

USAID Transform WASH Business Models



Learning Note, September 2022



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USAID Transform WASH aims to improve water, sanitation and hygiene (WASH) outcomes in Ethiopia by increasing market access to and sustained use of a broader spectrum of affordable WASH products and services, with a substantial focus on sanitation.

Transform WASH achieves this by transforming the market for low-cost quality WASH products and services: stimulating demand at the community level, strengthening supply chains, and improving the enabling environment for a vibrant private market.

USAID Transform WASH is a USAID-funded activity implemented by PSI in collaboration with SNV, Plan International, and IRC WASH. The consortium is working closely with government agencies, including the Ministry of Health, the Ministry of Water and Energy, the One WASH National Program, and regional and sub-regional governments.

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This learning note describes and analyzes the four business models elaborated by USAID Transform WASH, which have been applied over the last six years.

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Abbreviations

B2B	Business to business
B2C	Business to consumer
DHIS2	District Health Information Software 2 (open-source health management data platform)
ETB	Ethiopian Birr (46.50 ETB/USD in October 2021)
FMoH	Federal Ministry of Health
HEW	Health extension worker
HDA	Health Development Army
JMP	WHO/UNICEF Joint Monitoring Programme
MBS	Market-based sanitation
MI	Mason/installer
SATO pan	Plastic toilet pan patented by Lixil Corporation (brand name)
SNNPR	Southern Nation, Nationalities and Peoples Region
TVET	Technical and Vocational Education and Training
T/WASH	USAID Transform WASH
USD	United States Dollar
WASH	Water, sanitation and hygiene
WRP	Whitten & Roy Partnership

1. Introduction

A business model describes how an enterprise creates, delivers, and captures value. This learning note describes and analyzes business models elaborated by USAID Transform WASH (T/WASH) to support entrepreneurs interested in offering sanitation products and services in local markets of Ethiopia. The learning note also summarizes how these businesses are expected to create and deliver value to their customers and earn revenue for the business owners. This helps to understand enterprises' unique value proposition and how profit is made to sustain the business. While each enterprise has its distinct business model, T/WASH has identified four generic sanitation business models (further described in Section 3):

- 1) Advanced product manufacturing and construction by "advanced manufacturers" or "contractors"
- 2) Basic product manufacturing and installation by "basic manufacturers"
- 3) Door-to-door simple upgrades by "mason/installers"
- 4) Plastic product sales and support by "retailers"

In the past, a common approach in Ethiopia was for government agencies and NGOs to train unemployed youth on how to manufacture concrete toilet slabs. Sometimes they were given tools, land and even marketing training. The newly established entrepreneurs then produced slabs and waited for customers to arrive. In most places, sales were limited, and the trained youths moved on to look for other income opportunities.

Since its launch in 2017, USAID Transform WASH has adapted and tested business models designed to ensure a sustainable supply of WASH products and services. These business models have been evolving. Initially, T/WASH supported the customary concrete slab manufacturing model with a focus on working with already established businesses (rather

than unemployed youth). These businesses included local building contractors or cement block manufacturers at the district level. In parallel, existing retailers at regional and district levels were identified to sell pre-manufactured household products (e.g., plastic toilet pans and slabs, household water treatment products) to other businesses and directly to consumers.

Later, to better serve more remote rural communities, T/WASH engaged local artisans at the village level ("basic manufacturers"). Their product/service portfolio was designed to be lower cost and simpler to manufacture compared to their counterparts ("advanced manufacturers") at the district level.

Many manufacturers and retailers started working with sales agents to reach more customers. However, the transport of concrete slabs that were centrally produced and the installation quality of plastic pans installed by customers themselves emerged as major challenges. As a response, T/WASH introduced a door-to-door simple upgrade business model working with local mason/installers (MIs).

This learning note describes and analyzes the four T/WASH business models, which have been applied over the last six years. The main research questions for this assessment were:

- What are the similarities and differences between the business models?
- What is the relative importance of the four business models in terms of engagement of business partners and overall sales?
- What is the quality of delivered products/services and customer satisfaction?
- What are the profitability and financial viability of business partners?
- What is the satisfaction (and retention rate) of business partners?

2. Methodology

The study primarily involved the compilation, cleaning, and analysis of existing datasets. The following data sources were used for the study:

- **Business partner database.** Database of all T/WASH business partners, as of August 2022, covering 59 woredas in all implementation woredas except Tigray. This includes all business partners that collaborated with T/WASH at any time over the past six years, whether subsequently active, inactive or dropouts throughout the entire period.
- **Business partner assessment.** Survey conducted periodically by PSI to collect business-related information from all active business partners.
- **Household installation quality surveys.** Surveys conducted by PSI in three rounds (2020, 2021 and 2022) from a random selection of customers in implementation woredas that were accessible at the time of the surveys. Sample size: n = 857 (2020), n = 908 (2021), n = 899 (2022).
- **Sales data from DHIS2.** Historic sales to household customers (not including B2B) recorded by the T/WASH monitoring and evaluation (M&E) team (cleaned dataset). Monthly sales data disaggregated by i) manufacturers, contractors and sales agents, ii) mason/installers and iii) retailers through to June 2022, covering 59 woredas.
- **Weekly reports on sales program monitoring.** Weekly reports on “special numbers” (key performance indicators) tracked after training of T/WASH staff and business partners on the DQ Sales® approach. Data were collected from July 19, 2021, to July 4, 2022, and include the following key indicators: number of sales presentations by mason/installers (MIs), number of sales by MIs, and number of MIs with sales.

