VALO (YC W19)

Hydrofoils unleashing a new era of water transportation

ridevalo.com Alameda, CA

Y Combinator | Consumer Goods | Transportation | VC-Backed | Sustainability

Highlights

VC-Backed
Raised $250K or more from a venture firm

Y Combinator
Raised from Y Combinator

1. $3.5M+ hydrofoil watercraft pre-sales

2. $124M in Letters of Intent with Fortune 100 firms, ferry groups, & original equipment manufacturers

3. Led by 2X YC-backed founder & world-class team from McKinsey, Oracle, & Boeing

4. Team has built 1st hydrofoiling container ship, e-foiling boats, self-landing rockets, & drones

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Featured Investors

Fifty Years

Invested $1,060,000

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"My first ride on a Valo Hyperfoil was the best ride I'd ever had on a jetski. I laughed as I flew out of the water. When I was done, I was so giddy I forgot to stop and rammed the Valo prototype into the pier. While the Valo Hyperfoil is awesome, it's not just a recreational vehicle. It's the first demonstration of a massive shift to come. The same pressures that are causing whole-sale electrification in the auto industry are coming to the marine industry. And like electric vehicles, making..."

Read More

Other investors include Y Combinator Notable , Metaplanet Holdings Notable , Soma Capital Notable , Gustaf Alstromer Notable , Lower Carbon Capital Notable & 338 more

Our Team

Ed Kearney CEO

Serial entrepreneur. 4x founder, 2x YC-backed & 2 exits. Co-founder of world's largest photography company, Snappr, grew from 0-2K photographers in 6 countries. Creator of 1st hydrofoiling container ship. MEng Oceanography University of New South Wales.

Reo Baird CTO

Hydrofoiling tech + engineering expert. Co-founder and former CTO of e-foil boat company Navier. Ex-McKinsey consultant focussed on marine. BS Aerospace + ME Electrical & Computer Science Massachusetts Institute of Technology (MIT).

Paul Beiker Naval Architecture Consultant

Pioneer in marine design. 30+ years in high tech marine design + engineering. Principal design engineer on Oracle Team USA foiling boats.

Mateo Pena Doll Mechanical Engineering + Powertrain Consultant

Powertrain industry veteran. Owner at marine powertrain leader Doll Motors. Co-founder of New Valence Robotics (Acquired by Cincinnati). Mechanical Engineering MIT.

Benjamin Tripplet, PhD Lead GNC Engineering Consultant

Navigation + control engineer. 25+ years experience in control systems. Ex-Boeing, Insitu, & Masten Guidance. Built guidance systems for surveillance drones + self-landing rockets. PhD University Washington.

Summary

Why Valo?

At Valo, we are unlocking the next revolution in transportation by developing hydrofoil electric vessels that are 90% more efficient than traditional gas-powered vessels. Hydrofoils are like airplane wings, but under the water, lifting the hull up, reducing drag, and improving energy efficiency by a whopping 15 times.

We are doing this by leveraging our Hydrofoil Technology Platform, and entering the market in three distinct stages:

1. **The Valo Hyperfoil** - a cutting-edge personal watercraft sold to consumers, into a $1.5bn market segment
2. **Mid-sized hydrofoil systems** - sold to recreational and commercial boat builders for integration into boats 14 to 40 feet in length, with recreational boating worth a massive $42bn globally.

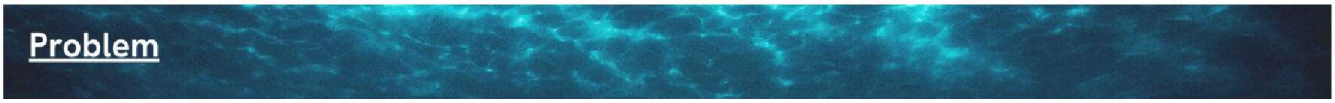
3. **High-powered commercial hydrofoil systems** - Sold to larger shipyards & enables passenger ferries and micro container ships that can transform global freight.

Valo is reimagining the $114B marine industry and is backed by Y-Combinator, notable VCs including Soma Capital, Fifty Years, and Climate Capital, and the founders of game-changing companies like Skype.

From personal watercraft to larger commercial vessels, our hydrofoil technology platform is making watercraft more efficient, more sustainable, and fully electric - all while improving the on-water experience.

Launch video of the first prototype of the Valo Hyperfoil

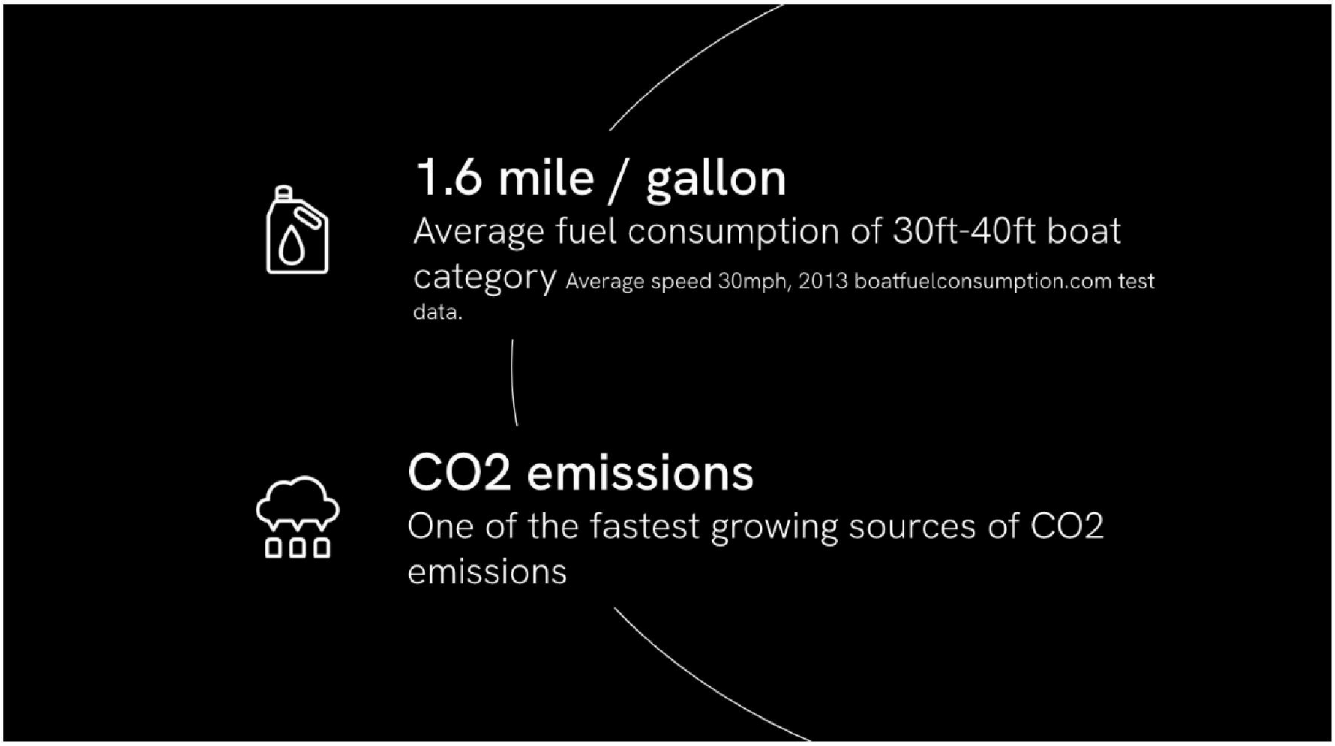
Led by a rockstar team of aerospace engineers, boating experts, and a two-time YC-backed founder with 2 successful exits whose companies have raised $50M in VC funding, Valo is uniquely positioned to pioneer the next transportation revolution.



