

Meet Asia-Pacific's Leading Water Innovators



at



|

June 2024



About Imagine H2O Asia

Imagine H2O Asia (IH2O Asia) is a Singapore-based water solutions accelerator and NGO with a mission to make innovation more accessible to water and climate-stressed communities in the Asia-Pacific.

Established in 2019, IH2O Asia builds and scales water technology businesses across the region. The organization’s specialized programs help entrepreneurs overcome the obstacles to water technology commercialization, early-stage financing and customer adoption.

Key pillars of IH2O Asia’s programs include pilot design and funding, regional market entry assistance and startup development.

Led by Imagine H2O, the US nonprofit organization, IH2O Asia draws on more than a decade of experience building solutions with the world’s best water entrepreneurs.

Imagine H2O Track Record

Since 2009

200+

Startups supported

\$1B+

Raised by IH2O startups

\$2.1M

Pilot funding awarded since 2019

17

Pilots supported globally in 2023

Our Supporters



PROGRAM AGENDA



**IMAGINE
H2O**
Asia

at



**Singapore
International
Water Week**

TechXchange*

📍 **Sands Expo**

18 June | 10AM - 5PM

Startup Pitches: Hear Cohort 5 pitch to an audience of utilities and industrial end-users.

Innovation-in-Action: Learn about four live IH2O-supported pilots in the region along with lessons from the field on implementation.

*This is a ticketed SIWW event.

Innovation Network Reception

An invite-only reception hosted by IH2O Asia and Burnt Island Ventures for our partners and the region's water innovation ecosystem.

Exhibition

📍 **Sands Expo**

19-21 June | 10AM - 6PM

IH2O Asia Innovation Pavilion: Meet 17 global water technology startups from our latest cohort of innovators as well as select portfolio companies.

Schedule a 1-1 meeting with our startups in advance [here](#).

SIWW Registration Links

Register as a Trade Visitor for the Expo (free)
Register as a Delegate for TechXchange (paid)



Featured Startups

Meet our entrepreneurs at the IH2O Asia Innovation Pavilion
Sands Expo | Booth B2-J45

Ontoto



Tim Blake
Managing Director

Atera Water



Adrian Yeo
CEO



Tai Kee
COO

H2O Mantra



Shailesh K.
CEO

Aumsat Technologies



Riddhish Soni
CEO

TracWater



Len McKelvey
CEO

Aquamonitrix



Mark Bowkett
Founder

Pure Active Water



Teguh Budiman
Process Engineer

Teredo Analytics



Liang Jie Wong
Co-founder



Rajat Mishra
Co-founder

NatureDots



M. Aatish Khan
Director



Snehal Verma
Director

Urbanblue Technologies



Virginia S.
CEO



Akash Singh
CTO

Movements Inc



Jeremy Yi
Business Director

SmartValve



Andrew Talkes
Director

TeamSolve



Mudasser Iqbal
CEO



Robin Wong
CCO

N&E Innovations



Didi Gan
CEO



Jaslyn Lee
CTO

Solar Water Solutions



Antti Pohjola
CEO

MIPS Innovations



Lu Di
CEO

SmartTerra



Gokul Krishna G.
CEO

Reach out to the IH2O Asia team at SIWW



Nimesh Modak
Managing Director



Simarpreet Khanijou
Senior Program Manager



Annamarie Martin
Manager



Chloe Kuan
Associate





WATER INNOVATION PILOT FUND

A new co-financing mechanism to accelerate the adoption and commercialization of innovative watertech solutions

16

Pilot projects
for 2024 globally

\$100k+

Average pilot
funding grant

Global Solutions

Pilots sourced from
IH2O's vetted portfolio

Technical Assistance

On-the-ground pilot design
and implementation support

Contact us directly or learn more at imagineh2o.org/pilot-funding

Featured Pilots at TechXchange

Four projects will be featured at IH2O Asia's session:

Water Quality Monitoring in the Philippines

Increasing real-time water quality visibility for two utilities to improve service delivery using **TracWater's** portable sensors

Non-Revenue Water Reduction in Indonesia

Localizing NRW areas efficiently using **SmartTerra's** AI tool to reduce NRW and increase revenue for two public utilities

Machine Anomaly Detection in Malaysia

Detecting machinery anomalies in a plant using **Teredo Analytics'** ambient acoustic sensor to provide equipment failure alerts

Groundwater Treatment for Farms in the Philippines

Treating groundwater for layer hens and egg cleaning using **Pure Active Water's** chemical-free, electrolysis solution



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06-08 Source Sustainability & Environmental Monitoring

Aumsat | Ontoto | NatureDots | MIPS

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UrbanBlue | N&E | Pure Active Water | H2O Mantra

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Movements | SmartValve | TeamSolve | Teredo Analytics | TracWater | SmartTerra

AUMSAT TECHNOLOGIES

www.aumsat.com

India

Growth



Suite of groundwater management tools designed to increase aquifer levels and treat groundwater.

