NUS GRIP
GRADUATE RESEARCH INNOVATION PROGRAMME

NUS GRIP LIFT-OFF DAY

NUS Deep Tech Start-Ups Showcase

TEAMS

A Flagship Innovation Programme by:

NUS National University of Singapore | Industry Liaison Office

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AIWater
Every Drop Counts

Team members

Ching Kwek POOI (PhD)
Founder, CEO

Chuan Yee LEE (MEng)
Co-Founder, CTO

Boon Jun AW (BEng)
Founder, CDO

How Yong NG
Advisor

David BONG
Commercial Champion

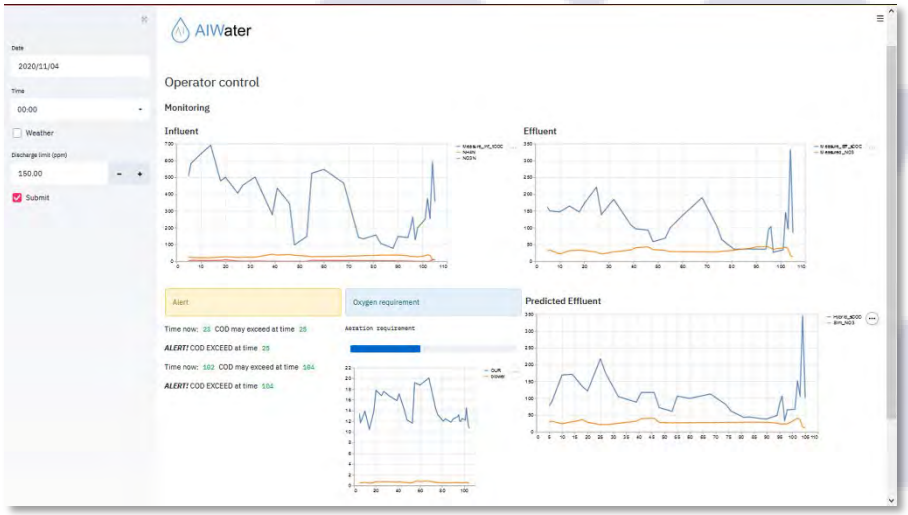
Jack SO
Venture Dev Mngr

Cynthia DUAN
Technology Mngr

Every drop counts

Wastewater treatment is crucial in modern society, treating wastewater into harmless effluent. However, most wastewater treatment plants are not optimized and face energy wastage and compliance issues.

AIWater utilizes both the power of AI and traditional process models to improve and optimize wastewater treatment plants. Our proprietary solution will optimize aeration of wastewater treatment plants, predict treatment performance and provide an advisory role to the operators. AIWater PRO™ will lower operating expenses, improve the aeration efficiency and reduce events of non-compliance. With these improvements, we aim to propel wastewater treatment towards sustainability.



