



SIT, Enterprise SG and JTC Jointly Launch FoodPlant to Advance Food Innovation

The S\$13 million facility will bolster Singapore's food innovation scene through Small-Batch Production and R&D

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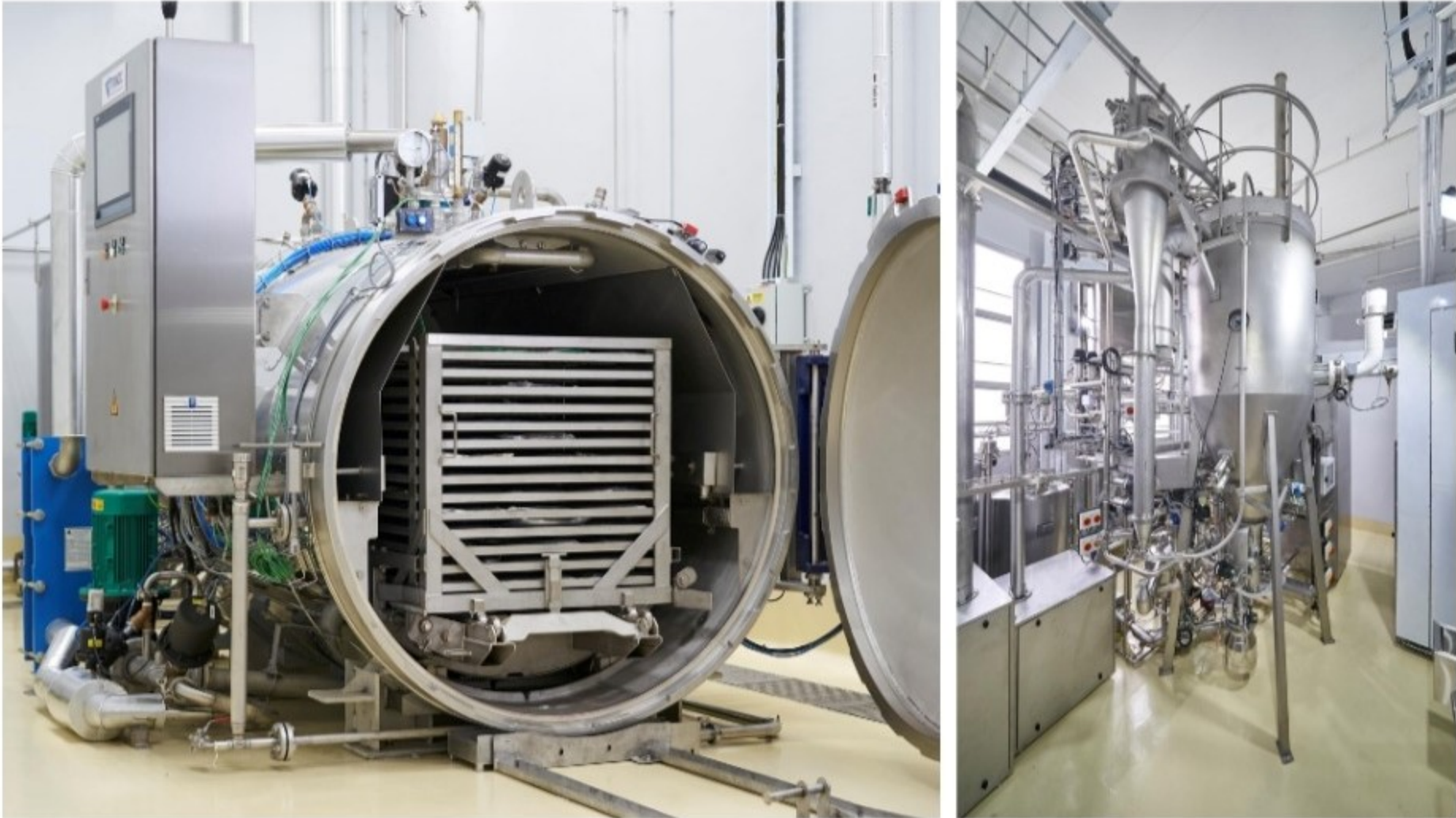
The team at FoodPlant include (from left): Ms Serene Teo (Technical Specialist), Ms Fiona Lee (Deputy Head), Mr Ong Wai Peng (Project Executive), Dr Lim Bee Gim (CEO), Mr Caleb Neo (Intern), Ms Angela Goh (Project Executive), Mr Vincent Koh (Technical Officer) and Mr Lim Eu Chin (Senior Technical Specialist).

