

# CITYTAPS SMART PAY-AS-YOU-GO PROJECT IN **MALINDI, KENYA**

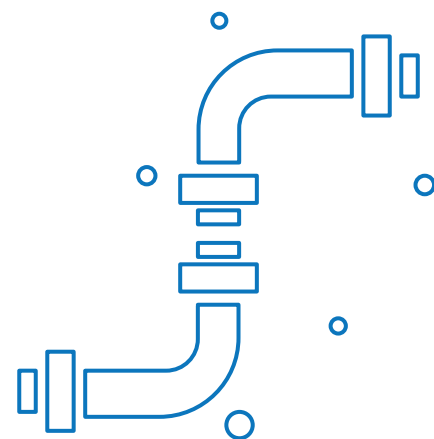
2020-2021 (MAWASCO)





CityTaps' vision is running water  
in every urban home.

## IN PARTNERSHIP WITH MAWASCO, CITYTAPS HAS INSTALLED 600 WATER METERS



### Introduction:

CityTaps was established in 2015 to solve a global issue: **over 2 billion urban people live without access to running water at home.**

CityTaps developed CTSuite, which leverages innovative technology - a smart and prepaid water meter and software - and existing mobile money systems. **CityTaps and Malindi Water and Sewerage Company (MAWASCO)**, piloted CTSuite in 2020 in Watamu, Kilifi County, Kenya. This pilot project in Kenya, implemented in partnership with MAWASCO, was fully funded by the **FASEP, French General Directorate of the Treasury.**

Founded in 2006, **MAWASCO's** mandate is to provide adequate quality water and proper sanitation services to its customers within the Malindi District, in the most efficient and cost effective way.



**Research 8020** conducted this quantitative survey to evaluate the impact of the water solution for beneficiaries.

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**Through this pilot, 600 water connections are now equipped with CTSuites in Malindi.**

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### Main Conclusions:

**67%**

of MAWASCO subscribers have seen an improvement in their quality of life



**30%** of MAWASCO subscribers feel that their water budget management has improved.



**88%** said the solution was easy to use.



**89%** said it was easy to pay by phone/USDD.

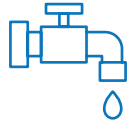


Type of MAWASCO  
**SUBSCRIBER**



## User Profiles

**600**  
water  
connections  
equipped with  
CTSuite



**3010** Direct beneficiaries

(households on average are made up of 5 family members).



**758** Indirect beneficiaries

(21% of households share their water with 2 to 10 other people).

**3768** people now have sustainable access to water, using CTSuite PAYGO system.

**54%** of the people impacted earn less than US\$100/month.

Households disconnected for high arrears can pay up to 3 to 7 times more for alternative water sources than regulated, utility piped water tariffs. Water access at home is both cheaper and of better quality. CTSuite guarantees upfront payment in a way that subscribers can sustainably afford (any amount, any time, with any phone). This solution is ideal for MAWASCO subscribers who do not have consistent or disposable incomes.



The endline survey was administered to **215 subscribers**, of which:

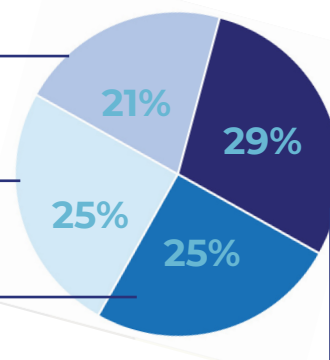
Subscriber Monthly Income:

above 200\$

below 200\$

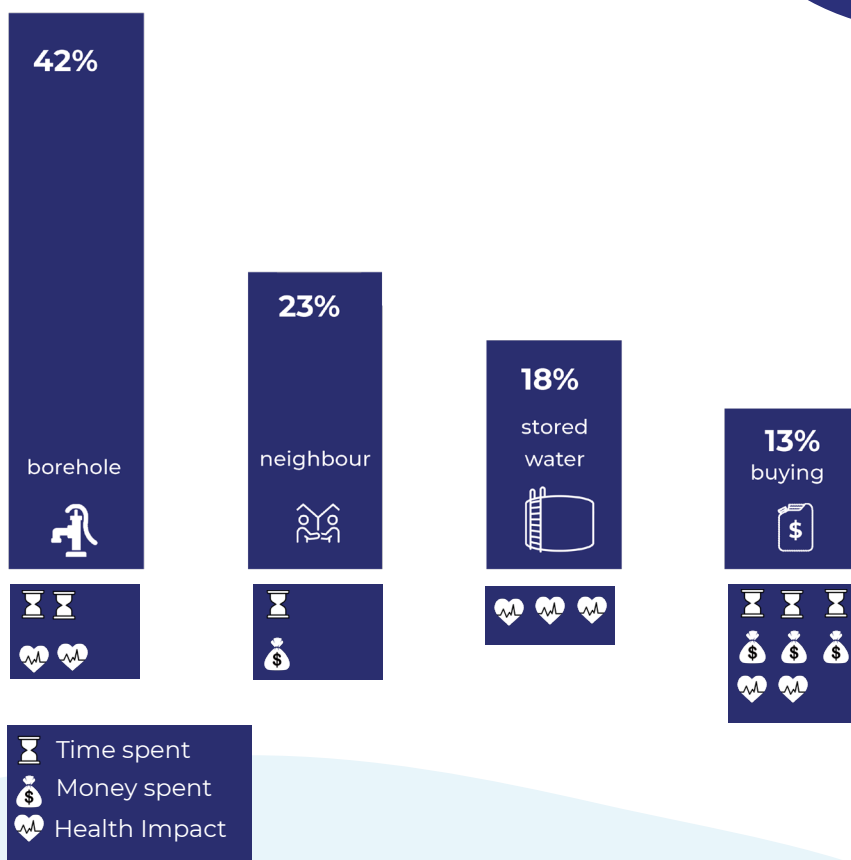
below 100\$

below 50\$



Before MAWASCO installed **smart pay-as-you-go water meters** on each subscribers' plot, they were often disconnected for long periods of time, and had to find water from other sources.

Previous sources of water when subscribers were disconnected:



**39%** of subscribers had previously been disconnected.

Over the last 5 years, on average, families were disconnected **5%**

When subscribers are disconnected and have to resort to an alternative water source, there is no water quality control.

Water bought in jerry cans or from storage can be contaminated and therefore has consequences on people's health. It can also be up to 3 to 7 times more expensive than piped-water.

With reliable water access now at home, MAWASCO subscribers save time. Over the past five years, for the 18% who have been disconnected for more than 4 days because of accrued arrears, this means they no longer have to fetch water with heavy jerrycans from the borehole (42%) or from their neighbours (23%). With CTSuite, water is easily available, more convenient, less stressful and means subscribers do not find themselves without water for any period of time.





Benefits  
**FOR**  
**SUBSCRIBERS**



## Global **Satisfaction** with the PAYGO Solution

By switching to MAWASCO's PAYGO solution, subscribers see the advantages: they gain time, money, and peace of mind.

### Positive impacts:



Better Budget Management



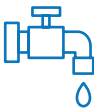
PAYGO solution is free of charge



Automatic disconnection and reconnection after payment (no human intervention)



Less Stress



Water Easily Available



Easy to Pay

With CityTaps' CTSuite solution, beneficiaries are able to use mobile money to prepay for running water at home with any mobile phone, at any time, for any amount, and improve their household budget. At-home water is available to even the poorest residents who can buy water as and when they need.

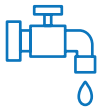
# 75%

of subscribers gave positive feedback and responses to why they were happy with the new MAWASCO PAYGO solution.

# COVID and the Importance of Water Access At Home and the Digitalization of Water Services

Safely managed water, sanitation, and hygiene (WASH) services are an essential part of preventing and protecting human health during infectious disease outbreaks, including the current **COVID-19 pandemic**.

Water access at home means improved hygiene and better health. Water from alternative sources (tankers, delivery services, standpipes, unimproved sources) is often untreated or becomes contaminated after being stored in dirty containers.



Tap water means subscribers have more water available for different uses (drinking water, cooking, bathing, laundry, cleaning..)



Access to handwashing facilities at home - one of most effective ways of keeping diseases like COVID at bay



To fight viruses, families have highlighted their increased desire and need to have water at home to slow the spread of contamination by avoiding contact



By using Mobile Money for sustainable access to water at home, subscribers do not have to go to the water utility office, bank, post office or agents to pay for their water which means less contact with people and less risk of infection

## Digitalization of Water Services



Automatic meter reading allows for utilities to monitor water consumption remotely, without exposing their field staff to the risk of contamination.



The remote meter reading also means that invoice collection is fully automated.



Payment by Mobile Money reduces over-the-counter payments and reduces exposure of cashiers and population to the risk of infection.



From the central software platform, the system allows rapid water tariff change implementation. For example, during the COVID pandemic, it was easy to comply with government requests and make the first six meter cubes of water free.



# Benefits of CTSuite for **MAWASCO**



## Pay-As-You-Go leads to a Positive Cash-Flow



Thanks to subscribers' pre-payments, MAWASCO is able to improve its financials to serve 100% of its subscribers, 100% of the time by helping them reduce accounts receivable from low-income households.

