Appropriate TECHNOLOGIES EXPO & INNOVATION LOUNGE 2025

Technologies and Innovations from the 3rd ATC

ATC

Intergrated Futures: Innovation Across Water, Energy, Food And Climate

3rd Edition
EXPO 2025

VENUE:
UMA GROUNDS-UPPER GARDENS-LUGOGO

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Appropriate TECHNOLOGIES EXPO & INNOVATION LOUNGE 2025

"HOMEMADE INNOVATIONNS FOR A SUSTAINABLE FUTURE"

29TH - 31ST MAY2025

Expo & Innovation Lounge

1500+	7	92+
PARTI CIPANTS	THEMATIC AREAS	EXHIBITORS

From Innovation to National Impact

Across the world, nations are increasingly recognizing that sustainable development is driven not only by policy and investment, but by innovation—the ability to design practical solutions that respond to evolving social, environmental, and economic realities. For Uganda, this imperative is particularly significant as we confront the dual challenges of climate change and growing demand for essential services such as water, sanitation, energy, and food systems.

The ATC Expo 2025 represents an important milestone in advancing this innovation agenda. Convened through the Appropriate Technology Centre under the Ministry of Water and Environment, in partnership with Makerere University, the Expo has created a unique platform where innovators, researchers, enterprises, and institutions converge to showcase technologies that address real development challenges. The breadth of solutions presented —from water supply and sanitation systems to renewable energy technologies, circular economy innovations, agricultural value addition, and health solutions— demonstrates the remarkable ingenuity emerging across Uganda's innovation ecosystem.

Equally significant is the growing recognition that many of the technologies capable of transforming our development trajectory are being conceived and developed within Uganda itself. Universities, research institutions, private enterprises, and community innovators are designing solutions that respond directly to local contexts and environmental realities. These innovations not only strengthen resilience and improve service delivery, but also open new pathways for industrial development, job creation, and sustainable economic growth.

The Ministry of Water and Environment remains committed to supporting this momentum. Through institutions such as the Appropriate Technology Centre, we continue to promote technology research, validation, demonstration, and knowledge exchange that enable promising ideas to evolve into deployable solutions. Platforms such as the ATC Expo are therefore essential—not only for showcasing innovation, but for building the partnerships and investment pathways required to scale these technologies for national impact.

The technologies featured in this publication stand as a testament to the creativity, determination, and entrepreneurial spirit of Uganda's innovators. Their work reminds us that the solutions to many of our most pressing challenges can emerge from within our own institutions and communities when supported by the right ecosystem of collaboration and opportunity.

It is my sincere hope that the ideas and technologies presented in this magazine will inspire continued investment in Uganda's innovation ecosystem and strengthen the collective commitment to transforming innovation into lasting national impact.

Dr. Alfred Okot Okidi
Permanent Secretary
Ministry of Water and Environment

Strengthening Uganda's Innovation Ecosystem

PROF. WILLIAM BAZEYO

CHAIRPERSON. ATC STEERING COMMITTEE

It is my pleasure to welcome you to this publication documenting the technologies and innovators showcased at the ATC Expo 2025. Organized by the Appropriate Technology Centre (ATC) on behalf of the Ministry of Water and Environment and implemented in partnership with Makerere University, the Expo was designed as a platform where innovators, researchers, enterprises, and institutions could present practical solutions to Uganda's development challenges.

The technologies featured in this magazine illustrate the breadth of creativity emerging across the country. From water supply and sanitation solutions to clean energy systems, circular economy innovations, agricultural value addition, and health technologies, the Expo brought together a diverse group of innovators whose work demonstrates the potential of locally developed technologies to transform livelihoods and strengthen environmental resilience.

The role of the Appropriate Technology Centre is to provide a bridge between innovation and application. By supporting research, testing, and demonstration of technologies, ATC helps ensure that promising ideas are refined and validated before they are adopted more widely. Equally important is the Centre's role in convening stakeholders from government, academia, industry, and development partners to foster collaboration and knowledge exchange.

The success of the Expo lies not only in the technologies that were exhibited, but also in the partnerships and dialogue that it enabled. Platforms such as this are essential for nurturing Uganda's innovation ecosystem and creating opportunities for innovators to connect with institutions capable of supporting further development and scale. On behalf of the ATC Steering Committee, I congratulate all innovators and partners who participated in this event. Your dedication and ingenuity continue to demonstrate that local innovation has a vital role to play in shaping Uganda's sustainable future.

Parliament Championing Innovation for Uganda's WASH Future

The ATC Expo 2025 provided a powerful demonstration of how innovation is becoming central to the transformation of Uganda's water, sanitation, and environmental management systems. It was therefore a privilege for me, together with several Members of Parliament who are part of the Uganda Parliamentary Forum on Water, Sanitation and Hygiene (WASH), to participate in this important event and witness firsthand the technologies being developed to address the country's development challenges.

The presence of members of the Parliamentary WASH Forum at the Expo reflects Parliament's growing interest in supporting innovation that strengthens service delivery and improves the wellbeing of our communities. As legislators, we recognize that expanding access to safe water, improving sanitation systems, protecting the environment, and strengthening climate resilience require not only infrastructure investment but also practical technologies capable of improving efficiency, reducing costs, and reaching underserved populations. The technologies showcased at the Expo demonstrate the remarkable ingenuity emerging from Uganda's universities, enterprises, research institutions, and community innovators. Solutions ranging from water purification and sanitation systems to clean cooking technologies, circular economy innovations, and climate-smart energy systems illustrate how local innovation can play a transformative role in addressing national priorities. Many of these technologies offer practical pathways for improving public health, protecting natural resources, and strengthening the resilience of communities across the country.

Parliament has an important role to play in supporting such innovations. Through legislation, policy oversight, and advocacy, the Uganda Parliamentary Forum on WASH continues to promote investments and initiatives that expand access to water and sanitation services while encouraging the adoption of technologies that improve efficiency and sustainability. Platforms such as the ATC Expo are particularly valuable in informing policy discussions because they allow policymakers to engage directly with innovators and observe technologies in operation.

I commend the Ministry of Water and Environme the Appropriate Technology Centre, Makerere University, and all partners who contributed to organizing this important event. I also congratulat the innovators whose creativity and commitment continue to demonstrate that Uganda possesses the talent and ingenuity required to address its development challenges.

The innovations presented at this Expo remind us that sustainable progress will depend on our ability to support homegrown solutions. As Parliament continues to champion improved water and sanitation services across the country, we remain committed to supporting initiatives that nurture innovation and enable promising technologies to reach the communities that need them most.

Hon. Silas Aogon,
Chairperson, Uganda Parliamentary Forum on Water, Sanitation and Hygiene (WASH)

CONTENTS

EXPO 2025

1.WATER SUPPLY AND MANAGEMENT (WSM)

Engineering Access. Strengthening Resilience. Powering Productivity.

Uganda's water sector is advancing, but innovation remains essential due to five key realities:

- **Rising Demand:** Rapid population growth and urban expansion are increasing pressure on water systems, especially in towns and growth corridors.
- **Functionality Gaps:** While coverage has expanded, thousands of water points nationwide are non-functional or abandoned, highlighting the need for durable designs, strong operation and maintenance systems, and lifecycle-focused investment.
- **Water Quality Challenges:** Groundwater quality issues—such as high iron and fluoride in some areas—can reduce community acceptance and lead to source abandonment. Low-cost treatment and corrosion-resistant technologies are therefore critical.
- **Climate Variability:** Droughts and erratic rainfall are affecting source reliability, making storage, monitoring, and climate-resilient infrastructure essential.
- **Limited Productive Use Infrastructure:** Irrigation and water-for-production systems remain underdeveloped, yet are vital for food security and income resilience.

Water innovation in Uganda must go beyond expanding access. The sector now prioritizes **reliability, water quality assurance, climate resilience, cost-efficiency, and productive use integration**—ensuring that systems not only reach communities but remain functional, safe, and economically empowering.

WSM1: CRESTANK LTD

Innovation solutions for water and sanitation

In a country where climate variability, rapid urbanization, and rising water demand increasingly strain infrastructure systems, **Crestanks Limited** has established itself as a leading manufacturer of practical water and sanitation solutions. Operating from its large-scale facility in Namanve Industrial Park, the company combines advanced polymer technology with strong local manufacturing capacity to produce durable, high-performance storage systems tailored to Ugandan conditions. At the 3rd ATC Expo, Crestanks showcased its flagship;

Polyethylene water storage tanks, designed for domestic, institutional, agricultural, and commercial applications. Ranging from small household units to large-volume installations, these UV-stabilized, food-grade tanks are engineered for long outdoor lifespan. Their leak-proof

Durability makes them particularly valuable in rural and peri-urban areas where supply interruptions are common.

Q-Desks and compact dustbins, reflecting its growing contribution to institutional and environmental infrastructure. The Q-Desks offer moisture-resistant, long-lasting alternatives to traditional wooden desks, while the compact dustbins support improved solid waste management in schools, health facilities, and public spaces.

Beyond standard tanks, Crestanks manufactures Bunkatanks and Loftanks for underground and space-efficient installations, alongside septic tanks and sanitation products that reinforce safe waste management in both on-grid and off-grid settings. Complementary guttering systems and accessories further enable integrated rainwater harvesting solutions—an increasingly critical adaptation strategy as rainfall patterns become more erratic.

W SM2: DAVIS & SHIRTLIFF

Improving people's lives through quality water and energy solutions.

Davis & Shirtliff has for more than 75 years been a cornerstone of water and energy infrastructure across East Africa, supplying high-quality equipment and solutions that underpin economic development and community resilience. The company has grown from a modest engineering outfit into the region's leading supplier of water-related and renewable energy technologies, with a strong presence in Uganda and across multiple African markets.

During the 3rd ATC expo, Davis & Shirtliff showcased a broad suite of technologies:

- Water Pump Systems: A diverse portfolio of pumps — including borehole, submersible, booster, and irrigation pumps — from globally respected brands such as Dayliff and Pedrollo, designed for reliable water lifting across domestic, agricultural, and industrial applications.
- Solar-Powered Water Solutions: Solar pumps and support systems that harness renewable energy to drive off-grid water access, particularly valuable in rural and climate-stressed areas where grid electricity is unreliable or absent.
- Water Treatment & Quality Systems: Domestic and institutional water treatment units, including reverse osmosis and UV systems, ensuring safe drinking water and helping reduce the burden of waterborne diseases.
- Irrigation & Supply Accessories: A range of irrigation kits, controllers, pressure tanks, and supply accessories that support efficient agricultural water use and crop resilience.
- General Infrastructure Support: Complementary offerings such as solar panels, backup power systems, generators, and digital controllers for integrated water and energy management.

Beyond the Expo exhibits, Davis & Shirtliff continues to supply:

- Swimming pool systems
- Water treatment chemicals
- Backup power generators
- Digital control panels and monitoring systems
- Integrated irrigation solutions (sprinklers, drip lines, etc.)

WSM3: SPOUTS INTERNATIONAL LTD

Spouts International Ltd is a Ugandan social enterprise expanding access to safe drinking water through locally manufactured ceramic filtration technology. Founded in 2011, Spouts produces the Purifaaya™ ceramic water filter, a gravity-based system that removes harmful bacteria and pathogens without electricity, fuel, or complex maintenance.