On 22 April 2022, the Singapore Institute of Technology (SIT), Enterprise Singapore (Enterprise SG) and JTC jointly launched FoodPlant, Singapore's first shared facility for small-batch food production that is licensed by the Singapore Food Agency (SFA). Located in JTC Food Hub @ Senoko, the facility's opening was officiated by Mr Heng Swee Keat, Deputy Prime Minister and Coordinating Minister for Economic Policies.

FoodPlant provides affordable access to a wide range of pilot scale equipment, research and development (R&D) consultancy services, and upskilling courses. These services aim to equip local companies with enhanced capabilities to develop new, innovative food products in response to evolving consumer preferences. FoodPlant is expected to benefit at least 200 food manufacturers and support the development of at least 400 new food products by 2026.

The 1,107 square metre facility boasts 12 rooms with specialised food production equipment, including:

- a Twin-Screw Extruder which employs a High Moisture Extrusion Technology (HMET) to texturise plant-based protein into viable meat alternatives;
- a Pulsed Electric Field (PEF) system for microbial inactivation, improved extraction, drying acceleration, amongst other advantages;
- a Retort machine that provides commercial sterilisation of food to extend shelf life and storage under ambient condition by packing and heating food within flexible retort pouches or glass jars; and
- a Spray Dryer with an integrated fluidised bed to enable creation of products such as milk powder, instant beverages and nutrient-dense food to address elderly needs.



Companies will have access to specialised equipment such as the Retort machine (left) or the Spray Dryer (right) at FoodPlant.

The equipment aid companies to expand their product portfolios and penetrate new consumer segments. For example, companies may use the Twin-Screw Extruder to produce plant-based meat analogues. Additionally, companies looking to expand abroad can make use of the Retort or the Spray Dryer machines to extend product shelf life or change product formats to meet various requirements.

Food products manufactured in the facility can be sold commercially as they are produced in an SFA licenced facility. Companies will be able to trial new products in small batches and sell them to consumers to conduct market testing. This will allow them to take in feedback at an early stage in order to sharpen their product development process.

FoodPlant will also provide skills training for food technologists to strengthen the industry's adoption of advanced food processing technologies. The industry can look forward to specialised upskilling courses such as "High Moisture Extrusion Technology (HMET) for "Meat Analogues", "Food and Feed Extrusion Technology" and "Retort Processing". The courses are led by local and foreign experts such as FoodPlant's Chief Executive Officer Dr Lim Bee Gim, who is also an Associate Professor at SIT. Courses can also be tailored to companies' specific needs.

To boost collaborations among local food companies as well as cross-border partnerships, FoodPlant and SIT signed a Memorandum of Understanding with Foodbowl New Zealand, a government-supported, pilot-scale food processing facility located in South Auckland on 20 April 2022. The parties will work with each other to develop capabilities in food innovation and manufacturing across shared facilities through knowledge sharing and extension of industry networks.



Guest-of-Honour Mr Heng Swee Keat (second from right), officiating the opening of FoodPlant with (from left) Dr Lim Bee Gim (CEO, FoodPlant), Mr Bill Chang (Chairman, SIT Board of Trustees, and CEO, Group Enterprise and Country Chief Officer Singapore, Singtel), and Professor Chua Kee Chaing (President, SIT).

SIT President Professor Chua Kee Chaing shared: "FoodPlant is a key component in SIT's sustainable food innovation programme which aims to help local companies grow and innovate through food technology. It is an enabling platform for companies to perform small-batch testing and production of innovative food products developed through R&D collaborations with SIT, other food R&D players or among themselves. Its affordable pay-per-use model lowers the barriers to market entry such as high upfront costs in setting up a manufacturing plant or being charged for minimum order quantities when accessing commercial food processing equipment. Through FoodPlant, SIT hopes to contribute to Singapore's transformation as a food innovation hub."

