

OEE-S2S/P2C

Clean Water Today. Future LH2 Hubs Tomorrow.

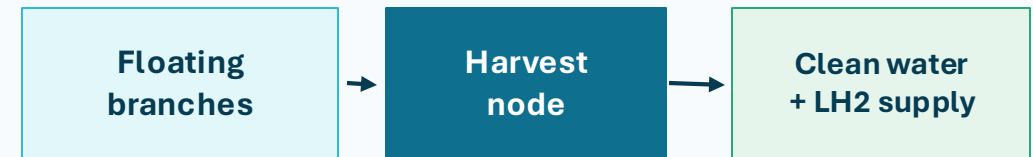
A modular nearshore/offshore platform designed to convert seawater and solar energy into clean water, green hydrogen, and future liquid-hydrogen supply infrastructure.

Clean water

Green H₂

Future LH2 hubs

Circular materials



The opportunity: solve water security first, then scale into future fuel

A coastal energy platform for governments, ports, islands, and clean-industry supply chains.

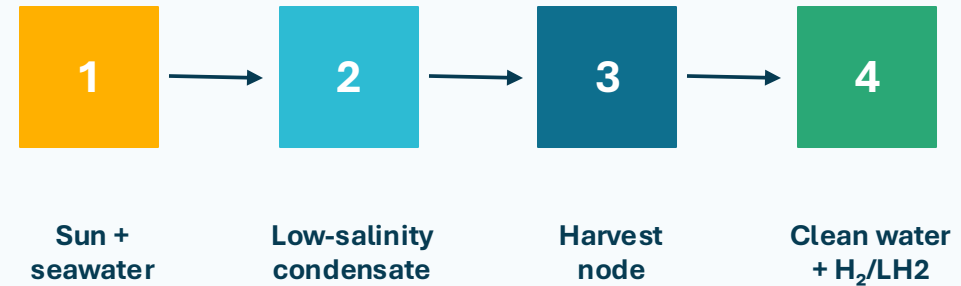
CURRENT BOTTLENECK

Conventional routes are heavy before the first useful megajoule is delivered.

- Fossil chains require exploration, drilling/fracking, refining heat, shipping, storage, and carbon exposure.
- Direct seawater electrolysis risks chlorine, corrosion, membrane fouling, and distributed hydrogen safety issues.
- Centralized desalination + hydrogen infrastructure can be capital-heavy for coastal regions.

OEE-S2S/P2C POSITIONING

A lighter asset-yield pathway

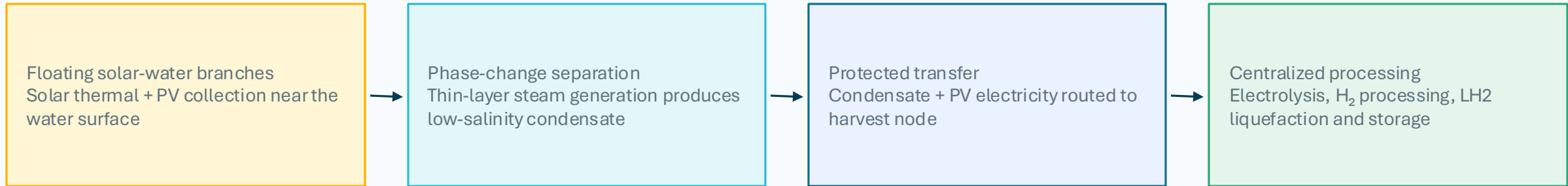


Strategic thesis

Move from extraction-dependent fuel logistics to modular, nearshore infrastructure that can start with clean water and scale toward LH₂.

How the OEE-S2S/P2C architecture works

Separate salt removal from electrolysis; centralize hydrogen processing at safer harvest nodes.



TWO PRODUCT PATHWAYS

1 Coastal water-security pathway

Near-term: clean-water pilots for coastal and island regions, with a lower-risk technical validation route before full hydrogen scale-up.

2 Future LH2 nearshore hub pathway

Long-term: green H₂/LH₂ supply for ports, marine bunkering, industrial demand, and energy-import resilience.

