



Urban Agenda Platform

The global platform for sharing progress, action and knowledge on the implementation of the New Urban Agenda to achieve sustainable urban development.

SOIL EkoLakay: A Circular Economy Solution for Urban Sanitation

Region	Latin America and the Caribbean
Award Scheme	EXPO Dubai Global Best Practices
Start Year	2020
Sustainable Development Goals	Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable

Summary

SOIL's climate-resilient sanitation solution is addressing a global challenge with an innovative circular economy solution. Using ecological sanitation technology, SOIL has pioneered an affordable sanitation and waste transformation service that is poised to scale in Haiti's urban areas with global implications for the sector.

Background and Objective

It is estimated that only 34% of urban Haitians have access to improved sanitation facilities and less than 1% of human waste in Haiti is safely treated. Haiti's lack of sanitation access has resulted in a major public health crisis resulting in the highest incidence of childhood diarrhea in the world and one of the largest and most virulent cholera epidemics in recent global history. Diarrhea represents a significant economic and health burden for Haitian communities. In fact, it is one of the top three causes of lost disability adjusted life years (DALYs) in Haiti. SOIL is combatting this crisis on the ground in Haiti by providing a sanitation service specifically designed for dense urban communities, and by treating 100% of the wastes. SOIL's full-cycle approach to sanitation services is currently the only example in northern Haiti of a service that meets the standards set by the Sustainable Development Goals, which require safe management of the entire sanitation value chain. Additionally, by transforming waste into compost, SOIL is recapturing valuable nutrients and ensuring that those nutrients are reapplied to Haiti's depleted soils, a critical intervention in a country where approximately 45% of the population is malnourished, largely due to declining soil fertility and reduced national production.

Actions and Implementation

SOIL was founded in 2006, inspired by the belief that the most pervasive human rights abuse globally is poverty and that the key to unlocking human development potential is ensuring equitable, safe, and dignified access to basic services. SOIL's development model was created as an integrated response to the community-identified priorities of increasing access to sanitation, improving food security, creating jobs, and building a healthier living environment. SOIL's social business for the provision of ecological sanitation services simultaneously addresses each of these needs by using ecological processes to transform a public health problem into an environmental solution. SOIL's system is environmentally sustainable by design and has been widely accepted by urban customers in Haiti. Over 70 percent of SOIL's staff are Haitian, as well as four members of SOIL's Board of Directors. The SOIL leadership team monitors SOIL's KPIs on a regular basis and uses this information to track SOIL's progress against our strategic objectives. This information informs operational decisions and is shared with employees during monthly staff meetings and team check in meetings. Metrics evaluated include the following, among others:

- Number of toilets installed
- Number of clients benefiting from sanitation services
- Customer payment rates
- EkoLakay gross profit margin
- Quantity of waste treated and compost produced
- Waste treatment gross profit margin
- Customer satisfaction with sanitation service and compost quality
- Revenue generated from toilet service fees and compost sales

These metrics are collected in SOIL's customer service database, in our financial system, and in operational reports. Given that this project is the continuation of a successful, ongoing effort, we already have the monitoring and evaluation systems in place that are necessarily to easily document, report on, and analyze these KPIs.

Outcomes and Impacts

SOIL began as a humanitarian organization focused on developing sanitation services for the most vulnerable and impoverished urban communities in Haiti, and SOIL has maintained this commitment even as we have moved to incorporate business principles to achieve cost reduction and revenue generation. SOIL primarily targets beneficiaries in the following two segments: 1. Geographic priority zones – SOIL's solution has a particularly high value proposition to the competition in very dense urban areas with high ground water as it is the only safe and viable technology that exists to reach