At the Expo, Spouts highlighted its range of household and institutional filters, including the standard family unit and larger-capacity models suitable for schools and clinics. Designed for affordability and durability, the Purifaaya filter provides a reliable alternative to boiling water—reducing fuel use, cutting household costs, and lowering indoor air pollution. The product is certified by the Uganda National Bureau of Standards (UNBS), reinforcing its safety and quality credentials.

Spouts' innovation extends beyond product design. Through a blended model combining commercial sales and carbon financing, the company supports wider distribution to low-income households and vulnerable communities. By reducing reliance on firewood and charcoal for boiling water, the technology contributes to forest conservation and carbon emission reduction.

WSM4: DELIGHT WATER SOLUTIONS

Delight Water Solutions is a Ugandan social enterprise dedicated to expanding reliable access to safe, affordable drinking water for homes, institutions, and workplaces. At the 3rd ATC Expo, Delight showcased its suite of modern water purification systems designed to eliminate the need for boiling-saving time, money, and fuels while enhancing health outcomes. The company's UV water purification systems combine multi-stage filtration with ultraviolet disinfection to remove particulate matter, eliminate pathogens, and improve water taste and odor across a variety of sources-including piped, borehole, rain-harvested, and well water. In addition to UV systems, Delight offers home and office water filters, compact water dispensers, and smart tanks in multiple capacities, providing flexible options for both residential and institutional use. Their products are paired with a year-long aftersales maintenance program and professional installation services, ensuring sustained performance and customer satisfaction.
By replacing traditional boiling methods using firewood or charcoal, its purification systems help reduce carbon emissions linked to indoor air pollution and deforestation — reinforcing community resilience in the face of climate challenges. The company has a strong local schools, health facilities, and households across Uganda.

WSM5: GREEN POWER INTERNATIONAL

Green Power International Limited is a Kampala-based renewable energy company committed to expanding access to reliable, affordable solar technologies across Uganda. Established in 2017, the company focuses on delivering integrated solar power and water solutions for households, institutions, farms, and commercial enterprises.

At the Expo, Green Power International showcased its range of **solar photovoltaic systems** designed to provide dependable electricity while reducing reliance on diesel generators and unstable grid supply. The company also highlighted its **solar water pumping systems**, which use clean solar energy to lift and distribute water for domestic use, irrigation, and livestock — an essential solution in off-grid and climate-stressed regions.

Beyond energy generation, the company offers **solar street and security lighting**, **borehole drilling services**, and customized solar installations tailored to specific site needs. Its technical team provides end-to-end services, from system design and installation to after-sales support, ensuring performance and long-term reliability.

WSM6: SUNDA TECHNOLOGIES

Sunda Technologies Ltd is a Ugandan clean-tech social enterprise transforming rural water management through prepaid smart metering systems. Founded in 2020, the company develops innovative solutions that improve fairness, transparency, and sustainability in community water supply.

At the Expo, Sunda showcased its **prepaid water metering technology,** which retrofits onto existing hand pumps and public taps. Households use registered ID tags linked to mobile money to access water on a pay-as-you-go basis. This system ensures that users only pay for what they consume while generating consistent revenue for maintenance — addressing the long-standing challenge of non-functional rural water points due to poor fee collection. The GSM-enabled system also transmits real-time usage data for remote monitoring and preventive maintenance, improving reliability and accountability.

WSM7: VELLAM ENGINEERING SOLUTIONS

Tailored Water Infrastructure Design

Vellam Engineering Solutions specializes in engineered water distribution systems customized for agricultural and community contexts. At the Expo, the firm presented irrigation layout systems and controlled distribution mechanisms designed for optimized flow and minimal loss. Their engineering services focus on site-specific system design, ensuring alignment with terrain, water source capacity, and intended usage.

Core Service Areas Include:

- Hydrological site assessments
- System design and optimization
- Installation and commissioning
- Technical advisory for water projects

VES emphasizes structural robustness and long-term functionality — key attributes for sustainable water delivery infrastructure.

WSM8: TECHNOLOGY FOR TOMORROW

Technology for Tomorrow (T4T) is a Ugandan appropriate-technology enterprise founded in 2008, driven by a clear mission: to design technologies that are affordable, environmentally responsible, and suited to local realities.

At the 3rd ATC Expo, T4T presented practical solutions addressing water access, clean cooking, sanitation, and sustainable construction. Its **MazziGo** water storage tanks, built using interlocking stabilised soil blocks (ISSB), offer cost-effective water storage for households and institutions, strengthening resilience during dry seasons. The Maka and Makiri fuel-efficient stoves significantly reduce firewood consumption, lowering household fuel costs while easing pressure on forests.

T4T also promotes **MAK medical and school incinerators** for safe disposal of hazardous waste, alongside MakaPads, biodegradable sanitary pads that enhance menstrual hygiene and support school retention for girls.
Through locally adapted design and community-centered engineering, T4T's technologies reduce environmental degradation, improve public health, create employment, and reinforce climate resilience through accessible, homegrown innovation.

2. SUSTAINABLE SANITATION SERVICES (SSS)

Why these technologies matter?

Uganda is still closing major sanitation gaps: UNICEF reports that open defecation remains a challenge and cites 6.7% of households with no sanitation facility in recent sector analysis. The 2024 population-and-housing census reporting (as summarized in local coverage) similarly indicates ~7% of households without toilets and that many households use unimproved sanitation.

At the same time, most urban households rely on on-site systems (pit latrines/septic tanks), and weak faecal sludge management can contaminate drainage and water sources; Kampala reporting highlights how limited sewer connections leave most buildings dependent on on-site containment and risky disposal practices. With more frequent floods and climate shocks, sanitation systems must be more resilient—emergency FSM capacity is increasingly recognized as essential for protecting public health and ecosystems during disasters.

That's why the Expo's showcased sanitation technologies in the range of ; **improved latrine interfaces, composting toilets, touchless handwashing, mechanized washing, and pit-to-resource recovery** are critical; they reduce disease transmission, improve dignity (especially for women and girls), prevent environmental pollution, and help communities adapt under climate stress.

A Shift in Perspective: The Sustainable Sanitation was presented as:

- A service
- A system
- A circular opportunity
- A public health shield
- A climate resilience tool

When containment, emptying, treatment, hygiene, and recovery are aligned, sanitation protects both people and the environment.

SSS1. LIXIL - SATO: UPGRADING THE USER INTERFACE

At the entry point of sanitation — where users interact with the system — **LIXIL's SATO,** exhibited in partnership with Water for People Uganda, demonstrated how simple yet intelligent design can dramatically improve hygiene.

The SATO Pan, featuring a low-water counter-weighted trap door, automatically seals after flushing, blocking odours, flies, and disease-carrying insects while using minimal water. Complementary solutions included the SATO Stool, I-Trap systems, and the SATO Tap for improved hand hygiene. In a gesture that extended impact beyond the exhibition space, 50 SATO pans were distributed to members of the public during the Expo, translating innovation into immediate household benefit.

SATO
A BETTER LIFE. EVERY DAY.

SSS2. DIVYA WASHING MACHINE:

Re-Imaging Laundry and Hygiene Burden

Sanitation and hygiene extend beyond toilets. Clean clothing is central to household dignity and health.
The Divya Washing Machine, developed by **The Washing Machine Project,** was showcased as an off-grid, manually operated laundry solution that significantly reduces the time and effort required for handwashing. Designed for low-resource settings, Divya reduces water use and physical strain while improving hygiene outcomes by freeing up time and reducing domestic burden particularly for women and girls. Sanitation systems are strengthened when household hygiene becomes easier and more efficient.

the washing machine project

SSS3. GHETTO RESEARCH LAB:

COMMUNITY-LED SANITATION INNOVATION

From the heart of Kamwokya, Ghetto Research Lab demonstrated how sanitation innovation can emerge from within informal settlements.

The Lab showcased eco-sanitation concepts and composting toilet solutions incorporating recycled materials and eco-bricks made from discarded plastics. By linking waste management with sanitation infrastructure, Ghetto Research Lab addresses environmental pollution while expanding access to safer facilities in dense communities. Beyond infrastructure, the Lab trains youth and women in waste collection, eco-brick production, composting, and green construction — turning sanitation and environmental challenges into skills and livelihoods.

SSS4. GIVE LOVE UGANDA:

SANITATION AS A MANAGED SERVICES

Where pits are unsafe or impractical, Give Love Uganda presented a structured alternative: container-based composting toilets.
Instead of accumulating waste underground, sealed containers are regularly collected and transported to centralized composting sites. There, waste is processed into nutrient-rich organic fertilizer.

This approach reduces contamination risks while converting sanitation waste into agricultural value — demonstrating that sustainable sanitation can safely close the loop.

SSS5. SCOUP PIT SANITATION UGANDA:

SANITATION AS A MANAGED SERVICES

In urban contexts where pit latrines dominate, safe emptying is critical.

Scoup Pit Sanitation Uganda showcased professional pit emptying services combined with compost recovery. By safely extracting faecal sludge and converting it into compost products, Scoup reduces environmental contamination while promoting circular resource use. Its model strengthens the sanitation chain at a stage often overlooked — ensuring waste is managed responsibly after containment.

SSS6. BADAYE TECHNOLOGIES:

Hygiene Re-Enforcement

Infrastructure must be reinforced by behaviour. Badaye Technologies showcased its automated, touchless handwashing machines designed for shared public spaces. By eliminating physical contact with taps or levers, the system promotes consistent handwashing while reducing disease transmission risk.

Infection prevention is the invisible backbone of sanitation systems. Badaye's innovation strengthens this foundation and aligns with SDG 6 and SDG 3 (Health & Well-Being).

SSS7. GREEN HOMELAND INITIATIVE: MENSTRUAL HYGIENE & ENVIRONMENTAL STEWARDSHIP

Sanitation also includes menstrual dignity.

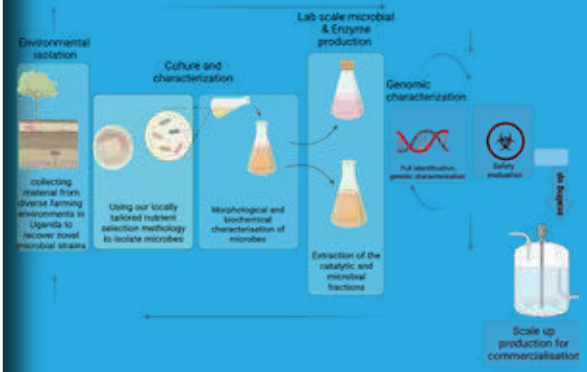
Green Homeland Initiative showcased eco-friendly reusable sanitary pads that improve menstrual hygiene while reducing plastic waste. Through production and community training, the initiative combines health, environmental sustainability, and women's employment.

SSS8. BULASCO INDUSTRIES LTD:

Biotechnology and Sanitation Support

Complementing infrastructure and service models, Bulasco Industries Ltd showcased bio-active cleaning and enzyme-based sanitation products designed to improve hygiene in households and institutions. By applying biotechnology to sanitation support systems, Bulasco enhances environmental health and operational efficiency.

The Expo made one message unmistakably clear: Sustainable sanitation is not about structures alone — it is about safe, integrated systems that endure.



3. CLEAN ENERGY & COOKING (CEC)

De-carbonising Kitchens. Protecting Forests. Powering Transition.

With over 85% of Ugandan households dependent on biomass fuels, clean cooking transition is no longer optional -it is an environmental, health,and economic necessity.

