

We make industrial water operations resource efficient.

Maintenance-free optical sensors and analytics for desalination, mining and industrial process water.



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Pitch Deck By

Spectromarine B.V.

team@spectromarine.com · www.spectromarine.com

Optimise industrial water infrastructure

Established in July 2025
Spectromarine builds
**maintenance-free optical sensors
and analytics** that give industrial
water operators continuous, real-
time visibility into water
composition and biofouling.



Signed collaboration agreement Nov 2025:
Saudi Water Authority & Spectromarine

Patented technology. Spinout from:



INSTITUTE OF SOLID STATE PHYSICS
UNIVERSITY OF LATVIA

OUR BEACHHEAD

Seawater desalination

Modelled economic impact: ~€700k
annual benefit per 100,000 m³/day
SWRO plant.

OUR PLATFORM

Industrial water monitoring

Desalination, HVAC / industrial
cooling and geothermal — same
sensor, same analytics core.

INVESTOR TAKEAWAY One sensing platform, three focused industrial markets, with desalination as first mover.

Demand for seawater desalination is “booming”

Population growth, urbanisation, industrial & agricultural demand, climate change, water scarcity & depleting freshwater resources drives demand for seawater desalination

Global momentum

~**200 new desalination projects** contracted worldwide in 2024–25

Source: IDRA Handbook / GWI 2026 data

Example: Morocco water security

63% of drinking-water needs planned to be covered by **desalination** capacity by 2030