Boats rely on inefficient, outdated technology

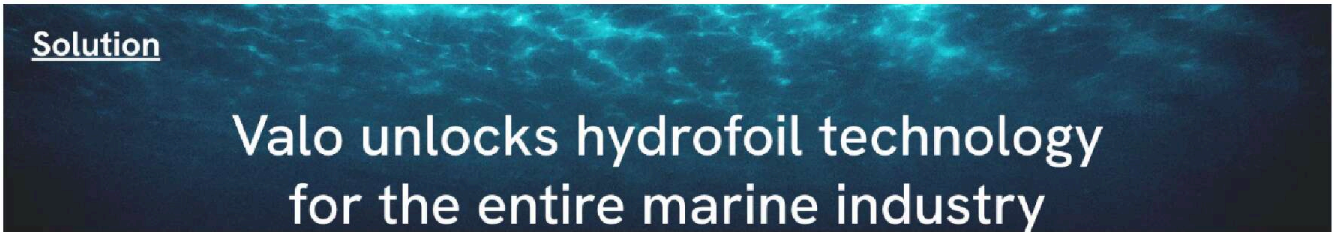
Water, through much of history, was our primary means of transporting people and goods. Access to navigable waterways played a key role in urban development and left a lasting legacy - with 40% of Americans living in coastal counties which represent only 10% of our land mass. Water transport is also critical to the global economy

However, water mobility is at a standstill, anchored by outdated technology. Ship designs still ride on the age-old principles of buoyancy first floated by Archimedes way back in 246 BC. These designs work well for bulk transport of goods at low speeds, but that is about it. The instant you try to speed up a traditional boat or ship, energy consumption increases immensely due to the high drag of water. For example, a typical gas powered small recreational speedboat - comparable in capacity to a personal car - has staggeringly poor fuel economies of just 1.6 miles per gallon.



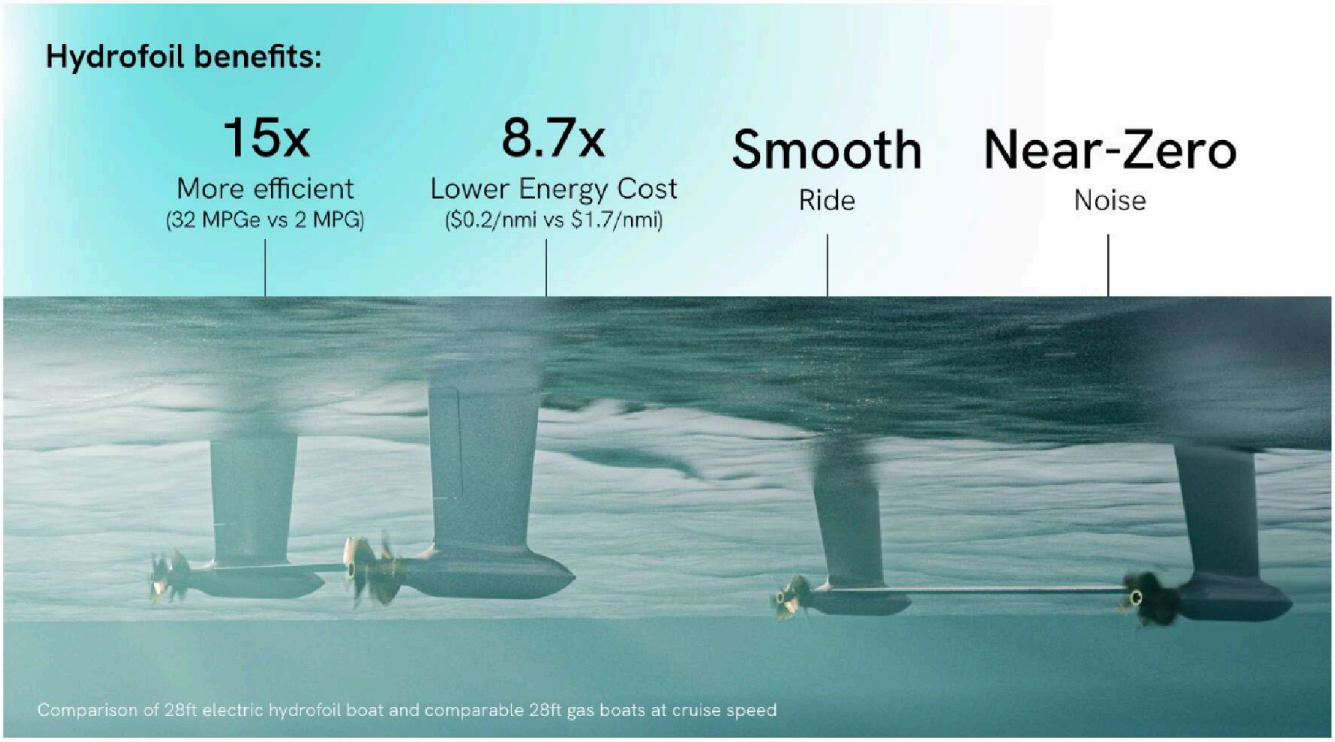
The modern world demands speed. As a result, we have replaced our slow, outdated ship designs with alternative methods of transportation - cars, trucks, jet planes, and the like. Today, our expensive and limited land-based infrastructure is choked beyond capacity. And, the once-bustling waterways our cities were built around sit empty and under utilized.

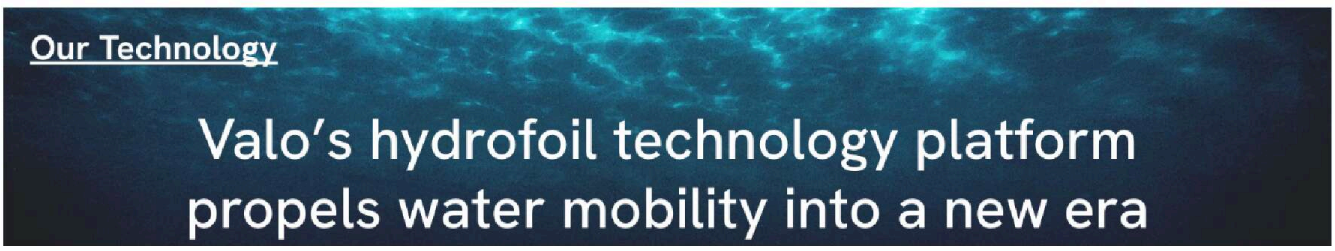
This is where we at Valo see a massive opportunity. Hydrofoils are able to bring a step-function efficiency increase to high speed boats and ships - A hydrofoil electric vessel is about 15x more efficient than a traditional gas-powered design, enabling them to become real alternatives to traditional forms of urban transport. However, due to technological difficulty, hydrofoil boats have yet to be widely adopted. At the core of this technological difficulty is the advanced computerized control system required to keep a hydrofoil vessel stable.



With Valo, vessels from small to medium size will finally be fast, energy-efficient, and entirely electric, and can now become a real cost-effective alternative to other forms of transportation. How? We unleash the power of hydrofoils.

