



A DEVICE THAT DETECTS TOTAL HEAVY METALS IN WATER

H2OSTAT SOCIAL INNOVATION

SOCIAL BUSINESS CREATION 2024 - ROUND 1

A PROUD PRODUCT OF





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A1. Social mantra

Social Impact

H2Ostat **detects heavy metals in water**, providing customers with real-time information about water safety. This ensures peace of mind for consumers, empowering them to make **informed decisions** about the water they consume. Hence, H2Ostat's primary impact is **safeguarding public health** and addressing pressing issues related to **water quality**.

01

H2Ostat uses NB-IOT technology to revolutionize real-time heavy metal detection in water.

02

03

Unique innovation

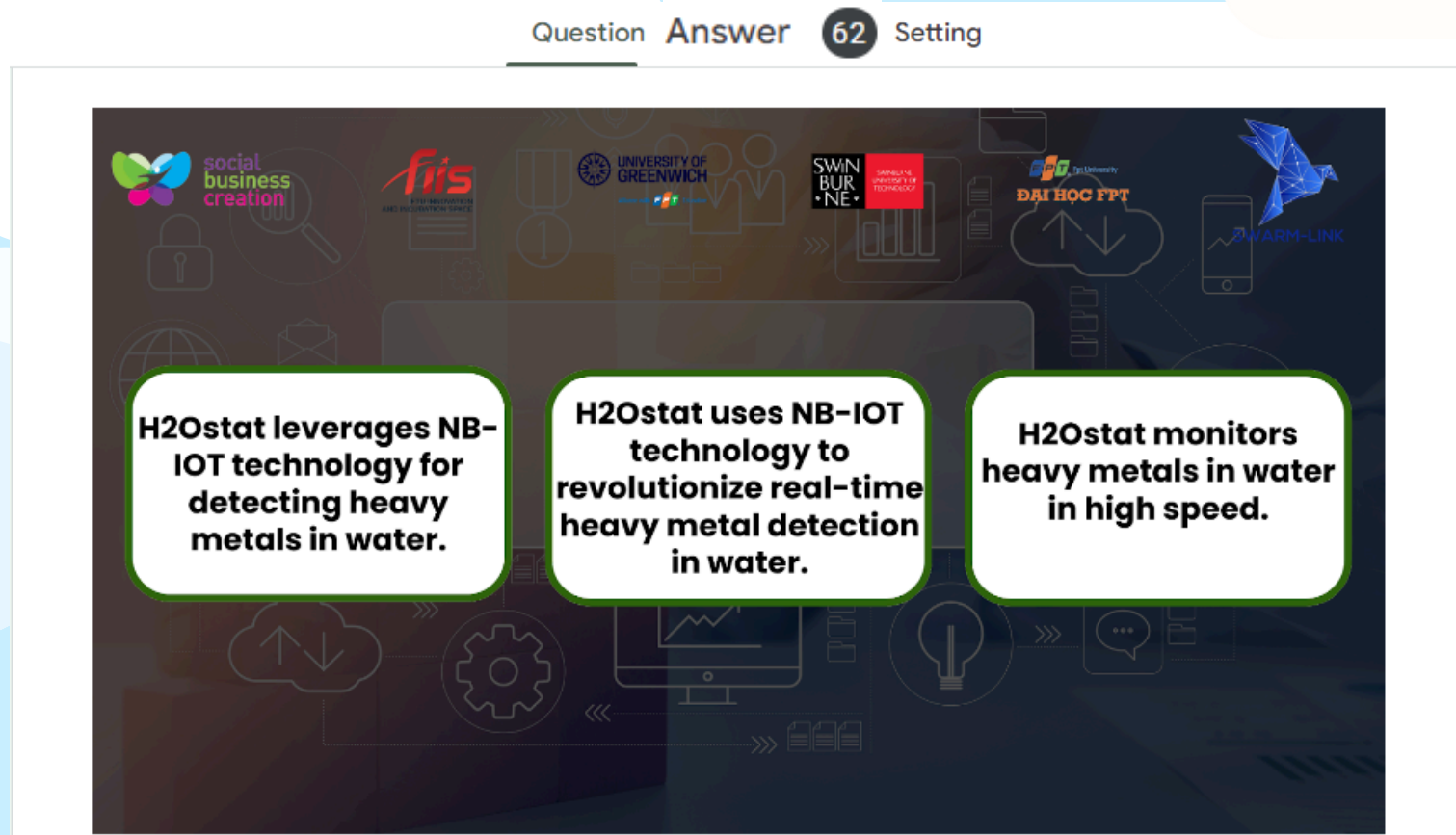
H2Ostat employs **NB-IoT** tech for community safety. It enables shared water grid communities to monitor water quality in **real-time**. Our advanced sensors **outperform** traditional methods, providing **affordable** value to households. Easy **integration** suits various neighborhood sizes.

Catchy & Memorable

The mention of "**NB-IOT technology**" captures attention as something *innovative* and *cutting-edge*, while "**real-time**" sparks *excitement* by promising immediate results, eliminating the wait for test outcomes. The focus on "**heavy metals in water**" resonates with those aware of the health risks associated with contaminants, piquing *curiosity* and prompting further interest even among those previously unaware of the issue.

Mantra field test

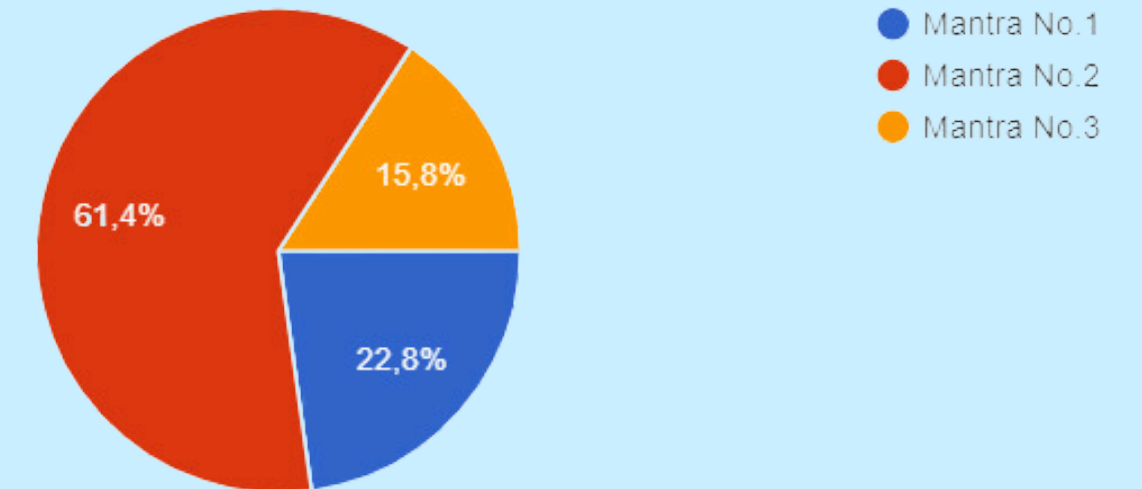
[Link to survey results](#)



A survey has been conducted, testing people's *understandability, the long-memory recognition, and the difference* of the product. There are 3 versions of mantra, and the mantra has been applied into the project is the second one.

On the given picture, which mantra facilitates your memory ability?

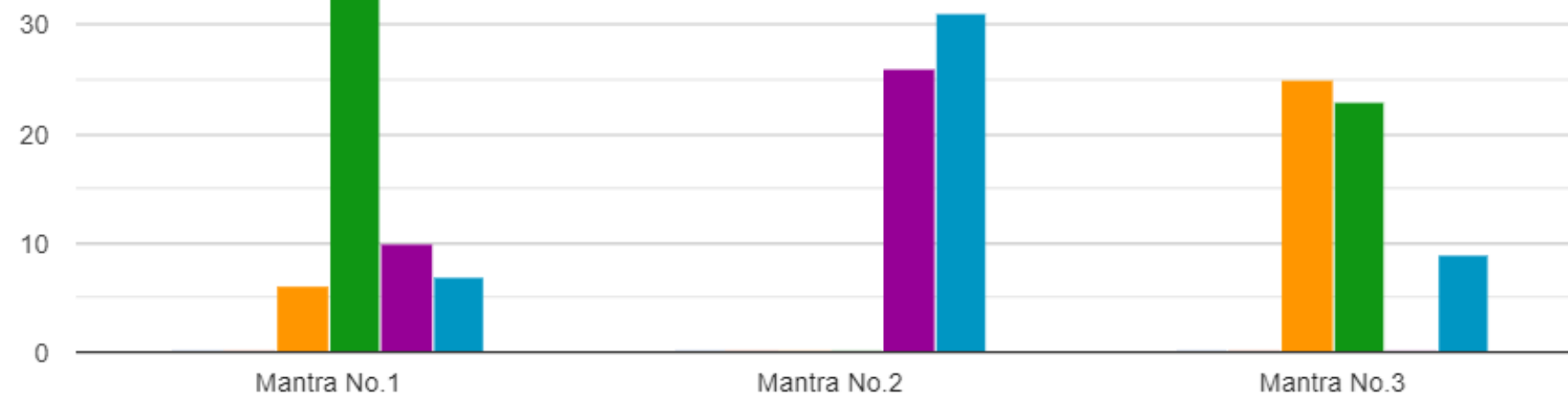
57 answers



In the picture above, how do you feel about the understandability of each given mantra:

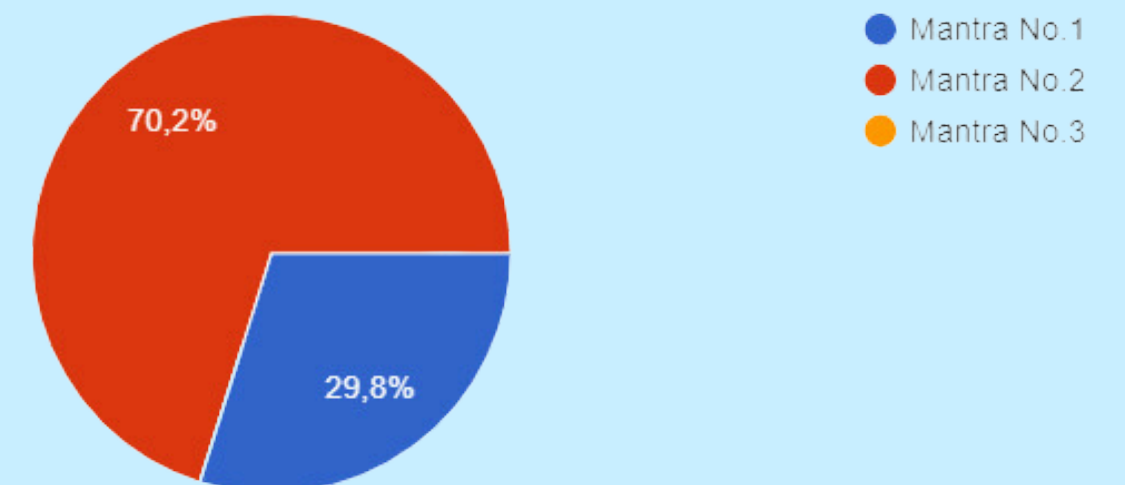
Very difficult Limited Understanding Partial understanding Moderate Understanding

General Understanding Deep understanding



Among three mantras, which one most effectively highlights the features of given product/service?

