
CODE for SIERRA LEONE
iDT LABS
Improving Water Access for Sierra Leoneans
A project by Code for Sierra Leone & iDT Labs

Code for Sierra Leone (CFSL) is a non-partisan civic data and civic technology 'change agent'. It is the country chapter of Code for Africa.

We use civic technologies and open data to build digital democracies that afford citizens timely and unfettered access to actionable information that empowers them to make informed decisions and that strengthens civic engagement for improved public governance and accountability.

iDT LABS

iDT Labs is among the leading providers of innovative and scalable solutions to tackle development challenges in West Africa.

Founded in 2013, iDT Labs partners with government departments, businesses, INGOs and social enterprises to bridge the digital divide and amplify social impact in sectors like telecommunication, health, water and sanitation, financial inclusion and agriculture.

Awards: UNDP Innovation Award 2013, UPS International Disaster Relief Award 2016, The Queen's Young Leaders Award 2017(awarded to CTO Salton Massally)

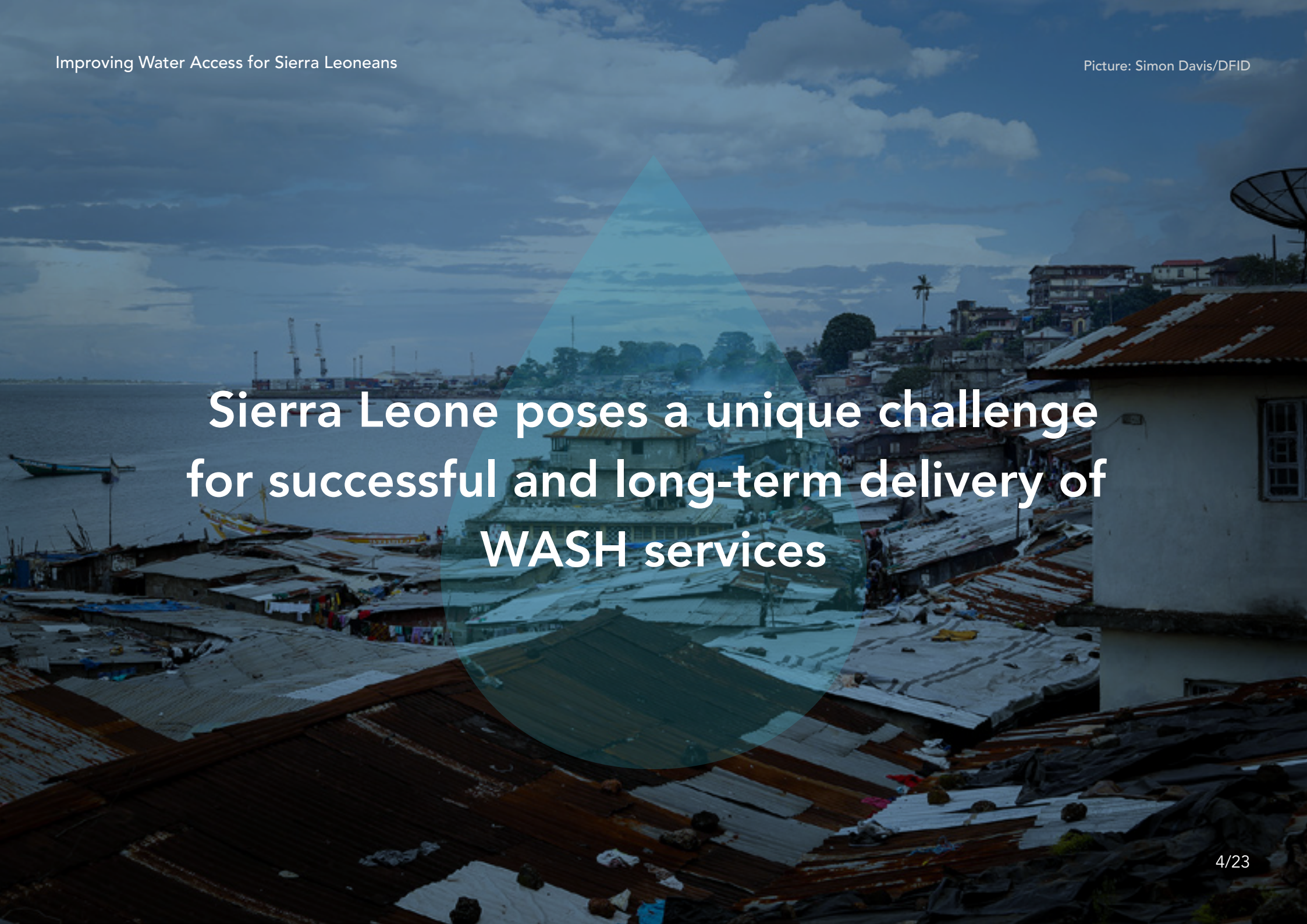
Clients:

THE WORLD BANK

UNDP

IBM

UNCDF



Picture: Simon Davis/DFID

Sierra Leone poses a unique challenge for successful and long-term delivery of WASH services

Influencing Factors on WASH Sector

Geography

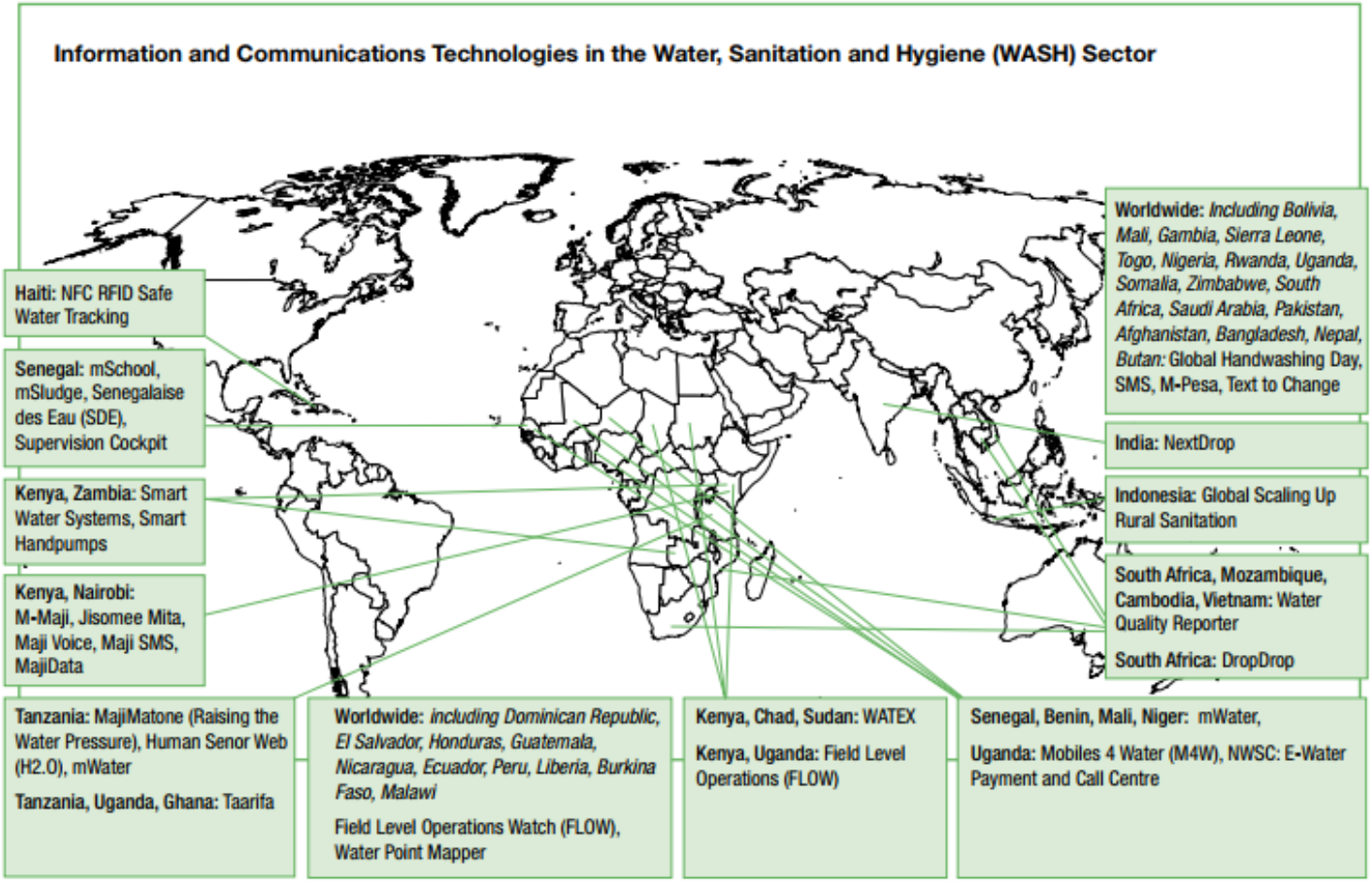
- 9 running rivers
- High annual rainfall
- Situated on a basement rock