Economic logic: from heavy extraction to light repeatable turnover

OEE-P2C should be assessed as material-amortized solar fuel infrastructure, not as an electricity-buying hydrogen plant.

“Fish-market” capital logic

Buy in the morning → sell by evening → replace low-cost tools over time.



Low burden • Fast turnover • Predictable replacement

OEE replicates this logic with modular parts, rolling replacement, local solar yield, and maintenance cycles governed by material durability.

Fossil method

Repeated heavy chain: rigs, crews, fuel, refining heat, freight, storage, carbon and depletion risk.

OEE-P2C method

Installed material assets repeatedly harvest local sun and seawater; the key driver is cost per productive material cycle.

Decision metric

MJ delivered per replaceable material cycle

Genarch / TPG Cleantech business model

Supply the backbone of the OEE-P2C ecosystem: equipment, materials, standards, replacement kits, and OEM licensing.

INDUSTRIAL SUPPLY BACKBONE

Genarch does not need to own every hub. It can supply what every hub repeatedly needs.

Module kits	floating branches, optical arm, PV branch, condensate conduits
Material-refinery chain	recycled polymers, panels, covers, sacrificial liners, cartridges
Replacement packages	3 / 6 / 9-month rolling service cycles
OEM Liquid licensing	liquefaction, storage, cryogenic valves, bunkering skids, boil-off recovery
Deployment standard	sizing, layout density, harvest-node interface, digital monitoring

SCALABLE DEPLOYMENT LADDER

Micro — resort / island / research site

Small — coastal clean-water pilot

Medium — nearshore H₂ node

Large — port / industrial LH2 hub

Mega — offshore production field

Revenue stack

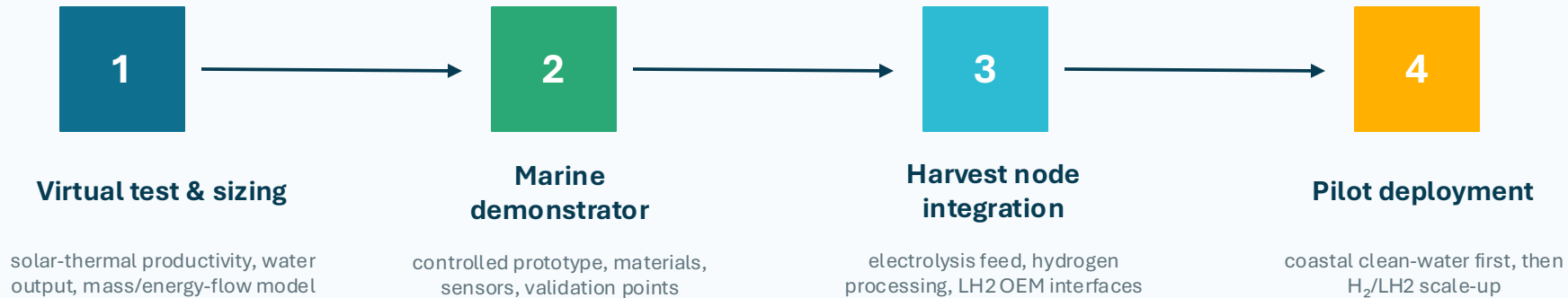
License fee + hub royalty + module royalty + replacement margin

Collaboration opportunity

TPG Cleantech is seeking EU partners for validation, prototyping, integration, and Clean Industrial Deal consortium building.

PROPOSED FIRST PATHWAY

Ask: virtual test → prototype roadmap → EU clean-industrial consortium



PARTNERS SOUGHT

- Marine engineering & offshore validation
- Solar-thermal simulation / digital twin
- Electrolysis and water-quality integration
- LH₂ liquefaction, storage and bunkering OEMs
- Recycled materials and modular manufacturing
- Ports, coastal regions, islands, and public agencies

Xuan C. Pham | Founder & CEO
TPG Cleantech / The Pham's Genius Inc. | Winnipeg, Canada
LinkedIn: [linkedin.com/in/xuan-pham-8050b047](https://www.linkedin.com/in/xuan-pham-8050b047)

