



Online **ADB Sanitation Dialogue 2021**

ACCELERATING INCLUSIVE SANITATION

12–22 April 2021

How to: **The Business of the Sanitation Economy**

with **TOILET**
BOARD COALITION

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Plenary Hosts



Alexandra Knezovich
Dir. of Operations



Venu Gupta
Dir. of Accelerator &
Investor Relations

Breakout Room Hosts



ABOUT TOILET BOARD COALITION



OUR VISION

We envision a global marketplace – a sanitation economy – for self-sustaining and resilient sanitation systems that serve our population, strengthen our planet and generate economic returns for businesses of all sizes and geographies.



OUR MISSION

Drive private sector engagement towards universal access to sustainable safely managed sanitation.

HOW WE WORK

Catalyse Sanitation Economy ecosystems through **strategic projects and thought leadership** to build opportunities and environments for the private sector to grow the Sanitation Economy and contribute to SDG 6.2.

Focused private sector engagement to drive and demonstrate scale

ECOSYSTEMS

ENTREPRENEURS

Ensure there are **scale-ready sanitation economy businesses** to take advantage of investment and business opportunities via the Accelerator Programme

WHAT WE'VE DONE



ENTREPRENEURS COMPLETING THE
ACCELERATOR PROGRAMME
GRADUATING WITH INVESTMENT OR
PARTNERSHIP WITH A MULTINATIONAL.

10M \$

INVESTED IN THEM IN THE PAST 5 YEARS

5M \$

IN 2020



45 SANIPRENEURS IN
OUR PORTFOLIO



3MT TREATED TOILET
RESOURCES



12 COUNTRIES



22KT EMISSIONS
MITIGATED IN 2020

5 CONTINENTS



1.5M PEOPLE
IMPACTED DAILY

22M \$

FACILITATED INTO PRIVATE
SECTOR SOLUTIONS TO
SDG6.2

22



REPORTS
REACHING
10K PEOPLE

100+



EVENTS ATTENDED
22B IMPRESSIONS
THROUGH MEDIA &
COMMUNICATIONS

THE SANITATION ECONOMY

MARKETPLACE

PREVENTATIVE HEALTH

HEALTH DATA
Nutrition & health data can inform public officials, the healthcare and pharmaceutical community and individual users

DISTRIBUTION
Relevant data is communicated back to the user through mobile applications and services

SMART SANITATION ECONOMY

SOFTWARE/DATA PROCESSING & ANALYTICS
Sensor sends molecular characterization data to cloud based cognitive computing platform where data is analysed and organised

SENSORS & DATA CAPTURE
Sensors in household, business, community and public toilets capture molecular characterisations of waste and transmit data through connected networks and devices



SYSTEM OPERATIONS DATA
Manufacturers, operators, and service companies can access status information to inform the need for maintenance, repair, cleaning, waste collection, etc.

TOILET ECONOMY



Sanitation as a business opportunity instead of an unaffordable cost

Sanitation as a solution provider, offering not only sanitation, but cost savings and environmental improvements to food/agriculture, consumer goods, energy, health, waste, water and other industries

Consumer biological waste
• toilet waste
• kitchen waste
• animal waste
• compostable packaging & other items

Industrial biological waste
• toilet waste
• food / market waste
• agricultural & food waste
• farm waste
• compostable packaging & other items

BIOLOGICAL WASTE INPUTS

CIRCULAR SANITATION ECONOMY

COLLECTION & TRANSPORT OF BIOLOGICAL WASTE

PROCESSING
Resource recovery plants process and refine the collected waste through various technologies to produce safe valuable products

HOMES, BUSINESSES, FARMERS, MANUFACTURERS, CITIES
Upcycled products from Toilet Resources are sold back to businesses, cities and individuals to complete the loop

PRODUCTS

FUEL, ELECTRICITY, HEAT
• Biogas for local factories & electricity to the grid
• Bio diesel for transport
• Bio charcoal to replace woodfuel

WATER
• Water recovery and purification of wastewater
• Local agricultural irrigation
• Water intensive factory processes
• Further treatment to produce drinking water

AGRICULTURAL PRODUCTS
• Compost, organic fertilisers, nutrients such as nitrogen and phosphorus
• Non-food crops/forest tree fibre crops, flower crops, etc.
• Food crops

PROTEIN RICH MATERIALS
• Such as oils and protein meal
• Protein oils for consumer toiletry goods and potentially cosmetics
• Protein "meat" for pet and farm animal feed

Materials for innovative products
• Faecal matter for pharmaceutical (biome) regeneratives health products and procedures
• Bio-plastics

TOILET

BOARD COALITION

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THE TOILET ECONOMY

Products and services that provide safe toilet access for everyone, everywhere. This spans centralised and decentralised, sewered and non-sewered, high and low water tables, low-income to high, rural, urban and peri-urban. Toilet designs apply circular sanitation economy principals to minimise waste and greenhouse gases and capture data to feed the smart sanitation economy.