57 answers



A2. Contributions to UN goals:

VISION

H2Ostat aims to become a pioneering leader in real-time water quality monitoring, empowering communities with actionable insights to safeguard public health and promote environmental sustainability.

MISSION

Our mission is to enhance access to water information, advancing environmental monitoring and public health through innovative solutions.

By upholding values of integrity, commitment, and compassion, we foster a culture of planetary care, transforming water management for a healthier, sustainable future.





TARGET 3.9 – H2Ostat's vision of becoming a pioneering leader in real-time water quality monitoring directly contributes to SDG Target 3.9 by addressing the reduction of deaths caused by dangerous chemicals and water pollution. By providing communities with actionable insights into water quality, H2Ostat empowers them to mitigate health risks associated with waterborne contaminants, thus supporting the overarching goal of improving public health and safety.

TARGET 6.1 – H2Ostat's mission to enhance access to water information is closely aligned with SDG Target 6.1, which seeks to achieve universal and equitable access to safe and affordable drinking water for all. By advancing environmental monitoring and providing communities with real-time data on water quality, H2Ostat facilitates informed decision-making and helps ensure that everyone has access to clean and safe drinking water, regardless of their socio-economic status or geographic location.

TARGET 12.8 – H2Ostat's commitment to fostering a culture of planetary care and transforming water management aligns with SDG Target 12.8, which aims to promote universal understanding of sustainable lifestyles. Through its innovative solutions and emphasis on environmental sustainability, H2Ostat not only addresses immediate water quality concerns but also promotes long-term resilience and sustainable practices, contributing to the global effort to build a more sustainable and equitable future.



H2Ostat



SDG TARGET	VISION MATCHING	MISSION MATCHING	POTENTIAL MEASURABLE RESULTS	EXAMPLES
3.9 Reduce illnesses & deaths from hazardous chemicals & pollution	H2Ostat pioneers real-time water monitoring, reducing health risks from water contaminants.	H2Ostat enhances water information access, mitigating health risks from contaminants.	Reduction in waterborne illness and mortality rates	Decrease in cases of skin irritation, developmental defect, cancer related to shower and consuming water contaminated by heavy metals.
6.1 Achieve universal & equitable access to safe & affordable drinking water	H2Ostat ensures equitable access to safe drinking water through real-time quality insights.	H2Ostat advances environmental monitoring for clean drinking water access.	Increased access to safe drinking water in underserved areas.	Distribution and education of H2Ostat water monitoring systems in rural communities.
12.8 Promote universal understanding of sustainable lifestyles	H2Ostat fosters sustainable water management, promoting environmental stewardship.	H2Ostat educates on sustainable water practices for environmental awareness.	Improvement of environmental awareness and adoption of sustainable water management practices.	Community-led initiatives to protect water sources and ecosystems.

B1. Target Issues

WATER CHEMICAL CONTAMINATION

EACH YEAR IN VIETNAM

9,000
**DEATHS DUE TO
SANITATION &
WATER QUALITY**

250,000
**HOSPITALIZATIONS
DUE TO SANITATION
& WATER QUALITY**

200,000
**CANCER CASES
LINKED TO WATER
POLLUTION**



(Natural Resources and Environment and Health Ministries cited in UNICEF Viet Nam, 2021)

Target issues

SOURCES OF HEAVY METALS

- Accidental discharge from industrial activities
- Production of fly ash from coal power plants
- Management of electronic waste
- Degradation of water pipe network

ENTRY INTO WATER SYSTEM AND EXPOSURE

- Soil leaching, improper waste disposal, and direct discharge into waterways
- Human drinking contaminated water, cooking with it, absorbing through skin during bathing.

SOCIETAL CONSEQUENCES

Lost productivity due to illness, potential decline in property values near contaminated areas, Immediately impact on the more vulnerables: children, pregnant women, and the elderly.

POOR PRACTICES IN VIETNAM

- Disposal of coal ash without treatment
- Use of coal ash in construction without safeguards
- 2016 Formosa Ha Tinh Steel plant spill
 - Polluted over 200 km of coastline
 - Devastating impact on marine life and local economies

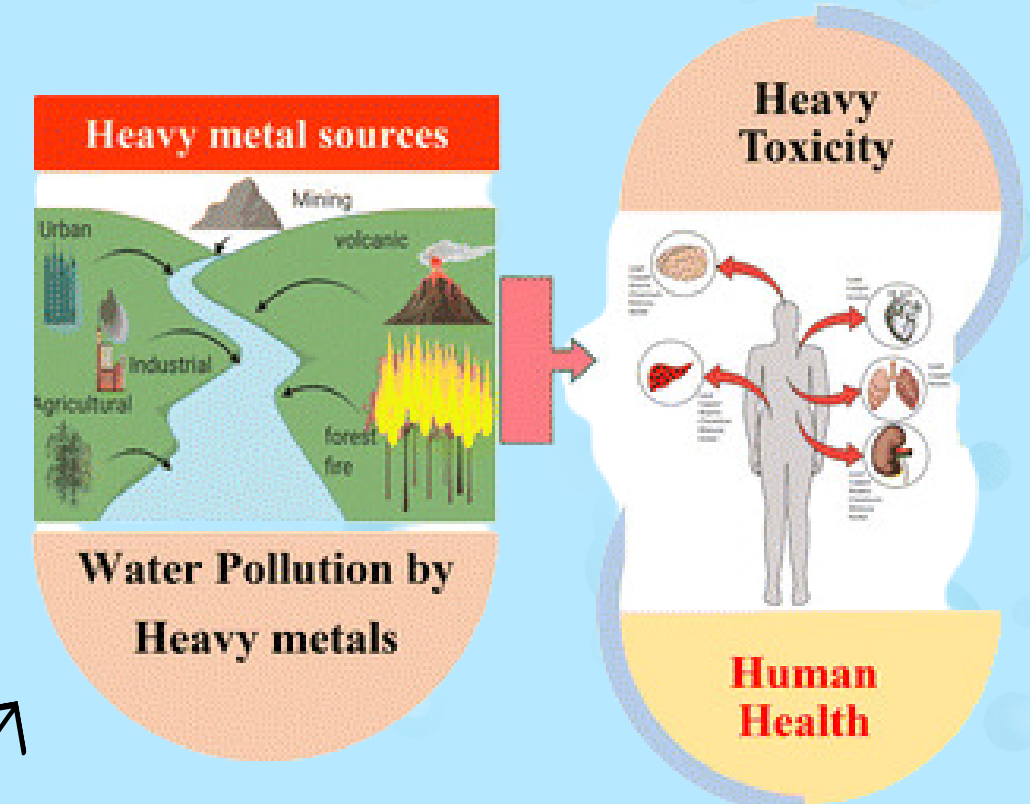
IMPACT ON HEALTH AND ENVIRONMENT

- Illnesses: diarrhea, skin irritation
- Chronic diseases: mental disorders, hypertension, cancer
- Environmental pollution: marine life, local ecosystems

[Sources: see next page]

Secondary research into target issues: Key papers

- Bielski, A., Zielina, M., & Młyńska, A. (2020). Analysis of heavy metals leaching from internal pipe cement coating into potable water. *Journal of Cleaner Production*, 265, 121425. <https://doi.org/10.1016/j.jclepro.2020.121425>
- Brindhadevi, K., Barceló, D., Lan Chi, N. T., & Rene, E. R. (2023). E-waste management, treatment options and the impact of heavy metal extraction from e-waste on human health: Scenario in Vietnam and other countries. *Environmental Research*, 217, 114926. <https://doi.org/10.1016/j.envres.2022.114926>
- Järup, L., 2003, Hazards of heavy metal contamination, *Br. Med. Bull.*, 68 (1), 167–182.
- Kawata, K., Yokoo, H., Shimazaki, R., and Okabe, S., 2007, Classification of heavy metal toxicity by human DNA microarray analysis, *Environ. Sci. Technol.*, 41 (10), 3769–3774.
- Konieczka, P., Zygmunt, B., and Namieśnik, J., 2000, Effect of fluorine content in drinking water in ricity on its concentration in urine of pre-school children, *Toxicol. Environ. Chem.*, 74 (2), 125–130.
- Mohod, C.V., and Dhote, J., 2013, Review of heavy metals in drinking water and their effect on human health, *Int. J. Innovative Res., Sci. Eng. Technol.*, 2 (7), 2992–2996.
- Ty, P. H., Marçon, R., Bayrak, M. M., & Phuong, L. T. H. (2022). The 2016 Vietnam marine life incident: measures of subjective resilience and livelihood implications for affected small-fishery communities. *Environmental & Socio-Economic Studies*, 10(1), 1–12. <https://doi.org/10.2478/enviro-2022-0001>
- Viet, C. T. (2022). REVIEW ON CURRENT SITUATION OF GENERATION AND MANAGEMENT OF COAL ASH IN VIETNAM. *International Journal of GEOMATE*, 22(91). <https://doi.org/10.21660/2022.91.gxi316>