In addition, primary data were collected specifically for this analysis through a **financial viability survey** conducted from September to November 2021. Sixty interviews were conducted by PSI's business advisory team based on a random selection of business partners from the business partner database which has a total of 362 businesses (as of August 2021). Sample size: 30 basic manufacturers (20 responses obtained), 30 MIs (19 responses obtained), 30 retailers and seven distributors (21 responses obtained from both).

T/WASH developed the following business model classifications: advanced manufacturer, basic manufacturer, mason/installer, and retailer of plastic sanitation (and other hardware) products (see detailed descriptions below). Only two businesses were categorized as “advanced manufacturers” by the business advisory team, thus results of these two businesses were not included in this learning note due to the small sample size.

The primary data collected were used to compile financial statements showing the average numbers for all business partners classified under the same business model. The following parameters were analyzed:

- Revenue = Price per unit x Number of units sold
- Cost of good = Sum of all costs per unit product
- Total cost of good = Cost of goods x Total units sold
- Gross profit per unit product = Price per unit - Cost of good
- Gross profit = Revenue – Total Cost of goods
- Gross margin = Gross profit / Revenue
- Operating expenses = Sum of all operating expenses
- Operating profit = Gross profit – Operating expenses
- Operating margin = Operating profit / Revenue

3. Business models

To describe the sanitation products and services that could be delivered by different types of T/WASH business partners, four major business models were developed:

- 1) **Product manufacturing and construction by “advanced manufacturers” or “contractors”**
Existing and well-established businesses that have the financial capacity to provide a full range of toilet options catering to the needs of different market segments. Initially, health extension workers (HEWs) were the main channel to promote these businesses' products and services. Gradually, the manufacturers were also linked with trained sales agents who could be retained to work on commission.
- 2) **Product manufacturing and installation by “basic manufacturers”**
Small-scale manufacturers at the village level with the capacity to produce pre-cast mini concrete slabs, which reduce the initial household investment needed to upgrade toilets and address transportation hurdles

associated with installing heavy concrete slabs.

- 3) **Door-to-door simple upgrades by “mason/installers”**
Mason/installers visit households and use the “decision intelligence,” or DQ Sales[®], approach (developed jointly with Whitten & Roy Partnership (WRP)) to identify individual households' specific needs and secure a sale.
- 4) **Plastic sanitation (and other hardware) product sales and support by “retailers”**
Existing and well-established businesses supply both imported and locally manufactured plastic sanitation and other WASH products directly to customers and other businesses. The products include SATO pan, SATO stool, AIM slab, household water filters and handwashing stations, among other hardware products.

Figure 1 illustrates the key characteristics (similarities and differences) of the four business models. The potential income presented in this overview figure is based on initial assumptions made at the time when designing the business models. The actual income achieved by the business partners will be discussed in the next sections of this learning note.

	Advanced Manufacturers	Basic Manufacturers	Mason/Installers	Retailers
Description	Mainly involves existing and well-established business partners	Mainly involves small-scale manufacturing with informal masons	Mainly involves small-scale manufacturing with informal local masons	Mainly involves existing and well-established business partners
Products and services	Mainly involves concrete slabs and full toilet options	Mainly involves concrete slabs and simple installations	Mainly involves installation of SATO and plastering	Mainly involves plastic sanitation products
Scale	Mainly operate at woreda-level	Mainly operate at kebele-level	Mainly operate at kebele-level	Mainly operate at woreda-level
Capacity and resources	High level of technical skills, space and equipment	Medium level of technical skills, space and equipment	Low level of technical skills, space and equipment	n/a
Marketing strategy	Focus on walk-in customers and construction contracts	Focus on door-to-door promotion and walk-in	Focus on door-to-door promotion with sales pitch	Focus on walk-in customers and business-to-business sales
Income	Potential income of around 15,000 Birr/month + income from other activities	Potential income of around 3,000 Birr/month + income from other activities	Potential income of around 4,500 Birr/month + income from other activities	Potential income of around 10,000 Birr/month + income from other products

Figure 1: Key characteristics of the four business models applied under USAID Transform WASH

Figure 2 illustrates the main products and services offered through the business models. More details on the four business models are provided in the Annex of this learning note.

It is important to note that USAID Transform WASH's business partners make their own decisions on how to run their business and do not all operate exactly the same way. Therefore, there is no clearcut boundary between the four business models. Some examples of overlap or blending include:

- The transition from basic to advanced manufacturing is fluid. Generally, advanced manufacturers also tend to offer non-WASH construction work (e.g., houses and larger structures) and a broad range of products and services (e.g., hollow blocks, toilet superstructure and pit lining). Basic manufacturers tend to mainly manufacture and install mini-slabs and concrete slabs (with embedded SATO pans, if trained) and offer less other construction work.
- Some retailers work with mason/installers or other artisans to offer installation services of plastic sanitation products to their customers.
- Some advanced and basic manufacturers also act as retailers and directly buy sanitation products (and

other WASH products) from a distributor.

- Some basic manufacturers also work as mason/installers.