Mr Jeffrey Siow, Managing Director & Chief Operating Officer, Enterprise SG, said: "Many of our companies are developing new products like plant-based meat alternatives or cell-cultured proteins through FoodInnovate to meet growing consumer demand. FoodPlant provides these companies access to advanced food processing equipment, technologies and expertise, which in turn enables faster innovation and time to market."

Mr Alvin Tan, Industry Cluster Group, Assistant Chief Executive Officer, JTC, said: "The opening of FoodPlant is a significant milestone in strengthening Singapore's food manufacturing ecosystem. FoodPlant will not only plug the gaps that food innovators face today but also provide a platform for partnerships and capability development. I look forward to seeing more collaborations amongst food innovators and exciting new products launched."

Ahead of the launch, FoodPlant had secured 17 membership sign-ups by companies and individuals who are keen to embark on or further their innovation journey. These companies include Agropcorp International, Dahmeh Pte Ltd and SGProtein. Companies can access FoodPlant's facilities and consultancy services. Interested parties can visit <https://www.foodplant.com.sg/> to find out more.

To read the full story, please click [here](#).

Capital! SITizens Get a New Bursary to Count On

The newly established Bond Capital Bursary at SIT, made possible by Mr Lim Sze Wee, will nurture deserving undergraduate students throughout their entire course of studies from Academic Year 2023/24 onwards

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Future undergraduates at the Singapore Institute of Technology (SIT) who are eligible for financial aid can look forward to a new source of support beginning in Academic Year (AY) 2023/24, when the first two **Bond Capital Bursaries** will be awarded.

Made possible by a generous endowed gift from Mr Lim Sze Wee, the Bond Capital Bursary (valued at \$5,000 each) aims to support first-year students enrolled in any full-time degree programme offered at SIT over their entire course of studies. At steady state (from AY 2026/27 onwards) at least four and up to five Bursaries will be awarded, each year and in perpetuity.

Said Mr Lim: “SIT’s cause to maximise the potential of its students to become thinking tinkerers, lifelong learners and catalysts for transformation who will care for the community is a compelling one. I hope the Bond Capital Bursary will help ensure that these students will be able to make full use of all their learning opportunities at SIT, without being hindered by financial hardship and worries. Through their SIT education, I hope the bursary recipients will be enabled to create a better tomorrow, not just for themselves but also for their families and the community.”

Said Prof Chua Kee Chaing, President, SIT, “We are very thankful for Mr Lim’s generous gift to nurture our students. The endowed Bond Capital Bursary, which aims to support the recipients over the entire course of their studies, will be especially impactful for our undergraduate students, many of whom come from less privileged backgrounds and are the first in their families to attend university.”

Largest Private Microgrid in Singapore at SIT's future Campus in Punggol to Support Singapore's Energy Transition

SIT's partner SP Group doubles initial investment to enhance the microgrid's capabilities for a low carbon future

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An artist rendering of the East Zone in SIT's upcoming Punggol campus.

The Singapore Institute of Technology (SIT) has announced an additional investment of up to S\$8 million by SP Group (SP) to enhance the capabilities of the earlier planned microgrid at SIT's future Punggol campus, more than doubling SP's investment first announced in 2017. The microgrid will be the largest private microgrid in Singapore when it is completed in 2024, and the first Multi-Energy Microgrid (MEMG) to be constructed on a university campus in Southeast Asia.

SP, a leading utilities group in the Asia Pacific that focuses on low-carbon, smart energy solutions, will design, build and operate the MEMG to fully support SIT's energy demands according to electricity generation capacity. It will supply more than 2000 MWh of electricity annually from photovoltaic solar panels, equating to 4% of the total energy needs of the campus. The microgrid is customised for Singapore's tropical climate and will provide a sandbox environment to testbed Singapore's future energy system while minimising risks of disruptions to operations. It will be able to integrate electricity, thermal and renewable sources of energy into a unified smart energy network, to support applied learning, research and experimentation in a real-world environment.

With the new investment, the microgrid will be enhanced to integrate various low-carbon solutions including building-integrated photovoltaics and distributed energy storage systems. SIT and SP will also design a system that can further island buildings and certain floors from the national grid. The enhanced microgrid will also boast a hybrid AC (Alternating Current)/DC (Direct Current) building level grid and will allow for different building management systems to be tested and deployed.