Source: Kosar et. al., 2023



Agricultural Discharges



Industrial Waste

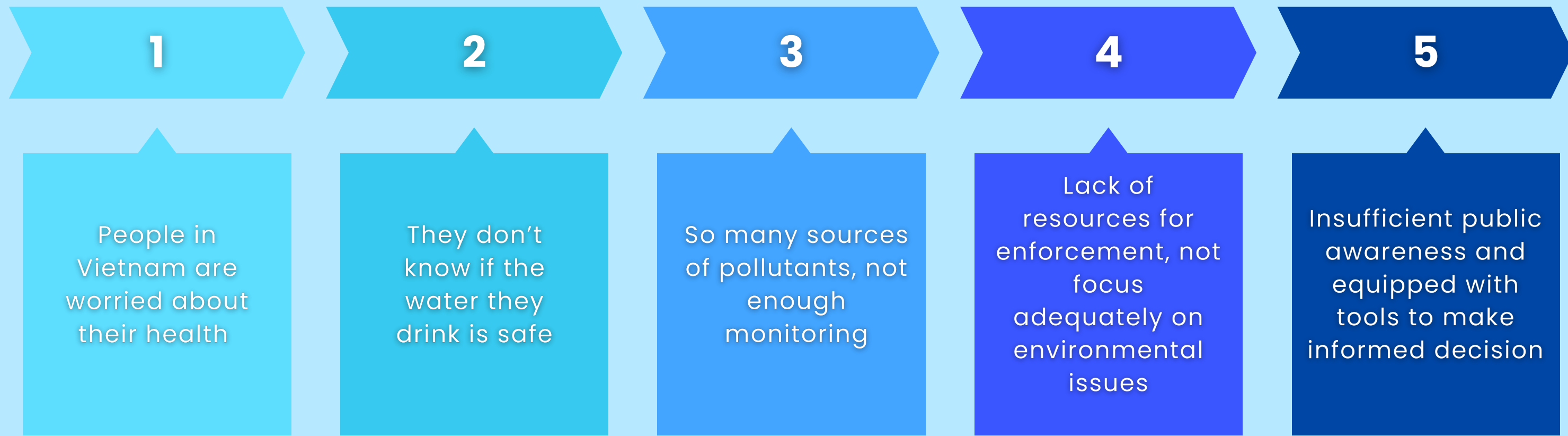


Old facilities, rusty pipes

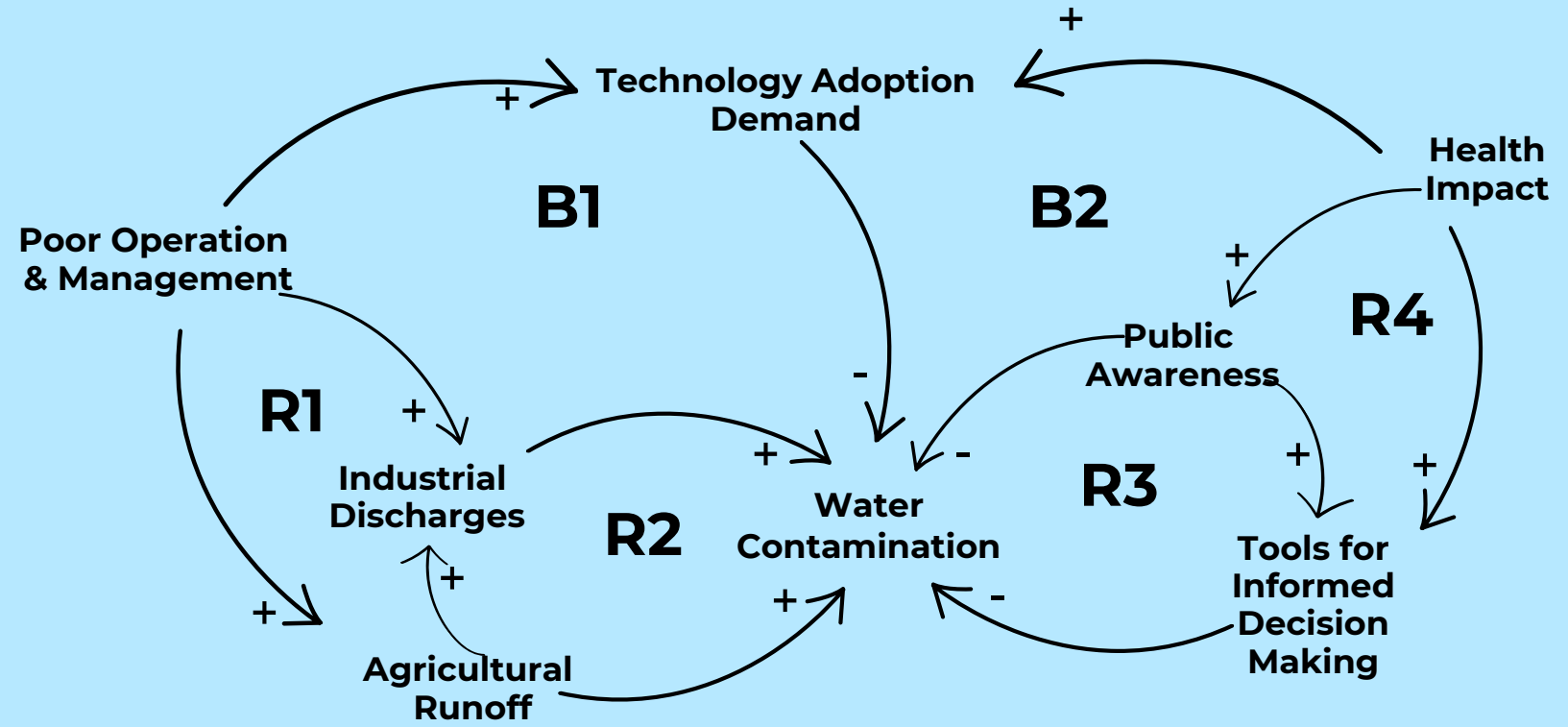


Urban Runoff

B2: Root Causes



CASUAL LOOP DIAGRAM



[Sources: see next page]



Primary research to define root causes, needs & wants

Survey Design

Quantitative questionnaire distributed on social media received 216 quality responses

Demographics

Students and office workers, aging from 18-44, and predominantly living in the metropolises of Vietnam

Current Situation

Consuming water from boiled tap water, well, and bottle with the huge uncertainty of the water sources & quality

Key Findings

33%, expressed concerns about the likelihood of their water sources being highly contaminated, indicating a prevalent worry about water quality.

53% attributed local water pollution to industrial discharge, while 94% pointed to household waste, 81% to leaks and rusty pipes, and 89% to agricultural chemical usage, underlining a broad spectrum of perceived pollution sources.

65% expressed a desire to test their water sources a few times a year, with 27% preferring more regular monthly testing.

87% believe in the need to improve public awareness on water safety. 82% expressed interest in the development of water safety projects.



92% of respondents were interested in products to check water quality, including home water testing devices (50%) and smartphone apps (65%).

Key factors influencing product selection included reasonable cost (95%), ease of use and maintenance (76%), smartphone connectivity (73%), and high accuracy (63.4%).




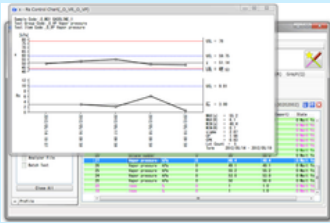


The screenshot shows a survey result page for 'H2Ostat Social Innovation' under the 'Social Business Creation 2024 - Round 1' competition. A magnifying glass highlights the number '216' in a blue circle, indicating the number of responses. The page includes logos for H2Ostat, SWARM-LINK, and social business creation vietnam. Below the logos are three target icons: 'REDUCE ILLNESSES AND DEATH FROM HAZARDOUS CHEMICALS AND POLLUTION' (Target 3-9), 'SAFE AND AFFORDABLE DRINKING WATER' (Target 6-1), and 'PROMOTE UNIVERSAL SUSTAINABLE LIFESTYLES' (Target 12-8). The page is titled 'Part 1 of 2' and features a section titled 'Social Problem Roots Identification' with a close button and a menu icon. The text in this section states: 'The survey aims to assess the degree of human awareness towards the existing consequences of chemical components and heavy metals in water use, especially drink water. Through the questionnaire, researchers will be able to identify the detrimental factors, leading to the pollution of water resources in Vietnam. Simultaneously, the conduction of given survey establishes a platform to enhance human identification to water inspection and the requirement of radical solution in evaluation and examination of water quality.'

[Link to survey results](#)

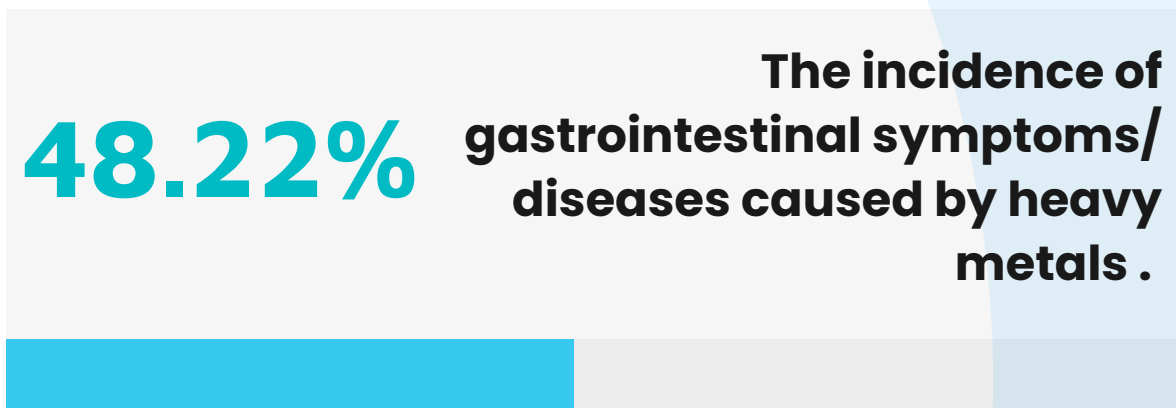
B3. Current solution landscape

Criteria	HACH	SHIMADZU	Xylem	Yokogawa Electric	Bottled Water (Aquafina)	Water Testing Center (NIOEH)	Potential Market Gap
 Real-Time Data	Varies	Yes	Leak focus	Yes	No	Periodic	Real-time heavy metal detection
 Heavy Metal Detection	No	No	No	No	No	Yes	Continuous heavy metal monitoring
 Installation	Professional or DIY	Professional	Professional	Professional	Not applicable	Professional	Simpler usage for the average consumer
 Cost	Variable	Variable	Variable	Low	Recurring cost	Single fee per test	Cost-effectiveness over time
 Consumer Access	Through platform	Through platform	Through software	App	Immediate	Report delivery	Direct consumer access via mobile application
 Market Presence	Broad	Broad	Established	Growing	Widespread	Localized	Opportunity for market expansion