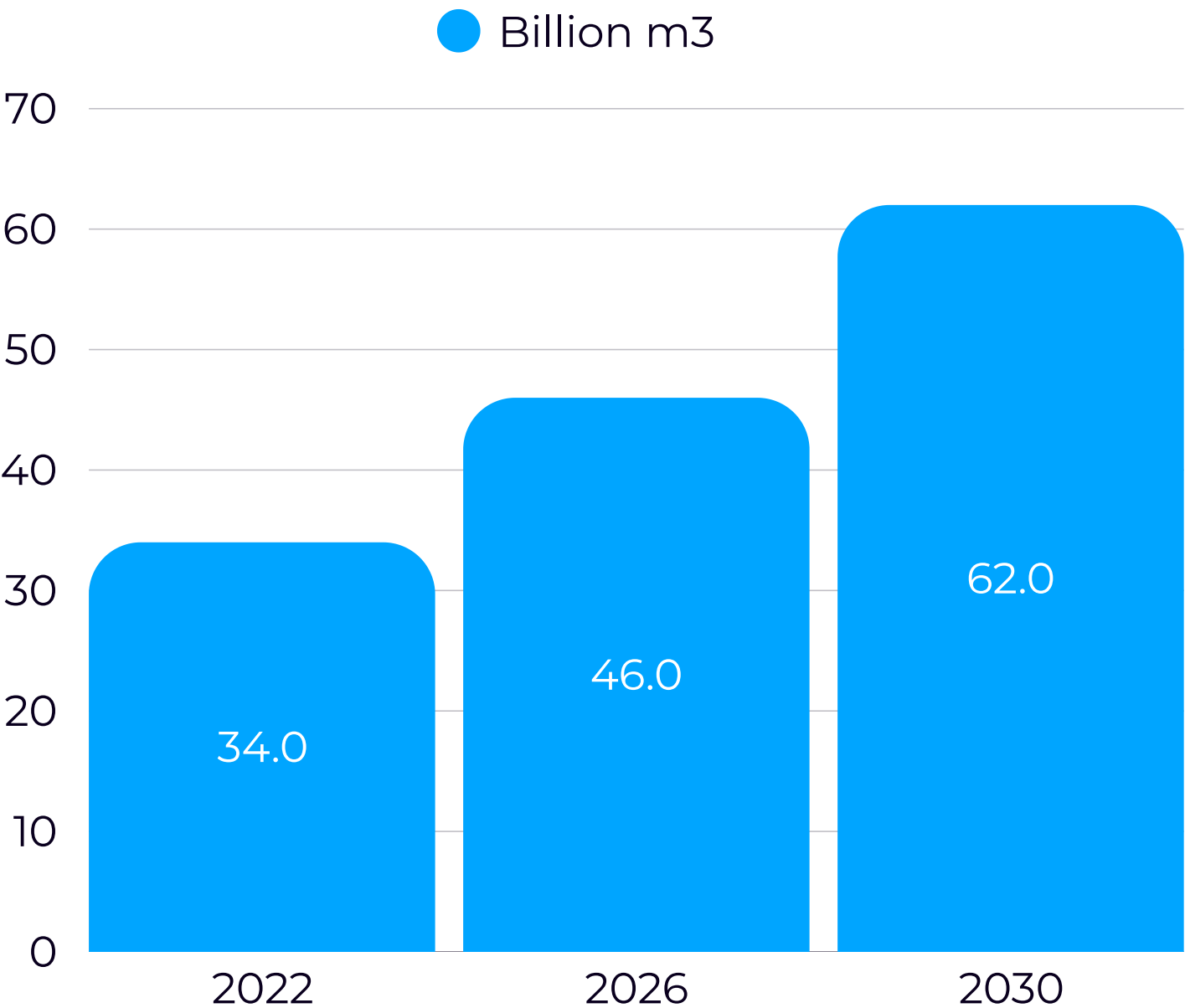
Source: Ministry of Finance of Morocco

Example: Chile mining industry water demand

~70% of copper-mining water needs expected to be covered from seawater desalination by 2034

Source: Reuters 2024

Projected Growth in Global Seawater Desalination Volume



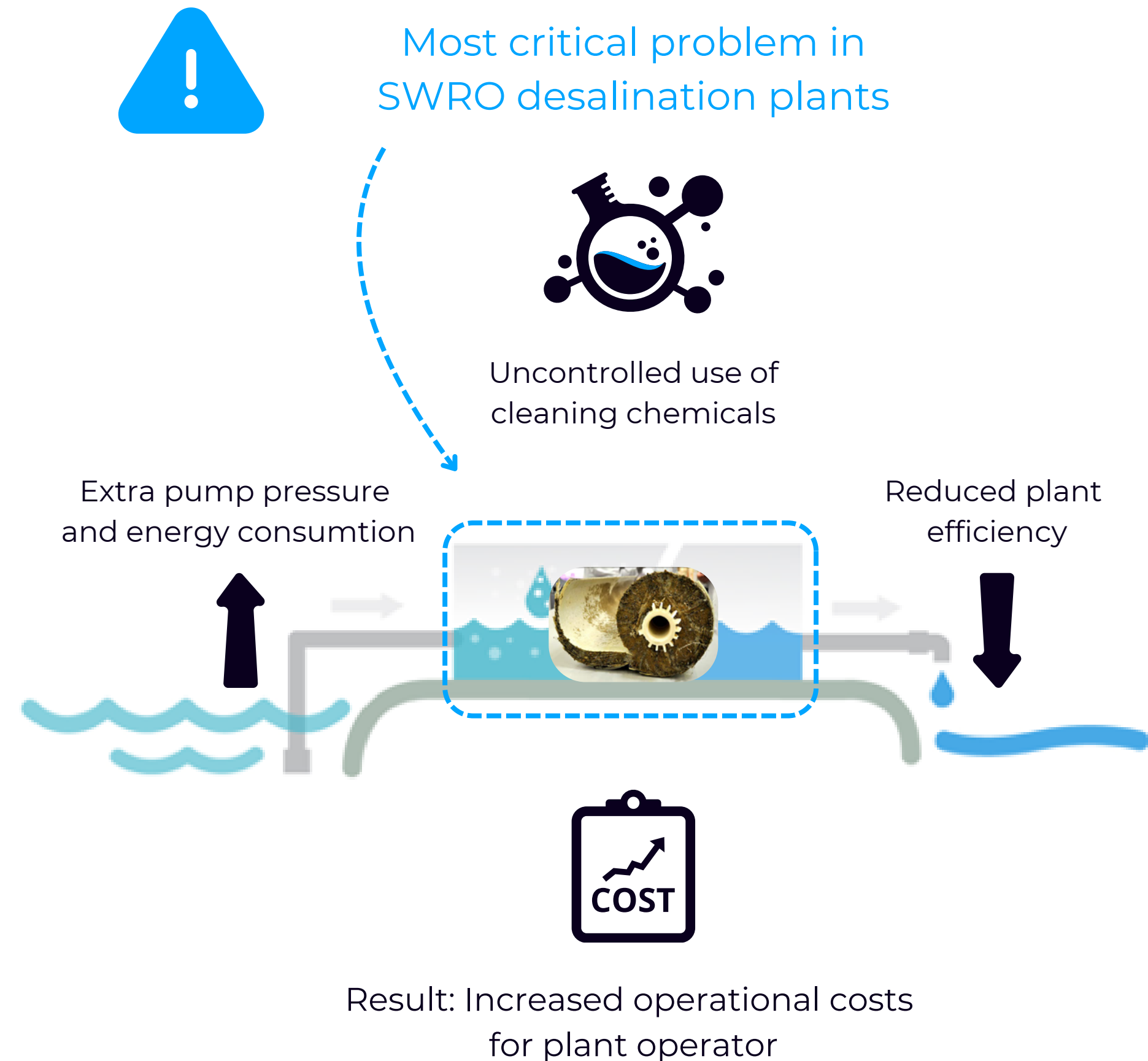
Costs per 1 m3 of clean water: from 0.5 USD

