

Innovation Alley Presenters

CMB



CBM Pte Ltd is a leading provider of integrated facilities management services in Singapore, delivering sustainable, end-to-end solutions across commercial, industrial, residential, and public sector environments. With decades of operational experience, the company offers a comprehensive suite of FM services spanning cleaning, security, environmental, engineering and laundry services, underpinned by deep domain expertise and a strong track record in reliability and regulatory compliance.

Anchored on ESG principles, CBM is advancing a next-generation operating model that addresses manpower constraints, enhances occupational safety, and reduces environmental impact, while strengthening governance through digital transparency, automation, and data-driven insights.

The showcase features three strategic innovations. The Façade Cleaning Robot (Environmental) mitigates high-risk work-at-height operations through automated mechanical scrubbing, improving safety while enabling efficient, low-disruption cleaning. The Robotic Dog for Surveillance (Security) delivers autonomous, AI-enabled perimeter patrols that enhance coverage and response times, while reducing reliance on manpower. Complementing these is the Washing Agent for Laundry (Systematic), a room-temperature chemical solution that reduces energy and water consumption as well as CO₂ emissions, while maintaining high hygiene and performance standards.

Collectively, these solutions demonstrate CBM's ability to operationalise ESG through scalable, technology-driven innovations that deliver measurable improvements in safety, sustainability, and service performance.

Carbon1010 by Singapore University of Technology and Design



Carbon1010 is a Singapore-based climate-tech startup focused on decarbonising the built environment through advanced material innovation and intelligent system integration.

Developed from over a decade of research, its proprietary C³[™] regenerative sorbent materials are capable of capturing both carbon dioxide (CO₂) and moisture, addressing a critical yet often overlooked contributor to urban energy demand and indoor air quality.

At the World Cities Summit 2026, Carbon1010 will showcase its 3CPO (Carbon Capture Control Process Optimiser) decarboniser—designed for seamless integration with existing HVAC infrastructure. The system continuously captures and moisture through an energy-efficient regeneration process, reducing cooling loads while maintaining healthier indoor environments.

Early deployments in commercial buildings have demonstrated measurable reductions in energy consumption and improved indoor air quality. By transforming buildings into active carbon management systems, Carbon1010 offers a scalable pathway for cities to reduce emissions, enhance liveability, and accelerate progress toward net-zero urban environments.

EcoVolt

ECOVOLT

Ecovolt's AI-Native Building Orchestration System (AI-BOS) is a modular platform that integrates existing building infrastructure with targeted IoT devices to unify data and control across entire portfolios. By aggregating siloed systems - ACMV, lighting, plug loads, metering, occupant feedback - into a single AI decision engine, AI-BOS delivers sustainability compliance, operational efficiency, and utilities optimisation without proprietary lock-in.

Solutions we will be showcasing: AI-BOS platform (<https://www.everest.ecovolt.ai/>) and devices (Smart circuit breaker relay, IAQ, etc...)

Energy Research Institute ERI@N



Energy Research Institute @ NTU

Dynamic Load Management System to help validate power management solutions for EV charging points at HDB carparks, and possibly another related project depending on the booth size. Dynamic load management is alternative solution towards the traditional ways of providing ancillary services by controlling the demand of non-time critical load in the response of changes in the system. It could lead to significant reduction in cost and carbon dioxide as well as it could help to facilitate the connection of intermittent renewable energy generation, such as solar and wind power. This solution is made feasible by implementation of smart grid in power system.

Key Aspects of ERI@N Load Management Research:

- **Intelligent Management:** Uses reinforcement learning-based energy management to control HVAC systems, washing machines, and EV charging, reducing costs.
- **Dynamic Response:** Leverages AI/ML technologies to coordinate Distributed Energy Resources (DERs), such as rooftop solar PV and energy storage systems (ESS), to manage supply/demand fluctuations.
- **Virtual Power Plant (VPP):** ERI@N pilots VPP technologies to aggregate and control distributed energy assets within Singapore's energy market.
- **EV Infrastructure:** Focuses on developing vehicle-to-grid (V2G) and vehicle-to-prosumer (V2P) concepts to enable intelligent EV charging.
- **System Optimization:** Implements algorithms for time-series forecasting of load demand and renewable energy generation to optimize energy consumption.

GreenPhyto

greenphyto[®]

Greenphyto, founded in 2014 by CEO Susan Chong, is one of the world's largest and tallest agri-tech farms dedicated to securing sustainable food supplies through innovation. We developed the Vertical Industrial Farming System (VIFS™), a fully automated, climate-independent farming solution that enables the production of fresh, pesticide-free vegetables at scale and efficiency—boosting output by 45 times compared to traditional methods.

Our Controlled Environment Agriculture (CEA) facility, capable of producing over 2,200 tonnes annually, contributes significantly to Singapore's food resilience. As a Greenmark Gold Plus-certified building and holder of various international standards (ISO9001, ISO14001, ISO27001, ISO45001), we are committed to sustainable, secure, and efficient farming. Beyond technology, Greenphyto is deeply rooted in social responsibility.