CIRCULAR SANITATION ECONOMY

Toilet resources (The TBC's preferred term for human waste) feed into a system which replaces traditional waste management with a circular economy approach. It connects the biocycle, using multiple forms of biological waste, recovering nutrients and water, creating value-adding products such as renewable energy, organic fertilisers, proteins and more.



SMART SANITATION ECONOMY

Digitised sanitation systems that optimise data for operating efficiencies, maintenance, plus consumer use and health information insights. Sanitation is included in smart cities' architecture, monitoring public toilet usage, sewage treatment and health indicators, and detects needs for maintenance and repair throughout the system.

THE SANITATION ECONOMY

MARKETPLACE

PREVENTATIVE HEALTH

HEALTH DATA
Numbers & health data
used to plan public
officials, the health care
and pharmaceutical
community and
individual users

DISTRIBUTION
Behavior data is
communicated
back to the user
through mobile
applications and
services

**SOFTWARE/DATA
PROCESSING &
ANALYTICS**
Sensor sends
molecular
characterisation
data to cloud
based cognitive
computing
platform where
data is analysed
and organised

SENSORS & DATA CAPTURE
Sensors in household, business, community
and public toilets capture molecular
characterisations of waste and transmit
data through connected networks and
devices

Loowatt

AEROSAN

BHUMIJO

Tiger Toilet

TRASHCORN

padcare

**BIOMASS
CONTROLS PBC**

ECODEW
PURE WATER SOLUTIONS

**TOILET ACCESS FOR
THE EXTREMELY POOR**

**SYSTEM
OPERATIONS
DATA**
Manufacturers,
operators, and
service companies
can access data
information to
inform the need for
maintenance,
repairs, cleaning,
waste collection,
etc.

**CIRCULAR
SANITATION
ECONOMY**

**HOMES, BUSINESSES, FARMERS,
MANUFACTURERS, CITIES**
Upcycled products from toilet
resources are sold back to
businesses, cities and individuals
to complete the loop

Sanitation as a business
opportunity instead of an
unaffordable cost

Sanitation as a solution provider,
offering not only sanitation, but
cost savings and environmental
improvements to food/agriculture,
consumer goods, energy, health,
waste, water and other industries

PRODUCTS

Fuel, electricity, heat
• Biogas for heat factories
• Electricity to the grid
• Bio diesel for transport
• Bio charcoal to replace
woodfuel

WATER
• Wastewater recovery and
purification of wastewater
• Local agricultural irrigation
• Water intensive factory
processes
• Further treatment to produce
drinking water

**AGRICULTURAL
PRODUCTS**
• Compost, organic fertilisers,
nutrients such as nitrogen and
phosphorus
• Non-food crops: forest tree fibre
crops, flower crops, etc.
• Food crops

**PROTEIN RICH
MATERIALS**
• Such as silk and protein meal
• Protein-rich for consumer
safety goods and
potentially cosmetics
• Protein "feed" for pet
and farm animal feed

**Materials for
pharmaceutical
products**
• Faecal matter for
pharmaceutical (biom)
regenerative health
products and procedures
• Bio-plastics