desalination capacity grows at 6-12% annually; demand rises sharply especially in MENA

Membrane biofouling affects operations

Scale and biological fouling from a raw seawater are two biggest factors that **damages Reverse Osmosis (RO) membranes** and causes major process issues for plant operators.

Desalination plants, water utilities and waste water treatment plants currently are optimising their water infrastructure to **reduce OPEX and increase efficiency** due to increasing demand.



Desalination plant operators are flying blind.

The cost is measured in hundreds of thousands per facility per year.

HOW OPERATORS DETECT THIS TODAY

Manual sampling + lab analysis.

- **24–72 hour latency**
- Samples manually collected daily, sent to lab
- Biomass degrades in transit — results unreliable
- By the time operators react, the damage is done

“The ideal method would be fast, reliable, and measure all active biomass.”

Dr. Motasem Abushaban · SWRO operator, Oman

LOSS PER 100,000 m³/day SWRO PLANT

€720k

annual cost of undetected biofouling / pilot data

Energy use

CIP frequency

Chemicals

Membrane wear

Downtime

INVESTOR TAKEAWAY A €720k/year problem per SWRO plant, currently solved with slow and ineffective methods.

We brought laboratory spectroscopy directly into industrial water

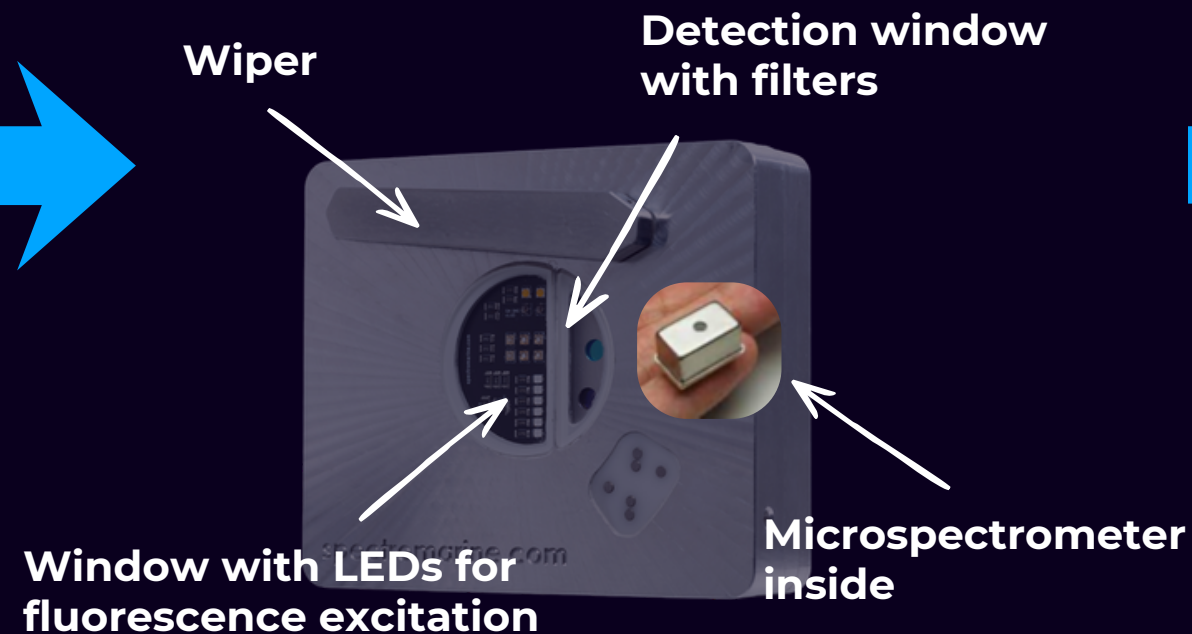
Old way



Laboratory analysis

- Sample removed from the process
- Periodic measurement
- Hours or days to results
- Not suitable for continuous control