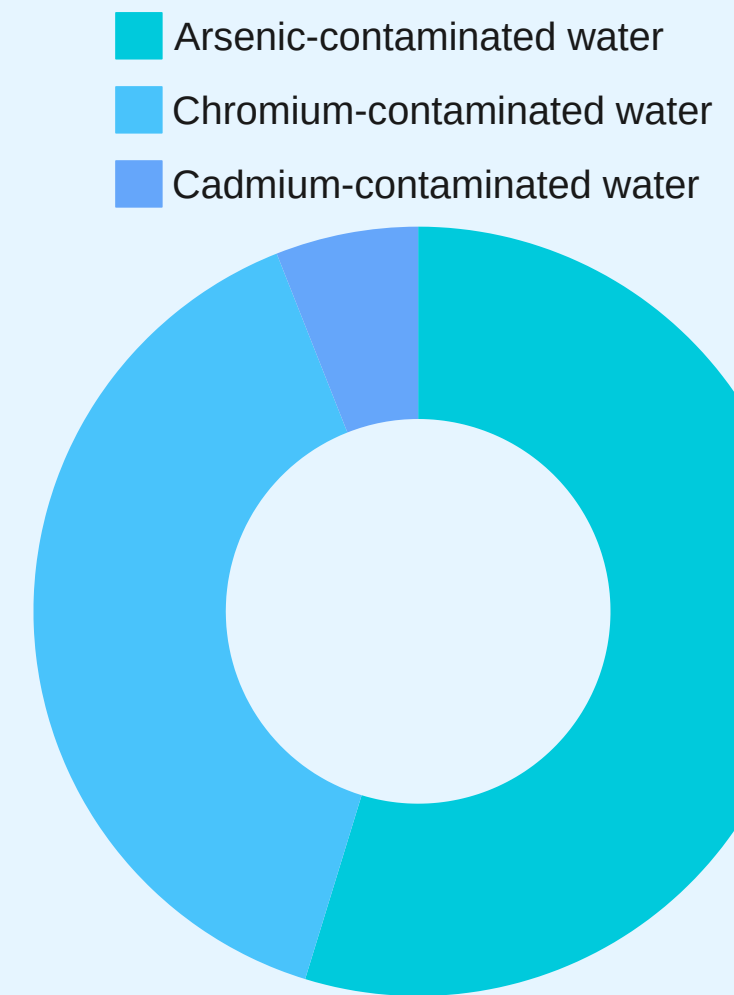
Key players		Pros	Cons	Source
HACH		High accuracy Professional	No heavy metals detection Complicated to use and pricey	https://www.hachvietnam.com.vn/test-kit-sub-16.aspx
SHIMADZU		High accuracy Professional	No heavy metals detection Complicated and pricey	https://labotec.com.vn/product-category/shimadzu/
Xylem		High accuracy Professional	No heavy metals detection Complicated and pricey	https://www.xylem-analytics.vn/prodfamdetail.php?Benchtop-Water-Quality-25
Yokogawa Electric		High accuracy Professional Systematic products & services	No heavy metals detection No self-test Complicated and pricey	https://www.yokogawa.com/vn/solutions/solutions/asst-operations-and-optimization/oprexlms/#Details
Water Testing Center NIOEH		Government owned Low cost	No self-test Not real time	http://nioeh.org.vn/vi/xet-nghiem-nuoc
Bottled Water		Convenient alternative to tap water. Abundance of delivery services.	Not a testing service/device but alternative to tap water. Quality varies due to poor control -> No peace of mind	Example: https://thewaterman.vn/blogs/dai-ly/dai-ly-nuoc-uong-tp-hcm?gad_source=1&gclid=CjwKCAjwrvyxBhAbEiwAEg_Kgj95zYNOtLpHXw8YEgAHEhnsQ3x2sYuwJkaKamfNW2S16RuDZ0OHXhoCeWcQAVD_BwE

Despite the current solutions, heavy metal pollution still leads to several detrimental effects

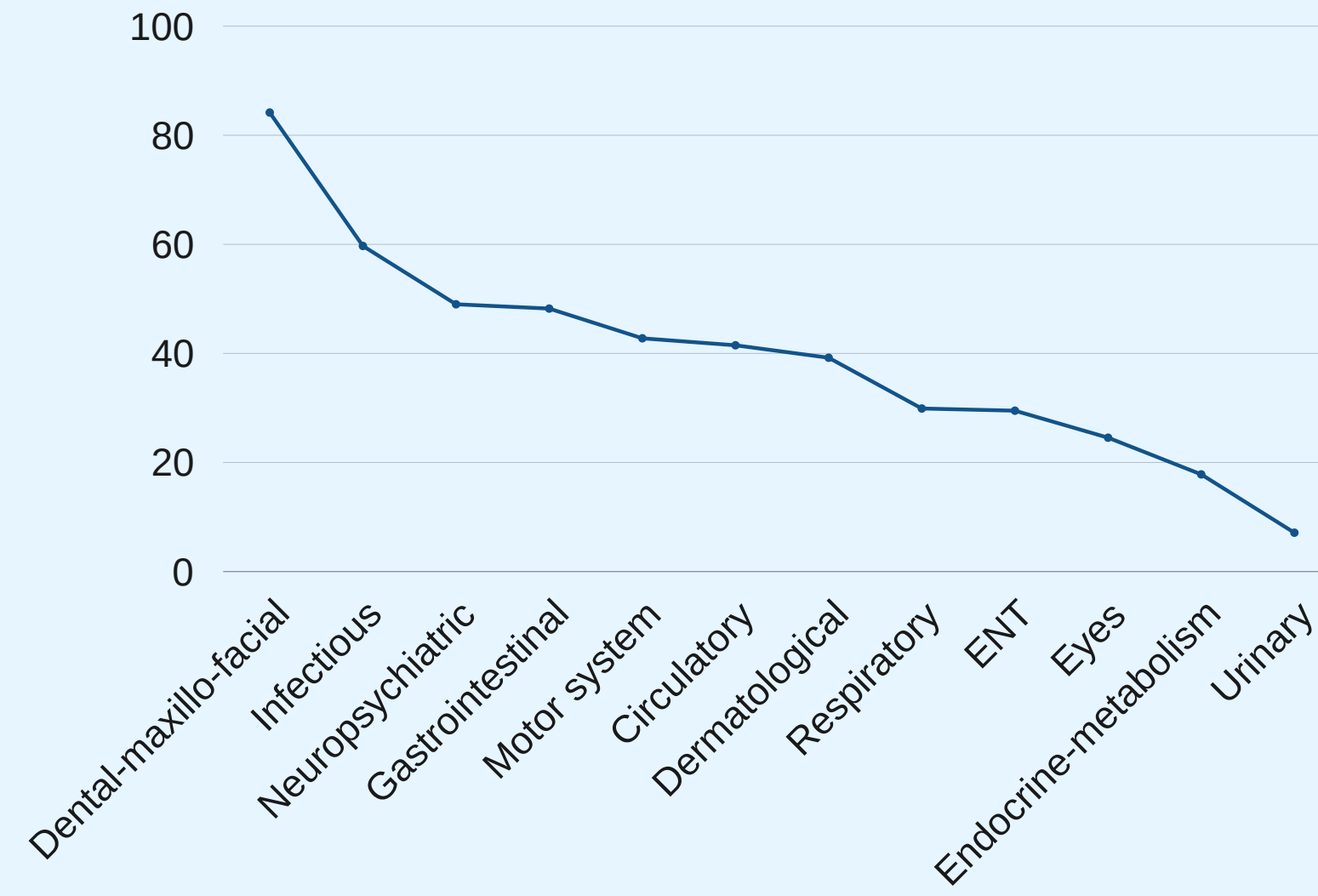


(Ngoc, 2020).
(Unicef Vietnam, 2021).

CANCER RISK FROM CONTAMINATED WATER SOURCES



PREVALENCE OF SYMPTOMS/DISEASES





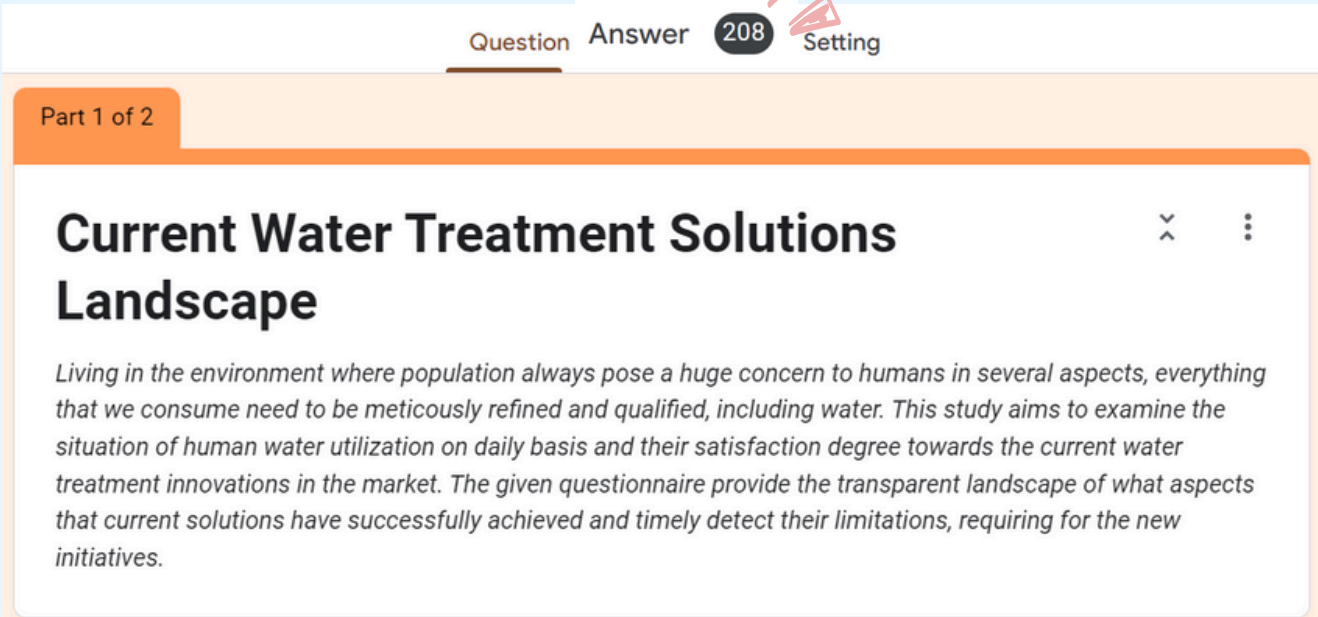
Ha Noi City

Da Nang City

Ho Chi Minh City

A primary survey has been conducted, focusing on 3 big cities in Vietnam to investigate the satisfaction of consumers towards the current water-monitoring devices producers.

[Link to survey results](#)



Primary research key findings

- Current products in the market could not meet the requirements of consumers.
- **89%** respondents pointed out that current products are **too complicated to use** without the **technical support**.
- **81%** consumers are **unsatisfied** with the **precision** of products.
- **87.5%** attendees expect to see the **auto-updating and self-calibrating features** in the innovative solutions.

IMPACT GAPS CANVAS

CHALLENGE MAPPING

What's happening, what's the impact of the challenge, and what's holding the challenge in place?

- Consumer concerns about health due to water contaminants.
- Pollution from industrial and agricultural practices
- Rusty old facilities contaminating tap water
- Heavy metals in water causing various health issues such as skin irritations, mild to terminal illnesses like cancer, and developmental issues

IMPACT GAPS

What is missing that could close the gap between the challenge and solutions, where are opportunities for collective impact, and what are the lessons learned?