With the enhanced functionality, the campus' MEMG will be a microcosm of Singapore's future energy system, supporting:

- technology and policy research in support of an increasingly distributed national grid with both AC/DC sub-systems, and various forms of distributed grid architecture and microgrid controllers to optimise for cost, resilience and carbon;
- next-generation power electronics to facilitate increasing bidirectional grid power flows; and
- innovative energy services to cater to the needs of different consumer segments.

Professor Chua Kee Chaing, SIT President, shared, "We are pleased that our collaboration with SP Group over the past few years has matured to a stage where we can explore new ground in areas that will help Singapore address issues of energy resilience and energy management. This augurs well for the country as we approach a future that is increasingly going to rely on sustainable and green sources of energy."

Please click [here](#) for the full story

Research for the Real World: Revolutionising Food Sustainability

How SIT is using research to tackle national concerns in Singapore such as food sustainability

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A raspberry-flavoured molecule equivalent to 100 tons of raspberries; turning coffee into alcohol; and lab-grown seafood – researchers in Singapore are crossing new frontiers in food tech. These breakthroughs are spelling out a promising future for food sustainability.

One university in Singapore is focused on research that contributes to this future. The Singapore Institute of Technology (SIT) is dedicated to applied learning, where they combine academia with real world industry partnerships to effect change.

Associate Professor Susanna Leong, Vice President (Applied Research) at SIT, shares how the university uses research to make a difference in the food sustainability space, and more.

Advancing Food Sustainability with Applied Research

Singapore’s ‘30 by 30’ goal aims to improve the country’s food security by producing 30 per cent of its nutritional needs locally and sustainably by 2030. SIT is contributing to this mission with its research in food sustainability.

“The goal of this research programme is to understand how we can sustainably produce plant-based food alternatives that can be both nutritious and affordable,” says Assoc Prof Leong.



Product image courtesy of Agrocorp International

SIT is embarking on a four-year joint research programme with agritech firm Agrocorp as part of this programme. The two had collaborated and created a plant-based cheese, HerbYvore (above), earlier this year. This new partnership will see them find ways to maximise the quality, yield, and functionality of plant-based proteins, as well as improve the extraction process of such proteins.

The programme hopes to uncover new methods of extraction that waste less water, use less chemicals, and upcycle agricultural waste. Greener methods of extraction can bring down processing and ingredient costs, reduce the amount of ingredients used to make food products, and enhance food quality.

The university also supports businesses in creating alternative proteins at its upcoming FoodPlant, a small-batch food production facility set up in collaboration with Enterprise Singapore and JTC. Food companies using this facility will have affordable access to cutting-edge technology and equipment, and R&D consultancy to help them scale and prepare for commercial production of their ingredients.

Bridging the Gap between Academia and Industry

SIT works closely with industries to tackle Singapore’s urgent needs through research beyond food sustainability. They focus on four other areas – energy resilience, sustainable infrastructure and maintenance, community health transformation and sustainable maritime engineering. These research programmes are also supported by technology such as AR, VR, 5G, and AI to future proof the research findings.

“The outcomes of these programmes are expected to help level up industry’s capabilities, enhance their competitiveness and boost Singapore’s status as a smart, sustainable and resilient nation,” says Assoc Prof Leong.

She adds that partnering industry in the university’s applied research pursuits keeps academic staff abreast with industry trends and knowhow. This is critical to train future-ready talent.

A Platform for Innovation

Companies can also work with SIT to develop marketable products and services by co-developing prototypes and workable products through projects. For example, a company with a new product idea can engage the Design Factory@SIT to identify problems in the product and come up with solutions. Once they have a viable solution, they can engage the Rapid Product Innovation & Development (RaPID) Centre to develop the first version of their product.

Students also benefit from these partnerships when they participate in these projects and receive mentoring by industry experts. Additionally, SIT works with companies to set up labs that mirror a real manufacturing environment. These labs expose students to real world manufacturing processes and give them the chance to develop problem-solving skills needed in the working world.

Industry-academia applied research partnerships are critical to shorten the time needed between knowledge creation and application. SIT hopes to champion more of such partnerships to bring real benefits to students, staff and industry.