Our innovation

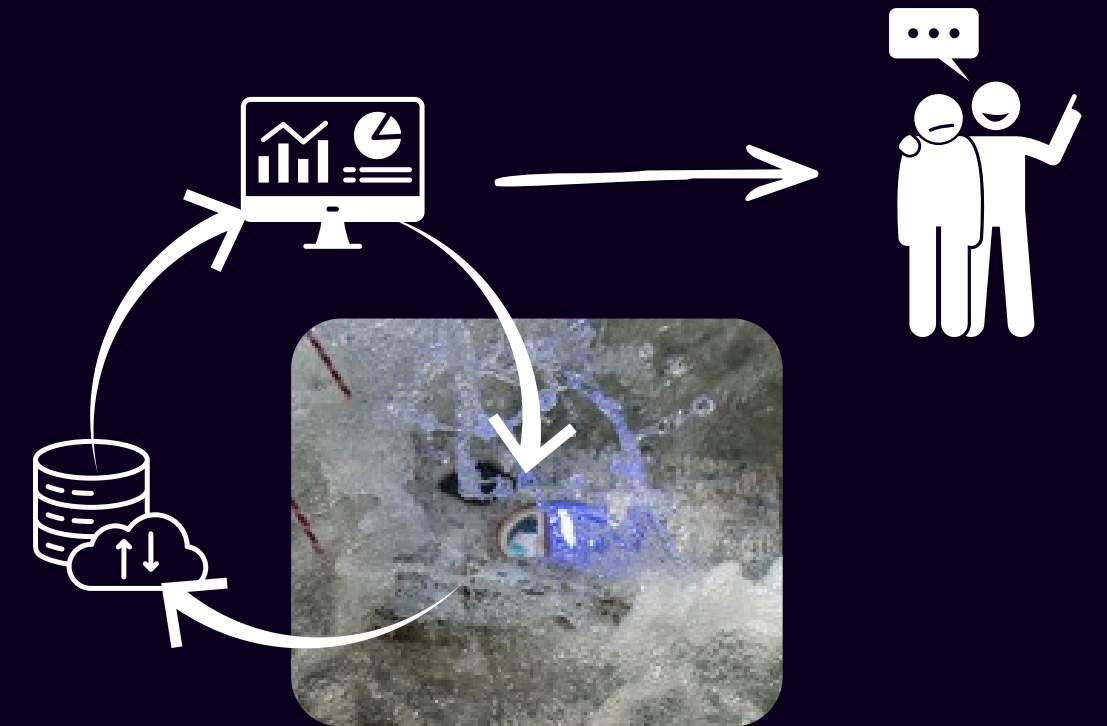


Miniaturised spectrometer under water

Unique combination of:

- Multi-Excitation Fluorescence (MEF) spectroscopy
- Visible spectrum (VIS) absorbance spectroscopy
- Automated spectral analysis
- Proprietary mathematical algorithms

The new way



Real-time water intelligence

- One sensing platform.
- Multiple water-quality models
- Continuous operation in the process itself
- On-going insights for operators

Drop-in optical sensor. Zero maintenance. Predictive data 24–72h ahead.

11 month successful
test plant pilot with:



 Spectromarine sensor
Multiple monitoring points

Zero consumables

No electrodes, no reagents,
no field calibration

Real-time alerts

Predicts biofouling 24–72h
before plant impact

Plug-and-play

PoE+ ethernet, integrates with
operator SCADA & AI



Commercial advantage

Depending on the plant size the cost savings with SM sensors are ~€720k / per year

Different optical architecture. Different operational insight.

OUR ADVANTAGES

Multi-excitation
spectral fingerprint

sees more than isolated parameter probes

Cross-signal
interpretation

shows how other water parameters
influence the parameter of interest

Application-specific
data models

new applications through calibration and
software, not new hardware

One core platform

turns spectral changes into operational
decisions



	Spectromarine	YSI EXO / multiparameter probes	s::can UV-Vis spectrometers
Core sensing approach	Multi-excitation fluorescence + spectral optical measurement	Multiple dedicated parameter sensors	UV-Vis absorption spectrum
Biological / organic fingerprint	Broad multi-excitation spectral response	Parameter-specific sensors	Absorption-based spectral response
Measures interference effects	Yes — spectral relationships across signals	Limited / parameter-specific	Spectral compensation, but absorption only
Biofouling-risk intelligence	Application-specific models	Water-quality measurements	Water-quality measurements
Autonomous cleaning	Yes	Yes	Yes
Consumables / reagents	None	Depends on sensor configuration	None
Data layer	Raw spectrum + analytics + API/SCADA	Instrument/platform data	Instrument/software platform
Primary positioning	Decision support for industrial water operations	Multiparameter water monitoring	Online spectral water-quality monitoring

