

TOILET

BOARD COALITION

SANITATION INTELLIGENCE
& PUBLIC HEALTH

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universal access to safely-managed sanitation by 2030

we need to
5X ACCELERATE
the rate of progress



we **ACCELERATE**
BUSINESS SOLUTIONS

to the sanitation crisis

universal access to safely-managed sanitation by 2030



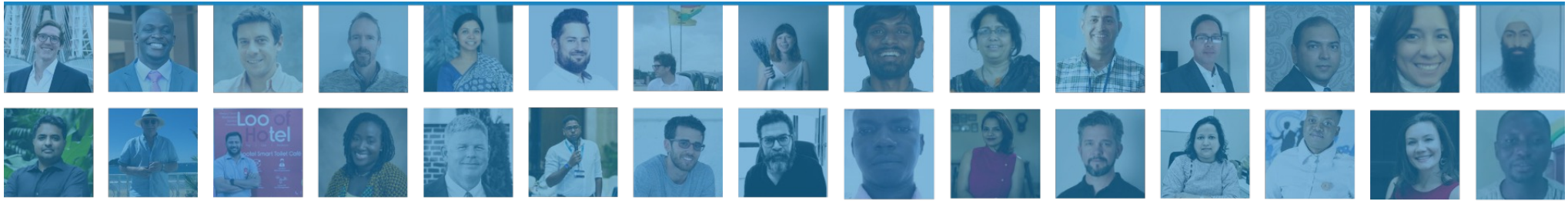
WE ARE BUSINESS LED



founded in 2015 and steered by global business leaders

Members





ACCELERATOR join us.



Case Study

COHORT YEAR 2018

COUNTRY India

OPERATIONS GROWTH

2500% – 2 to 50 toilets

From 2018 to date

MENTOR

Lisa Hawkes

Sustainable Behaviour Change Manager at Unilever

Alessandra Castro

Global Senior Director for reusable solutions at Kimberly-Clark

SANITATION ECONOMY

Toilet Marketplace

 **Kimberly-Clark**

&



&



toilet
integration

DEEPENING
PURPOSE

ENTREPRENEUR



Ulka Sadalkar
Co-Founder at Ti Bus



TOILET
BOARD COALITION

Deepen Purpose



"Mentoring through the Toilet Board Coalition Accelerator enables us to work together and accelerate women-owned sanitation businesses that support communities in need. Women are addressing some of the biggest challenges facing our society and a period should never get in the way of her progress. The Accelerator mentorship also offers a phenomenal development opportunity as we learn about new markets, strengthen our leadership and diversify our roles."

- Alessandra Castro, Global Senior Director for reusable solutions at Kimberly-Clark

