

When is a slab more than just a slab?



ALEMAYEHU TAFESSE, LATRINE PRODUCER



INTRODUCTION The cement latrine slab that iDE-trained sales agents have been selling in Ethiopia is deceptively simple: it is a concrete disk with a drop hole, foot platforms, and a simple cement-and-iron drop hole cover. But this humble slab was created through a rigorous field design process that dug deep into local customers' desires and challenges to outline critical design principles. And, with the right product in place, the slab is being commercialized by motivated entrepreneurs, producers, and government stakeholders with support from iDE, one of the world's leaders in market-based WASH models. The result: over 11,000 improved latrine slabs sold in under four years.

This document details iDE's journey to build one of Ethiopia's most successful sanitation marketing programs, highlighting the keys to the program's success and lessons for the WASH sector.

The Problem

The sanitation problem in Ethiopia — Africa's second-most populous nation — is a massive one. Although progress has been made toward reducing open defecation in rural Ethiopia (from nearly 90 percent practicing open defecation in 1990 to 32 percent in 2015), the country still has a higher rural population practicing open defecation (more than 25 million) than any other country in Sub-Saharan Africa. Additionally, over 50 million people in rural areas continue to use unhygienic toilets, which do not effectively separate human waste from the environment and, as a result, do little to curb the transmission of pathogens. Thus, the total market for improved sanitation products and services in rural Ethiopia — including individuals who practice open defecation and those who use unhygienic toilets — is roughly 75 million people.

Exploring Solutions

Starting in 2010, the Government of Ethiopia adopted Community-Led Total Sanitation (CLTS) as the preferred strategy for local government and civil society organizations to improve access to hygienic latrines. CLTS uses emotions such as shame and disgust to encourage individuals and households to cease open defecation. The CLTS approach focuses largely on triggering demand or sanitation at the community level, aiming to achieve 100% adoption. Because CLTS aims to reach everyone, even the poorest of the poor, it tends to promote DIY solutions, such as digging a hole in the ground, which are often neither desirable nor sustainable.



LATRINE PRODUCER, EAST BADEWACHO WOREDA

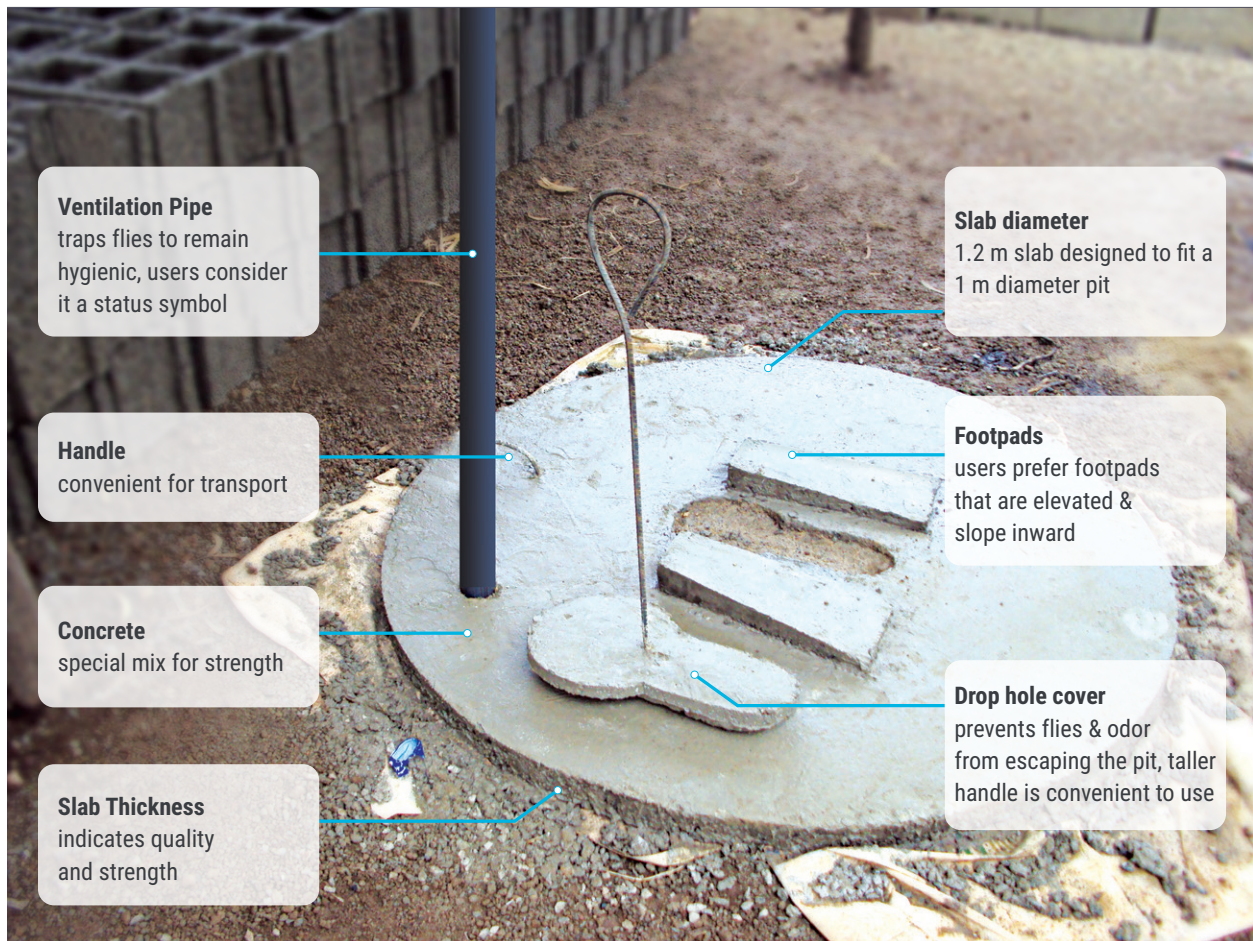
ELILO WAGESHO, LATRINE CUSTOMER AND FARMER, WOLAITA



