



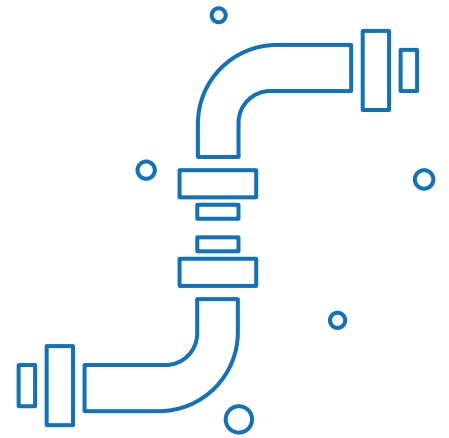
CITYTAPS

CITYTAPS PILOT IN
NIAMEY, NIGER
CONCLUSIONS

2016-2019 (SEEN Dey Dey)

CityTaps' vision is running water
in every urban home.

OUR GOAL IS TO REACH 2 MILLION PEOPLE BY 2022



Introduction:

CityTaps was established in 2015 to solve a global issue: **nearly 1 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 a Veolia Africa subsidiary, Société d'Exploitation des Eaux du Niger (SEEN), first piloted CTSuite in October 2016 in Niamey, Niger. The water PAYGO by Mobile Money offered by SEEN to its subscribers is called SEEN Dey Dey which means SEEN "fair, fair".

This pilot, implemented in partnership with SEEN and Orange Niger, is partially funded by the GSMA through the Mobile for Development Utilities Innovation Fund.

Sahel Consulting Group conducted quantitative baseline and endline surveys to provide data for this report. Omedia conducted an additional qualitative study near the end of the project to provide additional quantitative findings.

Through this pilot, 1,325 water connections are now equipped with CTSuites in Niamey.

Main Conclusions:

A large dark blue circle containing the text "90% of SEEN subscribers are satisfied with SEEN Dey Dey". In the background, there is a light blue circle and a dark blue circle.

90%
of SEEN
subscribers are
satisfied with
SEEN Dey Dey



82% of existing SEEN subscribers feel that their water budget management has improved to "good or excellent" with SEEN Dey Dey.



168 subscribers reimbursed their accumulated arrears with individualized repayment schedules.



86 mins and up to US\$3,14 per m³ of water saved by new subscribers by switching from water vendors to SEEN Dey Dey.



Benefits of
SEEN Dey Dey for
BENEFICIARIES

User Profiles

1325
CTSuites
installed



2650 households
directly impacted
(2 households on average share a water connection).



13250 direct
beneficiaries
(households comprise 5 family members on average).



7950 indirect
beneficiaries
(3 people on average access piped water from neighbors without living on plots equipped with a water connection).

Half of the direct
beneficiaries are male and
half are female.

33% of those
beneficiaries are under 13.

73% of households
using SEEN Dey Dey earn less
than US\$10 daily.

The pilot benefits three different types of subscribers:



Existing SEEN Subscribers

Subscribers who were already connected to the SEEN piped water before the launch of the pilot.



Reconnected SEEN subscribers

Subscribers who had been disconnected because of arrears and are reconnected to SEEN piped water thanks to SEEN Dey Dey.



New SEEN subscribers

Subscribers who have always relied on delivery from pushcart vendors and are now connected to piped water thanks to SEEN Dey Dey.

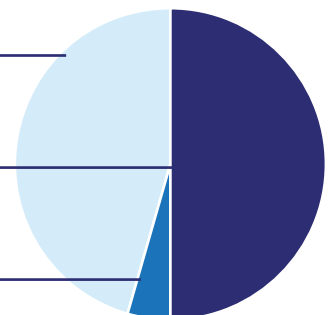


The endline survey was administered to **193 subscribers**, of which:

87 new
subscribers

96 existing
subscribers

8 reconnected
subscribers



Global Satisfaction

SEEN installs a **smart pay-as-you-go water meter** on each subscribers' plot.



The subscribers then use mobile money to **credit their "water balance"** - for any amount, at any time, with any phone - automatically opening water access at the CTMeter.

90%
of subscribers are
satisfied with
SEEN Dey Dey

100%
of women would
recommend SEEN
Dey Dey to someone
else

"With the prepaid meter, you can pay at any time and in any place. Even if it's nighttime, you can top up your account."



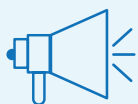
Subscribers top up on average US\$6 twice a month, for an average of US\$12 per month for water service at home.

Qualitative data shows that beneficiaries chose SEEN Dey Dey...

Based on:



The experience of neighbors and relatives.



Citytaps and SEEN information campaigns.

