADS’ products led them to IPI in late 2017.

“We wanted to create a polymer coating that utilises graphene to improve corrosion resistance, but struggled with the dispersion of graphene oxide in a stable polymer matrix,” recalls Yow. “IPI’s broad network introduced the right partner to us. Without their support, we would not have known we could tap the expertise of educational institutions to develop and enhance our products.”

IPI’s recommendation of Republic Polytechnic (RP) was an obvious choice. The institution’s commitment to nurturing strong problem-

solving capabilities and their School of Applied Science’s expertise in smart coating solutions made them the perfect fit. While RP’s Senior Lecturer (Industry) Dr Gabriel Lee and his project team contributed the technical expertise and facilities for R&D to optimise the formulation, ADS provided input on functionality, application and testing.

Over 12 months, ADS and RP’s researchers exchanged insights and findings on the suitable materials, processes and equipment. “The challenge was to create an optimal formulation that met performance enhancement requirements, while being easily scalable and commercially viable,” explains Dr Lee.

The year-long collaboration culminated in a final product that surpassed all expectations. “For the automotive care industry, ADS’ Nano Graphene Coating is a step ahead in terms of performance,” says Yow. “Not



only is the graphene oxide dispersion 10 times better with improved stability and even distribution, but the polymer coating composition recommended by RP is more mechanically robust and economical to formulate.”

Once the product entered the market in 2020, it took off, winning over car detailers worldwide and driving confidence in ADS as a pioneering brand. But the company was not the only winner. While ADS gained a new manufacturing process and sharpened their competitive edge, the RP team was able to broaden their experience and expertise in smart coating solutions.

“We were exposed to current industry problems and had to formulate innovative ways to solve them,” Dr Lee elaborates. “While strengthening our existing capabilities, we also gained new technical knowledge and insights and saw first-hand

how a local SME can stay competitive through innovation.”

Since production began in early August 2021, sales of the new product have spiked. In response to the promising sales, ADS is revving up the development of new revolutionary products for the global automotive care industry as well as more fruitful collaborations.

As they enlarge their global footprint, Yow is adamant that their roots remain firmly local. “Having many new and exciting products in the pipeline will propel us into the limelight. We are growing our team and will establish distribution hubs in strategic locations around the world. Even so, all our in-house formulated products will be solely and proudly manufactured in Singapore and exported. This will ensure tighter quality control and allow us to leverage the country’s excellent logistics network in the long run.”

## Success Stories

# Teaming Up to Advance Medical Care



Cell ID CTO Xander Sim (right) and Honsen Printing Executive Director Kief Lim

## Cell ID & Honsen Printing

When Xander Sim, the inventor of Quiz biochip-based PCR, co-founded Cell ID in 2014, he had one goal in mind – to combine engineering and biological sciences to deliver fast, accurate, affordable and mass-deployable diagnostic solutions for home and near-patient use.

As the medtech firm's Chief Technology Officer (CTO), Sim oversaw the R&D for several products. This included Cell ID's flagship biochip-based PCR test kit for HIV viral load, malaria parasitaemia, nucleic acid test (NAT) for COVID-19 extracted ribonucleic acid (RNA) and one-step (OS) COVID-19 saliva tests.

"Ensuring that the test kit could be mass-produced and affordable proved to be one of the most difficult challenges during the design phase as it involved using functional printing as the primary manufacturing method," explains Sim. This meant that the company had to scout around for potential industrial partners with the capacity to use functional printing for mass production yet keep costs relatively low. Cell ID's selected partner needed to appreciate that more trials were needed to produce medical-grade diagnostic devices through functional printing too.

With this weighing on his mind, Sim joined a functional printing roundtable discussion organised by IPI. "IPI has shown that they have the resources and connections to

pair SMEs up to exchange knowledge and promote collaboration," he says. "So, we hoped that they could do the same for us."

Sim was not disappointed. At the meeting, IPI introduced him to Honsen Printing, a high-tech printing firm that had the required expertise and technology to help. Importantly, they shared Cell ID's vision of bringing a 100% made-in-Singapore product to market by developing and producing it locally through partnerships with home-grown capabilities.

Although they had no experience in biosensor printing at the time, Honsen played an active role throughout the research process, readily accepting and incorporating feedback to meet Cell ID's requirements. Explaining their can-do attitude, Honsen Executive Director Kief Lim says, "Sim was very open in sharing his knowledge and helping us pick up functional printing within a short time. His faith in us and encouragement, together with our confidence in their products, made us redouble our efforts to make this collaboration a success."

**“ IPI has shown that they have the resources and connections to pair SMEs up to exchange knowledge and promote collaboration. ”**