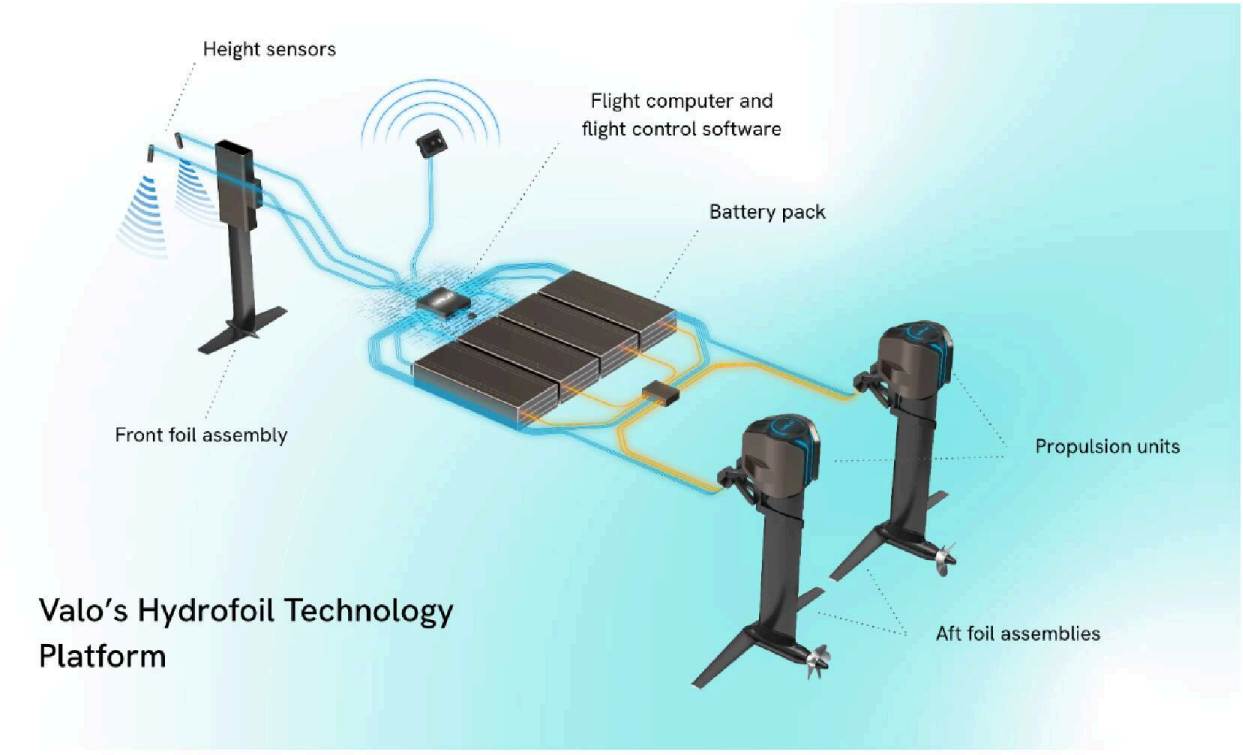
By leveraging the principles of hydrodynamic lift, hydrofoils elevate a boat's hull out of the water, dramatically reducing drag and enabling a smooth, gliding motion above the surface. This minimizes discomfort due to waves, boosts speed, and slashes energy consumption and operational costs by up to 15x - all while delivering an effortless, exhilarating, and near-silent journey. We see a future where waterways and bodies of water are fully leveraged for clean, near-silent recreation and enjoyment, as well as for new forms of mass mobility.





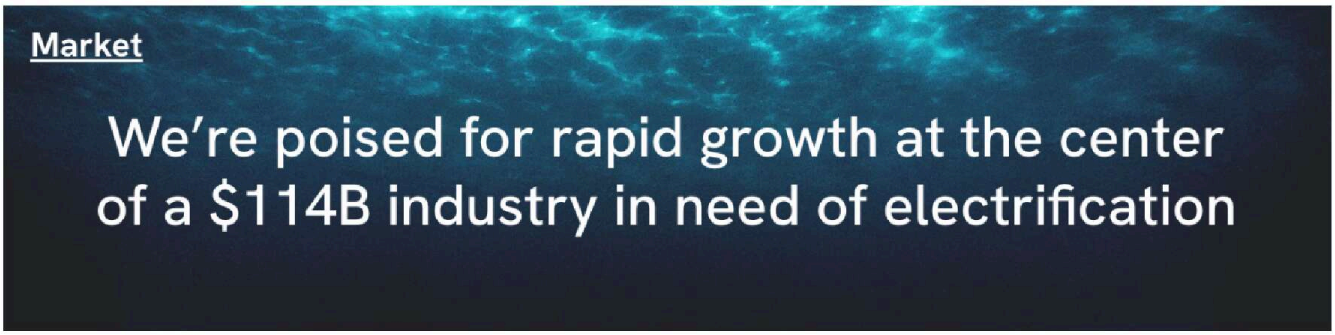
The core of our company is the technology that we have spent the last 5 years developing, which we call the Valo Hydrofoil Technology Platform. It is a fully integrated system of hydrofoils, electric propulsion, batteries and proprietary Skyride flight control software.

This stability software, which is the core of our technology, precisely controls the vehicle, keeping it stable and rejecting disturbances while only needing low cost off the shelf sensors that scale into mass production. This system has been built and tested, and is now ready for commercial applications.

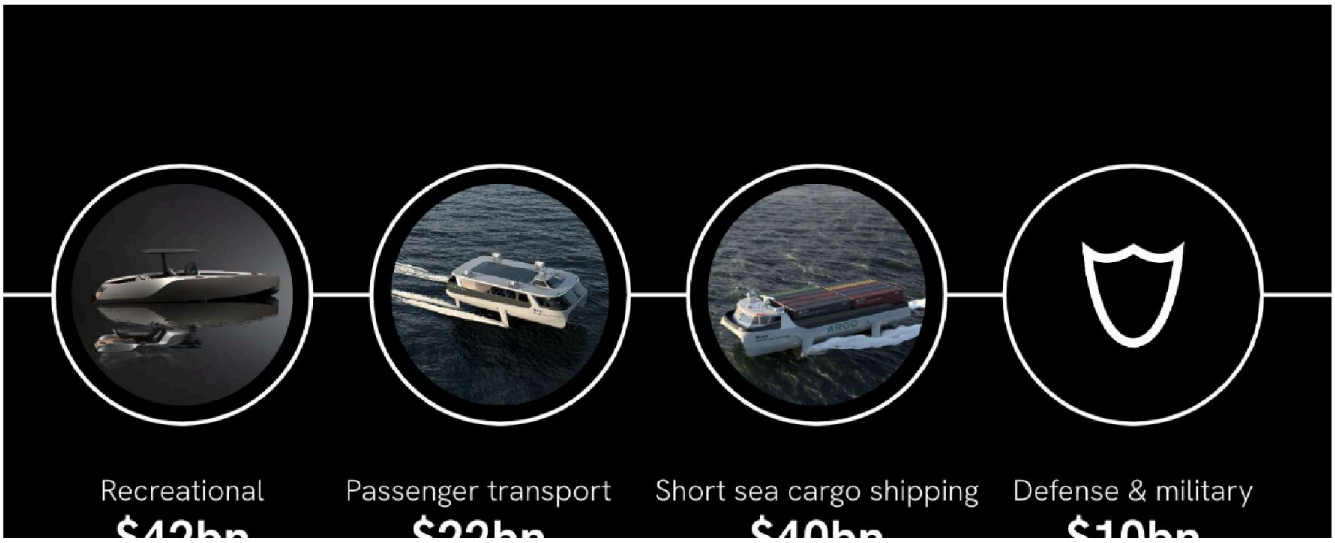


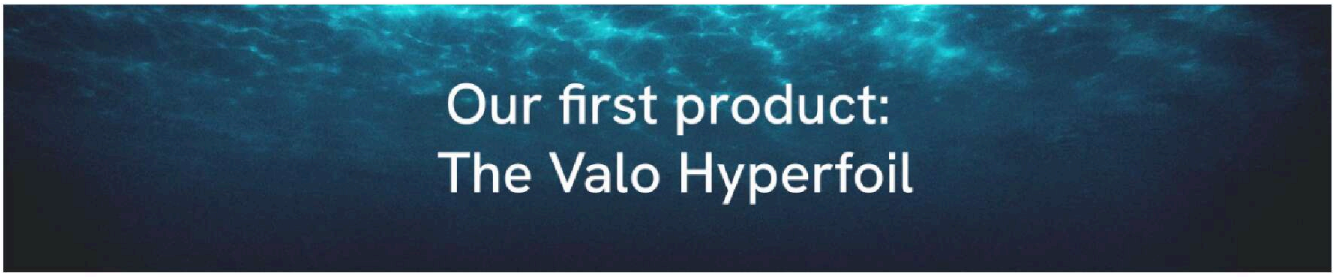
Valo's Hydrofoil Technology Platform

Meet Valo's hydrofoil technology platform. It is a fully integrated system of hydrofoils, electric propulsion, batteries and proprietary Skyride flight control software. This stability software, which is the core of our technology, precisely controls the vehicle, keeping it stable and rejecting disturbances while only needing low-cost off-shelf sensors that scale into mass production.