15'900 Sea Water RO type desalination plants globally

OUR FOCUS

Large SWRO plants

50'000 - 250'000 m³/ day

- Higher cost savings with Spectromarine and larger plant budgets to invest in optimisation
- Initial focus: Gulf region, wider MENA and South America
- Expand into large & mega plants

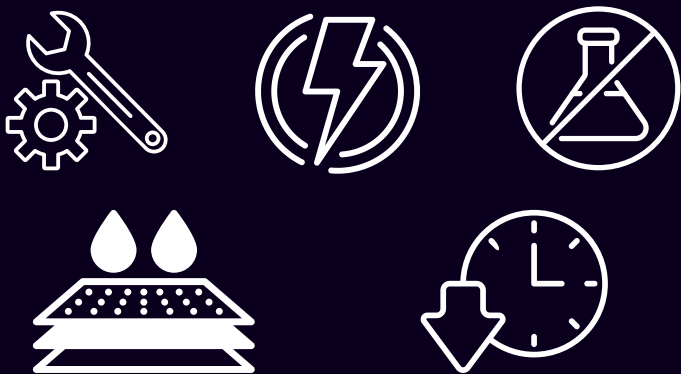
“28 new >50,000 m³/day seawater projects awarded globally in 2024–2025”

SOURCE: GWI DESALDATA / IDRA HANDBOOK 2025–2026

VALUE

~€700k modelled annual OPEX savings*

*Modelled using Saudi Water Authority pilot results for a 100,000 m³/day SWRO plant



Early biofouling warnings help operators optimise cleanings, chemicals, membrane life and uptime.

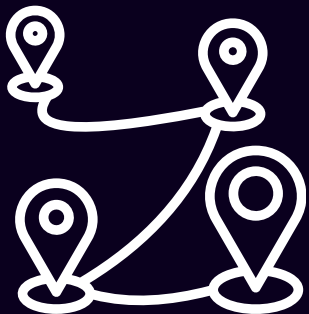
REVENUE MODEL

Commercial pricing target
~10% of validated OPEX savings

Typical target: 2 sensors per plant

3–6 month validation
Then **annual plant contract €50k–€100k+ per plant/year**
Pricing linked to validated operational value

Land at one plant, expand across the fleet



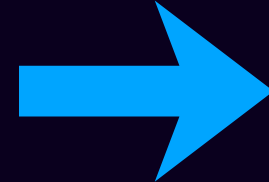
INVESTOR TAKEAWAY Focused customer base, strong operator economics and multi-site expansion turn each successful pilot into a recurring plant—and fleet-level—relationship.

From one beachhead to a broader industrial water platform

New applications through calibration models, software and commercial partners—not by rebuilding the core hardware

strongest expansion case







Industrial cooling and HVAC



Geothermal



Mining, aquaculture & environment applications

Commercial proof	Market evidence	Route to scale
Paid pilot with global HVAC industry partner*	Large global installed base with recurring water-treatment spend	OEM integration + recurring software / data licensing
Geothermal application validation with global water-treatment partner*	High-value geothermal assets need earlier process and scaling-risk visibility	Partner-led site deployment + recurring monitoring contracts
Commercial and pilot evidence across additional water applications	Same optical core validated across multiple water matrices	Expansion optionality after core verticals scale

*Industry partners under NDA; identities available during diligence.

INVESTOR TAKEAWAY Three focused commercial verticals. One sensing core. Partner-led scale.