Stakeholders

- Multiple stakeholders working on different aspects of water access
- Government is undergoing major policy changes with responsible agencies
- Private sector actors only provide fixes for their areas of interest

Political Climate

- Political climate affects infrastructure driven solutions
- 2 out of 5 years of each government's term spent on election preparations



Different ICT interventions are being used in WASH sector develoment in Africa and around the world. Sierra Leone, however, has seen limited ICT interventions in the improvement of WASH services.

Image source:Revised from original source of Hutchings & Dev, 2012, republished by The World Bank

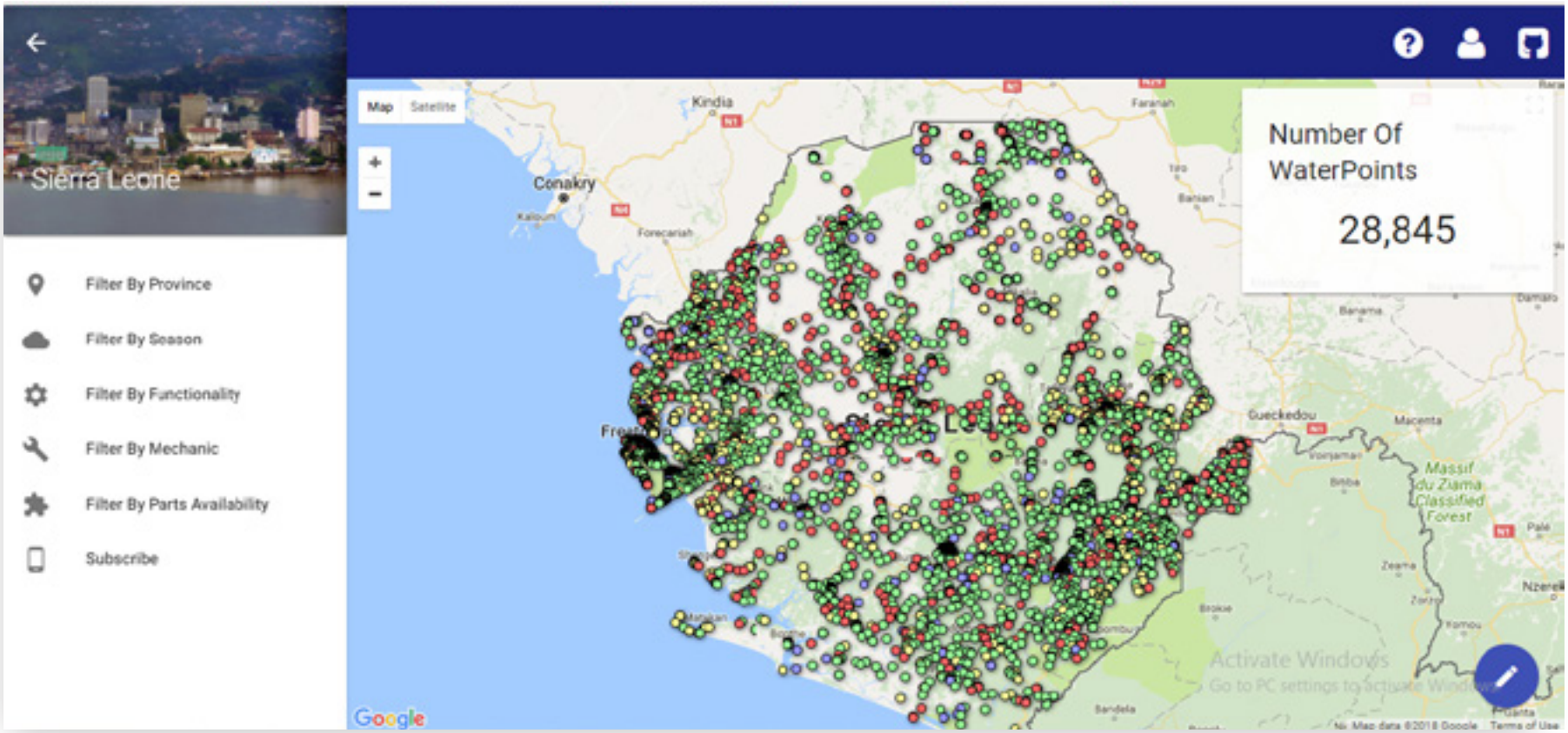
Picture: US Africa Command

We saw the opportunity to leverage ICT to solve the problem of water availability and water mapping in Freetown

A Water Points Mapping & Reporting Platform

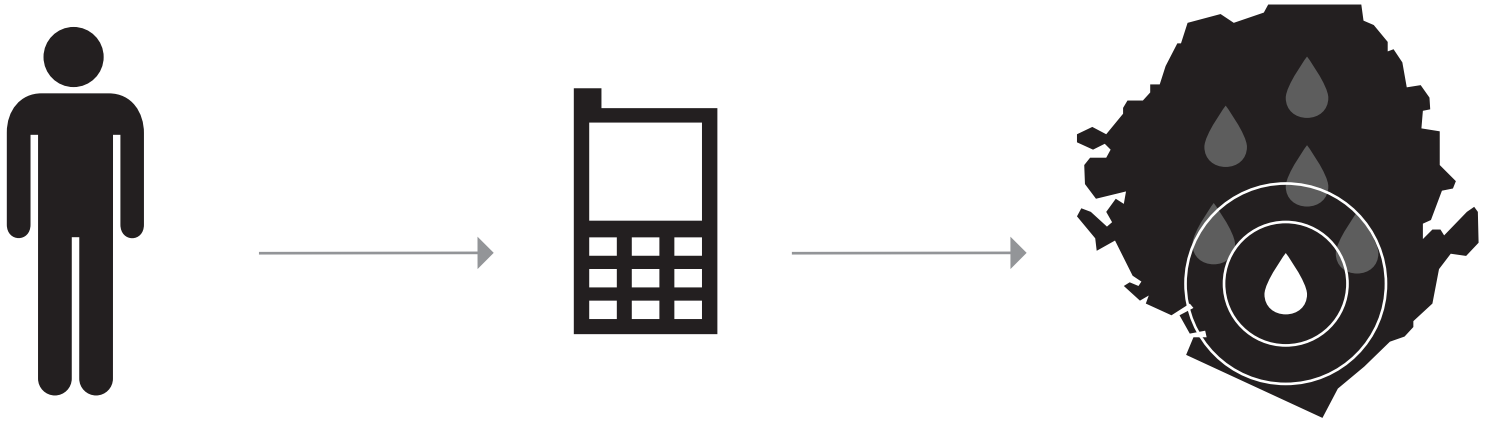
Code for Sierra Leone (CFSL), in collaboration with iDT Labs, created a crowd sourced web platform which mapped out all water access points in Freetown and which has been accessible to all citizens, government agencies and utility companies.