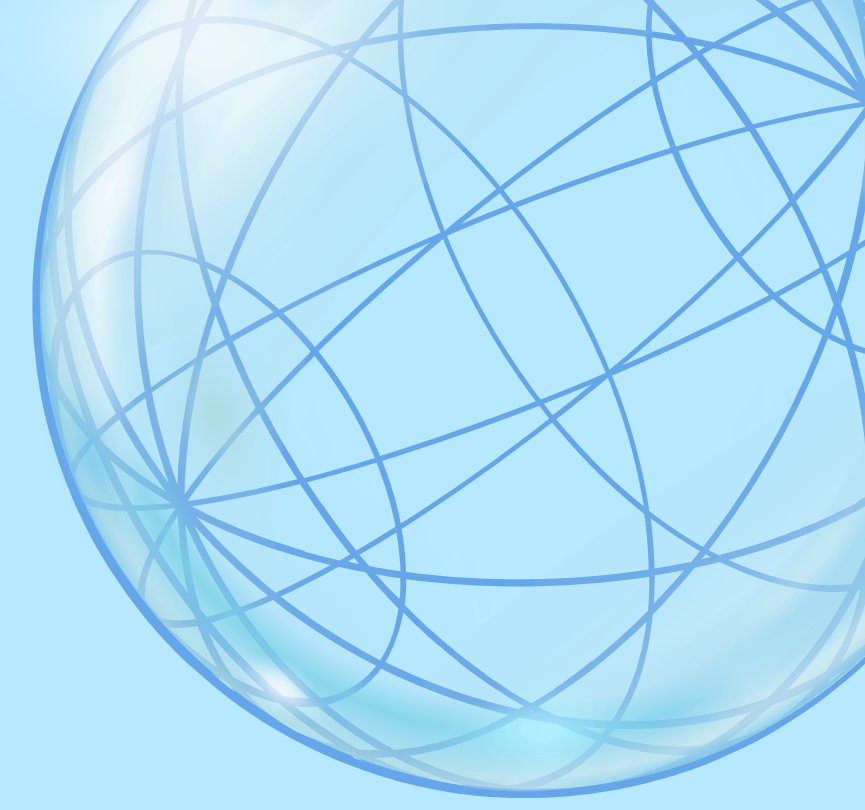
- High prevalence of diseases persists in Vietnam despite available solutions
- Consumers remain worried about water quality
- Existing solutions lack real-time heavy metal detection capabilities
- Need for cost-effective, real-time, user-friendly solution to address consumer concerns
- Urgent need for a crisis-oriented approach to provide consumers with peace of mind about their water quality

SOLUTIONS MAPPING

What models are already being tried, what's working, what's not, and what resources are available?

- Wide variety of solutions available
- Simple water testing devices
- Industrial water testing systems
- Water testing service centers
- Bottled water options
- Pros: Plenty of choices, especially in urban areas
- Cons: Expensive, complicated to use, not all real-time, bulky, not all target heavy metals, quality of bottled water varies

B4. Solution



Product Design

Simple operation
(plug, dip, read)



Components

Includes:

- Set of Screen printed electrodes (SPE).
- H2O'Stat with sensor cable integrated.
- SPE connector (Single channel).



THM sensor

- Electrochemical analysis.
- Integrated Wifi.
- USB-C cable.



Electric



- Operation voltage: 5V.
- Wifi-NB-open space connectivity, ranging ~100 m.
- Built-in environmental temperature.
- Power usage: 53 Wh.

Software



- Built in-operates immediately after login to network
- Available as OEM product:
www.Swarm-link.com
- Order code: AX-H2Ostat-Wifi

Total heavy
metal
detection

Palm sized
Portable

Real time data

Cost effective

Consumer benefits

**EMOTIONAL
BENEFITS**
how they **FEEL**

Provides peace of mind when consuming water
Offers protection for family from potential harm

FUNCTIONAL BENEFITS
what they **GET**

Enables informed decisions about water consumption
Protects health by avoiding harm from heavy metals for users and their families

PRODUCT FUNCTIONS
what we **DO**

Sensors detect heavy metals in water
Real-time results shared on network (on-grid/off-grid)

PRODUCT FEATURES
what we are **CAPABLE of**

Expert knowledge in analytical chemistry, sensors, and
network engineering

THE TARGET
who **THEY are**

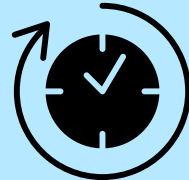
Individual households, communities, local authorities,
environmental organizations, health professionals,
industries, and educational institutions

B5. Solution uniqueness



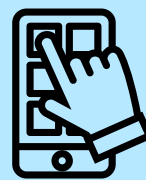
Power

H2O'stat runs on a 5V external battery, with a low power consumption and proven reliability.



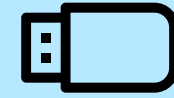
Real-Time Data

Capture the information as it happens. Contamination can spread throughout the grid if not dealt with properly.



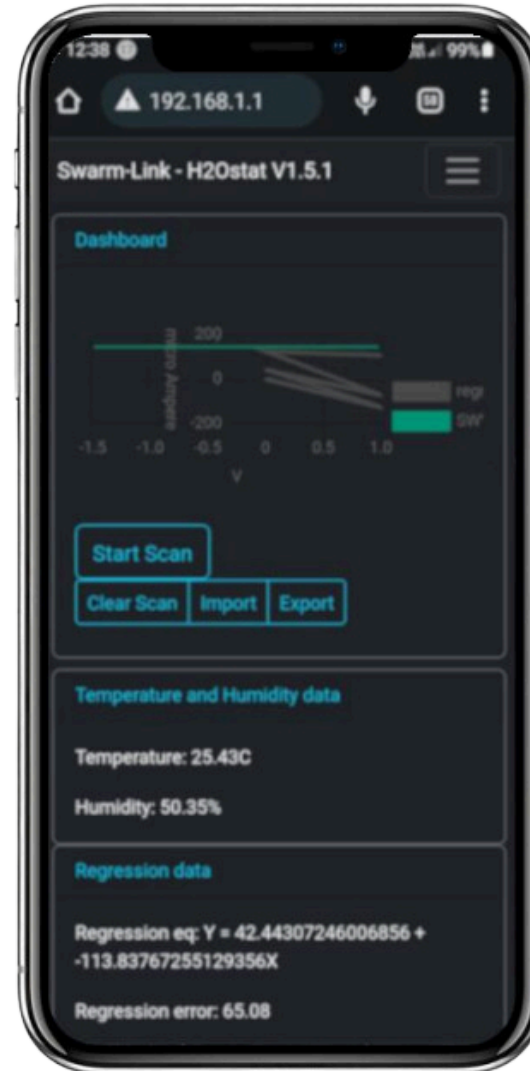
Ease of Use

H2O'stat has its own wifi hotspot network, No need for a 3rd party app installation just login from your browser or phone.



Affordable

The smallest cost effective potentiostat on the market.



OS support

H2O'stat supports the latest OS Android and Microsoft.



Sensors

H2O'stat comes with temperature humidity and Potentiostat sensors.



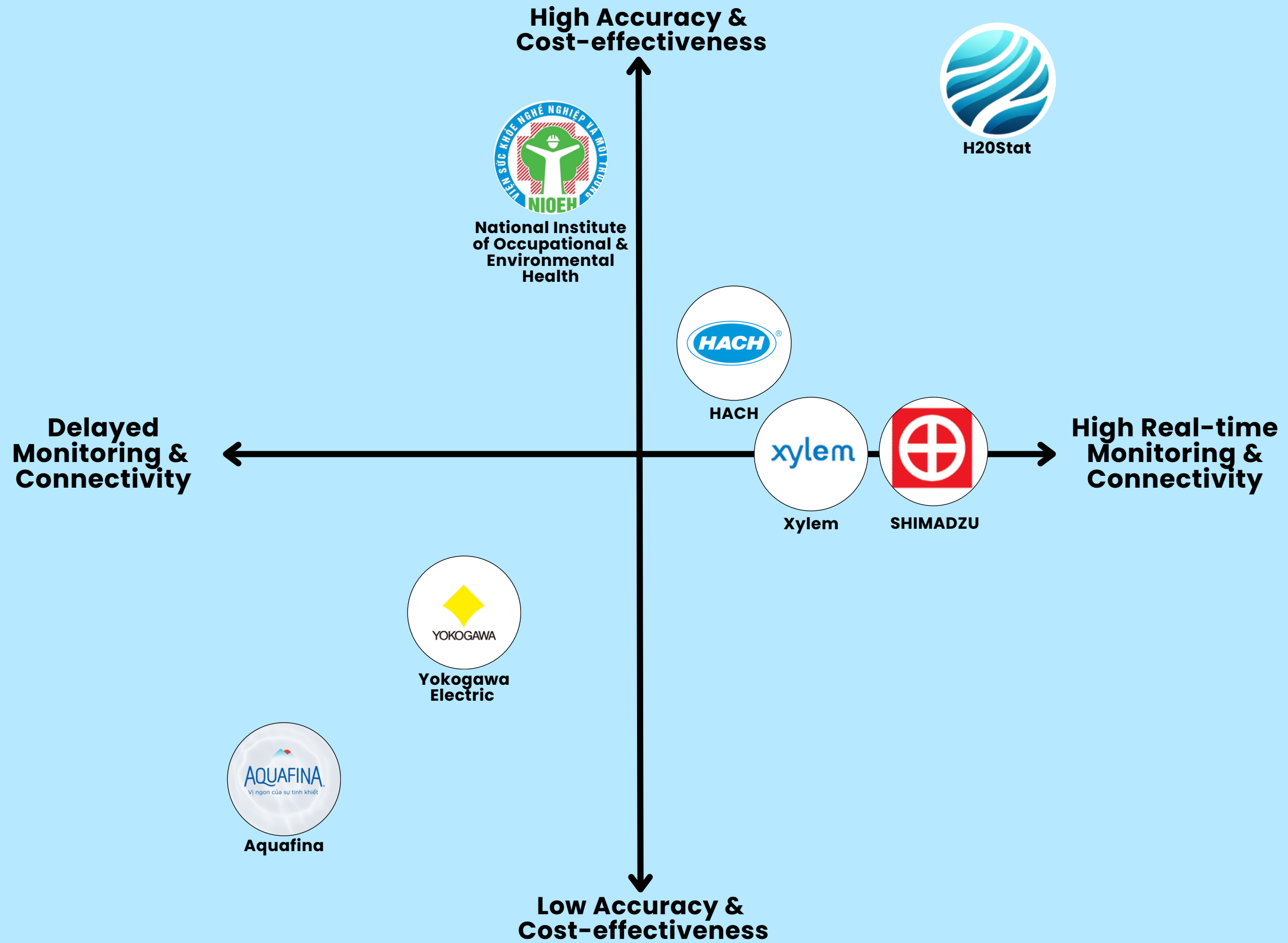
Communication

H2O'stat has 2 communication modes

- NBloT over cellular network
- Wifi Access either as Hotspot or access point.