SPECTROMARINE SEED ROUND · CONFIDENTIAL

Three verticals. One platform. €30M+ revenue by Year 5

Year 5 revenue

~€33.9M

Base-case Year 5 revenue across three core verticals by 2031

Recurring revenue base

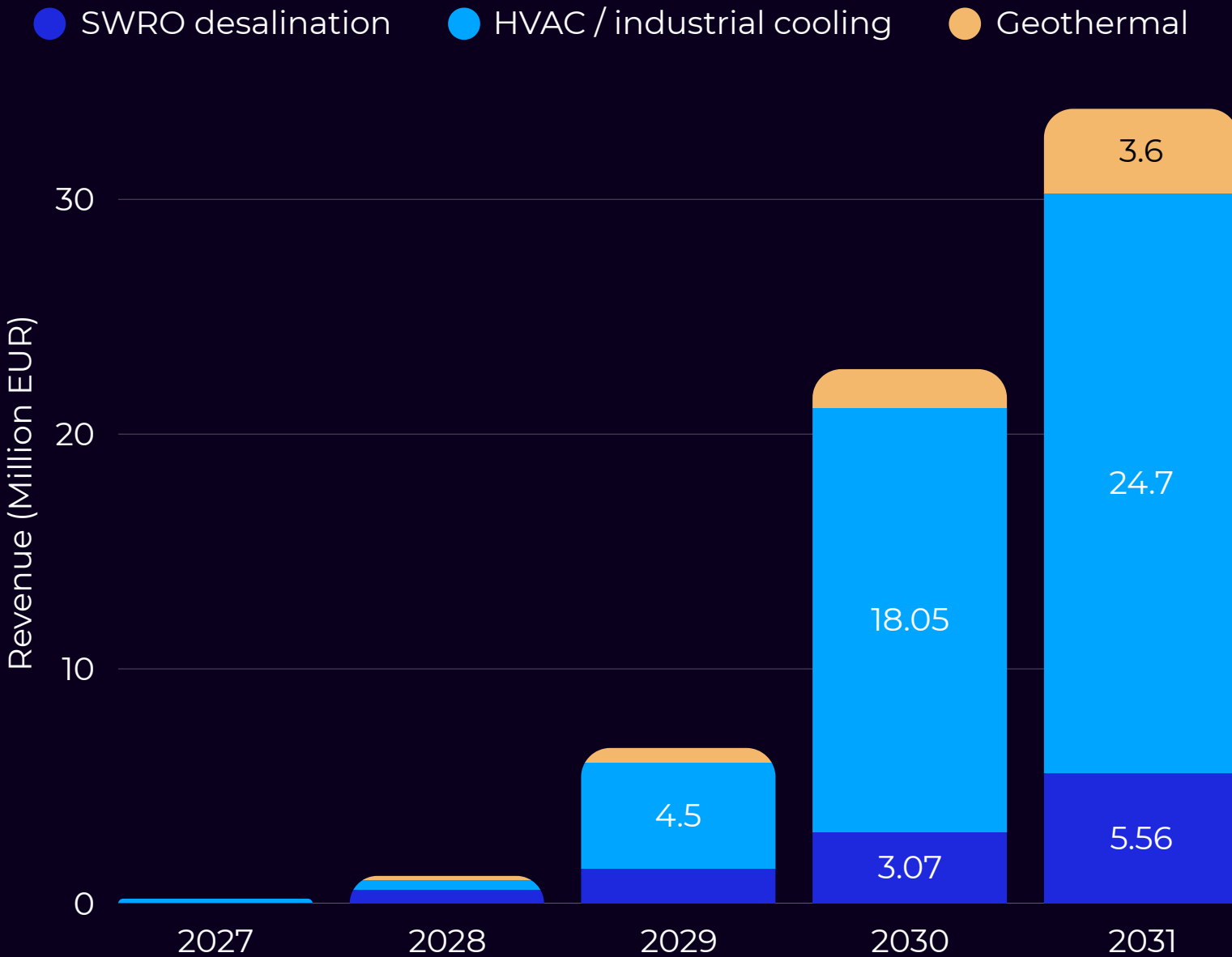
€14M+ recurring / licensing

Approximate forward recurring and licensing revenue from the active installed base by 2031

Revenue mix

3 verticals

16% desalination
73% HVAC / cooling
11% geothermal



INVESTOR TAKEAWAY One core technology scales across three focused verticals to €30M+ Year 5 revenue.

