STeP streamlines the path-to-market and develops turn-key solutions for field testing transformative sanitation technologies

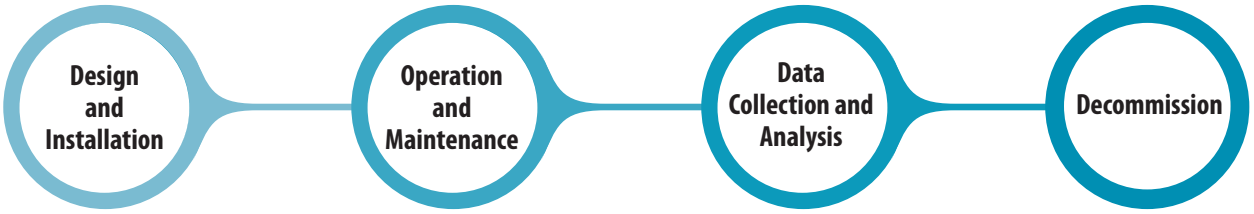
The STeP technology platform helps partners **accelerate transformative sanitation technologies** along the path to market by providing commercialization and technology transfer support, connecting commercial and technology partners, and providing a suite of **state-of-the-art field testing services** in real-world settings. Field testing is an essential piece of product development that supports health and safety, informs design, and drives adoption. Our in-field prototype testing and troubleshooting expertise, combined with user insights, offers **rapid learning and feedback cycles** to inform design optimization.

What We Do

De-risk Technology | **Test Use Cases** | **Accelerate Innovation**

Our Process

STeP has a turn-key process that is customizable to partner needs. We offer a range of related services and work closely with partners at each stage of the field testing process to ensure alignment with testing objectives.



Design and Installation

Site identification, preparation and installation; study design and implementation (e.g., baseline, user, site assessment); testing plans; sourcing of contractors, suppliers, and analytical capabilities; permitting; human ethics research approval

Operation and Maintenance

Long-term (6/12/24 months) system operation, monitoring, maintenance and troubleshooting; and relationship management

Data Collection and Analysis

Study design and data collection; continuous tracking and analysis; data interpretation and visualization (e.g., one-on-one consultations, dashboard reporting); QA/QC; assessment of readiness for ISO 30500

Decommission

Safe removal of systems; post-testing study design and implementation; stakeholder management

Field Testing

STeP Sanitation Technology Platform

Field Testing in Coimbatore, India

STeP's field testing platform in Coimbatore offers a complete, ready-to-use service designed to meet field testing needs in actual communities. More than 15 test sites have been validated—including university campuses, textile mills, and parks. All test sites have access to water, electricity, and overflow to sewage; select sites are suitable for testing subsystems such as toilet interfaces.

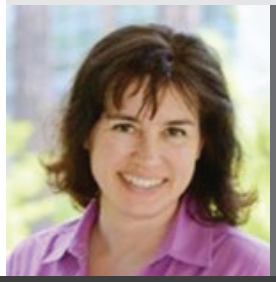
Our field team consists of master's- and bachelor's-level technicians, including engineers and microbiologists. Our established partnerships with local institutions and third-party certified laboratories provide high-quality, reliable services such as sample analysis.

OPERATION	Hours of operation, maintenance log, mean time to failure, electrical characteristics
LIQUID	Free and total chlorine, pH, chemical oxygen demand, ammonia, E. coli, helminth eggs, and many more
SOLID	% solids, proximate and ultimate analysis, elemental ash analysis
ODOR	Human panel, according to ISO 30500 method
EMISSIONS	CO, NOx, CO_2, H_2S, VOC, PM2.5, NH_3, SO_2

STeP is accepting new technology partners for field testing in Coimbatore!

Select Publications

1. Grego, Sonia et al. "Field testing of onsite wastewater treatment technologies with 100% pathogen removal." *4th International Fecal Sludge Management Conference*, 2017. [presentation]
2. Grego, Sonia, et al. "Soil-transmitted helminth eggs assessment in wastewater in an urban area in India." *Journal of water and health*, 16.1 (2018): 34-43. [article]
3. Barani, Viswa et al. "Characterization of fecal sludge as biomass feedstock in the southern Indian state of Tamil Nadu." *Gates Open Research*, 2018.



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RTI International is an independent, nonprofit research institute dedicated to improving the human condition. We combine scientific rigor and technical expertise to deliver solutions to the critical needs of clients worldwide. RTI International serves as the implementing partner of STeP, funded by the Bill & Melinda Gates Foundation.

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