



# Small Water Enterprises Go Digital: Safe Water Network in Ghana

# WHAT IS A SMALL WATER ENTERPRISE IN GHANA?



SEKESUA STATION, GHANA



## SOURCE WATER

Assessed and managed for sustainability

## TREATMENT

Sited and sized for community needs

## ROLE OF LEADERS

Trained to run the water enterprise like business

## STANDPIPES

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Treated water piped to public access points in community

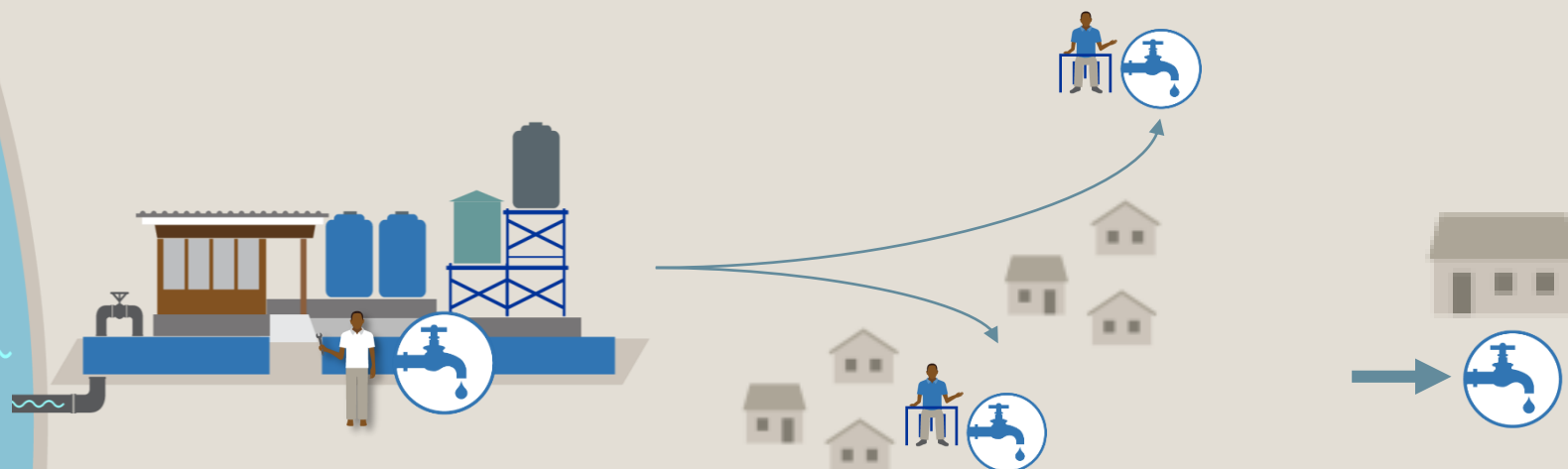
## HOUSEHOLD

## CONNECTIONS

Water piped to property



# WHAT IS A SMALL WATER ENTERPRISE IN GHANA?



TREATMENT STATION

STANDPIPES

HOUSEHOLD  
CONNECTIONS

## SAFE & AFFORDABLE WATER

~3 cents (GHS0.12)  
/person for daily needs

## USER FEES PAY FOR

- Station Operations
- Technical services
- Reserves for future repairs and improvements