 **Kimberly-Clark**

Impact to Date

8,700 MENTORSHIP
HOURS ACTIVATED

58 SMES
GRADUATED

97% >>>>
GRADUATED WITH MOU
OR INVESTMENT THROUGH ACCELERATOR

85%
% OF ACCELERATOR
ALUMNI THRIVING*
*RECEIVED INVESTMENT OR CREDIBLE AWARD IN LAST 12 MONTHS

\$22M
INVESTMENT ENABLED
INTO THE ALUMNI PORTFOLIO

LIVES IMPACTED
THROUGH ACCELERATOR PORTFOLIO

2.4M
CUSTOMERS
SERVED DAILY

1,500
PEOPLE
EMPLOYED

Geographic Presence

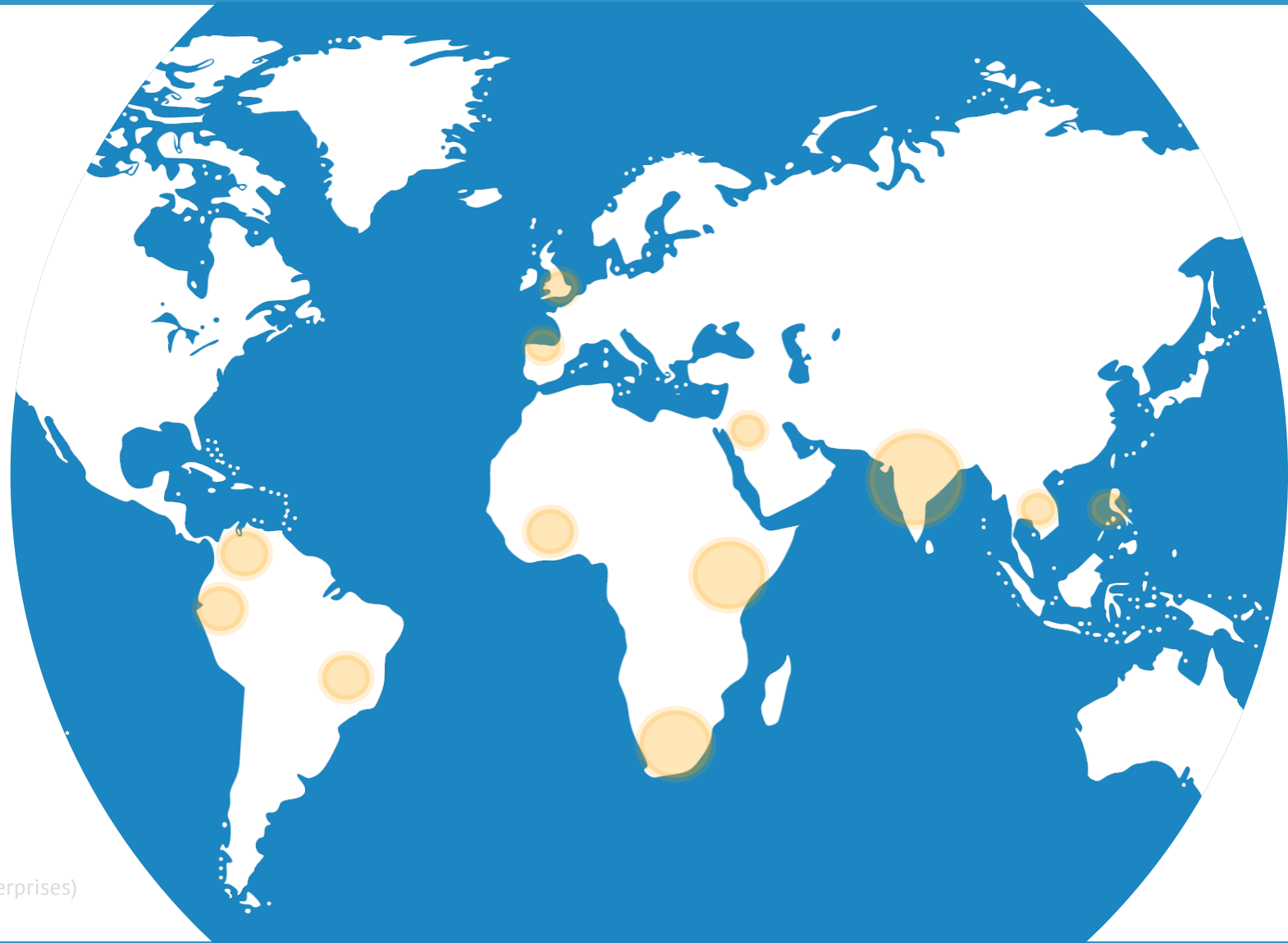
ASIA: **32**

AFRICA: **30**

LATAM: **3**

EUROPE: **2**

SMEs (small and medium-sized enterprises)



Sanitation Economy Resources



North Star

TOILET
BOARD COALITION

SCALE THE ACCELERATOR TO

1000 THRIVING BUSINESSES

BY 2030



2030 Vision



By 2030, the Sanitation Economy will be **thriving, circular & smart**, inspiring the brightest entrepreneurs, supporting **livelihoods** and bringing **dignity** to life.

We will be out of business. Because we're only in business as long as the crisis lasts.

