



科專事業化
生態系推動計畫

Taiwan Research Institute
Entrepreneur Ecosystem program

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2025 InnoVEX TREE Startups





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Biotech, Healthcare,
and Health Tech



ICT & Semiconductor



Green Tech and
Circular Economy



AI



Smart Mobility

BIOTECH,
HEALTHCARE,
AND HEALTH TECH

Redefining
Endoscopy—
Smarter, Safer,
Single-Use.



ENDOSEMIO

Our Introduction!

EndoSemio delivers smart, single-use endoscopic systems designed to improve clinical safety and efficiency. Developed by physicians and engineers, our solutions support both human and veterinary care, offering high-quality imaging, intuitive usability, and infection control. We bridge frontline needs with practical innovation to empower modern procedures across diverse healthcare settings.

Our Services!



Tracheostomy Tube Solutions

Our next-generation endoscopic image-guided tracheostomy kit provides real-time imaging for precise puncture guidance, enhances patient safety and improves procedural efficiency.



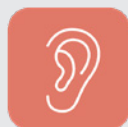
Neonatal Intubation Solutions

Neonatal and Pediatric Respiratory Tract Imaging Kit with swappable single-use endoscope, designed for safe, convenient respiratory checks during NICU rounds.



Flexible Ureteroscope

Equipped with industry-leading image quality to reduce physician fatigue and enhance diagnostic and treatment efficiency.



4-in-1 Digital ENT Scope System

Features high-resolution imaging and four interchangeable probes, enabling comprehensive ear, nose, and throat examinations in various clinical settings.

BIOTECH, HEALTHCARE, AND HEALTH TECH

Unlock the Power of Beads in Cell Therapy

iKONBeads



iKNOBeads

Our Introduction!

InnoCell Tech, a spin-off from Taiwan's ITRI, uses iKNOBeads to enhance immune cell manufacturing, reduce costs, and enable a safer, feeder-free platform for next-gen allogeneic cell therapies.

Our Services!



Immune Cell Activation Platform

- iKNOBeads for $\alpha\beta$ T (or CAR-T), PBNK, CBNK
- Cell Activation
- Cell Culture Reagent
- Cell Manufacturing Process



Devices & Kits

- iSEC column for EVs isolation
- iREX bioreactor
- NA purification



Customized Services

- Various Beads Synthesis
- Functionalization
- Cell Analysis

BIOTECH, HEALTHCARE, AND HEALTH TECH

Data-Driven DM foot Care



DMolution

Our Introduction!

DMolution is revolutionizing diabetic foot care with data-driven insights. At the core of our innovation is FootHow™ — an foot screening system that delivers comprehensive evaluations with speed, precision, and accessibility. By empowering both healthcare providers and patients to take proactive steps in foot health management, we are not just building devices — we are building a global ecosystem for preventative healthcare.

Our Services!



Comprehensive Evaluations

The first rapid screening device to integrate both peripheral neuropathy and circulatory assessments — offering a complete picture of foot health.



Fast and Convenient

Seated testing completed within 5 minutes, ensuring a quick and comfortable experience for users.



Fully Automated

User-friendly interface designed for easy self-operation, minimizing the need for medical personnel intervention.



Risk Assessment Report

Connected to a broader foot health ecosystem, enabling meaningful health promotion and proactive care.

BIOTECH, HEALTHCARE, AND HEALTH TECH

Streamlined Efficiency for On-The-Spot Results

mesoView

We, 17th
國家新創獎
Innovators



Our Introduction!

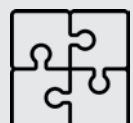
mesoView Co. Ltd., founded in 2022, specializes in advanced medical imaging technology. Its core innovation comes from GIPO, NTU, where the team developed the mesoscale Nonlinear Optical Gigascope (mNLOG) platform, granted related patents. mesoView applied this technology to create a slide-free tissue-to-digital imaging platform. Key products include "MESOScope" for academic research and "PATHOScope" for medical diagnostics assistance.

Our Services!