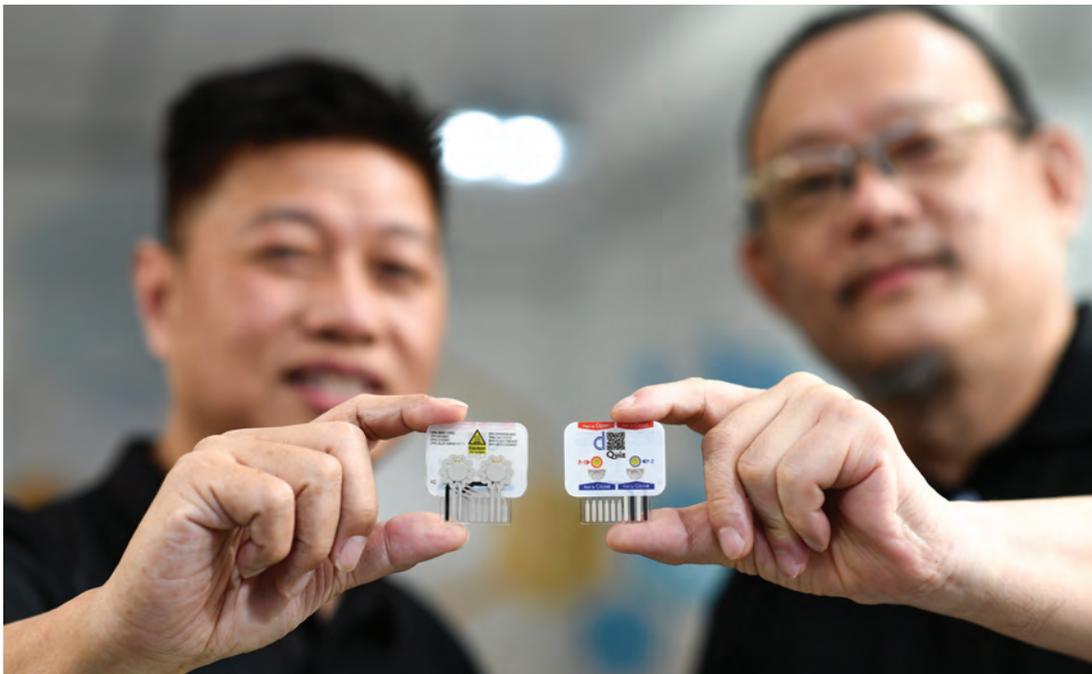
- Xander Sim

Honsen even stepped up to assist in the development of Cell ID's biochip. When Sim made an off-hand remark about an issue his team had with a sealing mechanism, he was surprised when Lim volunteered a solution, thus helping Cell ID overcome a million-dollar roadblock. This mutual trust in sharing proprietary information and know-how is the key factor Sim attributes to the success of their partnership.

Thanks to Honsen's support, Cell ID launched the world's first fully printed biochip-based PCR using conventional large-scale functional printing techniques in December 2020. The company is now working on optimising the biochip for home use and is exploring its application in chronic disease diagnostics. "As we push to be a leader in affordable molecular diagnostics outside of the traditional lab setting, we hope that our products can be used at home within the next few years and see extensive deployment in low-to-middle income countries."

Cell ID and Honsen's shared experiences have cemented their belief in collaborations. "Exchanging knowledge and leveraging a partner's capabilities without needing in-house development is an arrangement that will benefit all parties, especially for high-cost items like technology design and development," Sim says, firmly. "Open innovation is something every company can learn and benefit from."

Nodding in agreement, Lim adds, "Partnering with Cell ID has unlocked our true potential and capabilities in functional printing and opened us to new business opportunities. This is yet another step in our learning journey that began in 1995. We will constantly look for more opportunities to collaborate with other companies and build our knowledge."



The world's first fully printed biochip-based PCR.

Success Stories

# Saving More Lives with Augmented Reality Glasses



Moon Technologies Co-founder Tan Jian Ming

**Moon  
Technologies  
&  
Panasonic**

Tan Jian Ming strode into TechInnovation 2018 as a man on a mission. The Co-founder of Moon Technologies and his team had been puzzling over a way to improve user experience of their latest creation – wireless augmented reality (AR) smart glasses with image recognition capabilities.

Able to deliver real-time, actionable insights, the device would allow paramedics to quickly identify patients and retrieve their medical data, thus improving timeliness and quality of the medical help provided. However, there was one snag. The camera would shake irregularly, resulting in a shaky video and motion sickness for some users. Fixing the issue was therefore crucial for good user experience.

In between browsing the booths and attending talks at TechInnovation, Tan learnt about IPHatch Day. The programme invited start-ups to develop scalable business ideas by leveraging one of the IP portfolios offered. Scrolling down the list, Panasonic's IP caught his eye. "We found that it could be used to enhance the AR imaging system and eliminate video-induced motion sickness," Tan explains. With venture capital funding, incubation and mentorship all up for grabs, Moon Technologies decided to participate and eventually won the competition and acquired Panasonic's IP.

By clinching this fundamental patent, the team was able to build new technologies from it and increase their competitive advantage on the global stage. Besides providing their IP, Panasonic went one step further, surrounding them with technical support during the development process and the expertise to improve their product design.

Having Panasonic on board meant that the team had to stay on their toes. "Dealing with an investor like Panasonic requires greater attention to detail in everything we do," says Tan.

The combination of technical and design expertise from both sides culminated in a product that is suitable for outdoor use, enables image projection via a unique lens and can even be worn by individuals with short-sightedness or astigmatism. Able to last for four hours with continuous operation, the smart glasses come with a microphone integrated with voice-activated

**“ IPI’s focus on start-ups and evaluating technology readiness made it easier for potential clients to evaluate our technology. This opened up new pathways of collaboration. ”**

- Tan Jian Ming

A prototype of Moon Technologies' wireless AR smart glasses.



Google Assistant. Importantly, the device is comfortable to wear, with no risk of video-induced motion sickness.

The start-up has begun clinical trials in several countries. Once these conclude, they will start manufacturing their unique brand of smart glasses. The team is also collaborating with several companies to integrate their applications with Moon Technologies' image recognition AR platform.

