

SMART X

CLEAN WATER. ANYWHERE.

Modular • Automatic • Solar-Ready • Verified Impact



THE PROBLEM

Why rural communities struggle to secure a safe, consistent water supply



Intermittent power

Unpredictable power cuts make electric water pumps unreliable.



Unsafe groundwater

Wells and boreholes often have biological and chemical contamination



Lack of maintenance

There is often limited access to spare parts, tools, and skilled personnel.



Lack of verification

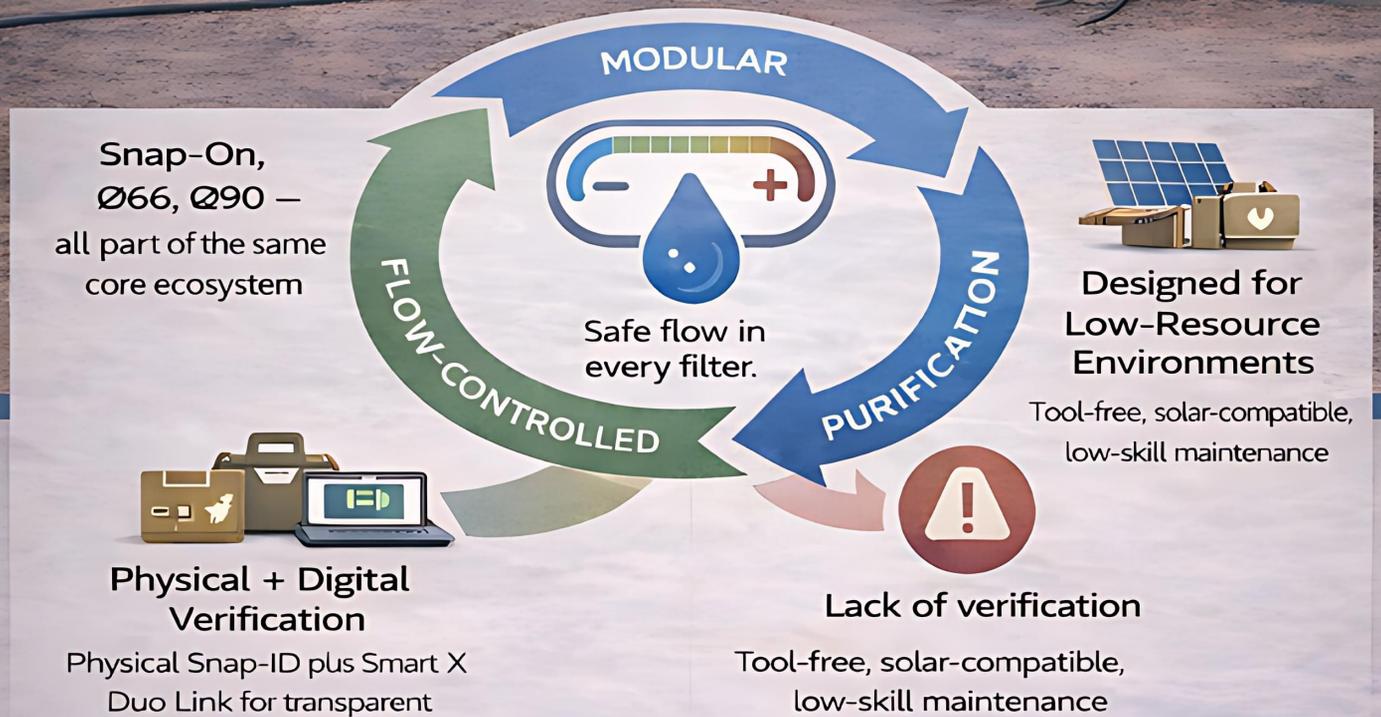
There is no field-proof way to confirm that the water really is safe.

Without reliable power, maintenance skills, or verification of the output, safe drinking water cannot be guaranteed.

This leads to failing water systems that become unsafe, unpredictable, and abandoned.

THE SMART X APPROACH

Bringing safe drinking water to resource-limited environments



ONE SYSTEM, ONE PROOF

By combining modular design, flow-controlled purification, and verifiable proof, Smart X solves the biggest challenges in rural, low-resource environments.

- Adapts to different communities and changing water conditions
- Performs consistently, off-grid, with low skill level
- Is verifiably safe for water produced
- Provides proof across all 3 system levels

No unreliable electricity. No lab testing. No untrackable impact.

