

# ELEVATOR PITCH COMPETITION 2021

INNOVATION  
STARTS HERE



# #Be EPiC

The 160+  
Global Finalists

# ONE PITCH LIMITLESS OPPORTUNITIES

Elevator Pitch Competition (EPiC), organised by Hong Kong Science and Technology Parks Corporation (HKSTP), is an exciting tech startup challenge drawing hundreds of brilliant minds from the globe to unleash their brain powers at one of the tallest buildings in Hong Kong – sky100. Starting from 2016, this international event has been scaling up significantly attracting overwhelming attention and has become an eagerly anticipated annual occasion in town ever since.

Our signature startup pitch kickstarts the event this year with a bang, where 160+ startup finalists from 40 economies pitch to win cash prizes worth US\$200k! Following that, we will host an exclusive Investment & Business Matching session to spark cross-border investment opportunities and the Investment Conference spotlighting IT heavyweights and global pioneers.

From helping startups go to market and find ground in Hong Kong to scaling game-changing ideas, EPiC provides end-to-end benefits to take innovation to new heights.



**FINTECH**



**GREEN TECH &  
CONSTRUCTION  
TECH**



**HEALTH  
TECHNOLOGY**



**SMART  
CITY**



# FINTECH

AIDA Technologies Pte Ltd  
Airome Technologies  
Almond Finance  
APLYiD  
Asia Top Loyalty Limited  
CASHOFF Limited  
Chekk Limited  
Chelpis  
Choco Up  
Compliance as a Service  
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Customomy Company Limited  
DATAGO TECHNOLOGY LIMITED  
DeepTranslated Limited  
Findustrial GmbH  
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Hashstacs Pte Ltd  
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Infinity Technology Corporation Limited

# FINTECH

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KRIP Limited  
Lumiere Project  
MOJODOMO Hong Kong Limited  
Nexus Frontier Tech Ltd  
OpenCBS (Open Octopus Limited)  
Pivotal Technologies Limited  
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TicTAP - Simply Connect  
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uVantage: wealth-tech as a service  
Valutico (Web Value GmbH)  
Velotix  
Wizpresso

# GREEN TECH & CONSTRUCTION TECH

3DK Tech Limited

Airsset Technologies Inc

archiREEF

Bia

Breer Limited

Clear Robotics Limited

Closer

DamoGO

Digipal papelfree

Dory iGarden

DronePlan

EightOSix Technology Company Limited

Film Players Limited

Flash Green

Green hydrogel

Hessner Technologies Limited

Hexagro

i2Cool Limited

JÚLIA G ESCRIBÀ

# GREEN TECH & CONSTRUCTION TECH

Just Vertical  
KNO Global  
Lineverge Limited  
Llewellyn and Partners Company Limited  
MinervaS s.r.l.  
NEU Battery Materials  
Open Ocean Engineering Limited  
Papkot  
Planeteers HK Limited  
R2C2 Limited  
Real Deal Milk  
ReCheck BV  
Sensegrass  
ShadeMe Sarl  
Shadowmap Technologies  
Shanghai Emerging Technology Limited Com-  
pany  
Solid-X Limited  
SunEmison Solar Energy Private Limited



# GREEN TECH & CONSTRUCTION TECH

Super Bamboo Limited

Sustain.Life

TechnoCarbon

The Kabadiwala

# HEALTH TECHNOLOGY

Airbender Co., Inc.

Ai-Ris LLC

Aortyx

Beth Bioinformatics Co., Ltd

BioOM Co., Ltd.

Bloom Standard, Inc.

Capmi Technology Limited

Cardiax Lab (Asia) Limited

CLAIRE Clinical AI Research Limited

C-Polar Biotech Limited

Cratos

CUre Enterprise

EIELING TECHNOLOGY LIMITED

Galactica Biotech Limited

Genenet Limited

Grand Rise Technology Limited

Grid Biosciences Hong Kong Limited

Han-Peng Assisted Reproductive Technology Limited

Harmony Baby Nutrition

Herbap Biotech Limited

# HEALTH TECHNOLOGY

Hollo Limited

InnoGenEx International – Science and Technology LTD

IPLEXMED, Lda

Kibus Petcare

Kinexcs

King's Phase Technologies Limited

M Health PSV2021 CO.,LTD

Matricelf

Mazecare

Meditect

Medwise AI Ltd

Meticuly Company Limited

MRM Proteomics (Guangzhou) Biotech Co., Ltd.

Nia Health GmbH

Novai Ltd

PanopticAI

Petaneer

PhoMedics Limited

PIPRA

# HEALTH TECHNOLOGY

PointFit Technology Ltd.

RootAlly AI

Selfit Medical

T-ICU Co., Ltd

UniExo Rehab

VastBiome Limited

VINH THINH HUNG CO., LTD



# SMART CITY

4Dage

a prototyping BoBi secretary robot

Acompany Co., Ltd.

AI Guided Limited

ARTech Space Limited

Artivive

AviBike Ltd.

Blockchain Solutions Limited

BOOQED Limited

Carpe Diem Solutions

Celantur

Dayta AI

Easy VR Technology Ltd

Farmacy HK Limited

Flowsophic Limited

Giftpack Inc.

InnoSpire Technology Limited

ITC - Intelligent Traffic Control

Kardome Technology Ltd

Keepers Child Safety

# SMART CITY

Linefox Systems  
MagicWeaver Inc.  
MICology Limited  
Movel AI  
NATIX  
Neuronspike  
RC Labs Limited  
Rekosistem  
Retailetics  
Return Helper Limited  
Robot INC.  
SafeMode  
Ship Supplies Direct Pte. Ltd.  
Smart Mobility Solutions  
Stemhub Holdings Limited  
Stoke Systems  
SUPERHIGHWAY  
Tolong  
Turing Chain Ltd.  
Unmanned Systems Bulgaria

# SMART CITY

VIETNAM BLOCKCHAIN CORPORATION

Vista Innotech Limited

Volvero

WaveScan Technologies Pte. Ltd.

XTRA Sensing Limited

Zip Infrastructure Inc

# AIDA Technologies Pte Ltd

## Smart AI and ML solutions for banks and insurers

"AIDA is a specialist AI/machine-learning solutions provider for the banking and insurance industries. Our solutions are designed by our team of PhD-level data scientists who have many years of real-world working experience with insurers and banks across Singapore, Malaysia, Thailand, Indonesia, India and Hong Kong. Our AI/ML solutions for process automation, fraud detection and revenue optimisation have been validated by tier-1 banks and insurers.

Our solutions include:

- (a) Insurance claims process automation – AIDA's SMART CLAIMS solution provides end-to-end health insurance claims processing starting from ingesting claims invoices submitted by a policy holder to providing a final recommendation as to whether the claim should be approved or rejected.
- (b) Health claims fraud detection – AIDA's SMART FRAUD solution provides real-time detection of potentially fraudulent claims so that they can be stopped before payment is made.
- (c) Revenue optimisation – AIDA's SMART AGENT solution provides insurers with comprehensive capabilities to identify, monitor and track the performance of their agents."

**[www.aidatech.io](http://www.aidatech.io)**



# Airome Technologies

## Securing private digital keys for bank users

"PayConfirm is an omni-channel platform based on cryptographic, biometric, risk-scoring and ID verification techniques to provide more user-friendly and secure experience within a digital journey in the financial sector.

The platform supports seamless digital onboarding within two minutes, and is able to achieve fraud reduction by 70-75%.

In the core of a signature, generated by PayConfirm, there are asymmetric cryptographic algorithms, which means that a bank itself doesn't store clients' keys. Digital keys — so-called "private keys" — are generated and stored in a client's smartphone and cannot be "intercepted" or reproduced by any third party."

<https://airome.tech/>

# Almond Finance

## Networking mobile wallets for financial inclusion

"About 1.7 billion people remain unbanked and financially underserved around the world. This prevents money from getting where it's needed most. It stifles economic growth for families and communities. So, Almond is building an international bank transfer system, without the banks.

Mobile phone usage and mobile finance in developing countries is growing rapidly. The time to solve financial exclusion is now. There are now over 250 distinct mobile wallet apps in Southeast Asia serving 300 million users. But most mobile wallets are stuck within their own networks. They don't allow money transfers with other wallets or across borders.

Almond is a financial technology solution that makes transferring money simple. Almond integrates mobile wallets into a single network. Users can send and receive money on their phones in real-time, at half the cost. No borders, no banks. Almond is taking the next step in financial inclusion. Almond is the friendliest way to transfer money."

**[www.almondfinance.com](http://www.almondfinance.com)**

# APLYiD

## Speedy verification of identity

"APLYiD is a digital onboarding solution that enables our clients to verify the identity of their customers in minutes, from anywhere.

Our solution is able to perform OCR (optical character recognition) capture, facial biometrics, fraud detection, location analysis, and verification of phone numbers and data sources."

[www.aplyid.com](http://www.aplyid.com)

# Asia Top Loyalty Limited

## A loyalty ecosystem for universal reward redemption

"AsiaTop Loyalty is the largest eVoucher platform in the Greater Bay Area. Our vision is to disrupt the loyalty market with innovative business models and technology. Our app aims to provide our users with a self-contained ecosystem where they can find and trade for rewards that they are interested in and find useful. It is the only open-loop loyalty platform in GBA focusing on loyalty points exchange, e-voucher, digital marketing and O2O by using latest technologies such as blockchain, AI and AR.

AsiaTop Loyalty leverages technologies to connect and integrate multiple loyalty programmes, allowing fragmented reward points to be converted into a universal unit – AT Points, for users to redeem coupons or exchange points from a wide variety of merchants in real-time on a single platform.

We have offices in Hong Kong, Guangzhou, Shenzhen and Singapore, serving over one million customers and 50,000+ merchant locations in the last five years."

<https://en.asiatop.net>



# CASHOFF Limited

## Banking API leveraging data for advancing sales and services

"Cashoff Ltd is a financial technology company that leverages open banking APIs to provide a suite of B2B and B2C products aimed at significantly improving the way data is used in the financial services industry.

We offer B2B2C products on data aggregation from multiple sources (banks, loyalty programmes, wallet accounts), data analysis, as well as providing our customers with PFM (private fund management), BFM (business financial management), Smart Advice and Stories solutions, and Cashback based on receipt recognition and itemisation.

By integrating our products, we have developed a white-label BigData ecosystem whereby each product generates value for banks, brands and consumers. Driven by transaction and receipt analysis, our API solution provides enhanced customer profiling and recommendations, therefore banks could gauge customer metrics such as visit frequency by mobile app users and session time, for facilitating banking cross-selling.

With offices in Hong Kong (established in 2018) and London (established in 2017), we have a team of 30 people worldwide, led by experienced engineers and executives from the financial services industry. "

<https://cashoff.global/>

# Chekk Limited

## Digital identity platform supports compliance and risk management

Chekk is a leader in digital identity, eKYC and data portability, working on removing the pain and costs from the interactions between financial institutions and their retail, private and corporate customers.

Chekk's solution has been architected as a universal KYC (know you customer) platform in a manner of KYC utility platform that leverages individual, corporate, business and SME digital identity. It can increase network effects, prevent duplications, ease onboarding and help generate additional revenues. The platform enables business customers onboarding in a minute and retail customers onboarding in 30 seconds, while creating the foundations for robust compliance and risk management processes.

Chekk has teams of developers in Hong Kong and Europe, and provides support to customers across Asia and Europe. Our teams handle various novel technologies such as AI, machine learning, deep neural network and a powerful set of API enabling multi-sourcing and bank customers' information merge and triage.

[www.chekk.me](http://www.chekk.me)

# Chelpis

## Decentralised finance structure for secure migration to blockchain

"Founded in 2017 by cryptographers from National Taiwan University Fast Crypto Lab, Chelpis is a Taiwanese startup focusing on blockchain, cryptography research and cybersecurity solutions.

Linking the 'real world' and the 'blockchain world' represents a new challenge. To build an infrastructure for this, a Decentralised Finance (DeFi) structure is required. DeFi refers to a financial service system with no central authority using cryptocurrencies that can be programmed for automated activities.

Chelpis has the vision to create a new standard protocol for the decentralised infrastructure enabling legacy infrastructure migration to blockchain as well as cross-chain transmission while ensuring privacy and security in the transmission. The objective is, ultimately, to build a scalable blockchain ecosystem.

The new protocol aims to create a channel for traditional financial systems to migrate securely to blockchain. Loans, savings plans, insurance and stock transactions will be realised on blockchain in a fully decentralised fashion. The protocol will eventually provide a private transaction network on blockchain."

<https://www.chelpis.com/>

# Choco Up

## Automated non-dilutive fund solutions with data analytics

"Choco Up is one of the largest revenue-based financing and growth platforms in Asia Pacific, offering flexible non-dilutive funding solutions across eight countries and 10 sectors.

With offices in Hong Kong and Singapore, Choco Up is an advanced data-driven fintech platform that leverages data analytics and vast integration to automate growth fund deployment and risk management.

Choco Up invests in rapidly scaling companies with domain expertise, established products and proven demand, providing them with recurring access to growth capital without equity dilution.

Our funding model allows our portfolio companies to grow their revenue, resulting in an increase in profitability and valuation of the businesses while preserving equity for future fundraising rounds."

<http://choco-up.com/>

# Compliance as a Service

## RegTech platform delivers digital compliance for less

"Surety is a RegTech platform that uses best-in-class machine learning and AI to help organisations comply with regulations. Our uniqueness comes with our in-depth experience within the financial services compliance arena. The platform will reduce the cost and risks that all regulated firms face today. The beauty of the platform is that it will allow firms to be confident that compliance is being achieved in a rigorous and efficient manner whilst they focus on their business.

So far, we have completed the StartupBootcamp FinTech programme in the UAE, which helped us to form partnerships with VISA and the Dubai International Financial Centre Authority. In addition, we have recently been accepted into the Microsoft for Startups programme."

<https://www.complianceasaservice.com>

# CoverGo

## No-code platform fully digitises insurance processes

CoverGo is a leading insurance technology company providing enterprise software solutions to insurers, banks, MGAs (managing general agents) and brokers to help them streamline and automate insurance processes, and create a digital insurance ecosystem, making insurance 100% digital.

CoverGo's fully configurable, modular, no-code insurance platform allows clients to build and configure any kind of insurance products, improve policy admin and claims, develop omnichannel distribution and more at record speed.

With superior technology and insurance expertise, CoverGo has a clear and future-proof competitive edge for six reasons:

1. No code: unique visual drag and drop insurance product builder configurable to handle any product line and any level of complexity
2. Open APIs: 500+ insurance APIs, the world's most comprehensive set, giving all clients full documentation to empower them and reduce dependency on CoverGo
3. Product agnostic: able to support any product line
4. Deployed on any cloud: in the jurisdiction of a client's choice, in compliance with strict local regulations
5. Fully configurable: match clients' exact needs and deliver a tailor-made fit-for-purpose product
6. Industry knowledge: CoverGo focuses on the insurance industry only, led by a team of insurance and tech professionals.

**[www.covergo.com](http://www.covergo.com)**

# Customomy Company Limited

## Enterprise key management solution enhancing digital asset security

"Customomy was founded by a group of cryptographic, digital customer experience and enterprise solution experts. We focus on applying cryptographic technologies to blockchain security. Customomy offers a groundbreaking enterprise key management solution that not only improves enterprise digital asset security with granular access control mathematically built-in, but also enables enterprises to innovate with value-added customer services and keep pace with rapid technological changes.

Hacking and losing private keys are always users' biggest problems with storing keys. To provide the highest-level security for clients, Customomy has created a hierarchical threshold key management scheme with multiple levels of threshold signing authorities.

The design embeds both horizontal access control (i.e. the number of shares needed to generate a valid signature) and vertical access control (i.e. a particular entity or entity ground must sign). All these desired properties are embedded mathematically in the cryptography of our MPC protocol. That makes our key management solution ultra-secure and perfect for different use cases of different organisations."

# DATAGO TECHNOLOGY LIMITED

## Mining valuable financial data for Chinese capital market

"Nowadays, a huge amount of data is generated, transmitted and electronically recorded every second. The flood of data, although highly valuable, has surpassed the processing capacity of most individuals and organisations, especially for those in the finance industry since they are closely connected to many other industries. In the finance industry, in addition to structured financial data such as real-time trading records and digits in forms, most valuable information is actually hidden in unstructured text from financial/analyst reports, articles published by news medias, and even users' posts on social media.

Therefore, Datago Technology Limited aims to leverage the big data and artificial intelligence technologies to mine valuable and easy-to-use information from heterogeneous and large-scale data in the financial sector, especially for the Chinese capital market.

Although there are several leading companies providing big data analytics to financial sectors for years, they mainly focus on the US and European markets as well as English news media. On the other hand, due to the complexity of the Chinese language and the uniqueness of the Chinese market, there is still no dominant financial big data analytics provider focusing on the Chinese market."

**[www.datago.com.hk](http://www.datago.com.hk)**



# DeepTranslated Limited

## Quality and quick AI-powered translation of financial content

DeepTranslate is one of the industry's leading artificial intelligence (AI) translation engines for providing high-quality financial translation services in English and Chinese. Our mission is to transform professional communication intelligently, in quick turnaround time.

With our cutting-edge deep learning technology and top-notch research and development, supported by our translation and linguistics team, we work together with our clients to enhance efficiency and provide opportunities for growth.

<https://deeptranslate.hk/>

# Findustrial GmbH

## Smart financing solutions facilitate automated industrial financing

On our platform, relevant stakeholders (OEMs, operators, financiers) can profit from fully automated and easy-to-use smart financing solutions that will boost equipment manufacturers' revenues and provide flexible repayment models for operators. The main features of our independent and global IoT-based platform are:

1. Connectivity: edge devices/assets connected directly to the platform with secure and transparent data streams. We provide data security through a data approval process, digital quality certification of data and data encryption.
2. Matching engine: Structured Pay-per-Use Financing Solutions through an automated funding process of industrial projects.
  - Registration-based platform for OEMs, operators and financiers
  - Standardised contracts included
  - Automated funding process of industrial projects
  - Competition among financiers for project funding
  - Intelligent Business Risk Assessment offering pre-evaluation
3. Settlement engine: Any equipment can be connected worldwide securely based on a trusted IoT data infrastructure.
  - Automatic settlement of bills and payments for all participants
  - Dashboards for all participants monitoring financing and operations
4. Pay-per-Use Calculator:
  - OEMs can create quick and easy pay-per-use financing offers for their customers on a global scale
  - Financiers can serve their existing clients with our IoT-based finance offerings
  - Full connectivity to Findustrial platforms

# FQX

## Building trade finance and money market infrastructure

"FQX provides a trade finance and money market infrastructure through eNotes. FQX's eNotes is powered by DLT (distributed ledger technology), legtech, fintech and digital assets. It can be enforced in over 165 countries for transactions in real-time, making liquidity accessibility more flexible."

<https://enotes.tech/>

## Empowering crowdsourcing and crowdfunding for private investigations

"gotEM is a decentralised DeFi platform that enables anyone to crowdsource and crowdfund global investigations, private security and humanitarian aid. gotEM was previously founded as MeetMySpy.

With the current political climate and the direction our world is taking, it is imperative that there is an outlet for transparency and global welfare. Our platform makes this demand a reality. Using the platform would act as a safe medium for users to contract freelancing investigators assisting with urgent missions anywhere in the world. We are first to market by innovating the world's first crowdsourcing platform with crowdfunding capabilities to address private investigation and security missions worldwide.

The platform enables crowdsourcing for small- to large-scale investigations locally and internationally. Crowdsourcing for an investigation is much more effective than relying on just one source to conduct your investigation. Our added crowdfunding feature changes the landscape in that people can now gather funds to conduct large-scale investigations as a group rather than individually. Cases range from petty disputes, marital issues, to serious investigations related to corruption, fraud, kidnapping and murder. There are also several types of investigations that are fundamental for B2B relationships, such as background checks, surveillance, fraud and corporate espionage."

<https://gotem.io/>

# Hashstacs Pte Ltd

## Interoperable blockchain platform enables effective Sustainable Finance

"STACS is a multi-award-winning Singapore fintech firm providing a live blockchain platform that unlocks value and enables effective Sustainable Finance for the financial industry.

For the last 50 years, the financial industry has been fragmented. Today, institutions still operate on different systems and ledgers, resulting in billions of dollars lost annually because of inefficient lockups and costly errors. STACS aims to simplify global markets and empower companies of all sizes to unlock value in Sustainable Finance. Our clients and partners include global banks, national stock exchanges, asset managers and corporates.

STACS' platform is highly interoperable with existing financial market infrastructure (FMI). Our technology provides high security and is built to scale and supports integration with FMI and other blockchain platforms. Through APIs, our clients can seamlessly connect to our blockchain platform. Ultimately, we aim not to overhaul existing systems but instead, to interoperate with them to reduce integration costs. This makes implementation easy and flexible, effectively driving speed to market for our solution deployment.

