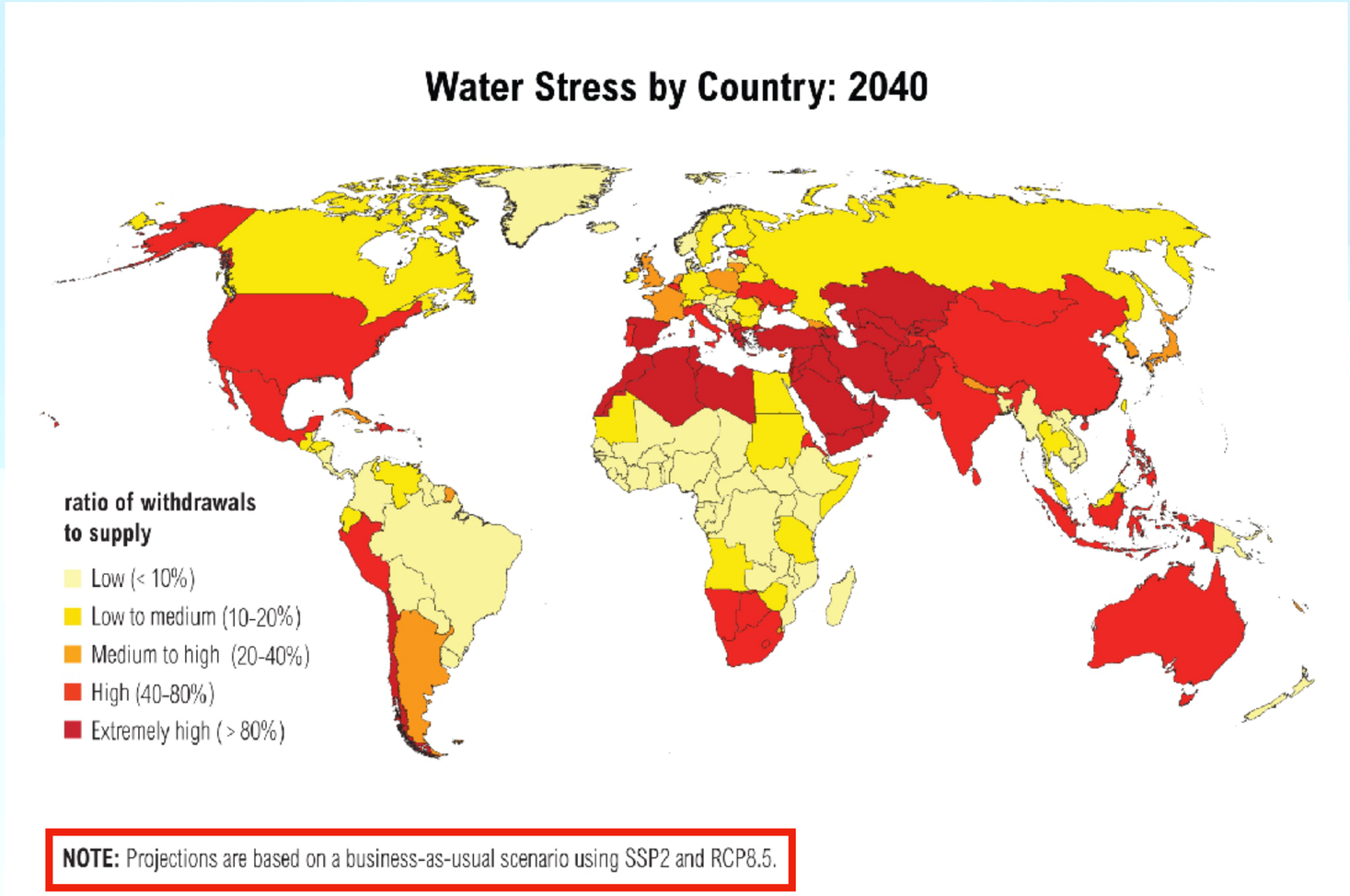
Water & Light

Securing Humanity’s Access to Consumable Water

Arnaud Thiercelin - Oct 2022

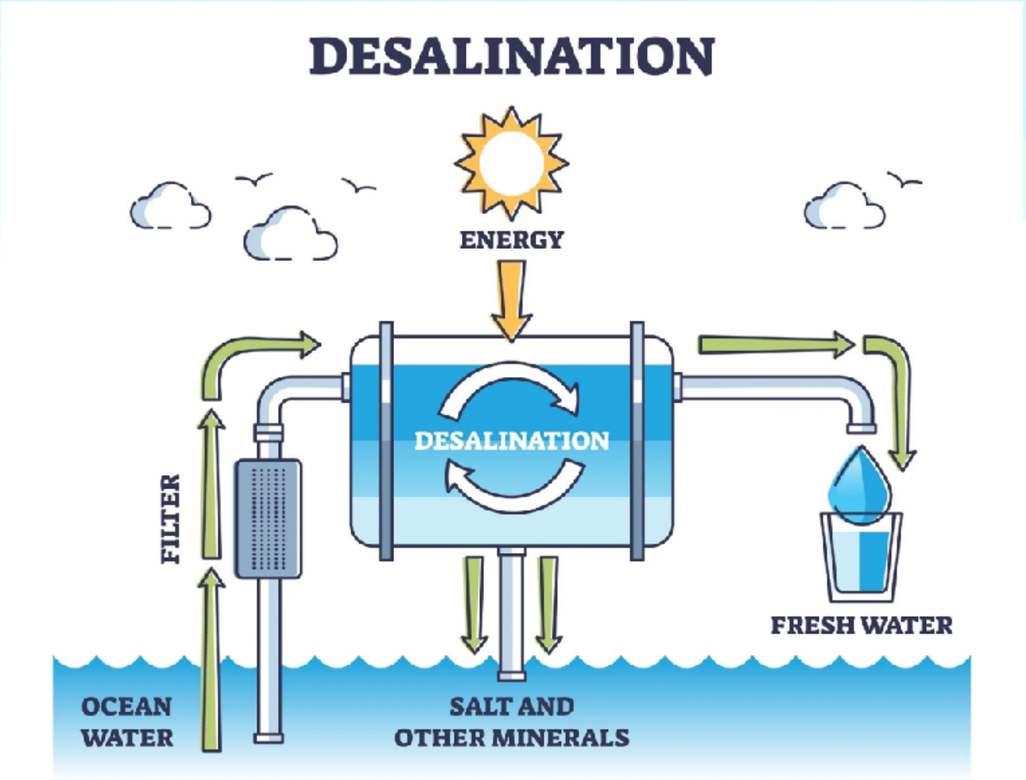
Problem: Fresh Water Scarcity



Current Solutions

Desalination & Water conservation

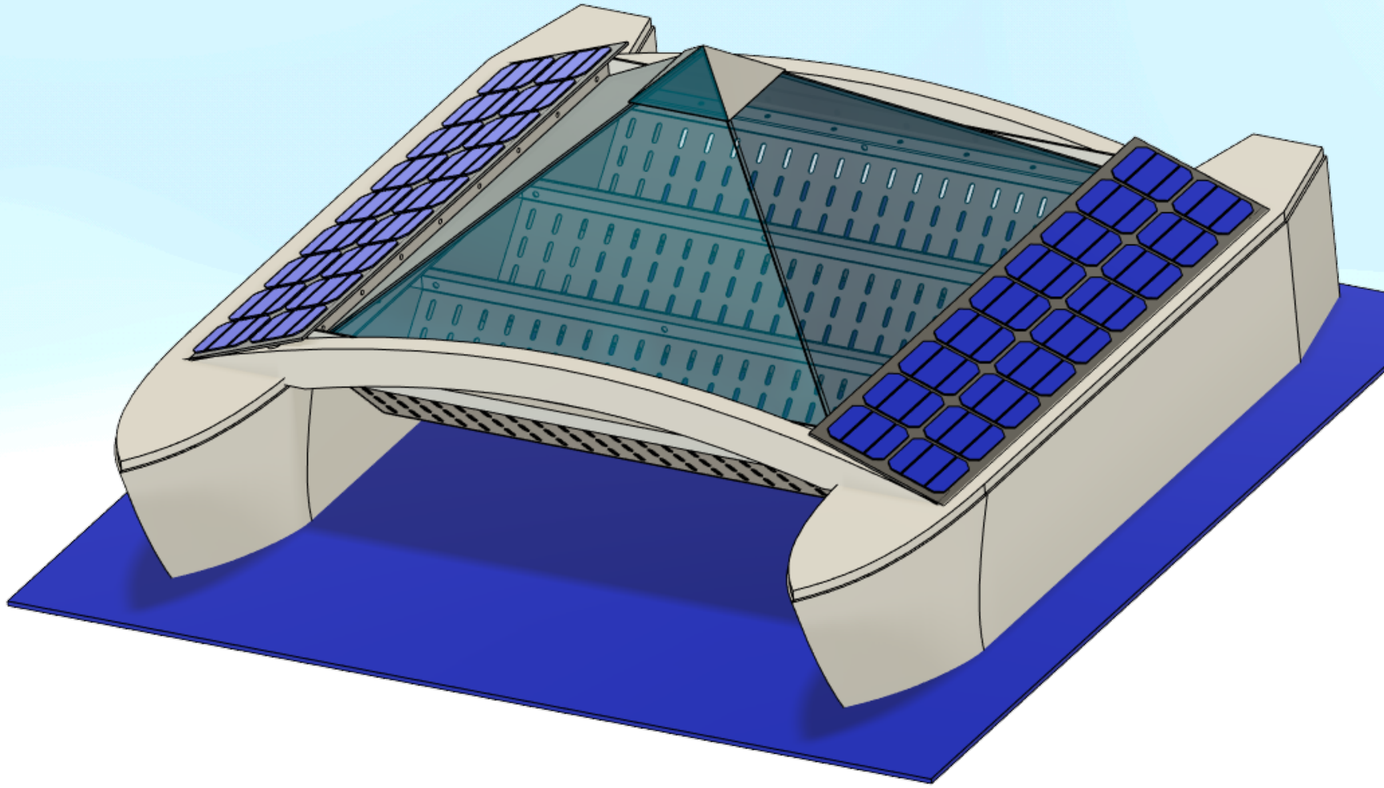
- Crash course: https://www.youtube.com/watch?v=bfr82RB72U8