In response to this gap, in 2013 the Government of Ethiopia released the “National Sanitation Marketing Guideline,” which encouraged development practitioners to develop desirable and affordable sanitation technologies along with sustainable business models to generate demand for and deliver more affordable, desirable, and sustainable solutions to customers.

iDE had been working to build agricultural markets in Ethiopia since 2007. In 2013, UNICEF funded iDE to explore options for adapting its sanitation marketing model to the Ethiopian context. iDE’s sanitation marketing model addresses not just latrine supply but also the marketing and behavior change strategies required to drive uptake at scale. In each of the countries where we work, we use a Human-Centered Design (HCD) approach to first study the needs, desires, and constraints of households and use this information to design affordable and desirable solutions that households are willing to purchase at a price that allows local businesses and entrepreneurs to earn a profit. We then build local private sector capacity to manufacture and install these products, and provide ongoing coaching and support to our public and private sector partners on the ground.

Photo: Ephrem Abebe/iDE/2018



IDE ETHIOPIA LATRINE SLAB DESIGN FEATURES

Solutions: The Product

In Ethiopia, our HCD work revealed five key design principles for an improved sanitation product:

OFFER VALUE THAT HOUSEHOLDS CANNOT PRODUCE THEMSELVES. Rural households have a Do-It-Yourself attitude and reduce costs by building and making things themselves. They do not buy what they can build themselves. For the solution to be adopted in the market, it must be a product that is not easily produced by most households. This is important in order to drive scale. Counting on households to build durable sanitation solutions on their own is not an easily or quickly scaled option.

OFFER A SOLUTION THAT MAKES IT EASY FOR USERS TO MAINTAIN A HYGIENIC LATRINE. Almost no dry pit latrines in the study areas were hygienic, primarily due to the lack of drop-hole covers.

ENABLE PEOPLE TO BUILD ON WHAT THEY ALREADY HAVE. Households have already invested into latrine components, design(s) should allow households to build on what they already have rather than starting from scratch.