The T/WASH team provides support to its business partners in the form of:

- **Training.** Capacity building on manufacturing local sanitation products, construction and installation services, basic sales and marketing skills. Capacity development for TVETs to continue ongoing technical support for businesses.
- **Coaching.** Coaching on day-to-day business operations and sales.
- **Business development support.** Strategic support based on capacity assessments by T/WASH (e.g., training at production sites or marketplaces to improve a range of supply-, demand-, and management-related skills).
- **Connection to finance.** Support to access loans from financial institutions for materials and equipment (including molds).
- **Providing samples of basic construction and safety equipment.**
- **Standardization.** Development of technical skill manual, standards and bills of quantity.
- **Marketing and promotional materials.** Enhance business partners'

		Advanced Manufacturers	Basic Manufacturers	Mason/Installers	Retailers
Products and services	Full toilet construction	++	+	+	
	Concrete rings, concrete bricks	++			
	Concrete slab with SATO or lid	++	++		
	Mini concrete slab with SATO	+	++		++
	SATO pan retrofit/skirting		++	++	
	Handwashing facilities	+	+		++
	Water treatment products				++

Figure 2: Products and services typically offered by different business partner types

promotional activities with: e.g., sales catalogues, posters, audio-visuals and market day events.

- **Networking.** Build links and functional working relationships among business partners, health extension workers, sales agents, distributors and relevant government offices.
- **Legalization.** Support business registration to formalize operations.
- **Data management.** Provide tools to manage accounting, stock keeping and customer databases.

The support structure established by T/WASH is presented in Figure 3.

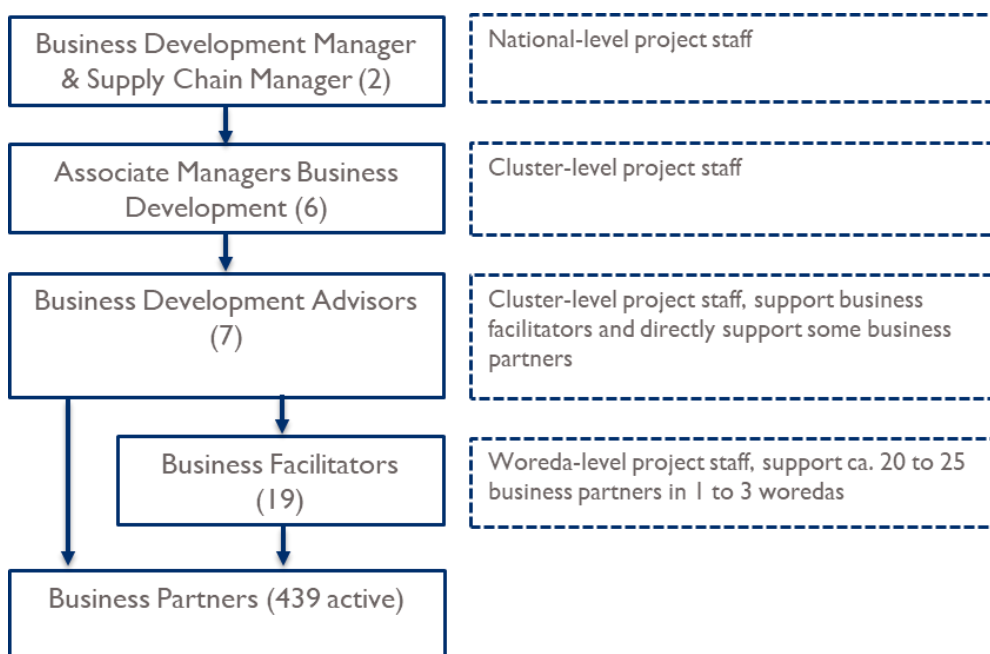


Figure 3: Support structure for business partners (as of June 2022)

4. Findings

4.1. Number of business partners

A total of 559 business partners have been enrolled since 2017 (as of August 2022) within the 59 implementation woredas included in this analysis. On average, almost 10 business partners were enrolled in each woreda with, however, a big variation: in Biyo Awale Woreda (Dire Dawa) only one business partner was enrolled while in Kalu Woreda (Amhara), a total of 37 business partners were enrolled.

The business partners were categorized as:

- 306 (55%) mason/installers
- 128 (23%) retailers or distributors
- 125 (22%) advanced or basic manufacturers

Initially, T/WASH enrolled mostly manufacturers, retailers and distributors as business partners. Starting in 2019, the project emphasis shifted toward the enrollment of mason/installers (see Figure 4) in response to T/WASH learning that a huge amount of potential household demand existed for simple toilet installations and upgrades.

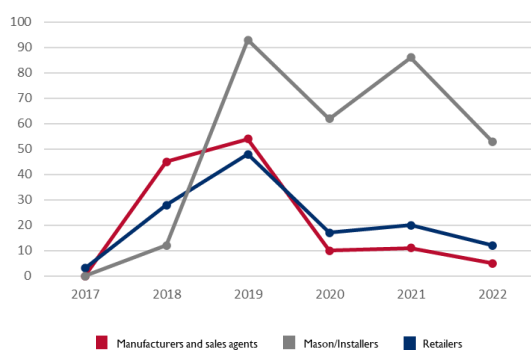


Figure 4: Enrollment of business partners (Source: business partner database, Aug. 2022)

Amhara Region has the largest number of enrolled business partners (198) followed by Oromia (183) and SNNPR (93) (see Figure 5). The highest density of business partners per woreda is found in Afar (18 per woreda) followed by Amhara (12 per woreda). The lowest density can be found

in Dire Dawa (one per woreda), followed by Benishangul-Gumuz and Gambella (each with three per woreda), and Somali (six per woreda).