- Huge Infrastructure cost
- Huge Energy demand
- Huge (under-estimated) Environmental impact of the brine by-product
- Huge carbon footprint
- Scalability problem (Large & specific land sites needed, long construction times)



Thalas

Autonomous Mobile Solar Still

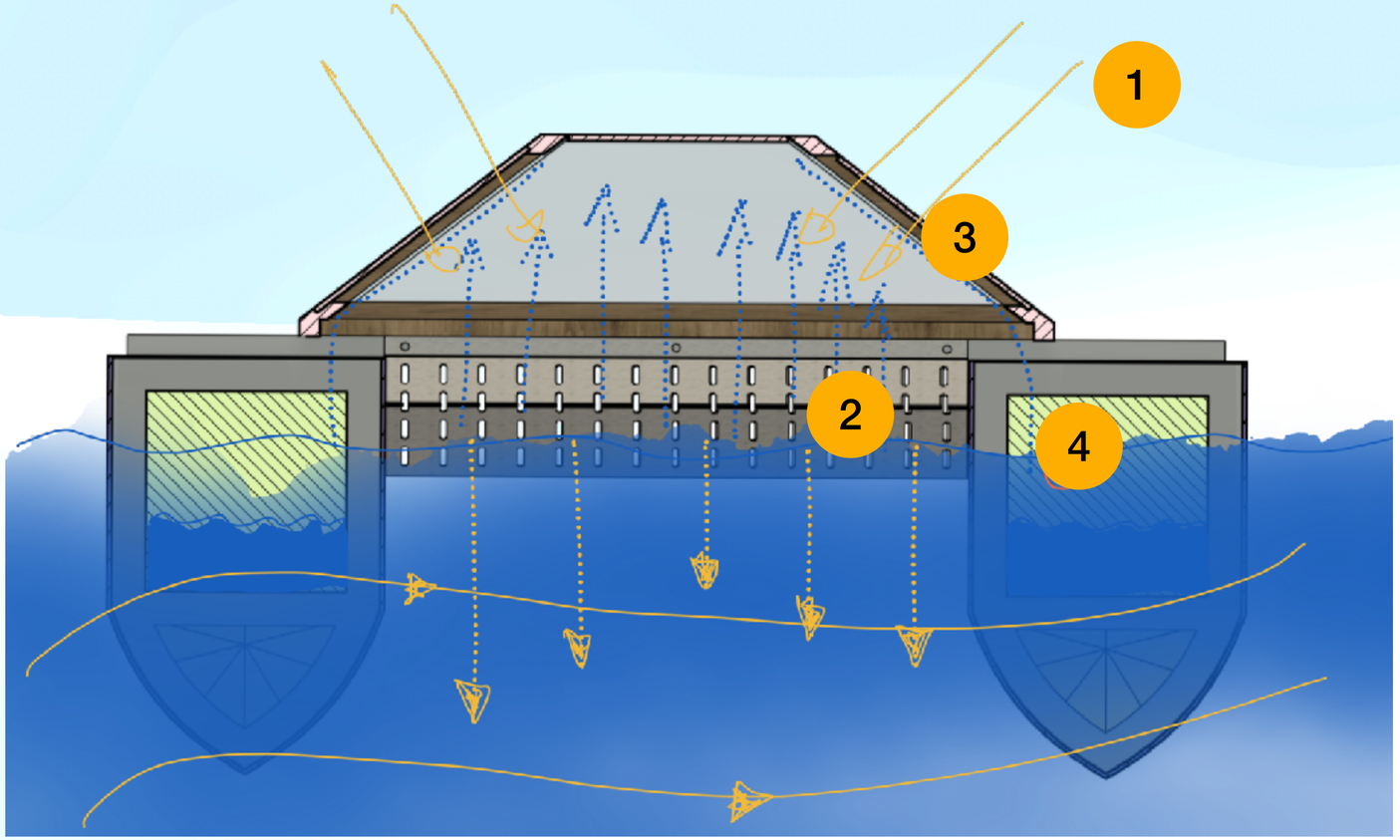
- Highly Efficient, Proven heat-based desalination.
- Low unit cost and highly optimizable through existing manufacturing technics
- Brine is redistributed over large areas and existing currents
- Infinitely scalable in configuration, shape, size and mobility
- Extendable to other application such as data collection and monitoring - including military applications