The platform not only provides a real time snapshot about the state of every water point in the city, it also allows real time reporting about the status of any water point via SMS.



Water points can be mapped according to different categories
and filtered quickly. Real time updates feed into the map to keep the information
as current as possible

Use Case #1.



A citizen finds his regular water point broken down

He sends an SMS to the web platform with the water point number and the issue

The water point is instantly marked as being broken down, signalling authorities to have it repaired

Use Case #2.

Government agencies survey the water mapping platform to assess the current situation of water delivery in the city

They use the platform to identify problem areas and predict future outcomes

The agencies use this information to allocate resources and make changes to improve the city's water strategy

Use Case #3.

Utility service providers check the real time mapping platform to keep an eye on faulty water access points

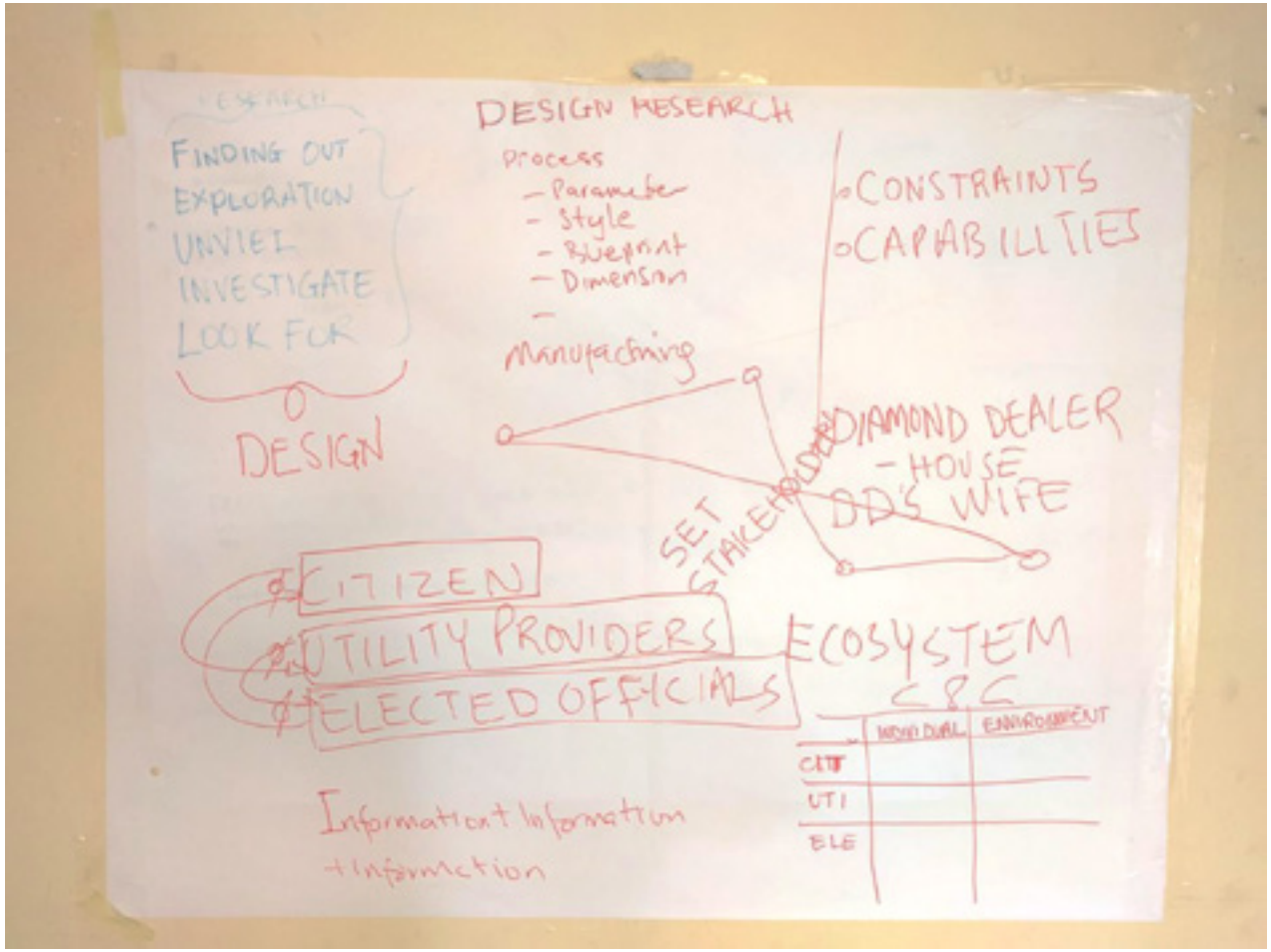
By seeing issues with water points in real time they can better plan repairs and other services