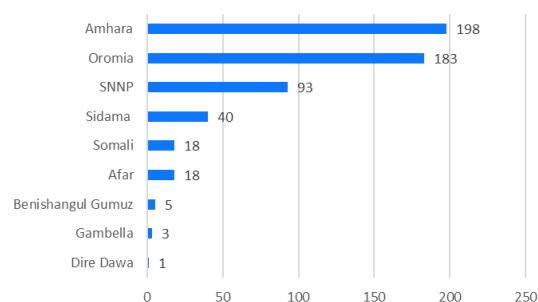


Figure 5: Number of business partners per region (Source: business partner database, Aug. 2022)

4.2. Retention rate

As of August 2022, a total of 439 business partners (out of the 559 enrolled) were reported to be still active (79%), defined as having reported sales within the past three months. The highest percentage of inactive businesses was found among those enrolled during the first full year of the project and among manufacturers, see Figure 6 and Figure 7. While the retention rate for businesses enrolled in 2018 was relatively low, it is encouraging that the retention rate appears to be stable for businesses enrolled between 2019 and 2022.

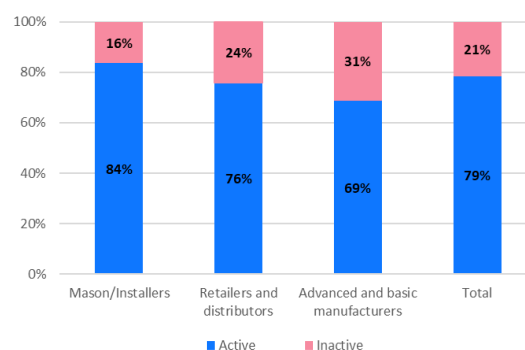


Figure 6: Retention rate by business partner type (Source: business partner database, Aug. 2022)

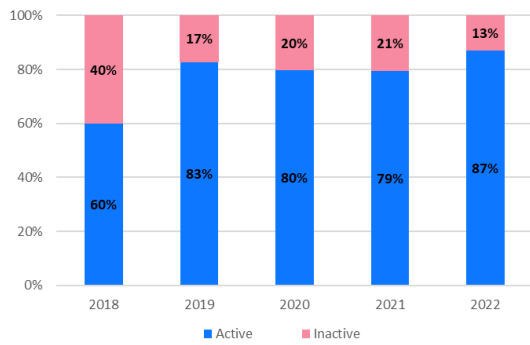


Figure 7: Retention rate by year of enrollment (Source: business partner database, Aug. 2022)

Triangulation with other datasets shows that the percentage of business partners that are actively engaged may be lower: in the business partner assessment only 409 entrepreneurs could be interviewed (73% out of the 559 enrolled) and in the financial viability survey only 62 out of 97 randomly selected business partners could be interviewed (64%). Furthermore, the weekly reports on sales program monitoring indicate that on average only 133 mason/installers are active, which is 43% out of a total of 306 trained mason/installers. The discrepancy between the business partner database and the other datasets can partly be explained by i) seasonality (some business partners may be more active, e.g., during harvesting season when there is higher demand) and ii) part-time work (most mason/installers also offer other construction work and may not be actively selling sanitation products/services every week).

4.3. Sales volume

By mid-2022, more than 100,000 products had been sold to customers, not including business-to-business (B2B) sales (See Figure 8). On average, almost 200 sales/installations were completed by each of the enrolled business partners.

The average number of monthly business-to-consumer (B2C) sales by all enrolled T/WASH business partners steadily grew from 278 in 2018, to 1,083 in 2019, 2,149 in 2020, 2,684 in 2021 and 4,023 in 2022.

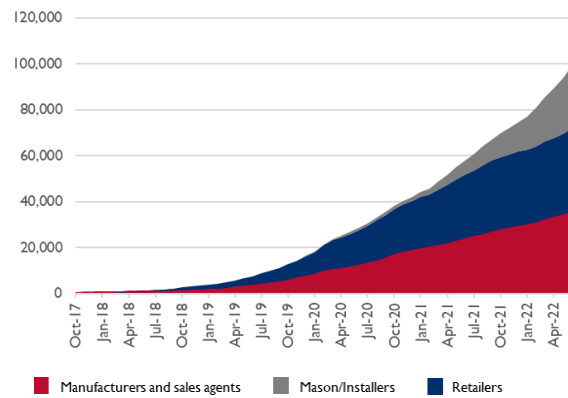


Figure 8: Cumulative sales to customers (Source: sales data from DHIS2, Jun. 2022)

Initially, manufacturers and retailers were responsible for almost all sales. However, since 2021 mason/installers became the leading sales force and made up 60% of all B2C sales in 2022. Manufacturers kept up a steady output over the past three years by serving approximately 1,000 customers per month (See Figure 9). Customers served directly by retailers declined after 2020 mainly because of a push by T/WASH to get products installed by mason/installers (instead of the consumers themselves) to improve installation quality.