Industry partner-led growth

SEA WATER DESALINATION (BEACHHEAD MARKET)

12-month pilot with largest sea water desalination operator in the world

MINING INDUSTRY

Paid pilot with one of the largest German mining companies

HVAC INDUSTRY

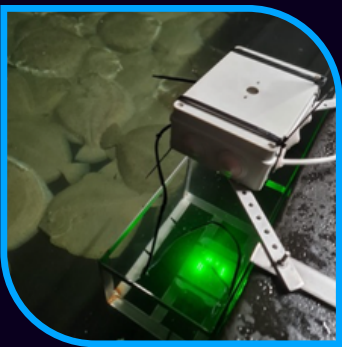
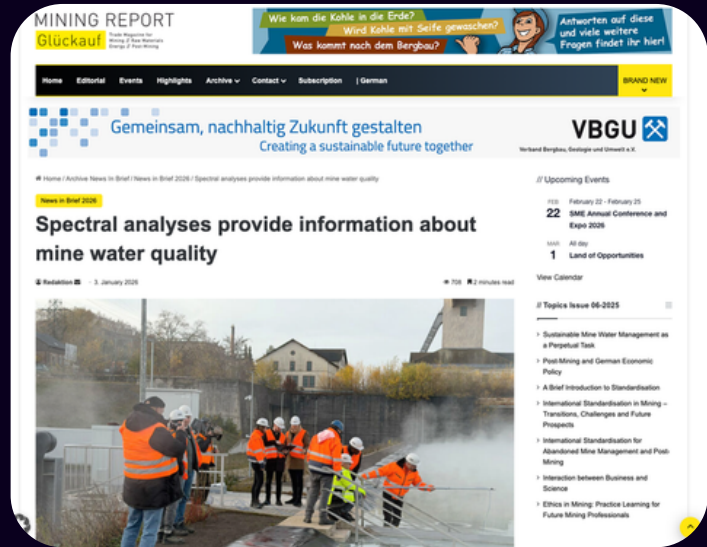
Paid pilot with the largest HVAC industrial equipmant manufacturer (under NDA)

ENVIRONMENTAL MONITORING

1st commercial sale to Turku AMK (Finland)
EU funded project with 6 sensor deployment on 6 lakes in Europe (Latvia/Lithuania)

AQUACULTURE

1st validation with the largest shrimp manufacturer in the World (Spain)



Pilot

Paid Pilot

Paid Pilot

Commercial sale

Paid Project

Validation

Large desalination customer/partner leads (in progress)	
Kurita Water Industries	Japan / global
IDE Technologies	Israel / global
ACWA Power	Saudi / GCC / global
DEWA	UAE
Veolia	France/ global
SUEZ	France/ global
Saudi Water Authority	KSA



Spin-out from Institute of Solid State Physics, University of Latvia · IP fully owned ·
HQ Leeuwarden (The Netherlands)



Physics + deep-tech business development

M B A

CEO & Commercial Lead

Girts Ozolins

12+ years deep-tech commercialization. Co-founder of 4 companies, 15+ years in startup ecosystem. Owns the SWA relationship and runs commercial execution end-to-end.