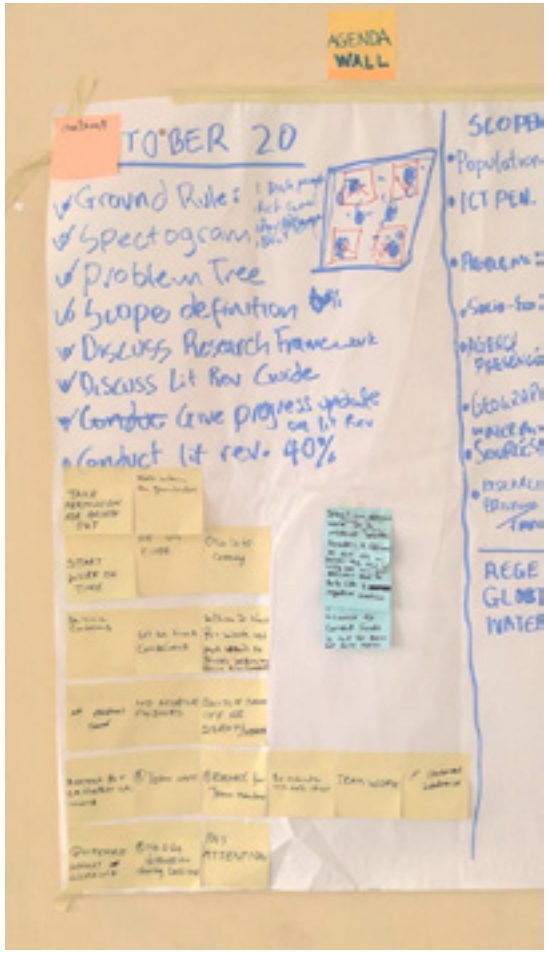
The service providers can make repairs on time to ensure continuous water access and implement other changes when needed

Picture: Dominic Chavez/World Bank

We used human centered design principles to assess how an ICT solution such as ours can solve the water access problem. We conducted in depth interviews with communities in Freetown.

We leveraged support from The Engine Room's Matchbox Project to design, conduct and synthesise our research