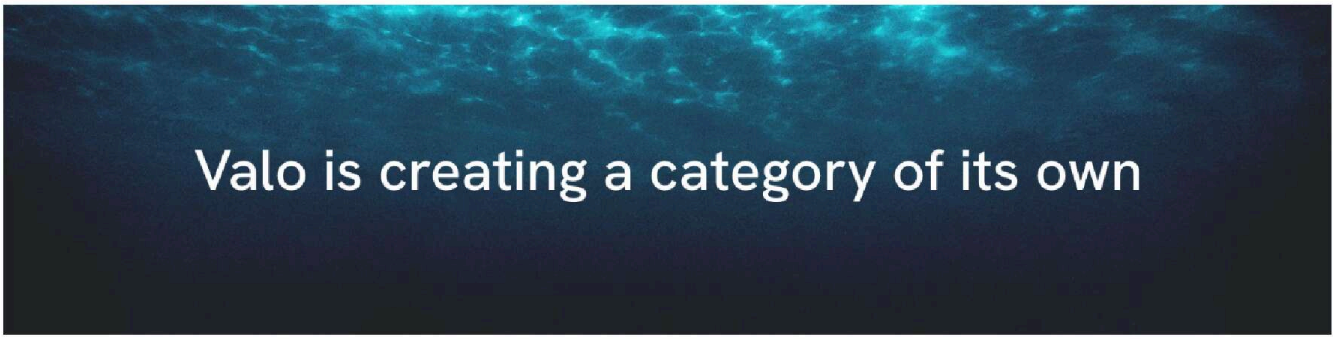


Rising fuel costs and a need for efficiency demonstrate clear and immediate demand for our hydrofoiling technology, Valo is poised to be the market leader for electrifying all recreational and commercial marine transportation. We are bringing cutting-edge technology to a $114B+ total addressable market.





Our first product is the Valo Hyperfoil, a 2-person electric hydrofoil personal watercraft, built on our hydrofoil technology platform. With a top speed of 42mph, a range of 62 miles, and all-electric near-silent operation, the Valo Hyperfoil represents a quantum leap forward in personal watercraft.



Hydrofoiling is one of the fastest growing segments in watersports, with foiling surfboard and e-foil boards having become incredibly popular in the last 10 years due to the excitement and thrill of flying over water. This is all despite a steep learning curve and other impediments to adoption. The Valo Hyperfoil is the next logical step in foiling sports, where a rider can experience the sheer joy of foiling flight without a challenging learning curve or superior athletic skill, opening up the experience to a far wider customer base.

The structure of the personal watercraft market is also very favorable. It is large and consolidated - approximately 80,000 personal watercraft are sold each year for a total of ~$1.5bn in sales with three major players each holding significant market share.

Testing of the Valo Hyperfoil alpha prototype - full launch video at the top of the page!

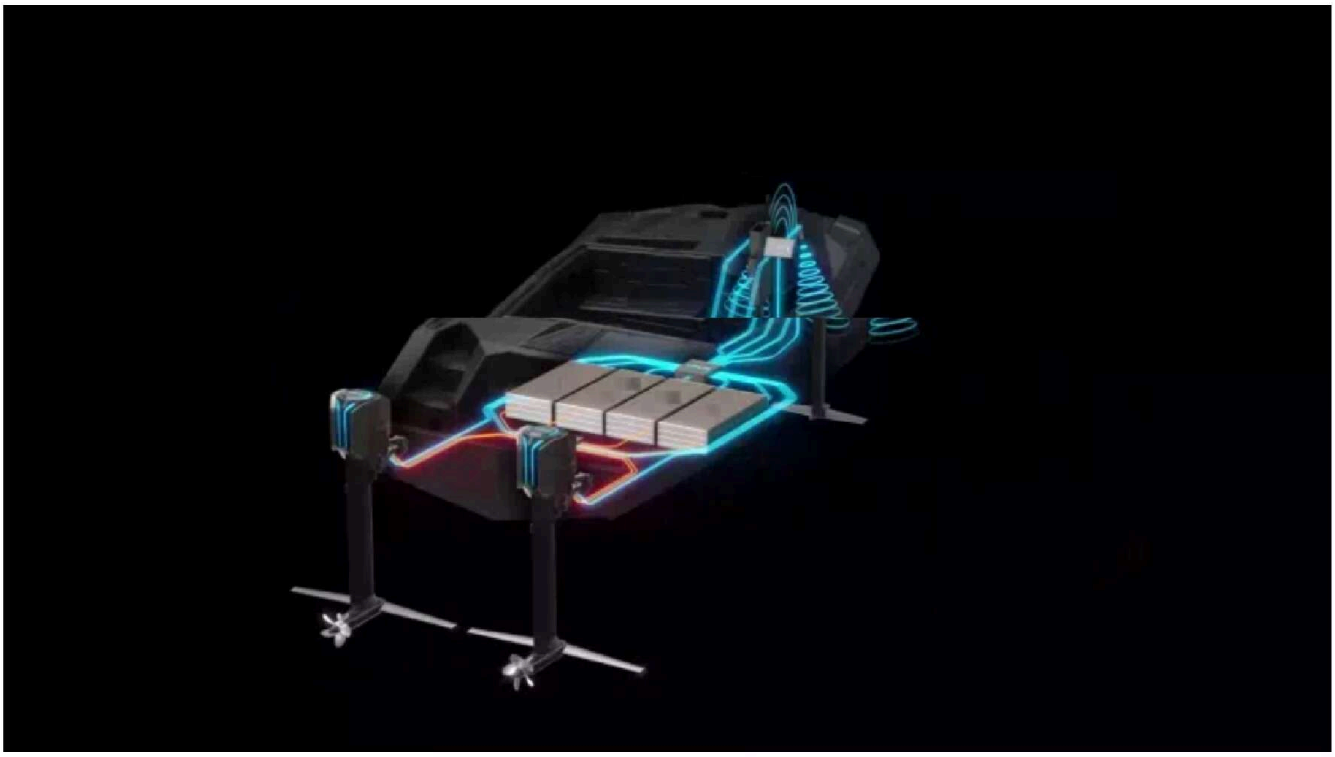
We have demonstrated strong market demand for the Valo Hyperfoil with $3.5m in pre-sales (note about pre-sales). Customers have paid a deposit of $500 - $1,000 per vehicle, with the rest of the revenue incoming once we've delivered, and two customers already paying full price in advance to be first in line. We have completed testing of our first prototype of the Valo Hyperfoil and are on track to delivering the first vehicles to our customers in 2024.

Not merely a concept, the first Valo Hydrofoil is already making its mark on waters today.

Alex Teng - Partner, Fifty Years VC

"Getting on the Valo Hyperfoil was like nothing I'd experienced before. When it lifted out of the water I felt like I was flying. It's the closest I've ever felt to nature on a boat — just the wind in my hair and the tiny swish of water as I flew across the surface."