- Visualizes groundwater availability using satellite imagery to identify recharge sites at 90% precision
- Reduces costs in aquifer detection by 75%
- Treats groundwater using non-invasive technologies such as water conditioning and handpump disinfection valves

Traction 44,000 hectares surveyed for groundwater across India, recharging 17,000 kL of water per month since 2019.

ONTOTO

www.ontoto.com

Australia

Growth



Low-power satellite telemetry dataloggers for groundwater that transmit high-quality data at low costs.

- Reduces transmission costs through optimised sensor readings
- Operates without cellular coverage, making it ideal for remote locations
- Functions for up to 10-15 years with minimal maintenance

Traction 1,000 devices deployed in Australia across government agencies, oil and gas projects and property developers.

NATUREDOTS

www.naturedots.com

India

Commercialization



Digital twin that generates dynamic virtual replicas of freshwater environments using AI to predict risk and inform preventative measures for utilities.

- Detects risks on water quality and quantity at up to 99.5% accuracy
- Reduces usage of water monitoring sensors and IoT hardware by 50-80%
- Other applications include freshwater fisheries monitoring and waterbody restoration

Traction 3 ongoing pilots monitoring a water treatment plant and 6,000 hectares of waterscapes for utilities in India.

MIPS INNOVATIONS

www.mipsinnovations.com

Singapore

Commercialization



Highly selective water quality sensors that leverage Molecularly Imprinted Polymer technology for label-free, real-time contaminant detection.

- Detects a wide range of contaminants, including heavy metals and pesticides, at ppb-level
- Generates analysis in <10 minutes
- Saves up to 75% of lab testing costs

Traction Online sensors: 3 pilots in Singapore and China for in-process and effluent waste monitoring with a government agency, mining company and utility;
Offline sensors: Commercialised and revenue generating.

SOLAR WATER SOLUTIONS

www.solarwatersolutions.fi/en/

Finland

Growth



Solar-powered desalination units that do not require energy storage units for potable water generation in off-grid communities.

- Balances RO pressure in all circumstances using patented valve technology
- Saves 50% in CAPEX costs as no batteries are needed
- Saves >80% in OPEX costs based on ongoing installations compared to conventional diesel-powered desalination systems

Traction 300+ installations in Africa, Oceania and Scandinavia treating seawater and brackish water.

ATERA WATER

www.aterawater.com

Singapore

Commercialization



Ultrafiltration system, TeraStream™, that uses advanced nanocomposite membranes to treat high turbidity water more affordably.

- Reduces sludge production by 85%
- Lowers energy usage by 45% given low operating pressure required
- Decreases costs of chemical consumption by 80%
- Generates zero toxic waste using solvent-free and water-free fabrication process

Traction Ongoing in-house pilot trial with utility in Vietnam and an upcoming pilot for process water treatment in textile manufacturing.

AQUAMONITRIX

www.aquamonitrix.com

Ireland

Growth



In-situ sensors that measure nitrite and nitrate simultaneously to optimize aeration processes and lower nitrous oxide emissions.

- Employs rapid ion chromatography with patented UV-LED detection
- Validated independently with an accuracy of >90%
- Guarantees no calibration drift or recalibration even when moving between different water types
- Other applications in aquaculture, chloramination and surface water monitoring

Traction Sales in 14 countries, with 6 trials underway in the UK, Netherlands and France.