WHY FLOW CONTROL MATTERS

Ensuring safe drinking water through controlled flow in every filter

Most water treatment systems rely on pressure pumps. But pressure does not equal purification flow rate*. Without controlling internal flow per filter, safety cannot be guaranteed.

Drinking water safety is not defined by how hard you push, but by *how much flows through each filter and for how long*.

PRESSURE CONTROL

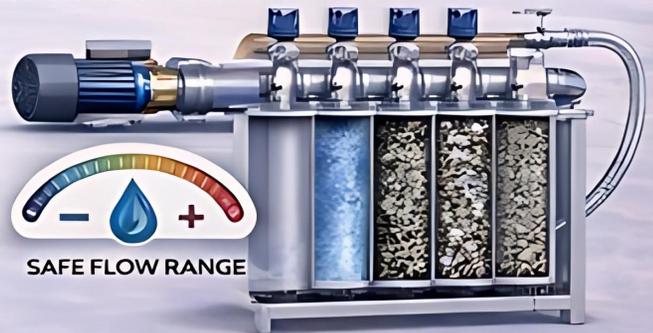
High pressure = high risk



UNCONTROLLED FLOW >>>>

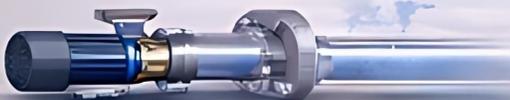
SMART X FLOW CONTROL

Balanced, independent flows



PRESSURE CONTROL

High pressure = high risk



⚠ Without Flow Control

- Filter safety depends on stable power and pressure
- Over-pressure may force pathogens through
- Output is inconsistent and unpredictable

SMART X FLOW CONTROL

Balanced, independent flows



- Fixed flow per filter with safe contact time
- Consistent pressure drops across each filter
- Stable, predictable output even if power, pressure, or usage change

SMART X systems ensure that each filter core removes contaminants effectively - no over-flowing, over-pressure, or under-performance.

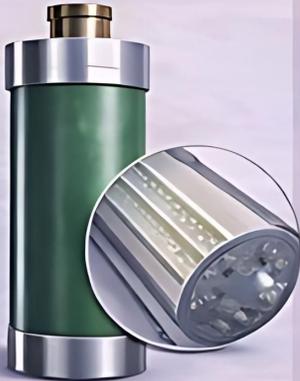
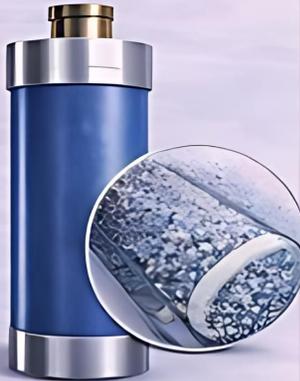
This is how we deliver safe, consistent, verifiable drinking water.

*Flow rate is the volume of water that passes through a filter per minute.

THE SMART X FILTER LINEUP

Modular filter cores designed for varied contaminants in unsafe water

Each Smart X filter core is color-coded for easy identification and specifically engineered to remove targeted contaminants from unsafe water supplies. All filters operate within *defined, controlled flow ranges** to ensure safety.

GREEN FILTER	BLUE FILTER	RED FILTER
 <p>Microbiological protection for households, clinics and rural schools</p>	 <p>Fluoride reduction for endemic regions where fluoride levels exceed WHO guidelines</p>	 <p>Arsenic reduction for affected wells and regions with arsenic-contaminated groundwater.</p>
		
<p>Microbiological protection</p> <ul style="list-style-type: none"> ✓ Bacteria, Viruses, ✓ Protozoa, ✓ Turbidity & suspended solids 	<p>Fluoride reduction for endemic regions</p> <ul style="list-style-type: none"> ✓ Fluoride (to safe drinking levels) ✓ Microbiological contaminants 	<p>Red filter. Arsenic (As III / As V; depending on config. (0mg) Arsenic (As III / As V, depending on config, oril)</p> <ul style="list-style-type: none"> ✓ Microbiological contaminants

Key factors verifiably verified by Flow Control

- ✓ Defined safe flow per filter core
- ✓ Real contact time — no by-pass trials
- ✓ Increased media lifespan and efficiency
- Increased media lifespan and efficacy

FEATURES OF FLOW-CONTROLLED OPERATION

- Defined safe flow per filter core
- Increased media lifespan and efficacy.