Thalas

How it works

Catamaran design for stability
2.2m x 1.6m
Dual motors
Auto-piloted with main controller
dual GPS network
Satellite Link by Swarm (SpaceX) (not in model)
44 Galons capacity
Lights for visibility (not in model)
Solar panels (not in model)
(Optional) Heating element (10% of energy input)



1/ Evaporating chamber heats up the water on the rack and its membrane.

2/ Brine is progressively released to the current below.

3/ Water condensate on the chamber’s roof and trickles to the collection gutters

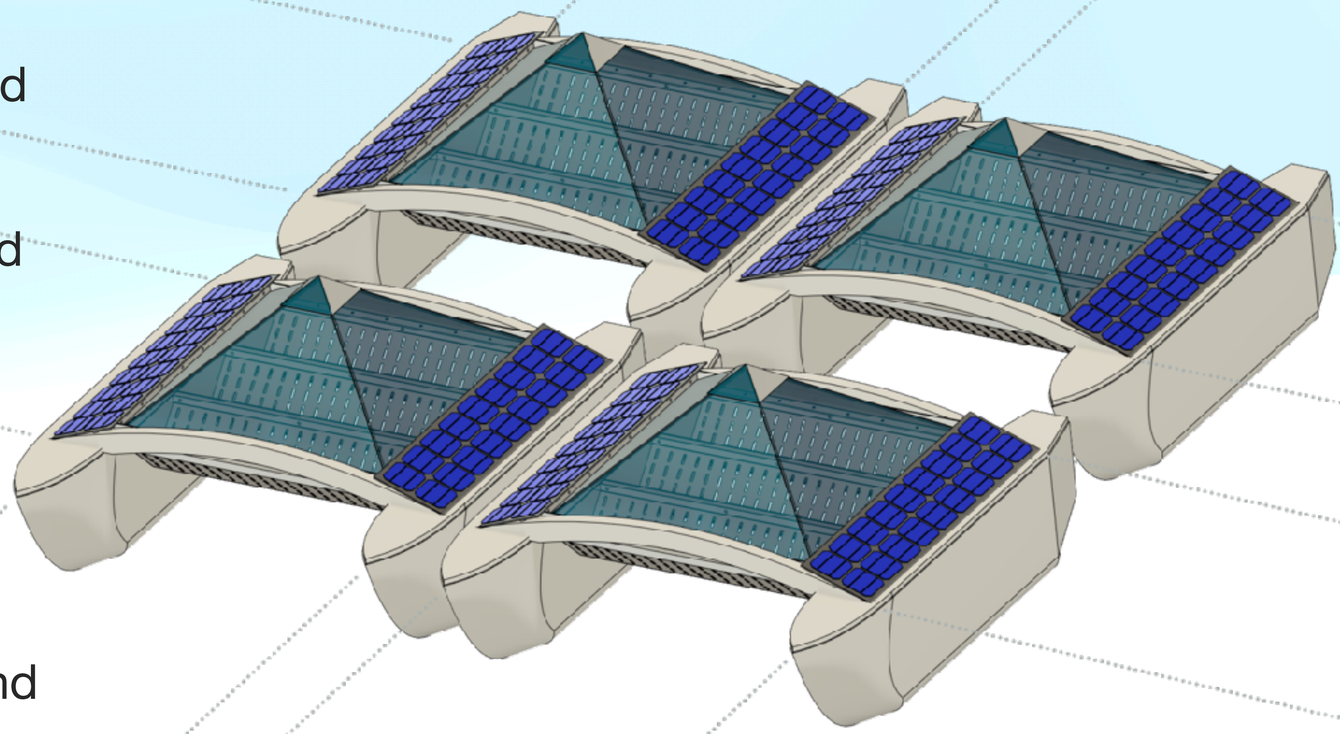
4/ Water Tanks in the hulls collect the fresh water - which will go through minor post processing