Positioning map



C1. Engagement strategy



C. Stakeholder engagement

Dr. Alon Meizler in an outreach field trip with HIU University and Japanese professors to Mekong Delta

In the pictures, he demonstrated the use of H2Ostat to detect heavy metals in field water due to unsustainable agricultural practice

Questions Responses **216** Settings

H2OSTAT SOCIAL INNOVATION
SOCIAL BUSINESS CREATION 2024 - ROUND 1

TARGET 3-9 TARGET 6-1 TARGET 12-9

Section 1 of 2

Social Problem Roots Identification

B *I* U ↺ ↻

The survey aims to assess the degree of human awareness towards the existing consequences of chemical components and heavy metals in water use, especially drink water. Through the questionnaire, researchers will be able to identify the detrimental factors, leading to the pollution. Simultaneously, the conduction of given survey establishes a plan for water inspection and the requirement of radical solution in evaluation.

Q1: Giới tính của bạn là gì?/ What is your gender? *

Questions Responses **208** Settings

H2OSTAT SOCIAL INNOVATION
SOCIAL BUSINESS CREATION 2024 - ROUND 1

TARGET 3-9 TARGET 6-1 TARGET 12-9

Section 1 of 2

Current Water Treatment Solutions Landscape

B *I* U ↺ ↻

Living in the environment where population always pose a huge concern to humans in several aspects, everything that we consume need to be meticulously refined and qualified, including water. This study aims to examine the situation of human water utilization on daily basis and their satisfaction degree towards the current water treatment innovations in the market. The given questionnaire provide the transparent landscape of what aspects that current solutions have successfully achieved and timely detect their limitations, requiring for the new initiatives.

EXCLUSIVE
INTERVIEW



Survey & Interviews with consumers
(mainly students & office workers)

KEY STAKEHOLDERS	What they want	What they can offer H2Ostat	What H2Ostat can offer	Channels to approaching	When	Status
Individual households	Safe and clean drinking water	Sales revenue, feedback on product usability and effectiveness	Access to real-time heavy metal detection data	Online surveys, community outreach	During product development (Ideation, Prototype) and on-going	Approached >500 advanced thinking individuals for survey & through digital channels
Communities	Solutions to water pollution	Local knowledge and community engagement	Collaborative initiatives for water quality improvement	Public meetings, events, and community forums	Before launching (Pre-launch, Early Adoption)	Plan for product demo or information workshops next quarter
Local authorities	Effective water management	Regulatory support, certifications, and infrastructure resources	Data-driven insights for policy-making and planning	Formal presentations, policy briefs	Once MVP is done	Last year had a discussion for grant from Israeli government. Will re-approach Israeli & Vietnamese government when MVP is done.
Environmental organizations	Sustainable water management solutions	Advocacy and expertise in environmental conservation	Partnerships for environmental monitoring and advocacy	Joint projects, networking events	Before launching (Pre-launch, Awareness)	Will source & contact once MVP is done
Health professionals	Prevention of water-related health risks	Medical expertise and research collaboration	Health impact assessments and recommendations	Workshops, conferences	During product development (Testing, Refinement)	Will source & contact once MVP is done
Suppliers	Contract for manufacturing H2Ostat devices	Production expertise, supply chain management	High-quality manufacturing services	Request for proposals, negotiations	Once MVP is done	Will source & contact once MVP is done
Educational institutions	Access to educational resources on water quality	Research partnerships, funding for consultation/education	Educational materials and outreach programs	Guest lectures, research collaborations	Before launching (research)	Actively working with some Universities: Greenwich, Swinburne, FPT, & HIU. Having contacts with FTU & HECS through SBC.
Media	Coverage of water quality issues	Publicity, dissemination of information	Media coverage and visibility for H2Ostat	Press releases, media interviews	Pre, launching & on-going	Will source & contact once manufacturing starts.

C2. Social support

Swarm Link • 2nd
Swarm-link is paving the future of IOT with advance analog tech...
1mo • 🌐

CÁCH NB-IOT & MẠNG LƯỚI MESH NÂNG CAO HIỆU QUẢ HOẠT ĐỘNG TRONG TIỆN ÍCH

👤 NB-IOT và mạng lưới mesh đang làm cách mạng hóa hoạt động của các tiện ích bằng cách cải thiện đáng kể hiệu quả hoạt động.

🌟 Công nghệ này cho phép giao tiếp liền mạch trên khắp các mạng lưới tiện ích rộng lớn, đảm bảo giám sát và điều khiển hệ thống theo thời gian thực.

📌 Sự tiến bộ này cho phép các tiện ích tối ưu hóa phân phối nguồn lực, giảm thời gian ngừng trệ thông qua bảo dưỡng dự đoán, và nhanh chóng giải quyết bất kỳ vấn đề hoạt động nào.

👉 Việc tích hợp NB-IOT và mạng lưới mesh không chỉ làm cho quản lý tiện ích trở nên gọn gàng hơn mà còn hỗ trợ chuyển đổi hướng tới dịch vụ tiện ích thông minh và bền vững hơn.

[See translation](#)

HOW NB-IOT & MESH NETWORKS IMPROVE OPERATIONAL EFFICIENCY IN UTILITIES

👤 NB-IOT and mesh networks are revolutionizing the operation of utilities by significantly improving operational efficiency.

🌟 This technology enables seamless communication across vast utility networks, ensuring real-time monitoring and control of the system.

📌 This advancement allows utilities to optimize resource distribution, reduce downtime through predictive maintenance, and quickly resolve any operational issues.

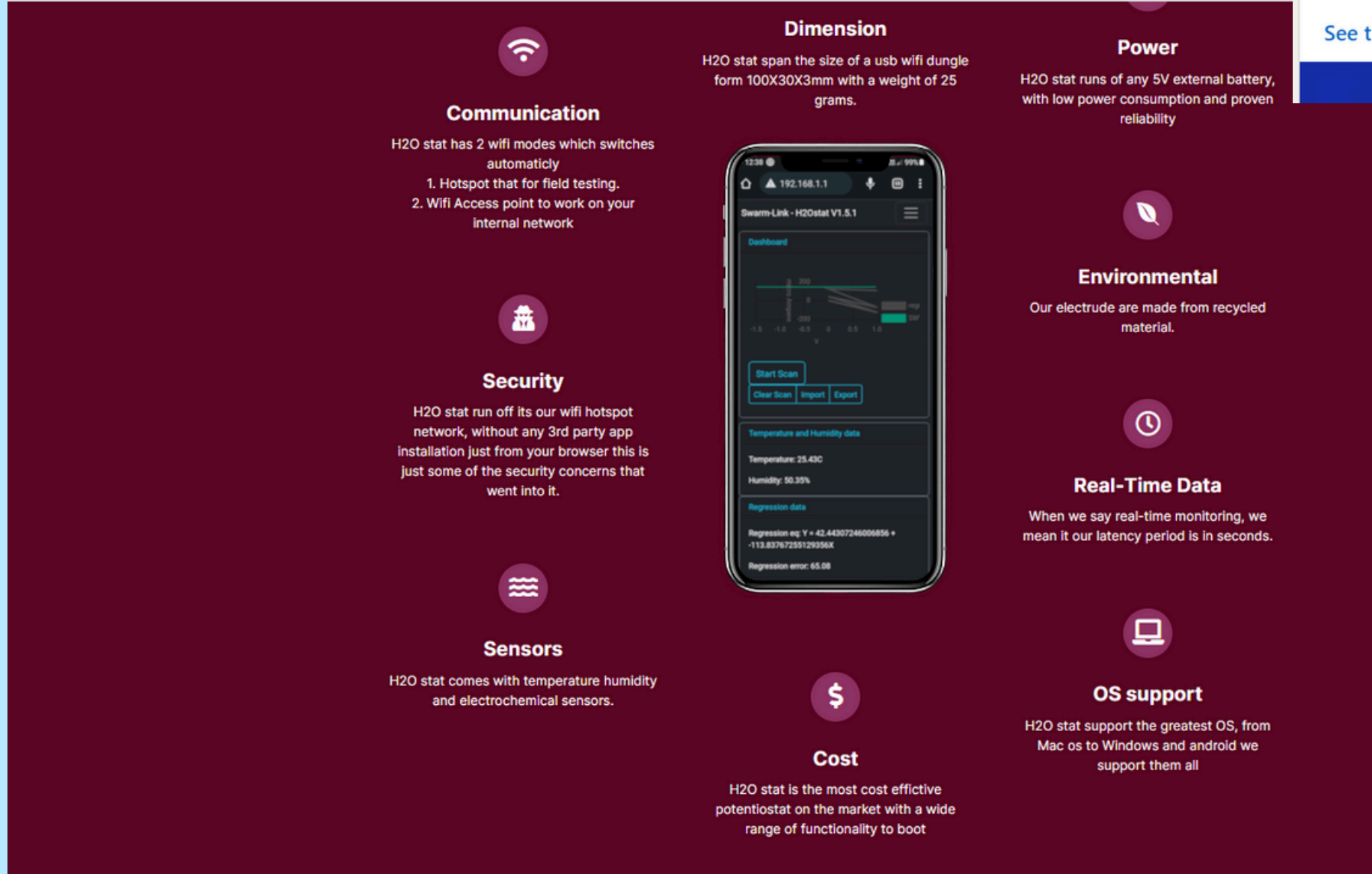
👉 The integration of NB-IOT and mesh networks not only makes utility management leaner, but also supports the transition towards smarter and more sustainable utility services.

Swarm-link

NB-IOT & MẠNG LƯỚI MESH NÂNG CAO HIỆU QUẢ HOẠT ĐỘNG TRONG TIỆN ÍCH



swarm-link.com/home/h2o-stat/



Communication
H2O stat has 2 wifi modes which switches automatically
1. Hotspot that for field testing.
2. Wifi Access point to work on your internal network

Dimension
H2O stat span the size of a usb wifi dongle form 100X30X3mm with a weight of 25 grams.

Power
H2O stat runs of any 5V external battery, with low power consumption and proven reliability

Environmental
Our electrode are made from recycled material.

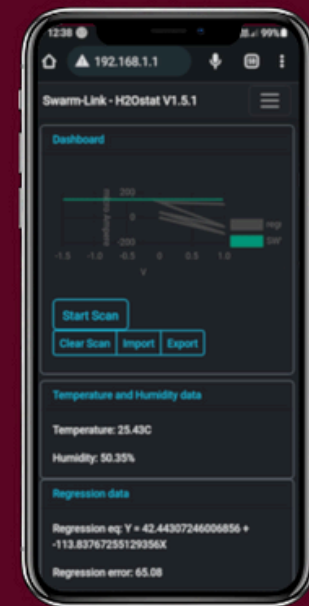
Real-Time Data
When we say real-time monitoring, we mean it our latency period is in seconds.

OS support
H2O stat support the greatest OS, from Mac os to Windows and android we support them all

Security
H2O stat run off its our wifi hotspot network, without any 3rd party app installation just from your browser this is just some of the security concerns that went into it.