Modular solutions where every filter combines real-world safety with proof of performance and impact.

*Flow range is the volume of water that passes through a filter per minute.

SMART X SNAP-ON FILTER SYSTEM

Portable purification with physical identity and proof



✔ What is Snap-ID?

Snap-ID is a water-dip verification card. When dipped into treated water, Snap-ID:

- ✔ Confirms correct system usage
- ✔ Links water production to a specific filter or deployment
- ✔ Enables traceability and accountability without electronics.

Why a physical Snap-ID® matters

- ✔ In many rural and emergency settings:
 - Electronic tags fail
 - Connectivity is unreliable
 - Simplicity and trust are essential

Snap-ID solves this by being:

- ✔ Physical
- ✔ Visual
- ✔ Durable
- ✔ Tamper-resistant
- ✔ Easy to understand by non-technical users

SNAP-ID + SMART X DUO LINK

Physical verification combines with program-level transparency.

Snap-ID enables:

- ✔ Verified manual logging of filter usage
- ✔ Field loggers that work offline
- ✔ Transparent NGO and donor reporting
- ✔ Data even where connectivity is unreliable.

FEATURES of FLOW-CONTROLLED

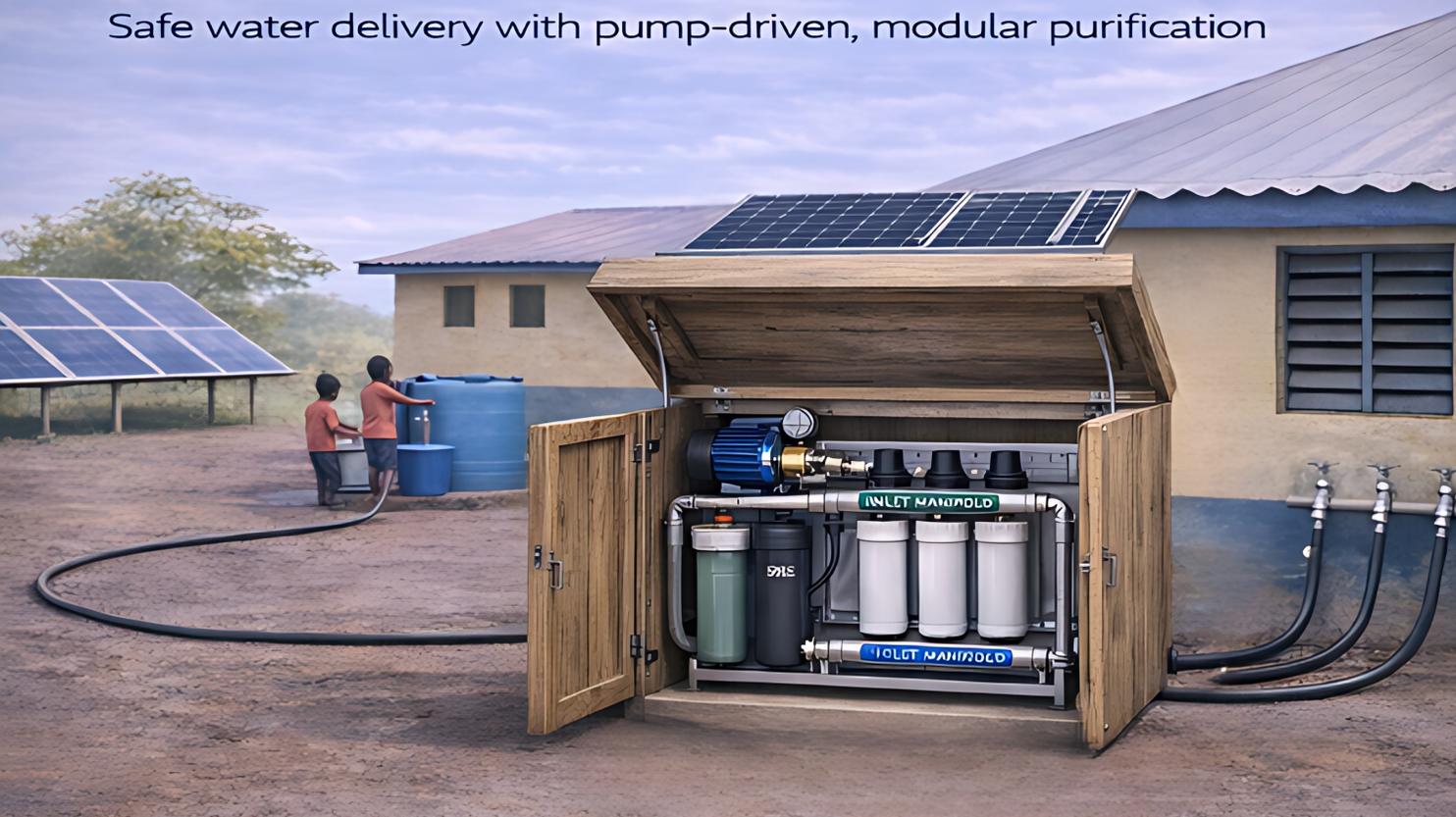
- Defined safe flow per filter core - program-level transparency.
- Increased media lifespan and efficiency - smart pressure

