

Humanitarian *Innovation* Hackathon



6 CLEAN WATER
AND SANITATION



THE GLOBAL GOALS
For Sustainable Development

Hackathon Challenge C

Improving drinking water quality reporting to prevent water-borne disease outbreaks.

Overview

The world's limited fresh drinking water resources are increasingly becoming polluted due to increasing populations and environmental degradation. Timely drinking water data is needed to ensure that any contamination of drinking water sources is rapidly detected and addressed. Appropriate responses prevent more people from consuming contaminated water, which can prevent outbreaks of water-borne diseases such as cholera and typhoid fever.

In less developed countries drinking water quality data can be disjointed and not always available. Current testing involves physically taking samples from drinking water sources and taps and processing them in the laboratory. The challenge is that transportation of samples and laboratory testing can take a long time. There are additional challenges with a lack of power supply in some areas to install remote sensors and meters. Community-reported water quality data (such as dirtiness or smell) are additional options to augment traditional laboratory testing results. Utilising digital technologies, new data collection methods are needed to rapidly inform public health authorities when drinking water contamination events are occurring and enable them to respond.

Challenge Task

Design a new data reporting system for water quality that can facilitate more timely responses to poor water quality events in less developed countries. Your solution could consider community reporting methods or laboratory testing or a combination of both.

SDG Targets

- **SDG 6.** Ensure access to water & sanitation for all.
- **Target 6.1.** By 2030, achieve universal and equitable access to safe and affordable drinking water for all¹.



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References

1. United Nations, 2023. SDG 6. Clean water and sanitation. <https://sdgs.un.org/goals/goal6>