WE HAVE **7 YEARS** TO MAKE IT HAPPEN

Sanitation Economy

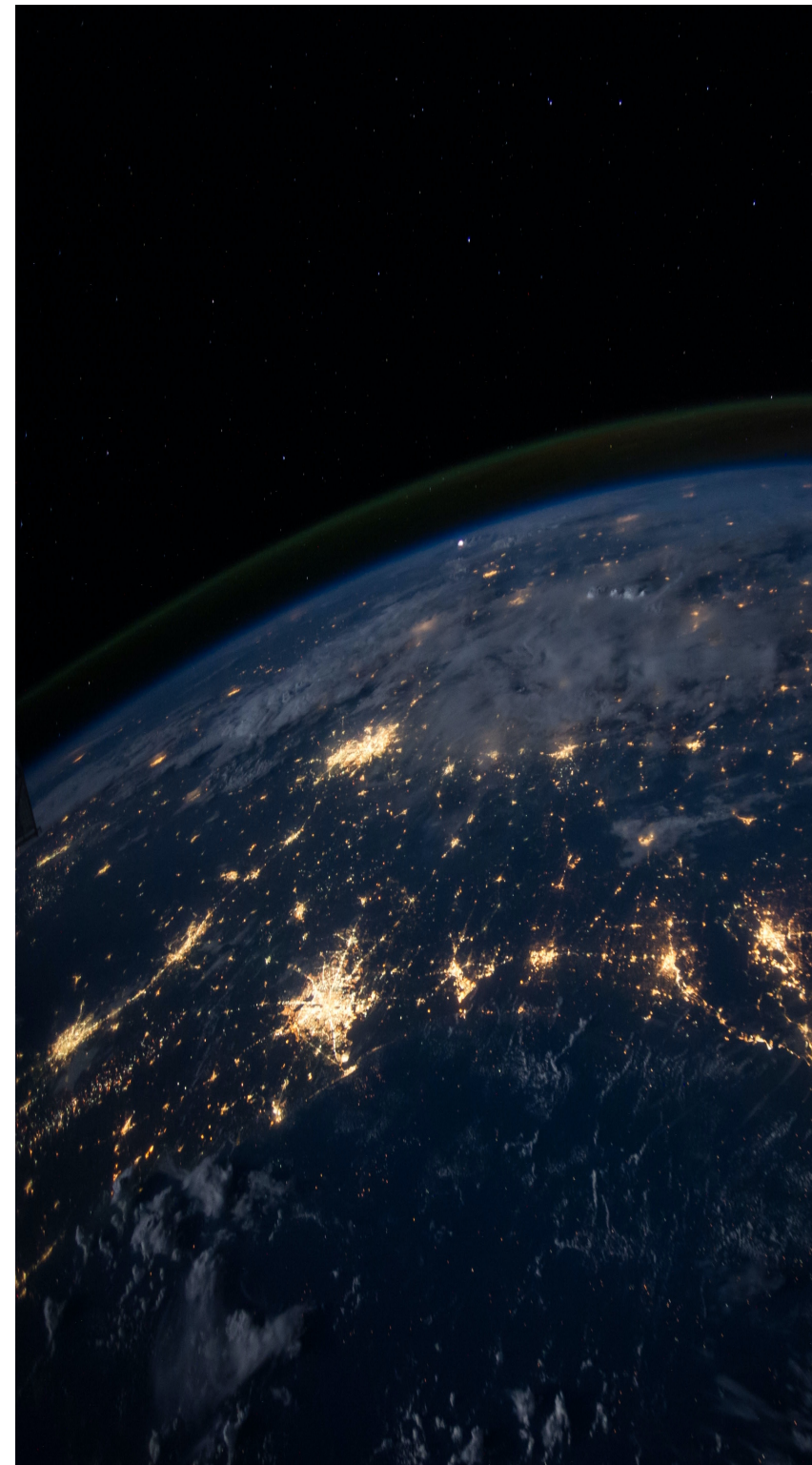


SANITATION INTELLIGENCE

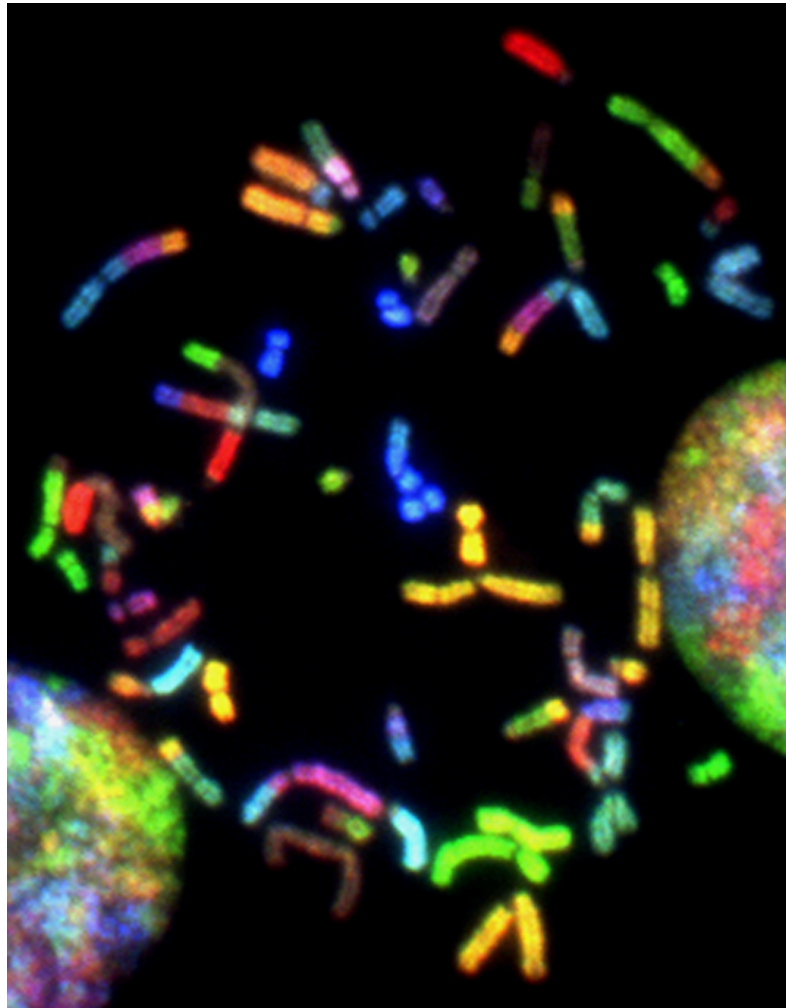
The TBC is primarily focused on understanding the potential of these use cases to shift the economics of sustainable sanitation provision to those without.

Related 2025 Learning Goals

- Identify how sanitation systems can safely generate data which can inform individual and community-scale preventative health interventions.
- Through development of a clear business case, stimulate increased innovation and adoption of digital applications for preventative health via sanitation.
- Stimulate new industries / service providers to enable digital health applications via sanitation



SANITATION INTELLIGENCE & PUBLIC HEALTH



Health Data + Smart Sanitation: The Big Picture:

Humans produce an abundant, diverse and consistently available health data resource every single day through their feces and urine. Toilets and the systems they are connected to have the opportunity to transform this data into a highly valuable resource.

Big Data Opportunity

To put this into perspective, if all 7 billion people on earth contributed just one health data point per day per year that would yield a database with two trillion five hundred fifty-five billion data points.

3 Components to the Big Picture

- Hardware (sensors and other detection/sampling)
- Software (data processing & analytics)
- Distribution (physical & mobile connections)

HOW MIGHT THE PIECES FIT TOGETHER?

COLLECTIVE POPULATION MONITORING

Data source: public restrooms, sewage systems, wastewater treatment plants
Technological dependency: smart sensors placed into sewage systems that can provide rapid data collection and analysis of a predetermined set of indicators

Potential use case: The seasonal flu vaccine is developed each year based on research conducted in collaboration with the WHO about which strains of the influenza virus are likely to be most common that year. Monitoring several sources of public sewage data for virus strains would provide a strong source of this data to inform development of more effective vaccines.