Commenting on IPI's efforts in bringing companies together, Tan says, "IPI's focus

on start-ups and evaluating technology readiness made it easier for potential clients to evaluate our technology. This opened up new pathways of collaboration."

Having enjoyed initial success, Moon Technologies is now looking at expanding their smart glasses for use well beyond healthcare. Given the device's usefulness for diverse purposes, the team is developing smart glasses which will infuse AR into everyday life and soon be able to support the daily digital needs of all.

# WORK SMARTER

In an interconnected world, collaborations and co-innovations are the superhighway for companies to reach their innovation goals. We help businesses work smarter and overcome their innovation challenges by matching them with the right partners who can fulfil their technology needs and bring their ideas to market.

Faces of IPI

# Igniting Innovation Through Collaboration

*Working together with Singapore companies to source for technologies or collaboration opportunities locally or abroad, IPI's Innovation and Technology (I&T) division facilitates partnerships to bring new and innovative products and services to the market. One signature initiative is the Open Innovation Challenge, where local start-ups and SMEs have the opportunity to support corporates and government agencies in addressing specific business challenges.*



*The I&T division also organises a wide collection of networking events and knowledge sharing sessions to keep Singapore companies updated on emerging technological developments for business growth.*

**Michael Goh**  
Deputy Head,  
Innovation and  
Technology  
IPI

*The I&T division's Deputy Head Michael Goh is a specialist in IP management and commercialisation. Having journeyed with IPI since its inception, Goh offers a behind-the-scenes peek into the inner workings of the division over the last decade and what lies beyond.*

When IPI first started in 2011, there were only four of us in the whole organisation. We were in start-up mode, rolling up our sleeves to do everything from handling office renovations to interviewing candidates. As we matured, the team grew bigger and departments were set up. Still, throughout the changes and challenges, our culture has remained anchored in collaboration and teamwork.

**“ As technology becomes more accessible, enhancing SMEs’ exposure to emerging technologies and co-creation opportunities is critical to drive adoption and upgrade skills. ”**

- Michael Goh

These values form the cornerstone of what the I&T division does as we press on in our quest to be the trusted matchmaker of technology to help local SMEs grow their business and push beyond boundaries. Behind every successful co-innovation and collaboration lies extensive behind-the-scenes work that the team undertakes to understand the business drivers.

From identifying the targeted end-users and market, to ascertaining management support for the project and the financial resources available, we put together a comprehensive picture of the company to dissect their business needs and uncover their technology and capability requirements. Then, we scan our global network to find the right technology and expertise before introducing them to the SMEs.

More than a matchmaker, we are also a sounding board for start-ups and SMEs. We give insight into the terms of the collaboration agreements with technology providers to ensure business owners are aware of their implications, and offer advice on IP management and commercialisation matters. Every step we take is to secure the success of each collaboration.

Our open innovation challenges, in particular, present local businesses with opportunities to access large corporates, while nudging

them towards adopting innovation and technology to differentiate their products and remain competitive. On the part of the MNCs, adopting the right mindset is crucial. This means accepting that innovation is non-linear, messy at times and involves a certain level of risk. To be successful in innovation, they need to break away from the business-as-usual mindset and obtain buy-in from senior management.

As technology becomes more accessible, enhancing SMEs' exposure to emerging



From left: Michael Goh; Jiang Yumin, Innovation Manager, Manufacturing, Infocomm and Built Environment; Yeow York Yen, Senior Innovation Manager, Food, Healthcare and Sustainability; Steven Lee, Innovation Manager, Manufacturing, Infocomm and Built Environment



From left: Adeline Chan, Innovation Manager, Food, Healthcare and Sustainability; Ethan Siew, Innovation Manager, Food, Healthcare and Sustainability; Alvin How, Head, Food, Healthcare and Sustainability; Lee Ya Ling, Senior Innovation Manager, Food, Healthcare and Sustainability

technologies and co-creation opportunities is critical to drive adoption and upgrade skills. Throughout the year, our host of technology forums, networking events and engagement activities are designed to share experiences, build knowledge and foster collaborations for future growth.