Charcoal demand continues to drive deforestation, while indoor air pollution remains one of the leading health risks for women and children. At the 2025 ATC Expo, innovators demonstrated that Uganda's clean cooking ecosystem is diversified, evolving, and ready to scale. The exhibitors below represent practical pathways toward resilient and low-carbon kitchens.

CEC1: AREM CLEAN ENERGY SOLUTIONS

CEC1: AREM CLEAN ENERGY SOLUTIONS

Efficiency as the first step in energy transition

Arem Clean Energy Solutions focused on one critical lever in clean cooking: efficiency. At the Expo, the company exhibited advanced pressure cookers engineered to reduce cooking time and fuel consumption across various energy sources. Rather than relying solely on fuel switching, Arem's innovation maximizes energy retention and heat distribution, ensuring that households use less fuel per meal prepared. This approach delivers immediate cost savings while reducing emissions, making it a practical bridge technology for communities still dependent on biomass. Arem's presence reinforced an essential insight: energy efficiency is often the most immediate and scalable clean cooking intervention.

CEC2: DETRA ENERGY & ENVIRONMENT CONTRACTORS

Multi-Fuel Pathways to Cleaner Kitchens

Detra Energy & Environment Contractors showcased both ethanol cookstoves and improved biomass systems, reflecting a diversified clean cooking strategy. Ethanol stoves offer a cleaner-burning liquid fuel alternative that reduces indoor air pollution, while their optimized biomass stoves reduce charcoal consumption through improved airflow and combustion design.

At the Expo, Detra emphasized gradual transition models - enabling households to shift progressively toward cleaner fuels without abrupt lifestyle disruption. Their portfolio acknowledges the economic diversity of Uganda's households and offers flexible energy options suited to different contexts. Detra's approach bridges affordability, environmental responsibility, and technological adaptability.

CEC3: SOLAR CONNECT ASSOCIATION

Zero-Emission Cooking Powered by Sunlight

Solar Connect Association demonstrated the simplicity and power of solar thermal cooking technologies. Their solar cookers, showcased live at the Expo, use direct sunlight to generate heat for food preparation — eliminating combustion entirely. The systems require no fuel purchases, produce zero smoke, and offer a sustainable cooking option particularly suitable for rural institutions, schools, and off-grid households. Solar Connects participation reminded visitors that clean cooking solutions can be elegantly simple — powered by natural resources that are free, abundant, and climate-aligned.

Test the sun. Experience Energy in a whole new way with Mukasa's Solar technology

CEC5. WES GAS

Expanding Reliable LPG for Immediate Impact

WES Gas showcased a comprehensive range of LPG cooking systems, emphasizing safety, reliability, and accessibility. LPG remains one of the most practical transitional fuels for rapidly reducing charcoal consumption and indoor smoke exposure. The company demonstrated cylinder options suitable for household and institutional use, alongside user education on safe handling and installation. WES Gas's participation highlighted LPG's role as a scalable, cleaner-burning alternative that delivers immediate health and environmental benefits while renewable infrastructure continues expanding.

CEC6. JEEP – JOINT ENERGY & ENVIRONMENTAL PROJECTS

Clean Cooking Through Community Engagement

JEEP's exhibit combined improved cookstove technology with grassroots awareness initiatives.

Their work extends beyond product distribution to include community education on clean cooking benefits, proper stove usage, and environmental stewardship.

At the Expo, JEEP demonstrated how behavioural change and technology adoption must go hand in hand.

Their approach positions clean cooking as a community movement rather than a standalone appliance.

CEC7: VILLAGE ENERGY

Renewable Power for Productive and Domestic Use

Village Energy showcased solar systems and solar-powered refrigeration solutions that strengthen both household resilience and agricultural productivity. Their exhibit illustrated how renewable electricity supports clean cooking appliances, cold storage, and small enterprises - linking energy access with economic empowerment. Village Energy's contribution emphasized that clean cooking transition is strongest when embedded within broader renewable infrastructure.

CEC8. GREEN POWER INTERNATIONAL

Decentralised Solar Deployment

Green power international presented solar PV systems designed for scalability and durability. Their installations support homes, enterprises, and institutions transitioning toward renewable power. At the Expo, the company highlighted how decentralized solar systems can power electric cooking devices and reduce reliance on fossil fuels and biomass.

GREEN POWER INTERNATIONAL

CEC9. ECO STOVE UGANDA

Incremental Innovation with Immediate Impact

Eco Stove Uganda showcased improved biomass stove designs optimized for enhanced combustion efficiency. Rather than replacing fuel types entirely, Eco Stove improves how biomass is burned — reducing wood and charcoal consumption while lowering emissions. Their practical, accessible approach offers immediate gains in environmental protection and cost savings.

CEC10. SWEDO INNOVATIONS

Engineering Clean Energy Locally

Swedo Innovations demonstrated renewable energy technologies engineered for Uganda's operating conditions. Their portfolio emphasizes localized design, serviceability, and reliability -strengthening domestic capacity in clean energy deployment and supporting sustainable systems integration.

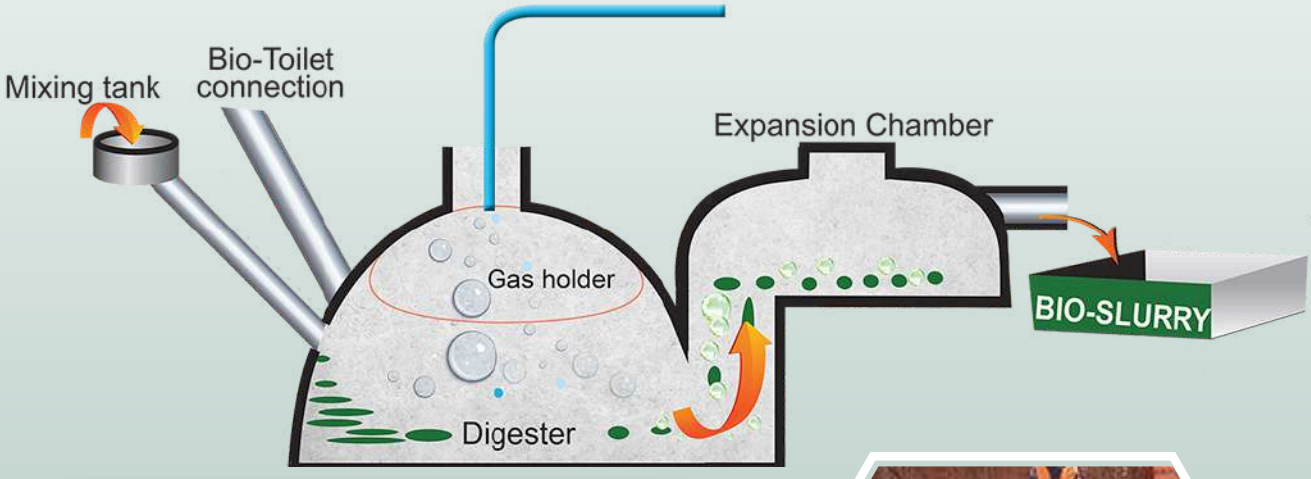
SWEDO
EMPOWERING WOMEN

CEC11. BIOGAS SOLUTIONS

Waste-to-Gas Systems

Biogas Solutions showcased anaerobic digesters that convert organic waste into cooking gas and nutrient-rich slurry fertilizer by linking sanitation, agriculture, and energy systems.

The company demonstrated how biogas offers a fully circular solution - reducing waste while generating clean cooking fuel.



CEC12. SOLARIKA ENERGY

Solar Systems for Homes and Institutions

Solarika Energy presented photovoltaic systems paired with storage solutions designed for households and institutions. Their Expo demonstration illustrated how solar energy can power lighting, refrigeration, and electric cooking appliances - supporting both domestic comfort and economic productivity..

SOLARIKAENERGY
LET THERE BE ENERGY

CEC13. GREEN ENERGY

Renewable Energy Access

Green Energy showcased modular renewable installations designed to reduce fossil fuel dependency and expand access to stable electricity. Their systems support clean cooking integration and broader energy resilience strategies.

CEC14. FRIENDS OF WEALTH STOVES

Affordable Clean Cooking for All

Friends of Wealth Stoves demonstrated improved cookstoves tailored for affordability and durability. Their focus on cost-sensitive households ensures that clean cooking adoption is inclusive, accessible, and scalable across income groups.

CEC15. BIO INNOVATIONS COMPANY

Sustainable Briquettes for Circular Energy

Bio Innovations presented eco-briquettes manufactured from organic waste streams, promoting responsible waste management while supplying alternative cooking fuel. Their technology demonstrates how environmental challenges can be transformed into economic and energy opportunities.

BIO INNOVATIONS
FOR YOUR ECO - FRIENDLY COOKING AND HEATING FUEL

CEC16. WANA ENERGIES

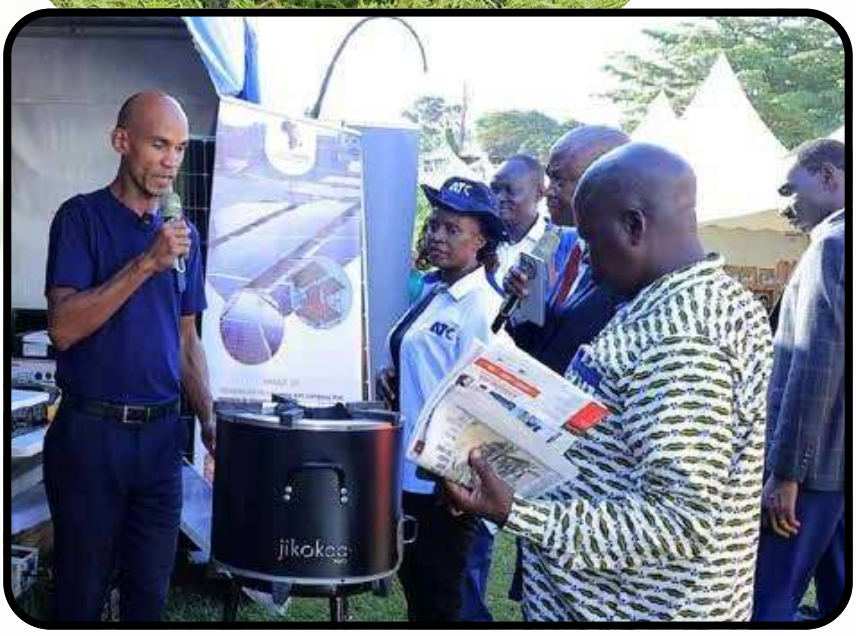
Hybrid Clean Energy Systems

Wana energy showcased integrated LPG electric cooking and solar home systems supported by innovative distribution models. Their hybrid strategy ensures flexibility for households transitioning toward cleaner energy sources while strengthening last-mile access.

CEC17. KANDEZA CARBON CONSCIOUS SOLUTION

Climate-Responsive Cooking Systems

Kendeeza exhibited carbon-conscious cookstove technologies designed to reduce emissions and improve fuel efficiency. By aligning clean cooking with climate accountability, Kendeeza positions household energy decisions within a broader environmental responsibility framework.



CEC18. AGRO ENERGY UGANDA

Energy Systems for Agricultural Value Addition

Agro Energy Uganda demonstrated renewable systems supporting agro-processing and rural enterprise development. Their participation reinforced the link between clean energy access and income generation within agricultural value chains.

Ultimate Clean Energies Ltd

CEC19: Ultimate Clean Energies Limited

Scaling LPG Solutions

Ultimate Gas Energy showcased LPG systems designed for safe and consistent cooking energy.
Their contribution supports immediate emission reduction and improved indoor air quality in both domestic and commercial kitchens.