*This article first appeared in [GovInsider](#).
For the full story, please click [here](#)*

SIT and TCOMS Form Strategic Partnership for Applied Research and to Jointly Nurture Engineering Talent

The MOU will strengthen Singapore's R&D efforts in sustainable maritime engineering and grow a future talent pool

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From left: Professor Chua Kee Chaing, President of SIT, and Professor Chan Eng Soon, CEO of TCOMS, at the MOU signing.

The Singapore Institute of Technology (SIT) and the Technology Centre for Offshore and Marine, Singapore (TCOMS) have signed a Memorandum of Understanding today to strengthen Research & Development (R&D) collaboration, and grow the talent pool for Singapore's Maritime, Marine & Offshore Engineering, as well as other ocean sectors.

This partnership will involve staff exchanges between the two partners to leverage the talent and expertise in both organisations, in areas such as naval architecture, fluid-structure interaction, as well as maritime autonomy and control. TCOMS will host SIT students on their internships. SIT will also be able to access TCOMS' R&D facilities, such as its ocean basin facility, for applied research and educational purposes. In addition, TCOMS and SIT will collaborate in applied research projects and events.



Second from left: Professor Chua Kee Chaing, with Professor Chan Eng Soon (second from right) sharing on TCOMS' capabilities, using the model of the TCOMS Ocean Basin.

Said SIT President, Professor Chua Kee Chaing: "As a university of applied learning, SIT is committed to nurturing industry-ready talent and innovate with industry. Sustainable maritime engineering is a key area of focus for us, and we look forward to working with industry to tackle new challenges including maritime decarbonisation, digitalisation as well as sustainable ship design. We are pleased to collaborate with TCOMS to strengthen Singapore's R&D efforts in sustainable maritime engineering and to build a pipeline of talent for the industry."

"TCOMS is proud to partner SIT to nurture Singapore's future engineering talent. As a national R&D centre dedicated to the Maritime, Marine & Offshore Engineering and other Ocean sectors, TCOMS seeks to offer an enriching opportunity to our researchers, academia and students to co-innovate with the industry and solve real world challenges," said Professor Chan Eng Soon, CEO of TCOMS.

For this and more stories, please click [here](#) to visit the SIT digital newsroom.

SIT and ISACA Singapore Chapter Sign MOU to Advance Student Development in Technology

Collaboration spanning areas such as academic awards, student development, talks and workshops will expand opportunities for real-world experience for SIT students

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The Singapore Institute of Technology (SIT) and the [ISACA Singapore Chapter](#) have signed a Memorandum of Understanding (MOU) to collaborate on activities spanning areas such as academic awards, student development, as well as talks and workshops.

This paves the way for students of SIT to expand their opportunities for real-world experience, whether through ideas for Capstone collaborations or assisting in seminars and conferences organised by ISACA. As a professional association focused on IT governance, risk, audit and cybersecurity, ISACA's network of professionals can share their considerable knowledge and insights on information technology, information security and innovation, to support SIT's efforts in preparing graduates for an increasingly digital world.

Professor John Thong, Deputy President (Academic) & Provost, SIT said, "The role of the infocomm technology professional is evolving constantly and there is a strong need for local talent to be equipped with the necessary knowledge and skillsets. We are appreciative of the contribution from ISACA that will support SIT to produce work-ready graduates. Our students will benefit from the early industry exposure and applied learning opportunity that ISACA provides."

Mr Peter Gwee, local chair of Young Leaders in Tech (part of ISACA One In Tech Foundation initiatives) and director of academic outreach at the ISACA Singapore Chapter, said, "ISACA Singapore has industry professionals who promote the 'positive' aspects of technology and the importance of adopting good and effective governance in the digital and cyber domains; thereby attracting the attention of government leaders, stimulating new ideas for industry and cited by academic authors' profiles in education for lifelong learning."

President of the ISACA Singapore Chapter, Steven Sim, added, "In this era of accelerated Industry 4.0, good domain expertise is crucial to achieve resilience by design in every industry. ISACA Singapore with its large membership base of experienced cyber leaders is glad to partner with SIT in skilling up the future cyber leaders of Singapore."

According to Dr. Chris Dimitriadis, Chief Global Strategy Officer at ISACA Global, "Skills gaps continue to persist in technology and cybersecurity roles. Through relationships like these, we better equip students, thereby better equipping organizations with the talent and knowledge they need to power innovation through trusted and secure technology."

For the full press release, please go to [SIT's Digital Newsroom](#).