Modular solutions where every filter combines real-world safety with proof of performance and impact.



SMART X Ø66 FULLY AUTOMATIC SYSTEM

Safe water delivery with pump-driven, modular purification



- ✓ Compact, weather-resistant, lockable enclosure
- ✓ Pump-driven, solar-compatible
- ✓ Four modular Ø66 cores per system (expand as needed)
- ✓ Flow-controlled by design
- ✓ Tool-free service from the front and top

Ø66 SYSTEM ARCHITECTURE



FEATURES of SMART X Ø66 FULLY AUTOMATIC SYSTEM

- Unattended operation – pump, filter control, and backflushing
- Fixed safe flow per Ø66 core – stable water quality at program scale
- Tool-free access and low-skill maintenance
- Verified Smart X Duo Link dashboard

Proven clean water. No battery, no electricity, no complex technology needed.

SMART X Ø90 HIGH-FLOW SYSTEM

Verified safe water at scale

- ✓ Designed for boreholes, schools, and high-demand sites
- ✓ Up to 6 m³ per hour – lowest cost per 1,000 L produced
- ✓ Eight modular Ø90 cores per system (expand as needed)
- ✓ Long service interval and tamper-resistant.



Ø90 SYSTEM ARCHITECTURE

- ✓ Compact, weather-resistant, lockable enclosure
- ✓ Pump-driven, solar-compatible
- ✓ Four modular Ø60 cores per system (pre-tav as needed)
- ✓ Eight modular Ø90 cores per system (pææmrl as needed)
- ✓ Long service interval and tamper-resistant.



FEATURES OF SMART X Ø90 HIGH-FLOW SYSTEM

- Lowest cost per 1,000 L – uses high-capacity Ø90 cores.
- Independent, flow-controlled filters – verified microbiological and arsenic removal, spectuaric cos trolled, and optional fluoride.
- Largest scale in modular, portable design – expand as needed.
- Verified Smart X Duo Link dashboard.

REAL WORLD DEPLOYMENTS

Streamlined installation in low-resource settings

- 1 Groundwater Borehole pump draws groundwater to the surface
- 2 Hose-Connected Buffer Tank Buffer tank stabilizes water pressure, flows directly to SMART X.
- 3 Solar-Ready SMART X System works 6kprnd automatically and off-grid
- 4 Safe, Clean Water Storage



From source to tap, in five simple steps.

- 1 **Groundwater Borehole** —————→
Solar-powered borehole pump draws groundwater to the surface
- 2 **Hose-Connected Buffer Tank**
Buffer tank stabilizes water pressure, flows directly to SMART X
- 3 **Solar-Ready SMART X System**
The modular O66 and O90 systems work automatically and off-grid
- 4 **Safe, Clean Water Storage** —————→
Pumped water is purified, stored in a raised tank, and gravity fed to the school



From source to tap, in five simple steps.

SMART X systems integrate with storage tanks, borholes, and existing school programs quickly and simply.

A holistic, turn-key solution for rō rural drinking water.