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AProxy

Team members

Yan Shan ANG (PhD)
Co-Founder

Lanry YUNG (PhD)
Co-Founder

Hui Xian GAN (PhD)
Member

Pauline NG
Commercial Champion

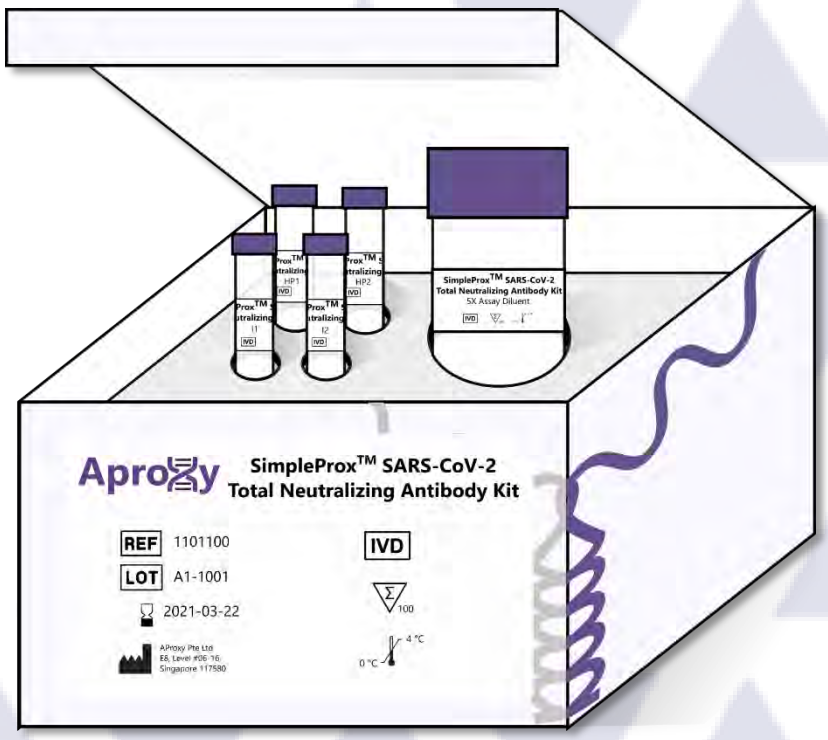
Chung-Pei OU
Venture Dev Mngr

Yoke Ping YONG
Technology Mngr

Lab Quality Results Simplified

AProxy delivers lab quality immunoassay with the speed and simplicity suitable for point-of-care test. Our first product, SimpleProx™, can detect SARS-CoV-2 neutralizing antibody level, which indicates protective immunity, within 30 minutes in a single step. With this patented solution, there is no need to trade-off test accuracy for speed.

AProxy is steadily expanding the panel of validated disease targets based on our SimpleProx™ platform technology, as we work towards a world where everyone can have a quick and actionable answer on their health status.



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AUXETICA

Team members

Balaji VENGATACHALAM (PhD)
Technology Lead

Vincent LEUNG (MBA)
Business Lead

Allan ONG
Commercial Champion

Roger CHEONG
Venture Dev Mngr

Mun Thoh MA
Technology Mngr

Always on your guard

Traumatic Brain Injuries (TBIs) in motorcycling/sports are caused by the rotational acceleration experienced by rider's/athlete's head and brain upon an oblique impact. Recent research studies have concluded that conventional helmets with EPS liners are ineffective in reducing the rotational acceleration in the event of an accident.

Auxetica's Brain Protection System (BPS) enhances the protective performance of a helmet by replacing the conventional EPS liner with a collapsible cellular liner. This liner's underlying meta-material architecture is specifically engineered for protection against both direct and oblique impacts, thereby greatly reducing the risk of sustaining TBIs during an accident.

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AXELR8

Team members

Ila MITTAL (MBA)
CEO

Satish PANDA (PhD)
CTO

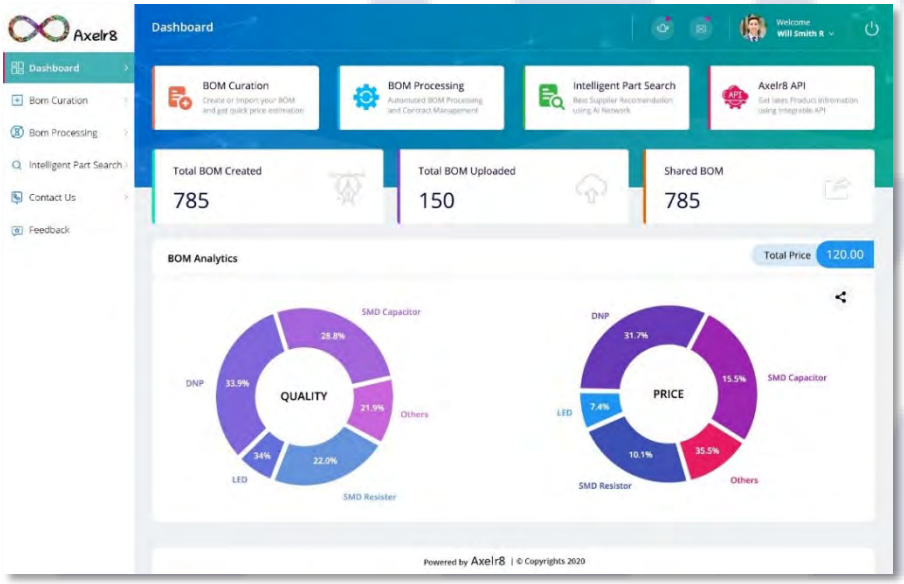
K.S LEE
Commercial Champion

Kevin LEUNG
Venture Dev Mngr

Chih Hong EYOH
Technology Mngr

AI-powered Platform for Design Schematic to Bill of Material Creation

Currently an engineer in fast-paced electronics sector takes twice the amount of time to procure parts at three times more expensive than production price. Axelr8, an AI enabled e-Sourcing platform where engineers, designers and procurement professionals can deconstruct a product into 3 tier Bill of Material (BOM), create BOM from design schematics, find, search and compare parts across distributors within electronics and semiconductor industries. Axelr8 Platform can interact with suppliers instantaneously to request quotes. Furthermore, Axelr8 Platform provides the best suppliers based on given criteria.