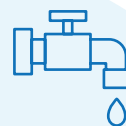


Informal chats in women groups.

Because:



Prepayment is done on fair pricing based on real, accurate consumption.



It is convenient to access water at home.

"With the prepaid meter, we're more comfortable, you consume what you've recharged into your account, it protects us from suspicious bills."

"I recommend it to everyone. I have a group of women at home, when they came to my house for the meeting, I told them about the meter."



Benefits per
**TYPE OF
SUSCRIBER**



1. Existing **SEEN** Subscribers



By switching to SEEN Dey Dey, the existing SEEN subscribers gain time, money, and peace of mind.

Time

The time necessary to pay for water has **decreased by 53 minutes per month** using SEEN Dey Dey as subscribers no longer need to go to the SEEN office.



90%

of previous subscribers described long lines at the SEEN office.

“To pay the bill it is no longer necessary to wake up very early in the morning, to take time off work, and go and get in a long line with jostling.”

Money

Monthly water-related expenses **decreased by \$2.81 per month** per subscriber because:



They immediately get notified by SMS when there is a leak on their plot and avoid unnecessary consumption.



They avoid paying reconnection fees.

Better water budget management and peace of mind

Subscribers feel comfortable because they are guaranteed that water will be available immediately upon top up and that any disconnection for low credit will be short.

“With this new meter, I can manage my consumption and expenses... I know exactly how much water I need per week and per month.”

82%

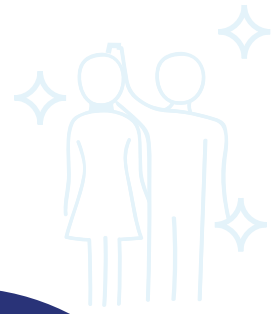
of existing SEEN subscribers feel that their water budget management has improved from “not good” to “good or excellent” with SEEN Dey Dey



Furthermore, the qualitative study revealed that some women and children who used to pay bills at SEEN were **robbed on the way**.

“When it was necessary to take a taxi to pay the bill, I used to send my child who was robbed and beaten by thieves.”

2. Reconnected **SEEN** Subscribers



Reconnected subscribers is the category most satisfied by SEEN Dey Dey.

Daily Debt Repayment



SEEN subscribers who were disconnected because of arrears have been reconnected to the utility network. **In return, they make daily micropayments towards their debts.**

100%
of reconnected
subscribers are
satisfied by SEEN
Dey Dey

“If you top up, little by little by little, it will take the debt away, that’s what makes us happy.”

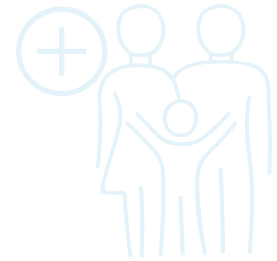
Increased Households’ Well Being Vis-à-vis Neighbors



Reconnected subscribers do not feel ashamed anymore vis-à-vis neighbors as they avoid the humiliation of the meter cut-off and having to beg neighbors for water.

“Now we all have water. I no longer have to be humiliated or disturb anyone in order to have water to drink... No one can laugh at us.”

3. New SEEN Subscribers



Subscribers who relied on alternative sources of water used to pay a triple tax on poverty in Money, Time and Health.



85%

of new subscribers used to rely on the garoua (home water delivery service) for water before SEEN Dey Dey.

Women suffered the most from the situation (**62% of the water collection burden is handled by women** according to a 2009 UNICEF study).

Money



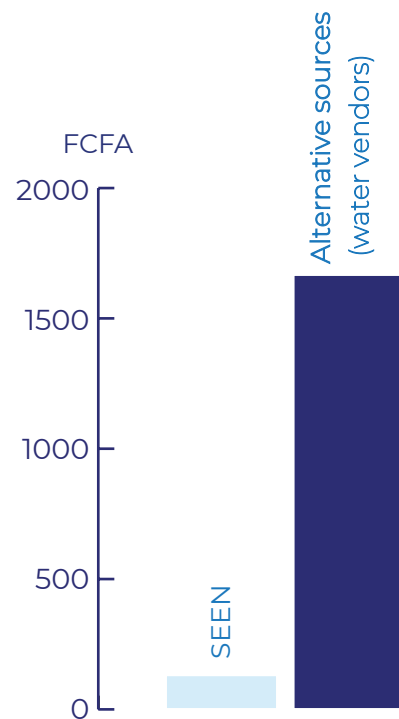
New subscribers **save up to 94% on spendings per m³ of water** consumed.

The regulated SEEN water price is \$0.21 US per m³, whereas the price of the water delivery service stands between \$1.53 US and \$3.37 US per m³.