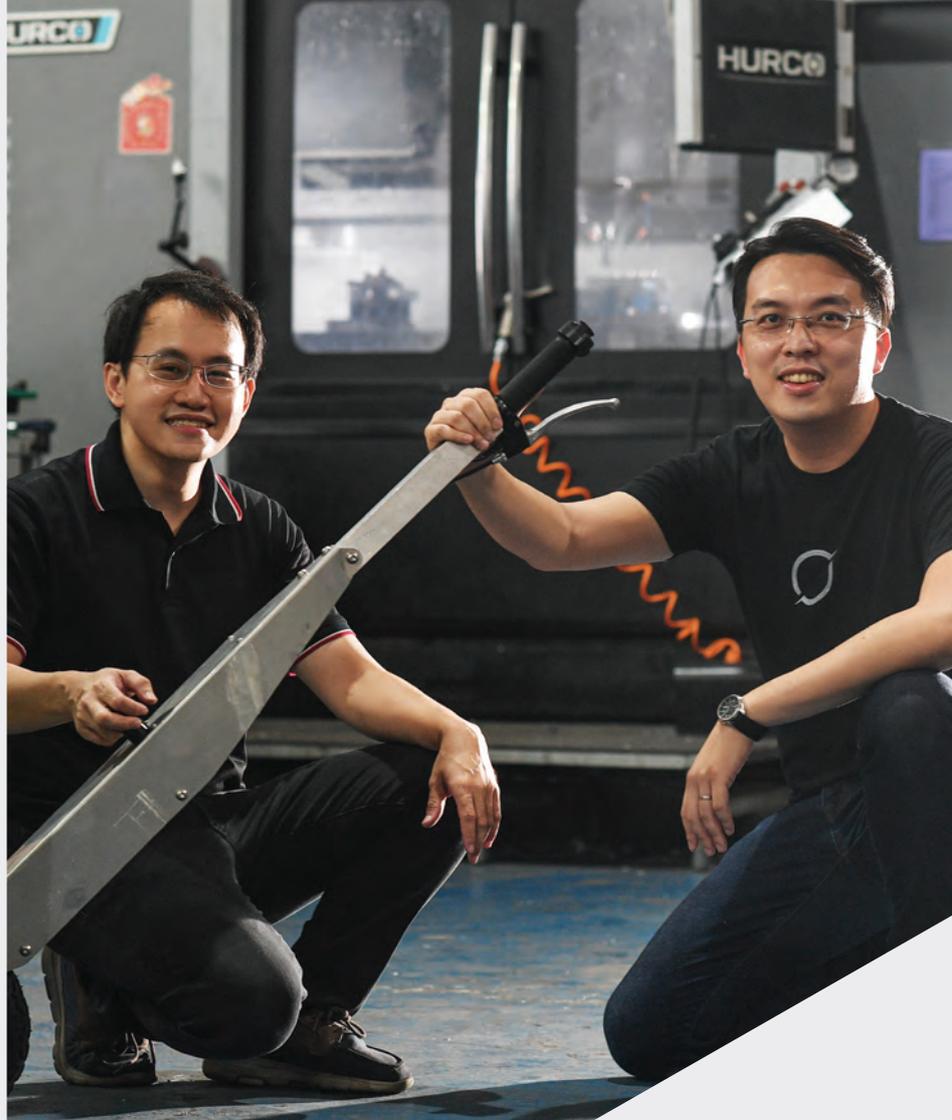
Every day, I step into the office ready to help businesses find that one piece of technology, innovation or expert that could move their top line. I will always remember when ERS, a local SME, sought our help to address their technical capability gap. We introduced a thermodynamics expert to them, who has since gone on to become their CTO. He not

only improved ERS' main product, but also developed a new product line that opened up a fresh revenue stream. This ability to make a difference to a business and transform the lives of others is what drives me.

In the decade to come, I hope that through our efforts, we will emerge as the preferred innovation partner among small businesses and large corporations alike. As we stay on top of market trends and industry needs, we will continue to evolve our services by listening to our customers, leveraging technology to drive operational excellence and bringing in talent to push IPI to new and greater heights.

## Success Stories

# Creating a Better Way to Handle Waste



Meisterform Founder and Managing Director Bryan Wong (left) and Partico Co-founder and Director Ng Ka Wai

## Meisterform, Partico Design & SembWaste

Meisterform is not your average wheel manufacturing firm. As the first company in Singapore to design, produce and retail extreme performance automotive forged wheels, it broke away from the manufacturing-to-scale traditions of the industry to deliver quick turnarounds and accelerated response times.

It is this commitment to efficiency that allowed Meisterform to embark on a trial project with SembWaste, a public waste collector appointed by the National Environment Agency (NEA). The collaboration between Meisterform and SembWaste was established from an open grant call that was launched by NEA and Enterprise Singapore and supported by IPI in early 2018.

The existing waste collection process requires two crew members to manoeuvre heavy bins weighing up to 300 kilograms up and down uneven surfaces, slopes, kerbs and drains. Upon reviewing SembWaste's challenge statement, Meisterform's Founder and Managing Director Bryan Wong realised that their portable, easy-to-use yet safe-to-operate solution could be the answer to a smoother and more efficient collection process.

Wong roped in the automotive expertise of its sister company Autokinetics as well as the engineering and design capabilities of Partico Design. Combining the skills and experiences of the two firms with Meisterform's fast prototyping facilities, Wong and his team worked closely with Partico's Co-founder

and Director Ng Ka Wai, to propose a motorised bin mover device that was considered by SembWaste for trial review. However, midway through their development, COVID-19 struck. "We experienced massive delays," Wong explains.

Despite the circumstances, the team rallied together to achieve their targets. In October 2020, the prototype unit was tested on site. It made moving bulky bins from point to point significantly easier, thus reducing worker fatigue and improving ergonomics. SembWaste also provided feedback to enhance the design in the next trial phase.

With diverse organisations on board, the project highlighted the importance of clear communication. "Each party has different requirements and perspectives, hence communication is key to ensuring the project runs smoothly," says Wong.

As for Meisterform's future, the push to challenge and improve the status quo will always be at its core – embracing new rules and innovations in an effort to always stay one step ahead.



Success Stories

# Improving Construction Processes the Smart Way



Operva AI Co-founder Chris Chua (right) and China Construction Senior BIM Manager Rob Sanchez

## Operva AI & China Construction

For a few weeks in March 2021, Chris Chua checked his emails in anticipation. The Co-founder of Operva AI had recently submitted a project proposal in response to a problem statement put out by China Construction and was eagerly awaiting their response.

**“ We now better understand the pain points of the construction industry. This helps us in innovating new solutions that solve real-world problems and are field-tested by the industry. ”**

- Chris Chua

Specialising in designing building inspection and defect detection solutions using drones and AI, Operva AI occupied a niche space in the technology sector. However, as a new start-up, it was difficult to attract partners and customers. “IPI helped us by sharing our technology on their Innovation Marketplace and introducing us to potential partners,” Chua shares. “We started to gain more exposure in the market and expand our network.”