In fact, through various industry partnerships, STACS has developed and deployed a live award-winning platform with a network of institutions, notably including clients like BNP Paribas and Eastspring Investments, enabling them to grasp strategic business opportunities."

[www.stacs.io](http://www.stacs.io)

# HomeCrowd Sdn Bhd

## P2P crowdlending platform to help millennials secure a mortgage

"HomeCrowd helps underserved millennials by using a holistic data-driven credit scoring system that grants them access to a peer-to-peer (P2P) lending platform for mortgage loans. Our platform streamlines the mortgage application processes online, using data-driven decision-making and recent advancements in tech to create a frictionless customer experience. Individuals and institutional investors invest for fixed, safe and social impact (ESG) returns.

Our digital mortgage crowdlending platform is designed to disrupt the conventional mortgage application process using AWS cloud technology. Our credit-checking algorithm includes two parts – DSR (Debt-to-Service Ratio) and comprehensive credit checking.

For investors, our mortgage investment profiles allow them to make an informed decision through the analytics we gather during a borrower's application process. For borrowers, they go through a simple yet thorough credit-checking process to increase their credit worthiness for securing a higher mortgage acceptance rate to make their home-buying dream come true. Our system also provides guidance on improving borrowers' credit worthiness. "

<https://myhomecrowd.com/>

# Infinity Technology Corporation Limited

## Turnkey solution automates F&B back-end operations

"DimOrder revolutionises the F&B (food and beverage) industry by providing a turnkey solution cloud POS system integrating automated ordering and payment, menu digitalisation, logistics, CRM, marketing analysis, supply chain and inventory management.

With all transactional data gathered, DimOrder POS system will offer financing packages to restaurants to secure raw materials and reduce receivables days for suppliers, via the Hong Kong Monetary Authority Credit Data Exchange programme or an in-house AI lending platform."

[www.stacs.io](http://www.stacs.io)

# InnoBlock Technology Limited

## Safeguarding data privacy against external threats

"SafeGuard Series was the runner-up in Hong Kong Monetary Authority's Global Regtech Challenge and an official solution provider in the Smart Government Lab under OGCIO.

### Current Challenges

- Protecting customer information and confidential data has always been a big concern, especially for financial institutions. While working from home is getting more common due to the pandemic, the risk of internal data breaches and data leakages is also getting higher, through external threats such as taking snapshots with mobile devices, unauthorised person using the devices, etc.

### Approach and technology

- Our SafeGuard Series is an all-in-one solution that protects data privacy and tackles external threats while preserving the features of traditional DLP (data loss prevention) software.
  - There are three versions:
1. SafeGuardChain – a full-version enterprise solution on Windows
  2. SafeGuard Lite PC – an entry version on Windows
  3. SafeGuard Lite Mobile – a SDK on Androids or a standalone MDM

### Benefits

- Reduce internal and confidential data leakage via external threats
- Increase customers' level of confidence
- Protect employee's integrity and proof of innocence
- Higher deterrence
- Lower operating cost on security monitoring
- Prevention of financial loss and goodwill damage with timely detection
- Reduce resources consumption"

**[www.innoblocktech.com](http://www.innoblocktech.com)**



# KRIP Limited

## Centralising credit card rewards database to drive card usage

"krip is the first fintech solution in Hong Kong to focus on driving credit card usage by creating the first centralised credit card rewards platform. Our mission is to support card issuers and networks in providing an improved cardholder experience by creating a single touchpoint for consumers to discover rewards available for each card. Our web and mobile apps offer card issuers and networks an effective channel to directly engage with cardholders, who likely carry multiple cards from multiple issuers,

Our ability to provide a personalised credit card rewards experience is built on sophisticated backend technologies. We are able to integrate various rewards data formats with a proprietary merchants database that contains 15,000+ branches of 3,000+ retail merchants, into one centralised database that produces a standardised data output via API. Our solution has received interest from UnionPay, with whom we have signed an NDA and are currently in discussion of rewards data integration.

krip is an incubatee of Cyberport's Incubation Programme and was shortlisted for HKSTP's BFSI Accelerator 2021 and Jumpstarter 2021. We are excited to lead the digital transformation of Hong Kong's payment rewards landscape through our end-to-end rewards data solution."

[www.krip-hk.com/](http://www.krip-hk.com/)

# Lumiere Project

## Making entertainment investment safe and traceable

"Lumiere offers creative content financing solutions at considerably lower investment risks for movie and entertainment financiers. Lumiere makes investments in film and recorded media safer and more liquid.

Lumiere is a trusted marketplace for safer entertainment investments – it attracts fans, monetises productions and monitors all expenditure from day one.

Lumiere has already tokenised the first film in the world, Papicha, with a Hong Kong partner in 2019.

Lumiere has developed a traceability prototype while in the HKSTP STEP programme. It is the first cinematic IP ecosystem of its kind that aims to integrate non-fungible tokens (NFTs), traceability and tokenisation."

**[www.lumiereproject.io](http://www.lumiereproject.io)**

# MOJODOMO Hong Kong Limited

## Maximising loyalty marketing impact with zero voucher waste

"MOJODOMO brings on a new era in customer engagement where fintech and martech converge. We have cracked the code to voucher waste and unlocked game-changing levels of marketing ROI.

MOJODOMO enables automated instant payment upon redemption via virtual cards. It is Asia's first zero-waste, performance-based approach to loyalty marketing. Our proprietary technology is credit-based, open-loop and cross-border. We can effectively target customers and help save 30-90% of marketing budget for marketers compared to typical campaign cycles. We are able to enhance the efficiency of their loyalty campaigns, as well as integrate them with a network of global merchants in the blink of an eye. Marketers only have to choose their preferred merchants on our platform and digital vouchers will be produced automatically, awaiting distribution via API integration, SMS, email or other social media.

Backed by Citibank and powered by Mastercard, we issue virtual cards for voucher payments so everyone wins – loyalty marketers, retail merchants and customers alike. We won the gold award for the Payment Tech category at the IFTA Fintech Achievement Awards 2019."

<https://mojo-domo.com>

# Nexus Frontier Tech Ltd

## Accurately extracting and labelling data for financial institutions

The challenge that Nexus' (Document AI) helps financial institutions to solve is to not only extract needed data from various documents with a high level of accuracy but also to label that data so it can automatically feed into downstream processes.

We help businesses move fast and efficiently through the data value chain with less human interaction so that they can serve their clients smarter at near real-time processing.

Competitive advantages:

Industry specific partners – We have strong industry partners and better market access.

Immediate ROI - We deploy faster and meet clients' requirements.

Well-established - We have been serving our clients since 2015.

Technological lead - We utilise our AI platform to deploy solutions into large existing processes faster.

Achievements:

- 2015-2018: 3-year track record of profitability without a sales team
- 2018: Achieved \$1.5 million (what currency?) sales; established London office; joined London Stock Exchange Elite programme
- 2019: Raised \$3.8 million (what currency)
- 2019: Won 3-year contract with top global bank; \$3.8 million (what currency) seed investment for sales expansion
- 2020: Launched Nexus's AI Factory
- 2021: Expanded commercial team in the UK and Singapore with three senior domain experts to drive revenue and a Head of Growth in the UK.

<https://nexusfrontier.tech/>

# OpenCBS (Open Octopus Limited)

## Cloud-based core banking system simplifies financial processing

"Financial institutions need IT systems to operate. These systems are expensive, complex and restrictive as they don't easily adapt to the changing tasks of employees or to the needs of the customers.

OpenCBS has developed systems that are agile enough to serve clients in the way they want. Our Cloud-based Core Banking System is built around the needs of people and takes the complexity out of banking. It is ideal for modern financial institutions. For those who cannot change their Core Banking System, we also have developed modular solutions that digitise key processes like customer onboarding or loan origination.

Thanks to OpenCBS, financial institutions bring down their costs, managers get real-time business intelligence, employees sell more and ultimately, clients are better served and happier. IT managers are also satisfied because, with our infrastructure-light solutions, they can go live on our systems within weeks and conveniently integrate with other systems via APIs."

<http://www.opencbs.com>

# Pivotal Technologies Limited

## Spearheading asset tokenisation and security token exchange

"Pivotal Technologies Limited is a Hong Kong-based startup building a Blockchain-based Security Token (STO) exchange. We have successfully launched a number of asset tokenisation projects for our clients. Our projects cover tokenisation of a variety of assets ranging from fine wine to mortgage contracts.

In April 2021, we issued our first property mortgage contract as a Security Token on the Ethereum blockchain. This project followed the successful issuance of wine tokens on PT Liquidity in late 2020. Our PT Liquidity (PTL) Platform covers both First Market Issuance and Secondary Market Trading. The tokens issued on PT Liquidity are also tradeable on the PTL platform.

We are one of the first market movers in this exciting Asset Tokenisation area. Our founding team has strong expertise in the financial industry and innovative technologies. Since our initial product launch, we have made significant progress in establishing strategic partnerships with other corporations in the digital asset and fund management space. Our goal is to enlarge our ecosystem, extend our client base and promote the profile of our platform.

We aim to provide our clients with innovative operating models taking advantage of Blockchain platforms, with greatly increased liquidity, participation, efficiency and reduced transaction costs."

<https://www.pivotaltechs.com/>

# SPIN Analytics

## AI for improving credit risk management

"SPIN Analytics helps tier-one and digital banks improve credit risk management with its explainable AI-based platform, RISKROBO™. The platform provides 10x acceleration of model development, validation, documentation and deployment, which reduces maintenance time by at least 90% and total costs by 70%.

Encoding 30 years of credit risk-modelling experience into AI and insights, the platform helps banks make decisions and control assumptions. The solution covers all types of credit risk models for regulatory, risk management and business purposes.

We have been expanding globally and we have partnerships with big Tech and System Integrators like Microsoft, Accenture, Capgemini, TATA and Fujitsu."

<https://spin-analytics.com/>

## Building wealth with individualised advice and portfolios

"Teyk is an all-in-one wealth management platform that provides uniquely personalised advice, instantly and for free. We only charge our fees when we have successfully increased the wealth of our customers.

Our all-in-one platform includes upfront and ongoing advice, trade execution and ongoing portfolio risk management. This is delivered through our proprietary and patent-pending technology, which automatically creates individual portfolios for each customer and then manages them 24/7.

We're revolutionising wealth management and we're making it available to everyone – people with existing wealth as well as anyone who is looking to build wealth for the very first time.

We're currently in the pre-launch phase and in the process of applying to the SFC (Securities and Futures Commission) for our license in order to launch in Hong Kong. To date, we have raised over US\$1 million in seed funding and we've also secured an agreement with Wellchamp Capital for an additional US\$600,000 in order to meet the required capital position for our license. We're targeting to launch in Hong Kong by the end of the year.

We are Teyk. Rightfully yours."

**[www.teyk.com.hk](http://www.teyk.com.hk)**



# The Proof of Trust and Assurance Ltd

## Blockchain platforms supporting compliance and dispute resolution

"We have created a collection of ground-breaking, globally patented blockchain-based platforms designed to provide security to all types of transactions across the governmental, commercial, and banking sectors. We are instilling digital trust on a global scale.

Our technology platform acts as a legal compliance and dispute resolution platform for all transaction types. Suppose any party believes terms and conditions haven't been met. In that case, we offer a unique method to resolve the issue and verify the transaction using a combination of technological innovation and the expertise of major legal firms. Our applications identify weaknesses, detect fraud, ensure data accuracy and manage contractual disputes at scale.

We are equipping the commercial landscape with better, fairer, more cost-effective and faster decisions for customers.

We pride ourselves on our rapid deployment capabilities, and our technology can be integrated into existing platforms in a matter of weeks.

The Proof of Trust has delivered solutions that focus on security, effortless consumption and scalability. All platforms have been built with assistance from our technology partner IBM:

1. ASTRA – Public Blockchain Assurance
2. Nebula – Governmental Application
3. Cosmos – Commercially focused, for business-to-business transactions
4. Nimbus – Delivering Social Good (e.g. Pandemic Response)"

**<https://theprooftrust.com>**

# The Seventh Dimension

## Enabling more accurate cash flow forecasting

"What is the problem we solve?

Cash Flow forecasting of corporates and small- to medium-sized businesses (SMBs) tends to be inaccurate with a huge gap between forecast and actual numbers, which are very difficult to analyse.

Our automatic next-generation AI real-time Cash Management & Planning Ecosystem for corporates, SMBs and banks can work out white label for their clients."

<https://www.the7d.com/>

# TicTAP - Simply Connect

## Transforming any physical object into digital form

"Still today, most of the stuff that surrounds us has paper attached: instruction manuals, post-its, checklists, compliances...

But when we need information about a specific object, we end up searching it in multiple channels: the Internet, email, phone, WhatsApp, etc. spending time, effort and possibly printing paper.

According to Forbes, an employee spends two hours a day in these frequent situations. Moreover, 70% of printed paper end up in the trash. That's 114 metric tonnes of CO2 per year!! In fact, most companies are still paper-dependent in many processes.

Our solution transforms any physical object into a digital entity, making it accessible from any smartphone in an app-less way and from the object itself, reducing 99% the time to access specific information and eliminating the need to print paper.

And we make it possible in the simplest, fastest and most cost-effective way. Placing a smart tag to an object, managing its content by drag & drop, and accessing it from any smart device, just Tap & Go!

Our biggest achievements this last year have been to multiply by 2 our ARR, divide by 2 our CAC and lower our churn to practically 0."

**<https://www.tictap.me>**

# Tide Foundation

## Zero-trust deep tech to shut out data breach

"Tide is a deep tech startup developing TRUE-zero-trust technology, unlocking cyber-herd immunity – the only cure for the breach pandemic.

Our patented new core technology is a cryptosystem utilising secured-multipart-computation in a high-performance, scalable threshold encryption scheme. Named "Blind secret processing", it introduces the seemingly impossible ability to use a cryptographic key that NO ONE can ever access. Similar to how blockchain technology guarantees the consistency of a unified ledger, Tide leverages trustless principles to achieve secret custodianship and processing of secrets, enabling a solution with no central authority or supply chain risk. Tide's SDK (Software Development Kit) can be seamlessly integrated into any platform to protect sensitive data, smart city infrastructure, digital health records and financial assets without any change to the user experience.

Our founding team is seasoned in Israeli cyber-intelligence, R&D commercialisation and enterprise software, backed by world-class advisory of veterans from tech, business, politics and cryptography.

Tide is a research partner of RMIT University and The University of Wollongong. We have been awarded a National Research Council grant, championed by global bodies like the OECD (The Organisation for Economic Co-operation and Development) and UK's Competition and Markets Authority, and have won numerous deep tech awards."

**<https://tide.org/>**

# uVantage: wealth-tech as a service

## Empowering direct investment bypassing asset management companies

"The financial services industries will be profoundly changed and challenged by advances in AI, data and infrastructure as well as changes in customer structure and demand. New customer groups like a growing middle class in emerging countries and mass affluent groups in industrialised regions are demanding in-person individualised financial services so far only available to the wealthy.

As well, investors' desire to incorporate individual preferences like ESG or building on legacy portfolios as well as the demand for increasing transparency will drive the proliferation of individualised investment styles.

These dynamics have increased the popularity of passive investing through index mutual funds and exchange-traded funds (ETFs) with these new customers, displacing the higher-cost active investment style.

To address these new requirements, uVantage provides solutions for the mass-affluent to remove asset management companies along with their inherent biases and inconsistencies and the lack of transparency of past performance. uVantage offers B2B and B2C solutions to empower the clients with the ability to directly invest based on their belief systems and investment views.

uVantage has taken part in ODI European data incubator and innovate EY, and is a member of the Investment Management Association of Singapore. Our clients include Nikko AM and Mercedes-Benz."

<http://www.uvantage.org>

# Valutico (Web Value GmbH)

## Fast and accurate business valuation for private/listed enterprises

"Fintech startup Valutico is a web-based valuations platform providing the financial services industry and valuation practitioners with data-driven tools to perform accurate valuations in a fraction of the time while solving the issue of complex tools, lack of data sources and time-consuming reporting.

With the world's leading valuation methodologies to choose from, Valutico accelerates business valuation processes by 30-50%. With our product offering, we especially address valuation experts in Advisory (e.g. Corporate Finance, M&A, Tax and Audit), Investment Management (e.g. Family Offices, Private Equity, Venture Capital), and Corporates (e.g. Strategy, Financial Reporting, IR).

Valutico's software solution currently comprises three different modules and a marketplace. The modules address specific valuation requirements for private/listed enterprises and provide access to industry and country-specific valuation parameters. The marketplace brings together valuation experts and customers in need of valuation expertise.

### Highlights:

- Launched in 2018
- ARR US\$ 1.5 million, growing at 300% yoy
- Gross margin 90%+
- CAC payback <8 months
- Sales efficiency ('SaaS Magic number') ~2.0
- NPS +46
- Globally distributed team of 45, with hubs in Vienna and London
- TAM US\$ 16bn+
- 2021 winner of the US Department of Commerce's global SelectUSA pitching contest (Category: Fintech)"

**[www.valutico.com](http://www.valutico.com)**

# Velotix

## Securing data journey for compliance and governance control

"Velotix is solving the financial sector's data compliance and governance challenges by employing Cybernetic Symbolic AI and machine-learning methods, enabling full control and maintenance of data accessibility, visibility and security.

Velotix's agile and cloud-based platform introduces a unique solution for the financial sector. The solution creates and enforces policies and results in a smart, fast and safe data journey, leading to an increase in oversight efficiency in an organisation.

Established in 2020, Velotix is currently conducting a pilot with a global European bank and collaborating with a major stock exchange. Having completed a seed investment round in March, Velotix is raising its next round. Velotix is participating in a Zurich-based Fintech program, F10, providing access to its 12 corporate partners."

[www.velotix.ai](http://www.velotix.ai)

# Wizpresso

## Transforming capital market workflow with deep learning

"Wizpresso is a RoboBanker SaaS platform that aims to transform capital markets' workflow and empowers industry stakeholders. Our solutions are underpinned by NLP (natural language processing) and deep learning to automate legal, financial and business due diligence. We deliver value to users by removing communication barriers between participants, improving sales capacity and enhancing market transparency. Our clients range from global investment banks and law firms to local enterprises.

We offer a SaaS platform with three core modules that work across the financial transaction lifecycle:

- Factify – a legal due diligence software for regulated capital markets disclosures
- Search – a market intelligence platform covering 28,000+ public companies across 20 capital markets
- Compose – a document automation system that transforms templates into workflow for enterprises"

<https://wizpresso.com/>



# 3DK Tech Limited

## Metal 3D printing for less cost and time

"3DK Tech. Ltd. was established in 2017 as a metal 3D printing company specialising in the patent-pending technology of Ultrasonic Selective Laser Melting (USLM). Our technology advantage allows us to disrupt this exclusive but rapidly growing market, through superior quality, manufacturing cost reduction of up to 75% and time reduction of up to 65%. Our minimum viable product (MVP) has been built and undergoing a continuous development cycle since the beginning of 2021. The commercial USLM machine is planned for market release in 2023. We forecast to have \$50 million (what currency?) in revenue by 2025.

We have been awarded the Top 1000 Environmentally Friendly and Profitable Solutions of the Future by Solar Impulse in 2020."

**[www.3dktech.com](http://www.3dktech.com)**

# Airsset Technologies Inc

## A new paradigm for improving indoor air quality

"Indoor air quality (IAQ) is still a mystery. We spend 93% of our time indoors, yet all around us are agents of poor indoor air quality – synthetic chemicals, biological agents, pollutants, allergens, microbial contaminants, gases and particles. What's missing is a means to detect them and make informed decisions on how to improve air quality.

We are leveraging next-generation sensor hardware to capture data needed for a new paradigm for improving indoor air quality – an integrated software and hardware platform that will inform our customers the state of their indoor environment anytime, anywhere.

At Airsset, we've started to build this unifying platform. It allows IoT hardware providers and the building industry to turn data into action. Our goal is to build on our platform and offer a data engine for improving indoor air quality for human wellness.

This is a platform needed by IAQ consultants, controls contractors, industrial hygienists and others who are experts in the built environment but struggle to meaningfully collect, analyse and present IAQ data, identify solutions and provide insights to clients. Imagine a platform that uses your own data to help you make better decisions for human health in buildings! That's what we're building."

**<https://www.airsset.com>**

# archiREEF

## Eco-engineering marine ecosystem restoration for ESG goals

"archiREEF offers climate solutions with eco-engineering approaches for ocean ecosystem restoration. We combine expertise in marine biology and the latest technologies in 3D printing techniques and material science to create artificial habitats that are best suited for different marine life anywhere in the world.

We restore degraded ecosystems and mobilise Blue Carbon to achieve carbon neutrality, together with the local communities and corporate clients with strong CSR (corporate social responsibility) and ESG (environmental, social and corporate governance) visions.

We revolutionise the way to restore the environment and empower ecological restoration-based education for local communities, and help our clients to plant corals underwater and translate the impacts into quantifiable ESG performances."