With these savings, households report that they can buy basic necessities or decide to save for the future.

"The money from the savings, we can put it into the tontine (savings group)."

"The money there has helped us a lot, because with the savings, it's easy to pay a bag of rice and other food."



Price comparison of water per m³ in FCFA.

Water used to create small women businesses



The qualitative study shows that some women use water to create economic activities. They sell drinks, ice or vegetables they grow.

« I have seen the benefits because I make lemon juice and ice to sell.»

"I have a little garden that I planted and my elderly neighbors come every morning to buy from me."

Time



Without water at home, new subscribers **waited on average 1h33min per day** to obtain water.

New subscribers would wait in line at a standpipe every day before hauling heavy jerrycans back to their homes, or waiting for the water delivery service.

"We used to buy water from the garoua; you give them your money to deliver the water but it was extremely difficult. Since we installed the prepaid meter, we no longer have a water problem."



7 mins is all it takes to top up water credit with SEEN Dey Dey.

Women reported that the extra time gained with SEEN Dey Dey would be used:



86 mins gained everytime they access water - this is time they can use for other activities.



Doing chores



Working



Resting

Health

No More Water-Related Sickness



Water from alternative sources (tankers, delivery services, standpipes) often becomes contaminated during transportation and storage in dirty containers.

Respondents judged the **cleanliness of the SEEN water** compared to the alternative sources by the water's low turbidity (low cloudiness or lack of suspended solids in water).

"Garoua brought us the water, you don't know what I saw in the water, the tobacco he put in his mouth... when he poured the water into the container, the tobacco fell out of his mouth into the container... and we had to drink it."



Respondents associate the piped water's purity with a health improvement.

"Getting sick has completely decreased, because we no longer have to consume water that can make us sick. Now really the water is very clean."

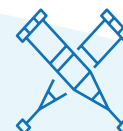
Health issues related to untreated or contaminated alternative water sources include:



Intestinal issues



Skin irritations



Fatigue

No More Water Duty Burden

Water duty was furthermore perceived by women as a physical and/or moral challenge.

With SEEN Dey Dey they feel more free, less tired, and relieved from back pain (for the ones who used to fetch water).



Some women expressed the fact that they feel emancipated because they no longer have to depend on water vendors.

"It wasn't easy, because the water vendors themselves choose who to serve or not (...) you have to create a kind of friendship with the garoua to get water."

Increased Water Usage and Better Hygiene

Before SEEN Dey Dey, the water bought was primarily reserved for drinking purposes, with water used for hygiene kept at a minimum.

With SEEN Dey Dey, **more water is available, which results in improved hygiene**, especially in homes with young children.



Households can do more laundry, take more showers, and keep their house satisfactorily clean.

"Now every morning I take the children's dirty clothes to wash them. Before we kept the dirty laundry for several days before cleaning it."

Benefits of CTSuite for **SEEN**



Pre-payment and Positive Cash-Flow



SEEN's collection efficiency with CTSuite exceeds 100% because **the water service is paid in advance.**

SEEN is indeed paid on average 18 days in advance, while domestic subscribers paid their bills up to 6 months late in post-payment.

Debt Repayment Schedule



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

168 subscribers were added with debt repayment schedules in CTSuite. SEEN has defined individual debt repayment schedules ranging from 3 to 18 months with daily payments ranging from 40 to 500 FCFA. The prepaid meters were installed between December 2017 and September 2019.

Of the 168 subscribers, 42 paid up in full as of September, 30th, 2019. The remaining debt is forecasted to be fully repaid within the next 10 months.

Potential for Decrease in Operational Expenses

CTSuite avoids manual monthly meter reads, manual water access opening and closing, invoicing, and payment collection. Studies to quantify OPEX savings resulting from CTSuite deployment are still underway as of this report's publication.

100%
collection
efficiency with
CTSuite

On average,
SEEN is paid
18 days
in advance

SEEN's Image Improved Thanks to SEEN Dey Dey



SEEN is now perceived by the new and the reconnected subscribers as a benefactor.

Subscribers are thankful and express gratitude.

"We thank SEEN and God for everything, now we have water at all times."



SEEN is perceived as caring, humanist, and professional.

"I see them as someone who has compassion (...) they know how to deal with the poor."

"They make every possible effort to ensure the proper supply of water in the city"

Digital Financial **INCLUSION**



Digital financial inclusion and **INCREASE IN MOBILE MONEY USAGE**



83%

of household members are over 13 years old and have a mobile phone.

Niamey was consequently a suited environment to begin **water pay-as-you-go by Mobile Money**.