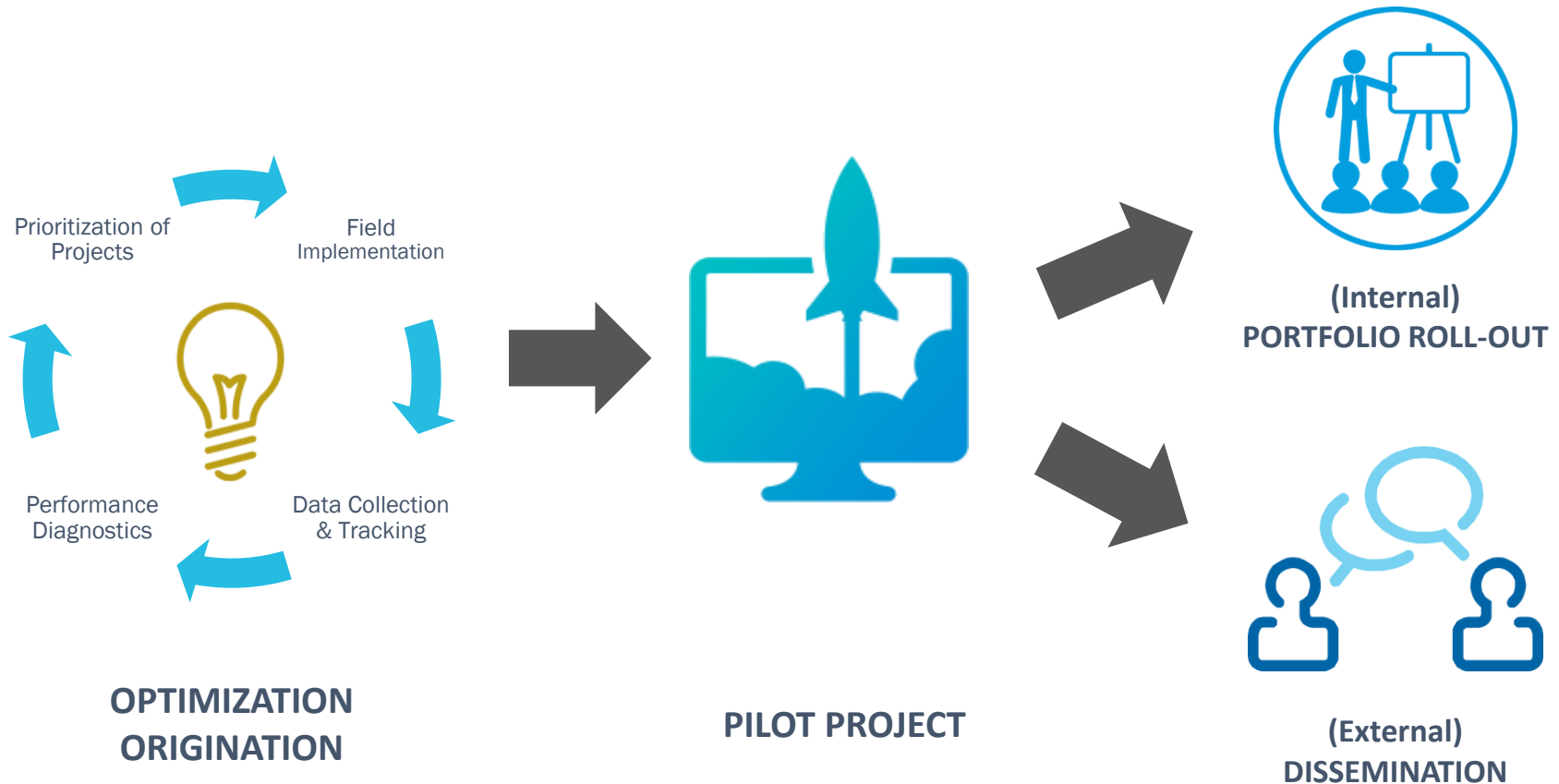
## THE PROBLEM

- Under Collection
- Customer Disputes
- Resource Intensive
- Security Risk
- Difficult to Collect Data



# OPTIMIZATION PROCESS

*The Process is grounded by a robust M&E system, followed by pilot projects and analytics, culminating in knowledge dissemination to make the case for scaling SWEs.*