**Subscribers disconnected for high arrears have been reconnected to the network and make small daily micro-payments towards their accrued debts.**

**126%**  
Cash  
Collection  
Rate

**16.5**  
points of  
improvement in  
creditworthiness in  
this project scope



## Potential to Optimize Operational Expenses

CTSuite avoids manual monthly meter readings, manual water access opening and closing, invoicing, and payment collection. Through an Automated Metering Infrastructure, smart meters ensure automatic data collection in near real-time which reduces the OPEX, avoids data errors and identifies non-revenue water causes more rapidly (meter inaccuracies, fraud attempts, leaks etc.). Improving the efficiency of a utility like MAWASCO helps them to save money and time which they can invest more appropriately. Studies to quantify OPEX savings resulting from CTSuite deployment are still underway as of this report's publication.

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*We had good technical support from CityTaps and good financial support from Untapped. Now our meter readers have turned into problem solvers. The customer care have become data analysts and experts. The debt collectors are now focusing on repayment plans.*

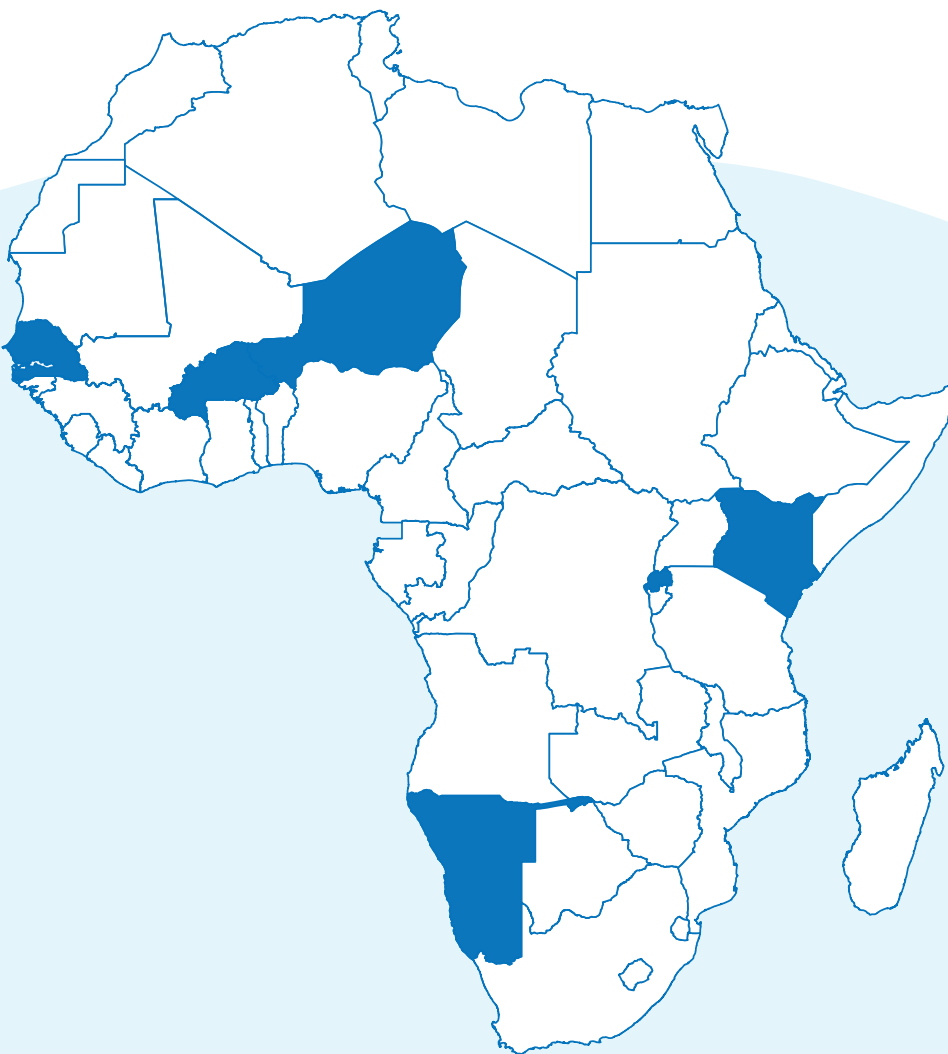
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Kingston Mulewa  
Audit Manager and PAYGO Project  
Manager, MAWASCO





## Adapting the PAYGO solution to the local environments and to each individual utility's special needs



Today, CityTaps is running projects in **Niger, Namibia, Senegal, Burkina Faso, Rwanda & Kenya.**