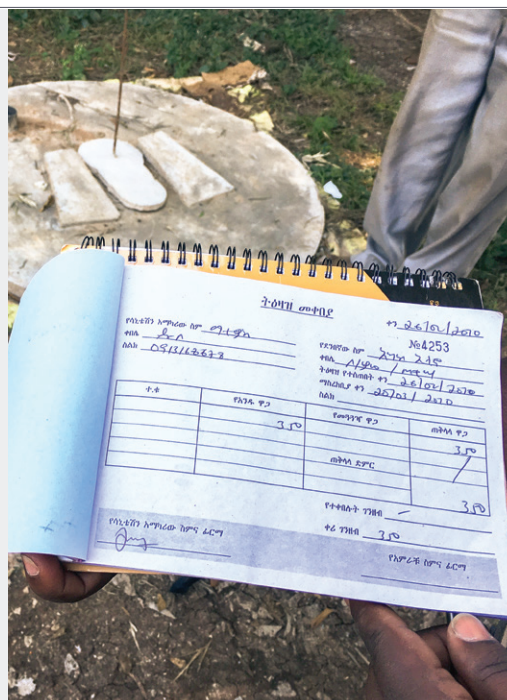
DESIGN FOR EASE OF USE. It is important to households that it is easy to keep the latrine clean and free from smells, and that it is easy and comfortable for children and adults to use.

DESIGN FOR LOCAL MANUFACTURING. Designs should be cost-optimized and consider the manufacturing techniques, resources, skills, and equipment available at the local level.

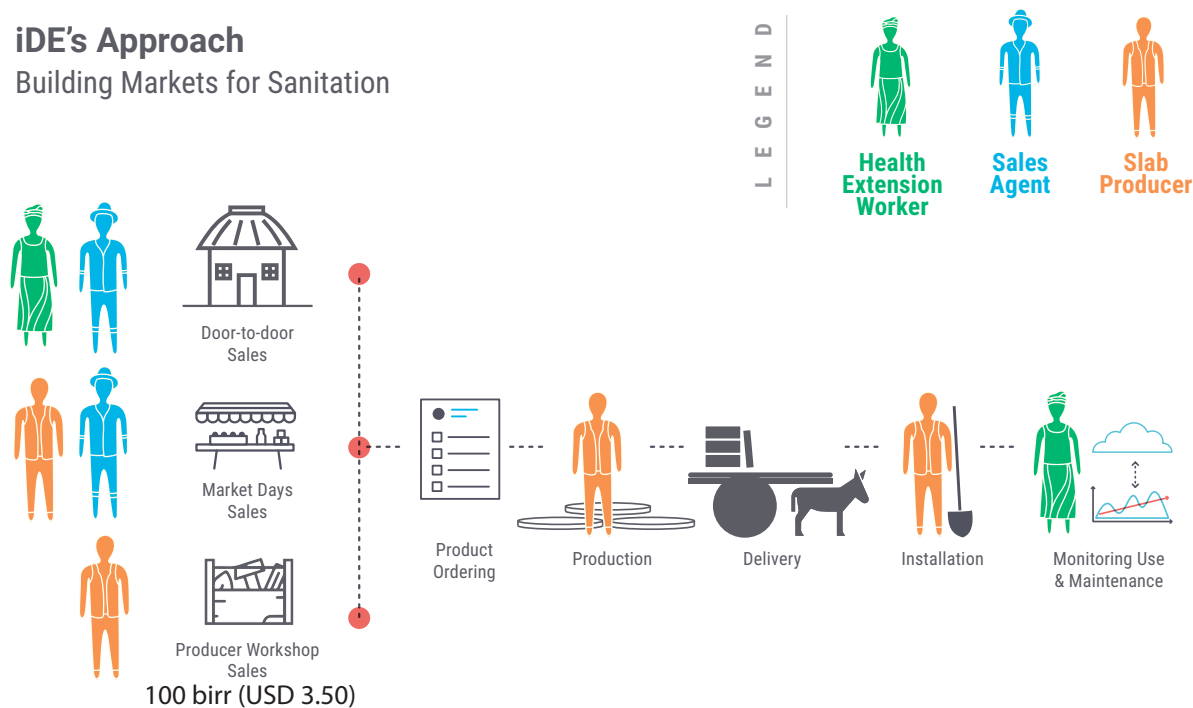
With these design principles and other insights in hand, the iDE team ran several iterative design and prototype field exercises. The result was a pre-cast concrete slab that responded to the needs of the rural Ethiopian user.