# OPTIMIZATION PIPELINE

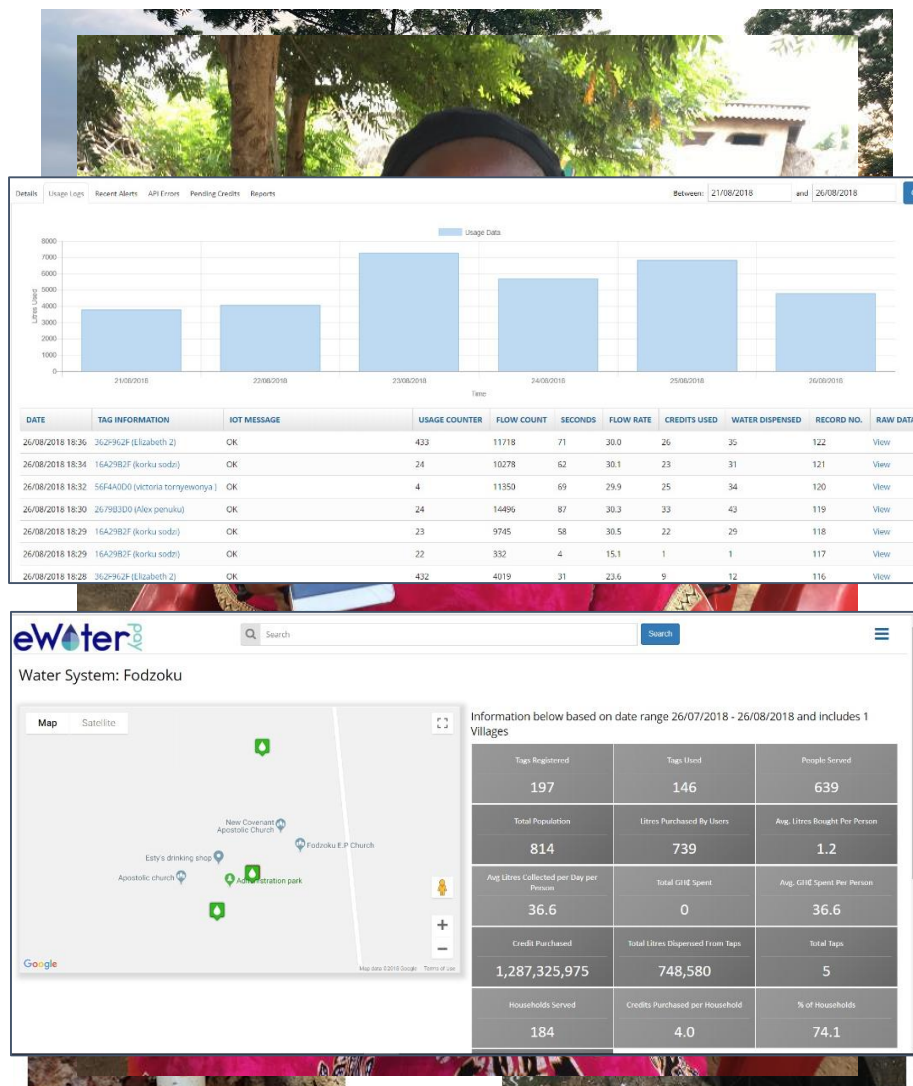
Optimizations	Consumer Acceptance	Affordability	Water Quality	Sustainability		
				Operational	Financial	Environmental
Pricing	√	√			√	
Solar				√	√	√
Household Connections	√	√	√	√	√	
Mobile Monitoring				√		
Digital Finance	√	√		√	√	√
Microfinance	√	√			√	
Water Quality Assurance	√		√	√		
Branding	√					