SIGNIFICANT TIME SAVING

4X faster assessment compared to frozen section analysis



TISSUE INTEGRITY

Delivering true-border artifact-free imaging without the need for tissue slicing and freezing



STANDARD STAINING DYE

Fully compatible with traditional H&E histopathology



EASE OF USE

Telepathology enhances collaboration and provides immediate access to high-resolution datasets with real-time zoom-in, without extra interpretation training.

BIOTECH,
HEALTHCARE,
AND HEALTH TECH

AI-Driven
Exoskeleton
Empowered
Your Life



FREE Bionics

Our Introduction!

FREE Bionics Taiwan, a leading exoskeleton company, provides data-driven exoskeleton system to increase the rehabilitation capacity. we provide various exoskeleton products and solutions to make people's life easier and better.

Our Services!



Lower Limb Powered Exoskeleton-FREE Walk

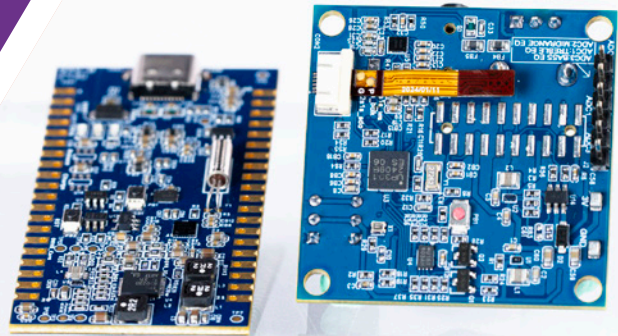
designed for people with lower limbs weakness to stand and walk, improve the activity of lower limbs, and the quality of life.



All-in one Isokinetic training robot-NimBO

An innovative training device that can improve your joint mobility (ROM-range of motion) and muscle strength is a smart, Safe and efficient way.

Empowering Always-On AI Sensing



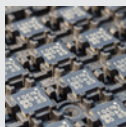
Upbeat Technology

UpbeatTech

Our Introduction!

Upbeat's UP301/UP201 SoC & UPM01 sensor deliver real-time, noise-proof sensing with intelligent anomaly detection powered by low-power endpoint AI—anytime, anywhere.

Our Services!



UP201, UP301

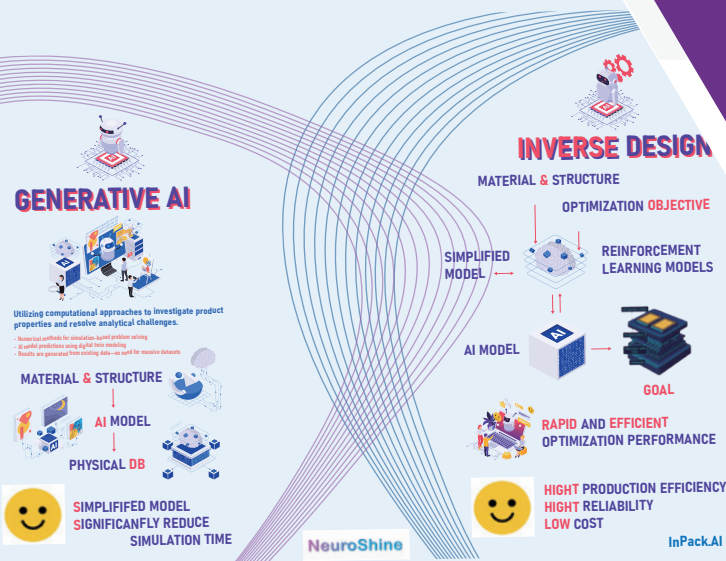
Endpoint AI SoC MCU for low-power, real-time, precise sensing and analysis.



UPM01

MEMS voice-vibration sensor with ultra-wide bandwidth and noise-resistant anomaly detection.

Accelerate Innovation with AI-Driven Design



NeuroShine

NeuroShine

Our Introduction!

From advanced packaging to future-ready platforms, NeuroShine brings together deep learning, reverse design, and environmental insight to power tomorrow's AI solutions. We are a deep tech startup applying generative AI and reinforcement learning to solve advanced semiconductor packaging challenges. By integrating simulation and reverse design, we enable faster, more accurate, and more adaptive design for next-generation heterogeneous systems.