One particular introduction was to the open innovation challenge under the Built Environment Accelerate to Market Programme (BEAMP) – a multi-agency initiative supported by IPI. It was there that they came across China Construction’s business challenge and felt they were a perfect match as the two companies shared the common goal of using drones to improve the construction process. If accepted, it would be Operva AI’s first time working with

an MNC and Chua was excited about the opportunity to put their solution to the test.

When he finally got the confirmation call, Chua was elated. Right away, he and his team rolled up their sleeves and got down to work. China Construction had been using drones for their construction progress updates and data analytics of the site. However, the existing process was time consuming and laborious, requiring several days to capture sufficient information. Operva AI’s proposed solution was the development of an automated drone photogrammetry application powered by AI and machine learning to shorten the time needed to obtain the necessary data. With that, Operva AI’s Airpland software was born.

Operva AI worked closely with China Construction’s Senior BIM Manager Rob Sanchez and his team, who provided feedback on the app development as



well as drone pilots to ideate with the team in user interviews. They took just five months to build the user-friendly mobile and web app that could help automate the construction firm's current process by creating automated flight plans and minimising human intervention. This also freed China Construction's drone pilots to focus on more important tasks.

With the prototype of Airland almost complete, Chua plans to launch the app in early 2022 and start onboarding more partners. "We will continue to implement more advanced features and create a full digital twin for users."

Besides adding a powerful new app to their portfolio, strengthening their R&D capabilities and enlarging their business potential, Chua is also grateful for the less tangible benefits of the collaboration. "We now better understand the pain points of

the construction industry. This helps us in innovating new solutions that solve real-world problems and are field-tested by the industry."

The experience will stand Operva AI in good stead, as they expand their software solutions globally in 2022 and continue to design AI-driven solutions that enhance efficiency and streamline processes for the built environment industry.

Meanwhile, the team's collaboration with China Construction is still ongoing. "Believe it or not, due to COVID-19 restrictions, the first time I met the team from China Construction in person was during the photoshoot for this publication," says Chua. "It is amazing what we have been able to achieve just through video conferencing."

## Success Stories

# Empowering Workplace Training with AI



Business Intelligence and 8analytics  
Managing Director Dr Nina Tan

**8analytics,  
creo.hu Kft,  
Sestek  
&  
Vakif Katilim  
Bankasi A.S.**

For Dr Nina Tan, Managing Director of Business Intelligence and 8analytics (8analytics), co-innovation is not just a buzzword but a dynamic way to bring forth synergistic solutions that will benefit individuals, businesses and society in general.

It began in 2013 when Dr Tan's research established a significant correlation between personnel competency and work performance targets. Today, what started as her idea to enhance workplace learning and development by leveraging predictive intelligence, has evolved into a consortium project involving four companies and spanning two continents.

The consortium project on AI Machine Learning Platform (AIMLP) aims to enhance workplace learning and development by synergising 8analytics' competencies and behavioural-based training intervention platform with meta-communication cues capabilities like voice tonality, body language, gestures, facial expression and cognitive behaviours.

However, while 8analytics has in-depth global experience as a business advisory providing visual business intelligence through predictive data analytics, it needed other meta-communication analysis capabilities to bring the project to fruition. For this, Dr Tan reached out to IPI.

From supporting 8analytics in crafting a Tech Need post to publishing it on IPI's Innovation Marketplace and the 2nd EUREKA GlobalStars-Singapore call, to sieving through the responses, IPI worked closely with Dr Tan to identify the right partners. This led to her connecting with three global research and business partners, which are creo.hu Kft (CREO), a Hungarian software company with strong competences in AI; Vakif Katilim Bankasi A.S. (Vakif), a Turkish bank with a R&D centre specialising in adapting technology in digital process automation, data analysis, machine learning and blockchain to drive customer experience; and Sestek, a global technology company that designs conversational AI and analytics solutions for brands to work more efficiently.

After several rounds of discussions, Dr Tan decided that she could dovetail the expertise of all three companies to enhance 8analytics' platform - CREO for its capabilities in natural language processing, semantics, emotion and gesture analysis, and electroencephalogram (EEG) signal processing; Vakif for its emotion

**“ Working with IPI enabled us to explore opportunities with complementary intervention technology partners to strengthen the value proposition to market within Asia and into Europe. ”**

- Dr Nina Tan

and motion analysis system; and Sestek for its conversational analytics powered by speech technologies.

But the collaboration was not without its challenges. With English not being the primary language for some of her partners, communication was a key hurdle. Recognising this, the team supported each other, taking time to explain specific points and clarify discrepancies. Another challenge was the vast amount of data needed on Asian and Western facial emotions, gestures and voices. Once again, the partners' rallied together and agreed to gather enough data to build an accurate and reliable model.

"It is important to note that we have different professional backgrounds and also come from different cultures. It means that our working styles and communication patterns are different. I think that the first months of our collaboration was a learning curve for everyone," says CREO's Managing Director, László Grad-Gyenge.

Hacer Özmen Yilmaz, Sestek's Senior R&D Project Coordinator, adds, "We worked very closely despite the different time zones. With 8nalytics' coordination, the project has been proceeding according to plan."

