

## Profile: Sanergy



*Improving access to hygienic sanitation in informal settlements in Kenya through a systems-based approach*

### Challenge

Eight million residents of Kenya's informal settlements lack access to improved sanitation. In urban areas, the main sanitation alternatives are shared toilet blocks, other unimproved solutions, such as "flying toilets" and open defecation. All of these alternatives increase the risk of spreading disease, are unsafe at night, and release untreated waste into the water system.

One of the key challenges in providing improved sanitation in informal settlements is safely removing waste in areas not connected to a sewerage system and often inaccessible to large vehicles.



Workers remove the sealed portable containers that hold solid waste from a brightly colored Fresh Life Toilet in Nairobi.

### Innovation

Sanergy ([www.sanergy.gy](http://www.sanergy.gy)) produces pre-fabricated, low-cost, high-quality, waterless toilets known as Fresh Life Toilets. It tackles the challenges of slum sanitation by producing toilets that are easily transported and assembled and collect waste in sealed portable containers. It builds its client base through aspirational branding and a network of local operators.

The company keeps prices low by processing the waste it collects and selling it commercially. A urine-diverting squat plate enables solid and liquid waste to be collected in two separate containers under the toilet. This separation reduces odor, which allows toilets to be located closer to people's home than traditional toilets. Sanergy employees empty the containers on a regular basis. Using hand carts, they transport the solid waste to Sanergy's central waste management facility, where it is processed into organic fertilizer and other byproducts for commercial sale.

The company operates three distribution models. It sells commercial toilets to local community members, known as Fresh Life Operators (FLOs), who run them as businesses. It sells residential toilets to landlords, who offer them as a value-add service to tenants living on plots housing 10–15 households. It sells community toilets to institutions (schools, clinics, and churches) that reach underserved populations.

The focus has been on the operation of commercial toilets by the network of FLOs in Nairobi's informal settlements. Individual FLOs set the prices they charge per visit, which average about USD 0.02 per child and USD 0.05 per adult. They build demand for the toilets, collect fees, and keep the toilets clean. Sanergy trains the FLOs, who become franchisees, purchasing toilets and business services from Sanergy. For about USD 500, they receive their first toilet, business support services, and first year's servicing (the fee is lower for subsequent units). Kiva, the online microlending platform, finances their investment with 12- or 24-month loans. Franchisees who pay cash receive a discount. Once they own the toilet, franchisees pay an annual servicing fee of about USD 90.

## Impact

Sanergy increases access to improved sanitation facilities in informal settlements, improving the health of residents and the urban environment. As of May 2015, five and a half years after it was founded, the company has installed 1,000 Fresh Life Toilets in informal settlements, where the network is used about 50,000 times a day. It has safely removed and treated more than 10,986 tons of waste. Waste is also converted at a centralized facility into useful end-products such as organic fertilizer and renewable energy. Schools that have Fresh Life Toilets report that enrollment rates have risen by 20 percent, according to the company.

Sanergy creates jobs throughout its supply chain. It employs about 250 staff and has a network of 650 FLOs. In addition, some operators hire an employee to run daily business operations; Sanergy estimates that FLOs hire about 175 people.

Franchisees typically recover their initial investments within 12–24 months. Once they repay their loan, they can earn about USD 20 a week—almost as much as the average weekly income in Kenya.

## Scaling Up

Cooperation of FLOs is essential to the business model for community toilets. Sanergy therefore invests time and resources training operators, gaining their feedback in regular meetings, managing their loans and telling their stories. Although a few struggle—and some have had their operations shut down because they failed to meet compliance standards—the vast majority remain engaged, driving the brand forward.

Sanergy engages engagement community councils and elders within the slums, in an effort to gain community support. It also works with county and national government officials on community health training, particularly in schools. In collaboration with WASH United, it launched a train-the-trainer curriculum for hygiene awareness in schools. Every school that receives a Fresh Life Toilet must participate in the training; schools that do not have Fresh Life Toilets are also welcome to attend.

The FLO model can be expanded incrementally, but it rests on community acceptance; it can therefore be challenging to introduce to a new target area. Alternative distribution models being developed—including working with schools and churches or groups of 10–20 households sharing a single toilet—may be easier to introduce to new areas.

Consumer adoption is critical. The toilet are designed for 100 uses a day, but many see fewer than 75 uses a day. A study of the program identifies two likely factors constraining use: cost and distance to the nearest Fresh Life Toilet (Esper, London, and Kanchwala 2013). Sanergy is investing in improving its understanding of consumer drivers and behavior patterns in order to address both issues.

Kenyans are used to paying for toilet services; community buy-in and creation of demand were therefore not key challenges in Kenya. Elsewhere in the world, where consumers are not used to paying for sanitation, more investment in awareness raising may be required.

Sanergy is exploring new ways to optimize waste collection and processing. The pace at which markets for waste products are secured will be a driver of success. The Kenyan Ministry of Agriculture issued a directive that favors organic fertilizer over chemical fertilizer. This move should benefit Sanergy, especially as very little organic fertilizer is produced domestically.

## Reference

Esper, Heather, Ted London, and Yaquta Kanchwala. 2013 *Improved Sanitation and Its Impact on Children: An Exploration of Sanergy*. William Davidson Institute, University of Michigan, Ann Arbor, MI. <http://wdi.umich.edu/wp-content/uploads/Child-Impact-Case-Study-2-Improved-Sanitation-Sanergy.pdf>.