<https://archireef.co/>

# Bia

## Customisable EV charging optimisation smooths clean energy transition

"Through AI and co-optimisation, Bia unlocks the full potential of electromobility for a successful clean energy transition. We optimise EV charging for the cheapest and greenest charge, smoothest loads and lowest battery degradation. Our platform provides Grid Operators with EV load and flexibility forecasting and aggregate control.

Bia's main differentiation is in the unique combination of our high-performance forecasting and automated charge control technology, and pragmatic go-to-market strategy.

Our forecasting based on machine-learning algorithms is a key differentiator as it minimises dependency on end-user engagement and allows for high-frequency adjustments for grid services.

Our optimisation engine is customisable based on the customers' needs and highly parameterisable. This means we can conduct optimisation for several weighted features, according to customer priorities and values.

Our technology is asset-agnostic and highly scalable so it can serve a wide spectrum of distributed storage assets (light EVs, e-cars, e-buses or stationary storage).

Unlike most of our competitors, we are addressing the current needs of our EV customers (data management, charging costs, peak loads, green charging, battery degradation), while setting up the foundation for providing grid services with their assets."

<https://www.biapower.io>

# Breer Limited

## Making beer from bread and crust waste

"Breer Limited makes Hong Kong's first bread beer, and the world's first pizza crust beer, both from otherwise wasted resources. We are a food upcycling startup that reduces bread waste and utilises it in the brewing of beer.

By obtaining these resources for free, and bringing to the market a delicious, bright and crisp beer for everyone, we are making the world a better place one sip at a time! We're an Incubatee of HKSTP's STEP programme, and a winner of Good Seed, Hong Kong Social Enterprise Challenge and Sino One Million!"

<https://www.breer.com.hk/>

# Clear Robotics Limited

## Ocean camera for monitoring climate change impacts

"In Hong Kong, there are no tools that continuously monitor the impact of climate change on water quality and marine ecosystems. Now, marine researchers use Gopros to collect data – an expensive, inflexible, time-consuming and wasteful process.

With our Open Ocean Camera (OOCAM), we address this issue by providing a turnkey solution packed with integrated sensors, customisable shooting modes and AI, resulting in 50x improvement in post-processing time and 7x improvement in annual operational costs for climate research. OOCAM is the ultimate IoT device for all things marine, and helps to accelerate the work of conservationists to combat climate change and build smart aquaculture.

In addition to collecting data, OOCAM can also auto sort and identify footage in real-time, reducing 172 hours of manual post-processing work to two hours. At present, we have already sold to researchers around the world including the UK, Mozambique, Australia and more."

**[www.openoceancam.com](http://www.openoceancam.com)**

# Closer

## Pick-and-place robot improves food factory productivity

"Closer is a robotics automation company specialising in pick-and-place robots for food factories to improve productivity, scale cost-effectively and remain competitive. Our robots are optimised for simple repetitive tasks to the highest quality standards and have the following characteristics:

1. Almost zero installation and set-up period
2. Cut costs and improve competitiveness, as monthly fees will be equal or less than hiring line-staff
3. Easy to install in existing lines
4. Comprehensive with all necessary hardware and end-of-arm tooling and system included in price

This allows Closer's clients to increase production, scale price effectively so they can empower human operators with more value-added and rewarding jobs."

<https://close-r.com/>

# DamoGO

## Connecting farmers and restaurants to reduce food waste

"We have a mobile app and software that help farmers in Indonesia sell their "ugly" harvest directly to restaurants and hotels, which results in more income, less food wasted and lower food waste costs.

In addition, our product allows our partner restaurant and hotel owners to manage the ordering of what they need from ALL their suppliers (and not just fruit and vegetables from us) on our app, saving them time and money, and preventing food from going to waste. Previously, these owners had to manage ordering from their suppliers using multiple confusing messaging platforms and groups, phone calls and emails. This results in missing paper invoices, not knowing prices and wasted time. Our software replaces all that headache with one screen and saves tons of time and money.

Although there are startups working directly with farmers, there are none that help restaurants easily manage all their suppliers. We are the first to market, with 44 brands as partners, and have started pilot testing with two large suppliers that can bring us more than 1,000 new brands. We are also in the middle of our seed round and have four VCs (venture capitalists) investing in the round."



# Digipal papelfree

## Giving every checkout a sustainable paperless option

"Time 's up for printed receipts!

DIGIPAL thinks paper receipts suck...and so we want to replace them.

According to a recent article in Chicago Health, 93% of paper receipts contain bisphenol A or bisphenol B. Your skin absorbs it, and it is linked to negative effects on children and adults, specifically behaviour, blood pressure and cardiovascular diseases. As if that isn't bad enough, it makes paper unrecyclable too.

It gets worse. In just one supermarket chain in Spain, over 3 million receipts are printed per day. Imagine that figure globally. We are felling 25 million trees per year and using billions of tonnes of water just to produce stuff that poisons us and winds up as unrecyclable waste for landfills.

So we have teamed up with supermarkets and shops to give you an alternative that won't ruin our planet or your purse. Just hold your phone in front of the till for a second and voila! By the magic of technology, it will appear on your phone, way easier and way better for everyone."

**[www.papelfree.com](http://www.papelfree.com)**

# Dory iGarden

## Automated plant growing livening up urban homes

"Dory iGarden has developed a modern plug-and-play indoor garden that takes care of plants automatically. The modular system is designed to allow users to effortlessly grow up to 21 plants. The system contains gardening beds that act as biological filters. The plants are nourished by LED lights and controlled by an intelligent operating system and a set of smart sensors, with built-in features to keep users engaged in the harvesting process. The product is designed to bring life into urban homes and spread the joy of effortlessly growing something without external assistance.

The unique smartphone-controlled system enables people to monitor the plants and the watering system, set reminders and collect badges for harvesting. Built-in AI algorithms are continuously learning about the plant environment, nutritional levels and sensory work to significantly optimise the gardening experience over time.

In the long run, the vision is to use IoT and AI to completely automate plant growing in vertical farming facilities. The need for a revolution in this area is exemplified by the fact that more and more people are demanding organic and locally grown food. Dory iGarden is a great innovation for plant cultivation and the food industry."

<https://doryigarden.demo.qbsstudio.com>

# DronePlan

## AI and drones for monitoring marine oil pollution

"The market is ready for smart automation solutions for water pollution monitoring. The marine environment is affected by an estimated one million tonnes of oil pollution each year, not just from oil spills from tankers but also land-based sources such as factories, farms and cities. Most oil spills are relatively small, at less than 700 tonnes of oil, and they occur in or near ports. Detecting an oil spill based on coincidence, especially at night, could delay cleaning.

Our monitoring system, powered by fully autonomous remote-sensing drones and AI for real-time analysis, can gather complete information about the environmental situation, floating objects, underwater vegetation and search and rescue work. It produces actionable data in just 30 minutes, with detailed analysis of specific water areas synchronised with ship location telemetry and other statuses, accessible from anywhere. The system can be operated on demand or on schedule, and is easy to scale up. It can be placed on any static surface, such as land or movable platforms like a ship.

Our value proposition: 70% faster problem detection, less environmental damage, faster containment of oil spills, more efficient and cheaper clean-up processes, less economic damage for ports, and clear identification of polluters."

<https://droneplan.eu>

# EightOSix Technology Company Limited

## Lithium batteries made pliable with metallic fabrics

"Flexible and wearable electronics – from smartwatches to flexible displays, health monitoring garments and even robotics – are increasingly commonplace in our daily life. However, lithium-ion batteries in the market for powering these products are rigid and bulky, causing discomfort to users.

Under the supervision of Prof. Zheng Zijian in the Institute of Textiles and Clothing at PolyU, we have created revolutionary flexible lithium batteries to solve the problem. To replace the metallic foil used in conventional batteries, we have fabricated metallic fabrics by coating textiles with a thin layer of metal with our patented technology. As textile is light, flexible, durable and has large specific surface areas, our batteries show excellent mechanical flexibility and high energy density. When compared to conventional batteries, our textile-based batteries are really stable under deformation and have proved to be penetration- and impact-safe.

Importantly, the battery fabrication is fully compatible with conventional textile manufacturing processes as well as battery production lines.

Based on our technology, we won four prizes at the 43rd and 47th International Exhibition of Inventions of Geneva. We are also an awardee of PolyU Microfund 2021, and have an offer from HKSTP's Incu-Tech programme."

# Film Players Limited

## Combining solar film with smart film to redefine partitioning

"Smart Film makes the transparency of glass switchable and is able to show graphic. This technology is set to change the industry of glass partitioning and glass curtain walls. Curtains will eventually be substituted by the dimmable and eco-friendly smart film system.

### Business Idea

Now, the products can be made even better and more competitive with Perovskite Solar Cell, a technology that makes solar cell more efficient, lighter and thinner in the form of a solar film. When the two technologies cross over, smart film can become self-power-generating and even provide surplus electricity for other appliances.

### Value Proposition

We provide a smarter and more eco-friendly solution that can replace curtains and blinds, and disrupt the market of solar cell and glass partitioning.

### Competitive Advantages

Also, the transparency switching characteristic of smart film allows solar film to trap more heat and energy, and ultimately generating even more power. They are so complementary to be integrated and make a better world tomorrow.

### Achievement

We have a strong partnership with the Kyoto University, which invented this technology. In the future, we are eager to bring the technology to the world and promote the value it brings to the world."

**<https://www.film-players.com/>**

# Flash Green

## Redistributing products before expiry to support green living

"Flash Green is a startup that focuses on recycling residual stock of short-dated best-before date products (fast-moving packaged food in particular) and redistributing them to people from different subgroups through vending machines and a companion mobile APP. Features like product reservation, automated price adjustment and auto-discount function are added to the traditional retail model of vending machines through IoT and real-time telemetry technologies between the vending machines and the APP.

Our mission is highly aligned with SDG 12 "Responsible consumption and production". Apart from reducing unnecessary food wastage, we also intend to be the creator of the next popular green-living trend.

Through integration of technology and sustainability, Flash Green is fostering a smart and sustainable campus and office culture dedicated to reducing food wastage through debunking the myths around best-before dates and promoting responsible consumption behaviour like purchasing short-dated products first. We will also enter the community starting with housing estates to expose citizens of all age groups to this concept, thus maximising our educational impact and showcasing how sustainable choices don't need to be costly."

<https://flashgreen.io>

# Green hydrogel

## Making customisable products from agricultural waste

"Business idea: We develop natural polymers from agricultural residues, in line with a circular economy strategy. We recover residues to make eco-friendly biodegradable products.

Value: The harm done by plastics is growing year by year, posing horrible consequences to us and our future. Meanwhile the world annually generates more than 1.7 billion tonnes of agricultural residues that contain a large amount of biodegradable natural polymers. Only a small amount of them is used for animal feed, composting and producing energy and heat, while the remainder is discarded.

We have created GreenHydrogel based on fully natural polymers of agricultural residues. The project promises to bring much value to customers, in terms of high profits, high-quality products and multi-application products.

The GreenHydrogel idea views waste as a resource that can create new jobs and revenue with zero impact on our precious environment, while creating more income for farmers, so the idea will be supported by governments and social organisations.

Advantages: Our products are all biodegradable, compostable, multi-usage, cheap, high quality and lab-developed. The products can be modified according to customer requirements."

**<https://dinhduclam.github.io/Hydrogel>**

# Hessner Technologies Limited

## Supercapacitor giving light EVs greater range per charge

"Hessner Technologies is a Hong Kong-based startup founded in 2020 and dedicated to developing innovative hardware and software technologies that give Low-Speed Electric Vehicles (LSEV) operators total control over energy-storage sources and onboard energy harvesting in their electric vehicles for a more comfortable and stress-free user experience.

Our power management system and high power density supercapacitor module, which acts as a secondary energy supply for low-speed and light-duty electric vehicles, enables a significant increase in the number of cycles of typical electrochemical batterie, as well as efficient absorption of transient energy from onboard sources, including solar energy and regenerative braking, to increase the driving range per charge.

After being admitted into the HKSTP STEP programme in September 2020, Hessner has completed two additional rounds of in-vehicle field testing in January and May 2021, resulting in the completion and acceptance of the company's first provisional patent in August.

Upcoming plans for 2022 include installing our first pre-commercial prototypes for deployment with fleet operator partners in Hong Kong and the Philippines. This development will be an important step forward for the fledgling electric vehicle industry."

**[www.hessner.tech](http://www.hessner.tech)**



# Hexagro

## Indoor farming platform propagates farm-to-fork convenience

"The vertical indoor farming sector faces scalability challenges due to the need for substantial capital, intense energy use and centralised distribution models. Hexagro is the first product-service platform to enhance access to urban farming technology. Our modular gardens can be installed in any urban space and make available living plants right at the point of consumption.

The quality of the crops is guaranteed thanks to partnerships with local greenery services for system maintenance and resource supply. Hexagro also partners with local plant producers to provide constant seedling supply to different clients and allow users to harvest within days of delivery, thanks to the use of LED lighting and high-pressure aeroponics.

Hexagro's Living Farming Tree (LFT) can grow several varieties of horticultural plants or work as drop-off locations for local plant providers (vertical indoor farms or greenhouses), to finish plants' growth at the customers' locations. Our unique selling proposition comprises: 1) modular hardware, 2) IoT software and 3) local partners. Hexagro aims to enter the market of vertical indoor farming by offering technology to households, offices, residences and any space where people live and work, so as to bypass traditional distribution and provide a (vertical) farm-to-fork model."

<https://www.hexagro.io/>

# i2Cool Limited

## Cooling paint keeps buildings cooler with less energy

"Our novel energy-free and environment-friendly passive radiative cooling paint can contribute to energy saving and decarbonisation. The self-developed and patented paint was inspired by Sahara ants that have self-cooling effects on their skin. Our product has an edge in optical performance, namely 95% solar reflection and 94% thermal emission, resulting in significant sub-ambient cooling effect without consuming electricity and ozone-depleting refrigerants.

Its high effectiveness and wide applicability have been demonstrated in various pilot tests and field investigations. In a site-building application, the roof surface and the indoor air temperatures could be reduced by 20–30°C and 5–6 °C, respectively, leading to 8–10% cooling energy-saving. Applying this paint to buildings in Hong Kong, carbon emissions can be reduced by about 11,000 tonnes a year, equivalent to planting around 71,000 trees.

We will collaborate with different organisations in the building and environment industries to extensively demonstrate and promote our paint product. Continuous product and business upgrades will also be conducted to maintain our technical competence and business sustainability. Our mission is to achieve a remarkable environmental impact, increase energy saving and mitigate climate change, while facilitating overall sustainable and green technology development and economic growth in Hong Kong. "

<https://edwintsolab.wixsite.com/laboratory/i2cool>

# JÚLIA G ESCRIBÀ

## Thermoregulatory clothing makes fashion functional and sustainable

Júlia G Escribà is a thermoregulatory clothing brand with a technology developed for NASA. It is one of the first brands to explore the application of this technology in urban fashion. We create urban clothing that is thermoregulatory, genderless and adaptable to all body types.

This technology makes clothes that adapt to the temperature that your body needs, allowing a change in the current context of fashion, giving viability to timeless collections, and combining technology and new design proposals.

The identity of Júlia G Escribà is defined by three main values: sustainability, design and technology.

We have always been very concerned with the climate emergency and wanted to change awareness in the fashion industry, providing not only aesthetic clothing but also promoting understanding of fashion as functional and sustainable clothing.

The main value propositions that the brand presents are the following:

- Innovative, comfortable and timeless design
- Smart textiles (Certified fabric Outlast®)
- Sustainability
- Natural materials
- Proximity production
- Inclusiveness (genderless and body-inclusive)

<https://juliagescriba.com/en/>

# Just Vertical

## Plug-and-grow indoor gardens produce year-round crops

"Just Vertical's indoor gardens are a fusion of the cutting-edge science of vertical farming and mid-century modern design that allows anyone to grow their own food at home, all year long. The gardens come with built-in grow lights and watering systems so setting up is as easy as plugging in the system and putting in the provided plant pods (just like a Nespresso). All the plants grow using 95% less water and no pesticides.

We have two patents (already filed and pending final approval) – a design patent for the shape and aesthetics of our hardware, the AEVA and the EVE, as well as a utility patent on the function and utilisation of our watering/irrigation pod integration system. We hold many trade secrets with regards to plant recipes that correlate to different controls in lighting, environment, watering and nutrient dosing to optimise the yield of the crops grown in any space, as well as maximise nutritional density and health properties. This technology maximises efficiencies in remediating food wastage by keeping the crops growing in the system, to be harvested again, weeks and months later, all without compromising quality, taste or plant health/vigour. "

**Just Vertical**

# KNO Global

## Gauging honest workers' feedback to tackle supply chain challenges

"KNO Global's vision is to “Humanise the supply chain”.

The common approach towards "supply chain sustainability/ ESG" has typically been carried out through audits, which primarily focus on assessing whether a supplier is compliant or not. Not only does it cost a huge amount of time and money to conduct comprehensive audits, the output reports are often not very practical for brands that want to work with “great” suppliers, not just suppliers that “pass” those audits. KNO Global believes that the bottom-up approach to “engage and build meaningful relationships with factory workers” will tackle the pain points of the existing methods.

We provide a three-way communication platform between factory workers, factory management and KNO. KNO provides professional guidance and expertise for users to gain knowledge in a wide range of topics, as well as tracking and resolving issues. Workers get a “voice” to share their honest feedback and suggestions safely, and factory managers would gain insight on things that workers normally would not share due to various social reasons.

There are no direct competitors in the market for KNO Global. The closest competing providers don't provide ongoing deep insights that directly affect operations and business performances that KNO Global could. "

**<https://www.knoglobal.com/>**

# Lineverge Limited

## Automating work processes and data handling with ease

"Lineverge provides a one-stop solution to let any company/individual automate their work with its no-code platform, Automail. Lineverge is incubated in the HKSTP Incu-App programme.

The company was founded a year ago by Florian Gamper and Clem Taing, two specialists in the supply chain of the tech industry. The duo realised large corporations were mostly relying on their teams to manage processes and handle data manually through countless Excel files and emails. They then created a tailor-made solution, Automail, to let users set up their own automated workflows and run processes without human intervention. Automail also transforms business users into business designers.

Unlike other automation software that require certain training or expertise to set up, Automail is created for business users and stays as close as possible to the tools the users are familiar with to remove the need for training or support. This makes Automail easy to pick up and fast to integrate within any existing business process."

<https://lineverge.com>

# Llewellyn and Partners Company Limited

## Integrating BIM models for managing AEC digital assets

"AEC (architecture, engineering and construction) is a complex industry consisting of numerous stakeholders to collaborate and bring a project to fruition. Leveraging its knowledge and experience, LPC has been developing digitalisation solutions to empower the industry. Over the past decade, we have worked with different stakeholders in the formulation of BIM standards and led various information management research and implementation projects in the UK, China and Hong Kong.

Our BIM Warehouse is an ISO-compliant e-warehouse for smart facility management and procurement (Certified BSI Kitemark for BIM Software, first in the world). It is a digital twin which integrates BIM models with project, facility and procurement data, and analyses historical and real-time IoT information. The ISO standardisation ensures high-value data for AI analysis and city information management with a security-minded approach. Quality of the information is optimised through the embedded AI function (AutoBIM) for digitalisation and standardisation. Bridging different disciplines with past, present and future visions, AutoCDE makes the built assets more sustainable and perform better.

Our cutting edge is integrating the digital assets with ISO-compliant management workflow and enabling AI for digitalisation. While being standardised for digital asset management, it is also highly customisable to begin with the end in mind."

**<https://www.linkedin.com/company/lpcltd>**

# MinervaS s.r.l.

## Making heavy-duty vehicles eco- and energy-friendly

"MinervaS is a university spin-off that offers innovative solutions for the energy and automotive sectors towards the reduction of carbon emissions and onboard energy management. The product of MinervaS can be customised for vehicles with any form of propulsion (conventional, hybrid, electric or fuel cells).

MinervaS provides a suite of integrated solutions for smart and future mobility, from driving advisors (TruckY) to fleet management tools, all tailored to the vehicle and size of the customer's business.

TruckY is a ADAS plug&play device capable of increasing the environmental sustainability of heavy-duty vehicles and offering an economic advantage to their operators thanks to its patented method. TruckY offers a reduction in fuel consumption of up to 10% and containment of the related polluting emissions, without increasing travel times and modifications to the vehicle. As you drive, TruckY processes information about road elevation, payload, speed limits, traffic condition and vehicle characteristics to manage the speed in the most efficient way.

Less Fuel. More Business. Less Emissions. More Planet."

<https://www.minervas.it/>



# NEU Battery Materials

## Recycling lithium batteries to power circular economy

"NEU aims to be the largest lithium raw material supplier, without ever owning a single mine. NEU recycles lithium batteries using our patented electrochemical redox-targeting technology. Our technology leverages off reusable chemicals in the process, allowing huge cost savings and reduction in wastewater and pollution. With reusable chemicals and electricity to power the process, NEU is up to 100 times less pollutive and 10 times more profitable compared to the industry average.