Mid-sized hydrofoil systems for boat OEMs



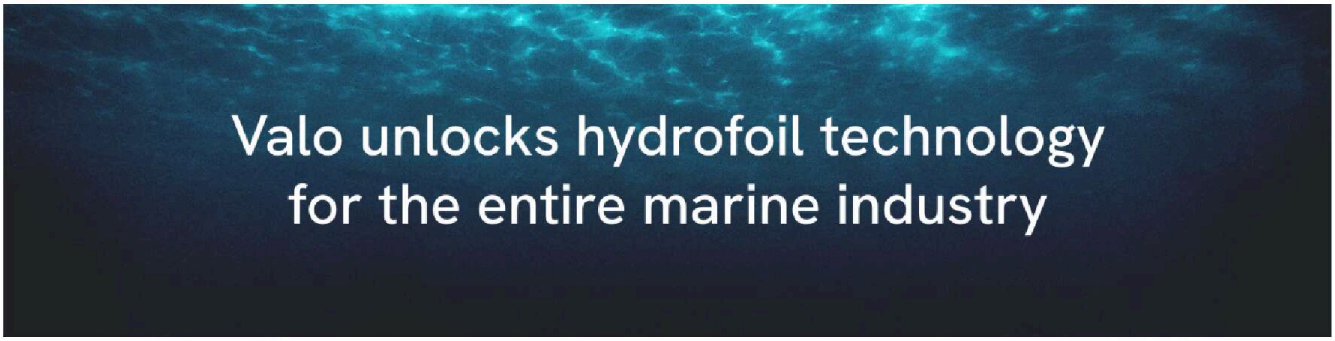
The Valo Hydrofoil Technology Platform integrated into a 18ft boat.

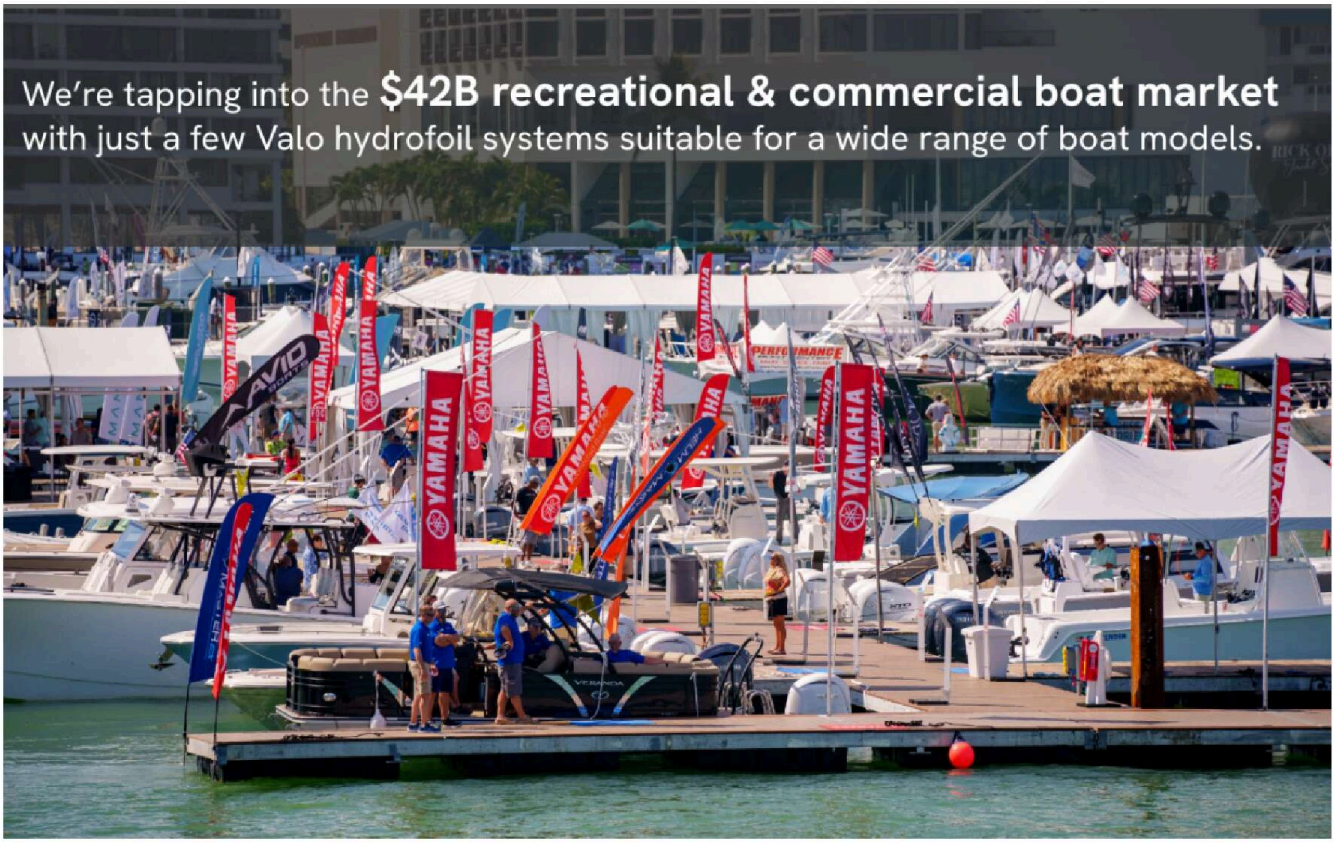
While the personal watercraft market is perfect for a single company to capture a small number of products, the broader recreational and small boat commercial market is the complete opposite. There are over 2000 recreational boatbuilders (OEMs) in the world, each with a large range of different boat models and variations.

2,000+

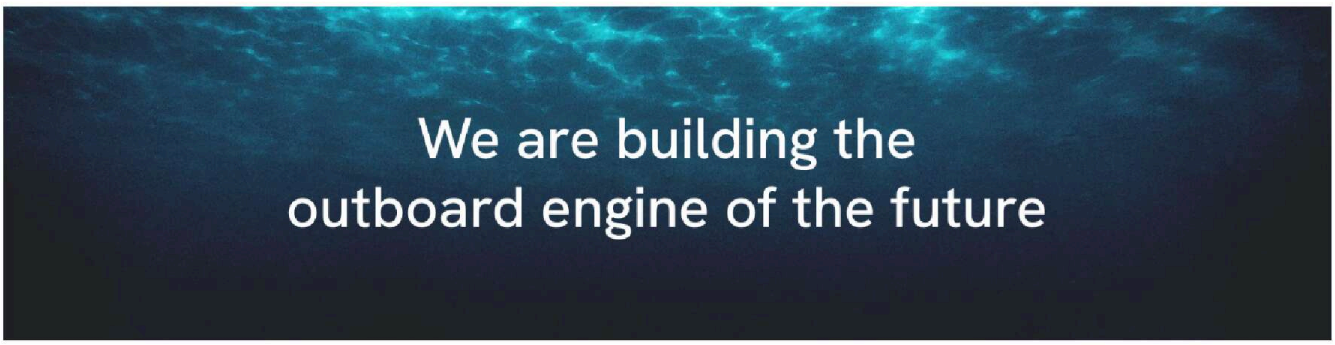
recreational boatbuilders (OEMs) in the world, each with a large range of different boat models and variations.

This high level of fragmentation in the recreational boat market is due to a wide variety of customer requirements and desires. Boats vary across several dimensions, function and style.