## THE PROBLEM

1. DIGITIZE  
TRANSACTIONS

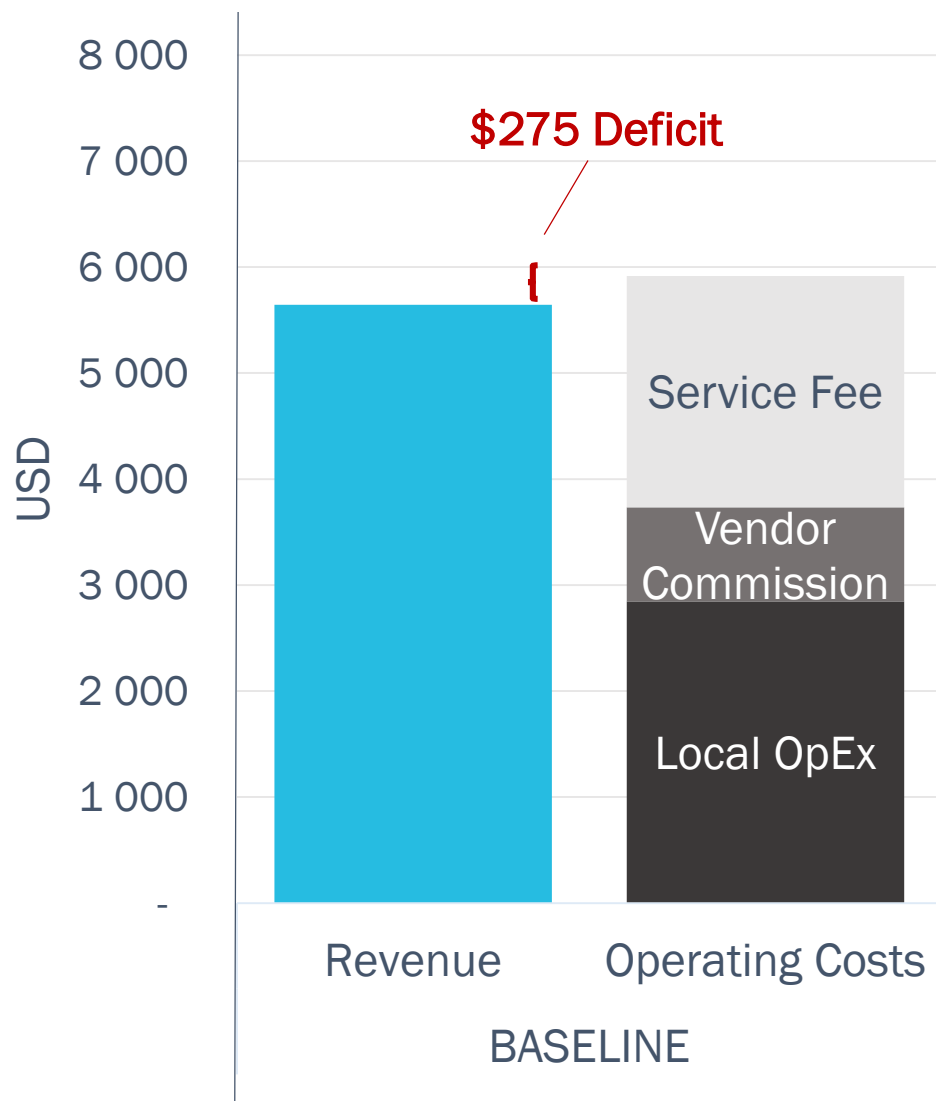
2. GO CASHLESS with  
MOBILE MONEY

3. AUTOMATE DATA  
COLLECTION



Prepaid Meters for Households

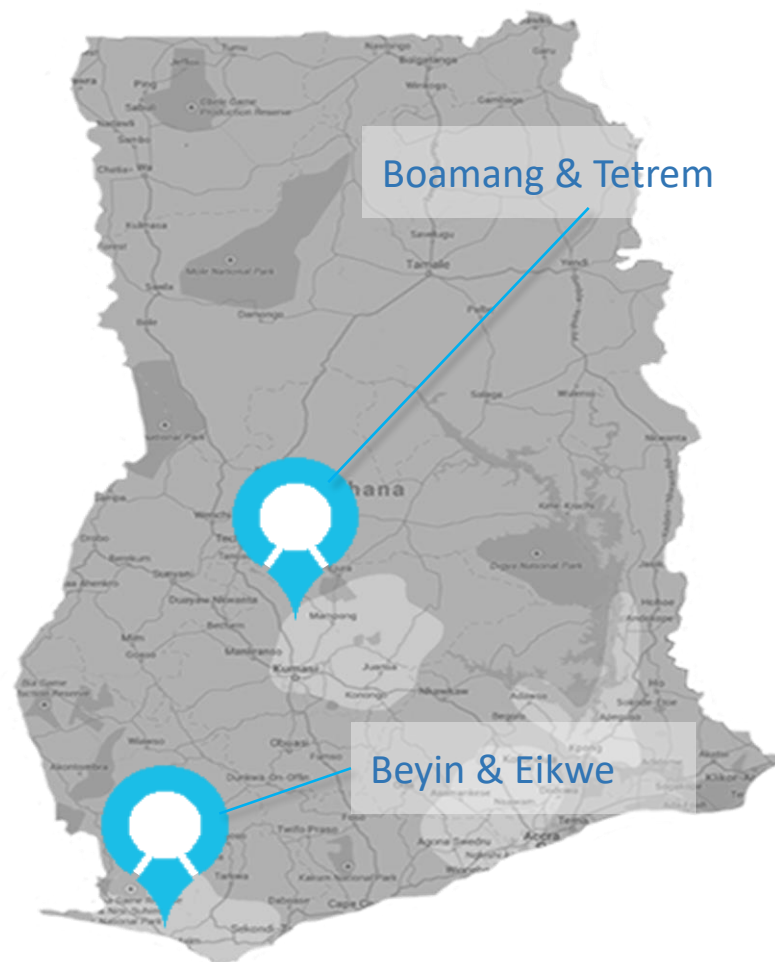
## Annual Financial Performance (Avg. Station)