SMART X DUO LINK

A cloud-connected dashboard that ensures safe water production

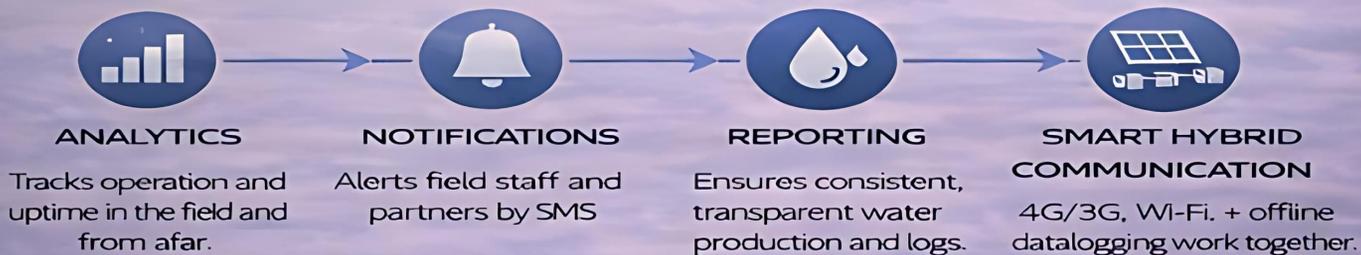
- ✓ Instant insight, verification, and alerting when it matters most
- ✓ Tracks operational performance, uptime, location, and safety
- ✓ Provides analytics, auto-reports, and GPS-linked outputs
- ✓ Works online AND offline with NGOs, partners, and funders.



FROM THE FIELD TO THE CLOUD



FROM THE FIELD TO THE CLOUD



Smart X Duo Link lets you know - everywhere in real-time - that clean water is being produced safely.

DELIVERING SAFE WATER, WHERE IT'S NEEDED MOST



What can **SMART X** do for your safe water programs?

Smart X is dedicated to innovation in affordable, verifiable, and resilient safe drinking water systems. Contact us to learn about **SMART X** capabilities, deployments and how we can solve your most difficult water challenges.



ANALYTICS

Works off-grid, stable flow-controlled output equal to expert level operators.



NOTIFICATIONS

Confirms treated water quality even where verification is difficult



REPORTING

Enables fast deployments and meets diverse community needs



VERIFIABLE **WATER** PURIFICATION FOR CHALLENGING ENVIRONMENTS™

Smart X Duo Link lets you know – everywhere in real-time – that clean water is being produced safely.

EXPAND Ø66 AND Ø90 WITH MORE CORES

INCREASE WATER OUTPUT CAPACITY TO MEET DEMANDS

Ø66 SYSTEM EXPANSION

Allows for up to **8** modular Ø66 CORES

Ø90 SYSTEM EXPANSION

Allows for up to **16** modular Ø90 CORES



EXPAND Ø66 and Ø90 with more CORES

Ø66 SYSTEM EXPANSION

15–19 L/min
actual output range



+ 4 CORES

Ø90 SYSTEM EXPANSION



Increase defined, flow-controlled
safe water output up to 10–30–38 l/min
(1800–2280 L/hour)

SCALABLE AND ADAPTABLE FLOW-CONTROLLED DESIGN

- Both Ø66 and Ø90 offer a flexible, modular design to accommodate water demand changes over time.
- Each CORE expansion increases safe, flow-controlled water output without ever bypassing contact time
- Expansion capacity empowers rapid deployment to meet higher and growing demand.

DESIGNED FOR LONG-TERM OPERATION

Predictable lifetime. Verifiable performance. Low total cost.

SMART X IS A LONG-LIFE PLATFORM

Smart X systems are engineered as **durable infrastructure** — not disposable devices.

COMPONENT	EXPECTED LIFETIME
Smart X Housing & Frame	10–15+ years
Flow Control Manifold	10+ years
Valves, piping, fittings	5–10 years
Electronics (Duo Link)	5+ years
Solar components	10–20 years



The system lasts for years. Only filter cores are replaced.



FILTER CORES VERIFIED FOR RELIABLE SERVICE LIFE

Each Smart X filter core has a defined, flow-controlled service life.

- Total liters processed
- Controlled flow rate (guaranteed by design)
- Contaminant load



DURABLE FILTER CORES

SMART X is a LONG LIFE PLATFORM

- ✓ Total liters processed
- ✓ Controlled flow rate
- ✓ Water quality

SAFE, VERIFIED SYSTEM LIFETIME

Smart X Flow Control, keeps filters stays

- Longer usable life
- Fewer replacements
- Lower lifetime cost



REPLACE
FILTER CORES



SYSTEM STAYS
IN PLACE



VERIFIED
LIFETIME PERFORMANCE

BUILT FOR YEARS — NOT EMERGENCIES ONLY

Smart X is designed for: Schools, Clinics, Community programs
Multi-year NGO deployments

A system you install once — and operate safely for years.