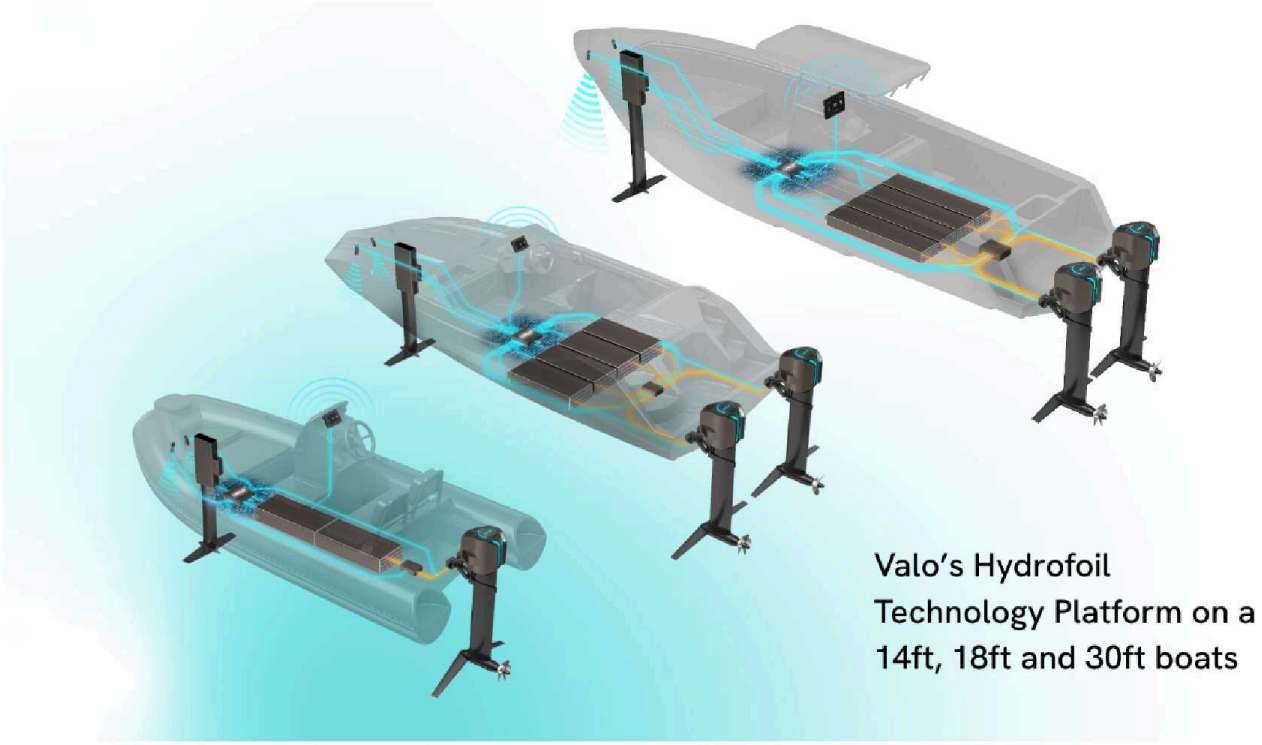


Achieving a large market share in this $42bn market as a boatbuilder requires dozens, if not hundreds of distinct products. We are accessing a broad section of this market with just a few products by providing systems that are usable in many varieties of boat models. Outboard motor manufacturers like Brunswick (Mercury) and Yamaha have been extremely successful with this approach.



As our second market entry point, Valo is taking the hydrofoil technology in the Valo Hyperfoil and packaging it up in a way that can be seamlessly integrated into existing boat designs with minimal modifications. Essentially, we offer the outboard engine of the future that yields a dramatically better experience for boaters - vastly superior efficiency, and a much more comfortable ride.

With every passing year regulations on gas boat emissions become more stringent across the world, however, no plausible solution exists for boat builders to electrify their products, until now.



Valo's Hydrofoil Technology Platform on a 14ft, 18ft and 30ft boats

But what about a non-foiling electric boat? In a word, drag. Since an average boat uses up to 15X more energy than a car, and batteries

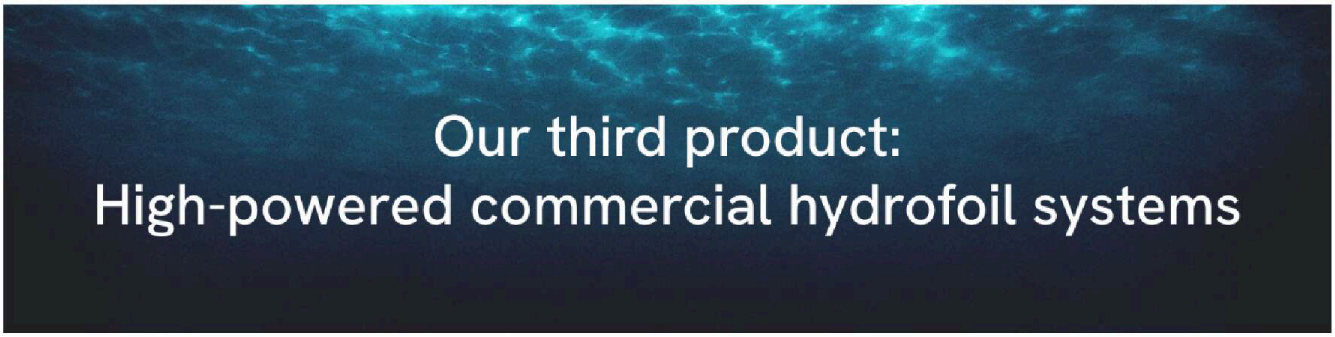
average boat uses up to 15X more energy than a car, and batteries contain 15x less energy per unit weight than gasoline, a non-foiling electric boat simply consumes too much energy to make a compelling product that recreational boaters will be comfortable buying. In short, non-foiling electric boats either have to travel very slowly to go any distance or suffer extremely limited range if operated at normal speeds.

We've built Valo to be the technology platform powering the marine industry of tomorrow. And it's getting attention - We have a pilot project to supply a system for an 18ft ski boat to be delivered in mid-2024, and LOIs worth $8m for future systems.

Planned system sizes

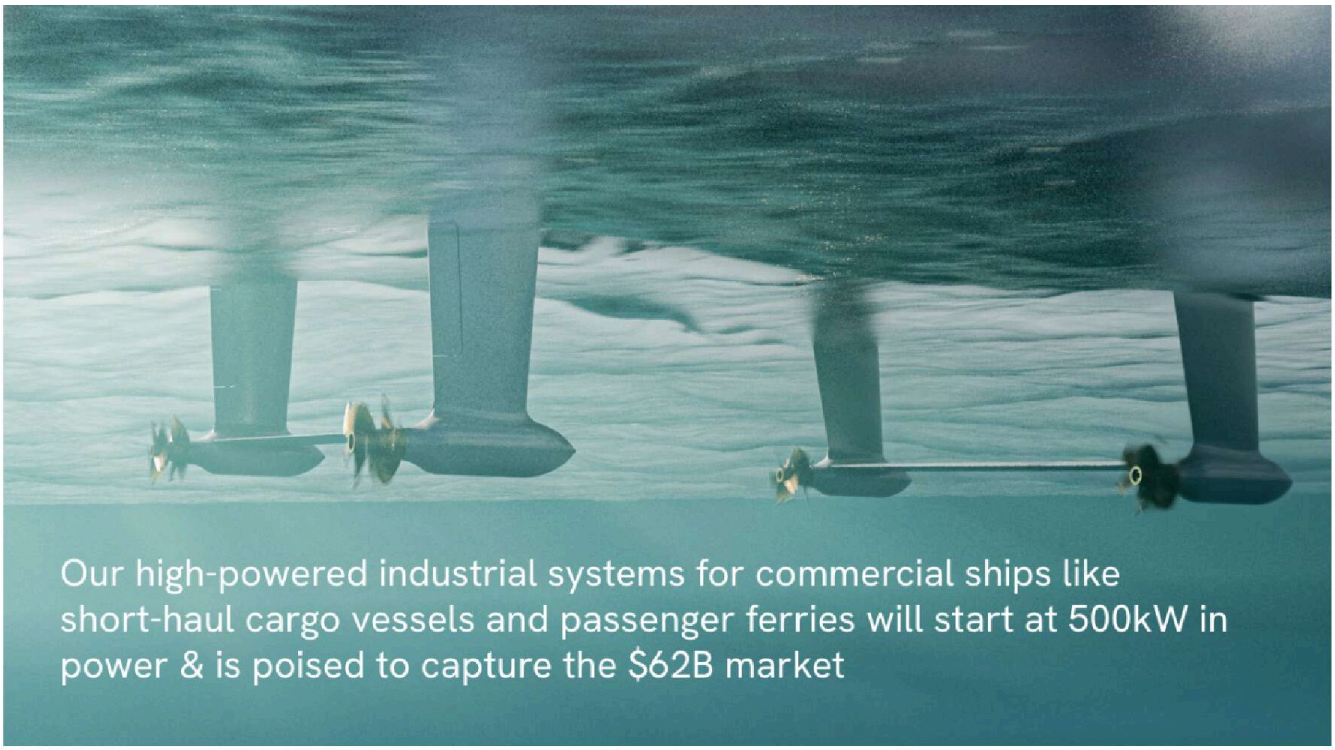
System Size	Boat Size range
Single 45kW system	12ft - 16ft boats
Twin 45kW system	16ft - 20ft boats
Twin 100kW systems	20ft - 30ft boats

With just four sizes of hydrofoil systems, we can power boats up to 40 feet– meaning we can serve 98% of the total recreational boat market based on boat length and achieve very high production volumes.