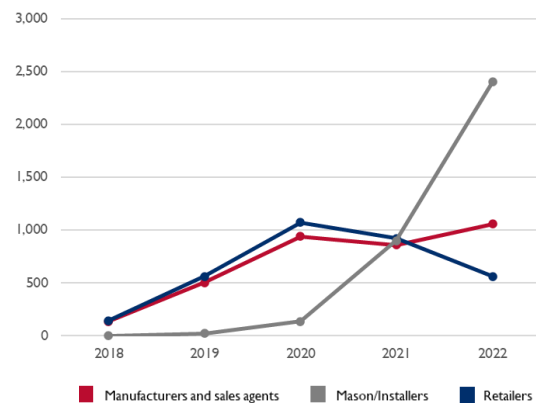


Figure 9: Total sales – average per month (Source: sales Data from DHIS2, Jun. 2022)

Considering that the growing number of business partners is one of the reasons for increased sales,

Figure 10 shows the average number of B2C sales per month per business partner (based on the cumulative number of months business partners have been

enrolled in a specific year). Across the five years and business partner type, average monthly sales per business partner (active and inactive ones) are relatively low: 6.5 sales/month. However, average monthly sales per business partner steadily increased from less than five in 2018 to almost 10 in 2022.

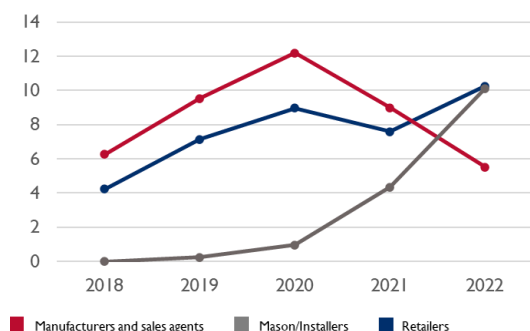


Figure 10: Average monthly sales per business (Source: sales data from DHIS2, Jun 2022 and business partner database, Aug. 2022)

Triangulation with other datasets shows that mason/installers that reported being active during a specific week served 4.8 customers on average (i.e., around 20 per month) (See Figure 11). Given that only about half of the enrolled mason/installers are active in a specific week, an overall average of 10 sales per month seems plausible. Furthermore, in the financial viability survey, the interviewed mason/installers reported that they serve 11 customers per month on average. Thus, monthly sales by active mason/installers in 2022 are estimated at around 10 to 20.

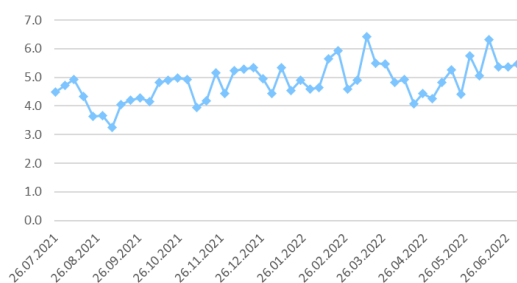


Figure 11: Average weekly sales per MI (Source: sales program monitoring, Jul. 2022)

Manufacturers interviewed as part of the business partner assessment reported serving 21 customers per month and

manufacturers interviewed for the financial viability survey reported serving 23 customers per month (both on average). The sales numbers directly reported by manufacturers (around 20 per month) are about double the overall tracked sales divided by all enrolled manufacturers (around 10 per month). The discrepancy can be explained because only 69% of the manufacturers are active and more active manufacturers are more likely to be available for an interview. Thus, monthly sales by active manufacturers in 2022 are estimated at around 15 to 25.

Finally, retailers reported selling around 34 products (business partner assessment) and 50 products per month (financial viability survey). These numbers are higher than the overall tracked sales divided by all enrolled manufacturers (around 6 per month). While the activity rate also plays a role here, the main reason for the discrepancy is that the overall tracked sales only included B2C sales, while retailers/distributors also report B2B sales in the interviews. Assuming that most sales by mason/installers and manufacturers also included a product sale by the retailer to the other business, an average monthly output of 30 to 50 products seems plausible.

4.4. Installation quality and customer satisfaction

The household installation quality surveys conducted in 2020, 2021 and 2022 provide insights into the consumer experience with different service providers. When randomly selected customers were asked “Who sold the product to you?”, surprisingly almost one in five reported having procured the product from a health extension worker (see Figure 12). HEWs are not expected to sell products directly but rather to refer customers to business partners. Thus, in some instances, the HEWs may have visited the households together with the business partners and were perceived as the main person selling the product. The

main sales channels were reported to be manufacturers and sales agents in 2020, retailers in 2021 and mason/installers in 2022.

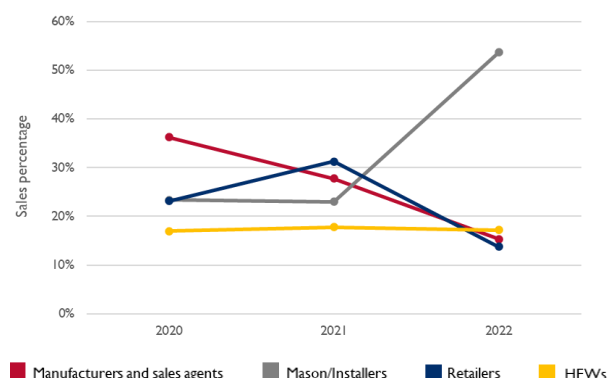


Figure 12: Who sold the product to you? (Source: household installation quality surveys)

Most customers are highly satisfied with the installation service provided by the business partners (see Figure 13). Overall, the services provided by manufacturers, retailers and health extension workers were rated slightly higher than services provided by mason/installers and sales agents. A possible reason is that manufacturers, retailers and HEWs are well established and therefore perceived to provide better services than new actors such as mason/installers and sales agents.