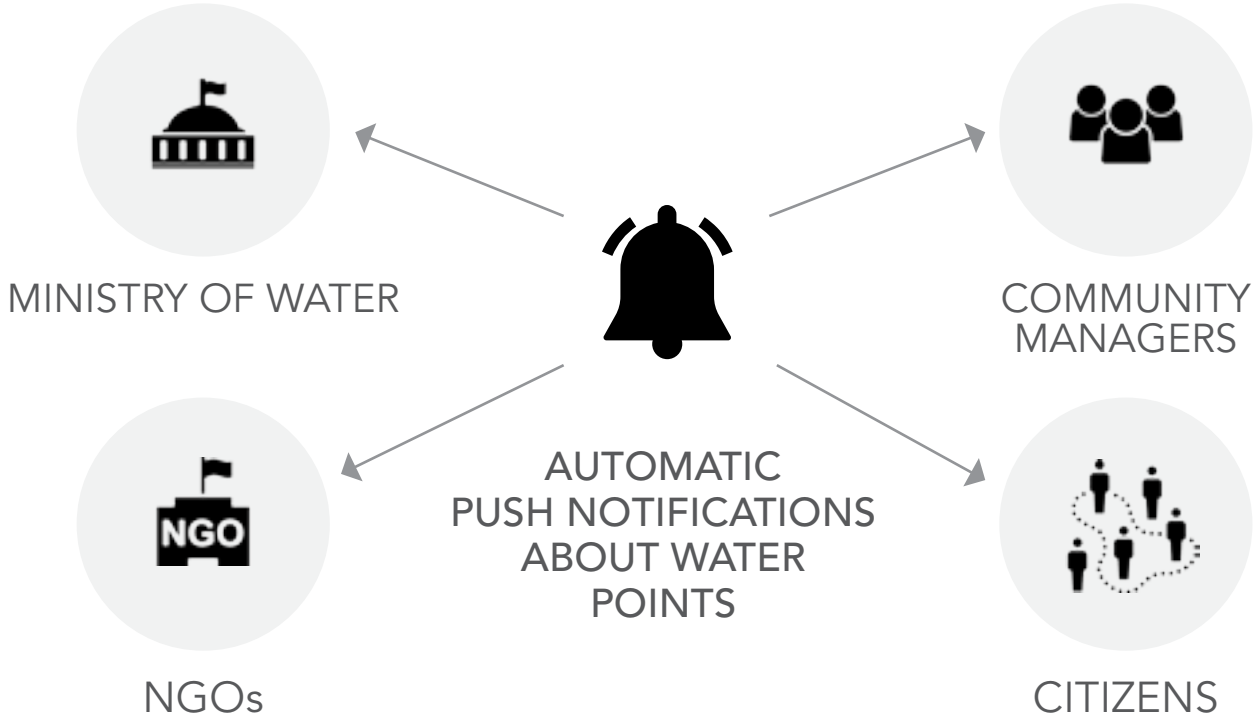




Our team employed several methods to synthesise the qualitative data from the interviews and arrive at the next steps for the project.

Key Findings

#1. Community members would prefer a service that sends out regular automatic push notifications on the status of various water points, instead of having to manually subscribe to notification alerts