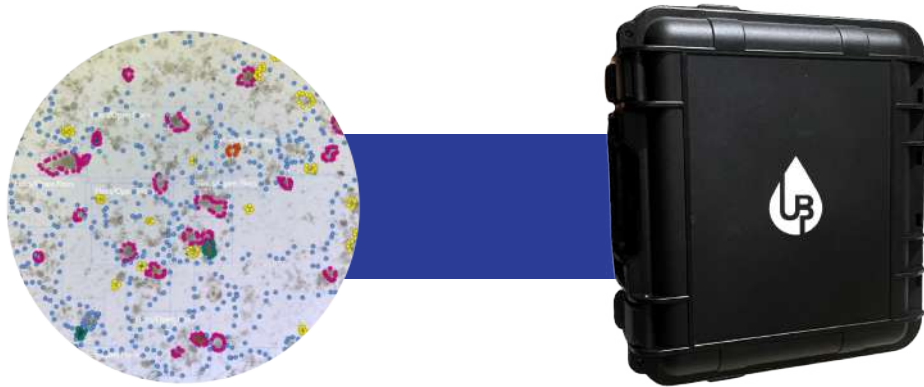
URBANBLUE TECHNOLOGIES

www.urbanbluetech.com



India

Commercialization



Automated in-situ wastewater sampling device that leverages AI to speed up microbial analysis to optimize treatment processes.

- Retrofits into existing infrastructure with easy-to-install device
- Lowers energy consumption from aeration by up to 30%
- Reduces RO membrane fouling by up to 50%
- Increases plant capacity by up to 50%

Traction 1 fully integrated pilot ongoing across 4 ETPs with a chemical manufacturer in India.

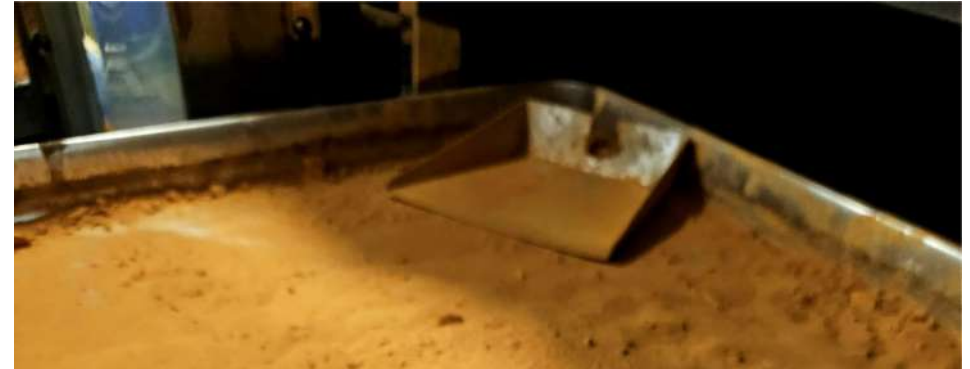
N&E INNOVATIONS

www.vi-kang.com



Singapore

Commercialization



Natural anti-microbial agent valorized from food waste, applied to consumer goods such as surface disinfectants and sanitisers.

- Serves as a long-term and non-toxic alternative to chemical disinfectants through the generation of reactive oxygen species

Wastewater segment discovery and applications:

- Testing BOD and COD removal in low-range greywater
- Testing azo dye degradation in textile wastewater

Traction Early exposure to the sector through trials and lab-scale validation of product performance.

PURE ACTIVE WATER

www.pureactivewater.com

Singapore

Commercialization



Chemical-free and salt-free electrolysis technology, ActivH2O, that disinfects water by generating a long-lasting natural oxidant while eliminating biofilm.

- Provides sanitised and potable water safe for human and animal health with no disinfection by-products
- Consumes 10x less energy compared to RO, operating at <math><1\text{kWh}/\text{m}^3</math>
- Saves 30% more water than RO
- Applications in industry, hospitality, farming and livestock

Traction 140 electrodes deployed in Asia including commercial system with Dole Philippines and >10 ongoing pilots in Singapore, Thailand and the Philippines.

H2O MANTRA

*Non-IH2O Asia Portfolio company

www.h2omantra.com

India

Pre-commercialization



Advanced biotechnology formulations for wastewater treatment including a liquid drop-in solution made of various microorganisms to treat industrial discharge.

- Mineralizes recalcitrant organics into harmless substances and without solid waste by-products within 15-20 mins of reaction time
- Lowers unit operations and overall OPEX
- Retrofits well with existing water treatment infrastructure

Traction Early trials with a textile company in India treating 100m³/day.

MOVEMENTS INC

www.movements.kr

South Korea

Growth



Digital twin and augmented reality solution for all stages of project construction for underground utilities.

- Converts 2D drawings into 3D visualizations for intuitive modeling, saving >60% in design costs
- Integrates and updates data from all stakeholders in real-time
- Provides spatial information of pipes for operators to conduct maintenance activities efficiently
- Decreases construction time by 30%

Traction Commercially deployed in >10 constructions sites with government agencies and constructors in Korea, with 3 ongoing PoCs in Southeast Asia.