NEU's system is also modular, allowing rapid scaling and requiring lower capital expenditure compared to competitors. NEU only requires 10% more footprint to double the processing capacity. As such, this is the only method to meet the recycling needs of our forecasted 100 million EVs on the road by 2030. In order for EVs to be truly clean and decarbonise our world, NEU is the solution to recycle and close the lithium gap, creating a circular economy."

[www.neumaterials.com](http://www.neumaterials.com)

# Open Ocean Engineering Limited

## Autonomous robot for efficient marine trash recovery

"Open Ocean Engineering Limited aims to sell or rent out our Clearbot robots for various operations that include marine trash recovery and construction waste collection. Our tech is both more environmentally friendly and efficient compared to current practices.

In Hong Kong, marine trash is collected using a fleet of diesel boats with fish nets that operate only with half the efficiency of Clearbot. In parallel, construction waste is collected using cranes and barges repetitively throughout the day, which is extremely cost- and resource-inefficient. With our tech, created in partnership with renowned brands like Razer Inc., we are able to provide an AI-powered autonomous robot alternative that is able to increase cost- and resource-efficiency by two times."

[www.clearbot.org](http://www.clearbot.org)

# Papkot

## Coating paper to replace plastic for eco-friendly packaging

"By 2040, packaging worldwide will be not made with plastic anymore. It will be made with fully biodegradable and fully recyclable pure paper thanks to a clean, sustainable, human-safe, planet-safe, eco-friendly, plug&play technology: PapkotTM.

Papkot is an innovative chemical company. We design an advanced natural coating for paper that enables CPG (consumer packaged goods) companies to replace their non-recyclable and non-biodegradable plastic packaging with fully recyclable and fully biodegradable paper packaging.

PapkotTM-coated paper behaves like plastic, but without plastic.  
Understanding and capturing customer needs and pain points are at the centre of Papkot's business philosophy, product development and strategy."

<https://www.papkot.com/>

# Planeteers HK Limited

## Edible cutlery for sustainability and better culinary experience

"We at Planeteers envision replacing disposable cutlery with incrEDIBLE! – our 100% vegan, biodegradable, delicious and edible cutlery. Our beneficiaries include our partner chains like Treehouse, Cathay Pacific, Sino Group, Green Common, Swire Group and Jardines, which are interested in replacing their cutlery with incrEDIBLE!, giving diners a better culinary experience and central kitchens an additional income source.

Our implementation strategy is divided into two phases:

1. Agile – Targeting sustainability-focused restaurants, the goal is to set up operations and improvise from market feedback.
2. Scale-up – The goal here is to become the primary supplier of cutlery to restaurants that offer disposable cutlery, by scaling up to capital-intensive production.

We deduce that incrEDIBLE!'s carbon emissions are five times less than plastic and 2.1 times less than wooden cutlery. By promoting a closed life-cycle loop, we reduce material footprint per capita, fulfilling SDG12 (Sustainable Development Goal 12). Through incrEDIBLE!, we significantly reduce greenhouse gas emissions, working towards SDG13. By replacing plastic, we aim to reduce mortality rates attributed to plastic poisoning, fulfilling SDG3.

By 2023, we plan to replace nine tonnes of disposable cutlery and in the process, reduce carbon emissions equivalent to planting 11,000 trees!"

<https://www.linkedin.com/company/planeteers-hk>

# R2C2 Limited

## Powering up robots for industrial usage

"R2C2 is a Hong Kong-based robotics startup that focuses on outdoor robot automation and management. Robots are used in the construction industry, property management business and public utility sector for repetitive and dangerous tasks. We are determined to empower over 1.4 million robots for autonomous inspection and industrial automation to elevate industries' productivity, security and safety.

R2C2 was founded in 2020 and has become the first and only Boston Dynamics developer in Hong Kong. We are developing a product: JetPack, to add advanced sensing, long-distance remote control, and robot automation and management to all robots. We have tripled our sales in 2021, and we have deployed seven Boston Dynamics SPOT and JetPack across different industries. We are an energetic and visionary team. We believe technologies should transform humanity and explore new opportunities. Our founder Mr. San Wong graduated from the University of California, Irvine, with a Master's degree in Electrical Engineering. San is an experienced AI and robotics researcher. The team is experienced in underwater robot development and video analytics.

We will continue our research and development in advanced technologies to support various robots. We aim to create more product use cases in Hong Kong and expand in Canada and America."

<https://www.r2c2.ai>

# Real Deal Milk

## Teaching microorganisms to produce dairy products

"It turns out, cows aren't great at making milk.

They are an outdated and inefficient production system that aggravates climate change, water waste and pollution through waste products. We can do much better.

At Real Deal Milk, we are developing technologies that produce dairy products that are equivalent to traditional dairy in terms of their nutritional value as well as the consumer experience.

Through genetic modification, we teach microorganisms how to produce components of milk – protein, fat and sugars. Our product will allow customers to enjoy milk products from cheese to ice cream as they were meant to be without having to worry about impact on the environment and animal welfare."

<https://www.realdealmilk.com>

# ReCheck BV

## Blockchain-based SaaS hub for reassuring data exchange

"ReCheck develops a blockchain-based SaaS hub connecting organisations and allows them to securely share, trace and monetise ESG data.

Value Proposition:

- Cost-efficient and risk-free realisation of privacy and security in data exchange for ESG metrics and sustainability reporting
- Higher rate of data extraction via unlocking reluctant-to-share sources
- Increase trust in data shared with external to the organisation peers.

Differentiator:

- Privacy and incentives enable higher rate of ESG data extraction
- Data integrity and traceability with audit evidence on DLT
- Data normalisation and analytics create comparable metrics
- Ahead in the learning curve with infrastructure in production

Achievements:

Projects with the Dutch Government and European Commission, Techstars alumni, winner in the biggest Dutch blockchain hackathon, a growing business pipeline."

<https://www.recheck.io/>

# Sensegrass

## Sensor and AI to monitor soil health for crops

"According to the Food and Agriculture Organization (FAO), around 65% excessive nitrogen and fertilisers we use in our agriculture remains in the environment and destroys one-third of global crop waste. It is one of the leading problems for productivity as well as environmental issues. Lack of real-time soil information leads to poor soil health and crop degradation and loss of millions in low crop yield, financial losses and carbon-nitrogen emissions. Now after COVID-19, this is going to be even more critical when food quality and sustainability will be a matter of priority.

Sensegrass is a Soil Intelligence Platform that helps companies and farmers to reduce the excessive nitrogen and fertilisers from the soil using a patented NPK (nitrogen, phosphorous and potassium) sensor and optimise crop data through Artificial intelligence Agronomist to grow better with low fertiliser intake to make food of the future."

<https://www.sensegrass.com/>



# ShadeMe Sarl

## Decentralised control for anti-glare blinds

"Modern buildings tend to have large windows. However, occupants have to suffer from discomfort caused by glare of the sun and overheating of buildings in summer. Existing automatic blinds on the market are complicated to install as a centralised system, and are unavailable for old buildings or a part of a building. They cannot sense glare sources or protect users from glare. The occupants also have few overriding options.

ShadeMe offers decentralised anti-glare shading controllers to blinds producers, making the installation of smart blinds possible for every building to save cooling and lighting energy for building owners. It also features advanced anti-glare technology to protect users from the discomfort of glare, with personalised set-up and overriding functions. At the moment, ShadeMe has raised US\$380,000 non-dilutive funds to finalise the product."

<https://www.shademe.ch>

# Shadowmap Technologies

## 3D mapping for scoring apartment brightness

"Shadowmap is the first 3D maps app to accurately visualise Sun and solar shadows anytime and anywhere on Earth. It is user-friendly, instant-on and runs on all devices.

Currently, there exists no automated technology to calculate the sunlight intake of real estate in respect of shading by neighbouring buildings and terrain. Hence, customers looking for a new property are limited to rough estimations based on on-site visits, floor plans or imprecise maps. Seasonal differences further increase uncertainty, or might even be impossible to predict.

Sun exposure not only affects the value of an apartment but also its energy efficiency, costs for HVAC and photovoltaic potential associated with the apartment's aspects. These factors are relevant for green construction certifications and taxation, and more crucial than ever due to climate change and the transition to sustainable energy.

With Shadowmap, we have already shipped a highly innovative product which is used by thousands of customers to research the brightness of apartments. Now we are bringing it to the next level: Based on 3D real estate data, we will automatically calculate respective sunlight scores. Our declared goal is to establish this score among international real estate platforms and thereby define a new global standard."

<https://shadowmap.org>

# Shanghai Emerging Technology Limited Company

## Multi-technology platform for growing robust plants indoors

"Shanghai Emerging Technology Company was founded in 2019 to provide customers with solutions through a world-class indoor plant factory, improve plant production efficiency and quality, and provide the public with a stable supply of high-quality vegetables, herbs and other products under automated cultivation in a closed system of plant factories. It is a modern high-tech-integrated planting technology system that combines many technologies.

We use green technology optimising indoor environment temperature, humidity and CO2 control for plants to grow in a comfortable environment. Through the development of an artificial light LED light technology, our plants can also photosynthesize indoors. Our fully developed nutrient technology provides the necessary nutrients for plants to grow. At the same time, we use plant tissue culture technology, cultivation technology, automated equipment technology and modern plant factory management technology to achieve stable cultivation of high-quality plants.

We have applied for 75 patents in total, of which nine are invention patents. Among pending patents are nine in Japan, three of those are invention patents."

<https://www.set-sh.cn/>

# Solid-X Limited

## Overcoming flammability issues of li-ion batteries

"Solid-X is a young, energetic and technology-driven startup founded in May 2020 by a group of passionate and young scientists from the Department of Mechanical and Aerospace Engineering, Hong Kong University of Science and Technology (HKUST).

We are developing Solid-State Li-ion Battery (SSB) technology to provide a safe and reliable energy storage solution for businesses and society.

Our team has more than 10 years of R&D experience in solid-state energy materials for fuel cells and batteries.

We focus on the development of high performance and safe SSB technology, which enables applications in electronic vehicles (EVs). Based on our patented meta-solid-state electrolyte (meta-SSE) technology, our batteries can work at a temperature 33% higher than conventional rechargeable Li-ion batteries without flammability issues. We are targeting to develop next-generation SSB to improve safety, increase energy density (>300 Wh/kg) and battery life (>1000 cycles). These special features allow us to directly answer the market's and customers' needs. Our inventions have been protected by two US patents and three Chinese patents.

Traction and Achievements

2020-21 HKUST U\*Star Award

2020-21 HKUST Yeung Wing Yee Entrepreneurs Fund Awardee

2021-22 TSSSU Awardee

HKUST-Sino One-Million-Dollar Entrepreneurship Competition 2021 – GF Innovation Award 2021"

# SunEmison Solar Energy Private Limited

## Turning glass walls into solar power generators

"SunEmison Solar develops and manufactures clean energy solutions such as a building-integrated solar systems for corporates, real estate/skyscraper developers and smart cities. We are focusing to serve customers in Asia Pacific, Eastern Europe, Sub Saharan Africa and ASEAN.

We offer AI-enabled glass with embedded photoactive / synthesis technology, converting a traditional building construction material into a solar energy generator, while optimising three different things at the same time, namely electricity production, thermal insulation and intelligent behaviour analytics by UI / UX.

AI glass is the photosynthesis integration of Nanotechnology AI & IoT Combination into the building envelope. The glass serves the dual functions of a building skin, replacing conventional building envelope materials, and a power generator. The glass can be integrated in new construction or retrofitted into existing buildings to have better thermal insulation properties.

Having solar energy collection integrated into the building envelope not only serves its original purpose but also produces financial payback through electricity generation and energy savings.

Achievements:

1. Two commercial pilots implemented successfully
2. \$278,000 (what currency?) revenue generated even during COVID by utilising innovative logistics arrangement and deploying manpower
3. Set up a manufacturing facility in a 3,000 sqm site in an industrial area "

**SunEmison Solar Energy Private Limited**

# Super Bamboo Limited

## Augmented bamboo materials for building sustainable future

"Our world of tomorrow needs and demands for sustainability. Among one of the worst contributors to the crisis of climate change today is the materials industry. However, the current roster of traditional materials is often highly environmentally damaging. Steel produces huge carbon emissions and emits toxins to the air and water. We all know how harmful plastic is. Even wood, the current best choice, aggravates the problem of deforestation and releases toxic formaldehyde.

Our company Super Bamboo Ltd. invents augmented materials out of bamboo, combining nature's genius and elegant materials engineering. Our base material, bamboo, is as strong as hardwood and can grow up by one metre every day, eliminating deforestation and supply problems. While it is growing, it absorbs 35% more carbon dioxide from the air than trees. Super Bamboo is a material that is 3 times stronger than natural bamboo. In fact, it is stronger than steel and titanium.

The process to make it is 100% eco-friendly, releasing no formaldehyde, and is carbon negative. Our material will answer the demand for green and sustainable materials without compromising performance."

**<https://www.thesuperbamboo.com>**

# Sustain.Life

## Self-service tool for corporate sustainability evaluation

"Sustain.Life is a new SaaS platform helping organisations across industries define and achieve their sustainability goals. Launched through the 4Sided Venture Studio in 2021, Sustain.Life enables enterprises to future-proof themselves by embracing sustainable practices that reduce costs and help distinguish them to customers, partners, investors and recruits. The platform equips users with a powerful suite of tools that help them make progress along key metrics such as energy and emissions, carbon emissions measurement and offsetting, water and waste management, and more.

Environmental sustainability is a critical issue that has clear business benefits – research shows that 83% of millennials would take a pay cut to work for a socially responsible company, and according to an IBM study, 60% of consumers say they would change their buying habits to reduce environmental impact, and over 70% would pay premiums for sustainable brands. However, it's hard to operationalise, particularly for medium-sized businesses that lack the budget for expert consultants or dedicated headcount.

Sustain.Life is an affordable self-service tool designed to help businesses evaluate their environmental footprint and make actionable plans for change. Critically, Sustain.Life enables non-experts to do this work so that organisations can present world-class sustainability programmes without hiring additional employees."

<https://www.sustain.life/>

# TechnoCarbon

## Making stronger and lighter materials for diverse applications

"TechnoCarbon will revolutionise the construction industry through a patented new materials family called CarbonFiberStone (CFSÂ®), which, compared to traditional construction materials (from steel to concrete), is more durable (5-10x), stronger (4x), lighter (1/3), more energy-efficient (1/2), zero-waste and eco-friendly (90% reduction in CO2 emissions).

TechnoCarbon disrupts material manufacturing to decarbonise architecture, infrastructure and industry, using the world's first sustainable, high-performance material by replacing concrete, metallic alloys and plastic, to protect health, biodiversity, climate and ecosystems.

Our technology can scale-up worldwide in several verticals: construction, maritime transport, aerospace and defence, and energy. We partner with new material pioneers in each vertical to design products, and reduce risks and time-to-market."

<https://tctf.eu/en/>



# The Kabadiwala

## Saving resources with smart waste management

"TheKabadiwala.com is a technology-driven company working on a technology platform to make a Smart Waste Management system. We redefine the waste management value chain by bringing in efficiency, transparency and traceability in collection, segregation and recovery through technology and logistics optimisation.

Our platform helps find and map assets that streamline the collection of post-consumer waste, schedule efficient and cost-effective pickups and incorporate them into the recycling/vendor network.

We believe efficiency and optimisation in the collection process will definitely help this sector to be more organised and transparent. Our passionate team has been making efforts to increase the percentage of collection and diverting a maximum volume of waste from landfills to recycling. Till now, the amount of resources we have saved include:

Trees saved: 43,854

Water saved: 68,356,599 litres

Electricity saved: 3,626,699 kwh

Oil saved: 1,625,618 litres"

**<https://www.thekabadiwala.com>**

# Airbender Co., Inc.

## Pain alleviation by frequency resonance and TCM theory

"The demand for pain management is enormous, as pain is one of the increasingly serious issues due to ageing, stress, injuries, diseases, etc. Body pain (especially nerve pain, frozen shoulders, plantar fasciitis) could make daily activities difficult and impact the quality of life. Airbender Co. Inc. aims to provide an effective, non-invasive and safe pain management solution to resolve this urgent worldwide issue.

The ChiWavez Pain Alleviation Massager (CPAM) device is designed primarily to effectively alleviate human physical pain, based on the principle of frequency resonance and Traditional Chinese Medicine (TCM) theory. Our R&D designers developed CPAM in US's Silicon Valley and Taiwan as an innovative technology. CPAM has gained thousands of positive endorsements and testimonies and proved to be an effective massager for relieving pains. The CPAM is a patented technology in the US, Taiwan and Mainland China."

[www.airbender.com.tw](http://www.airbender.com.tw)

# Ai-Ris LLC

## Democratising retinal examination for easy vision screening

"Vision Loss, especially due to diabetes and hypertension, is a huge problem affecting up to 60 million people each year in the U.S. and over 600 million globally. Early detection is key to prevention, but due to a lack of easy access to retinal examinations, most patients go undiagnosed and suffer from vision loss. At Ai-Ris, we empower primary care physicians to provide retinal examinations and bring them upstream using an AI-powered retinal imaging system (patent pending). Currently, vision loss is diagnosed by an ophthalmologist who uses either a slit lamp or OCT (optical coherence tomography) machines. These machines are expensive, and require pupil dilation and the presence of an ophthalmologist. Our device is compact and automates the screening process. Virtually anybody can use it.

There are several software companies that are exploring this space but do not have a hardware solution. We are the only company in this space that offers an integrated hardware and software solution. With our massive database of over 400,000 expert-labelled images, we've built high-performing machine-learning models achieving 96% accuracy. These findings have been published as cover articles of Cell and Nature Medicine journals."

<https://getairis.org>

# Aortyx

## Endovascular devices allowing for native aorta regeneration

"Aortic aneurysms (AA) and dissections (AD) represent a major challenge in the cardiovascular field. Especially frequent in developed countries, aortic diseases have historically received less attention from medical device companies than other cardiovascular diseases. As a result, innovation in this field has been barely incremental in the past years.

AD and AA present incidences of 1/10.000 patients/year, which is estimated to increase due to ageing population and increased predominance of endovascular procedures. These procedures, while present lower risks and faster recovery time compared to conventional open surgery, have inherent limitations, secondary effects and elevated mortality.

Aortyx wants to meet this unmet need by developing the ultimate solution for aortic diseases. Aortyx designs and develops a novel family of endovascular devices that allows for endogenous regeneration of the aorta instead of artificial replacements. The devices are based on a bioresorbable and biomimetic patch that is released on the damaged section of the aorta using an endovascular deployment system. The patch mimicks the natural mechanical properties of the aorta to secure smooth integration in the native tissue.

Our first product prototype, indicated for AD, is successfully progressing its pre-clinical trials and has scheduled the first in human trials for 2022."

<https://www.aortyx.com/>

# Beth Bioinformatics Co., Ltd

## Bioinformatics solutions facilitate efficient vaccine making

"Beth Bioinformatics Co., Limited (BethBio) is a biotech company that develops state-of-the-art technologies for precision medicine in pharmaceutical and healthcare settings. Founded by Professor Maggie Wang and Professor Benny Zee, who are both active professors at the Chinese University of Hong Kong, BethBio aims to translate frontier research results into applicable cutting-edge technologies.

In the area of vaccines, BethBio has developed a patented technology that can characterise viral genome mutations. With the help of AI and machine learning, BethBio provides a series of innovative bioinformatics solutions including optimal antigen design, region-specific antigens, vaccine effectiveness (VE) estimation in-silico, protein binding & codon optimisation and more. These solutions could help pharmaceutical companies make vaccines with new technologies, higher manufacture efficiency and improved VE. Our solutions are applicable to any manufacture platform and transferable to many viruses, including influenza, RSV, COVID-19 and more.

Currently, BethBio has already established collaborations with multiple pharmaceutical companies regarding vaccine development and signed several contracts or agreements, including a strategic collaboration agreement. In addition, within less than three years of establishment, we have been admitted to the HKSTP Incu-Bio Programme (2019) , two years of Technologies Technology Start-up Support Scheme for Universities and the 4th cohort of the HKAI Lab Pilot Program."

**[www.bethbio.com](http://www.bethbio.com)**

# BioOM Co., Ltd.

## Enzymes for neutralising pesticide toxicity of farm produce

"BioOM Co., Ltd. is a synbio-based deep-tech startup. Our innovations are aimed at improving consumers' health and well-being. Our initial product is "M-Green – a fruit and vegetable washing product" that contains insecticide-degrading enzymes as key ingredients.

M-Green is formulated to remove insecticides from the surface of fruits and vegetables. It contains essential enzymes that are highly effective for degrading insecticides and reducing their toxicity. M-Green is a natural substance derived from bacterial cells via a biotechnological process. It is a safe and environmentally friendly product.