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EGGOL

Team members

Tianyu SHAO (MSc)
CEO

Jiaqi WU (PhD)
CTO

Tianji SHAO (MSc)
CMO

Barnabas Chan
Commercial Champion

George HAN
Venture Dev Mngr

Haujiun CHEN
Technology Mngr

Revolutionary New Kitchen Experience

The vision of the company is to revolutionize the kitchen experience with cutting-edge technology. For a start, we aim to reduce manual labour used during the cooking process and our initial focus is on a key and important ingredient in our diet - eggs. Our product, EGGOL, is a fully automated, multi-recipe egg cooking machine, which works similarly as an automatic coffee machine. Customers get their favourite egg dish at the press of a button.

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FACI-FI

Team members

Tze Jie (TJ) EEY (BEng)
Co-Founder, Business & Venture Lead

Amir BARUCH (BSc)
Co-Founder, Product Development Lead

Nir REGEV (MSc)
Co-Founder, Technology Lead

David ISAAC
Commercial Champion

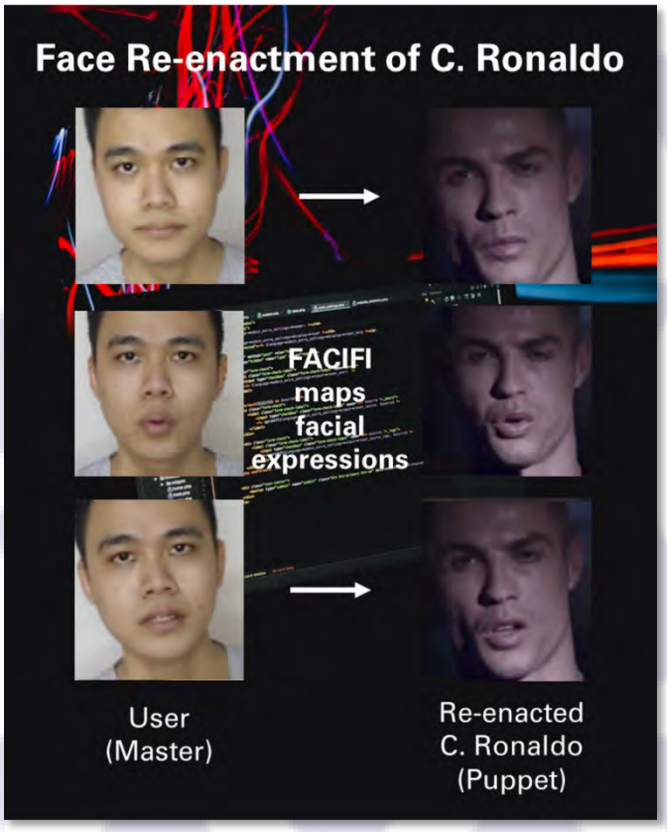
John PHILLIP
Venture Dev Mngr

Cynthia DUAN
Technology Mngr

Defining Animation-4.0: Taking Facial Re-enactment To The Next Level

FACIFI is a full AI media technology solution that allows full, photorealistic control of faces in video and animation. We can make any actor look like anyone else, and make any image act in the way we wish.

Powered by FEAAS (Face re-Enactment As A Service), an autonomous software that aims to drive automation in CGI development and 3D animation that are constrained by expensive and highly manual work. Using FEAS may shorten production time by 60%, enabling faster turnaround for businesses.