Our Services!



EDA Reinvented — Zero Risk in Advanced Packaging

InPack.AI is an next-generation AI-driven tool with reverse design, supports heterogeneous material packaging design, physical field verification, and high-speed processing.



Seamless Fit, Maximum Freedom

Compatible with mainstream design software, InPack.AI requires no relearning or workflow disruption. Users can instantly leverage evolved simulations with existing tools and data formats.



Tackle Challenges with Precision

From thermal and warpage analysis to full-package simulation, our engine delivers fast, accurate results—without massive datasets.



Design. Emulation.

With its unique AI core, InPack.AI helps generate structure drafts, run simulations, and refine designs in a continuous loop—empowering users with flexibility and speed.

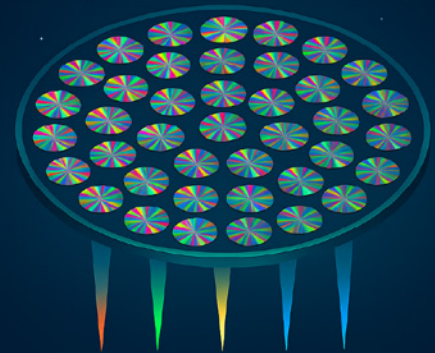


NeuroShine Co., Ltd.

NeuroShine.AI@gmail.com

The Key to Future Optics

MetaRosetta



METALENS



METAROSETTA

Our Introduction!

MetaRosetta is a startup focused on breakthrough optical technologies and developing advanced metalenses. We provide a total metalens solution through our self-developed AI-based software, allowing our clients to save over 50% in time and money while enhancing competitiveness and reducing risk.

Our Services!



Thermal Imaging Metalenses

Our thermal imaging metalenses with achromatic performance and aberration correction, delivering high-quality imaging in the 8-12 μm wavelength range.



Design Service Product Range

We already have products covering a wide range of applications from thermal imaging in the far-infrared, to facial recognition in the near-infrared, and visible-light imaging sensors.





4K (-269°C) Cryo-CMOS Module



taqt

Our Introduction!

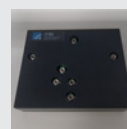
We provide cryo-modules which can work in 4K (-269 °C) to drive and read-out the Transmon and Fluxonium superconductor qubits. These ICs and modules features low-power and compact size compared to room temperature electronic equipment. Customized design with system optimization is available that will further bring the advantage of low latency and enhance the performance (t_1 , t_2 , fidelity, ..., etc.) of qubit.

Our Services!



Driver module

Provides the up-conversion function of I & Q pulse signal from IF to RF to set the X & Y angle of a qubit.



Readout module

Provide both the up-conversion and down-conversion functions between IF and RF to monitor the response from qubits.



Innovation of IC Security

Jmem Technology
Co., Ltd.



Our Introduction!

Jmem Tek is a semiconductor company developing quantum-safe hardware security solutions. The PUF Based PQC Hardware Security Chip is the first to combine NIST FIPS-203/204 compliant post-quantum cryptography with invisible key technology, delivering chip-level protection for AI, AIoT, Drone, Fintech, Unmanned Vehicle and Defense devices against next-generation cybersecurity threats.

Our Services!



Encryption Communication

Secure data transmission between cloud and edge devices, preventing any leakage during transfer



End-to-End Binding

Permanently bind data to its designated device, protecting core value and ensuring data integrity



Algorithm Protection

Safeguard AI models against theft, tampering, and unauthorized access.



Identity Authentication

Guarantee that only authentic software and firmware versions are installed, blocking fake updates and cyber threats.

GREEN TECH AND CIRCULAR ECONOMY

Software Defined Boiler for Sustainable Development

GasolineAI Co., Ltd



Our Introduction!

Our team, composed of experts from the Energy Research Institute of National Taipei University of Technology and second-generation professionals from the boiler industry, brings over 30 years of experience. We spent two years developing AI-assisted control technologies to enhance combustion efficiency and reduce carbon emissions. Additionally, we are actively researching hydrogen-rich combustion technology for industrial boilers, aiming to achieve a cleaner combustion process.

Our Services!