Insecticides can pose a risk to farmers when used improperly, and to consumers when farm produce is contaminated. While chemicals and ozone may be able to remove pesticides, they do not eliminate their toxicity. M-Green with insecticide-degrading enzymes is a natural biocatalyst that has been scientifically validated for its high catalytic activity, selectivity and ability to significantly reduce the toxicity of insecticides.

M-Green can be used both pre- and post-harvest on fruits and vegetable. As a result, M-Green will benefit farmers and a variety of industries, including export and import, food, modern trade, nursing homes, hospitals and schools, as well as health-conscious consumers."

**[www.bio-om.com](http://www.bio-om.com)**

# Bloom Standard, Inc.

## Handy ultrasound device for infant cardiopulmonary diagnostics

"Bloom Standard's mission is to save children's lives by developing a wearable ultrasound device to screen for cardiac and lung conditions, which account for one-third of deaths in infants. Bloom Standard aims to deliver a portable, affordable and self-driving AI-based solution to address the need for such equipment that can be operated by laymen, especially in remote and low-resource settings.

Our solution works simply by pressing a button. Autonomous scanning will alert the user of heart or lung abnormalities. Acting as an early warning system to flag potentially life-threatening conditions, Bloom's technology will allow earlier interventions, saving lives by democratising ultrasound for the patients who need it most.

This compensates for the dearth of primary-need technology in countries that have high infant mortality rates, addressing the high cost of screening equipment compounded by a lack of portability, trained ultrasound technicians and radiologists to diagnose a disease. It helps to fill service gaps for governments, health staff and global health purchasers while helping countries reach critical Sustainable Development Goals (SDGs) accountability targets for newborn and child mortality. It gets children the care they need in some of the hardest-to-reach, most under-resourced and disadvantaged places on the planet."

<https://www.bloomstandard.com/>

# Capmi Technology Limited

## Tracking and speeding up ACL injury recovery

"We provide an innovative Anterior Cruciate Ligament (ACL) rehabilitation solution that could reduce such injuries and shorten the recovery time.

ACL injury is a common knee injury, with over 100,000 cases annually in the US. Most ACL tears are a result of a non-contact mechanism such as a sudden change in direction causing the knee to rotate inward. It commonly occurs in several sports, including soccer, basketball, skiing and rugby. Both professional athletes and amateur sports lov

Our product is a set of motion tracking sensors with an App that generates ACL reports. The patient simply wears the sensors and does the ACL assessments (17 ACL tests and 6 recovery phases at the industrial level are included). The tiny sensors can capture motions in real-time, then analyse the angles and the range of each motion. After gaining precise data, a report will be generated in the App, with test performance and advice offered.

Our solution transforms the traditional rehabilitation process in a more efficient and convenient way. It helps users to easily understand assessment results, keep track of the rehabilitation process and speed up recovery."



# Cardiax Lab (Asia) Limited

## Cloud computing and AI for mass cardiovascular screening

"Cardiax Lab focuses on digital health and medical AI. Our cardiovascular screening services help to reveal the underlying causes of cardio diseases and the effectiveness of treatment.

We provide an ideal solution for mass screening in the population, especially in the post-COVID-19 pandemic era.

The service has been launched in Hong Kong since 2019 and we have developed rapidly from one flagship centre to seven partnership centres so far, and hopefully extended to 10 by the end of 2021.

We are helping the government to improve public health and primary care by using a preventive approach for cardiovascular risks.

Our first device is for measuring blood flow (haemodynamics) by using cloud computing, with AI for cardiovascular analysis and treatment efficiency monitoring."

**[www.cardiaxlab.com](http://www.cardiaxlab.com)**

# CLAIRE Clinical AI Research Limited

## Individualising therapy with AI prediction of KOA prognosis

"Knee osteoarthritis (KOA) is a common disease in Hong Kong for which there is a years-long waiting line for treatment in public hospitals. Worse still, patients can only receive non-individualised therapies in hospitals, resulting in poor treatment outcome and resources allocation, due to an absence of KOA precise prognosis.

Thereby, we have created a one-of-a-kind AI-based KOA progression risk predictor. It acts as a multimodal triage method for KOA patients based on their progression risk, using affordable and accessible clinical data and medical images from Queen Mary Hospital and St. James' Settlement. Furthermore, our AI delivers comprehensible findings to assist clinicians in developing individualised therapies, and improve treatment outcomes and resource allocation – low-risk patients obtain low-cost preventative therapies like education, whilst high-risk patients receive intense treatment sooner.

We place a high importance on "Point-of-Care," thus a mobile application will be established. It comprises online rehabilitation sessions, ongoing monitoring and individualised health advice to ensure an uninterrupted and streamlined treatment procedure.

Our AI achieves a state-of-the-art prediction precision of >80%. This result has been published in two scholarly papers. We have given presentation in an international medical congress, and won seed funding from PolyU and HKSTP, indicating our commercial potential."

<https://www.claireairesearch.com/>

# C-Polar Biotech Limited

## Bioelectret for eliminating pathogens in fast air flow

"C-POLAR is a biotech startup developing and manufacturing bioelectret for electroceuticals. Our company has successfully developed the C-POLAR bioelectret to arrest, inactivate and eliminate 99.9% of viruses and bacteria in fast air flow, with short contact time and low pressure drop.

The mechanism of C-POLAR is independent from external energy, chemical consumption and toxicity to human cells. To protect C-POLAR's partners, our mechanism is patented in Hong Kong and the United States, covering 158 countries and regions globally. C-POLAR has received US EPA (Environmental Protection Agency) exemption and NHS (National Health Service) approval."

[www.c-polar.com](http://www.c-polar.com)

# Cratos

## Telerehabilitation for musculoskeletal chronic pain management

"Musculoskeletal (MSK)-related chronic pain affects one-third of all Canadians and half of all Americans, and costs US\$600 billion to manage in the US alone. In Canada, MSK issues are treated by visiting a physiotherapy clinic on an ad-hoc basis, or by being prescribed pain medication. Both of these solutions are not optimal or sustainable in the long run.

Cratos uses a digital platform to provide telerehabilitation for individuals who suffer from MSK-related chronic pain. Our platform connects its members to physiotherapists and other relevant professionals, and allows them to communicate remotely via chat and 1:1 live sessions when needed. Members on our platform are entered into a programme and given exercises that are personalised to their current recovery needs. A professional is always one chat away to answer questions and to make sure members stay motivated throughout the programme.

We place a high emphasis on education, to educate members and allow them to self-manage. Our goal is for our members to ultimately become independent and not have to rely on our solution as much."

<https://www.cratoshealth.co/>

# CUre Enterprise

## Lower cost niche respirator for front-line medical workers

"CUre Enterprise is a spin-off social enterprise of Chulalongkorn University (CU), Thailand. The company is tasked to bring "Research to Reality" from the labs of CU's various institutes, especially for medical/health innovation.

Our first product line is CUre AIR SURE: a revolutionary niche respirator designed for medical/health application. The product is a "blue ocean" as respirators are usually either built for industrial use or as disposable masks such as N95.

With more than a dozen researchers in the team from the Faculty of Engineering, Faculty of Medicine and the Metallurgy and Materials Research Institute, the team has crafted a respirator that offers the highest filtration protection (99% efficiency according to Global ASTM F2299 & ASTM F2100:2019 standards), at only one-tenth of the cost of disposable N95 masks.

This first product is functional and affordable, addressing the immediate need of front-line medical workers in Thailand. The next version MK2 will offer aesthetic value while keeping the original criteria of being 99% protective.

Within a period of two months, 17,000 units of CUre AIR SURE have been adopted."

**[www.cureenterprise.co.th](http://www.cureenterprise.co.th)**

# EIELING TECHNOLOGY LIMITED

## Portable ultrasound device for accurate assessment of liver diseases

"Eieling Technology Limited is a Hong Kong Polytechnic University (PolyU) academic-led startup focusing on the development of a portable ultrasound device targeted for the liver, named Liverscan.

Progressive haptic fibrosis and subsequent development of cirrhosis are the prognosis for patients with chronic liver diseases, which require early diagnosis and continuous monitoring. Liverscan is a palm-sized tool for detecting and staging liver fibrosis through non-invasive measurement of liver stiffness. This system features a patented technology of real-time B-mode ultrasound imaging guided transient elastography (TE), which enhances the accuracy of measurement. Moreover, its lightweight and cable-free design allows higher flexibility in operation. It provides a point-of-care approach for liver fibrosis and cirrhosis assessment, and thus favours community-based screening, early diagnosis, follow-up assessment and treatment outcome monitoring.

With its portability and cost-effectiveness, Liverscan is readily accessible for healthcare professionals and patients in needs. This allows operators to perform liver fibrosis detection for patients anywhere and anytime.

Liverscan was awarded the silver medal at 2021 Inventions Geneva Evaluation Days. Eieling's Liverscan is currently in HKSTP's Incu-Bio Incubation Programme, and has already received a total of HK\$7.5 million angel funds and public funding."

# Galactica Biotech Limited

## Unearthing molecule potential to extract nutritional value

"We have developed a machine-learning platform capable of identifying new applications for molecules to unleash the power of next-generation smart food supplements and personalised nutrition.

We use this technology to develop supportive nutrition formulations for different diseases. For example, we have developed a formulation that could reduce the possibility of contracting COVID-19 and the severity of infection.

We have also used our platform to help pharmaceutical companies discover new applications for their molecules that could generate more value and intellectual property.

We have received a Horizon 2020 Seal of Excellence from the European Commission, an international panel of independent experts evaluated our proposal in a very competitive process as a high-quality project passing extremely demanding evaluation on each of the criteria: excellence, impact, quality and efficiency of implementation."

**[www.galacticabiotech.com](http://www.galacticabiotech.com)**

# Genenet Limited

## Culturing cardiac organoids for drug discovery and screening

"Cardiac disease is the number one cause of death worldwide last year, with four times more deaths than COVID. However, we are lacking an efficient drug screening platform for cardiac diseases.

By using bioinformatics techniques to screen biomarkers, artificial neural network (ANN) to predict drug efficacy and organoids as cutting-edge tissue models, we have created our AI cardiac organoid drug discovery platform which could reduce five times the time-cost and three times the expenses.

Currently, we have successfully cultured cardiac organoids, built highly accurate ANN and genetic circuit designs. With our patented technology, we are now turning cardiac organoids into AI computers that help us predict drug efficacy and toxicity.

The AI drug discovery market is huge, expected to reach US\$3.5 billion by 2027. We are expecting over US\$20 million revenue by 2025 via screening 4M (four million?) drugs. Yet, this is only the beginning of our journey. By turning different cells into AI computers, our vision is to become ARM (Alliance of Regenerative Medicine?) in the biotech industry. With a strong team, including PhD and postdoc from Cambridge and Imperial, Forbes 30 under 30 entrepreneurs, professors and fellows from HK and Harvard, we believe we are going to generate enormous value to the industry and our society."

<https://genenettechnology.com/>



# Grand Rise Technology Limited

## Eco-friendly antimicrobial coating with long-lasting disinfection efficacy

"We are a startup backed by PolyU InnoHub and HKx Foundation, focusing on bio-based nanomaterials development for a sustainable world.

Amid the COVID-19 pandemic, people are more concerned about environmental hygiene than ever. Most of us still remember vividly how bleach, alcohol and hand sanitiser were snatched up. Disinfectants effectively kill pathogens such as coronaviruses, but high-touch surfaces, such as elevator buttons and handrails, need frequent re-application to be free of germs. Moreover, certain disinfectants may irritate human skin while others may pose health risks upon prolonged exposure. Toxic chemicals may also leach into our ecosystem, contaminating water and other resources.

In light of this, we have developed a solution, CareCoatex, with long-lasting antimicrobial effect on various surfaces, but safe for humans and the environment. CareCoatex is a bio-compatible, non-toxic and eco-friendly antimicrobial coating based on our patented ground-breaking core-shell particle technology. It can effectively and rapidly kill 99% of common bacteria and viruses (e.g. Covid-19) for up to six months and can be used for a wide range of applications such as public hygiene, antimicrobial textile, food safety protection and degradable antimicrobial plastic.

In March 2021, our invention won a Gold Medal at Inventions Geneva. "

**[www.innocoatex.com](http://www.innocoatex.com)**

# Grid Biosciences Hong Kong Limited

## A non-chemotherapy treatment alternative for nasopharyngeal carcinoma

"Grid Biosciences Hong Kong Limited ("Grid HK") is a startup company developing drugs for rare and hard-to-treat diseases. Its first drug, called GRD-729, is a non-chemotherapy drug for the treatment of nasopharyngeal carcinoma (NPC), which has a high incidence rate among Hong Kongers and the Chinese population!

GRD-729 has already completed Phase 1 clinical trials, and Grid HK is preparing to advance the drug to Phase 2 clinical trials.

GRD-729 has the potential to be the first, targeted treatment for NPC. Grid HK was recently admitted into the HKSTP IDEATION programme in August 2021."

[www.gridbiosciences.com](http://www.gridbiosciences.com)

# Han-Peng Assisted Reproductive Technology Limited

## **Accurate embryonic prediction for elevating IVF success rate**

"Our products are designed to assist IVF doctors and embryologists in predicting the potential of embryonic development. Our platform is equipped with the world's leading and unique human fertilised egg image analysis algorithm and embryo development prediction and analysis. It has opened up a new link for the assisted reproductive service industry chain.

Based on convolutional neural network technology, we have established a unique segmentation algorithm and early blastocyst prediction model to achieve accurate and early prediction of embryo development potential, so that IVF doctors can arrange more appropriate transplant and embryo culture programmes based on the prediction results, and help improve patients' key clinical outcomes."

**www.zmp.hk**

# Harmony Baby Nutrition

## Making allergen-free infant formulas with breast milk proteins

"Milk Care Co., Inc. ("Harmony") is a food-science company applying cutting-edge biotechnology to create the next generation of infant formulas with a composition that mimicks human breast milk. Harmony leverages recombinant protein technology to produce human breast milk proteins that can replace cow's milk proteins and vegetable hydrolysates used in infant formulas. Our breast-milk-based baby formula is cost competitive, safe and allergen-free for babies.

We are solving one of the biggest challenges in the baby food space – the use of cow's milk as the main ingredient for baby nutrition. Up to 17% of newborn babies experience adverse reactions to the proteins in cow's milk infant formulas and are unable to consume dairy products (0.5 million babies in the US and 2.6 million babies in China annually). Cow's milk has both significantly more proteins (four times more concentrated) and allergenic proteins such as Alpha1, 2-caseins and Beta-Lactoglobulin that lead to cow's milk protein allergy (CMPA) in babies, and these proteins are absent in breast milk. Our product also resolves the issues of current solutions like extensively hydrolysed or amino acid-based formulas that taste bitter, smell bad, and cause osmotic diarrhoea, vomiting and nausea."

<https://www.harmonybabynutrition.com/>

# Herbap Biotech Limited

## **Fern-derived phytonutrient fluids help remove fibrous scars**

"Herbap Biotech is a green company founded by two Hongkongers who are passionate about scientific research, phytomedicinal studies and knowledge products. Herbap Biotech is committed to producing and delivering scientific processes on phytochemicals and herbal products with young technical mind and advanced tools. One of our specialties is phytonutrient-based remedial fluids for the management of elevated scars. Herbap Biotech aims to deliver to sufferers the non-invasive biomarker-specific phytonutrient fluids with easy adoption and convenience of use in order to help them remove raised fibrous marks in the comfort of their home. Lately, we have been formulating a series of remedial fluids especially for sufferers with hypertrophic scars and keloids.

In the future, we aim to incorporate our fern-derived phytonutrients into silicone/hydro-gel sheeting, complemented with 3D printing, to develop more thorough and personalised protocols for the management of different fibrous marks of the skin, while collaborating with other academic institutes and/or biotech companies. Herbap has been granted funding from the Technology Start-up Support Scheme for Universities (TSSSU) for two consecutive years."

**[www.herbap.com.hk](http://www.herbap.com.hk)**

# Hollo Limited

## Behavioural health prediction helps improve chronic diseases care

"Behavioural health is crucial to patients under treatment for chronic illnesses like diabetes, cancer, Alzheimer's, or even as a standalone condition. Research shows that an individual's behavioural health impacts the recovery process, yet many healthcare plans are devoid of any planned intervention to improve patients' mental health, especially in Asia.

Hollo is an award-winning B2B health-tech social enterprise building Digital Therapeutics (DTx) and Software as Medical Devices (SaMD) to improve patient outcomes and lower cost of care. Our USP is our research-backed Behavioural Health AI for predicting mental health early via biomarkers and behavioural data.

Our technology is advantageous for patients as we empower them with transparency and toolkits to keep abreast of their own condition and how their behavioural health impacts their recovery journey. As a standalone tool that adds to their existing recovery/monitoring, our technology for improving mental health can lead to decreases in the cost of their care. Doctors and providers find value in the model as we enable collaborative care between different professions and behavioural health specialists, engaging the client in a clear scope of care and providing measurable outcomes for patients via FDA-approval-pending clinical SaMD and DTx."

**<https://hollo.hk>**

# InnoGenEx International – Science and Technology LTD

## Fighting diseases with a compact automated diagnosis system

"Diseases in both livestock and humans keep emerging, such as the African swine fever virus and COVID-19. Scientists are in a constant race against pathogens, and don't always win. Early detection is among the most effective strategies to control the spreading of a disease. The need for rapid, onsite and low-cost detections, therefore, is soaring. To meet the need, we have successfully developed an automated disease diagnosis system. The system is the size of a coffee maker thanks to the LAMP technology (Loop-mediated isothermal amplification of DNA). We have also simplified DNA/RNA extraction to fit the whole detection process into one compact instrument."

<https://innogenex.vn/>

# IPLEXMED, Lda

## Portable device for user-friendly respiratory infectious disease detection

"Our product consists of a portable electronic platform and disposable cartridges for the diagnosis and monitoring of respiratory infections/resistance in pulmonary disease patients. The involved infectious agents are often drug-resistant, thus timely personalised treatment reduces hospitalisation costs and morbidity/mortality to achieve better patient outcomes.

By using a single disposable cartridge, our device enables simultaneous and laboratory-grade detection of multiple infectious agents and their drug resistance, within minutes, in unprocessed samples. The results are displayed in a user-friendly mobile APP and communicated directly to clinicians, and stored to enable community health surveillance. Given the product's portability and ease of use, consumers could use the device not only at the point of care but also at home, with the advantage of communicating the results directly to doctors in real-time. Our product overcomes the typical issues of accuracy and sensitivity associated with portable rapid tests, while mitigating problematic resistance of organisms by offering personalised information to clinics and enabling an unprecedented level of health monitoring of pulmonary disease patients' infection history, which is also relevant for surveillance/epidemiology. We have developed a small-sized portable platform and cartridges applied successfully to infectious agents detection in saliva, TRL4."

<http://www.iplexmed.com/blog/en/home/>



# Kibus Petcare

## Automatic cooking of healthy pet food

"Kibus is the first device that cooks healthy pet food automatically. We commercialise both the device and multi-dose pet food capsules in a Gillette business model. Pet parents have to choose between traditional solutions (such as extruded and canned pet food) which are highly processed, and alternative solutions (such as home-made, frozen and dehydrated pet foods) which are really inconvenient and require a preparation process before every meal.

Kibus is created to solve this problem. It allows pet parents to feed their pets on a healthy and natural diet in a convenient way. Kibus has already appeared in some of the main media worldwide such as Techcrunch and TEDx, and it has already been considered as the main product innovation in Spain by AECCOC.

Kibus has raised already more than 1M€, (one million? What currency?) between private investment and public grants. We are also part of Brinc, a Hong Kong-based hardware accelerator, and we are collaborating with Nestlé Purina, the second largest company in the pet food industry. We won the International Prize of the Catalonia Investment Forum 2019, voted by Hong Kong venture capitalists, and we presented in HKSTP's EPiC last year."

**[www.kibuspetscare.com](http://www.kibuspetscare.com)**

# Kinexcs

## Monitoring knee joint recovery continuously

"Kinexcs uses AI algorithms and advanced IoT wearable technologies to help reduce the burden of musculoskeletal conditions, which affects about 25% of the global population. Our first product, the KIMIA Knee Recovery Management Solution, is the world's first continuous monitoring device for the knee joint launched in Q2 2021. The product is built upon a proprietary sensing technology (based on over 20 patents) which provides the world's first continuous joint range of motion monitoring capability in an accurate and reliable manner.

It has booked initial revenues from large medical device companies, hospitals and private specialist clinics. Currently, it is deployed in some of the largest hospitals in Singapore such as Singapore General Hospital, Mount Elizabeth Hospital, and large medical device companies such as Meril Life. The product was a National Winner in Singapore and among the International Top 20 of the prestigious James Dyson Award 2020.