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GranuSmart™

Revolutionize Granular Food Quality Control

Team members

Zhiyong ZHANG (PhD)
CEO

Xiaolei YIN (MSc)
CTO

Zhiyuan YAN (MSc)
COO

Huan Ping LOW
Commercial Champion

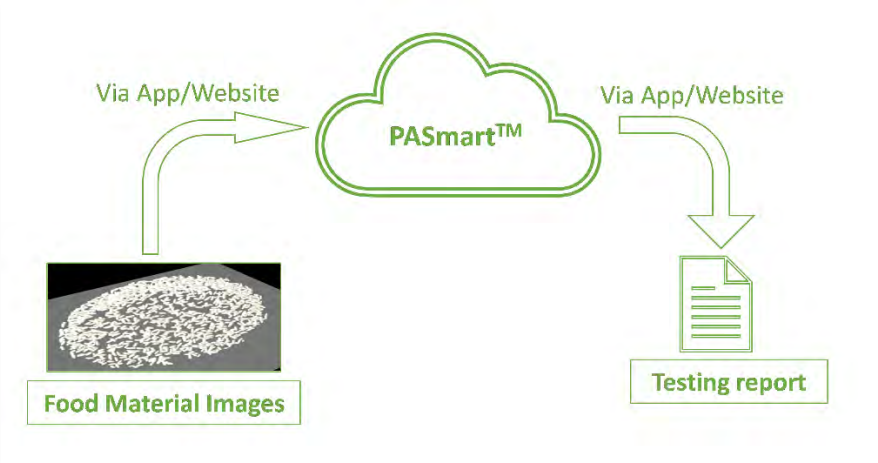
Jack SO
Venture Dev Mngr

Ziying YUAN
Technology Mngr

Revolutionizing Granular Food Quality Control

Granular food producers face significant production wastage and product return from customer due to inadequate quality control. Current methods are either manual or require expensive testing instruments with different tests requiring different devices.

GranuSmart™ provides an easy-to-use solution capable of performing multiple tests simultaneously, thus enabling fast, cost effective and accurate testing to be carried out. Our solution is built on deep learning and uses data analytics to revolutionise granular food quality control.



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Green COP™

Team members

Song Han (Hanson) LEE
(BEng)
Technology Lead

Rohit BEHL (MSc)
Business Lead

Yee Ching SNG (BEng)
Marketing Lead

Kun-Lin YANG (Assoc Prof)
Advisor

Frank SIEGFRIED (PhD)
Commercial Champion

David SHER
Venture Dev Mngr

Grace WEE
Technology Mngr

Adding value to residual biomass

Effective and safe pre-treatment of residual biomass from various sources is a global problem. Current processes are environmentally harmful, costly and energy intensive. They are also not effective for lignin-rich biomasses to look for valorisation opportunities downstream.

Green-COP's technology utilises its patented and efficient catalytic process to break down cell walls, and release fully soluble lignin from residual biomass. These soluble lignin and clean sugar generated can be converted to value-added bio-chemicals and bio-fuel.

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hiomi
keeping kids safer online

Team members

Nilesh SADARANGANI
(BEng)
CTO, Co-Founder

Jackson TAN (MBA)
CEO, Co-Founder

William KOO
Commercial Champion

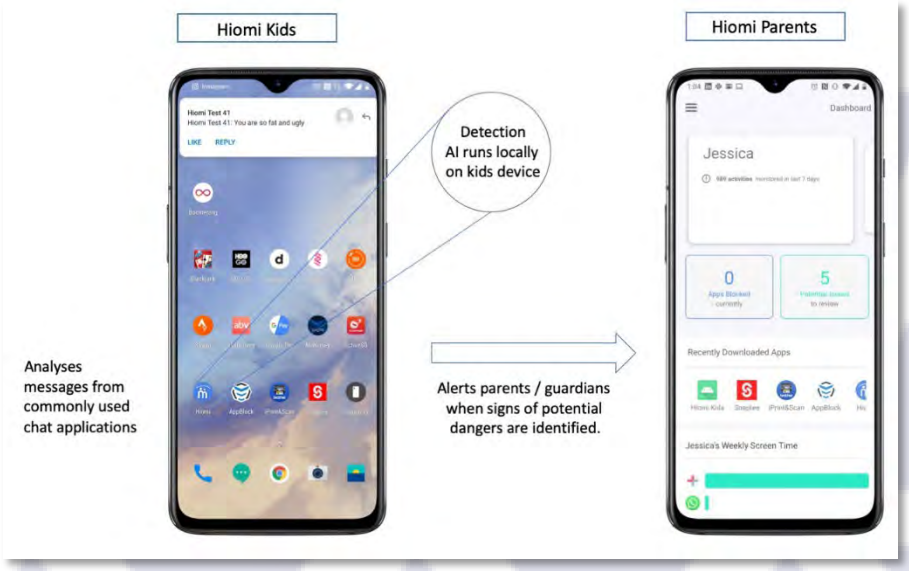
Cato GULLICHSEN
Venture Dev Mngr

Joseph YANG
Technology Mngr

Keeping kids safer online

Hiomi is a digital safety startup that aims to keep children safer online. Our technology helps protect young children from cyberbullying, game addiction, online grooming & sexual content and other online dangers that they are ill-equipped to handle.