Bringing Joy Through Service

SITizen Ambassadors Gaivin Tey and Darren Loo are making positive ripples in the community through volunteer work

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Year 3 Computer Engineering undergraduate Mr Gaivin Tey has been volunteering since his secondary school days. When he enrolled in SIT in 2019, he wanted to continue serving, so he took part in an event organised by the SIT Community Service Club for residents of the St Andrew’s Nursing Home in Taman Jurong.

“It was extremely memorable for me as I felt that I was able to make an impact on the elderly and bring them joy, even though they were unable to go outside given the haze situation at that time,” he said.

At SIT, Mr Tey went on to lead the Community Service Club as its president in 2020. His most memorable project was “stARTS with the heART”. Held amid the COVID-19 outbreak, it was a collaboration with the SIT Silat Club and the Running Club to engage with beneficiaries from Thye Hua Kuan Nursing Home in Hougang. The two-part event included a compassion run by the student volunteers, and a session where the volunteers guided the elderly to work on simple canvas paintings via Zoom, while also sharing their own artworks. Mr Tey and his team were on-site with tablets and laptops to ensure that the event ran smoothly, and to assist as needed. The week-long event saw the participation of more than 70 SIT student volunteers and 60 beneficiaries.

Mr Tey’s enthusiasm for volunteering proved infectious. He recalled how a classmate, who did not have any volunteering experience, was finally convinced to do so for an event called “With Grit Stay Fit”, where they recorded simple exercises for the elderly to stay active and engaged while staying indoors during the pandemic. His efforts were recognised at the SIT Student Leader Appreciation Night 2021 where he received the SIT-DNA Award: Catalyst for Transformation.

Another SITizen who is making life a little better for others is Mr Darren Loo, a second-year Air Transport Management student. At the start of the “circuit breaker” in April 2020, he decided to volunteer after seeing a Facebook post made by Mr Tan Chuan-Jin, Speaker of Parliament and the Member of Parliament for Marine Parade GRC. Mr Loo is now a social team volunteer in Kembangan-Chai Chee, visiting residents and distributing food rations to those who need it.

He recalled how volunteers from SPD (Society for the Physically Disabled) supported his father who had had a stroke. They helped his father throughout his rehabilitation and after that, to adjust back to work. “I was in National Service at the time. Someone was there for my family when I really needed it. In return, I now dedicate my life back to helping others in the community,” said Mr Loo, who is also volunteering at a soup kitchen and for a sustainability community project involving upcycling food wastage.

Both Mr Tey and Mr Loo are SITizen Ambassadors, a group of student leaders who exemplify the SIT-DNA. They serve as strong advocates of SIT to their peers and members of the public by sharing about the SIT experience.

Said Mr Loo, “Sometimes what we do might seem to be the smallest thing but it really means a lot to others and you really see how much you can make a difference from their smiles.”



Mr Gaivin Tey (left) helping a beneficiary with her artwork on-site while another student volunteer guided the beneficiary via Zoom during the “stARTS with the heART” event organised by SIT students.



Mr Darren Loo in action at his constituency in Kembangan-Chai Chee, making sure residents receive their rations.

Getting Crafty with Fibre Arts

SITizens get busy with their hands, turning textures into a statement home décor piece at a workshop organised by the SIT Alumni Leisure Network