The second product, KIMIA Home, is a digital therapist in the form of a mobile app capable of providing real-time exercise guidance and feedback using computer vision and AI. Kinexcs has obtained a total of US\$1.5 million in equity financing to date."

**[www.kinexcs.com](http://www.kinexcs.com)**

# King's Phase Technologies Limited

## Sensing fat-burning rate to motivate fitness pursuit

"Sensing ketone bodies means understanding human fat-burning rate and risk of ketoacidosis.

Current technologies in ketone sensing are either invasive, or offer ketone sensing with low sensitivity in the concentration range of 1mg ketone bodies per litre air (ppm) and low specificity.

Our semiconductor ketone gas sensor provides ketone sensing capability that is over 1,000 times more sensitive in terms of part per billion (ppb) range. Imagine a person starting to run on a treadmill hoping to lose fat. While human breath contains 200ppb of ketone bodies at rest, when a person starts to burn more fat, the breath ketone concentration would increase. Only our sensor could indicate improving fat-burning rate. A person seeing instant positive results is a motivated person."

[www.kpt.com.hk](http://www.kpt.com.hk)

# M Health PSV2021 CO.,LTD

## Nutritious chewy gel bubbles as future food

"Fit & Fun Food Bubbleology is a new edible platform for future food. We apply encapsulation and extraction technology for pharmaceuticals to food and cosmetics applications. We make enjoyable chewy gel bubbles in various shapes, containing selective nutrients that can help to reduce the risk of chronic diseases, and avoid contamination of hormone, pesticide and antibiotics that might be in meat and fresh produce. This novel product is also more pleasant to take than traditional pills of food supplements. You can choose from favourite menu items such as Japanese Sushi, Caviar Cocktail, Thai Green Curry, Boba Tea or Bingsu dessert.

The M Health PSV 2021 team fully supports growers in the upstream to achieve sustainable agriculture and use food technology to transform natural raw materials and ingredients into nutrient bubbles for delivery to consumers, in accordance with international food manufacturing and food safety standards. We plan to use our products to improve nutrition for the most underprivileged groups at the bottom of the economic pyramid in Asia and Africa. We also aim to achieve the sustainable development goals for food security and improved nutrition agreed by the United Nations, and ensure healthy living and promote well-being for all."

# Matricelf

## 3D printing of human tissues makes medical miracles

"Matricelf is a biotechnology company in the field of tissue engineering. The company has developed a platform for autologous (personal) 3D printing of tissues and organs that significantly reduces the risk of implant rejection. Using a single biopsy from a patient, we develop tissues (cells and scaffold) that we can 3D print, inject or simply place where needed. In 2019, we printed, for the first time in human history, a three-dimensional human heart from human tissue.

Matricelf's technology aims to completely regenerate the future of medicine. The company has completed successful pre-clinical studies in a number of medical conditions such as acute Myocardial Infarction, Parkinson's Disease, Age-related Macular Degeneration and more.

Our first indication is spinal cord injury (SCI). Each year, there are tens of thousands of new cases of traumatic SCI cases that usually lead to paralysis. The fact that SCI patients have no suggested treatments and are expected to be wheelchair-bound for life motivated us to further develop the technology and specifically SCI implant. In our pre-clinical animal studies, mice treated with our implants regained their walking ability both in acute and chronic spinal cord injury models. Just imagine that we will make SCI patients walk again!"

**[www.matricelf.com](http://www.matricelf.com)**

# Mazecare

## One-stop platform fully automating the healthcare journey

"Many healthcare providers are operating with technology that is up to 20 years old, and they struggle to find decent software development houses and solutions for them to optimise their services. As a result, both the public and private sectors struggle with providing streamlined and efficient services to their patients and stakeholders, at a reasonable cost.

Mazecare brings something to the healthcare market that no other tech provider does – full automation of the entire patient healthcare journey. Our digital healthcare platform is capable of connecting the patient, the health provider and the insurer. It covers the full patient journey, and enables hospitals to automate and streamline their existing operations, with improved connectivity with insurance companies and third-party agencies.

Mazecare's solutions cover everything from appointments to health services, medical records, billing, claim adjudication and payment. No provider currently offers this, and Mazecare has the resources and knowhow to be a one-stop-shop for all things healthcare. This gives our scalability massive potential."

<https://www.mazecare.com/>

# Meditect

## Screening out fake medicines with blockchain and AI

We guarantee authentic medicines thanks to blockchain and AI technologies. We have signed with 12 big pharmaceutical companies, and extending our solution right now.

<https://www.meditect.com/>

# Medwise AI Ltd

## Providing the right clinical answers for better patient care

"Our company's mission is to create a world where every person receives the best health care possible.

Thousands of clinical guidelines and biomedical journal articles are released daily, so much so that clinicians struggle to stay on top of best-practice care for patients. A lack of time is often cited as an explanation for why 50% of clinical questions are abandoned at the point of care. Without access to the right information at the right time, clinicians may not provide best-practice care to patients. Non-adoption of best practices and unwarranted variation in care is estimated to cost the UK National Health Service £5 billion and the US \$105 billion annually, driven by avoidable hospitalisations and poor patient outcomes.

With Medwise.ai's natural-language question-answering AI assistant, clinicians can quickly find the best-practice answers they need to make decisions at the point of care, empowering them to provide better care for patients. At this unprecedented time of the COVID-19 pandemic, the healthcare workforce is under tremendous pressure, and Medwise.ai can support them in day-to-day work in these dire situations and improve the wellbeing of clinicians while also improving the patient care delivered."

**[www.medwise.ai](http://www.medwise.ai)**



# Meticuly Company Limited

## Personalising implants and surgical guides for greater outcomes

"Meticuly is a 3D-printing medical technology company focusing on personalised implant solutions for orthopaedic, neurosurgery and plastic surgery applications. Instead of off-the-shelf standard-sized implants to treat patients with bone deformity, Meticuly provides state-of-the-art pre-operative planning, surgical guides and implants that are tailored to fit individual patients.

The implant solution is built on two proprietary technology platforms: AI-assisted design using a cloud-based platform for patient-specific biomechanic, and the manufacturing of surgical guides and implants based on 3D printing technology in EN ISO 13485: 2016 certified cleanroom.

After uploading a CT scan of patients to our AI cloud server, medical professionals are then provided with surgical assistance through collaborative software to preview the design. Information such as 3D planning, surgical approach and implant design customisation is provided and adjusted in real-time.

Patient-specific implants and surgical guides are then manufactured and delivered to the hospital. Information and post-op results are compared with pre-op planning to constantly improve predictive design algorithms. With 450+ clinical information and cadaveric big data, the post-op clinical outcome of each patient has achieved both functionality and aesthetics. Patients also benefit from less blood loss, less chance of infection and reduced surgical theatre time."

**[www.meticuly.com](http://www.meticuly.com)**

# MRM Proteomics (Guangzhou) Biotech Co., Ltd.

## Protein quantitation even with low-concentration samples

"Our parent company is MRM Proteomics Inc., originally launched in 2010 as a spin-off company to commercialise cutting-edge proteomics technologies, tools and know-how developed at the University of Victoria-Genome BC Proteomics Centre.

Founded by Christoph H. Borchers in March 2021, we offer a wide variety of unique services, easy-to-use kits for do-it-yourself multiplexed protein quantitation, bile acid quantitation and quality control, and are actively involved in developing clinical diagnostics.

Our unique technological advantages include MRM-MS methods with a full suite of peptide standards for every targeted protein, ensuring precise quantitation even in low concentrations, and high-accuracy highly-multiplexed quantitation of hundreds of proteins in a single analysis using low-volume samples (20-60ÅµL).

Our products include first-to-market proteomics kits for MRM-MS protein quantitation in mouse plasma samples, and high-resolution structural characterisation of proteins and biosimilar drugs, with the record for largest protein characterised by top-down HDX, etc. Our highlights and achievements include MRM-MS assays of the highest quality, Innovative HDX-MS methods for protein characterisation, with over 400 protein targets to choose from; tissue imaging of lipids, small molecules and peptides; PeptiQuant™ Kits for a variety of instruments and sample types; capabilities for custom analysis, and patented iMALDI technology."

<https://mrmproteomics.com/>

# Nia Health GmbH

## Personalising patient care with digital therapeutics

"Based on our innovative MedTech platform for personalised patient care, Nia Health develops medical software. Nia Health covers a wide range of use cases in dermatology and allergology. Our digital therapeutics (DTx) combine strong clinical validation with empowerment, gamification and machine learning. Nia Health's end-to-end DTx solutions are indication-specific and tailored to the individual needs of each patient.

Pharmaceutical companies struggle with increasing costs of go-to-market while peak sales decreases significantly due to a lack of customer access and insights. With our DTx platform, we are generating unprecedented longitudinal real-world data in the fields of dermatology and allergology. We will help pharmaceutical companies with curated patient insights to find innovative treatments to improve the lives of millions of people worldwide.

As a spin-off of Charité Berlin, one of the largest hospitals in Europe, we differentiate ourselves from lifestyle app providers with a strong clinical focus. We have already registered four DTx solutions as medical devices (CE mark for Europe). We won the EIT Health Headstart Award (organised by the EU; 50,000 euro prize money) and have already gained leading German health insurance companies, clinics and global pharmaceutical companies (L'Oréal, Pfizer, Sanofi) as partners."

**[www.nia-medtech.com](http://www.nia-medtech.com)**

# Novai Ltd

## Biomarkers on cellular level enables rapid drug testing

"Novai is an innovative UK biotechnology company developing and commercialising transformational and disruptive technology in the ophthalmology area, developed by Professor M Francesca Cordeiro at University College London and Imperial College. Novai's ultimate goal is to become a global leader in the biomarker, diagnostic and therapeutic markets whilst benefiting patients by helping to diagnose potentially life-changing diseases through early diagnosis and treatment.

We have already established ourselves as a disruptive competitor in the biomarker market with our patented fluorescent protein (ANX-776) or 'DARC'. It is continuously gaining traction with global pharmaceutical companies as it is combinable with current imaging equipment, therefore allowing pharmaceutical companies to observe images of their trial results on a cellular level, which can only currently be visualised once 30-40% damage has occurred, without using our technology.

DARC is being sold to pharmaceutical companies to help them develop therapeutic assets in glaucoma and AMD (age-related macular degeneration). There are 280 million people around the world suffering from these diseases, giving us huge market penetration potential. Now that these companies can analyse the efficacy of their assets on a cellular level, rapid drug testing can be completed in months rather than years."

<https://www.novai.co.uk>

# PanopticAI

## Camera-based remote analysis of health and wellness

"PanopticAI's products originate from proprietary technology developed at The Hong Kong University of Science and Technology. Our team has over 25 years of experience in computer vision AI and signal processing research for health applications, and regularly publishes in high-impact academic journals and conferences.

PanopticAI's camera-based health and wellness monitoring solution provides users with a holistic analysis of their health simply by using the camera of their smartphone, tablet or computer. Users can assess their physiological state and get actionable insights in the comfort of their own home.

By analysing subtle colour changes on human skin that are invisible to the naked eye, our proprietary algorithms can extract human vital signs that would traditionally require the use of a contact-based sensor. While contact-based health monitoring devices have risen in popularity, they have inherent complications (e.g., costs, upgrades, charging, shipping, etc.). Compared to our wearable counterparts, our camera-based monitoring solution offers a more efficient and affordable alternative that directly improves the users' quality of life.

While our technology was originally designed for a triage system, it can be applied across many verticals such as elderly care, telemedicine, insurance, automotive vehicles and corporate wellness."

**[www.panoptic.ai](http://www.panoptic.ai)**

# Petaneer

## Aqua treadmill evolved from pet-care to human use

"For the past five years, I have developed a pet underwater treadmill to treat my patients who suffer from chronic degenerative diseases. I got very good feedback because this machine can strengthen muscles with low impact to the joints. Last year a young person who suffered from back pain requested us to transform it for human use.

There was no smart hydrotherapy product in the Thailand market to deliver this service. We need ergonomic design for Asian sizes, at a high service level. I got a partnership with a large hospital here in Thailand and together we have designed and built the first "AquaTrek" for Asian body sizes, compatible for elderly use, integrated with smartwatches. The price is only half compared with other solutions.

The wellness solution is promoted on social platforms. The first prototype is now ready and will be installed in Golden Jubilee of Siriraj Hospital, the number one medical school in Thailand. We believe we will gain traction very soon."

[www.petaneer.com](http://www.petaneer.com)

# PhoMedics Limited

## Microscope for faster intraoperative tumour cells detection

"PhoMedics is a MedTech company founded in 2020 in Hong Kong. We have developed a revolutionary imaging tool, coined as CHAMP Microscope — a fast, accurate and user-friendly medical device that is the best fit for intraoperative cancer margin analysis.

As it does not require time-consuming preparation of tissue samples, CHAMP can simplify the clinical workflow down to minutes and preserve tissue integrity for a more accurate diagnosis. A virtual staining software is also developed based on a deep-learning algorithm that can accurately transform CHAMP images to the style that professionals can understand without additional training. Hospitals can expect a simple, effective and efficient clinical workflow during surgery by adopting our solution.

With CHAMP, the intraoperative tumour cells detection time is reduced from 30 minutes to three minutes, and the testing accuracy is improved from 65% to 95%. Compared with other companies tackling this clinical issue globally, the CHAMP microscope is by far the best in terms of speed, accuracy, cost and ease of adoption. More than 4,000 second cancer surgeries in Hong Kong can be eliminated each year, saving 50,000 working hours for the clinical workforce and, at the same time, saving HK\$400 million of clinical resources. "

<https://www.phomedics.co/>

# PIPRA

## Reducing risk of Postoperative Delirium complication

"Every year, millions of people undergo routine surgeries, such as a knee replacement, and are worse off post-surgery: feeling disoriented or struggling with memory. They often end up in a nursing home with dementia when all they wanted was a little more mobility. Postoperative Delirium (POD), the most common postsurgical complication, affects 20% of all surgical patients aged above 60. POD has dramatic adverse outcomes on patients including doubling nursing care admissions and increasing mortality dramatically. It also causes significant increases in costs to payers, providers and the society at large, which we can now help reduce.

Our mission: to tackle this fundamental, unmet healthcare challenge with a proprietary AI-driven risk assessment tool that helps doctors stratify patients into risk categories prior to surgery. Our CE-certified SaaS software uses the largest, richest database in the world to drive its algorithm. We're currently launching in several hospitals in Switzerland, Germany and the Netherlands and raising capital to expand to the U.S. and Asia.

Our vision: to become a category leader in reducing delirium. The economic outcomes of all types of delirium rival costs associated with cardiovascular diseases and diabetes! Patients should leave a hospital better than when they arrive."

<https://www.pipra.ch/>



# PointFit Technology Ltd.

## Non-invasive fatigue monitoring patch aiding sport science innovation

"PointFit offers a novel ultra-thin skin patch that tracks muscle fatigue through sweat biomarkers. It is built with a specially patented UHMWPE Nano-membrane (licensed from Technology Transfer Centre, Hong Kong University of Science and Technology), which is able to conform to human skin without using any adhesives.

The fatigue monitoring system provides maximum convenience and real-time analysis so that athletes can optimise their on-court performance without worrying about over-training or injury. We set our aim to revolutionise the sports science industry by driving the global adoption of non-invasive fatigue monitoring systems.

We will first launch our product to the professional athletes' market (i.e. sports institutions and national teams), starting with two Chinese provincial teams that have agreed to take part in our pilot launch, and building this market to 2023.

This segment has the technical knowledge to understand the need for such a product (as identified with one of our partners, Hong Kong Sports Institute) and is more likely to pay the higher launch price for the added value that such product brings."

<https://www.pointfittech.com/>

# RootAlly AI

## AI rehabilitation monitoring solution to support remote healthcare

"Our Allycare solution is based on the latest deep-learning algorithms tailored for human pose estimation. It can identify and track the movement of human joint points captured in live video or stored video files, without requiring any wearable accessories on the human body. An "AI-therapist" deployed on patients' mobile devices actively guide the patients through rehabilitation exercises and monitor their progress.

For patients, our solution provides real-time AI monitoring, regular feedback, no to low entry cost, ease of use and on-demand service. For hospitals, our solution is highly scalable with high throughput and robust infrastructure for continuous monitoring of patients. It can also be easily integrated with the existing infrastructure of the healthcare provider, with low to minimal training.

Compared to our competitors, our solution does not need costly sensors, is designed with consideration for both the therapists and patients, and is rehabilitation-focused rather than fitness-focused.

The concept was developed to meet increasing need for remote healthcare due to the pandemic. We have won an award in Healthcare InnoMatch 2021, and will start a six-month test with Singapore General Hospital in November. We believe our solution will improve accessibility to quality rehabilitation services without compromising the quality of rehabilitation services."

<https://rootally.com/>

# Selfit Medical

## Therapist robots as helpers for human caregivers

"Selfit is a digital robotic care startup based in Israel, with early operations in the UK. We've developed a unique human-machine operating system, a therapist robot. Our robot is designed for the booming ageing market and is focused on physical and cognitive health. Some of the applications are rehabilitation-related (e.g. neuro, cardiac, geriatrics). Others are designed for wellness and prevention phases (e.g. elderly falls, cognitive impairments).

Our human-machine approach could fill gaps where there is a shortage of human therapists and augment their work significantly in various other cases (e.g. B2B, homecare) as well as reduce recovery time.

Our product is installed in several leading hospitals and care homes in Israel and the UK. We have concluded a clinical trial with the Tel-Aviv Medical Center and have a few pilot tests in the UK. This year we shall start two more clinical trials with Geriatrics and Parkinson's populations.

We have received a CE mark and plan to start sales soon in Europe and Hong Kong."

**<https://www.selfitmedical.com/>**

# T-ICU Co., Ltd

## Remote ICU services from Japanese emergency care experts

"COVID-19 has shaken the health sector around the world. The most pressing issues are the shortage of skilled and trained ICU physicians and nurses to treat critically ill patients.

To overcome the challenges of intensive care and access, tele-ICU could be an effective solution. T-ICU is the first Japanese startup company providing remote ICU services within Japan and overseas. Our support centre has 30 intensivists and 20 intensive care certified nurses, each intensivist can support 30 ICU beds remotely. By sharing information connecting vital monitors, ventilators and other necessary information, the on-site doctor can consult with our intensivists 24/7. We also provide a remote monitoring system so that the doctor and nurse can also monitor the patient from the staff station. This reduces the need for medical staff wearing PPE and the risk of nosocomial infection.

The main strength of T-ICU is its expert team. The CEO and the medical manager are intensivists and the executive director is an intensive care certified nurse.

The intensivist team of T-ICU could add value through:

- Severe patients management
- Post-operative patient management

It's cost-effective as the service of T-ICU is on-demand rather than on a continuous care model."

<https://www.t-icu.co.jp/en/>

# UniExo Rehab

## Accessible rehabilitation with modular robotic exoskeleton for rental

"UniExo Rehab offers a personalised rehabilitation solution making available modular robotic exoskeleton for rehab exercises and movements. It supports faster recovery after injuries, without the need for 6-8 weeks of hospitalisation.

Our device can help users regain limbs mobility five times quicker than standard rehabilitation process. Our "UniExo rehab service" business model lets patients rent a suitable exoskeleton for a rehabilitation period assigned by the doctor. This makes exoskeleton more affordable in many regions for use by people of different social categories, with or without health insurance.

The advantages of our solution:

1. Modular construction, no need of stationary equipment and assistance, for more comfortable and flexible movements in any setting;
2. Constant assistance of doctors not required, remote doctor's supervision is viable;
3. Software with machine learning algorithms help track health, easy to work with doctors to change rehab programmes;
4. Flexible business model allows patients to rent a suitable exoskeleton for a rehabilitation period assigned by the doctor;
5. Machine-learning algorithms and AI assistants remotely supervise devices everywhere in the world, allowing exoskeletons to work more efficiently and safely during quarantines and rehabilitation at home."

<http://www.uniexo.com/>

# VastBiome Limited

## Mapping gut microbiome to advance molecular therapy

"VastBiome's mission is to revolutionise drug discovery through microbiome. We focus on the human gut microbiome as a rich source of medically relevant, bioactive compounds. Compositional and probiotic-based research has shown that the gut microbiome can exert significant effects on human health including modulating host response to immunotherapy in cancer. Effectively mining the gut microbiome requires identifying these active chemical agents and being able to elicit those in a controlled system.

We focus on cell-free expression, bioinformatics, and metagenomic and metabolomic testing to identify microbial natural products and reconstitute them in a controlled expression system. These products are then added to our growing library of host-derived chemicals which we then advance as molecular therapy programmes. By doing this, we effectively map the gut microbiome including its functionality and chemical products while continually improving the yield with which we convert these findings into chemical, naturally derived therapies.

We envision a future of natural product discovery where it is possible to explore the rich biodiversity already present within us and to catalogue new therapeutics which have already demonstrated host compatibility and therapeutic potential.