*Piloting smart meters in 100 households connections (HHCs).*

- Partnered with CGAP
- Piloting smart meters
  - Prepaid
  - Mobile-money enabled
- Piloting in four communities
  - Ashanti Region: Boamang & Tetrem
  - Western Region: Beyin & Eikwe
- Timeline: May-Sept 2017



# PILOT RESULTS: SMART METERS

**52%**

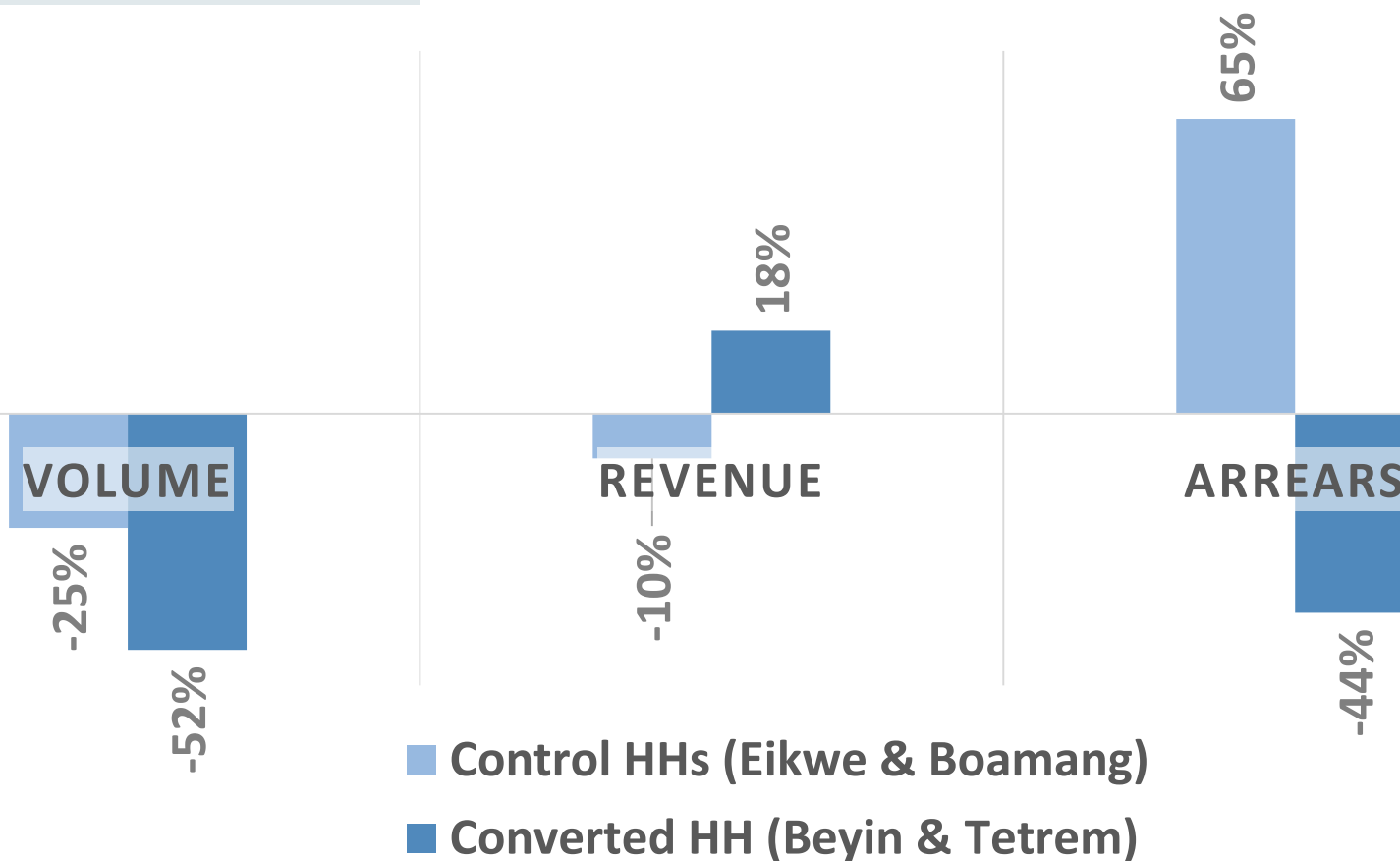
Volume Reduction  
(**25%** compared  
to control)