We dont just supply energy. We deliver smart low cost solutions that power home with efficiency and purpose

CEC20: BUKONA AGRO PROCESSORS

Ethanol Innovation from Farm to Kitchen

Bukona Agro Processors showcased ethanol-based cooking solutions produced from locally sourced agricultural feedstocks. By linking smallholder farmers to clean energy production, Bukona integrates rural agriculture, bio-fuel production and cleaner household cooking — creating both environmental and economic impact.

CEC21. ECOVERSE INNOVATION LTD

Waste-to-Fuel for Greener Kitchens

Ecoverse Innovation Ltd showcased a compelling model that links waste management with energy production. At the Expo, the company showcased high-density biomass briquettes manufactured from agricultural residues and organic waste, alongside fuel-efficient cookstoves designed to optimise combustion.

What distinguishes Ecoverse is its integrated approach — not just selling fuel, but redesigning the energy cycle. By converting waste streams such as sawdust and crop residues into durable briquettes. The company reduces landfill pressure while lowering demand for charcoal. When paired with efficient stove systems, the briquettes deliver stable heat output with significantly reduced smoke emissions.

Ecoverse's technology positions clean cooking within a circular economy framework where waste becomes fuel, fuel becomes energy, and energy strengthens household resilience.

4. CIRCULAR ECONOMY (CE)

Turning Waste into Wealth. Redesigning Uganda's Resource Future.

Plastic pollution, agricultural residues, textile waste and discarded materials increasingly threaten Uganda's environment — clogging drainage channels, filling landfills, and polluting water sources. Yet across the nation a new narrative is emerging: waste is not waste — it's raw material.

Creatives, engineers and entrepreneurs are pioneering solutions that valorise discarded materials, generate income, and strengthen climate resilience.

At the 2025 ATC Expo, the Circular Economy section brought together innovators turning waste streams into value-added products from construction materials and furniture to fashion, art and educational media. Their work reflects global circular economy principles; reduce, reuse, recycle and reintegrate materials into productive use.

Impact Theme Across Exhibitors

The 2025 ATC Expo Circular Economy section illustrated how waste materials can be transformed into opportunity:

- Construction materials from plastic and organic waste
- Renewable and biodegradable household goods
- Art and cultural expression from reclaimed sources
- Education and community capacity building for sustainable lifestyles
- Green jobs, youth empowerment and social impact

Uganda's circular economy is more than recycling: it is resource regeneration, livelihood creation, and climate resilience.

CE1. SEGO INDUSTRIES LTD

Eco-Tiles from Agricultural By-Products

Sego Industries Ltd transforms eggshell waste — a common by-product of food supply chains — into eco-friendly construction tiles. These lightweight, durable eco-tiles reduce reliance on conventional building materials and demonstrate how discarded organic matter can have high-value applications in sustainable construction.

CE2. ART PARADISE

Design Innovation from Recycled Tires

Art Paradise exhibited functional and artistic furniture made from recycled car tires. Their up-cycled designs i.e from chairs to tables — illustrate how durable consumer goods can be built from materials historically deemed difficult to reuse.

''He takes what the world throws away and turns it into beauty,function and opportunity''

CE3. TAKATAKA PLASTICS

From PET Waste to Durable Building Materials

Takataka Plastics leads Uganda's PET plastic waste transformation, collecting and processing hard-to-recycle plastics into **TakaTiles**, furniture, accessories and functional household items. TakaTiles, a signature product, are roofing and wall tiles made from recycled PET — robust, cost-effective and more durable than ceramic alternatives. Their model creates jobs, trains youth, and supports community education on recycling.

CE4. NEZIKOKOLIMA ENVIRONMENT GROUP

Plastics Rebirthed as Artistic Expression

Environmental Group showcased ornaments and creative objects crafted from discarded plastic waste. Their work emphasizes not just recycling, but artistic interpretation of materials, engaging communities in environmental stewardship.

CE5. BANANA FIBRE CREATIVES

Textiles From Agricultural Residue

Banana Fiber Creatives transforms banana stems-agricultural by-products normally discarded after harvest — into textiles, ornaments and fashion items, valorizing biomass waste into eco-friendly materials that can rival synthetic textiles.

Namukasa tells ugandan's story through creativity. she has a vision that enriches tourism sector only needs support to break through

CE6. BAMBOO INNOVATION HUB

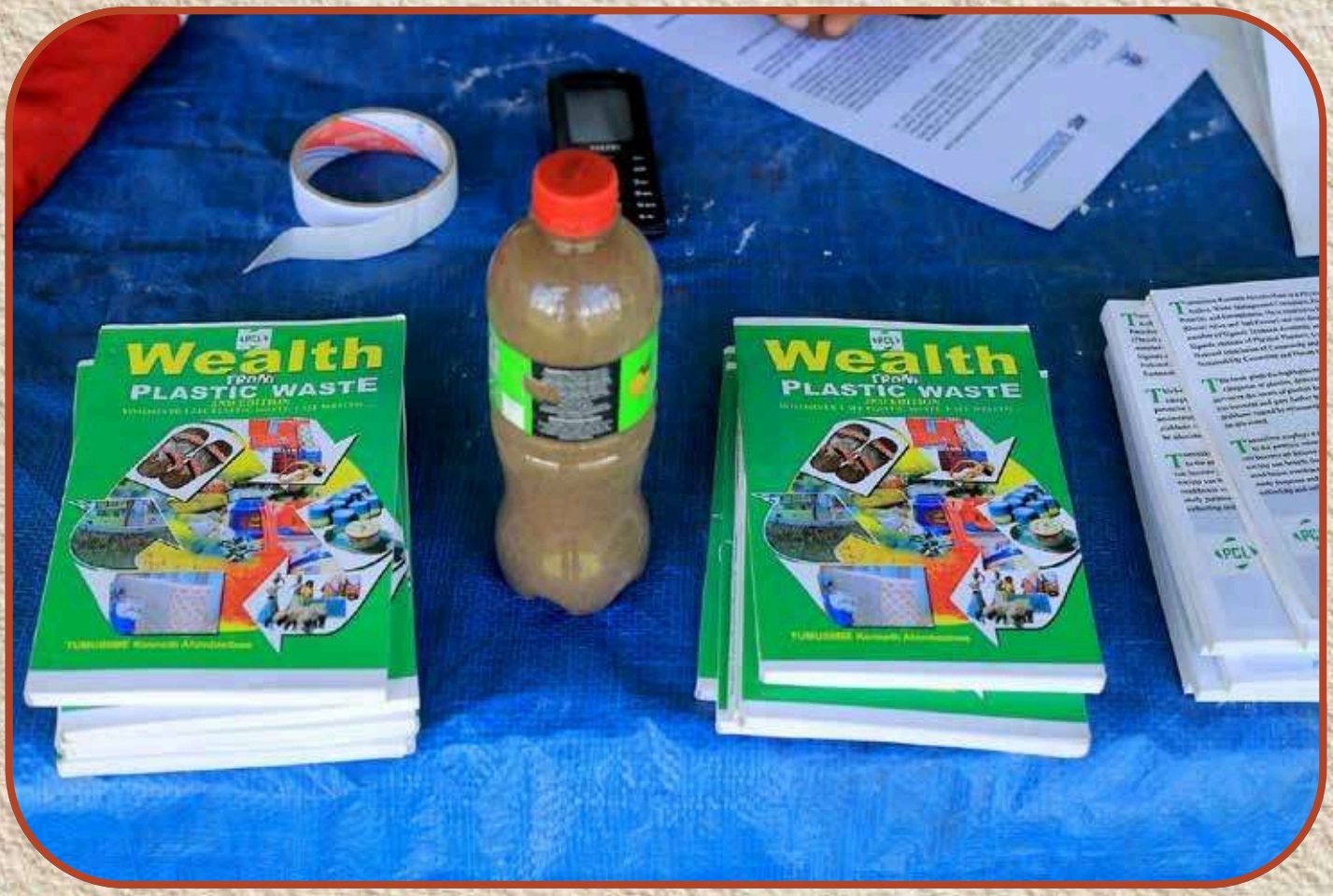
Sustainable Materials from Fast-Growing Bamboo

Bamboo Innovation Hub exhibits utensils, scholastic materials and bamboo-based products that replace plastics and wood, promoting rapidly renewable materials in everyday use. Their showpieces demonstrate how bamboo can support circular design across sectors.

Imagine replacing plastic with something stronger, safer and renewable

CE7. PLASTIC WASTE SOLUTION LTD

Education for Transformative Waste Management



Plastic Waste Solution Ltd uses textbooks and educational media to teach waste classification, recycling practices and circular economy principles. Their exhibit emphasised that systemic change requires both technology and human capacity building.

Mawejje Creations

CE8: MAWEJJE CREATIONS

Eco Crafts That Tell a Story

Mawejje Creations displayed arts and crafts — bags, chairs and décor made from reclaimed materials, illustrating how local creativity can generate income while reducing environmental waste.

CE9: BANANA FIBRE HUB

Crafting Value from Plantation By-Products

Distinct from Banana Fibre Creatives, Banana Fibre Hub focuses on ornaments from raw banana fibre, including woven crafts and fibre-based design objects -s howcasing community-level circular production.

Through natural precision, i don't just make Art. I tell stories of people, animals and our culture.This is more than decoration it is preservation, innovation, its is our heritage transformrd into something un forgettable.

CE10: MUKONO POTTER

Traditional Craft, Sustainable Usage

Distinct from Banana Fibre Creatives, Banana Fibre Hub focuses on ornaments from raw banana fibre, including woven crafts and fibre-based design objects — showcasing community-level circular production.

CE11. ECOPLASTILE

Earth Materials, Infinite Possibilities

ecoplastile

Waste becomes worth with Ecoplastile

Ecoplastile is a leading Ugandan CleanTech company transforming post-consumer plastics into low-carbon construction products such as recycled roofing and wall tiles. Using a decentralized plastic collection model, the company blends plastics with other materials to create high- performance, affordable products that are lighter, stronger, and 30 % cheaper than traditional alternatives. The company also rewards waste collectors through incentive models, enabling waste pickers — many of whom are urban poor, refugees, youth and women — to earn income while feeding the recycling economy. Ecoplastile's technology supports recycling infras$_5$tr$_2$ucture while empowering communities across Uganda.

CE 12. ZERO WASTE AMAZING PRODUCTS

Furniture From Textile and Plastic Waste

Zero Waste Amazing Products produces eco-furniture from waste clothes and car tires, demonstrating how blended waste streams can be engineered into durable, aesthetic household goods — reducing landfill burden and expanding domestic circular manufacturing.

CE13. MEDIA BARD

Storytelling For Sustainable Change

Media Bard participated as a media and narrative partner, amplifying circular economy stories and educating audiences on creative approaches to waste, reuse and community transformation for behaviour change and movement building.

"Through images, voices and real experiences media bard brings innovations to life making them seen, understood and supported."

CE14. ART CATHEDRAL

Sculptures from Scrap Metal

Art Cathedral's sculptural installations repurpose metal waste into large creative artworks that communicate environmental urgency and inspire collective action toward sustainability.

From discarded fragments, we create living statements that challenge how we see waste,nature and our role in protecting it.