We exist within the microbiome therapeutics space wherein many companies focus primarily on "bugs as drugs", or probiotics and designer consortia."

<http://www.vastbiome.com/>

# VINH THINH HUNG CO., LTD

## Eco-cooler system to mitigate global warming impact

"In the 20th century, the average temperature between troposphere and oceans has gone up by 0.6 degrees Fahrenheit (please confirm if this is correct) (The US National Oceanic and Atmospheric Administration).

Too much sun exposure (UV rays) may cause sunspot, wrinkles and even skin cancer. Anybody could be affected by UV rays. High temperature / global warming is one of the biggest causes of wildfires that might lead to lung cancer and lung diseases (World Health Organization). Sunlight has seriously impacted citizens of developing countries in Asia (Nikkei - The Japan Times).

Cool Air Jacket Project uses an eco-cooler system combined with reusable refrigerant and solar panel charge mounted on jackets to produce clean energy.

The project targets to:

- \* Make technology against high temperatures accessible to everyone
- \* Keep things simple and environmentally friendly, using renewable energy
- \* Make product easy to use
- \* Prevent sunburn and sun damage
- \* Protect skin and hair against high temperatures
- \* Mitigate the impact of UV rays on the human body

The value proposition is as unique as its approach to bold and unique product design and aesthetics. It has obtained intellectual property right at the National Office of Intellectual Property in Vietnam (Patent No. 1-2020-01189)"

# 4Dage

## World's first consumer-ready 3D camera

"4Dage has invented the world's first consumer-ready 3D (space reconstruction) camera, a reality-capture hardware-enabled software technology, solving an "impossible trilemma", thereby providing unprecedented ROI opportunities for clients, by being simultaneously:

- cost-efficient (1/10th of the price, 1/20th of the weight, 1/30th of the time needed to capture and process a space)
- user-friendly (virtually no training required)
- high quality and accuracy (8K ultra HD image resolution, with 4x magnification availability and cm-level measurements precision)"

<http://www.4dage.com/en/>



# a propotyping BoBi secretary robot

## Secretary robot no hand for multi-lingual communication

"Robots are becoming more widely adopted. In recent year, products and research that utilise smartphones as parts of robots have been actively promoted. With advances in interface boards and sensing, a secretary robot with great computing power can perform complex tasks, and it has been a familiar device in our life. That's the idea of the BoBi secretary robot prototype.

The BoBi secretary robot is an intelligent transformable phone robot with voice interaction and intelligent voice simultaneous interpretation of 12 languages, supported by a speed processor to deliver fast response. It can solve language communication issues for offices, travel, learning and entertainment, so that everyone can enjoy life all the time."

# Acompany Co., Ltd.

## Secure computing for big data utilisation without leakage

"Changes in the world caused by ICT and IoT have realised a convenient society while producing an enormous amount of data.

We at Acompany are developing a technology called "secure computing" to promote data utilisation while preventing the leakage of big data. Secure computing is a technology that enables computations using statistical analysis and machine learning while keeping data confidential. This safely enables inter-company data linkage and data analysis to create new value from data. We are sure that this will lead a revolution in data protection and utilisation in the future. We have developed our unique engine for this secure computing.

Before this, secure computing was too complicated to implement because it requires specialised knowledge and technology. However, our product "Quick MPC" enables us to build a secure computing environment for multi-party computation, just by installing it. Since the release of the unique software "Quick MPC" in October 2020, we have been engaging in multiple demonstration experiments and joint research. For example, we are conducting a demonstration experiment on a marketing data integration platform with DAC, a major marketing consulting company, and with Nagoya University Hospital to optimise resources management using medical information from hospitals."

<https://acompany.tech/>

# AI Guided Limited

## LIDAR device to aid navigation for the visually impaired

"Our business is to research and develop a high-tech and innovative companion device for specifically tackling the navigation problem for the visually impaired and the elderly, using light detection and ranging (LIDAR) and automation intelligence (AI).

A completely new algorithm is being developed for obstacle recognition, route planning and auto-piloting. We aim to empower the visually impaired community with the mobility and confidence for independent navigation and hence reduce disability-based inequality.

Compared with both the traditional white canes and guide dogs as well as recent products including the angel eye smart glasses and the WeWalk smart cane device, our technology is more advanced with faster and more direct response, faster and higher accuracy of obstacle detection as well as larger detection range.

Our technical team is building the prototype and fine-tuning the AI algorithm. We have successfully gained the support of one of the local NGOs – Hong Kong Society for the Blind. They would like to try our prototype and give us the user feedback."

<https://ai-guided.com/>

# ARTech Space Limited

## Creating immersive spaces with just walls and mobile devices

"Our mission is to break down geographic barriers and connect spaces to deliver immersive art experiences.

### 1. Space transformation

We build an immersive space that fundamentally transforms an offline visitor experience by extending a two-dimension setting into an infinitive horizon in commercial ambience, such as shopping malls and commercial buildings.

Conventional XR content has to be developed in professional studios with several high-quality cameras by a virtual technology team. We are building an XR studio that can be placed on any wall surface in a building for interaction with end users through their mobile phones.

### 2. Content curation

ARTech Space provides the platform and solution to world museums to digitalise and exhibit their collections round the world without boundary. We transform legendary art contents into a digital experience that is more accessible and approachable.

Our immersive space works well with smartphones, tablets and similar devices that use GPS tracking. They offer computer-generated data in the form of graphics, tags and videos that get overlaid onto the real world through visual devices.

We are the winner of IPHatch HK 2020/21 and achieved the Ultimate Sensing Audio patent offered by Nokia and Panasonic. "

<http://artechspace.io/>

# Artivive

## AR tool enriching possibilities for art interaction

"Artivive is an AR tool that allows artists to create new dimensions of art by linking classical with digital art.

The digital layer opens doors to a whole new world of possibilities. Artists can take visitors on a journey through time, explain what lies underneath, enhance the art with animations, or show how the artworks were made.

More than 100,000 users are creating artworks with Artivive and are having exhibitions in 92 countries. For museums, exhibitions, galleries and other art institutions, Artivive offers a new and innovative way for the audience to interact with exhibitions."

**<https://artivive.com/>**

# AviBike Ltd.

## Bike racks for countering thefts and enhancing mobility

"We have created the next generation of bicycle racks for public use to stop bicycle thefts and popularise sustainable urban micro-mobility. Bike theft is just as harmful to businesses as it is for cyclists. It casts a negative light on a city and prevents almost every Smart City initiative from really gaining traction.

Our bicycle racks are tangible smart hardware that enable the most secure and convenient way of publicly storing and charging urban mobility vehicles. Our BLOCK 2P product is the Fort Knox of bike racks, a robust yet stylish hardware coupled with a versatile software enhancing Smart City urban mobility tasks (including 5G small cell hosting and location-based marketing) and enabling fully automated (electric) bicycle rental services for the hospitality industry.

A bicycle is secured when both its wheels and the frame are locked. BLOCK's novel rack design enables this 2-point locking in one simple motion. Push your bike into the rack, then close the gate. That's it! There's no need to carry heavy, expensive and bulky locks anymore. With BLOCK's free App, there's no more wasted time and dirty hands. Just one tap on the screen and the bicycles are in the safest hands."

<https://blockcity.tech/>

# Blockchain Solutions Limited

## Tracing and certifying product data by blockchain

"CerTraze, a blockchain-based product tracing and certifying platform, allows every stakeholder to have real-time oversight of the entire product cycle: the composition of raw materials, product logistics, ownership certification and transfer. CerTraze provides the answer to the long-existing market pain point of manufacturing and supply chain management, which was exposed by the COVID-19 pandemic, by bringing it to a blockchain level.

CerTraze incorporates necessary IoT with blockchain so that users could document essential data of their product, including time, GPS location, photos taken in situ, owner certificate, etc. CerTraze will be an irresistible solution for enterprises. It has the potential to reshape product management in a secure, cost-efficient and fool-proof manner.

The greatest competitive advantage of CerTraze over our rivals lies in our team of tech veterans. Our team is led by an IT expert with over 20 years of experience, accumulated over seven years in blockchain development, and has close partnerships with IoT, AI, and Big Data experts. CerTraze is agile in structure and integration as we provide bespoke customisation.

CerTraze has been exhibited in more than five public events and received recognition such as an award from Mediazone for the best project management and service in 2021."

**<https://www.blkchainsolutions.com/>**

# BOOQED Limited

## Connecting office spaces for work-from-anywhere flexibility

"BOOQED is a marketplace for teams and remote workers to quickly and easily find and book short-term places to meet or work, while offering a means for landlords and asset owners to utilise their unused spaces to increase ROI (return on investment) and utilisation.

With COVID-19 critically impacting markets due to implementation of social distancing measures, business continuity protocols and the shutdown of all international business travel, BOOQED leveraged its existing booking platform technology to develop a hardware / SaaS solution called QUBIC. As a modular system that can be placed inside office buildings, QUBIC's smart-booth functions – combined with BOOQED's booking and management software platform – provides critical office space flexibility in markets where COVID-19 has significantly affected how teams and companies work and collaborate. BOOQED's solutions let companies and teams be more safe and agile in uncertain and changing times, while saving over 70% costs compared with traditional fit-outs and renovations.

Our vision is to rethink the "traditional office" and empower companies and individuals to truly work from anywhere."

<https://www.booqed.com/>



# Carpe Diem Solutions

## Real-time positional tracking with millimetre accuracy

"Carpe Diem Solutions develops real-time positional tracking and connectivity for critical and massive indoor IoT applications, providing low latency, high accuracy, extreme throughput and reliability for ecosystems of drones, robots and humans in applications like 5G mobile broadband, IIoT, robotics, AR/VR, smart cities and factories, automotive etc.

The killer feature is our absolute positioning – the ability to identify absolute coordinates of multiple moving objects in a space, with millimetre accuracy.

We use a combination of technologies like GPS, RTLS, IMU, electromagnetic field, our high-speed algorithms based on the Adaptive Lattice Filter and our knowhow in digital signal processing and sensor fusion. Such combination and all-proprietary tech stack are able to mitigate errors and outages in any subsystem, providing smooth operation and reliability. We are currently applying for patents via the PCT (Patent Cooperation Treaty) programme in a few jurisdictions."

**<https://carpe-diem.solutions>**

# Celantur

## Anonymising personal data on images and videos

"Our technology automatically detects and anonymises personal data (faces, bodies, license plates and vehicles) shown on images and videos. Hence, we help companies and organisations to comply with data protection regulations and avoid hefty penalties, making this process cost-effective at the same time.

Today, we offer Image Anonymization as a Service on our AWS cloud platform. Alternatively, we provide our solution on-premise as a Docker container (Linux and Windows, with offline-capability), which can be integrated within our customers' cloud-based systems. So far, we have delivered 160-plus projects (including sales demos) and acquired 25 paying customers and resellers in Europe, Southeast Asia and East Asia, as data privacy regulation is a strong driver globally. Some of our notable customers are STRABAG AG, one of Europe's largest construction companies, and Huawei AS, a Swedish subsidiary of Huawei Technologies developing ADAS (advanced driver-assistance systems).

We have been interviewed by Y Combinator twice in the past."

<https://www.celantur.com>

# Dayta AI

## Shopper analytics delivers insights for data-driven retail strategies

"Dayta AI is a SaaS company with a vision to establish a SmartRetail ecosystem that entails computer vision and business intelligence.

Our innovative AI cloud solution, Cyclops, is a shopper analytics platform built for offline businesses, utilising only surveillance cameras. Users can manage stores on a real-time basis and understand deeper shopper insights for implementing data-driven strategies to enhance sales and shopper experience.

The main advantage of Cyclops is the offer of a comprehensive set of services including not only data collection but also data analysis, real-time management and business intelligence. Unlike other solutions, users can explore the practical value of data directly from our service, even without much background in data science.

Cyclops is also competitive for its effortless implementation and the monthly subscription business model. Our platform directly extracts video streams from existing surveillance cameras without extra hardware, and the set-up process can be completed online in five minutes. We also offer flexible monthly subscriptions with multiple pricing plans. Instead of paying an expensive fixed up-front cost, retailers can simply switch around different plans that best suit their needs at the time. We have made the technological solution lighter and more accessible than ever."

**<https://www.dayta.ai/>**

# Easy VR Technology Ltd

## Versatile app for DIY 360-degree virtual tours

EasyVR is the only bilingual mobile app in the market that allows people to DIY their own 360-degree virtual tours, record and organise contents within a physical space, embed versatile information and links, and direct share with others by a simple click-and-drop for comments and interaction via smartphones.

EasyVR platform is led by two award-winning industry leaders with a proven track record in technology and design, who have startup experience, extensive connections and complementary skillsets in technology, creative, management and business.

Having experienced pain points in various industries, Dr Chan founded EasyVR as a good solution to relate loose information within complex spaces such as construction sites, equipment rooms, storerooms, galleries, shops, etc. The technology can also be used to create virtual exhibitions or show suites, and even directly as games and edutainment tools.

Without much marketing effort, and simply by organic growth, EasyVR has gained traction with established organisations as pilot customers.

**[www.360easyvr.com](http://www.360easyvr.com)**

# Farmacy HK Limited

## Data-driven mobile farming to reduce food wastage

"Farmacy aims to bring highly nutritious fresh green produce and zero food wastage to all urban cities in the world with our data-driven and decentralised farming movement. Due to a lack of farmland, urban cities across the globe need to import more than 90% of vegetables to meet demand. In Hong Kong, 98.3% of our vegetables are not locally grown. Imported green produce present two main problems: 1) more than 50% nutrient loss during transportation, and 2) short shelf life causing high food wastage. On average, as much as 40% of fresh green produce in supermarkets have become food waste. This adds up to 14 tonnes of vegetable disposal from supermarkets in Hong Kong daily, and customers pay for this through marked up retail prices, with diminished quality.

Farmacy makes smart mobile farms that can grow and harvest fresh green produce onsite. While minimising supermarket cost on food wastage by supplying only hydroponic living plants in-store, the data-driven farms improve growing efficiency and quality through continuous analytics and learning, and hence enable fresh plant harvest with 100% nutrition retention and affordable prices that are 20% lower than imported brands."

**[www.farmacyhk.com](http://www.farmacyhk.com)**

# Flowsophic Limited

## Matching students with best-fit tutors

"We are Flowclass. We navigate students towards the tutors that best suit their needs. Our cross-platform solution is a digital hub linking thousands of education centres and hundreds of thousands of students in Hong Kong. We let students and parents search, chat and book both online and offline lessons directly without visiting the centres. They could also simply ask our Flowy AI if comparing thousands of centres' profiles is too troublesome. In addition, we provide customised newsfeed of educational events and free lessons gathered from partnering education centres. The analysis of users' searching and chatting behaviour, combined with in-app users' ratings, can further improve the accuracy of our Flowy AI.

We disrupt the tutorial services market by offering the most personalised way for students to leverage existing educational resources in our society. We envision to build an ecosystem of not only regular tutorial centres but also education centres for STEM, SEN and ethnic minorities.

We are partnering with more than 100 tutorial centres in Hong Kong with the support of Cyberport and HKFYG. Through our platform with over 27,000 monthly users, we are confident to dominate the Hong Kong market within five years with our network effect."

<https://flowclass.io/>

# Giftpack Inc.

## Personalising corporate gifts to generate greater CRM impact

"Giftpack's AI-powered solution simplifies the corporate gifting process and amplifies the impact of personalised gifts. We're crafting memorable touchpoints by sending personalised gifts selected out of a curated pool of 3 million options with just one click.

Our AI technology efficiently analyses each recipient's social media, cultural background and digital footprint to customise gift options at scale. We take care of generating, ordering and shipping for gifts worldwide. We're transforming the way people build authentic business relationships by sending smarter gifts faster with gifting CRM."

<https://giftpack.ai>

# InnoSpire Technology Limited

## Assisting the visually impaired through smart glasses

"InnoSpire Technology Limited is a technology social enterprise dedicated to using technology to provide visual assistance for the elderly and visually impaired people. We are an incubatee of HKSTP's Incu-App programme. Currently, we are developing the FIRST smart glasses in the world that can provide human backend visual support to the visually impaired and the elderly.

Our smart glasses can be worn like normal eyeglasses, and our backend staff can see from the viewpoint of the user and provide instant support accordingly. The smart glasses include a super light-weight battery and can support both 4G and 5G, along with a high-resolution camera. They are equipped with bone-acoustic transmission to ensure better sound transmission for the elderly.

Additionally, we provide a mobile app to connect volunteers with visually impaired people or the elderly who have weak eyesight. Real-time video call support can be provided by volunteers to the users in need.

With smart glasses and/or a mobile app, users can get visual assistance from backend staff and/or volunteers to go about their daily lives. Also, it will improve social inclusion and the quality of living of the visually impaired/elderly people."

**<https://www.techinnospire.com/>**



# ITC - Intelligent Traffic Control

## Easing traffic congestion with prediction and prevention of jams

"At ITC, we're building software that solves traffic congestion.

Apart from being annoying, traffic jams are also terrible for humanity and the planet, costing billions of dollars per year and generating horrifying CO2 emissions.

We've developed state-of-the-art computer-vision and machine-learning algorithms to predict traffic patterns and prevent jams before traffic even starts to accumulate. Our systems are deployed in intersections in Japan and Israel, reducing the incidence rate of traffic jams by 50%."

<https://www.itc.city/>

# Kardome Technology Ltd

## Delivering clearer speech separation in noisy environments

"Kardome's software uses existing microphones in a device to isolate individual speech in noisy/multiple-speaker environments through location-based clustering. We replace traditional beamformers with AI source separation algorithms, allowing us to produce over 90% better voice activation results.

Kardome changes the way people interact with voice-enabled machines in a vast variety of industries and verticals. Our initial goal was to develop an audio front-end software, to enhance speech quality and practically give machines "better ears". This core technology was validated in 2020 by Hyundai, through a detailed technical benchmarking of Kardome versus competitors in the world. Kardome not only located the speaker's voice but also executed noise cancellation with speech separation. Kardome voice technology is the only solution for multiple-speaker recognition simultaneously.

Since then, Kardome has involved in proof-of-concept (POC) exercises with major industrial players, such as Hyundai, Amazon, Renault, Denso, Yandex, and more, resulting in two commercial agreements, two production-intent programmes, seven full-scale POCs and several technological evaluations.

Our customers favour Kardome's AI solution due to its rich features, such as being hardware-agnostic, multi-user speech-to-text capabilities and robust performance in noisy environments resulting in over 80% of speech recognition."

<https://www.kardome.com/>

# Keepers Child Safety

## Keeping children from harm in the digital world

"Keepers is dedicated to protecting children wherever they play in the digital world. Keepers has developed proprietary AI and ML technology to monitor, detect and protect kids from toxic conversations whilst maintaining and protecting their privacy. Our technology detects cyberbullying patterns, allowing early detection of any intention to cause harm, and consequently informs parents and protects children.

The platform is a robust and smart engine based on deep learning and other cutting-edge technologies, allowing use on all cyber platforms and in multiple languages. Moreover, Keepers's unique algorithm recognises unsafe situations even when no suspicious words are mentioned (including emojis, acronyms and other paedophile patterns), and thus cannot be tricked or bypassed.

Like no other solution, Keepers proposes online psychological support to parents and broad information for schools and education departments to promote means for children protection.

Keepers provides an intuitive platform with quick installation, without requesting passwords or jail-breaking a device, while complying with Google/Apple policies."

**<https://www.keeperschildsafety.net/>**

# Linefox Systems

## Making test systems of high-end electronics faster and cheaper

"Every high-value electronics product (i.e. anything you might exercise a warranty claim against should something go wrong) is rigorously tested before shipping. Since these are physical products, they need physical systems to test their functionality on a production line.

Designing, deploying and gathering data from these test systems often cost upwards of US\$100,000 to build and over three months to manually create, on account of the specialised mechanical, electrical, embedded and IT engineering skills involved. Furthermore, once the systems are active in a manufacturing facility, gathering data, analysing it and taking timely action is a pain.

At Linefox, we're creating a suite of automated software and modularised hardware to make building, maintaining and collecting data from test systems easier, faster and cheaper. We help companies reduce their costs by up to 10 times, their time to deployment by up to 8 times and free up valuable engineering resources in the process.

We started operations in March 2021. We're currently generating revenue by working with six companies on the OEM side. We have three more customers to be onboarded soon and 15 more in our immediate pipeline."

<https://www.linefox.com/>

# MICology Limited

## XR platform for easy creation of immersive contents

"sDream is an Extended Reality (XR) solution that mixes live action with computer graphics in real time. It is powered by virtual production technology. Our custom software synchronises latest technologies such as motion tracking, light-emitting diode display, ray trace rendering, 5G, AI and robotics to create a new and immersive solution for video production and live streaming.