Hydrofoiling electric passenger ferry and micro containership powered by Valo's hydrofoil technology

The opportunities in the small & medium boat sector for recreational and commercial uses are huge, but at Valo we believe that the potential for foiling technology doesn't stop there.



Once we have successfully scaled to fully service boatbuilders building small and medium-sized boats, we will introduce Valo's third product line: high-powered industrial systems for commercial ships like short-haul cargo vessels and passenger ferries. Our high-powered systems will start at 500kW in power and will meet the requirements of class society equipment certification.

By partnering with leading naval architects, shipbuilders, and ship owners across the globe, our technology will help unlock the last frontier of water transit by creating small, fast cargo ships that can compete with air freight on transit time, while being half the cost.

Traction

Valo is seeing phenomenal momentum in numerous verticals

Leading boat makers, Fortune 100 companies, and ferry operators have signed $124M in Letters of Intent (LOIs). The Valo Hydrofoil has already experienced an explosive launch with $3.5M in pre-sales. And, boat original equipment manufacturers (OEMs) are signing contracts to purchase our hydrofoil technology platform.

$3.5M
in presales for Valo Hyperfoil watercraft

$8M
in LOIs with recreational boat builders

$26M
in LOIs from Fortune 100 companies for freight container ships

$90M
in LOI from ferry operators

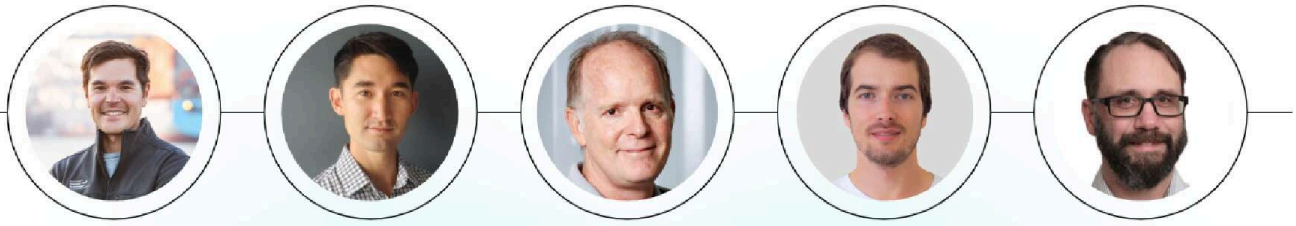
The press loves us

Forbes · Yacht Harbour · electrek · New York NYSG Style Guide · Robb Report · TechCrunch · Jetset Magazine · NEW ATLAS

Team

Our venture-backed team has brought transformative innovations to the marine sector

The unique challenges in bringing a hydrofoiling system to market can only be met by an equally unique and qualified team. Our team is a powerhouse of talent with deep knowledge in the marine sector. We've built e-foiling boats, self-landing rockets, drones, and America's Cup yachts, and hail from industry giants like McKinsey & Co., Oracle, and Boeing.



Ed Kearney
CEO
4x founder, 2 exits,
2x YC founder,
ME UNSW Sydney

Reo Baird
CTO
MIT, Fmr McKinsey
Fmr CTO Navier
Boat, delivered
their prototype

Paul Bieker
Naval Architecture Consultant
Principal design engineer on Oracle Team USA foiling boats

Mateo Peña Doll
Drivetrain Consultant
MIT MechE,
founder of Doll Motors

Dr. Benjamin Triplett
Lead GNC Engineering Consultant
PhD, Fmr Boeing, Insitu, Masten Space

Y Combinator BOEING ORACLE

McKinsey & Company Massachusetts Institute of Technology NAVIER

Business model and projections

Our business model has both D2C and B2B opportunities

We are already generating direct-to-consumer revenue with pre-production sales of our Valo Hyperfoil personal watercraft.

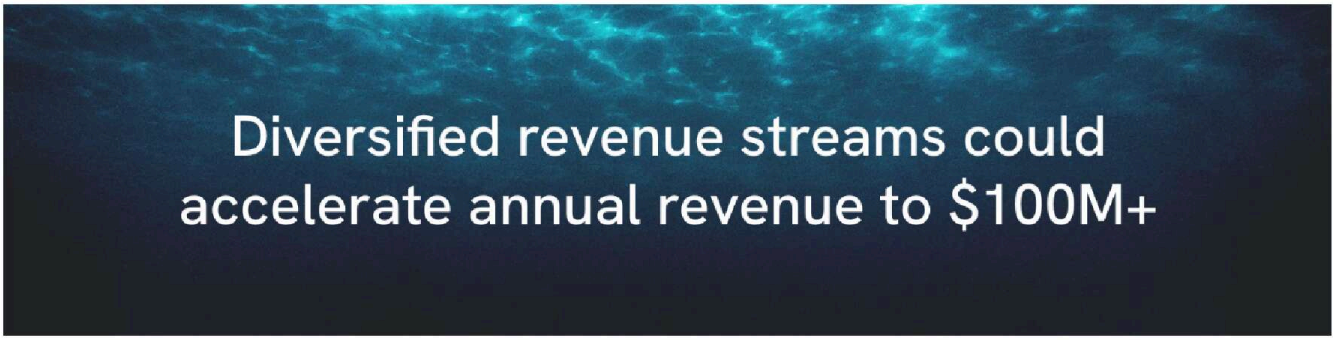
Recreational and commercial boat builders purchase hydrofoil systems to be installed on the watercraft they produce, requiring a 50% down payment on a minimum production order of 50 systems worth a total of $1.5M.

Direct-to-consumer
revenue generated by Valo Hyperfoil sales to recreational boaters

Business-to-Business
revenue generated by hyperfoil technology platform sales to recreational and commercial boat builders