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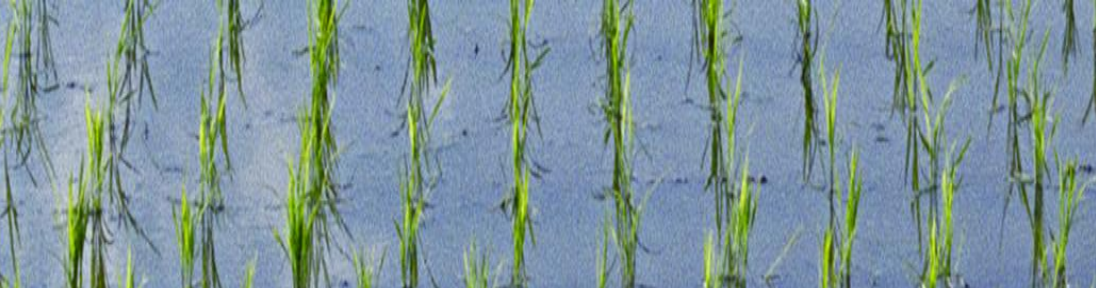
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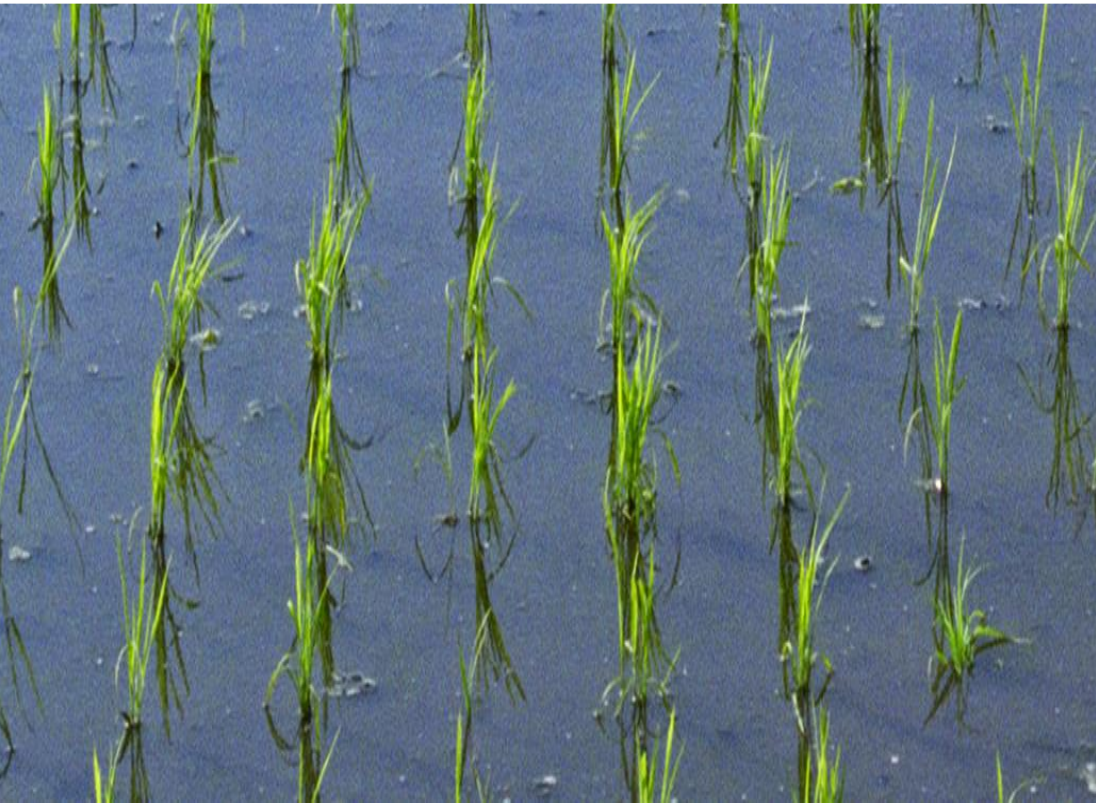
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BREAKOUT ROOMS



Room 1 / Aerosan & PadCare Labs
(Nepal & India)

Room 2 / Bhumijo, Biomass
Controls, & Trashcon (Bangladesh &
India)

Room 3 / Loowatt, Tiger Toilet &
Ecodew (Philippines & India)

MIRO BOARD

[Link & directions](#)

AVAILABLE TOOLS



MARKET ESTIMATES

The Toilet Board Coalition has developed with



CITY SANITATION PLAYBOOK

For municipalities looking to provide sustainable urban sanitation services, the Toilet Board Coalition has developed a City Sanitation Playbook & Toolkit to power data backed decision making.



RESOURCE CALCULATOR

This tool is designed for cities, governments, plantations and factories to assess the benefits of implementing circular sanitation by calculating the potential amount of fuel, fertiliser, feed or water produced from the Toilet Resources of a community.



ROUNDTABLES

We assemble Roundtables from across our membership to oversee and guide projects throughout their lifecycle.

ENGAGEMENT OPPORTUNITIES



INNOVATION LABS

Co-design an Innovation Lab with the Toilet Board Coalition to engage with entrepreneurs and fill a technological, business model, geographic or demographic gap in the Sanitation Economy.



SCALE PROJECTS

Design and implement bespoke collaborative projects with multinational corporations (or local governments) to advance sustainable sanitation economy systems in a specific context.



KNOWLEDGE & INSIGHTS

Partner with the Toilet Board Coalition to highlight the business insights and new perspectives of the Sanitation Economy in a sector or geography through media, publications or the development of a standard.



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THANK YOU!

Reach us at anytime at:
secretariat@toiletboard.org