Solutions: The Business Model

With the latrine slab product in place, the iDE team began building a business model to commercialize it. The team tested three models that leverage key market actors including iDE-trained sales agents, latrine producers, and health extension workers to generate demand, manufacture and install latrines, and monitor use and maintenance. These three models are illustrated below. To date, the majority of latrine sales have been made by iDE-trained sales agents, often with significant assistance from health extension workers on customer targeting and messaging. When sales agents facilitate a sale, they collect a 100 birr (USD 3.50) deposit from the customer. The sales agent then places an order with a slab manufacturer, and acts as a liaison between the customer and manufacturer to ensure timely delivery. The manufacturer pays the sales agent a commission upon slab delivery and collection of full payment from the customer.



iDE's Approach Building Markets for Sanitation



Demand

Three Latrine Sales Channels

1. Sales agents conduct door-to-door sales with individual households and small community groups, often assisted by local Health Extension Workers.
2. Product demonstrations and sales at large community gatherings such as market days.
3. Direct sales at latrine producer's workshops.

Supply

Product Ordering: Customer pays 100 birr (USD 3.50) deposit
Production: Producers receive molds and training to fill orders
Delivery: Sales agents receive commission upon delivery
Installation: Customer receives instructions on how to dig the pit and install the slab
Monitoring: Health Extension monitors and ensures correct use

Solutions: Leveraging government partnerships

One of the key insights from iDE's foundational HCD work is the outsized role that government institutions play in the Ethiopian WASH sector. With this in mind, iDE aims to build local government's confidence in sanitation marketing as a strategy for achieving those goals, with the ultimate objective of creating strong government partners who contribute to achieving scale. For instance, at the local level, government offices are expected to drive progress toward national WASH goals. Thus, in addition to leveraging the energy and innovation of private sector partners, iDE works closely with local government actors. The most critical on-the-ground partners are health extension workers (HEWs),

a corps of public workers who provide households with key health messages and support. Sales agents coordinate with HEWs to identify target households and deliver consistent messaging on the importance of improved sanitation and key hygiene behaviors.

At the national level, government sets key WASH policies and strategy, exerting substantial influence on WASH activities on the ground throughout the country. While national policy is increasingly friendly toward market-based approaches, local government entities often require evidence that such models will help them in achieving their sanitation goals. In light of this, iDE's goal is to generate sufficient scale and impact to influence market-friendly policies and to increase buy-in from key local government stakeholders.

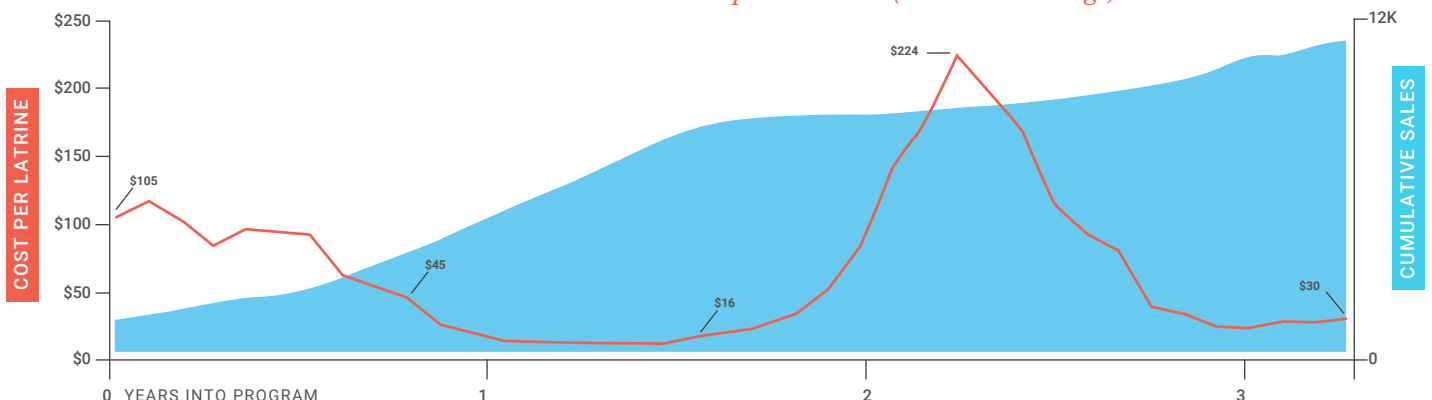
Results

iDE-trained sales agents and latrine producers have delivered over 11,000 improved latrines since 2014, making the initiative one of the largest market-based WASH programs in the country. The program is also cost-effective: on average, iDE currently spends \$30 in program funding to facilitate the sale of each toilet. This is in-line with iDE programs in more densely populated Asian countries and, as shown in the image below, shows the potential for market-based models to deliver increasingly cost-effective results over time.