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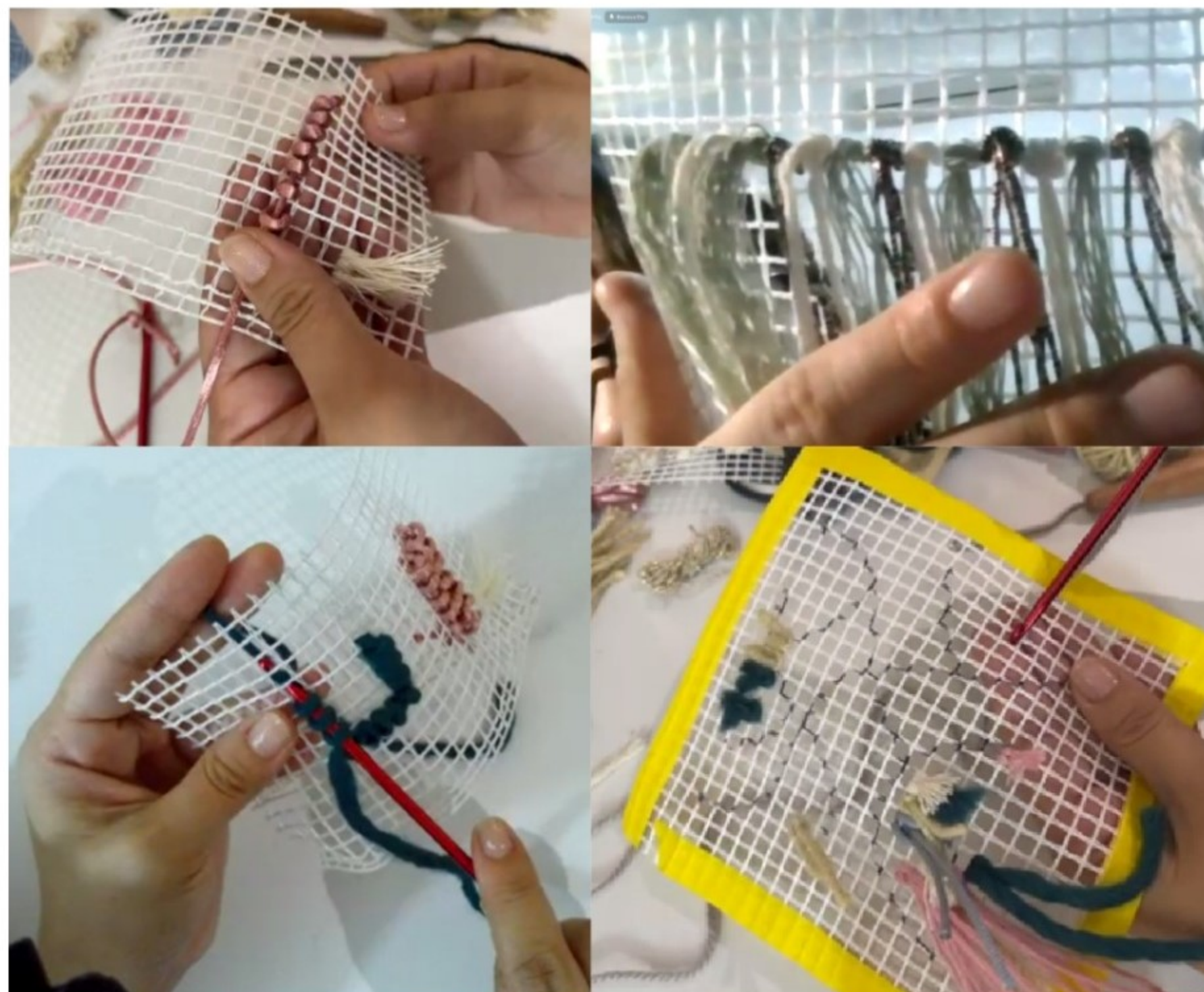


Soft,, fluffy, and colourful – there's no limit to the types of fibre art you can create on a canvas!

Fibre art is a unique type of fine art which uses materials such as fabric, yarn, as well as natural and synthetic fibres. On Thursday, 7 April 2022, SITizens spent two hours with fibre artist Ms Autumn Brown to learn how to combine a variety of textiles to create a tactile art piece at the Fibre Art Canvas Workshop.

Armed with a workshop kit containing materials such as yarn, felt, thread and silk ribbons, the participants were introduced to two fibre art techniques – latch hooking and locker hooking. By applying these techniques to their materials, they could create fluffy or fringe textures and combine them to create their art pieces.

This was Accountancy Alumnus Ms How Kah Hwee's first try at fibre art. "I enjoyed the exploration and play of different colours, textures and shapes to create an abstract outcome," she said. Due to limited time, she could not finish her piece, but intends to use it for decoration.



Using simple techniques, participants constructed an assortment of patterns and textures on mesh, which would result in a unique fibre artpiece.

Said Hospitality Business Alumnus Ms Lim Pei Shan: "It's relaxing as we could be creative in crafting our own pieces, and refreshing as there were new techniques which needed some getting used to, but once you get the hang of it, it was pretty fun!" she said. "The tools provided will allow me to explore more crafts in the future, all I need is to get the materials!"