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people with safely-managed sanitation in these regions. SOIL also further prioritizes beneficiaries in specified communities in order to increase the density of the service, thereby reducing unit costs due by reducing staff time and transport needed to travel between zones. 2. People dissatisfied with their current sanitation option – SOIL's solution is marketed to all households within the geographic priority zones with a particular value proposition relevant to beneficiaries who are dissatisfied with their current sanitation option. These potential beneficiaries include the people forced to resort to open defecation, people using shared pit latrines, people using private pit latrines that are dissatisfied with the quality or maintenance expense of those latrines, and people using flush toilets who are dissatisfied with the cost of water or maintenance for those toilets. Over the next few years, SOIL strives to strengthen the water and sanitation service sector in urban and peri-urban Cap-Haïtien Haiti with specific focus on the following results: (1) the provision and direct expansion of household toilet services, (2) the provision and expansion of waste treatment services, (3) the strengthening of strategic partnerships with the public sector, and (4) continued refinement of SOIL's business through the implementation of service improvements with key lessons and outcomes transparently shared with global partners.

Sustainability and Scalability

In the long-term, SOIL is committed to demonstrating that environmentally-sound sanitation services can be sustainably scaled through public private partnerships, and we believe that working with outcome payers and the Haitian government to design a results-based financing plan to support long-term provision of services will provide a key test case for this assumption. The global urban population is projected to increase by 2.5 billion people by 2050, with much of that growth concentrated in informal settlements and regions that are highly vulnerable to the impacts of natural disasters and the climate crisis. It is therefore critical to identify innovative technological solutions, services, and financing mechanisms to meet the sanitation needs of people living in rapidly growing urban settlements. While SOIL is first and foremost committed to scaling sanitation services to support public health outcomes and positive economic development in Haiti, in collaboration with our partners at the Container-based Sanitation Alliance (CBSA), we strive for nothing less than to revolutionize the global approach to sanitation provision, proving a scalable and replicable model with the potential to provide sanitation access for the 700+ million people living in urban communities who currently lack sanitation.

Gender and Social Inclusivity

There is a particularly crucial connection between access to sanitation and quality of life, safety, and economic opportunity. This is particularly true for women and girls, who often act as the primary caregivers within family structures in Haiti, and for at-risk populations like gender nonconforming or transgender people. Lack of access to sanitation means an increased risk of being sickened by waterborne and other diseases that are linked to poor household and/or environmental hygiene, and increased vulnerability to physical and sexual violence when looking for a safe place to defecate. In-home sanitation provides women and girls a private, safe space to use the toilet, and provides the opportunity for menstrual management for those who menstruate. Especially for nighttime use, a private household toilet is a significant upgrade from a shared or public option outside of the home for people of all gender expressions and identities. SOIL not only provides an in-home toilet service, we are also committed to preventing all forms of exploitation related to service access for women, children, transgender and gender nonconforming customers using SOIL's service.

Initiative Contribution

• Goal 1 - End poverty in all its forms everywhere • Goal 2 - End hunger, achieve food security and improved nutrition and promote sustainable agriculture • Goal 3 - Ensure healthy lives and promote well-being for all at all ages • Goal 4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all • Goal 5 - Achieve gender equality and empower all women and girls • Goal 6 - Ensure availability and sustainable management of water and sanitation for all • Goal 7 - Ensure access to affordable, reliable, sustainable and modern energy for all • Goal 8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all • Goal 9 - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation • Goal 10 - Reduce inequality within and among countries • Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable • Goal 12 - Ensure sustainable consumption and production patterns • Goal 13 - Take urgent action to combat climate change and its impacts • Goal 14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development • Goal 15 - Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss • Goal 16 - Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels • Goal 17 - Strengthen the means of implementation and revitalize the global partnership for sustainable development

Innovative Initiative

SOIL's initiative has been innovative within the context of Haiti from its founding. Community driven design and locally sourced supplies have been critical to the ongoing operations and adaptation of our sanitation solution. Further, local authority and government support has been critical to building long-term partnerships in the communities we serve in order to scale an innovative and viable sanitation model in the sector. By employing social



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entrepreneurship principles to streamline operations and cut costs, we believe that we can create a safely-managed sanitation service that can be viably covered by public sector contracts in the long-term. SOIL has already mobilized government support through the provision of land for its treatment and transformation facilities, and is currently in discussions with the Haitian government and international financing institutions to establish a public-private partnership that pays for services through results-based finance. This partnership is being modelled on successful solid waste management services used in many emerging economy cities.