**18%**

Revenue Increase

**44%**

Arrears Reduction



# PILOT RESULTS: MOBILE MONEY

Mobile Money: **14% transactions** & **10% revenue** during pilot



# CONSUMER CONSIDERATIONS



"I pay the  
mana  
better n  
b  
Lizzie B

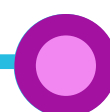
"I like the security, no one can  
use the water when I am not  
home."  
- Charles, Hotel Caretaker



April  
2017



July  
2017



Nov  
2017



# OPERATOR CONSIDERATIONS



Michael,  
Tetrem Operator



Eric, Beyin Operator

- Significant reduction to time spent chasing bill payments
- Better relationships with customers (from bill collector to water provider)
- Recommend spending more time training users
- More availability to drive sales and manage water quality

*We are rolling out prepaid meters, ATMs, and Mobile Money across our portfolio.*

1. Prepaid meters are essential for financial viability
2. Customers prefer prepaid meters, but rigorous training is required
3. Prepaid meters reduces OpEx and improves Operator job satisfaction
4. Prepaid meter process must be fully digitized to realize full benefits







Thank you



*From paper to digital prototyping – mobile money integrations & field learnings.*

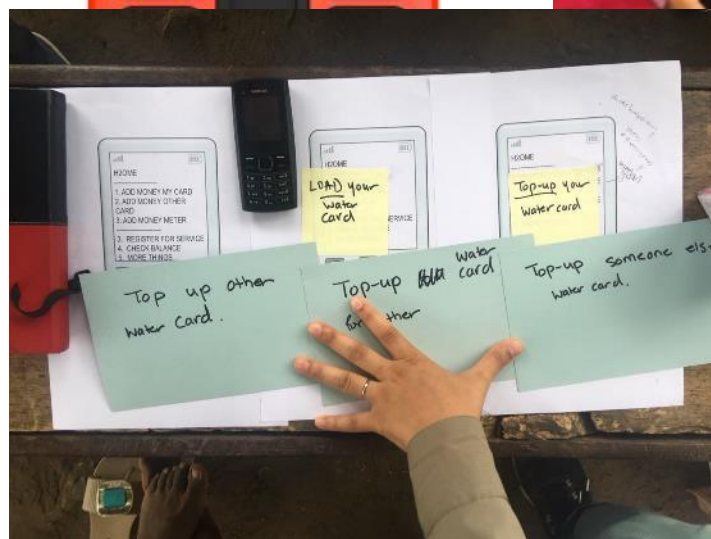
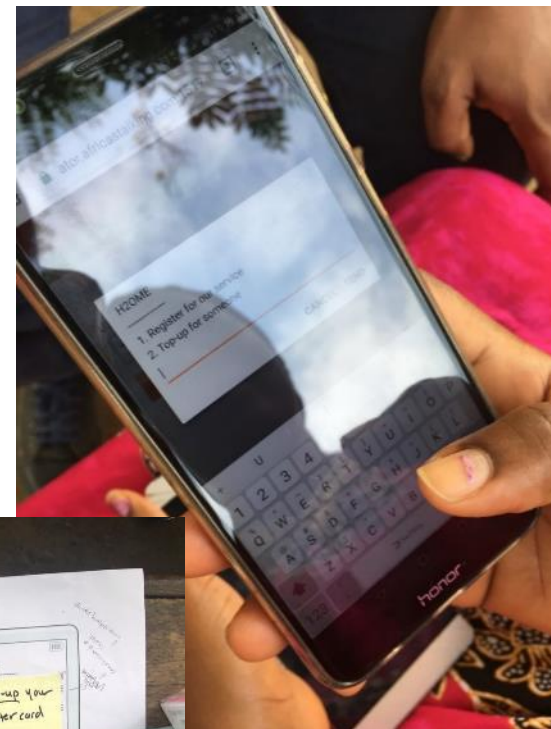
USSD