Key Findings

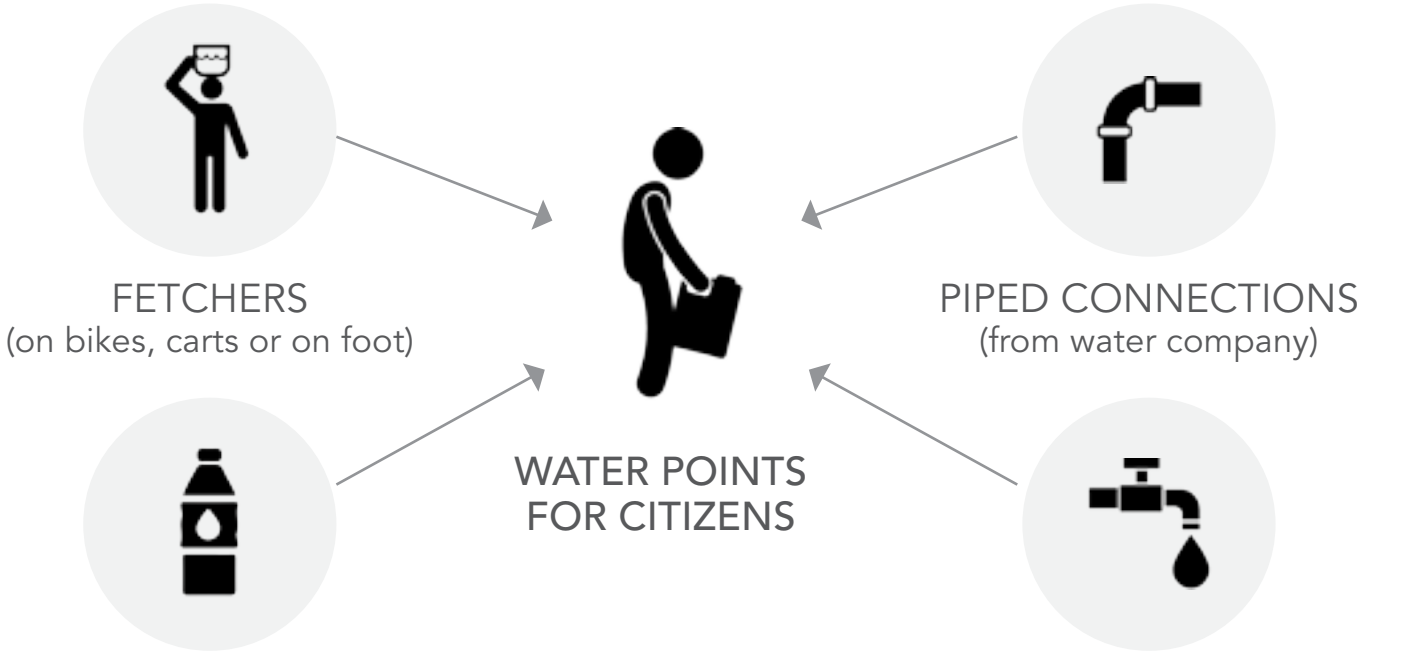
#2. The majority of users (75%) are comfortable with receiving water point alerts via SMS

75%

NOTIFICATIONS VIA SMS

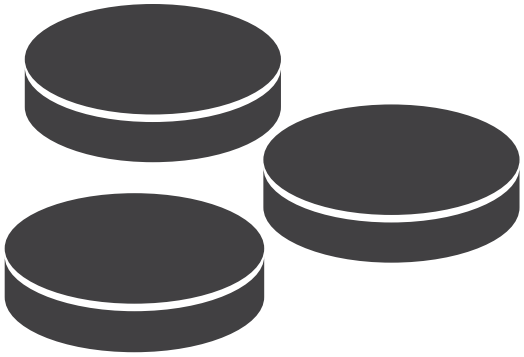
Key Findings

#2. When faced with water access problems, citizens get their water from multiple sources and improvise solutions on a need-by-need basis



Key Findings

#4. Approximately 60% of the users would be willing to pay a nominal monthly subscription fee to subscribe to the water point alert system



60%

PAY MONTHLY SUBSCRIPTION

Next Steps

Based on the key findings, the following additional features can be built onto the existing water mapping platform

1.

Water Mita

A crowdsourced rating system via which the communities review and report on the performance of various water utility providers

2.

Water Data

A crowd-sourced, online and offline database of the various water enterprises operating in different communities, allowing the community to provide real-time feedback on the operations of these enterprises

3.

Pay Water

A digital payment system that allow end users to make their water utility payments via mobile money

Picture: Mustafa Öztürk/IHH

Year round water access for everyone in Freetown can be ensured through the incorporation of ICT solutions utilising mobile phones & crowdsourcing

MATCHBOX
BY THE ENGINE ROOM

Our water point mapping platform was selected as a partner by the Engine Room's Matchbox Project. As a partner, it received support to conduct research on the next steps for the platform.

Matchbox is The Engine Room's flagship support program. Through it, they provide support to partners in three main categories: (1) data, (2) technology, and (3) overall strategy.

Get in touch

Usman Khaliq
Lead, Code for Sierra Leone

Email: ukhaliq@idtlabs.xyz

Salton Massally
CTO, IDT Labs

Email: smassally@idtlabs.xyz

Rohit Wadhwani
Lead, iDT Consultancy

Email: rwadhwani@idtlabs.xyz