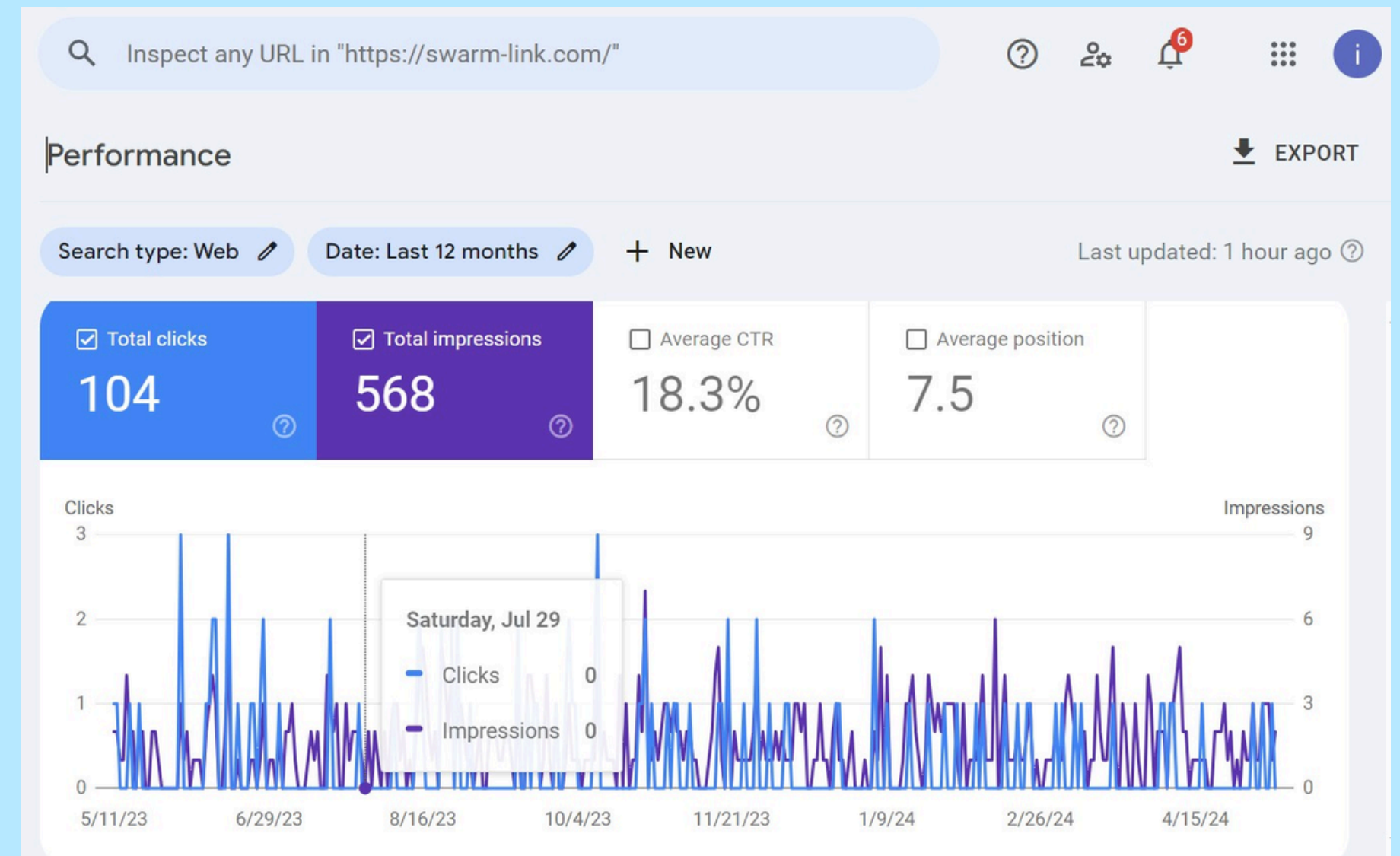
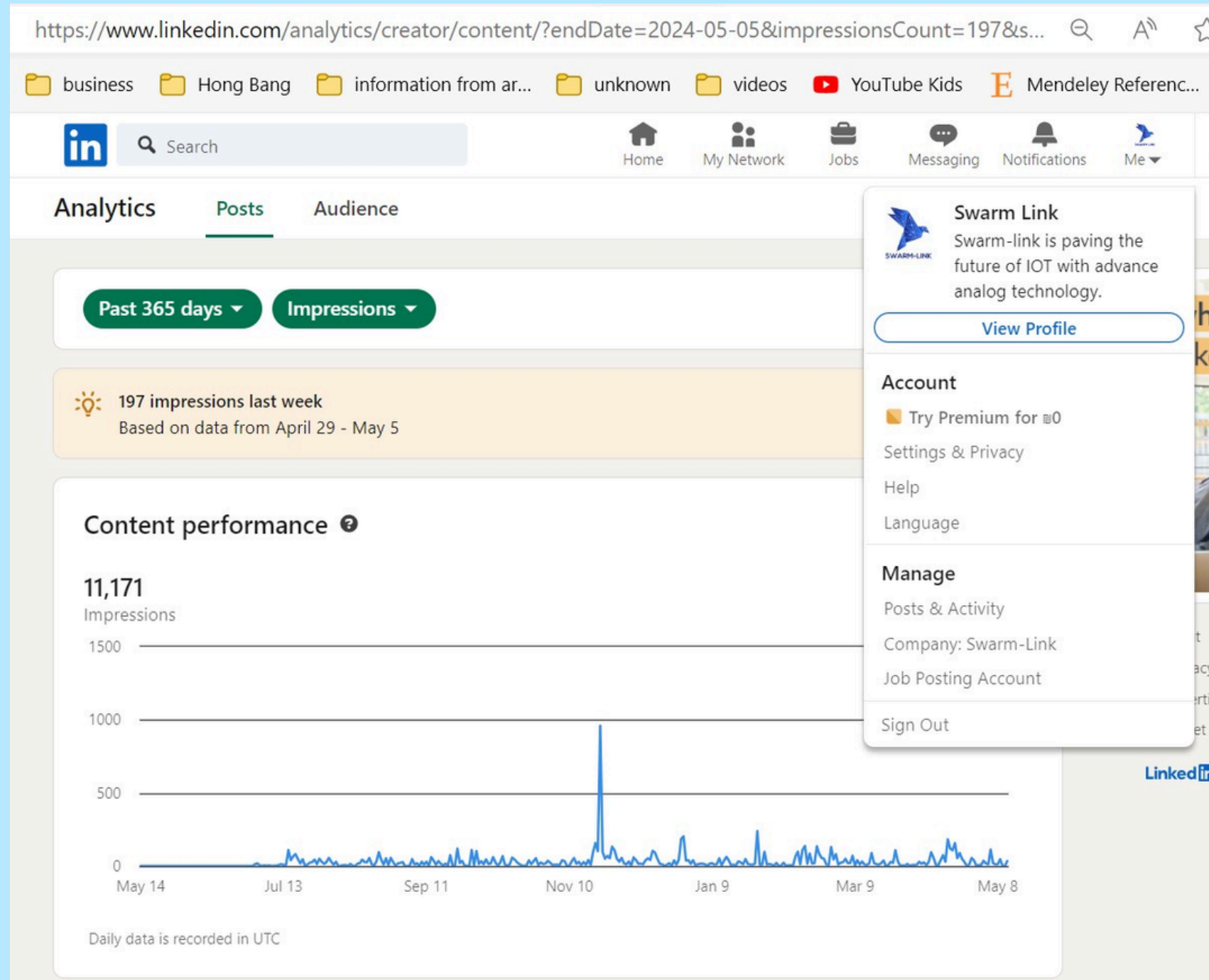
Sensors
H2O stat comes with temperature humidity and electrochemical sensors.

Cost
H2O stat is the most cost effective potentiostat on the market with a wide range of functionality to boot



We are active on our Web page, LinkedIn, and direct contacts

Social performances



<https://swarm-link.com/home/h2o-stat/>

<https://www.linkedin.com/in/swarm-link-637842272/>

Organizations & key personnel supporters



Affirmation Support for H2Ostat Project

To whom it may concern:

We have been informed about the H2Ostat project and understand that this project is a part of Social Business Creation Competition 2024 (SBC) organised by HEC Montréal and Yunus Centre.

Project team members have provided us with information on project mission, objectives and implementation. As the project addresses urgent and critical social needs, we fully support this social business idea and strongly believe this would create significant social impact in Vietnam settings.

We also would like to be a stakeholder of this project by offering the team:

- Use of meeting rooms, facilities and utilities for teamwork.
- 10 consulting sessions from our lecturers.
- 3 workshops including auditorium rental, utilities, and guest speakers.
- Connect and refer H2Ostat to those who are interested in water safety.
- Join H2Ostat workshops to update knowledge about water safety.
- Actively support the project social media channels.
- Provide media support through our social media pages.
- Become an investor of the project.

Should you need further information, please do not hesitate to contact me.

Sincerely,

Name: Nguyen Nhat Tan
Position: Director of Greenwich Vietnam
Company/Organization: University of Greenwich Vietnam
Other Comments:
Nhận xét khác:

Signature
Chữ ký xác nhận

Nguyễn Nhật Tân

University of Greenwich

To whom this may concern,

I am writing to express my enthusiastic support for the H2Ostat project developed by your team for the Social Business Creation 2024 Competition at HEC Montreal, Canada.