Management Platform

Virtual Bank Account

Mobile App

Mwater Integrations





*From paper to digital prototyping – mobile money integrations & field learnings.*

- KYCs for consumer programming
- Model hub for SWE learning on automation, digital finance
- Direct subsidy programs
- Microloans
- Pricing Strategy

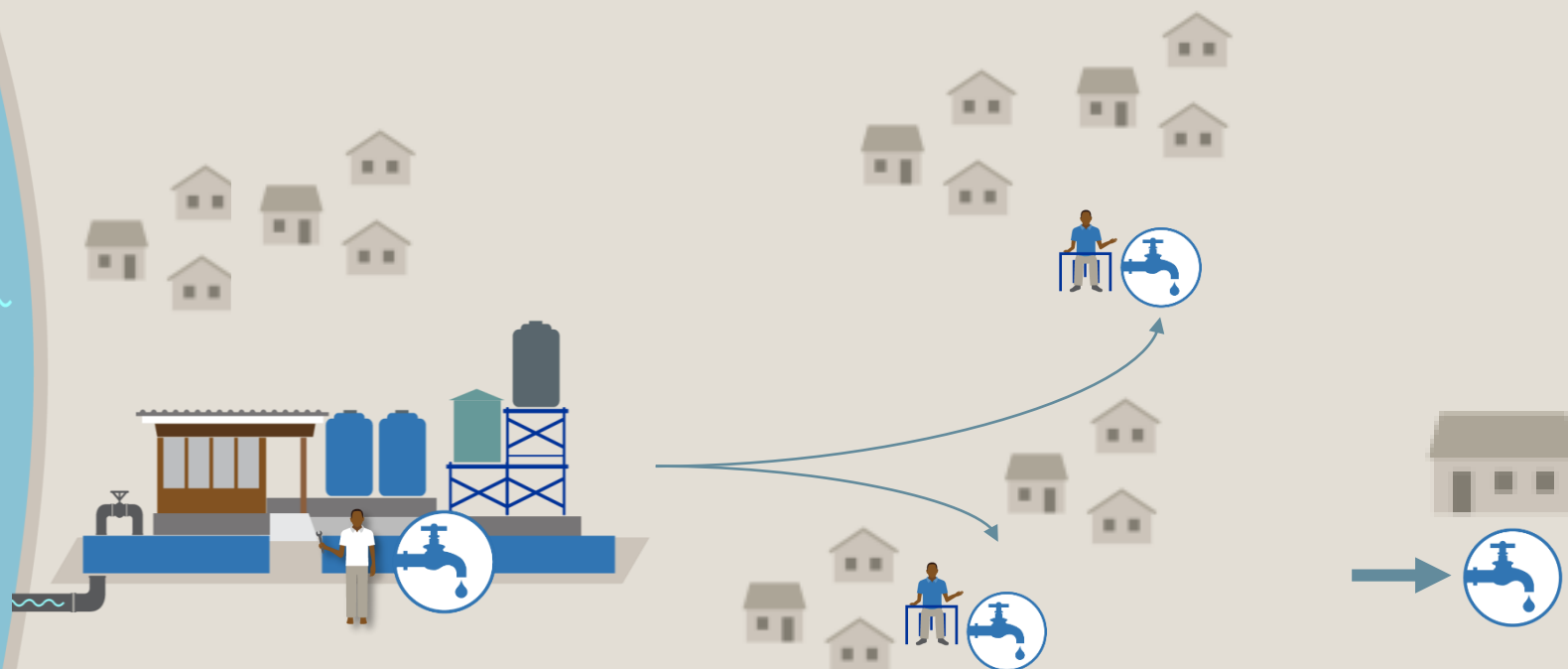


# Operator Considerations

*Consumers responded very well to additional training.*



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DISTRIBUTION PIPES

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