PhD Physics

Chief Scientist & COO

Aleksejs Zolotarjovs

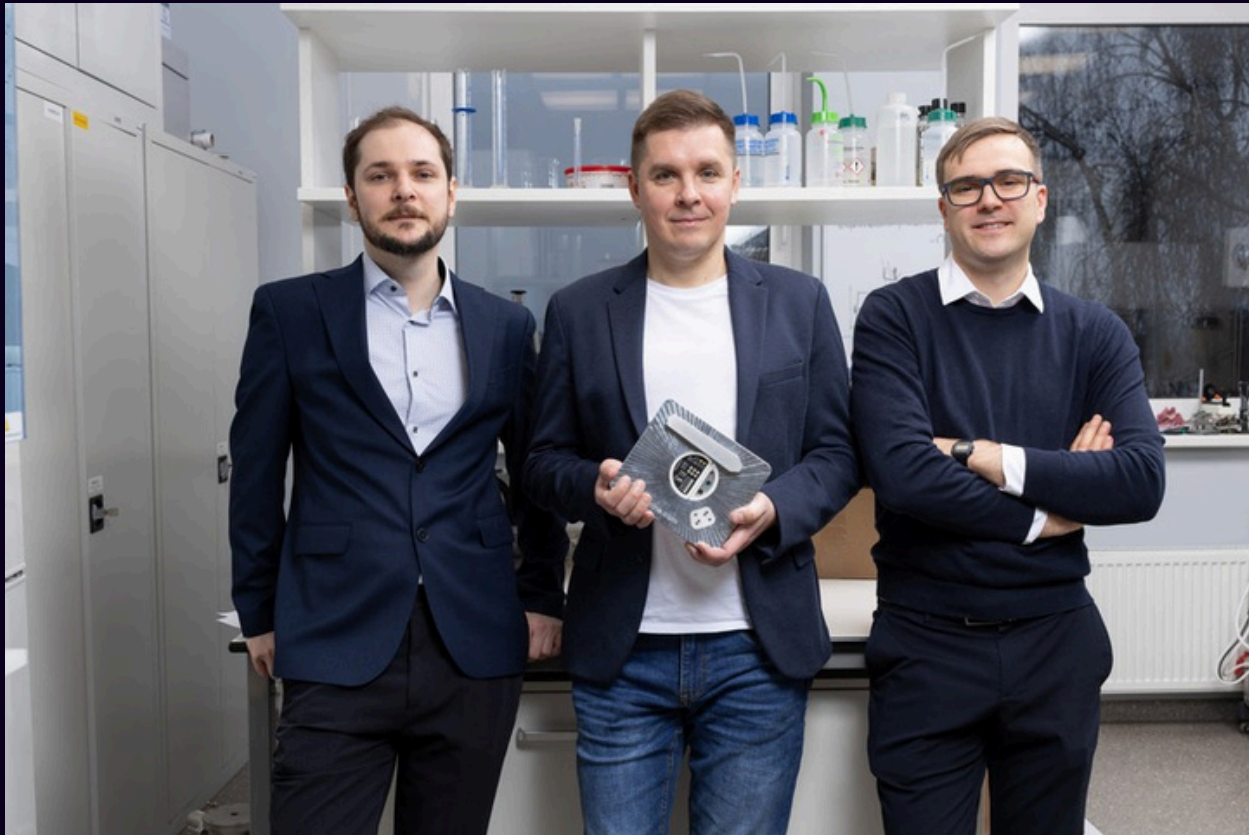
10+ years R&D in optical systems. 50+ scientific publications. Head of Optical materials laboratory of the Institute of Solid State Physics, University of Latvia. Manufacturing and supply chain leadership + product co-development.

MSc. Physics

CTO

Gatis Tutens

5+ years experience with complex optical and electrical engineering system development. Owns tht HW and SW development.



Strategic Advisor

Wayne Byrne

Water-tech entrepreneur with 4 exits, VC investor, €80M raised, expert in scaling water technologies from pilot to global commercialization.



NEXT HIRE Support Engineer & Sales / BD Lead · earmarked in use of funds

INVESTOR TAKEAWAY Technical depth from one of the EU's leading photonics labs, founder-led commercial execution, with a clear next hire to scale.

What we did in first 12 months

Traction

- 1st commercial sale in month 1.
- 2 paid pilot agreements in first 6 months
- Working with TOP 3 or world's largest industrial partners/customers in all our target industries.
- 40'000 EUR revenues in first 9 months

Ecosystem support

- Par of EriCA accelerator programme water batch 2026 (Finland) supported by KEMIRA
- Par of QSTP WaterTech Accelerator batch 2026 (Qatar) supported by Total Energies

Awards/recognition

- Finalist of United Nations Blueing The Black Sea innovation challenge 2026
- Finalist of WIS Award 2026
- Finalist of Miriam Balaban Innovation Award 2026
- Hello Tomorrow Deep Tech Pioneer Finalist 2026
- Winner of Bryck Startup Alliance water monitoring challenge 2025
- Finalist of Water Europe Innovation Award 2025

Spectromarine B.V.
established in July 31st, 2025



INVESTOR TAKEAWAY These folks can deliver!

From validated pilots to repeatable commercial deployment

RAISING NOW

€1.3m

seed round

Target close: Q1 2027

With runway for 24 months

€350k pre-seed

Already raised

**LOI for €500k co-investment
from existing investor***

*available upon request

WHAT THE CAPITAL BUILDS

PRODUCT

Industrialisation



TEAM

Engineering & Delivery



VALIDATION

Pilots & Certification



COMMERCIAL

Sales & Channels



MILESTONES - 24 MONTHS

- ☒ Production-ready, certified and repeatably assembled
- ☒ Commercial desalination reference plants with recurring contracts
- ☒ OEM-ready HVAC product and first channel rollout validated
- ☒ Geothermal field validation completed with an industry partner
- ☒ Recurring software / licensing revenue demonstrated
- ☒ Series A: ~€4M planned for 2029 — international channel rollout and volume scale

INVESTOR TAKEAWAY Seed capital converts technical validation into a repeatable commercial business ready for Series A scale

Enabling more resource-efficient water operations
through earlier detection, lower chemical use, fewer
unnecessary cleanings and better asset utilisation

CEO Girts Ozolins



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