Hiomi uses AI to analyse activity in mobile apps such as Instagram, YouTube, WhatsApp and TikTok for potential safety concerns, so busy parents can have a peace of mind. Hiomi goes beyond the traditional parental control app approach of limiting time and restricting app and website access. By analysing underlying activities and providing specific advice to parents, Hiomi works with parents to keep children safer online.



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INVIGILO

Team members

Vishnu Saran UDAYAGIRI
(BEng)
CEO, Founder

Son Nguyen THANH (BEng)
CTO

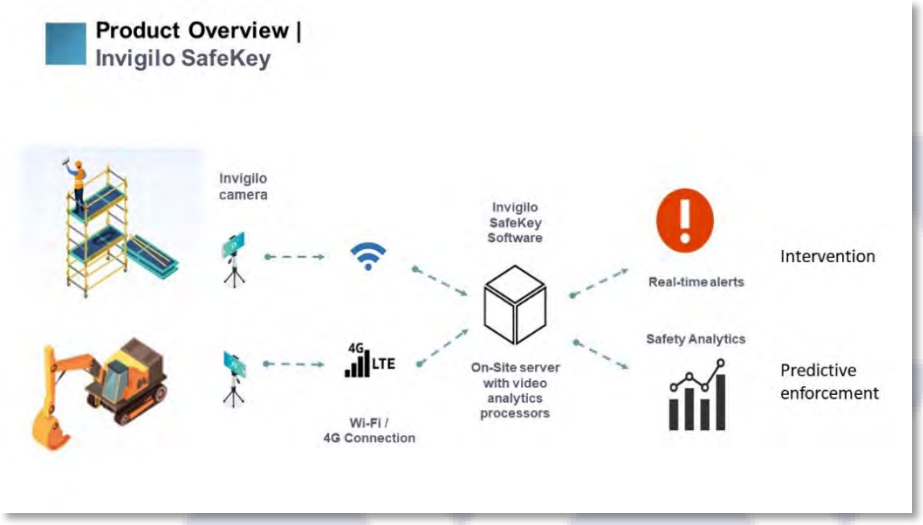
Wee Jin TAN
Commercial Champion

Jack SO
Venture Dev Mngr

Prasanna SHIRIDI
Technology Mngr

Democratize industrial safety

Safety is a high priority in high-risk environments such as construction sites. Globally, one in every four workers suffers a major injury in construction sites, due to safety violations. In Singapore, 17 workers died in the year 2019 due to work hazards. Invigilo Technologies aims to enhance safety by utilizing video analytics and IoT technologies. Invigilo Safekey™ can be easily deployed to construction sites to provides real-time alerts whenever a safety violation is detected.



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QSIGNAGE

Team members

Amit CHOUBEY (MPA)
Founder, Head of Operations

Bryan LONG (MBA)
Co-Founder, Head of Growth

Gokul CHINNAPPAN (MTech)
Co-Founder, Head of Technology

Senthil KUMARAN
Commercial Champion

Cato GULLICHSEN
Venture Dev Mngr

Prasanna SHIRIDI
Technology Mngr

Every village a smart city

The rural market is a USD 1 trillion market in India. Advertisers use urban marketing methods to reach out to the villagers, which don't work because rural villagers think and behave differently from urban customers.

Typical advertising signages in urban settings are created to get the attention of busy urban consumers. However, villagers are communal, not in a rush and prefer face-to-face selling so they can get to ask questions. The rural market need a rural solution that works for them. QTV is our product for interactive live selling over our QTVs, powered with edge AI, a first of its kind in the rural market

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Reachbots Automation

Team members

Rayner TAN (BEng)
Co-Founder and CEO

Yan Zhi TAN (PhD)
Co-Founder and CTO

Alex THAM
Commercial Champion

Amir Haim NIVY
Venture Dev Mngr

Mun Loong CHIA
Technology Mngr

Robotics and AI for a safer and better world

Reachbots Automation provides the industry's highest payload, modular mobile robotic solutions for constrained environments and mission critical tasks at half the cost and double the efficiency.

Accessing complex confined spaces or heights by workers to perform operations are Risky, Inefficient and Costly. MagReacher's modularity allows multi-functional use and its patent-pending magnetic wheel system enables transition between horizontal, vertical and overhead surfaces within the complex ferromagnetic environment, allowing workers to control it from a safe location. MagReacher can be deployed across industries ranging from Environmental Cleaning, Offshore and Marine, Petrochemical to Construction.