Traditional Boiler Improvement Solutions

The combustion efficiency of boilers gradually declines with age. We assist customers in digital transformation to address fuel waste and carbon emission issues



AI-assisted Boiler Control

Our team's AI mathematical model dynamically adjusts the air-fuel ratio for complete combustion in hydrogen-rich environments



Long-term LNG supply station

It can be combined with regional partners or directly supply customers, and can also serve as a secondary and backup gas source.



Temporary LNG supply station

It resolves sudden fuel usage issues for customers, utilizing ISO tanks, tank trucks, and pipeline configurations.



<https://twlng.com/>



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GREEN TECH AND CIRCULAR ECONOMY

Ultra-sensing,
Infinite
Possibilities,
the Key to AI
Intelligence.

Piezo Ultratech



PIEZO ULTRA

Our Introduction!

Piezo Ultratech develops advanced piezoelectric sensors featuring ultra-high bandwidth, embedded integration, and compact design. Applied in semiconductors and smart manufacturing, we operate via OBM and ODM models, offering standard and custom solutions to drive innovation and differentiation

Our Services!



Ultra-High Frequency Piezoelectric Vibration Accelerometer

Featuring 34kHz top-tier bandwidth, it empowers AI with precise data — ideal for high-speed equipment and smart sensing evolution.



Miniature Embedded Piezoelectric Vibration Accelerometer

Compact form enables seamless integration into equipment — perfect for tight spaces and embedded sensing applications.



Discrete-Type Piezoelectric Vibration

Ultra-compact package for easy PCB integration — ideal for embedded and system-level sensing applications.



Embedded Miniature Piezoelectric Force Sensor

Engineered for smart machinery, withstanding ultra-high speeds for seamless embedding and real-time force sensing.

GREEN TECH AND CIRCULAR ECONOMY



Lighting
Up Circular
Fashion with
AI, achieving
Cradle to cradle



PADE

Our Introduction!

Global regulations and market demand driven; Taiwan government founded PADE technology and spin-off from Taiwan Normal University to resolve the key challenge in the textile-to-textile initiatives. PADE specializes in AI and NIR solutions for textile circular economy. Through sorting systems and clouds, it enables material identification, data traceability, and ESG management. Empowering brands to achieve sustainability.

Our Services!



Precise Fiber Detection

Identify fibers instantly for R&D reuse



Smart Brand Management

Boost material control and product R&D



Inventory Reuse Ready

Revive unsold stock via fast sorting



Circular Data Integration

Connect data to drive sustainable ops

GREEN TECH AND CIRCULAR ECONOMY

Smart charging is not just about plugging in, it's about plugging into a smarter and more sustainable future.

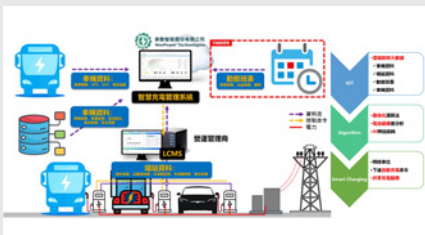
NeoPower Technologies



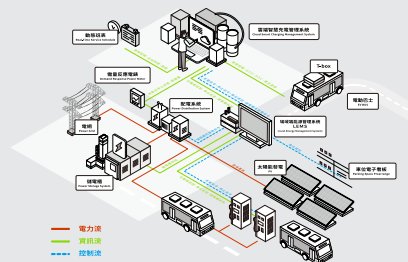
Our Introduction!

The first university spin-off company of National Taiwan Normal University. It focuses on green energy fields and electric vehicles, utilizing active optimal energy management technology to maximize the efficiency of energy and power system usage.

Our Services!



Cloud Smart charging Management System



Smart Bidirectional Charging and Storage System



Prevention is
our Passion.



DeepRad.AI

Our Introduction!

DeepRad.AI develops AI-powered medical software to assist early disease detection and preventive care. Our core products include DeepLung-CAC100, which leverages low-dose CT scans to detect lung nodules and assess coronary artery calcium and bone density risks, and DeepBrain-Cognito, which uses MRI to evaluate brain health, estimate brain age, and identify early signs of cognitive decline.