CE15. CERAMICS CENTRAL

Earth Materials, Infinite Possibilities

Ceramics Central exhibited ceramic utensils and art pieces from clay, proving that natural, biodegradable materials have enduring value and can reduce reliance on plastics in everyday utensils.

CE16: UP CYCLE AFRICA

Turning Plastic Pollution into Eco-Homes and Jobs

Upcycle Africa is a leading Ugandan circular enterprise transforming plastic waste into eco-bricks, furniture, garments and durable products while training youth and women as “wastepreneurs” — empowering livelihoods and building climate-resilient homes from repurposed plastics. Their model tackles plastic pollution, unemployment and housing deficits simultaneously.

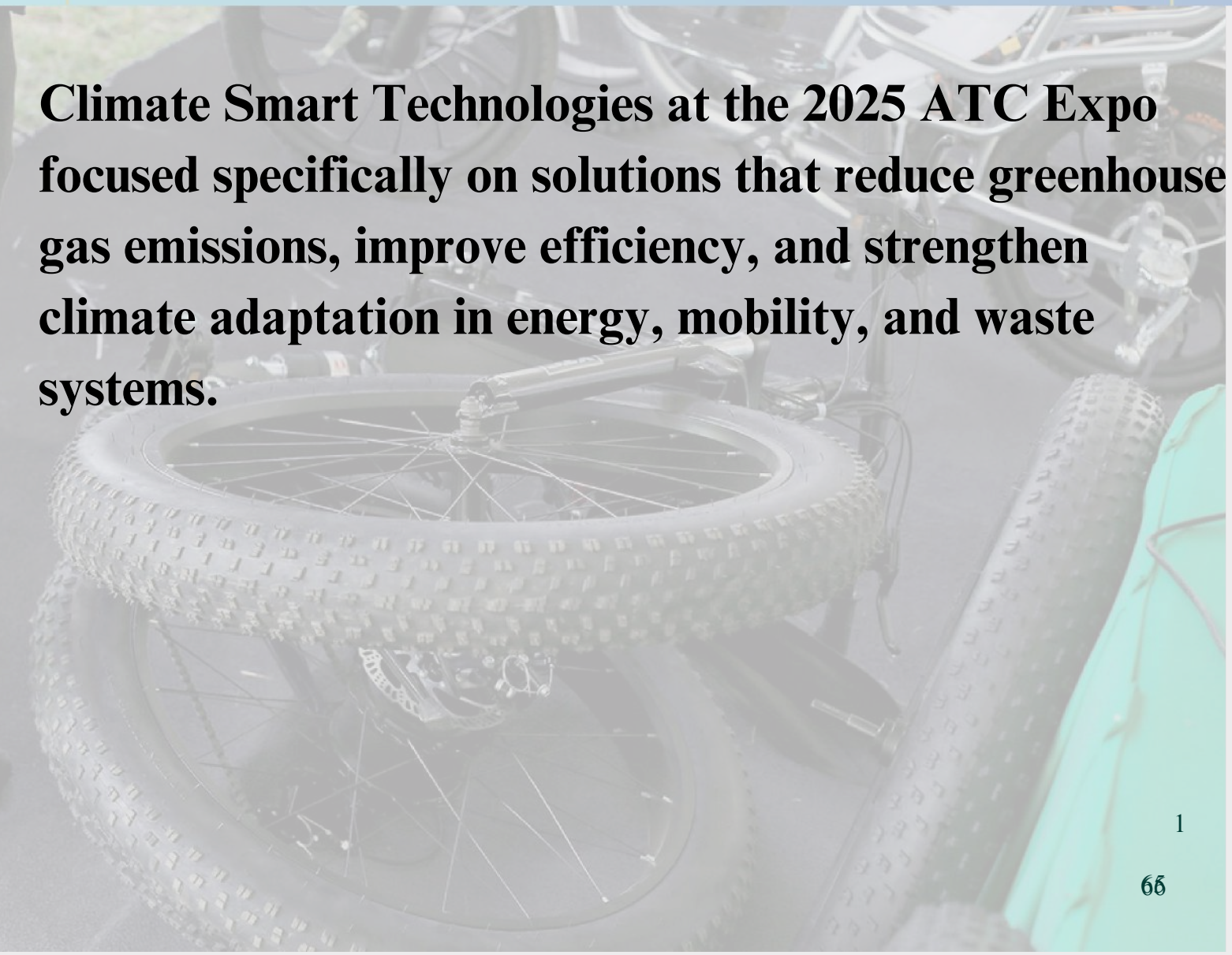
QUOTE

“When Parliament engages with innovators, policy becomes informed by practical solutions. The technologies showcased here demonstrate that Uganda’s WASH future can be strengthened through innovation developed within our own institutions and communities.”

— Hon. Silas Aogon, Chairperson, Uganda Parliamentary Forum on Water, Sanitation and Hygiene (WASH)

5. CLIMATE SMART TECHNOLOGIES (CST)

EngineeringResilience. ReducingEmissions. Accelerating Transition.



Climate Smart Technologies at the 2025 ATC Expo focused specifically on solutions that reduce greenhouse gas emissions, improve efficiency, and strengthen climate adaptation in energy, mobility, and waste systems.

EBENEZER ENERGY SAVING STOVES LIMITED

CST1: EBENEZAR ENERGY SAVING STOVES

Efficient Stoves and Briquettes

Ebenezer presented improved cookstoves and briquettes engineered to reduce firewood consumption and indoor smoke. By enhancing combustion efficiency, the company contributes to lower household emissions and reduced deforestation pressure. Our stoves are designed to save fuel, protect your and preserve our forests.

CST2: UP ENERGY

ElectricPressureCookersandEnergy Saving Systems

UpEnergy

Up Energy exhibited electric pressure cookers and efficient cooking systems designed to reduce biomass dependency. When powered by renewable electricity, these appliances significantly cut household carbon footprints. Our pressure cooker is powered by clean electricity, they free you from firewood, long cooking hours and raising fuel cost.

Cook in minutes, save everyday, upgrade to up energy

CST3: GOGO ELECTRICS

Electric Motorcycles

GOGO Electrics demonstrated electric motorcycles as low-carbon alternatives to petrol-powered boda bodas. The innovation addresses urban air pollution, fuel costs, and transport emissions simultaneously.

Save more, Breathe cleaner, Move better
Go GOGO

Why keep paying for fuel when you can ride smarter? Our electric motocycle are built for today's roads - lower costs, zero emissions and reliable performance for everyday transport

CST4: HARAKA E-BIKES

ElectricBicycles

Gogo Electrics demonstrated electric motorcycles as low-carbon alternatives to petrol-powered boda bodas. The innovation addresses urban air pollution, fuel costs, and transport emissions simultaneously.

Move your way Faster,Lighter and Smarter

Haraka E-Bikes are built for you to navigate busy streets with ease. No fuel, no trafic frustration. Just smooth efficient move ride Haraka.

CST6. REMAT ENGINEERING SOLUTIONS

Energy-Efficient Electric Ovens

REMAT Engineering Solutions presented electric ovens optimized for heat efficiency and reduced energy waste, supporting cleaner commercial and household cooking operations.

"Our energy ovens are designed for reliability and efficiency, they help you save money while scaling your operations"

Cook smarter. Spendless . Get more done

6. FOOD SECURITY AND NUTRITION (FSN)

From Soil to Shelf: Strengthening Uganda's Agricultural Value Chains

Food security in Uganda is shaped by climate variability, soil fertility decline, post-harvest losses, and limited value addition capacity. Ensuring resilient food systems requires more than production — it demands innovation in inputs, processing, storage, diversification, and nutrition.

At the 2025 ATC Expo, the Food Security & Nutrition section brought together enterprises transforming agriculture into a modern, value-driven, climate-responsive sector. From bio-fertilizers and hydroponics to honey production, herbal nutrition, dairy value addition and mechanized processing, the exhibitors demonstrated that resilient food systems must integrate sustainability, technology, and entrepreneurship.

The Food Security & Nutrition section demonstrated that resilient food systems require:

- Sustainable inputs
- Mechanised processing
- Post-harvest value addition
- Apiculture diversification
- Circular bio-innovation
- Functional nutrition products

From soil fertility to processed foods, the 2025 ATC Expo showcased a food system in transition — modern, climate-responsive, and enterprise-driven

FSN1. SPARK AFRICA YOUTH INITIATIVE

Youth Leadership in Climate-Smart Agribusiness

Spark Africa Youth Initiative is a youth-driven agribusiness empowerment platform focused on equipping farmers with practical knowledge, improved planting materials, and sustainable input systems. Founded with the vision of positioning young people at the forefront of agricultural transformation, Spark Africa has trained thousands of farmers while promoting organic production systems and climate-resilient practices.

At the Expo, Spark Africa showcased eco-friendly fertilizers and improved banana suckers, emphasizing soil regeneration and yield improvement. Their participation reinforced that resilient agriculture begins with healthy soils and informed farmers. By integrating agronomic expertise with mentorship and enterprise training, Spark Africa demonstrated how youth innovation can accelerate SDG 2 (Zero Hunger) and SDG 8 (Decent Work & Economic Growth) while promoting sustainable land management.

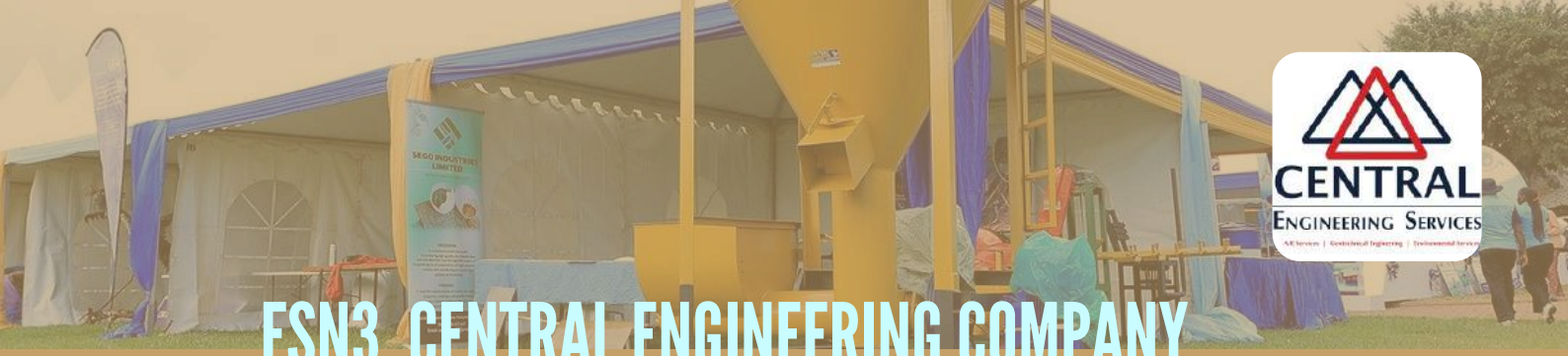
FSN2. NEWA FARMS

Beekeeping as a Climate-Smart Enterprise

NEWA Farms Limited operates at the intersection of apiculture, crop cultivation, and value addition. The company produces premium honey, beeswax products, and bee-derived cosmetics while empowering rural producers through modern beekeeping training.

At the Expo, NEWA Farms showcased its honey product line and beeswax derivatives, demonstrating how beekeeping supports both nutrition and income diversification.

Apiculture requires minimal land, strengthens pollination services, and enhances biodiversity — making it inherently climate-smart. Their presence underscored the powerful link between ecosystem health, food security, and rural enterprise development.