The vehicle controls send it to the ocean/ water body when empty and come back to base when at capacity

Thalas

The force of numbers

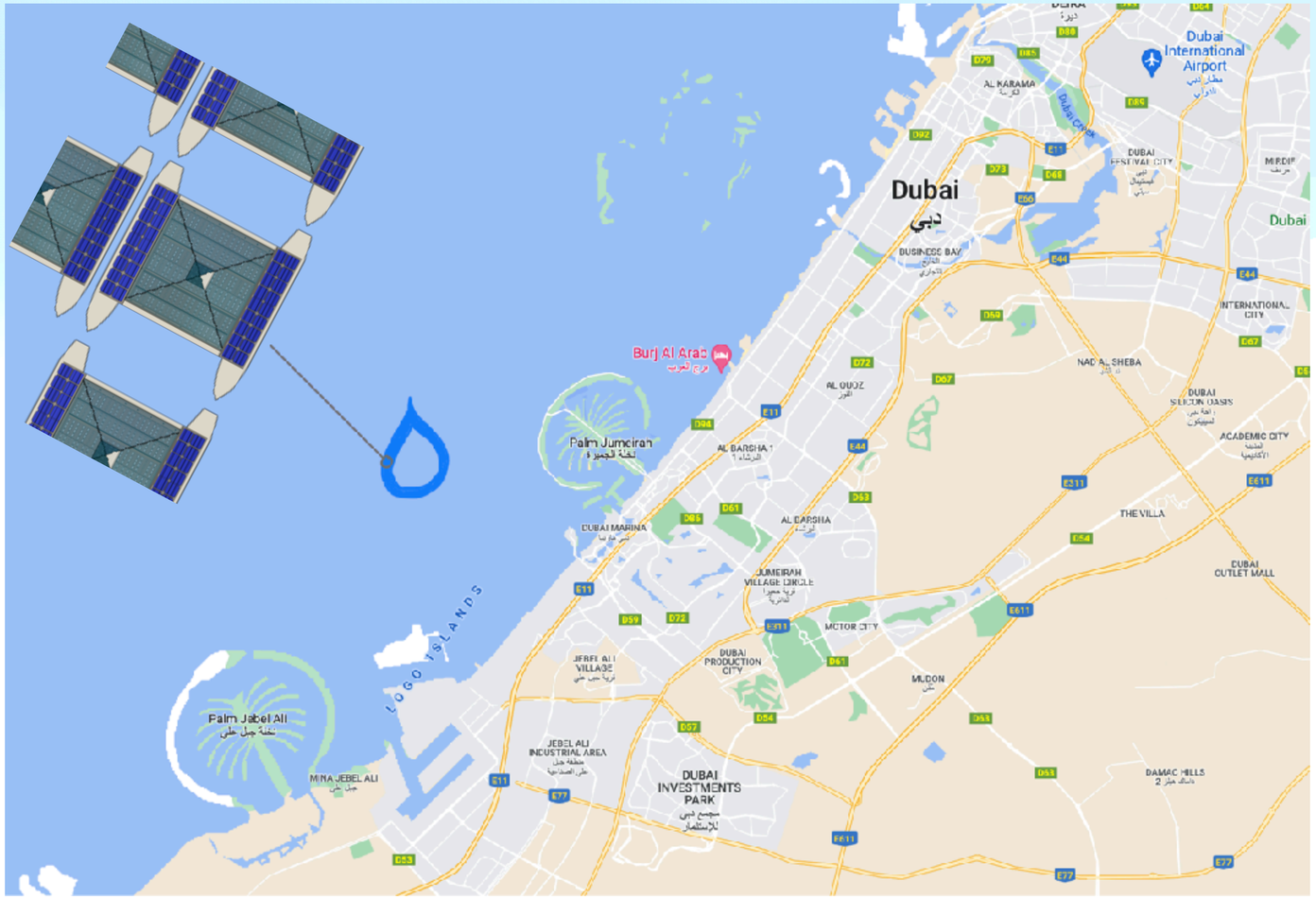
- Robots deployed in numbers scale collection and adapt to all site shapes.
- Robotic dock allow for the quick deployment and collection of robots and their water payload
- Solar panel, low mobility activity and sat connection make the platform fully power independent.
- Transportable in standard containers, a system can be deployed anywhere in the world easily and - as needed - temporarily
- -> **Millions** of these units to be deployed