HOW MIGHT THE PIECES FIT TOGETHER?

DE-IDENTIFIED INDIVIDUAL & POPULATION MONITORING

Data source: residential or public toilets or sensors

Technological dependency: smart toilets or smart sensors placed into toilets that can provide rapid data collection and analysis of a predetermined set of indicators, but do not identify individual users.

Potential use case 1: Thousands of smart toilets are installed in a community in a developing country suffering from a vitamin C deficiency. A public health organization implements measures to combat this deficiency, and progress is efficiently tracked via vitamin C measurements collected from the toilets—instead of frequent individual checkups which can be costly and culturally difficult.

Potential use case 2: A pharmaceutical company is seeking to develop a new drug. They are seeking to expand the number of individuals participating in their research and to expand the number of data points they collect. They now can dramatically scale up and remotely collect the data through a network of smart toilets that contain a customized sensor that screens for specific information that they designate.



HOW MIGHT THE PIECES FIT TOGETHER?

IDENTIFIED INDIVIDUAL MONITORING

Data source: residential toilets or sensors

Technological dependency: smart toilets or sensors placed into toilets that can provide rapid data collection and analysis of a predetermined set of indicators, that can combine with external information about each individual user

Potential use case 1: Doctor prescribes a smart sensor that a diabetic patient is to place in his/her toilet. Sensor measures glucose levels in urine each time patient uses the bathroom. Sensor is connected to mobile devices: can send alerts to patient's phone, can send individual data points back to doctor so doctor can monitor patient's progress in real time and identify trends.