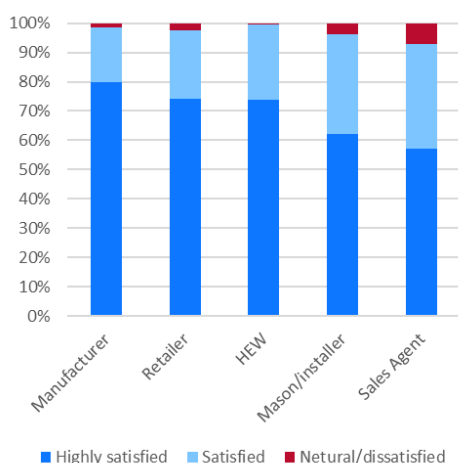


Figure 13: Satisfaction with installation service (Source: household installation quality surveys)

Ideally, the products (e.g., concrete slab, SATO pan or AIM slab) would be directly installed by the service provider and the floor plastered with cement. However, not all business partner types achieve this to

the same extent (see Figure 14). While almost all products supplied by manufacturers (mainly concrete slabs) have been installed, many products supplied by sales agents, health extension workers, mason/installers and retailers have not been installed. This is likely because the plastic products (e.g., SATO pan) were sold without an installation service, and the consumer had not yet procured the installation.

In more than half of the households that purchased a product from a T/WASH business partner, the floor was found to be plastered with cement (which makes the floor washable and contributes to an upgrade from “unimproved” to “improved” status as per the Joint Monitoring Programme definitions). The mason/installers and manufacturers perform well, while households buying a product directly from a sales agent or health extension worker are less likely to invest in a cleanable latrine flooring solution (see Figure 14).

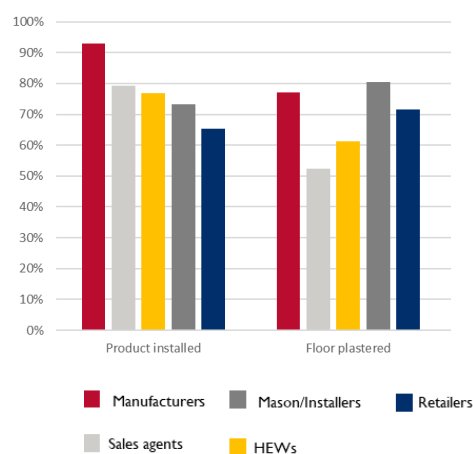


Figure 14: Observation of installation quality (Source: HH installation quality survey 2022)

4.5. Financial viability

To assess the financial viability of each of the business model types (as part of the financial viability survey conducted in the second half of 2021), profit was calculated based on reported sales volume and price and reported costs of production inputs. Furthermore, to explore financial viability

(which is a somewhat subjective measure), the entrepreneurs were asked about their expected monthly net profit, which was then compared to the calculated operating profit. Operating expenses in the assessment included rent for working space, daily laborers and marketing activities.

The interviewed basic **manufacturers** were found to have an average operating profit of 2,435 Birr per month (median: 2,303 Birr, maximum: 6,720 Birr), (see Table 1). This is the highest operating profit compared with the other business model types. However, it is less than the monthly profit reported as expected by the interviewed manufacturers (4,285 Birr for sanitation products/services) and slightly less than the potential income initially calculated by T/WASH (3,000 Birr). On average, concrete slabs with SATO (31%), SATO retrofitting (33%), and SATO skirting (29%) contributed the most to the monthly gross profit. For some manufacturers, a comparison of reported revenue and expenditures resulted in a loss, which indicates that some businesses may not adjust sales prices with the continuously increasing input costs.

Table 1: Simplified monthly profit and loss statement for basic manufacturers (Source: financial viability survey, 2021 Q4)

REVENUE	10,253 Birr	220 USD
Costs of goods	7,478 Birr	161 USD
Operating expenses	340 Birr	7 USD
OPERATING PROFIT	2,435 Birr	52 USD
Average operating margin		24%
EXPECTED PROFIT	4,285 Birr	92 USD
Ratio of expected profit achieved		57%

The interviewed **mason/installers** were found to have an average operating profit of 1,577 Birr per month (median: 1,400 Birr, maximum: 2,930 Birr), (see Table 2). Mason/installers have the highest operating margin compared with the other business model types mainly because of the low expenditures for materials. The monthly profit reported as

expected by the interviewed mason/installers was almost met (1,845 Birr for sanitation products/services), but it is less than the potential income initially calculated by T/WASH (4,500 Birr). On average, SATO retrofitting (43%), SATO skirting (33%), and concrete slabs with SATO (20%) contributed the most to gross profit.

Table 2: Simplified monthly profit and loss statement for mason/installers (Source: financial viability survey, 2021 Q4)

REVENUE	3,344 Birr	72 USD
Costs of goods	1,709 Birr	37 USD
Operating expenses	58 Birr	1 USD
OPERATING PROFIT	1,577 Birr	34 USD
Average operating margin		47%
EXPECTED PROFIT	1,845 Birr	40 USD
Ratio of expected profit achieved		85%

The interviewed **retailers** (including a few distributors) were found to have an average operating profit of 1,434 Birr per month (median: 920 Birr, maximum: 9,178 Birr) (see Table 3). Retailers have the highest monthly revenue compared with the other business model types, however, the lowest operational profit margin. The operating profit is less than the monthly profit reported as expected by the interviewed retailers (4,345 Birr for sanitation products/services) and less than the potential income initially calculated by T/WASH (10,000 Birr). On average, sales of SATO pans (18%), SATO stools (13%), and AIM plastic slabs (20%) contributed the most to their gross profit.