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SCPscan
Smart System Surveillance Solution

Team members

Hasmat MALIK (PhD)
CEO

Nishant KUMAR (PhD)
CTO

Sanjib Kumar PANDA (PhD)
Technical Director

Joseph TEO (BEng)
Business manager

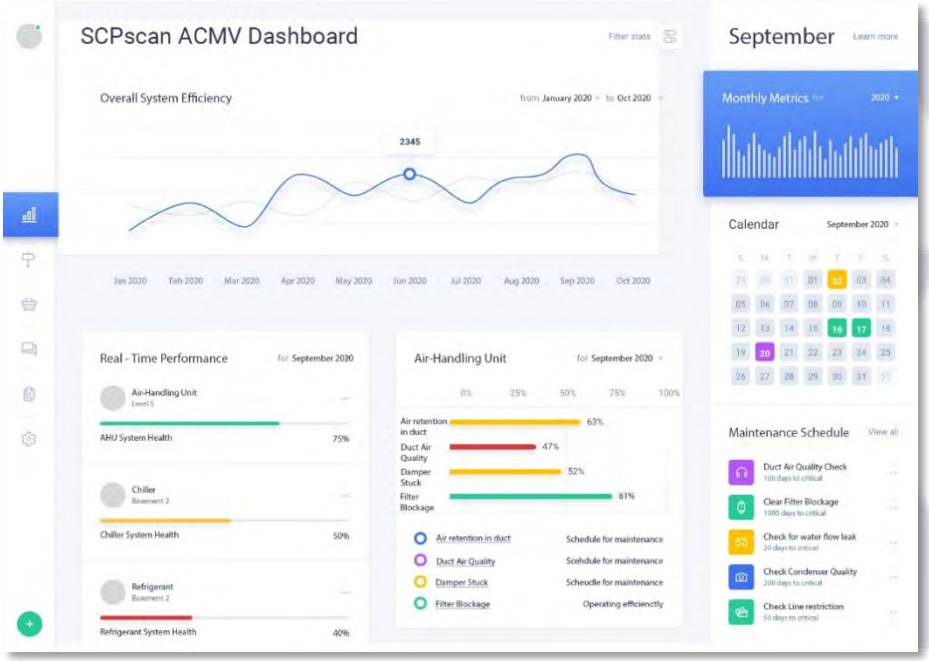
Derrick LEE
Commercial Champion

Cato GULLICHSEN
Venture Dev Mngr

Haujiun CHEN
Technology Mngr

Smart system surveillance solution

SCPscan is a diagnostic software tool for commercial air-conditioning systems. It uses a proprietary electrical signal processing algorithm that is able to detect faults up to 75% earlier than conventional methods, potentially saving up to 30% of power consumption by air-conditioning systems. SCPscan is also able to accurately pinpoint and recommend an optimised maintenance schedule that will help users keep their expensive air conditioning system in optimal condition, increasing device lifespan and overall operational performance of the system.



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SINGNOVEL ChemTech

Team members

Zhigang Alex WANG (PhD)
CEO

Nikita DEWANGAN (BEng)
CTO

Ming Hui Kelvin WAI (MSc)
COO

Beatrice ONG
Commercial Champion

David SHER
Venture Dev Mngr

Yoke Ping YONG
Technology Mngr

Better catalyst , Better life

SINGNOVEL ChemTech provides value-adding and sustainable solutions for petrochemical processes. It develops active, selective and stable catalysts for petrochemical products using olefins as feedstocks.

SINGNOVEL's first catalyst is a Platinium-based Propane Dehydrogenation (PDH) catalyst known as “Singdro-1”, which can be directly used in UOP Oleflex PDH-designed plants without any modification. Moreover, Singdro-1 catalyst is superior to UOP’s Oleflex catalyst, capable of delivering 8% higher propylene yield (arising mainly from 3% higher selectivity and 5% higher conversion) over the same catalyst lifetime of 3 to 4 years. This can help a 500kta-PDH-plant increase their margins by about US$10 million per annum. With this remarkable performance, SINGNOVEL has gained great attention from potential customers globally.