In addition to improving sanitation conditions through latrine sales, iDE's market-based approach has impacts on the local economy. As of December 2018, Households had invested \$150,772 in latrine purchase and delivery. In turn, sales agents had earned \$12,923 in commissions. These financial returns promote durable changes in the sanitation market: while iDE has not formally collected data on market sustainability, anecdotal evidence indicates that a large portion of latrine producers continue operating in geographic areas where the program no longer works.

ETHIOPIA SANMARK

Cumulative Latrine Sales vs Cost per Unit Sold (six month average)



What's Next

WASH FINANCING Although iDE has enjoyed success in implementing the sanitation marketing model, a substantial part of the market remains untapped due to households' limited capacity to purchase toilets in an upfront lump-sum payment. For the most part, households in the areas where we work are the poorest of the poor and are characterized by their vulnerability to disaster and climatic shocks. While there is no rigorous data to show how many households forgo purchasing a latrine because they don't have cash on hand, anecdotal evidence from our sales agents suggests that this is the number one objection to purchase. In addition, iDE's experience in the Ethiopian agricultural sector indicates that 70 percent of households require financing to purchase inputs such as seeds and fertilizer.

These barriers pointed to the need to build a business model that includes loan options for the poorest. To address this issue, iDE has established a revolving WASH loan fund with three local partner MFIs. This revolving loan fund has also gained us a "seat at the table" with these partners, through which we have been able to provide capacity building and knowledge sharing. Results have been promising: over 692 loans for latrines have been disbursed in under a year, accounting for over one-third of total latrine sales.

Sanitation businesses also face high barriers to entry, as the market for sanitation products and services in Ethiopia is not yet mature. This limits business investment because returns are not guaranteed. To help local entrepreneurs overcome this challenge, iDE partnered with MFIs to facilitate start-up capital for 6 businesses. iDE offers ongoing coaching to these manufacturers on their investments in sourcing raw material, labor and molds to ensure timely repayment of their loans.

SALES STRATEGY The iDE team's experience has shown that developing relationships with active and effective HEWs is a key driver of success. The team is using this knowledge to identify target HEWs and to revise a sales strategy to increase engagement with these public-sector stakeholders.



HEALTH EXTENSION WORKER, WOLAITA

iDE has also found that sales are generally highest in kebeles that have achieved open-defecation free (ODF) status. As such, the team is re-focusing its geographic expansion strategy to focus more on ODF areas, and will work over the next year to monitor the results of this operational pivot.

GENDER Analysis of iDE's sales data shows that male and female sales agents are equally effective at convincing households to invest in improved sanitation. However, similar analysis shows that the sales agent recruitment process leads to far fewer women applying for available positions. This may be because iDE relies heavily on local leaders and government officials to identify promising candidates. iDE is using these initial insights to inform further research into how to more effectively attract, develop, and retain women sales agents, and to leverage their unique skill sets and social capital in the service of improving sanitation conditions for their communities.

Photo: KC Koch/iDE/2017

PIT COLLAPSE

and what to do about it

PIT LINER



Households throughout iDE's program area complain about the danger of pit collapse. In fact, many households have watched their pits collapse on an annual basis due to heavy rains, high groundwater, and sandy soil.

Latrine users express frustration at this recurring problem, but continue to redig latrine pits because they want to give their families a safe and clean environment.


To address this issue, iDE conducted an HCD Deep Dive aimed at understanding the drivers and barriers that people faced in addressing the pit collapse issue.

The study found that latrine owners had no high quality, affordable options to mitigate the risk of pit collapse, and that simpler “do-it-yourself” solutions provided mixed results.

Building on these insights, the iDE team set to work designing a solution, and ultimately produced an easy-to-build and affordable pit liner product. The pit liner uses a combination of soil and cement, which are compacted on-site using a circular ring mold.

The “all-in” cost for materials and installation is lower than what a household would spend on re-digging a new pit, and the installation process is quick.

The iDE team looks forward to testing business models for delivering this innovative product alongside the standard latrine slab.

 Read More: **Learn about iDE Ethiopia's work engaging sanitation businesses and entrepreneurs to address the sanitation gap for rural customers:**

www.ideglobal.org/ethiopia



Photo: Ephrem Abebe/iDE/2018

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