We are a signatory of the UN Global Compact, recipient of the Company of Good Award, and actively support charities, and community organizations through donations and education on hydroponic farming. This minimizes food waste and aids families in need. Our corporate purpose—anchored in doing good while doing well—mirrors the vision of our founder, Susan Chong, whose prior success with Greenpac exemplifies blending business excellence with social impact. Today, her legacy drives Greenphyto's mission to revolutionize agriculture and nourish the world sustainably. Hydrogreens is a brand by Greenphyto, and focuses on fresh produce.

Joe Green



green concrete panel

JOE Green Pte Ltd, incorporated in 2006, is a Singapore-based manufacturer and supplier of lightweight, high-performance concrete wall panels and green building materials, including LiGrA technologies. Its solutions reduce embodied carbon, improve thermal efficiency and durability, and support Green Mark targets, while advancing sustainability through waste reduction, energy savings, and applications across construction and emerging industries.

LiGrATM (Lightweight Green Aggregate) is an eco-friendly horticultural medium **made from recycled glass**, expanded into lightweight, porous granules. Designed for modern urban greenery, it is **well suited to Singapore's tropical climate** and applications such as **green roofs, green wall, rooftop and balcony gardens, and planter systems**. Its structure provides excellent drainage and aeration, improving root health while preventing waterlogging. At the same time, it retains sufficient moisture to reduce irrigation needs.

LiGrA is **ultra-lightweight**—up to 90% lighter than natural aggregates—making it ideal for load-sensitive structures. Its high pH and inorganic composition naturally deter pests without chemicals. Environmentally, it is sustainable, non-toxic, free from harmful emissions, and contributes to green building goals.

Chemically stable and inert, LiGrA does not degrade, compact, or leach substances, ensuring long-term performance. It can be used as a drainage layer, soil conditioner, or full growing medium, offering superior durability and sustainability compared to traditional materials like soil, perlite, vermiculite or LECA.

N&E Innovations



N&E Innovations Pte. Ltd. is an agritech company focused on transforming food waste into high-value, sustainable materials. By upcycling food waste into functional biomaterials, we support circular economy practices while addressing global challenges in food preservation, packaging, and hygiene.

At the forefront of its innovation is ViKANG™, a next-generation biodegradable cling wrap designed to replace conventional plastic films. Beyond cling wrap, N&E also develops a range of sustainable solutions, including eco-cleaning solutions, hand sanitisers, and vacuum bags. These products are engineered to enhance food safety, extend shelf life, and reduce environmental impact by leveraging natural, food-derived compounds.

At the exhibition, N&E will present live demonstrations showcasing how its solutions improve shelf-life extension and reduce waste in real-world applications. Comparative displays with conventional solutions highlighting performance, compostability, and antimicrobial effectiveness. N&E innovations can help businesses reduce plastic usage while minimising food waste across supply chains.

Pivot



Pivot Green Solutions is an integrated sustainable technology company focused on delivering **measurable energy savings and carbon reduction** for commercial, industrial, hospitality, and data centre environments. Rather than approaching sustainability as a long-term concept, Pivot focuses on **practical implementation**—helping clients reduce energy consumption, improve operational visibility, and achieve cost efficiencies from day one.

At the core of Pivot's offering are its **AI-enabled IoT lighting systems** and **high-efficiency air filtration solutions**. These technologies are designed to work to assist companies reduce their energy consumption, enabling **real-time monitoring, adaptive control, and data-driven optimisation** of building environments. This allows clients to gain better visibility of their operations while steadily progressing toward their sustainability targets.

Pivot adopts a **flexible and execution-driven commercial approach**, including Energy-as-a-Service (EaaS). This model allows clients to implement upgrades with **minimal upfront investment**, with costs aligned to realised energy savings. By linking performance to financial outcomes, Pivot provides a **practical and lower-risk pathway** to modernising infrastructure and reducing carbon footprint.

Through this approach, Pivot contributes to key sustainability priorities, including **Affordable and Clean Energy, Industry Innovation and Infrastructure, and Responsible Consumption and Production**.

V-Plus Agritech



Empowering Resilient Cities through Circular Agriculture: Transforming Concrete Jungles into Productive Ecosystems

As cities race to meet climate goals and secure food supply chains, V-Plus Agritech delivers the blueprint for the next generation of urban infrastructure. We don't just build farms; we integrate Smart, Circular, and Scalable Vertical Aquaponics into the very fabric of the modern city.

In a world where "business as usual" is no longer an option, V-Plus Agritech invites global leaders to ACT Now by turning underutilized urban spaces—rooftops, community hubs, and industrial zones—into high-yield, zero-waste food sources.

Why Partner with V-Plus Agritech?

- **Circularity:** Our closed-loop systems use 90% less water than traditional farming, turning fish waste into organic nutrients for premium crops.
- **Hyper-Local Food Security:** Reduce "food miles" and carbon footprints by growing fresh produce exactly where it is consumed.
- **Farming-as-a-Service (FaaS):** We eliminate the technical barrier to entry. From IoT-driven monitoring to full farm management, we provide a turnkey solution for city developers and administrators.
- **Infrastructure-Ready:** Designed specifically for the constraints of urban environments—minimal water usage, no soil, and optimized for energy efficiency.
- **Proven in Singapore:** Developed in one of the world's most land-scarce nations, our systems are proven for density and efficiency in urban environments.

Our goal for WCS 2026 is to identify real estate developers & infrastructure partners for overseas pilot programs. Let's discuss how we can bring urban circular agriculture to your city.