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SOLV8

Team members

Chunfeng WAN (PhD)
Co-Founder

Guimin SHI (PhD)
Co-Founder

Neal CHUNG (Prof)
Advisor

Shekhar KINJAVDEKAR
Commercial Champion

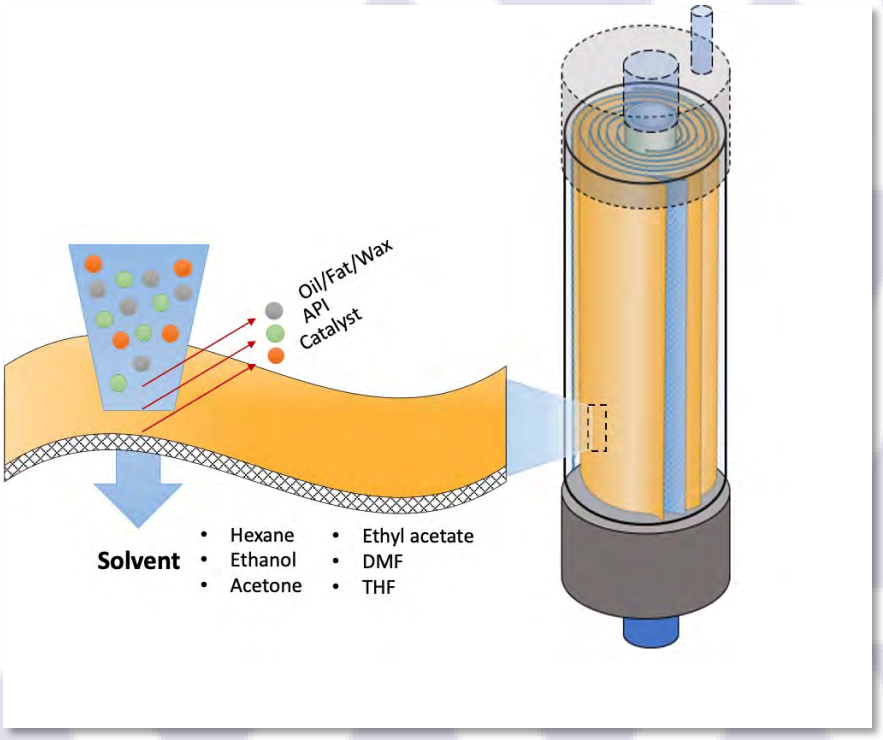
Chung-Pei OU
Venture Dev Mngr

Yoke Ping YONG
Technology Mngr

Sustainable Solvent Separations

Billions of tons of solvents are used in industries to extract vegetable oils, pigments, flavours and fragrances, and to synthesise medicines and chemicals. Separations of the solvents from the final products contribute to 70% of the capital investment and 50% of the energy cost.

Solv8 offers a sustainable membrane filtration technology to separate and recover high-purity solvents without the usage of heat, which significantly reduces the energy costs and carbon emissions. The non-thermal filtration technology also reduces solvent losses, product denaturation and decomposition, and potential safety hazards at high temperature.



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TANNGENT

Team members

Vinay (BTech)
CEO

Payas PANDEY (BTech)
CTO

Mousumi DHAR (MTech)
Business Development Officer

Francine MARTINDALE
Commercial Champion

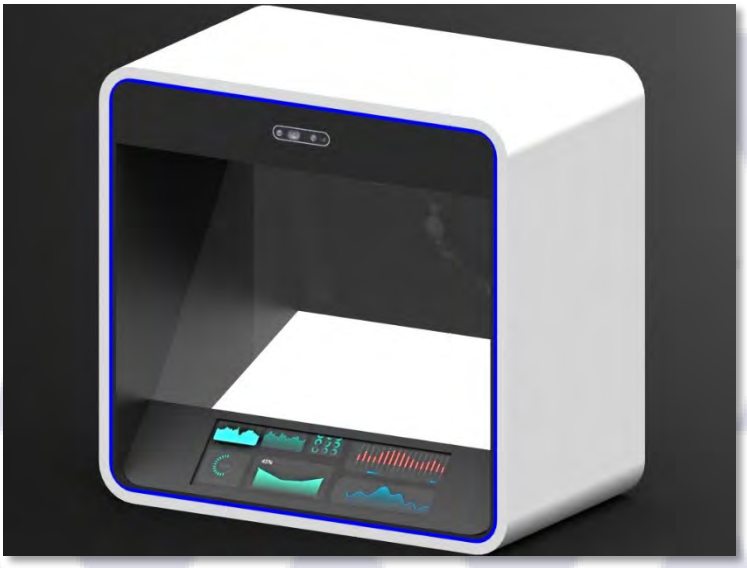
John PHILLIP
Venture Dev Mngr

Prasanna SHIRIDI
Technology Mngr

Taking brands closer to customers

HoloSight by Tanngent is a smart holographic platform that allows brands to engage prospective customers using interactive 3-dimensional product displays. Featuring integrated sensors and an AI-powered content management system, HoloSight provides brand owners with granular localised customer analytics which enables the effective delivery of targeted product promotions to physical shoppers in real-time.