Potential use case 2: Doctor prescribes a smart sensor that a patient is to place in his/her toilet that screens for biomarkers for genetically predispositions. Sensor is connected to mobile devices: and can send alerts to patient's phone, can send individual data points back to doctor so doctor can monitor patient's progress in real time and identify trends.

JOURNEY

2016

2017

2018

2019

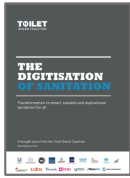
2020

2021

2022

2023

BUSINESS OF SANITATION



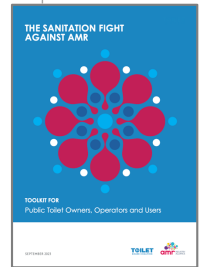
PUNE PROJECT



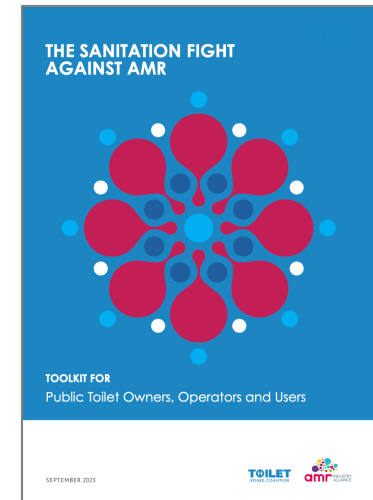
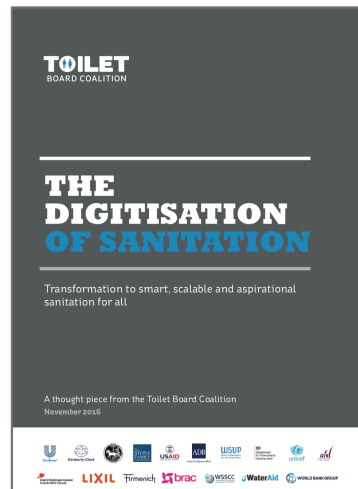
MICROSOFT WORKSHOP



SMART SANITATION & PUBLIC HEALTH ROUNDTABLE



SMART SANITATION MARKET



SANITATION & AMR



An infographic titled "ANTIMICROBIAL RESISTANCE (AMR)" with a blue and red color scheme. It includes a statistic: "Antimicrobial Resistance (AMR) is killing 1,270,000 people in the world every year." It features a checklist section titled "YOUR ANTI-AMR CHECKLIST" with three main categories: "AMPLIFY AWARENESS of AMR and its dangers", "MINIMISE RISKS of getting infected", and "REDUCE THE SPREAD of infection through proper sanitation and hygiene practices". Each category contains several bullet points and small icons. The infographic also includes logos for the Toilet Board Coalition and the AMR Industry Alliance at the bottom.



Download @ www.toiletboard.org



THANK YOU

Questions: secretariat@toiletboard.org

Learn more: www.toiletboard.org

With thanks to our leaders

The Toilet Board Coalition and its work is made possible by the generous support of the Toilet Board Coalition Membership.
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The contents are the responsibility of the Toilet Board Coalition and do not necessarily reflect the views of the Members and partners.



November 16, 2023

[QUATERNARY AMMONIUM-BASED DISINFECTANTS: ADVANTAGES, DISADVANTAGES, AND SAFETY CONCERNS](#)

Speaker: **Dr. John M. Boyce**, J.M. Boyce Consulting

(FREE Teleclass)

November 28, 2023

[INFECTIOUS DISEASE IMPACT FROM THE NATURAL DISASTERS IN PAKISTAN AND REGION](#)

Speaker: **Prof. Aamer Ikram**, National Institute of Health Pakistan

(South Pacific Teleclass)

December 6, 2023

[SOCIAL SCIENCE AND INFECTION PREVENTION AND CONTROL](#)

Speaker: **Prof. Holly Seale**, University of New South Wales School of Population Health, Australia

Postponed to 2024

December 7, 2023

[HOSPITAL WASTEWATER SYSTEMS: ORIGINS OF NOVEL NOSOCOMIAL BACTERIA](#)

Speaker: **Professor Colum Dunne**, School of Medicine, University of Limerick, Ireland

(FREE Teleclass)

December 14, 2023

[THE FUTURE OF OUTBREAKS](#)

Speaker: **Prameet M. Sheth**, Queen's University, Canada

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