The innovative combination of advanced analog network technology and electrode sensors in H2Ostat to detect heavy metals in water is truly remarkable. I believe that the H2Ostat project has the potential to make a significant impact on communities worldwide facing water quality challenges, and I am confident in its success. As I understand the vision, missions, goals, and implementation plan of the project, I am compelled to offer my full support in various capacities:

- HR training support
- Technical training support
- Facilities support (for example: office space, meeting hall, utilities, etc....)
- Refer H2Ostat to people in need
- Participate in H2Ostat product and network testing
- Purchase H2Ostat for personal use
- Purchase H2Ostat for organizational use
- Follow H2Ostat webpage and social media updates
- Sponsor their crowdfunding
- Become an investor
- Other support (specify):

Name: Dr. Tran Minh Tung
Position: Acting Director
Organization: Swinburne Vietnam - Danang Location
Contact details (phone/email): tungtm6@fe.edu.vn


Signature

Swinburne University



Organizations & key personnel supporters

To whom this may concern,

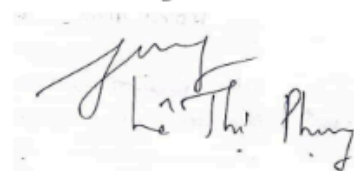
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- Purchase H2Ostat for organizational use
- Follow H2Ostat webpage and social media updates
- Sponsor their crowdfunding
- Become an investor
- Other support (specify):

Name: Le Thi Phung
Position: Test Manager
Organization: VNEMEX CO., LTD

Signature



VNEMEX (tech company)

To whom this may concern,

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- Purchase H2Ostat for personal use
- Purchase H2Ostat for organizational use
- Follow H2Ostat webpage and social media updates
- Sponsor their crowdfunding
- Become an investor
- Other support (specify):

Name: Nguyen Minh Tan
Position: Director
Organization: GR INDTECH
Contact details (phone/email): minhtan@gr_indtech.com

Signature



GR INDTECH (water treatment service)

To whom this may concern,

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- Purchase H2Ostat for organizational use
- Follow H2Ostat webpage and social media updates
- Sponsor their crowdfunding
- Become an investor
- Other support (specify):

Name: Le Hoang Chuong
Position: Director of Recruitment and Connection Center
Organization: C.P. Vietnam Corporation
Contact details (phone/email):

Signature



**C.P CORPORATION
(largest farm feed supplier)**

Organizations & key personnel supporters

----- Forwarded message -----

From: **Michael Belinsky** <michaelbelinsky@gmail.com>
Date: Tue, Jul 11, 2023 at 3:21 AM
Subject: Fwd: 2023 הפיילוטים מסלול
To: Alon Maizler <alonmeizler@gmail.com>

שלום אלון,
לדעתי אתם יכולים להגיש את המוצר שלכם לשני יישומים:
1. מניעת שריפות של רכב חשמלי ע"י גילוי מוקדם מבוסס IOT + בינה מלאכותית
2. ניתור מזדהמים ע"י כוחות הצלה באירוע חומ"ס מבוסס IOT

----- Forwarded message -----

From: [redacted] <[\[redacted\]@102.gov.il](mailto:[redacted]@102.gov.il)>
Date: Mon, Jul 10, 2023 at 5:38 PM
Subject: Fwd: 2023 הפיילוטים מסלול
To: [redacted]

אתם יכולים לראות את הפרסום למסלול הפיילוטים באתר הרשות לחדשנות, ובקישור –

<https://innovationisrael.org.il/JointPilotsDefenceMinistry>

ואת האתגרים לדוגמה בכתובת –

<https://innovationisrael.org.il/kol-kore/6709>

מוזמנים להפיץ לחברות אפשריות.

בברכה.

ירון קרון

מנהל תחום בכיר(פיתוח תכניות מחקר-מדעים וטכנולוגיות) | לשכת המדען הראשי

משרד: 073-365-7936 | נייד: 058-7870114 | yaronkr@mops.gov.il



משרד
הביטחון לאומי

Translation:

Hello Alon,

In my opinion, you can submit your product to two applications:

1. Prevention of electric vehicle fires by early detection based on IOT + artificial intelligence
2. Pollutant detection by rescue forces in an IOT-based HMS incident

Translation:

You can see the advertisement for the pilot track on the website of the Innovation Authority, and at the link - <https://innovationisrael.org.il/JointPilotsDefenceMinistry>

and the challenges for example at –

<https://innovationisrael.org.il/kol-kore/6709>

Feel free to distribute to possible companies.

Best regards.

Invitation to submit for a grant competition from Israeli government.

The supportive personnel is Mr. Michael Belinsky (Fire Deputy Chief – R&D Department – Commission District)

He can be contacted for endorsement at michaelbelinsky@gmail.com

D. Learning curve

Learners	Before SBC round 1	During SBC round 1	Areas for improvement for next rounds
Owners - Key engineers	<ul style="list-style-type: none"> - Overemphasized technical aspects - Lack of market insights and collaboration 	<ul style="list-style-type: none"> - Significant improvement in market knowledge - Learned to discuss the product with supporting students in a more understandable manner for better collaboration 	<ul style="list-style-type: none"> - Shift more focus to consumer benefits over functions during communication - Increase social media presence to suit Vietnam market - Engage stakeholders more aggressively while safeguarding design secrets
Student team supporting SBC lab	<ul style="list-style-type: none"> - Surprised by the danger of heavy metals in water that affect them personally - Intrigued by product innovation - New understanding of social issues and impact gaps 	<ul style="list-style-type: none"> - Deepened understanding of product innovation - Enhanced awareness of social issues 	

Learning curve examples

First draft

VISION

- Developed by NB-IOT, H2Ostat is expected as a pioneer in community-based water monitoring network.
- Unify and align water-quality inspection with community standards.
- Embrace social networking and human interconnection by water pipes.
- Monitor contaminants and change in water quality in real time, leading to highly fast and automatic responses and interventions.

MISSION

- Make water information accessible to everyone at the time when it is needed the most.
- Support the broader goal of maintaining high-quality water supply systems, marking a significant leap forward in environmental monitoring and public health protection.
- Promote social values of integrity commitment, adaptability and compassion.

Clearer, more concise, better comprehension of SDG targets

Improvement

A2. Contributions to UN goals:

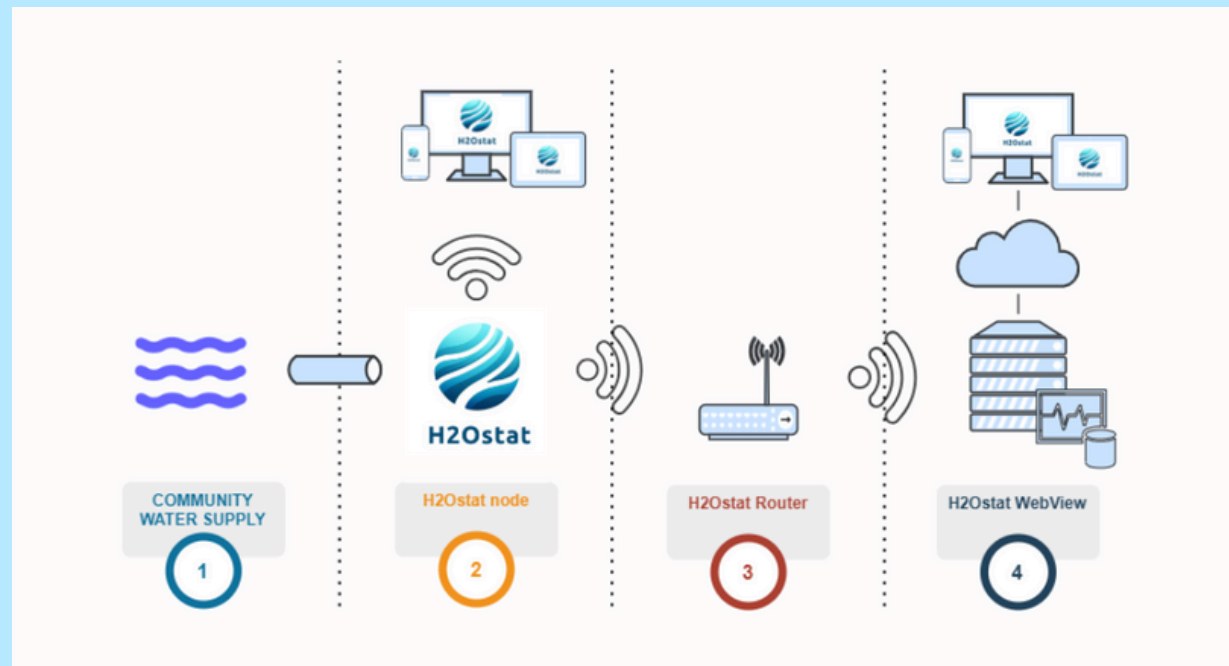
VISION

H2Ostat aims to become a pioneering leader in real-time water quality monitoring, empowering communities with actionable insights to safeguard public health and promote environmental sustainability.

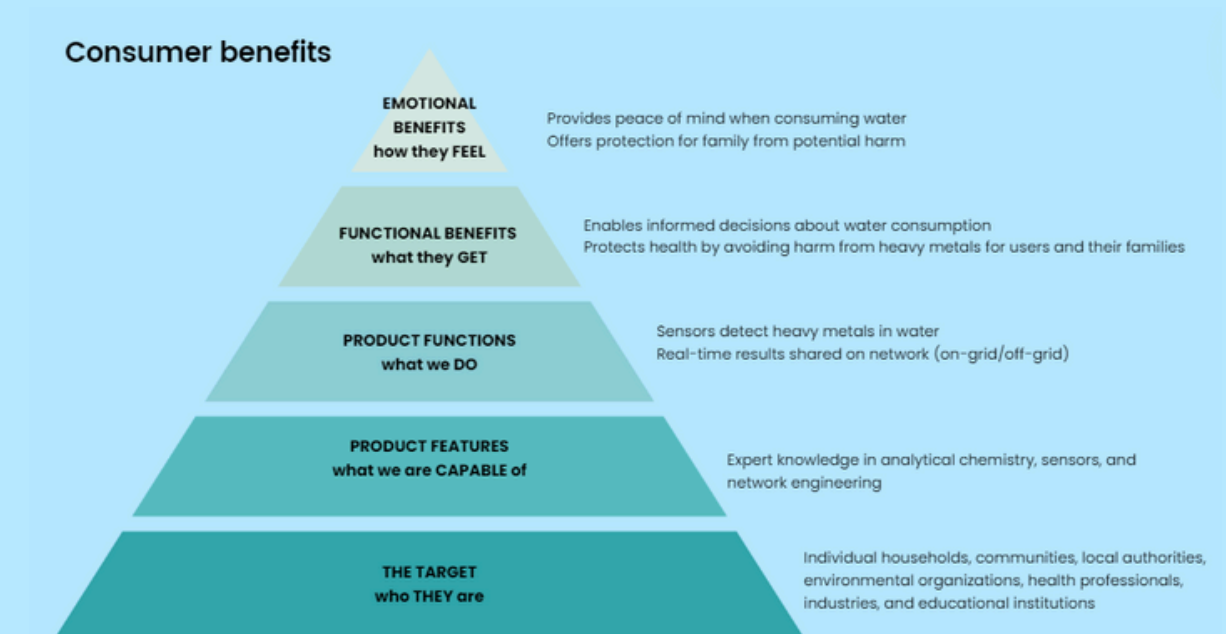
MISSION

Our mission is to enhance access to water information, advancing environmental monitoring and public health through innovative solutions.

By upholding values of integrity, commitment, and compassion, we foster a culture of planetary care, transforming water management for a healthier, sustainable future.



More customer focused approach



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- <https://labotec.com.vn/product-category/shimadzu/>
- https://thewaterman.vn/blogs/dai-ly/dai-ly-nuoc-uong-tp-hcm?gad_source=1&gclid=CjwKCAjwrvyxBhAbEiwAEg_Kgj95zYNOtLpHXw8YEgAHEhnsQ3x2sYuwJkaKamfNW2SI6RuDZ0OHXhoCeWcQAvD_BwE
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H2Ostat

A DEVICE THAT DETECTS TOTAL HEAVY METALS IN WATER
PROUD PRODUCT OF



SWARM-LINK



THANK YOU!