ENSURING THE QUALITY OF SANITATION PRODUCTS DURING PROJECT SCALE UP

BACKGROUND

Benin, a country of 10 million people, has only 13% coverage of basic sanitation and widespread open defecation. An affordable product that meets consumers preferences for a safe, odor and insect free, easy-to-clean, and low-cost toilet did not exist on the market. The average toilet cost was $450.

To close this gap, USAID’s Sanitation Service Delivery project used an iterative approach to optimize design and reduce cost of a pour-flush double offset pit latrine, now branded as WC Mimin. This latrine is designed for low-income consumers in urban and periurban areas with low water tables, as the contents decompose and pathogenic elements die in situ, eliminating the need for mechanical emptying. In its fourth and fifth years, the project has been scaling up product sales through private sector actors, with a focus on ensuring the quality of pre-fabricated toilet components and installation.

SSD PRODUCT DEVELOPMENT

SSD developed a set of three monitoring tools that support the team in controlling norms and quality standards of prefabricated component and WC MIMIN installation. (1) the quality control protocol; (2) quality control sheet of prefabrications/latrines; and (3) construction monitoring sheet. These tools were revisited and revisited at each step to incorporate learnings from users and projects activities, evaluate results against goals and targets, and drive data-led decision-making.

QUALITY CONTROL TOOLS

QUALITY CONTROL PROTOCOL

Purpose: Defines the role of each member in control team and the methodology to be used to evaluate the constructions at each stage of their installation.

QUALITY CONTROL SHEET OF PREFABRICATIONS/LATRINES

Purpose: Allows control team to populate data concerning the quality control indicators. It also provides the data to evaluate the performance of masons and entrepreneurs.

CONSTRUCTION MONITORING SHEET

Purpose: Provides information on the progress of construction and the purchase of the components by the customer.

INSTALLATION PROCESS CHALLENGES

The training given to entrepreneurs on the construction of latrines focuses on the following elements and quality standards:

1. Digging pits too close to water sources and digging pits too deep, risking contamination of the watertable;
2. Non-compliance with protocols for producing pre-fabricated components, including using incorrect proportions of materials for mixing concrete, use of pipes that were the wrong size, and failure to adequately cure concrete rings;
3. Incorrect slope of pipes leading to offset pits;
4. Connecting the pipe from the handwashing station directly into the toilet, leading to bad odors;
5. Poor quality finishing of toilet components

KEY RESULTS & FUTURE PERSPECTIVES

Efficiency of microentrepreneurs improved: installation of WC MIMIN is now offered in two days. Monthly sales and customer satisfaction increased over time. Between January and March 2018, 89% of customers were satisfied with services and 405 products were sold. Satisfaction and sales peaked between July and September 2018 with 96% satisfaction and 1492 sales. Between October and December 2018 also witnessed high satisfaction and sales at 86% and 912 respectively.

LESSONS LEARNED

1. Entrepreneurs/masons building a branded, standardized product require access to standardized molds for prefabricated components and should be discouraged from producing their own molds. In a fledgling market, project funds may be needed to supply molds.
2. Entrepreneurs/masons need practical tools, such as established quality control protocols and latrine construction referencemanuals.
3. Following training and supervision of the first several latrine installations, unannounced monthly visits to test pre-fabricated components are effective in improving quality.
4. Skilled entrepreneurs and master masons acting as peer educators can cost-effectively improve performance of less skilled masons through additional on-site coaching. Continuous opportunities for entrepreneurs/masons to share experiences improve quality and promote innovation.
5. By law, municipal authorities are accountable for ensuring compliance with sanitation standards. Involving those authorities in routine quality assurance activities is a promising approach for nudging municipalities to commit to this responsibility.