Perspective

The power of numbers and agility

- Scenario 1: A massive permanent system is installed off the coast of Dubai in the shape of a water drop (or other). It provides clean water to the city while being art visible from space.
- A permanent water line connects the site to the land
- In case of maintenance, the system disassembles partially or fully to return to the docking station for repairs



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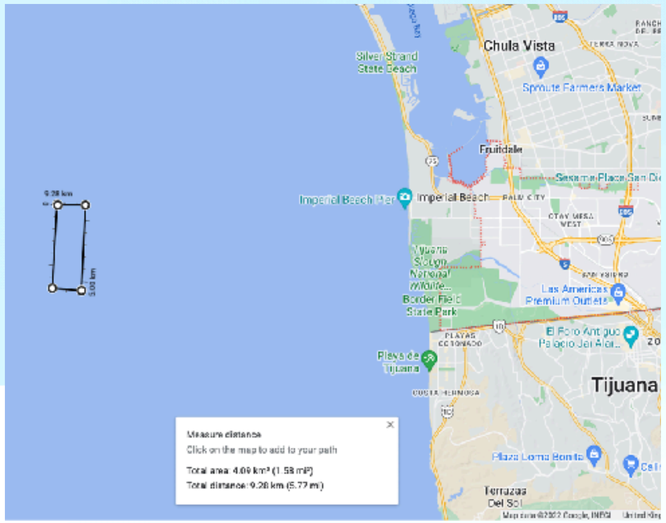

- Scenario 1: System is deployed at mass scale off the coast of San Diego producing the equivalent output of Carlsbad station.

- Scenario 2: System is packed and shipped using standard cargo container to different location around the globe, between seasons, allowing to provide missing water when it’s most needed, while leveraging smaller fleet.

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Challenges

- Unit economics need validation.
  - Cost of water is going to dramatically increase so there is a lot of room to grow here
- Modeling of water returns per UV index (or other better weather metric) to be validated.
  - Output is expected to never hit 0 and there is no operating cost to leave the platform floating, but this is a critical planning information
- Cost of unit should be around 10k USD in low numbers, but it’s to be confirmed.
- Docking station will be necessary for large scale operations.
- Educating the market on the difference of this approach (low carbon, low impact) will be difficult.

Revenue

The paths are multiple

- 1/ We offer our low carbon water to beverage companies who can afford a higher cost water and need the PR
- 2/ We offer the solution to areas which are severally impacted by drought. This can be deployable seasonally
- 3/ We partner with existing water company to provide a low carbon extra capacity to existing systems
- 4/ We sell water directly to the end-user
- 5/ We crypto-up the system offering people to buy into an ICO which can be exchange for water credits at future time

Team & Investment

Team

Arnaud Thiercelin

15+ years experience building high tech products - including hardware - as a founder and in leading robotics companies such as DJI and Auterion.

Investment

GBP 300k (~375k USD) Seed for ~15%

-> Build advanced prototypes (3 units)

-> First engineering hires

-> Patents (3 in the pipeline)

-> Validate unit economics

-> Validate operations

-> Prep GTM