

July 31, 2024
XPrize Water Scarcity
Fast Team Pitch



Has the Team with the vision, experience, tools & technology to achieve the extraordinary. Let's make history together.

5



Bob Evans MS
Systems Architect



Susanne Chess
Managing Director



Mike Edwards JD
External Relations



Ryan Elliott PE
Subsea Engineering



Michael Hollander PE
Reverse Osmosis



Lou Mastriani JD
IP/International Trade



Dan Tormey PhD
Science Advisor



Dave Blankenhorn PG
Regulatory Advisor

"The brilliance of the Founders' work is to effectively integrate an engineered solution that advances the state-of-the-art for comprehensive management of coastal resources while generating renewable potable water sources. Their technology offers a solution not only for energy savings but targets the core need for a new sustainable paradigm within the seawater desalination industry. This is a solution with special emphasis on its impact on ocean life and ocean systems, and their relationship to climate change."

- Tim Foresman, Ph.D., Former Chief Scientist for the United Nations Environment Program

Timabu Team Member who participated in reverse osmosis systems and ocean thermal energy conversion development with the U.S. Naval Civil Engineering Laboratory

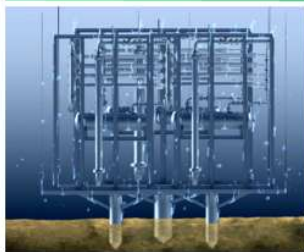


Illustration of Tiabzu System installed in subsea clusters or arrays of multiple modules for **unlimited supply of purified water** for high population, **water constrained regions** with coastal drop off to suitable depth, continental shelves, and many remote islands.

Illustration of how Tiabzu System offers a solution for sustainable water supply with Mobile Operation, for high capacity >1 million gallons per vessel per day of purified water for quick response to an emergency or humanitarian need, or peak or seasonal delivery to islands, forward operating bases, coastal ports, or for commercial, industrial or offshore projects.



Thank you.

My name is Susanne Chess, Managing Director for Tiabzu. I speak for a Team of professionals whose experience and life trajectories led them to join us in doing the extraordinary. To give you a sense of our company culture, we asked each Team Lead what inspires them.

From our regulatory lead, the President of Catalyst Environmental Solutions, Dave Blankenhorn:

"I am inspired by Tiabzu's innovative solution to address water supply needs while minimizing impacts on the environment."

Co-Founder and Systems Architect, Bob Evans spent decades offshore, developing equipment, collaborating, and managing projects documenting and exploring alternatives for existing offshore assets. On February 14, 2015, he posed the thesis:

"If the high energy cost of desalination is in powering the pumps required for intake, pre-osmotic filtering, and finally to bring up to pressure for reverse osmosis, why are we not operating subsea, in depths where hydrostatic pressure powers reverse osmosis?"

Operating subsea high-pressure, high flow pumps are required only for delivery of purified water from depth to shore. Pumping only the product (purified water), and not the product source (saline seawater), lowers overall energy requirements by as much as 40%.

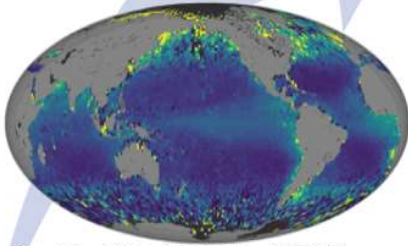
DVM Plankton & Earth's Carbon Cleansing Cycle

TIABZU³

Plankton supplies more oxygen than all land plants



High Marine Life Concentration in Coastal Intake Zones



Concentration of O2 Producing Phytoplankton – NASA SeaWiFS

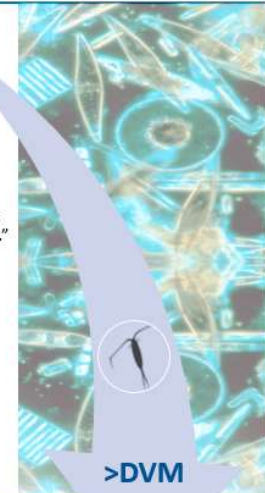
Diel Vertical Migration (DVM)

The Largest Migration on Earth - every 24 hours - plankton drops to a depth of ~900', then swims to the surface to feed upon phytoplankton, which produces >50% of O2 in the atmosphere. It also absorbs CO2. As the marine food chain base, this CO2 is sequestered as the marine life that feeds upon the phytoplankton descends. This is a planetary climate regulating process, which might be called "Lungs of the Earth."