Table 3: Simplified monthly profit and loss statement for retailers/distributors incl. B2B sales (Source: financial viability survey, 2021 Q4)

REVENUE	13,776 Birr	296 USD
Costs of goods	11,513 Birr	247 USD
Operating expenses	829 Birr	18 USD
OPERATING PROFIT	1,434 Birr	31 USD
Average operating margin		10%
EXPECTED PROFIT	4,345 Birr	93 USD
Ratio of expected profit achieved		33%

4.6. Business partner satisfaction

Many entrepreneurs interviewed as part of the financial viability survey believed that they would still offer WASH-related products and services in five years, irrespective of the business model type (Figure 15). This shows that a majority of Transform WASH's business partners believe that selling sanitation products and services is a valid business opportunity. It must be noted, however, that only a few businesses expected all their finances to come from sanitation-related products and services. Results from the financial viability survey showed that 70% of the basic manufacturers, 84% of the mason/installers and 100% of the retailers/distributors also generated income with other products/services.

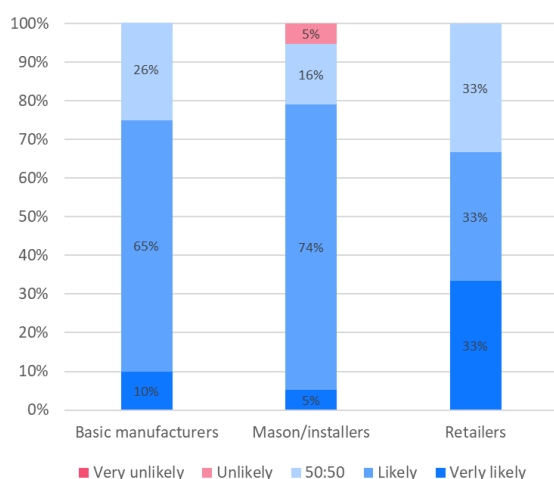


Figure 15: How likely will you still offer WASH-related products and services in 5 years? (Source: Financial viability survey 2021)

Almost 75% of the mason/installers reported being satisfied with the overall profit that they generate from the sales of WASH products and services (Figure 16). This aligns with the finding that, on average, mason/installers generate 85% of the income that they would expect. Although mason/installers “only” serve around 10 to 20 customers per month, three out of four reported being satisfied with their overall sales volume (Figure 17).

Satisfaction with sales volume and profit generated by sanitation products and

services was lower for manufacturers and retailers compared to the mason/installers: 60% of the manufacturers and about 50% of the retailers reported being satisfied. This result indicates that there should be capacity and willingness to serve more customers if the demand for the products/services were to increase.

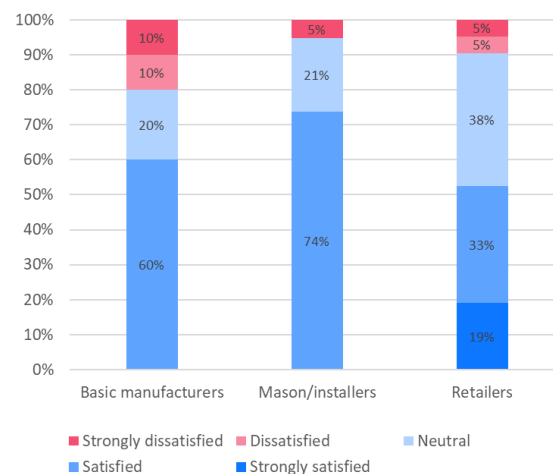


Figure 16: How satisfied are you with the overall profit you generate from the sales of WASH products and services? (Source: Financial viability survey 2021)

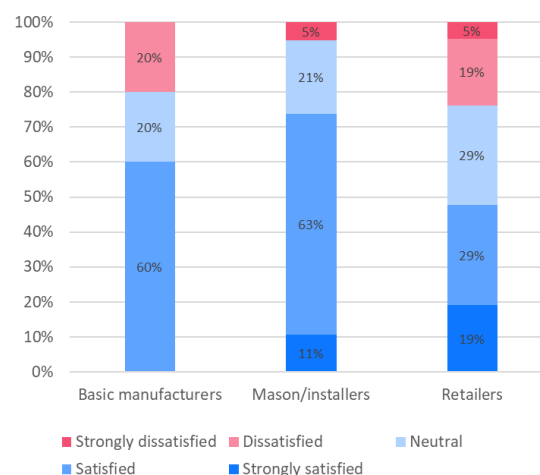


Figure 17: How satisfied are you with your overall sales volume of WASH products and services over a month? (Source: Financial viability survey 2021)

5. Lessons learned and recommendations

The Transform WASH business models are feasible. Plastic product retailers, manufacturers, and mason/installers are generally satisfied with selling sanitation products and services, and the retention rate is high (almost 80%) despite the sales volumes generally being below the businesses' expectations. Most businesses expect to be offering WASH products and services in five years while continuing to generate income also from other activities (such as farming, retail, and construction).