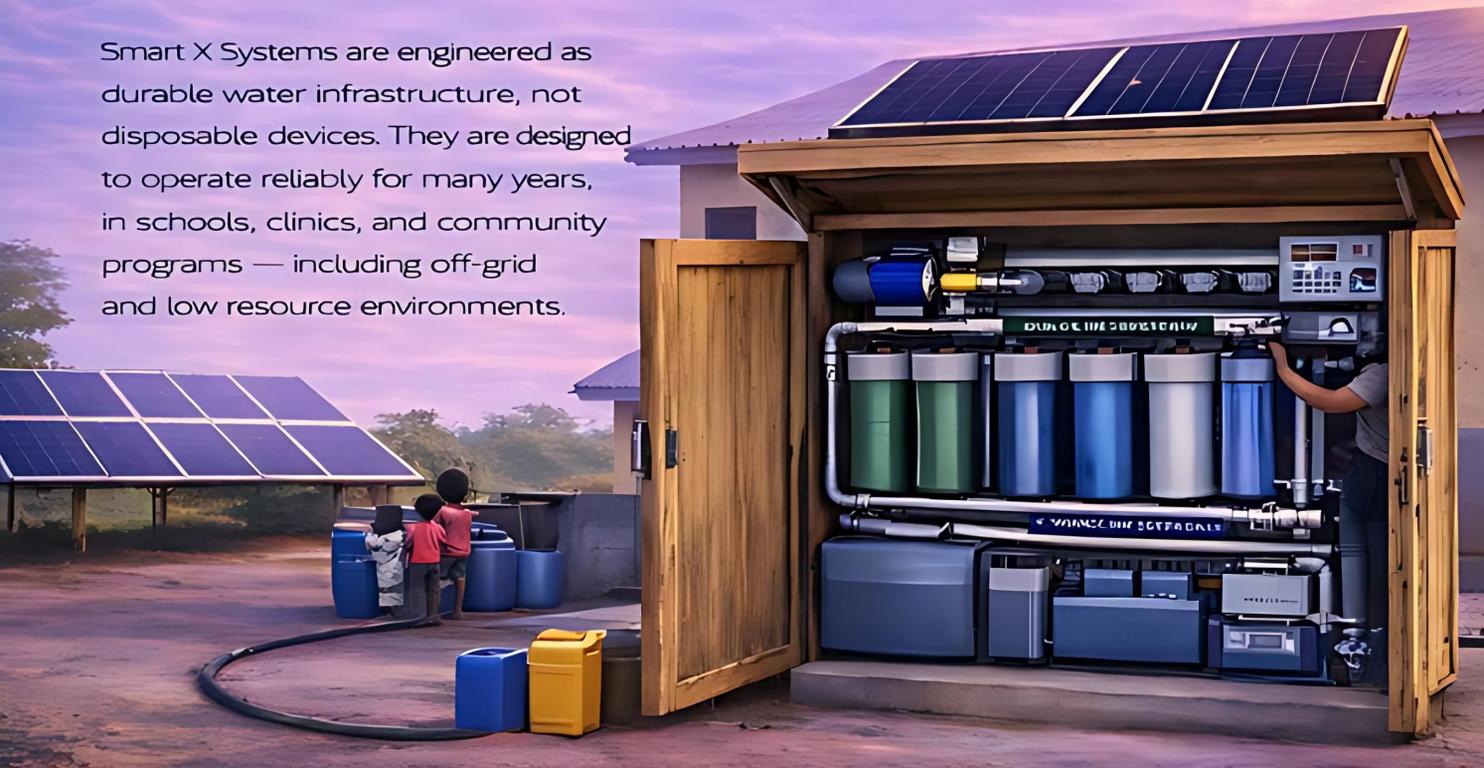
SMART X

Global Clean Water Solution

Durable infrastructure. Verifiable performance. Transparent impact.

SMART X IS A LONG-LIFE WATER INFRASTRUCTURE PLATFORM

Smart X Systems are engineered as durable water infrastructure, not disposable devices. They are designed to operate reliably for many years, in schools, clinics, and community programs — including off-grid and low resource environments.



Reliable



Proven Impact



Smart X Systems deliver safe drinking water and real-time sensor data — proven worldwide and built to outlast emergencies.



**SMART X
FOUNDATION**

Our humanitarian foundation Smart X Foundation receives 10% of net revenue ensuring technology serves humanity — with 100% accountability |



SCAN TO LEARN MORE

www.smartx.eco