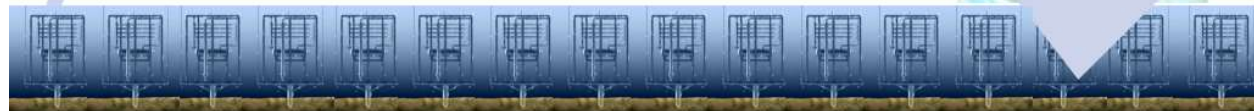
90% of known marine life lives within DVM.

Tiabzu Operates Below DVM

Avoids detrimental impact of intake and outflow endemic to coastal and surface seawater desalination on marine life and natural carbon-sequestering and global climate regulatory systems.



>DVM



Contributing to energy savings is removing requirement for multi-pump pre-osmosis by operating below the Oceans' most biologically productive zone which reduces impact of desalination on phytoplankton, the marine carbon cycle, and potential negative feedback on climate that disruption of these systems causes.

Tiabzu merges subsea technologies developed for offshore oil & gas and ocean exploration by housing a reverse osmosis module within a submersible hull, controlled by patented methods for subsea deployment and recovery. Fresh water sustainably harvested using the Tiabzu patented method for desalination is globally accessible, and infinitely scaled subsea development is competitive.



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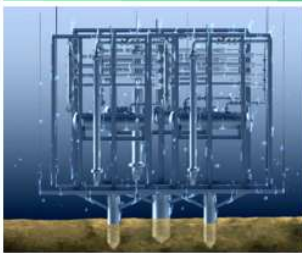


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Our IP and International trade consultant, Lou Mastriani, "I immediately recognized that the Tiabzu project is revolutionary on several levels and applications."

Mike Edwards joined Tiabzu last year and brings decades of executive level experience in Santa Barbara offshore oil & gas. Mike grew up "in the West and appreciates both the need for fresh water and its scarcity."

In his words: "Producing fresh water from the ocean isn't difficult, but doing so in a manner that minimizes impacts on the sea life is vital to the health of the oceans."

In addition to ocean stewardship, personal experience with drought is motivation throughout.

Ryan Elliott is a Professional Engineer with more than 20 years of experience in design, analysis, testing, assembly, and installation of subsea systems. He gets big objects safely into and out of ocean depths.

Ryan "grew up in the Santa Barbara area where water-rationing and drought were regular occurrences. He has been aware of water scarcity issues since childhood and sees fresh, clean water as a major concern in his travels all around the world."

Michael Hollander is a Professional Engineer who led a team of reverse osmosis, structural, process, and mechanical engineers for Tiabzu concept design and feasibility:

Michael is "living in the Caribbean where he learned what a precious commodity water is for people who live in island communities. Investing his time and energy to make potable water more accessible is giving back to the people he has come to deeply care about."

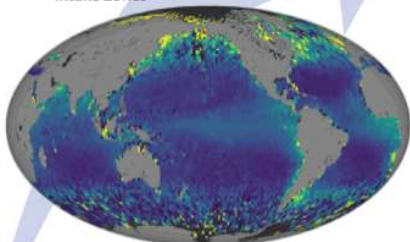
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>DVM

One of the first parties with whom we shared Tiabzu was our friend and mentor Ocean Explorer and Environmental Leader Jean Michel Cousteau

He asked us the question – what is the largest migration on Earth?

With the answer he educated us about the most important point to take home:

PLANKTON. Every 24 hours – plankton drops to a depth of ~900', then swims to the surface where phytoplankton does its photosynthetic dance to produce >50% of oxygen in the atmosphere. It also absorbs CO₂. This carbon is sequestered as the marine life that feeds upon the phytoplankton descends. This is a planetary climate regulating process which we call "Lungs of the Earth."

As phytoplankton concentrates along coastal zones it is specifically impacted by intake and discharge of coastal desalination.

Tiabzu operates below effect on this vital ocean system.



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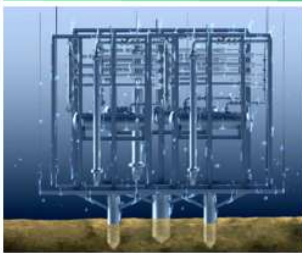


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From Dr. Dan Tormey, our Scientific Advisor:

“Our team looks at water scarcity with a different lens and as a result has found methods to produce fresh water from ocean sources in a benign manner, and with innovative ways to use containerized fresh water to solve a variety of challenges associated with offshore development. Add Bob’s artist’s view, seeing things differently and in beautiful ways. Inspired Dan to join our team.”

Tiabzu is scalable, economically viable, and protects scarce and critically important environmental resources.

We all are honored to be members of such an experienced and brilliant team.

Thank you. You can contact me through Tiabzu.com