Our Services!



Multi-disease detection in a single scan

One scan to detect lung nodules and assess CAC and bone density risks



Predictive brain health AI

Predict brain age and cognitive decline using MRI



Enhancing radiologist efficiency

Smart workflow solutions to reduce workload and boost productivity



Designed with clinicians in mind

AI insights that empower better clinical decisions

The Next-Gen P2P Infrastructure Secure, Low Latency, and Fully Controllable

O'Prueba

O'PRUEBA

Our Introduction!

O'Prueba delivers secure, low-latency edge networking with full control. Spun off from NYCU and backed by 30+ years of software and networking experience, our OOS platform replaces traditional VPNs and relays with fast, secure, and controllable P2P connectivity.

Our Services!



PQC Encryption

PQC-level encrypted communication, ready to defeat future quantum threats.



Device Anonymity

Concealed device identity on the network to prevent targeting, tracking, and metadata leaks.



P2P Connectivity

Direct device-to-device links—no third-party relays, no wasted hops.



Full Control

You own the system end-to-end: no external dependencies, full visibility, and policy enforcement.



Bridge AI, robots, and sensors into a unified intelligent system.



Holon Robotics

Our Introduction!

Holon Robotics empowers manufacturers and integrators to automate faster—with an AI OS that works across brands, and a cloud platform that generates robot code on demand.

Our Services!



Multi robot & sensor

Supports 6 brands of robot, 7 types of sensors.



3D scan generating

Automatically generate paths, positions, and process parameters.



AI code generation

Automatically generate main robot program and integration of subprograms.



AI assistant

AI guides troubleshooting for operation problems.

Smart Mobility

See More. Move Freely.

LiPro Vision CO., LTD.



Our Introduction!

About LiPro Vision

LiPro Vision is a technology company focused on ultra-compact optical engines for next-gen smart glasses. Our lightweight, low-power displays enable AI-ready designs for active use—whether running, cycling, diving, or triathlon swimming.

Our Services!



LiPro Vision's Metalens Optical Engine

Ultra-compact, lightweight, power-efficient module enabling immersive AR with design freedom and optical clarity.



Smart Sports Glasses

Stylish AR eyewear with real-time data, navigation, and performance tracking for outdoor sports and training use.



Smart Swimming Goggles

Slim, streamlined, lightweight design reduces drag for a natural, unobtrusive swimming experience.



Cycling with Smart Sports Glasses

Hands-free ride stats, turn-by-turn directions, and safety alerts, all while staying focused on the road ahead.

Firm Vehicle
Partner.Firmware
Solution Expert

KopherBit, the
gateway for smart
mobility.



KopherBit. Co., Ltd.

Our Introduction!

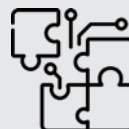
KopherBit provides an all-in-one platform integrating AUTOSAR-compliant basic software, and customizable ECUs—plus toolchains and expert services to accelerate EV controller development from concept to deployment.

Our Services!



Configurable Controller

Flexible Controller Empowering
Customers the right to decide how
to use



Omnibearing Environment

Speed up the development with
pre-integrated environment and
total solution



Real Examples

Guide developers with concrete
examples



Drive sustainability Forward

Drive the world with green energy

Smart Mobility

Freedom at
Sea. Safety
Guaranteed.

SOIC Marine
Solutions



梭易科 海洋應用方案
股份有限公司
SOIC Marine Solutions Co., Ltd.

Our Introduction!

SOIC Marine Solutions (SMS), founded in April 2023 and backed by MOEA and Ship & Ocean Industries R&D Center, will unveil AI Sailor in 2H 2025. Using data from cameras, AIS, sonar, radar, and GPS, AI Sailor analyzes obstacles, calculates risk, and guides autopilots—revolutionizing maritime navigation with intelligent, real-time decision-making at sea.

Our Services!



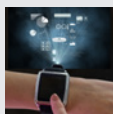
AI Sailor

a refined Maritime ADAS



X2 marine HMI

Built for life at sea



Thetis Smart vessel

Test service for new application by self-driving



科專事業化
生態系推動計畫

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Entrepreneur Ecosystem program

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