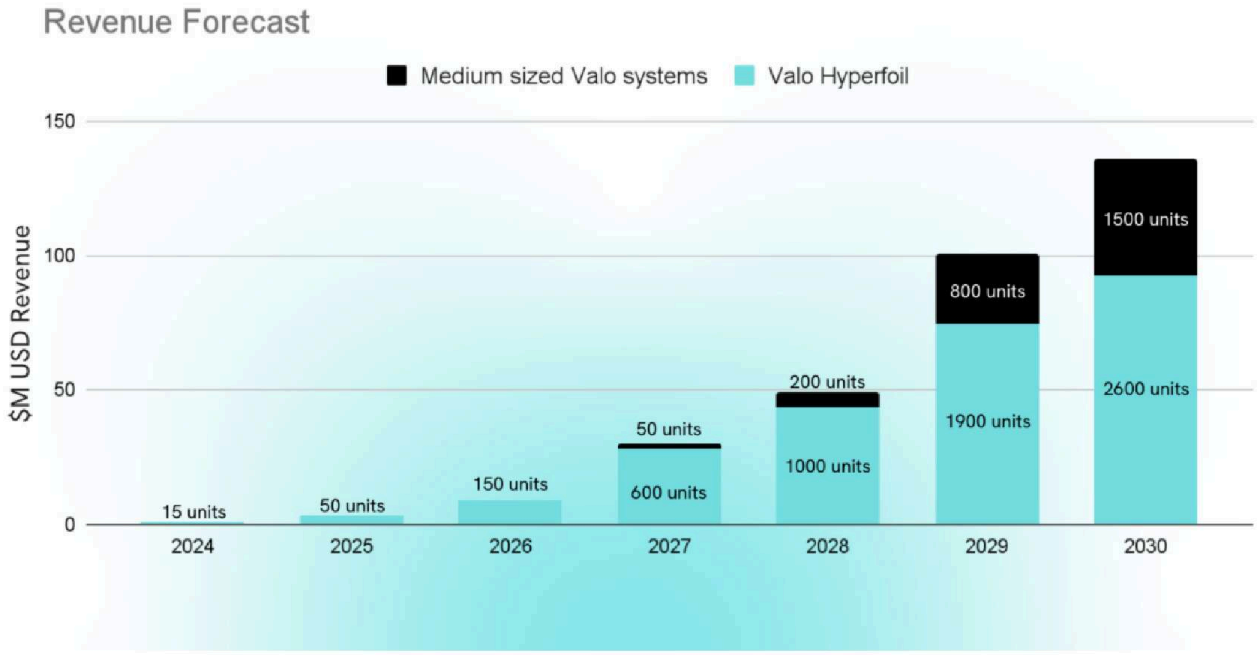
-$3.5m in pre-production sales-

-$124m in letters of intent -



With a strong and growing number of pre-orders for Valo Hyperfoil, a growing pipeline of initial OEM customers, and additional LOIs for $124M, Valo is well on its way to $100M in annual revenue by 2029.

We are targeting sales volume of 2,600 units of the Valo Hyperfoil by 2030, contributing $90m+ revenue at a target gross margin of 26%, all while representing only 3.3% penetration of the PWC market.



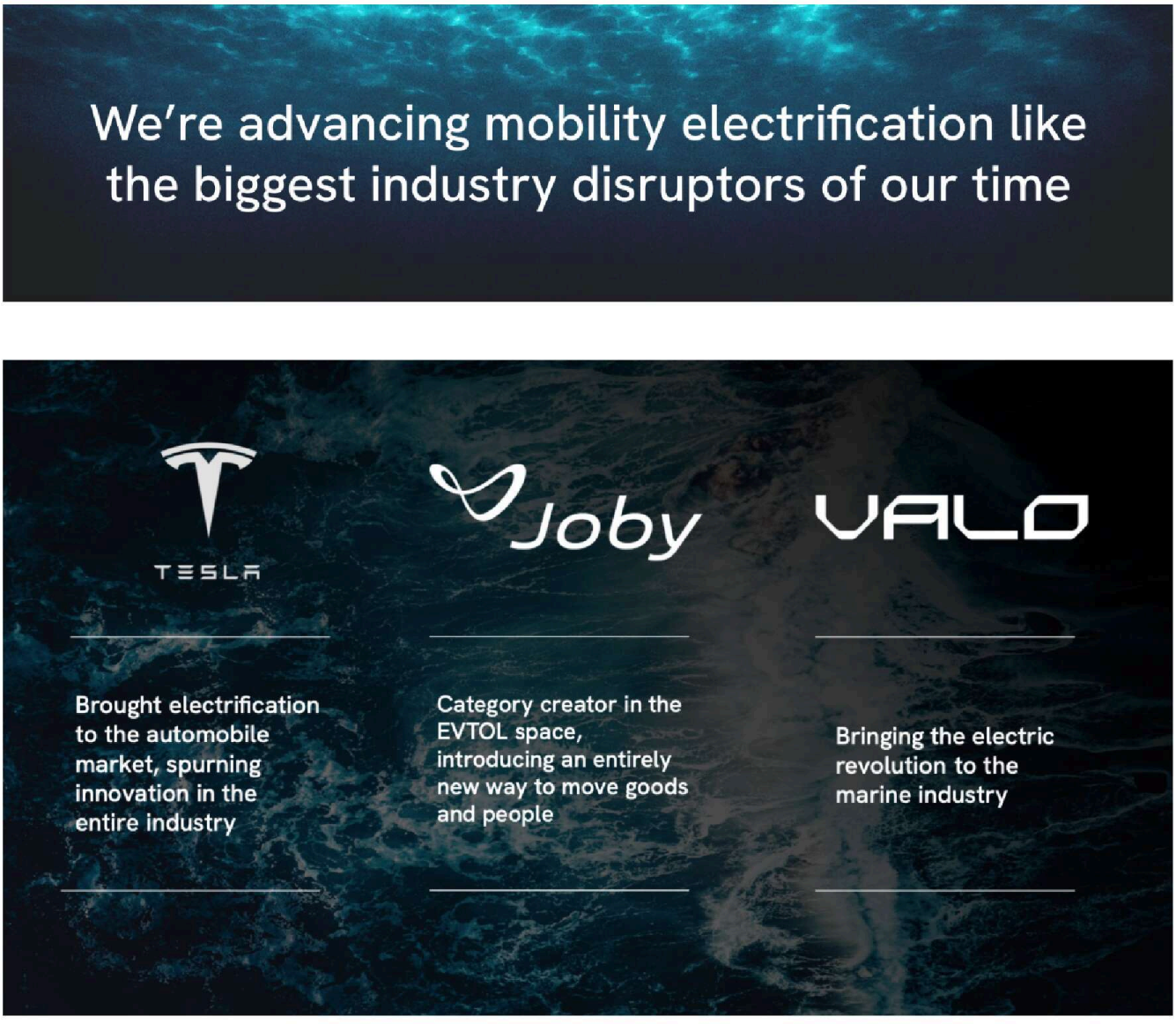
Note: future projections cannot be guaranteed.

Note: Our projections are based on reaching 2600 sales of the Valo Hyperfoil Flagship 2030, reaching a market penetration of 3.5% based

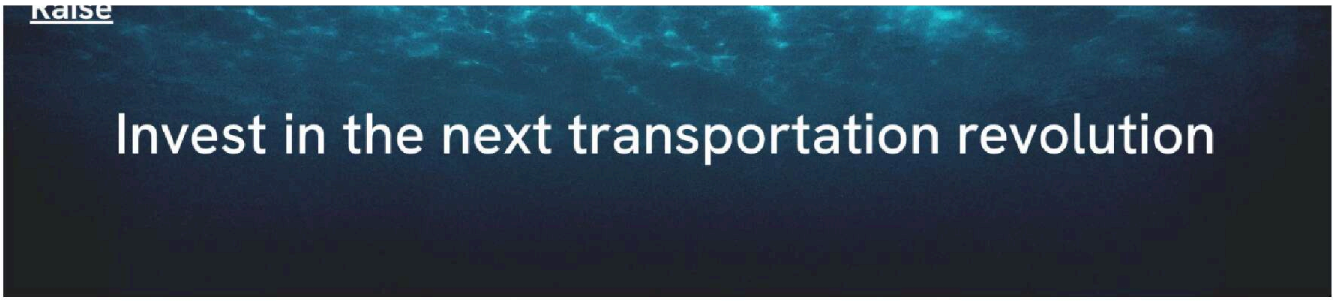
Hyperion Flagship 2030, reaching a market penetration of 3.3% based on 82,000 personal watercraft sold in 2020 and a conservative assumption of the comparable market in 2030.

Our projections are based on reaching 1500 sales of the medium-sized Valo system in 2030, reaching a market penetration of 0.5% based on 305,900 outboard engine sales in 2020 personal watercraft, and a conservative assumption of a comparable market in 2030.

Achieving this will require a spin-up of a large manufacturing facility as well as execution of wide-ranging sales and marketing efforts.



Note: Although identified as comparables, this does not predict a similar future exit, as outcomes are not guaranteed.



We're raising capital to scale production of the Valo Hyperfoil and capitalize on the demand for our technology platform from our recreational and commercial boat-building partners, positioning us to revolutionize water mobility as we know it.

Investing in this round means you'll be investing alongside Y-Combinator, Soma Capital, Fifty Years VC, Climate Capital, and Lower Carbon Capital, as we unlock the next transportation revolution.