FSN3. CENTRAL ENGINEERING COMPANY

Mechanisation for Agro-Processing Excellence

Central Engineering Company plays a critical role in strengthening Uganda's agro-processing capacity through industrial milling and food processing machinery. Mechanization reduces post-harvest losses, improves product quality, and increases market competitiveness for small and medium enterprises.

At the 2025 ATC Expo, the company showcased industrial grain milling systems and processing equipment, illustrating how farm produce can be transformed into market-ready products efficiently and reliably. Their participation highlighted that production alone is insufficient — value addition through modern processing is central to resilient food systems.

You have worked hard to produce,now let us help you process, add value and earn more. Dont just Produce. Process smart , sell better and grow with Central Engineering

FSN4. URBAN GREENS

Hydroponics for Urban Food Resilience

Urban Greens exhibited its hydroponic farming pods, enabling soil-less vegetable cultivation in urban and peri-urban spaces. These systems use significantly less water than conventional farming and allow year-round production independent of seasonal rainfall.

At the Expo, the company demonstrated how compact vertical systems can produce fresh vegetables close to consumers, reducing transport costs and supply chain vulnerabilities. Urban Greens' model supports urban food security while conserving land and water — a vital combination in rapidly urbanizing environments.

FSN6. TONNET AGRO ENGINEERING COMPANY

Processing Technology for Enterprise Growth

Tonnet Agro Engineering Company, showcased machinery designed for grain cleaning, milling, and food processing. Their equipment strengthens enterprise productivity by reducing labour intensity and improving consistency in food output.

The Expo demonstrations illustrated how mechanized systems enable farmers and cooperatives to capture greater value from crops such as maize and beans by equipping agribusinesses with reliable engineering solutions, Tonnet contributes directly to rural income growth and food system modernization.

FSN7. MARULA PROTEIN LTD

MARULA PROTEEN LIMITED

Circular Agriculture Through BSFL Innovation

Marula Protein Ltd showcased its Black Soldier Fly Larvae (BSFL) compost and protein systems, transforming organic waste into nutrient-rich soil amendments and animal feed inputs. This circular bio-conversion model reduces waste accumulation while enhancing soil fertility and livestock feed supply.

At the Expo, Marula Protein demonstrated how integrated waste-to-resource systems strengthen agricultural resilience and reduce environmental pressure — proving that sustainable agriculture and circular economy principles can operate hand in hand.

FSN9. WORLD OF BEES (U) LTD

Premium Honey and Biodiversity Stewardship

World of Bees (U) Ltd showcased premium honey, beeswax candles and cosmetic derivatives highlighting the nutritional and economic value of apiculture. Beyond product display, the company emphasized pollination services as a cornerstone of crop productivity.

Their participation illustrated how honey production contributes to food systems, biodiversity conservation, and rural income diversification simultaneously.

FSN10. MAK BEE HONEY LTD

Nutrient-Rich Honey and Rural Livelihoods

MAK Bee Honey Ltd exhibited pure honey and beeswax products, reinforcing honey as both a nutritious food and an economic opportunity for rural households.

At the Expo, they demonstrated how quality processing and packaging elevate apiculture into competitive agribusiness.

Their model strengthens pollinator health, supports smallholder farmers, and contributes to diversified food systems.

FSN11. NATIONAL COFFEE RESEARCH INSTITUTE

Brewing Innovation Beyond the Bean

At ATC Expo 2025, the National Coffee Research Institute (NaCORI) showcased a focused exhibition of coffee value-addition technologies that demonstrated the expanding industrial potential of Uganda's leading export crop. Rather than centering solely on raw bean production, the stand highlighted diversified, research-driven consumer products developed to stimulate domestic consumption and unlock higher-value markets.

Operating under the National Agricultural Research Organisation, NaCORI was established in 2014 with a mandate to conduct strategic, market-oriented research on coffee and cocoa. Its Expo presentation reflected that mandate through tangible outputs spanning food, beverage, and personal care categories.

FSN12: KIPEKEE SOLUTION LTD

Herbal Teas for Nutritional Diversity

Kipekee Solution Ltd showcased herbal tea blends derived from local botanicals, promoting natural nutrition and dietary diversity.

At the Expo, their products reflected the growing demand for functional foods that support immunity and digestive wellness.

Their enterprise connects agricultural biodiversity with consumer health markets.

KENZA
HOLISTIC NUTRITION

FSN14. KENZA HOLISTIC NUTRITION

Plant-Based Supplements for Preventive Wellness

Kenza Holistic Nutrition exhibited herbal supplements formulated to support metabolic balance and immune health.
Their participation highlighted the intersection between agriculture and preventive nutrition.
By leveraging local plant resources, Kenza contributes to diversified diets and holistic wellness solutions.

FSN15. KANYES DAIRY FARM

Goat Milk Value Addition for Nutritional Strength

Kanyes Dairy Farm showcased goat milk yogurt and cosmetic products, demonstrating diversification within livestock value chains. Goat milk's digestibility and nutrient profile position it as a functional food alternative.

At the Expo, their display reinforced how small-scale dairy enterprises can expand beyond raw milk sales into value-added products.

7. HEALTH & WELLNESS (HW)

Prevention, Care, and Community Resilience

Wellness is more than symptom treatment — it is access, preparedness, prevention, and dignity.

The 2025 ATC Expo's Health & Wellness section brought together frontline service institutions and wellness innovators demonstrating how care, emergency response, and personal wellbeing intersect to strengthen communities.

From emergency medical response and preventive screening to herbal wellness and organic personal care, these exhibitors showcased services and products that protect health, enhance quality of life, and support everyday wellbeing.

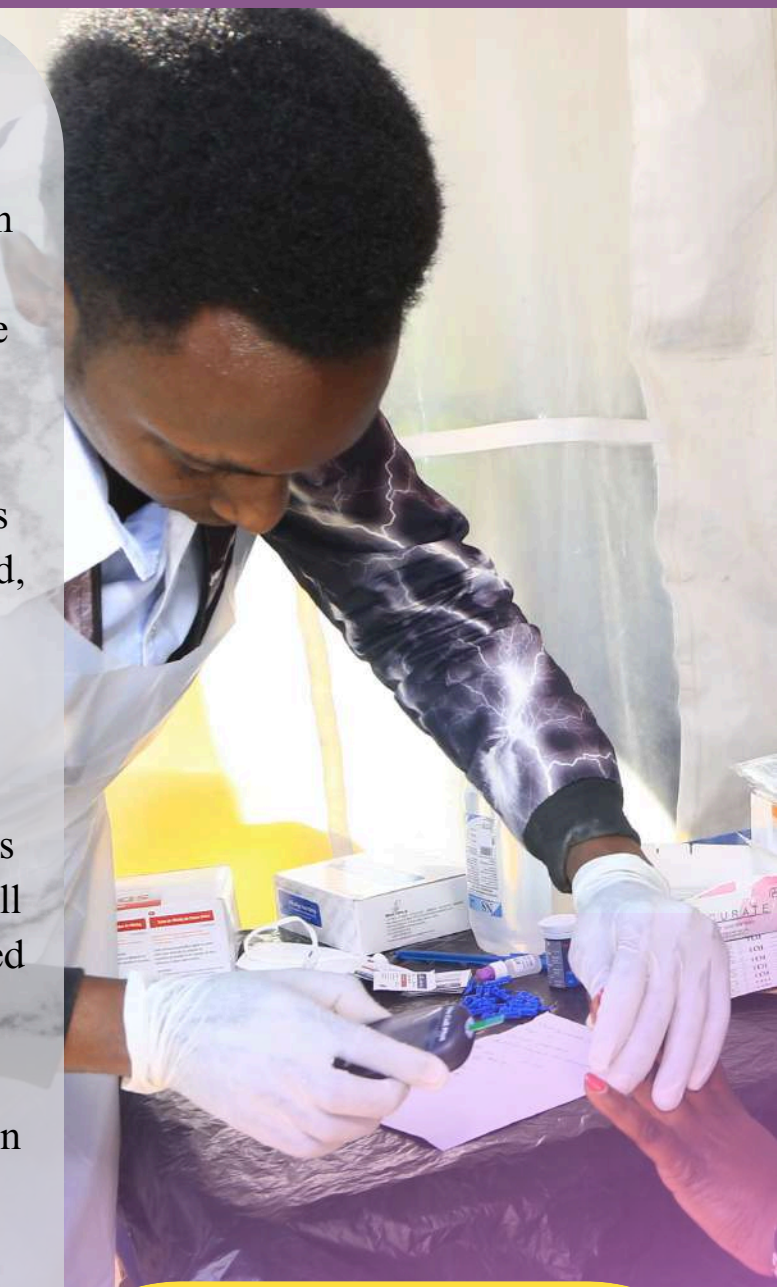
HW1. MAKERERE UNIVERSITY HOSPITAL

Makerere University Hospital: Advancing Preventive Care at ATC Expo 2025

Makerere University Hospital brought essential health services directly to communities at the ATC Expo 2025 through a targeted medical outreach and wellness camp, reinforcing the role of preventive care within innovation spaces.

During the Expo, the hospital reached 457 clients (192 males and 265 females). Services provided were comprehensive and integrated, including HIV counselling and testing (52 clients) alongside 49 HIV self-testing kits, hypertension and diabetes screening (50), and medical consultations (59). Eye care services supported 45 clients, while Hepatitis B screening (26) and vaccination (16), as well as Yellow Fever vaccination (5), strengthened disease prevention efforts.

Additional services such as routine deworming (43), Vitamin A supplementation (40), family planning (13), and cervical cancer screening (7) addressed broader public health needs. First aid support (34) and condom distribution further complemented



HW2. NATURE'S LOVE UGANDA

Organic Wellness — Natural Care for Healthy Living

Nature's Love Uganda is a wellness brand rooted in natural, plant-based personal care and skin health products made from locally sourced botanical ingredients.

At the 2025 ATC Expo, Nature's Love showcased an array of organic offerings — including:

- Herbal body oils and lotions
- Plant-infused skincare formulations
- Natural moisturisers and aromatherapeutic blends

Their exhibit emphasised the importance of chemical-free, environmentally responsible personal care — supporting not only skin health but overall wellbeing. Visitors enjoyed one-on-one product demonstrations and learned how botanical ingredients like aloe, shea, and essential oils nourish skin without synthetic additives.

Nature's Love's presence at the Expo spoke to a growing health narrative: that true wellness embraces holistic care, where what we apply to our bodies reflects broader commitments to environmental and personal health.

By promoting organic, local products that are gentle on both skin and planet, Nature's Love advanced key Sustainable Development Goals including SDG 3 (Good Health & Well-Being) and SDG 12 (Responsible Consumption & Production).

HW3. TWEYAMBE EMERGENCY SERVICES

Rapid Response to Save-Lives

Tweyambe Emergency Services is a dedicated emergency medical response provider focused on strengthening pre-hospital care and rapid intervention capabilities across communities.

At the 2025 ATC Expo, Tweyambe showcased:
Emergency response protocols and first-response tools
Ambulance readiness demonstrations
Life-saving equipment displays and training snippets
Their Expo presence reminded visitors that emergency preparedness is a public good, especially in contexts where trauma, accidents, and acute medical events demand speed and coordination. Tweyambe's team provided practical insights into how emergency systems can be activated, organized, and mobilized effectively — spotlighting pre-hospital care as a critical complement to clinical service delivery.