Users are able to create limitless immersive contents in a small area with minimal manpower. It is suitable for a wide range of industries, including and not limited to:

- Product advertisement and announcements for automotive, real estate, fashion, furniture, or any products
- Online courses and sharing for education, fitness, finance, engineering
- Live performance or video production for eSports, drama, music video, orchestra, broadcasting

With sDream, we are able to redefine the unique value proposition for enterprises, creating exponential growth in branding and marketing."

<https://micology.ai/>

# MagicWeaver Inc.

## Digitising human body shapes for virtual applications

"MagicWeaver is a California-based company focused on providing a highly efficient solution for digitising the human body using AI technology. Our solution can use phone photos (2D), depth images (2.5D) and scanning point clouds (3D) as input sources to generate a complete 3D digital human body, including: standardised 3D body models, accurate body measurements, and skeleton and muscle simulation.

From there, we are able to provide services to multiple industries such as fashion, e-commerce, fitness, health care and smart seat/cabin. In the next stage, our technology can also be extended to areas such as next-gen virtual dressing, automated digital content production and 3D object recognition.

Since October 2020, we have set up an office in Shanghai for servicing clients in mainland China. Our solutions have been applied to some small- and mid-sized businesses in the earlier stage. Now large-sized enterprises, including leading e-commerce platforms, fitness mirrors and fashion brands, are interested in our solution. We have started to cooperate with some of them since March 2021. Our business is rapidly growing in these sectors."

<https://www.magicweaver.com/>

# Movel AI

## Making robots more human-like to speed up adoption

"At Movel AI, we automate robots with advanced navigation solutions together with sleek user interface across industries. Combining sensor fusion, AI, vision and machine learning technologies, Movel AI's goal is to deliver human-like precision and movements to robots to speed up the adoption of robotics. Single platform management is also available to control all your robots' working in tandem.

Our products are compatible with customers' robots across different industries, applications and needs – from AGVs (automated guided vehicles) traversing factory grounds for logistical movements, to inspection robots scanning structural defects within multi-storey buildings, to enabling automated navigation in personal mobility devices.

Founded in December 2016, Movel AI is backed by 500 Startups, SGInnovate and Enterprise Singapore."

<https://www.movel.ai/>

# NATIX

## Giving cameras “brains” for programmed applications

"NATIX gives cameras brains and makes them GDPR (General Data Protection Regulation) compliant. Connect an off-the-shelf AI processor (Edge Computers) to any camera, install our software on it, and let the AI detect the event of your choice. Upon detection, a notification with anonymised footage is sent to our dashboard or any client of your choice.

Our platform enables you to turn any camera into a multi-purpose sensor that can support you with applications ranging from parking management to occupancy control, safety and security. With our toolkits, you can build privacy-preserving AI in only a few lines of code, bring it to the camera over-the-air, manage the workflow, view the events in an intuitive dashboard and act upon them."

[www.natix.io](http://www.natix.io)



# Neuronspike

## Brain-inspired AI chips to power faster machine learning

"Neuronspike is developing brain-inspired AI chips to bring ultra-fast and highly efficient machine learning to edge devices.

Our mission is to help AI-driven enterprises to deliver the most reliable services and products in the simplest and cost-effective ways. In contrast to competitors who degrade the accuracy of the AI to increase the other performances by a little, the edge devices like mobile phones with our products have the competitive accuracy level as if the AI is being run on a very powerful rack of GPUs. In current prototype metrics comparison, we have achieved almost 10 times faster processing and 100 times higher energy-efficiency while having 90-95% accuracy level on most AI tasks.

We have been selected to multiple accelerators/incubations in the USA and Hong Kong, including the Harvard innovation labs incubation program, HKAI Lab and HKSTP Incubation Programme. "

<https://www.nspiketech.com/>

# RC Labs Limited

## Smart battery management for heightening safety

"What is the common factor among the following events?

1. Tesla cars' on fire
2. Chevrolet's US\$2 billion Bolt recall
3. Samsung Galaxy Note 7's fiasco

A failed battery pack.

Battery packs fail due to poor cell quality, inefficient thermal management and sub-optimal battery management systems. This could cause physical harm to the end customer and damage the brand, and delay or even completely derail Electric Vehicle (EV) adoption. Furthermore after accidents, employees and customers quit, and OEMs are in a legal soup and lose market share rapidly.

To solve this, RC Labs is developing intelligent Battery Management Systems (BMSs), which are adaptive, chemistry-agnostic and modular. The IoT BMS helps to model and understand EV batteries significantly better than the state-of-the-art alternatives under different weather, driving terrain and application. This knowledge is transformed to code and the BMS is frequently updated over the air. In addition, enhanced understanding of batteries and the physical design of the BMS allow us to rapidly accommodate new applications and implement plug-and-play infrastructure to scale to higher voltage applications. With our BMS and accurate battery models, we aim to enable a currently defunct safe and circular battery economy."

**[www.rclabs.co](http://www.rclabs.co)**

# Rekosistem

## Driving collaboration for waste management

"There are 3 million waste workers whose livelihood depends on the waste value chain in Indonesia. But It's unproductive – most workers only get below \$100 (what currency?) per month.

Rekosistem will change the game. We provide a circular economy platform that connects users, waste workers and recyclers, and captures waste data for waste credit transactions. We work as a connector to track consumers' consumption, drive waste collection by waste workers, match each type of waste with recyclers and enable brand owners to implement a sustainable model. We generate waste credit from all these processes on our platform.

We are a platform-based company so that instead of competing with existing players in the waste value chain, we collaborate with them and embrace collaboration. The waste management industry is another comprehensive value chain. It is like another distribution chain but works in reverse. Our competitive advantage compared to others is our ability to collaborate with other waste management companies."

<https://rekosistem.com/>

# Retailtics

## No more queuing at supermarkets with self-checkout carts

"Supermarkets desperately want to solve long checkout queues, inventory shortfalls and other common customer frustrations with in-store shopping that severely impact customer retention and sales.

Our Smart Self-Checkout Shopping Cart (SmartCart) and integrated shopping list app enables supermarkets to better anticipate demand and personalise shoppers' experience, delight them with contextual promotions in the app based on list entries, proactively engage shoppers with data-driven promotions on the cart inside the store, as well as self-checkout that allows shoppers to skip the queue by paying in-cart with cashless services or PayWave, then exit the store through special lanes.

As the first and only SmartCart in Southeast Asia at present with PCT approval and patents pending in Malaysia, we aim to quickly establish our dominance in the region. To that effect, we have commenced our first pilot test with a major retailer in Thailand, and are preparing to deliver to retailers in Malaysia and a 80-store strong retailer in Saudi Arabia that had all issued letters of intent prior to pandemic-induced movement restrictions.

We also believe our zero-capex subscription fee model will sit well with price-sensitive Asian retailers, and give us an edge over other players who may be eyeing this market."

**<https://www.retailtics.com>**

# Return Helper Limited

## Making returning purchases an efficient and pleasant process

"Return Helper makes ecommerce product return easy – for both sellers and buyers. Return Helper is a data-driven platform that connects shipping carriers, third-party warehouses, sales channels and aftermarket services. We optimise not only the return process and the aftermarket activity for online retailers, thus reducing costs, maximising sales and saving environmental resources, but also the buyer return experience that will improve the NPS (net promoter score?).

Our Technology also enables warehouses to process returned parcels efficiently. Our smart mobile application simplifies the return process and significantly reduces processing time.

Our smart analysis allows online retailers to manage, monitor and analyse all online returns across different sales channels and countries, and make better data-driven decisions."

**[www.returnhelper.com](http://www.returnhelper.com)**

# Robot INC.

## Linking robots to operate complex tasks for any trade

"Robot Inc.'s Robot as a Service Platform (RaaS) is a central platform to link the functions of individual robots so they work together as one team. Cloud AI is available for analysis and calculating efficiency for each robot to work together most effectively.

Cloud, AI, IoT, 5G and Big Data technologies are brought in to help facilitate modern operations and manage various complex tasks that the robots are programmed to do, regardless of the nature of your business and trade.

Our platform acts as an intermediary linking all robots to work together and manage various complex tasks."

<https://www.robotinc.asia/>

# Ship Supplies Direct Pte. Ltd.

## Digitalising to enhance marine supply chain efficiency

"SSD has created Singapore's largest digital logistics platform focusing on the marine supplies industry.

The maritime industry is extremely backward in terms of technology. Even its supply chain is still largely fragmented, and coordination is mostly done using texts/emails/calls. Add the complication of trying to deliver within controlled zones and the target being a moving ship that will leave within less than a day, the process is highly inefficient.

Our platform provides three key value propositions – matching logistics providers with marine supplies shippers, last-mile delivery optimisation and automating import/export documentation.

We are using proprietary algorithms to help our customers generate savings of up to 30% on their last-mile deliveries by reducing waiting time at the port. Our system pulls delivery relevant data, like weather, vessel positioning, port activity plans, plus 10 different data sets to generate a recommended window for delivery.

We have been recognised as a leading innovator, being one of the finalists of the Smart Port Challenge 2018 and Korea Start-up Grand Challenge 2020, among other accolades. Our platform has converged maritime companies that generate more than a billion dollars of revenue, showing their recognition of our solution."

**<https://www.shipsuppliesdirect.com/>**

# SafeMode

## BehavioralAI platform motivates fleet drivers for better performance

"SafeMode has developed the first driver-success platform called Driverz, transforming the way transportation companies and drivers interact and perform.

Driverz uses artificial intelligence and Behavioural Economics principles at the core of its BehavioralAI technology. The platform supports drivers on and off the road with performance-based bonuses, social-networking, career development opportunities and entertainment. Simultaneously, car fleets become more profitable with better driving performances of drivers, and engagement and retention of talent.

Unlike coercive technologies of fleet management and dashcams that measure drivers to allow management supervision, Driverz serves the drivers. It provides them access and ownership of their information and incentivises with salary bonuses and a valuable sense of recognition and community.

Fleets using the Driverz platform reported a 30% reduction in road accidents and fuel savings of 3%-5%, while dramatically increasing driver retention by 35% to set a WIN-WIN situation between the management and the hard workers.

With a multidisciplinary team of researchers, serial entrepreneurs and transportation business experts, the company has the ingredients to rebuild the relationships between fleets and drivers and other stakeholders that benefit from the safety and performance enhancements, like insurance companies and OEMs."

<https://www.safemode.co/>



# Smart Mobility Solutions

## Shielding cyclists from rain and wind

"BikerTop® is a ground-breaking system that protects cyclists from rain and wind. The cover pops open from the handlebar in just a few seconds, providing the rider a shelter from the rain while using the bicycle.

Urban transportation continues to move towards eco-friendly alternatives as e-bikes and traditional bikes become more popular. Yet these means of transportation lack a solution when facing bad weather. BikerTop® is the world's first portable solution that provides riders an instant shield from the rain while commuting on their bikes.

The innovative pop-up design of BikerTop® allows instant opening and closing, very similar to an umbrella. With a few simple movements, cyclists can quickly protect themselves from adverse weather in just seconds."

[www.bikertop.com](http://www.bikertop.com)

# Stemhub Holdings Limited

## Simulating IoV scenarios for education and planning

"Learning the 5G Smart City & Internet of Vehicle (IoV) concept is a trend for our new generation. However, IoV education tools are lacking in the market to facilitate students' understanding of the concept and interaction of Smart City. Therefore, it is difficult to mimic future 5G Smart City real-life scenarios for teaching.

We have developed the Stemhub IoV Platform. Together with our customised Smart City IoV car kit, students can learn to recreate different real-life scenarios between the IoV and different components of Smart City. Robotic cars are able to auto-pilot in our simulated city.

Governments can also utilise our products to design and simulate future Smart City model for city planning

Value Proposition:

- To provide the best STEM education platform for schools and students to teach and learn about Smart City.

Competitive advantages:

- 1) We are a first-in-market IoV education platform
- 2) Users can re-create real-life on-road scenarios with our IoV and V2X command centre
- 3) Easy to simulate scenarios of IoVehicles relying on vehicle-to-vehicle (V2V), vehicle-to-human (V2H), vehicle-to-building (V2B) and vehicle-to-infrastructure (V2I).

Achievements:

Our products have been used by over 100 schools, NGOs and education centres in the past years."

# Stoke Systems

## Pushing processing power to the edge

"Monitoring remote equipment has been challenging for both industries and cities because of the costs involved in installing measurement devices, setting up power and IT infrastructure and transferring asset data to the cloud for analysis.

Stoke's solution, SmartEdge, combines sensors, edge analytics and connectivity into a plug-and-play solution that installs in 20 seconds. With a three-year battery life and ubiquitous connectivity, affordable equipment monitoring is now possible.

Our big differentiator is that SmartEdge, our flagship product, pushes processing power to the "edge". To put that in context, the idea behind Industrial IoT is collecting operational data from where it's generated (the operational edge) and pushing that data to the cloud where insights and value can be extracted from it. Most companies process all that data in the cloud, whereas SmartEdge processes the data directly on the sensor -- saving battery and bandwidth, and drastically lowering total cost of ownership."

<https://stoke.global>

# SUPERHIGHWAY

## Mapping drone traffic routes

"SUPERHIGHWAY was born from the development of drone traffic routes, to create a new air industry.

Our strengths include real-time maps and blockchain and AI back-end technologies."

<https://www.facebook.com/Superhighway-350584889444081>

# Tolong

## Matching freelancers with low-skilled jobs

"In the post-pandemic world, Tolong is solving the issue of filling low-skilled jobs such as waiting tables, kitchen help, administrators or even cashiers by connecting budding freelancers to small- and medium-sized enterprises (SMEs). These additional help on the fly can take over jobs with minimal training and available as quickly as within an hour of requesting for help.

Tolong's platform allows anyone to sign up as a freelancer and try waiting tables today, then as a cashier tomorrow. The platform is supported by machine learning for job matching and data analytics for profile building and recommendations. Not only do we fill urgent jobs, we help manage the entire supply chain and payroll, including validating whether the profiles of both freelancers and SMEs are solid and reliable."

<https://tolong.app/>

# Turing Chain Ltd.

## Easy authentication and verification of certs and IDs

"Turing Certs, a blockchain-based smart ID service, helps governments and institutes issue verifiable certificates and IDs, and users are able to easily keep all the records on our one-stop website. We have helped more than 30 institutes, 30 universities and seven government agencies across nine countries and regions conduct digital transformation. For recruiters or any other verifiers, they can simply click the URL or scan a QR code to verify the authentication of individual user's record. Our product, Turing Certs, plays an important role in bridging the gap and improving efficiency between issuers, verifiers and users.

Turing Certs have three major advantages: 1) We already got the ISO27001, meaning that we can protect users' data properly; 2) We use the IOTA public chain so that issuers can upload certificates in a short time at low cost and 3) We follow the W3D regulations, offering compatibility with many systems.

Our team members include business talents located in Singapore, Japan and Taiwan, technology talents located in Hong Kong and Taiwan, and product talents located in Taiwan. Most of us are graduates of prestigious universities across the world. "

<https://certs.turingchain.tech/>

# Unmanned Systems Bulgaria

## Air traffic control for drone operations

"We develop and deploy Air Traffic Management solutions for drone operations, better known as Unmanned Traffic Management, to enable safe and secure flights for manned and unmanned air traffic and generate a lot more business opportunities.

We will provide flight approvals much faster and help operators not to bypass the whole procedure with the authorities. We will provide airspace awareness of where a drone is actually flying, updated in real time, so that the operator is assured he is compliant with air traffic rules through his own device or a tablet or even the ground control station from where he controls the drone.

The solution will help to jumpstart a lot more aerial business opportunities."

<https://www.unmannedsystems.bg/>

# VIETNAM BLOCKCHAIN CORPORATION

## Blockchain for solving practical problems in Vietnam

"Vietnam Blockchain Joint Stock Company (VBC) is honoured to be awarded "Science and Technology Enterprise" in 2019. As a pioneer in the blockchain field in Vietnam, VBC's vision and goal is to promote awareness of the benefits of this technology. VBC has been researching and developing blockchain solutions to solve practical problems in Vietnam. These blockchain solutions are deployed in many fields including agriculture, manufacturing, supply chain, logistics, e-commerce, fintech, public services and smart city.

Our Blockchain Traceability Solution provides transparency of product information and production processes, from preparing raw materials to delivering products to consumers, as well as assists in managing and monitoring crops using data that are accurately provided and securely stored on the blockchain platform, to improve value and protect products brands."

<https://vietnamblockchain.asia>



# Vista Innotech Limited

## Built-in micro gimbles for steadying smartphone photography

"Most people get shaky and blurry images when taking photos in low-light environment. The problem can be improved by using traditional built-in Optical Image Stabilizer (OIS) or applying large-sized external gimbles. However, OIS image improvement is low and large gimbles are not convenient especially in impromptu situations.

Our solution is called Micro-Gimble Stabilizer (MGS). It is a patented mechanical and electronics design that enables the best anti-shaking performance by using an anti-shaking mechanism similar to gimbals that tilt the lense and the sensor together. Our novel and patented springs and flexible printed circuit (FPC) designs for MGS enable the smallest gimbal sizes and larger compensation angles. It is at least 40% smaller than the closest competitor, allowing camera module manufacturers to integrate it as a built-in micro gimbal for most mobile devices.

In 2020, the smartphone camera module market reached 1,800 million pieces per year and traditional OIS annual sale was over 500 million pieces. The CARG (compound annual rate of growth) was 10% and OIS penetration was under 30%, with the growth rate (of what?) at 800% since 2014.

Our MGS technology is already in mass production for many non-smartphone applications, with 45+ patented protection in the USA and China."

**<https://vista-innotech-limited.business.site/#posts>**

# Volverot

## Secure platform for car sharing

"Volvero is built to be the Airbnb for vehicles. By allowing owners to share their vehicles with drivers through a secure platform, we bring a significant social and environmental impact.

Volvero is a game-changer in mobility as it targets several problems faced by the society. People lack alternatives, as public transport is often unreliable, inflexible or absent, especially in remote areas. It also can be dangerous, which deters people from moving about, women and young people in particular. Taxi, car rentals and dealers are expensive and not flexible. Urban areas are over-congested, while privately owned vehicles remain unused 96% of the time. This, among other factors, makes self-ownership of cars not feasible.

Volvero allows users to find a vehicle for any need. At the same time, owners are able to reduce their vehicle costs and ecological footprint. Volvero collects data to analyse driving behaviour and improve the situation on roads. It provides necessary information such as the performance and reputation of owners, drivers and vehicles. Moreover, we offer a unique insurance that covers drivers and all kinds of vehicles, providing maximum security."

**<https://volvero.com/>**

# WaveScan Technologies Pte. Ltd.

## See-through scanners for structural inspection and predictive maintenance

"WaveScan is a Singapore-based deep-tech startup specialising in see-through scanner technology and advanced AI algorithms for high-resolution structural inspections. Our proprietary scanner technology is built upon nearly a decade-long R&D on electromagnetics-based wireless sensors for non-destructive testing applications.

We provide an end-to-end AI-enabled asset inspection solution, addressing the specific needs of the built environment sector. Smart scanner systems, integrable with autonomous vehicles, along with a centralised AI-enabled analytics solution, are the future of active inspection systems for sustaining resilient infrastructure.

At WaveScan, we envision safer, productive and liveable cities by creating a predictive maintenance ecosystem through data-driven standardisation of inspection processes."

[www.wavescan.sg](http://www.wavescan.sg)

# XTRA Sensing Limited

## Monitoring machine health data for cost-efficient facility management

"Our business idea is to collect data about machine health in the chiller plant rooms of commercial buildings, hotels, shopping malls and cold storage, to establish a model that predicts the remaining useful life of different components of a machine. Then, we monetise the data to (1) offer just-in-time provision of part replacement service and optimisation of maintenance schedule, (2) issue insurance policy to cover the compulsory excess of the existing insurance or top-up for machine breakdown.

Our value proposition is to minimise the cost and chance of machine breakdown for facility management.

Our competitive advantages are our co-founders' 10+ years of experience in machine diagnosis and non-destructive test, plus realisation and commercialisation of cutting-edge algorithmic research in academia.

Our product has now been installed in a data centre, two shopping malls, a commercial building, a concrete production plant, a power plant, two health care centres, two municipal sewage pump stations and two municipal fresh water pump stations. The clients are either discussing scope expansion or referring other potential clients to us."

**[www.xtrasensing.com](http://www.xtrasensing.com)**

# Zip Infrastructure Inc

## Making ropeways that can curve and branch

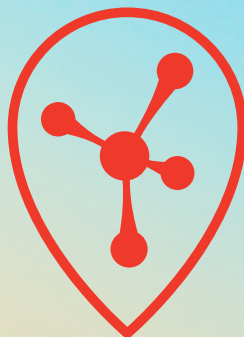
"Existing ropeways can't curve or branch on the road.

Our self-drive ropeway "Zippar" can curve and branch on the road. It can help to reduce urban traffic congestion.

We have patented the technology of simultaneous rope and rail travel. "

<https://zip-infra.co.jp/>

# INNOVATION STARTS HERE



[epic.hkstp.org](http://epic.hkstp.org)