On average, sales and profits are relatively low. Manufacturers, on average, serve around 15 to 25 customers per month, and mason/installers around 10 to 20. Retailers sell around 30 to 50 products per month (including B2B). The low sales volume is one of the main reasons for the relatively low monthly operating profit: manufacturers (2,435 Birr, 52 USD), mason/installers (1,577 Birr, 34 USD) and retailers (1,434 Birr, 31 USD). Results of the financial viability survey indicate that some businesses may not adjust sales prices with the continuously increasing input costs which results in low or negative margins, especially for manufacturers.

Door-to-door simple upgrades are the most promising approach for scaling. This business model became the main sales channel in 2021 and 2022. Mason/installers reported being satisfied with the monthly revenue from the business and, when active, they achieved constant sales (approximately five per week) during 2022 with no significant seasonal pattern. Sales by mason/installers also positively impacted retailers and manufacturers.

Key recommendations:

- Adjust the generic business models with more realistic sales figures to manage the expectations of business partners and stakeholders.
- Continue working with existing businesses (for manufacturers and retailers) that do not only offer WASH products and services because this would likely not be financially viable.
- Continue expanding the number of trained mason/installers as the approach seems to be scalable. The retention rate of mason/installers needs to be tracked carefully.
- Continue improving the business partner database and business partner surveys to assess retention rates more systematically and regularly, as well as average monthly sales, financial viability and satisfaction (disaggregated by business type).

Annex: Detailed description of the business models

Table 4: Description of business models for advanced and basic manufacturers





	Advanced product manufacturing and construction	Basic product manufacturing and installation
Target consumer	Rural and urban households with unimproved traditional latrines, open pits or no latrines that plan (and are already convinced about the need) to construct improved toilet facilities.	Rural and urban households with unimproved traditional latrines, open pits or no latrines that plan (and are already convinced about the need) to construct improved toilet facilities.
Household need	To have a latrine or to upgrade latrine with wood/mud floor with the intention to reduce smell and flies, to make floor washable and to improve cleanliness, comfort, and user experience.	To have a latrine or to upgrade latrine with wood/mud floor with the intention to reduce smell and flies, to make floor washable and to improve cleanliness, comfort, and user experience.
Products / services	<p>Manufacturing of circular or rectangular concrete slabs with SATO or lid (reinforced with iron bar or bamboo), construction services for superstructure, pit lining, and on-site flooring.</p> 	<p>Manufacturing of small precast slabs of 60 cm x 80 cm with SATO (reinforced with iron bar or bamboo), and handwashing facilities. Some also manufacture and sell regular-sized concrete slabs.</p> 
Reverse value chain	Household (HH) customer < sales agent < local sanitation product manufacturer at woreda level (mason) < sanitation product / raw material retailers	HH customer < sales agent < local sanitation product manufacturer at kebele level (mason) < sanitation product / raw material retailers
Sales points	Masons direct sales for walk-in customers, door-to-door promotion by sales agents and masons, market displays and model latrines at public areas, market day events, HEW/ HDA health promotion activities, and promotion in community events.	Masons direct sales for walk-in customers, door-to-door promotion by sales agents and masons, market displays and model latrines at public areas, market day events, HEW/ HDA health promotion activities, and promotion in community events.
Potential profit	The mason is expected to get an average monthly net profit of 15,548 Birr for selling 200 products.	The mason is expected to get an average monthly net profit of 3,162 Birr for selling 70 SATO precast slabs.

Table 5: Description of business models for mason/installers and retailers

	Door-to-door simple upgrades	Plastic product sales and support
Target consumer	Rural or urban households with unimproved traditional latrines or open pits.	Rural households with unimproved traditional latrines or open pits. Focus on those living far from urban centers (i.e. without access to installation services) and those facing low water availability.
Household need	To upgrade latrine with open hole (with wood/mud or concrete floor) with the intention to reduce smell and flies, to make floor washable and to improve cleanliness, comfort and user experience.	To upgrade latrine with open hole (with wood/mud or concrete floor) with the intention to reduce smell and flies, to make floor washable and to improve cleanliness, comfort and user experience.
Products / services	<p>Installation of SATO and concrete plastering of floor (naming used by T/WASH: "skirting" if installed on wood/mud latrine, "retrofit" if installed on concrete slab).</p> 	<p>Sales of SATO pan and SATO stool (B2B sale) and AIM plastic slabs (for installation by the household). Handwashing and menstrual hygiene products, household water treatment products.</p> 
Reverse value chain	HH customer < mobile mason with basic skills for sales and installation (mason/installer) < sanitation product retailer / raw material retailer / basic or advanced manufacturer	HH customer < sales agent < retailers at woreda level < distributor (the retailers also sell to slab manufacturers and mason/installers)
Sales points	Door-to-door sales pitch directly by mason/installers, referrals from retailers and basic/advanced manufacturers, supported by HEW community outreach for awareness creation.	Direct sales for walk-in customers, door-to-door promotion by sales agents, market displays and model latrines at public areas, market day events, HEW/HDA health promotion activities, and promotion in community events.
Potential profit	The mason/installer is expected to get an average monthly net profit of up to 4,500 Birr for installing improved latrines at 50 households.	The retailer is expected to get an average monthly net profit of 4,600 Birr for selling 50 AIM and 5,250 Birr for selling 150 SATOs.