The organisation's emphasis on rapid care coordination, lifesaving response, and community safety aligns with Sustainable Development Goals focused on health equity, injury prevention, and resilient health systems. Their participation helped position health access not only as treatment, but as timely action that saves lives when every second counts.

Health & Wellness Impact

The Health & Wellness section of the 2025 ATC Expo reinforced that:

- Wellness is preventive, not just reactive
- Personal care and community care are interconnected
- Emergency readiness empowers entire populations
- Innovation spans both products and service delivery systems

As Uganda charts its path toward stronger, more inclusive health systems, these exhibitors reminded attendees that wellness is a right — supported by technology, strengthened by service, and sustained by community engagement.

INNOVATIONS CHALLENGE (IC)

Prototypes. Precision. Possibility.

The Innovations Challenge at the 2025 ATC Expo showcased the bold ideas emerging from Uganda's universities, vocational institutes, and secondary schools. Unlike commercial exhibitors, these innovators presented working prototypes and engineering concepts — many built with limited resources but unlimited creativity. From intelligent irrigation to neonatal care systems, from renewable energy hybrids to automation and robotics, the Challenge proved that Uganda's next wave of transformation is already under construction.

Kyambogo University

Knowledge and Skills for Service

IC1. KYAMBOGO UNIVERSITY

Engineering Intelligence for Real-World Systems

Kyambogo University students presented a diverse portfolio of practical engineering solutions addressing agriculture, healthcare, energy access, and inclusive mobility

Kyambogo University

Knowledge and Skills for Service

Baraka Harris – Solar-Wind Hybrid Power Generation System for Residential Loads

A dual renewable energy system integrating solar and wind power to support household electricity demand. The innovation enhances energy reliability while reducing dependence on fossil fuels.

Kyambogo University

Knowledge and Skills for Service

Morris Nduwayo – Intelligent Irrigation System

A smart irrigation platform designed to optimise water use through automated control mechanisms. The system supports climate-resilient agriculture by reducing water wastage while improving crop productivity.

ISAIAH ADRIEN DONG – DYNAMIC AND COST-EFFECTIVE NEONATAL INCUBATOR

A locally engineered incubator aimed at reducing neonatal mortality by providing affordable temperature regulation for premature infants — a breakthrough for community-level healthcare facilities.

Kyambogo University

Knowledge and Skills for Service

Kyambogo University

Knowledge and Skills for Service

Kugonza Emmanuel – Head Motion-Controlled Wheelchair

An assistive mobility innovation allowing individuals with limited limb movement to control a wheelchair using head gestures — advancing accessibility and inclusive engineering.

Kyambogo University

Knowledge and Skills for Service

Mwanja Jimmy

Semi-Automated Chain Link Fence Making Machine

A fabrication-focused innovation designed to enhance production efficiency in construction materials manufacturing presents significant potential for SME industrial growth. Furthermore, in response to existing saving options on the market, the university developed an automated savings box that operates using both solar energy and electricity.

MAKERERE UNIVERSITY

MAKERERE UNIVERSITY

Smart Systems, Environmental Protection & Automation

Makerere University innovators demonstrated high-level research translation into deployable systems.

MAKERERE UNIVERSITY

Mubiru Ivan

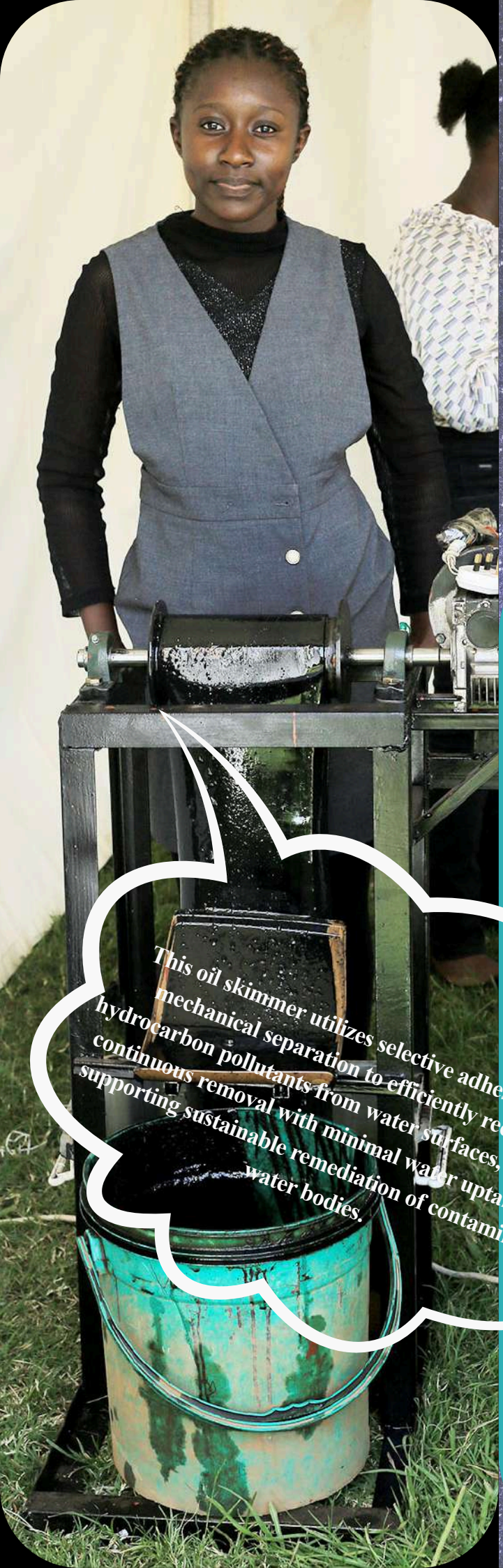
Soil Moisture Monitoring Node for Smart Irrigation Systems

A sensor-based soil monitoring system that enables data-driven irrigation scheduling — reducing water waste and increasing agricultural efficiency.

MAKERERE UNIVERSITY

Kajumba Angelica – Oil Skimmer

An environmental protection device engineered to remove oil contaminants from water surfaces — relevant for pollution control and water body restoration.



MAKERERE UNIVERSITY

Authur Olemkan

AquaSmart (Smart Water Metering and Control System)

A digital water management platform enabling real-time monitoring and consumption control — supporting urban water efficiency and accountability.

Musalwa Moses – Smart Posho Mingling Machine

This automated grain processing innovation is designed to enhance milling efficiency and improve hygiene standards. It also helps protect the environment while saving time. The technology is suitable for use in schools, prisons, factories, and communities that serve large populations.

MAKERERE UNIVERSITY

Edeni Faith Babra Pario – Underwater Search Robot

A robotic system designed for underwater exploration and recovery operations, demonstrating advanced mechanical and electronic integration.

Ashaba Ronald Agaba – Agri-Spray Solar (Automated Solar-Powered Chemical Sprayer)

A solar-driven crop protection sprayer enhancing precision agriculture while reducing manual labour intensity. As student of Technology we always look forward to produce some thing that will help farmers and protect environment

BUSITEMA UNIVERSITY
Pursuing excellence

BUSITEMA UNIVERSITY

Water Quality Innovation

Busitema University showcased a locally designed water purification system aimed at improving access to safe drinking water and strengthening public health, as well as rural water resilience. It was developed in response to community concerns, where people were forced to share water sources with animals.

BUSITEMA UNIVERSITY
Pursuing excellence

Sewerage Emptying Machine

It is an automated machine that can be used in both urban and rural areas, and it is easy to operate. This system is best suited for use in slums and schools, where areas are not easily accessible by pit latrine emptying trucks.

ISBAT University

ISBAT University presented innovations combining digital technologies with healthcare and agricultural applications. Among the technologies showcased was a portable mobile ultrasound device, designed to provide diagnostic imaging in resource-constrained healthcare environments.

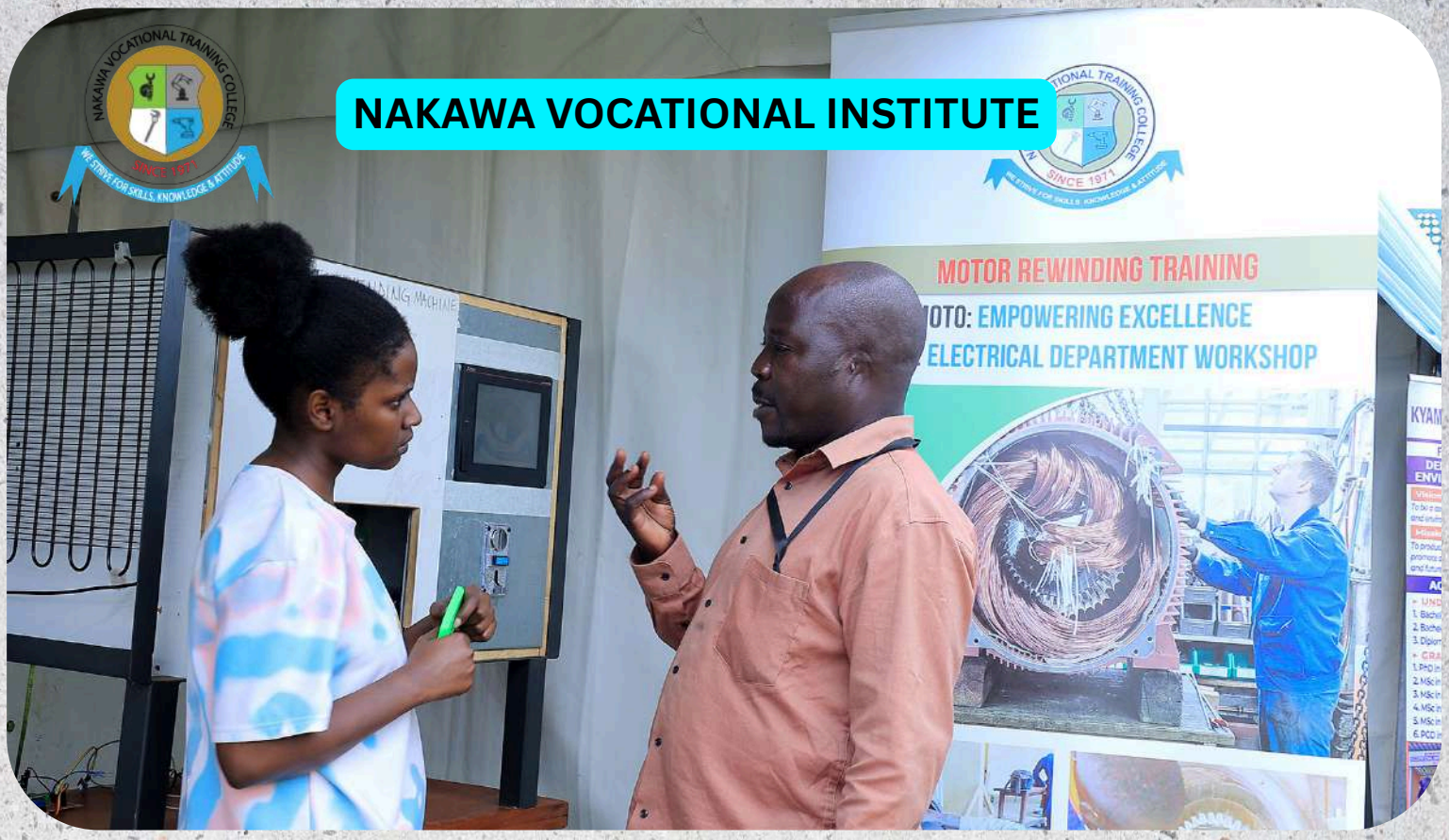
The portable system expands access to medical diagnostics in rural clinics and mobile healthcare services.