Already, the team is in the process of test-bedding the pilot platform. Pleased with the achievements of the collaboration to date, Dr Tan attributes this to all partners having shared goals, mutual trust and frequent communication. "It is incredible to see how the consortium partners' technologies synergise to produce holistic insights."

Although the project is scheduled to wrap up in the second half of 2022, this will not spell the end of the alliance. Once launched, the solution will seed diverse licensing and commercialisation opportunities around the globe – something that the consortium wants to actualise together.

Individually, each partner has grown in various ways as a direct result of the collaboration. "The AIMLP project gives us experience in a different domain and allows us to learn the needs of other sectors," says Hacer.

For Bulut Karadağ, Vakif's R&D and Innovation Service Manager for their IT Strategy and Governance Directorate, the global nature of the project has been an eye-opening experience. "We usually carry out national projects on emotion and motion analysis on Caucasian people. Thanks to our work with 8nalytics, we are improving our ability to do international projects as well as gain new face datasets for testing."

As for 8nalytics, Dr Tan expects to apply the advanced technology created to help even more companies and individuals grow and thrive. "Working with IPI enabled us to explore opportunities with complementary intervention technology partners to strengthen the value proposition to market within Asia and into Europe," she says. "By uniting our strengths, we are able to create an AI-assisted and automated novel learning platform that will meet the training and development needs of companies in these regions and possibly beyond."

## Success Stories

# Plant-Based Food for a Sustainable Future



From left: Chen Ying Jie, Consumer Centric Innovation Manager, Food Innovation & Resource Centre, Singapore Polytechnic; Joel Chan, Project Manager, Food Innovation & Resource Centre, Singapore Polytechnic; Lee Van Voon, Production Manager, StemCell United; Kris Tan, Product Development Manager, StemCell United

## StemCell United & Food Innovation & Resource Centre

When Philip Gu spoke at IPI's first Aquaculture Innovation Webinar in March 2021, he never expected that it would jumpstart an exciting collaboration in sustainable food manufacturing. As the CEO of StemCell United (SCU), he had spearheaded the marine plant-based biotechnology company's foray into food, nutrition, healthcare and cosmetic products. The company had recently set up a seaweed germplasm seed bank and had their sights set on becoming a plant-based food manufacturer using a mix of various microalgae.

As he shared the multiple applications of SCU's plant-based extracts during the webinar, IPI saw the potential to further their innovation through collaboration. After scanning through possible technology partners within Singapore's ecosystem, Singapore Polytechnic's Food Innovation & Resource Centre (FIRC) stood out.

From the first meeting, the synergies were clear. "SCU is a front-runner in marine sustainability," explains Joel Chan, FIRC's Project Manager for this collaboration. "Their vision to develop plant-based marine food as sustainable future food options is in sync with our role in co-creating a sustainable ecosystem to address Singapore's food security goals."

Following several rounds of discussions, SCU decided to engage FIRC as their food technology consultant to expedite their development of western vegan foods, specifically plant-based fish fingers, sausages, beef and chicken patties. "IPI played an important role in introducing us to FIRC and facilitating the discussions which led to the signing of the product development agreement," says Gu. "Along with our staff Lee Van Voon and Kris Tan, our team's end goal is to create high quality plant-



Plant-based fish fingers are one of the products developed by FIRC for SCU.

based food from the different varieties of macroalgae farmed by SCU and formulate a suitable recipe for mass production."

After calibrating, ideating and setting project targets, both sides got down to work. FIRC dedicated six professionals including Chan and their Consumer Centric Innovation Manager Chen Ying Jie to accelerate this product innovation journey, which featured regular joint tastings and discussions with SCU to achieve the desired taste profiles. Within six months, the partnership experienced breakthroughs in the development of various plant-based meat analogue products.

**“ IPI played an important role in introducing us to FIRC and facilitating the discussions which led to the signing of the product development agreement. ”**

- Philip Gu

With product innovation going according to plan, SCU turned its attention to commercialising their new vegan foods. For this, they teamed up with VeganBurg, a local plant-based burger chain with a presence in Singapore and the United States. “We will co-invest in a plant-based food manufacturing facility in Singapore. The factory will directly supply the ingredients used in all VeganBurg restaurants,” explains Gu. “Hence, FIRC has a critical role in ensuring the product is suited to mass market palates and can be scaled up commercially and globally.”

Buoyed by their initial success, the FIRC team is forging ahead to co-develop more delicious and nutritious products. “The collaboration with SCU has brought

about new perspectives and expanded the capabilities of our existing technological solutions. We hope to proliferate the technology to uplift more companies, create more sustainable food options and secure a sustainable food supply for tomorrow,” says Chen.

The future is also not far from Gu’s mind. With the plant-based products coming on stream, SCU expects to expand their team and grow the business further. Beyond the bottom line, the launch of the innovative food items will mark a fulfilment of the company’s larger aim to produce alternative proteins as part of Singapore’s 30 by 30 vision – harnessing the potential of plant stem cells to nourish both people and planet for the generations to come.



# GROW FASTER

When it comes to innovation, we help SMEs stand on the shoulders of giants. By tapping on the expertise and experiences of industry veterans, businesses are able to grow faster, accelerate their learning curves and leap ahead in their innovation journeys.