SMARTVALVE

www.smartvalve.co.uk

United Kingdom

Growth



Mobile app that provides real-time guidance for utility staff managing manual valve operations to eliminate water hammer and avoid pipe bursts.

- Collects real-time network operations data across multiple workflows and integrates it into a work management software
- Helps utilities avoid water quality fines, saving them \$1.9 million
- Reduces repair and maintenance costs from pipe bursts, saving utilities \$9.5 million

Traction 2,000 users daily from commercial contracts with UK utilities, including Anglian Water and Severn Trent Water.

TEAMSOLVE

www.teamsolve.com

Singapore

Commercialization



AI-driven O&M chatbot that provides utility operators with field guidance and insights while increasing knowledge capture.

- Ingests, integrates and analyzes historical asset and incident data with expert notes, troubleshooting guides, and SOPs
- Captures 80% more information from field teams to discover mistakes and best practices through shared text, images and audio
- Lowers field response time by 40% from finding relevant information quicker during operations

Traction Commercial projects in Australia and New Zealand, completed trial with PUB Singapore and ongoing pilots in the Philippines, Malaysia, Canada and Hong Kong.

TEREDO ANALYTICS

www.teredo.sg

Singapore

Growth



Ambient acoustic sensor with an AI-based anomaly detection system to identify new pipeline leaks and abnormal machinery operations.

- Installs easily through non-invasive, plug-and-play device
- Generates site-specific AI within weeks for baselining
- Continuously monitors the acoustic signature of the asset(s) in real-time
- Triggers event-based alerts when anomalies are detected

Traction 4 ongoing projects in Singapore demonstrating > \$300k in cost savings and 1M litres of water saved.

TRACWATER

www.tracwater.com.au

Australia

Growth



Robotic water quality analyzers integrated into cloud-based data systems to provide utilities with alerts of water disinfection issues.

- Monitors water quality across free chlorine, pH, conductivity, turbidity, ORP, temperature, pressure and transient pressure
- Operates independently of existing water utility management systems including SCADA for improved resilience
- No human intervention needed during normal operations

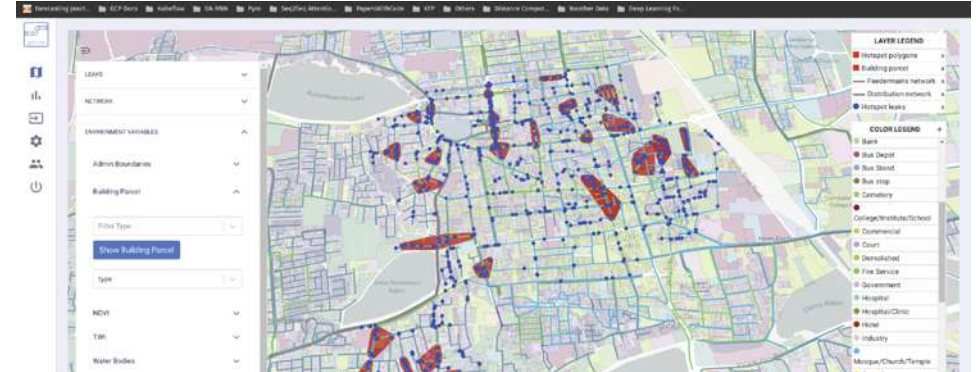
Traction 30 analyzers deployed on the Gold Coast monitoring 3,500km of water pipeline, with 6 ongoing trials with other utilities in Australia and the Philippines.

SMARTTERRA

www.smartterra.io

India

Commercialization



AI-powered analytics software that helps water utilities continuously localize and reduce non-revenue water.

- Creates a digital twin of the utility's network and customers for operational efficiency
- Detects, localizes and predicts leaky pipes; up to 75% accuracy
- Detects revenue loss from meter or customer issues; up to 80% accuracy
- Integrates existing data, meters, sensors and workflows across varied utility sizes and data availability

Traction City-scale projects with L&T and Suez in two Indian cities, with ongoing pilots in the Philippines and Indonesia.



**IMAGINE
H2O**
Asia

ENGAGE WITH US

Interested in meeting our startups?

Receive facilitated introductions from Imagine H2O Asia.

Contact: Simarpreet Khanijou
simarpreet@imagineh2o.org

Interested in joining Imagine H2O's Tech Adopters Network?

The Tech Adopters Network is a community of municipal and industrial end-users committed to testing and piloting innovative solutions.

Contact: Annamarie Martin
annamarie@imagineh2o.org