The university also demonstrated a Tomato Pest Analyzer, a digital agricultural tool capable of identifying crop diseases and recommending treatment measures. By supporting early pest detection and targeted response, the system helps farmers reduce crop losses and improve productivity. Together, these contributions illustrate how tertiary institutions are increasingly integrating applied research and engineering innovation into their academic programs, generating technologies that contribute to improved service delivery and sustainable development.

Cavendish University Uganda

Cavendish University Uganda showcased two practical innovations aimed at improving public health and sanitation. The first was a portable water testing kit designed to enable rapid field assessment of water quality. The system allows users to quickly detect contamination risks and supports community water monitoring efforts, particularly in areas where laboratory facilities are not readily available. The university also exhibited the Egessa handwashing facility, a hygiene innovation designed to promote handwashing in public institutions and community spaces. The facility emphasizes simplicity, accessibility, and ease of use, reinforcing the importance of hand hygiene in preventing the spread of disease.

NAKAWA VOCATIONAL INSTITUTE



TECHNICAL SKILLS POWERING INDUSTRY

Nakawa Vocational Institute showcased a range of hands-on mechanical, electrical, and fabrication innovations, demonstrating strong technical capacity in applied skills development, research, and consultancy. These innovations reflect the institute's critical role in bridging skills training with practical industry solutions that support employment creation and national development.

Among the featured technologies was an automated dispensing system designed for commercial environments, offering efficiency, control, and improved service delivery. Also showcased was an automated fragrance system tailored for residential and indoor air quality enhancement, highlighting innovation in everyday living solutions.

NAKAWA VOCATIONAL INSTITUTE

Further demonstrating financial innovation, the institute presented a cost-saving system for SACCOs, aimed at improving operational efficiency, accountability, and service accessibility within community.

IC5: NAMILYANGO COLLEGE SECONDARY SCHOOL

Automated Shower Machine for Water Regulation

Namilyango College Secondary showcased a system to regulate and control water consumption in bathrooms, promoting conservation in institutional settings. Their participation demonstrated that climate awareness and engineering curiosity are taking root at the secondary level — a promising sign for Uganda's long-term innovation ecosystem. The school has shown that an innovation culture can start early and, if sustained, can help reduce dropouts while fostering student creativity and problem-solving.

The Innovations Challenge at the 2025 ATC Expo showcased the bold ideas emerging from Uganda's universities, vocational institutes, and secondary schools. Unlike commercial exhibitors, these innovators presented working prototypes and engineering concepts — many built with limited resources but unlimited creativity. From intelligent irrigation to neonatal care systems, from renewable energy hybrids to automation and robotics, the Challenge proved that Uganda's next wave of transformation is already under construction.

From Research to Practical Solutions

As the convenor of the ATC Expo 2025, the Appropriate Technology Centre (ATC) also presented a range of demonstration technologies reflecting its mandate to research, validate, and showcase solutions that respond to Uganda's environmental and development challenges. These technologies illustrate how practical innovation can transform waste streams, improve agricultural productivity, strengthen sanitation systems, and support sustainable resource use.

CIRCULAR CONSTRUCTION MATERIALS

A central feature of ATC's showcase was its work in circular construction materials derived from plastic waste. The Centre exhibited superstructures made from recycled plastic waste in form of unfired composite materials demonstrating the potential of plastic recovery to produce durable construction components suitable for sanitation facilities and other community infrastructures. Complementing this innovation were construction blocks and paving units produced from molten sand and plastic, which convert non-biodegradable waste into strong and weather-resistant building materials. These technologies illustrate how waste management challenges can be transformed into opportunities for sustainable construction and resource recovery.

MATERIAL RECOVERY AND PROCESSING MACHINES

ATC showcased practical, small-scale machinery designed to convert waste materials into valuable production inputs. The fiber extractor demonstrated the efficient recovery of natural fibers from agricultural residues such as banana pseudo stems and sisal, enabling the production of textiles, mats, ropes, and other low-carbon products. This technology supports value addition at source while promoting sustainable livelihoods.

Complementing this, the plastic extruder was presented as a solution for transforming plastic waste into reusable products such as pellets, pavers, and molded items. By enabling on-site recycling and material reprocessing, the machine reduces plastic pollution while creating opportunities for circular manufacturing.

BIOLOGICAL WASTE TREATMENT

ATC demonstrated nature-based waste management technologies focused on biological conversion processes. Black Soldier Fly Larvae (BSFL) systems were showcased for their ability to compost both cooked and uncooked biodegradable waste, transforming it into high-value outputs such as protein-rich animal feed and nutrient-dense organic fertilizer. Complementing this, ATC also presented earthworm (vermicomposting) technology, specifically suited for the treatment of uncooked, non-citric biodegradable waste, producing high-quality compost for agricultural use. Together, these technologies highlight efficient, low-cost, and environmentally sustainable approaches to organic waste management, supporting resource recovery while reducing pollution.

LOW-COST IRRIGATION PUMP

In the area of agricultural resilience, the Centre showcased a low-cost irrigation pump designed to improve water access for smallholder farmers. Developed with affordability and ease of maintenance in mind, the pump enables farmers to irrigate their crops using simple mechanical systems, strengthening climate adaptation in areas where rainfall variability increasingly affects agricultural productivity.

SUSTAINABLE MATERIAL RECOVERY

ATC's innovations further extended to the recovery of materials from commonly discarded plastics such as buveera (thin plastic bags). Through simple processing techniques, these materials can be transformed into useful products, demonstrating how community-level waste recovery can contribute to environmental management while creating livelihood opportunities.

BIOMASS BRIQUETTES AND BIO-ENZYME FORMULATIONS

Complementary, ATC showcased **biomass briquettes** produced from organic residues, providing an alternative cooking fuel that reduces dependence on charcoal and firewood while promoting responsible waste utilization. The Centre also exhibited **bio-enzyme formulations**, natural cleaning and sanitation solutions produced organic waste materials. Research proved that these bio-enzymes provide an environmentally friendly alternative to chemical cleaning agents while supporting improved sanitation and environmental hygiene.

Taken together, the technologies demonstrated by ATC illustrate the Centre's broader mission: translating research and experimentation into practical solutions that address environmental challenges while creating opportunities for sustainable production, resource recovery, and resilient livelihoods. Through such innovations, ATC continues to demonstrate how appropriate technologies can contribute to building a more sustainable and circular economy in Uganda.

What Is Crippling Quality and Hindering Scale?

While the Innovations Challenge revealed enormous promise, it also exposed systemic constraints that prevent prototypes from maturing into scalable technologies. The most significant barriers include:

- Limited access to advanced fabrication facilities: Many innovators rely on basic workshop tools, constraining precision, durability, and finish quality.
- Inadequate testing and certification pathways: Without accredited testing, performance validation, and standards compliance, innovations struggle to attract institutional buyers or investors.
- Minimal seed financing and commercialization support: Prototypes often stall due to lack of capital for iteration, refinement, and market entry.
- Weak industry linkages: Few structured partnerships exist between universities, technical institutes, and manufacturing firms to transition designs into production lines.
- Limited intellectual property protection awareness: Innovators frequently lack guidance on patents, licensing, and technology transfer mechanisms.
- Fragmented incubation ecosystems: Support systems remain scattered rather than coordinated within a national innovation framework.

These constraints do not reflect a shortage of talent — they reflect a shortage of structured support.

Uganda’s innovators are ready: With the right ecosystem, prototypes can become products — and products can become industries.

A Call to Invest in Uganda's Innovation Future

The 2025 ATC Expo has demonstrated one undeniable truth: Uganda possesses the ideas, the ingenuity, and the technical talent required to drive climate resilience, industrial growth, and inclusive development. From clean energy systems and circular economy enterprises to smart irrigation, neonatal care devices, and automation technologies, local innovators are already designing solutions tailored to our realities. What remains is not imagination — it is structured support. To unlock the full potential of these innovations, deliberate policy and financial commitment must be directed toward strengthening incubation ecosystems, expanding fabrication and testing infrastructure, supporting certification and standards compliance, and creating predictable financing pathways that move prototypes into scalable enterprises.

Government, development partners, financial institutions, and private industry must now shift from celebration to consolidation. Innovation must be treated not as an event, but as a national development strategy. Strategic public procurement of local technologies, targeted innovation funds, university–industry partnerships, and technology validation platforms can transform promising concepts into competitive domestic industries. If Uganda is to reduce import dependency, build green industrial capacity, and position itself within regional and global value chains, sustained investment in in-country innovation is no longer optional — it is imperative. The future has been prototyped. The responsibility now is to scale it.

Closing reflections on Innovation and Impact”

Across Uganda, innovation is steadily emerging as a powerful force shaping how the country responds to development challenges. From water and sanitation systems to renewable energy, circular economy solutions, agricultural technologies, and health innovations, Ugandan innovators are increasingly designing technologies that respond directly to the realities faced by communities, industries, and institutions.

The ATC Expo 2025 offers a unique window into this evolving innovation landscape. Bringing together enterprises, research institutions, universities, vocational institutes, and grassroots innovators, the Expo provides a platform where practical technologies are demonstrated, ideas are exchanged, and partnerships are formed. What distinguishes this platform is its focus on solutions that are not only innovative, but also locally appropriate, scalable, and capable of improving service delivery and environmental sustainability.

The technologies showcased throughout this publication illustrate the breadth of ingenuity emerging across the country. Innovations addressing water supply and sanitation challenges sit alongside renewable energy systems designed to reduce dependence on biomass fuels. Circular economy enterprises demonstrate how waste streams can be transformed into construction materials, fertilizers, and energy products. Agricultural innovators present technologies that improve productivity and reduce post-harvest losses, while health and wellness initiatives highlight approaches that strengthen community resilience and wellbeing.

Equally significant is the diversity of innovators behind these technologies. The Expo reveals an innovation ecosystem that spans established enterprises, emerging startups, academic researchers, and young engineers experimenting with prototypes in technical institutes and universities. This diversity reflects the growing recognition that innovation can emerge from multiple entry points across society when supported by the right institutional environment.

The ATC Expo therefore represents more than a technology exhibition. It is a convergence point where ideas, institutions, and opportunities intersect by providing a platform for innovators to demonstrate their work and engage with policymakers, development partners, and investors, the Expo strengthens the pathways through which promising technologies can move from experimentation to adoption.

Organized across thematic areas including water supply and management, sustainable sanitation services, clean energy and cooking, climate-smart technologies, circular economy, food security and nutrition, health and wellness, and the Innovations Challenge, the magazine presents a snapshot of the ideas and technologies shaping Uganda’s technological future.

Together, these innovators tell an important story: that Uganda’s development challenges are increasingly being met with solutions designed within the country itself. With the right support, partnerships, and investment, these technologies have the potential to evolve from promising innovations into transformative tools for national development.

Dr. Ashabrick Nantege

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MINISTRY OF WATER AND ENVIRONMENT

Appropriate TECHNOLOGIES EXPO & INNOVATION LOUNGE 2025

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EXHIBITORS

Appropriate TECHNOLOGIES EXPO & INNOVATION LOUNGE 2025

"HOMEMADE INNOVATIONNS FOR A SUSTAINIBLE FUTURE"

29TH - 31ST MAY2025

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