Faces of IPI

# Driving Business Growth with Advisors

*The Innovation Advisors Programme (IAP) plays a key role in IPI's strategy of catalysing innovation among Singapore-based, technology-centric SMEs and start-ups. Started in late 2019, the IAP connects local firms with well-regarded industry veterans, who provide tailored advisory aimed at helping companies accelerate business growth through leveraging technology and innovation.*



*Helping the division is Khor Aik Lam, an experienced leader in international partnerships, business model innovation and technology solutioning. He reflects on the programme's progress to date and shares his thoughts for its future.*

**Khor Aik Lam**  
Head, Innovation  
Advisory  
IPI

The Innovation Advisory division is just two years old. As a young team, we function very much like a start-up. In facing similar resource constraints, we have to be nimble and creative to persevere against the odds. As a result, the programme's value proposition has gone through many iterations, and we are still refining it while strengthening our business processes and engaging new customers. We are a work in progress that gets better at every turn.

One of the best parts of my job is working with exceptionally experienced industry veterans and an amazing team to engage Singapore companies and bring real impact to their business. Every project differs in scope and complexity, which means I get to learn new things every day from both our clients and the Innovation Advisors (IAs).

**“ I have personally been inspired by how these veterans have generously given their time to share their experiences and insights, often going above and beyond to equip companies for success. ”**

- Khor Aik Lam

All our IAs are successful individuals who genuinely want to help businesses in Singapore. Each one is thoughtfully handpicked by our team for his or her years of domain experience in innovation and business at regional and global levels. The vast majority have held senior management positions over several decades at large corporations and are well connected to the global ecosystem of their respective sectors. People are often amazed that we are able to assemble such a powerhouse of veterans with global standing. I have personally been inspired by how these veterans have generously given their time to share their experiences and



From left: Peter Tay, Deputy Head, Innovation Advisory; Khor Aik Lam, Senior Manager, Innovation Advisory; Faith Teng, Senior Manager, Innovation Advisory; Derek Yip, Senior Manager, Innovation Advisory

insights, often going above and beyond to equip companies for success.

When we introduce the right IA to a business with genuine pain points that is willing to listen to alternative views, has the ability to follow up on advice and is ready to address underlying needs, we have a recipe for success on our hands. Although it has only been two years, there are many projects that are on the brink of emerging stronger as a result of our IAs' support, with at least one on track to double its revenue in the next few years.

One particularly memorable session I participated in was between IA Dr Rebecca

Lian and a food service company. With her decades of experience in helping R&D leadership positions in Nestle, it took her just a few minutes to correctly diagnose the food science behind the company's challenge and give them a practical solution on the spot. The company was so impressed that they immediately decided to join the IAP!

What excites me and my team is seeing the companies we support realise their potential as a direct result of the IAP. In the road ahead, we look forward to adding value to more SMEs and welcoming competent and motivated IAs on board to meet the evolving business and innovation needs of companies amid an ever-changing global landscape.

## Success Stories

# Saving the Planet One Drink at a Time



SinFooTech CEO Jonathan Ng (left) and Innovation Advisor Dr Ong Mei Horng

## SinFooTech & Innovation Advisor Dr Ong Mei Horng

SinFooTech is all for creating a cleaner, greener future. So, when the local start-up discovered a method of turning soy whey – a by-product of tofu production – into a fruity and floral beverage, they spied a tasty opportunity for an alcoholic drink that checked all the eco-friendly boxes.

**“ As we continue developing more products, we hope for more opportunities to work with Dr Ong Mei Horng and IPI to grow our business and reach new markets. ”**

- Jonathan Ng

With that, Sachi was born. Containing 7 percent alcohol-by-volume with a similar flavour profile to Japanese sake, Moscato and apple cider, SinFooTech knew they had a winner on their hands. However, there was just one snag. Sachi had only been produced in small batches under laboratory conditions so far. Upscaling and streamlining their processes to meet the high standards needed for commercialisation and licencing was another ball game.

Realising what they were up against, CEO Jonathan Ng turned to IPI for help. “IPI is the catalyst of innovation and we hoped to tap their ecosystem of advisors to solve the technical problems our licensees might face, such as filtration and shelf life.”

After undergoing a thorough understanding of the company’s pain points and carefully selecting the best solution and advisor for them, IPI paired SinFooTech with with IA Dr Ong Mei Horng, a food science expert with decades of experience in R&D innovation and commercialisation in the F&B industry. The company’s confidence in Dr Ong was cemented in the first meeting. “Dr Ong very professionally and patiently

listened to and understood our challenges, requirements and expected outcomes. Within two hours, we were able to pinpoint many areas of improvement and she offered suggestions to improve our research. It was super efficient!” recalls Ng with a smile.

On her part, Dr Ong was intrigued by Sachi as an environmentally sustainable product. “It is such a brilliant idea to apply brewing science and technology to turn tofu whey into alcoholic beverages. In the process, SinFooTech is not only creating new products, but also bringing soy manufacturing closer to a circular economy.”

From brewing to bottling, Dr Ong offered advice to extend the shelf life of the product and connected the SinFooTech team with other industry veterans and domain experts. Through her efforts, they were surrounded with a wealth of fermentation, filtration and clarification knowledge as well as commercial insights into the brewing industry.

One critical obstacle was SinFooTech’s difficulty in replicating the filtration techniques on a larger commercial scale. As Sachi is produced using a by-product from

food manufacturers, it cannot be brewed using conventional methods for beer or wine. For this, Dr Ong discussed potential solutions with a veteran master brewer and filtration expert who recommended various filtration and separation techniques. What followed was months of trials before the team successfully developed specialised technology to ensure consistency in the product's purity and taste profile.