All transactions were made through Orange Money, as there was no integration with other MNOs for the project.

New Orange Customers



15%

of the beneficiaries have become Orange customers thanks to SEEN Dey Dey.

"I didn't have an orange Sim at first, it's with Seen Dey Dey I paid for the Orange chip."

Mobile Money Increase



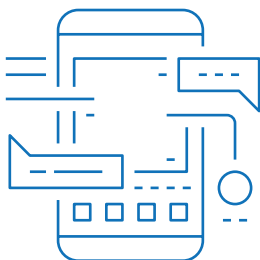
43%

of our subscribers became new Mobile Money users thanks to SEEN Dey Dey.

Furthermore, among the ones who used to pay by Mobile Money before SEEN Dey Dey, 95% increased their transactions' number.

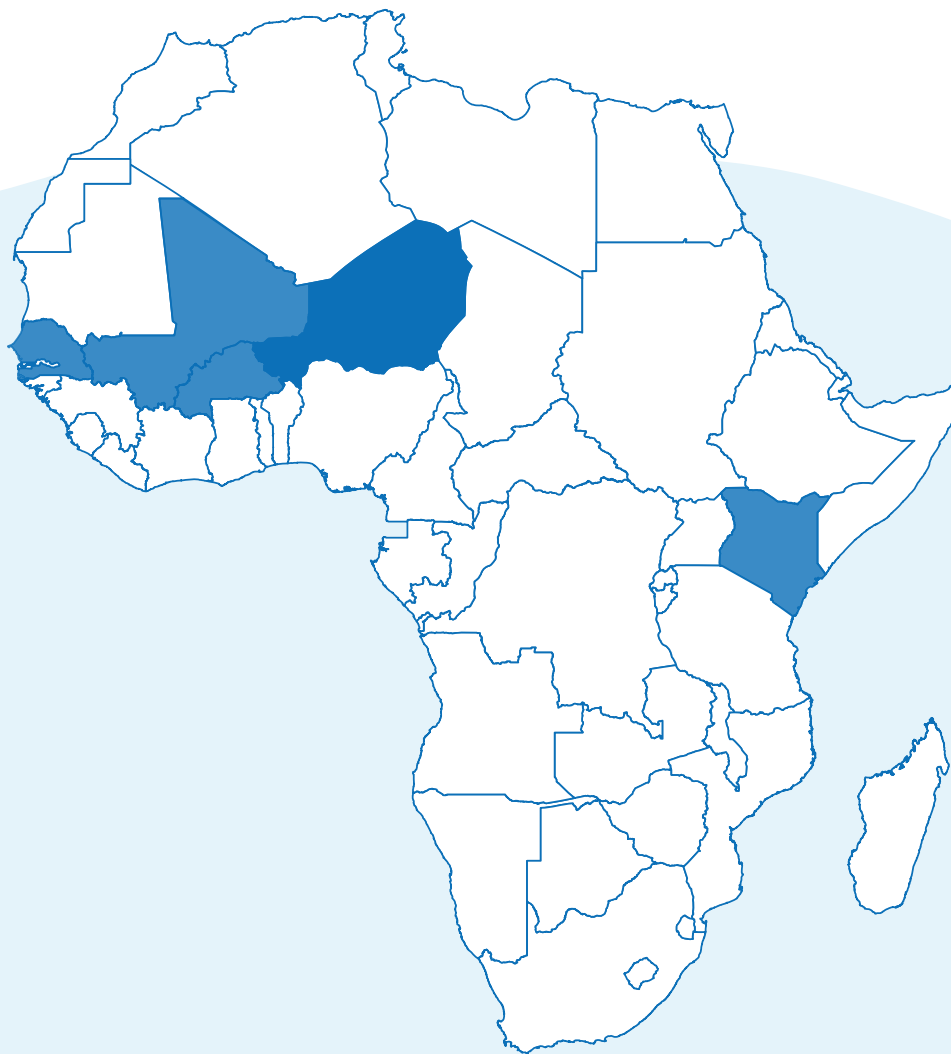
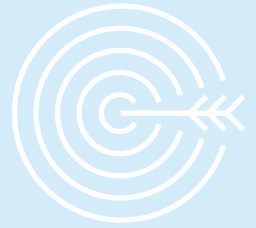
"I use it like a savings account."

"I did have an Orange Money account, but it is thanks to SEEN that I now use it frequently."



Scaling up to

**18,000 CTSUITES
BY DECEMBER 2020**



Citytaps will work in
**Niger, Mali, Senegal,
Burkina Faso, Kenya;**
and in many more countries in
the coming years.