With HoloSight, retailers can easily display a full range of products not just within their own stores, but also at public hotspots like malls, airports, and subway stations. This will enable brands to synchronise their physical and digital marketing campaigns, deepen their customer engagement and eventually generate more sales.



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WiSe

Team members

Viveka KALIDASAN (PhD)
CEO

Tern Poh LIM
COO

John HO (Asst Prof)
Technical Advisor

Lawrence HO (Prof)
Clinical Advisor

Randel FRAZIER
Business Advisor

Karen WAI
Commercial Champion

Mayank GURNANI
Venture Dev Mngr

Haujiun CHEN
Technology Mngr

Gastrointestinal Leak Detector

WiSe is a wireless sensing platform technology and solutions provider. Our vision is to render wireless sensing (WiSe) capability to every implant - to make every implant WiSe. WiSe comprises of passive WiSe tags to monitor deep surgical sites and a handheld WiSe reader to power and communicate with WiSe tags. Our flagship product, WiSeCue, monitors the surgical site for anastomotic leakage after colorectal surgery. In the event of a sudden anastomotic leakage, WiSeCue will alert on-time to enable early medical intervention, even before the symptoms appear. At the core of our technology lies the ability to wirelessly sense events happening at deep, invisible sites, and can be extended to other medical or non-medical applications.

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Xavoury Foods

Team members

Xinzhi LI (MSc)
CEO, CTO & Founder

Gerald TOH (BBA)
Finance Lead & Co-Founder

Ken HIROKAWA
Commercial Champion

George HAN
Venture Dev Mngr

Na ZHAO
Technology Mngr

Make More with Less

Xavoury Foods aims to serve as a platform with its patented foodtech solution to transform underutilised meat by-product in the global multi-billion meat industry into savoury food products with customised flavour and taste. We will be licensing our solution to meat manufacturers, our key customers, who are looking for new sources of revenue of their processing meat by-products. Our proprietary technology allows us to leverage on a multitude of meat, such as chicken, fish, mutton and beef. Our end-products will be including but not limiting to concentrated soup stock, cooking sauces and taste enhancers.

Download Team Factsheet

https://bit.ly/R4LOD-Factsheets2

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GRADUATE RESEARCH INNOVATION PROGRAMME

THE FLAGSHIP INNOVATION PROGRAMME

by NUS Industry Liaison Office enabling NUS postgraduate students and researchers to develop commercially viable and investible deep tech start-ups

About NUS GRIP

Launched in 2018, the NUS Graduate Research Innovation Programme (NUS GRIP) is the Industry Liaison Office's flagship innovation programme. Based on our extensive experience working with deep technology, the programme will provide step-by-step guidance to NUS postgraduate students and researchers to cultivate deep tech entrepreneurs, to transform the university's world-class research into their own deep tech start-ups.

Twice a year, 25 teams are selected from the best and brightest NUS researchers and postgraduate students to equip them with entrepreneurial skills and experience.

For the duration of one year, teams will undergo a transformation journey through a series of workshops, mentorships, industry linkages and incubation support, to develop commercially viable and investible deep tech start-ups. NUS will invest up to S$100,000 in start-ups demonstrating high commercial potential to accelerate their growth. We are committed to take in 50 teams a year, generating a pipeline of up to 250 teams in five years.

Find out more at http://nus.edu.sg/grip/

Connect with the teams gripventures@nus.edu.sg

NUS INDUSTRY LIAISON OFFICE

The NUS Industry Liaison Office (ILO) is the technology translation and commercialisation arm of the National University of Singapore (NUS). Over the last five years, ILO has played a pivotal role in getting more than 580 patents granted and more than 60 technology-based companies spun off from the NUS.

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More than **580**

Patents Granted

More than **60**

Tech Company Spin-offs from NUS

Through innovative programmes delivered in a customer-centric manner, ILO provides funding, connections and expertise to students, researchers and professors, whether they are seeking to create a spinoff company or partner with established industry players to translate their innovations into the market place.

The ILO team comprises of technical, business and legal expertise that commercialises any technology-based opportunities.

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nus.edu.sg/grip

linkedin.com/company/nusgrip

grip@nus.edu.sg