However, the new technology greatly reduced the conversion rate of soy whey to Sachi and the team was bent on achieving a 100% recovery rate. Recognising that this was unrealistic, Dr Ong kept them focused on creating a product that meets consumers' expectations and is commercially viable.

After five years of research, coupled with bespoke advice from Dr Ong, Sachi was officially unveiled to the public in August 2021 to rave reviews from wine lovers to alcohol newbies alike. Today, the SinFooTech team is back in the laboratory busy developing different product variants including a carbonated version and potentially a soy whey spirit distilled from their soy wines.

"We are still in contact with Dr Ong," explains Ng. "Our experience with her was an enlightening and enriching one. As we continue developing more products, we hope for more opportunities to work with her and IPI to grow our business and reach new markets."



# Hear from Our Partners



**Albert Pozo**  
*IPI Innovation Advisor*  
*Independent*  
*Non-Executive Director*  
*& Digital Transformation*  
*Consultant*



Never before in IPI's 10 years of history has innovation and technology played a more important role to enable SMEs' business transformation. As we enter a new post-COVID era, individuals and enterprises need to adapt and leverage the opportunities associated with a fast economic recovery cycle.

I am honoured, as one of IPI's Innovation Advisors, to be able to contribute my business and technology expertise towards Singapore SMEs' fast recovery and future success.



ITE College Central's Technology Development Centre (TDC) has enjoyed a successful journey of innovation over the years, not only due to the efforts of our dedicated team internally, but also through long-term partners like IPI.

IPI's emphasis on collaboration and open innovation catalysed our innovative technological solutions' ability to bring about positive social impact for the future of our community. TDC has benefited greatly from IPI's extensive network and open innovation services.

Congratulations on IPI's 10th anniversary and we look forward to many collaborations with IPI.



**Dr Lee Teck Kheng**  
*Director, Technology*  
*Development Centre,*  
*ITE College Central*



I would like to congratulate IPI for achieving its first 10-year mark.

I am glad I can share my experience in contract manufacturing as an IPI Tech Expert to help innovators today realise their commercialisation goals quickly.

IPI plays an important role by matching suitable new innovative technologies with our local SMEs or entrepreneurs. Its pool of consultants and experts contribute to a strong ecosystem of Innovation with Impact. I hope IPI will continue this great effort for many decades to come.



**Garrick Soon**  
IPI Tech Expert  
Director, Prototyping



**Jason Fong**  
CEO & Founder,  
Wholesome Savour



As a start-up, we face many challenges but I am grateful for IPI's invaluable support. They have gone the extra mile in seeking growth opportunities for Wholesome Savour in the food industry. This will always be appreciated.



Global open innovation outside of the region is a must, not an option, and will accelerate in the future. We hope Singapore and Korea will create various technological innovations through partnerships that are formed with IPI's support.



**Ki Sool Chang**  
President, Korea  
Association of University  
Technology Transfer  
Management (KAUTM)



**Mark Wee**  
*Executive Director,  
DesignSingapore  
Council*



IPI has been a strong and supportive partner of the DesignSingapore Council and our work to drive human-centred innovation through design. It has only been a decade, but your success and unwavering commitment in enabling Singapore enterprises to grow beyond and innovate through services like the creation of networks and knowledge exchanges, and providing advisory services, has been inspiring to say the least.

I cannot wait to witness even greater transformative change in our enterprises, brought about by IPI's work, and of course, through our continued collaboration in realising the power of design and innovation!



Where unmet clinical needs call for innovative technological solutions, working with IPI through its innovation marketplace has provided us a platform to surface clinical challenges and seek meaningful partnerships with enterprises for co-development of impactful solutions that can benefit our patients and healthcare systems.

We are also grateful for the opportunity to showcase our tech offers for potential licensing and collaboration opportunities annually at TechInnovation, so as to facilitate the translation of technology into commercialisable products that can be made accessible to those who need them.

On behalf of the National Healthcare Group, our heartiest congratulations to IPI on your 10th anniversary!



**Louis Ang**  
*Director, NHG Group  
Research, Centre for  
Medtech and Innovations  
(CMTi), Translation  
Research Office (TRO)  
and Clinical Scientists  
Development Office (CSDO)*



**Isabella Tan**  
*IPI Innovation Advisor*  
*Board Member, Halogen*  
*Foundation Singapore*



The experience of supporting local SMEs and start-ups as they forge ahead with market expansion and innovation in mind has been both humbling and fulfilling.



I am one of the privileged few who have maintained engagements with IPI since its incorporation. I am impressed by IPI's key founding team for showing great entrepreneurial spirit and continuously driving the organisation to new heights through the years. This deserves high commendation given the challenges in the speed of innovation, technological changes and the resources that the team could leverage on.

Mdesign has benefited substantially from new business leads and IP quests from these collaborations. With new leadership strengthening the team, I am excited to see IPI's renewed passion that will make a significant contribution to the IP landscape and positively impact businesses in the region.



**Cheong Siah Chong**  
*IPI Tech Expert*  
*Founder and Chairman,*  
*Mdesign Solutions*



**Tan Heap Jui**  
*Director, Office*  
*of Technology*  
*Development,*  
*Republic Polytechnic*



At Republic Polytechnic, we work closely with IPI to raise the capabilities of our local enterprises through technology commercialisation and industry outreach initiatives. Our heartiest congratulations to IPI on its 10th anniversary and we look forward to many more years of collaboration.



**IPI**  
SINGAPORE



2011 - 2021  
A Decade of Impact.  
A Journey of Innovation.

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