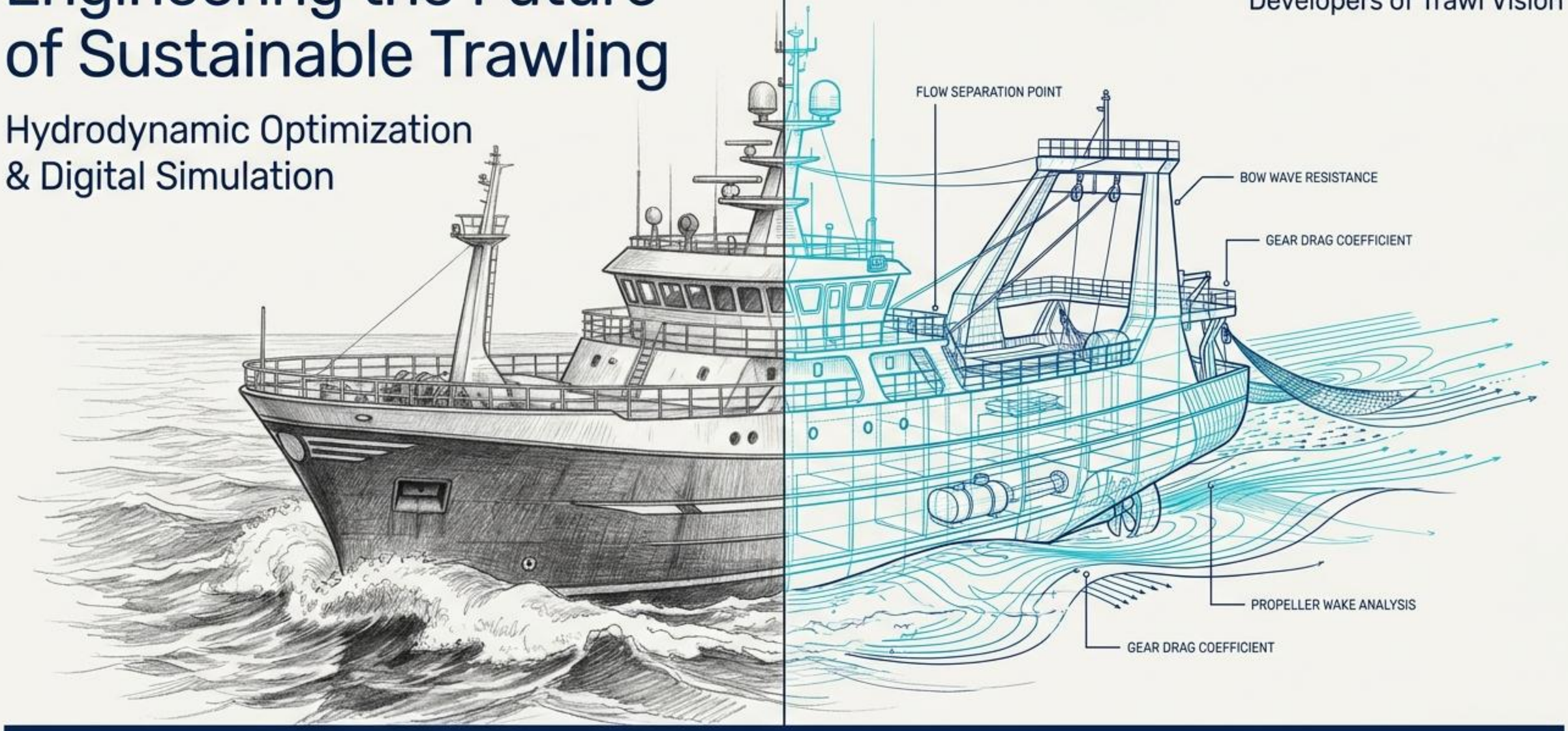
Engineering the Future of Sustainable Trawling

Hydrodynamic Optimization & Digital Simulation

AcruxSoft Engineering
Developers of Trawl Vision



Maximizing operational efficiency and eliminating trial-and-error at sea.

AcruxSoft

Invisible Hydrodynamic Resistance is Draining Daily Profitability

The Physics of Loss

A significant percentage of fuel consumption in trawling originates from systemic inefficiencies—specifically the hydrodynamic drag of the net, doors, and rigging.

The Financial Impact

These invisible losses compound daily, costing thousands of dollars per operation in wasted fuel burn.

The Traditional Flaw

Historically, optimizing this gear relied on costly, risky, and unsclentific sea trials.

The New Paradigm

Utilizing methodologies aligned with FAO and ICES standards, AcruxSoft replaces guesswork with precision simulation.

Global Simulation Expertise Replacing Guesswork with Precision

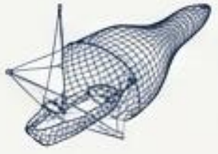
AcruxSoft is a specialized technology firm deploying simulation engineering for international fishing fleets, research centers, and maritime training academies.

Advanced Hydrodynamic Analysis

Evaluating fluid resistance and spatial geometry of current trawl configurations to pinpoint structural inefficiencies.

System-wide Energy Optimization

Directly reducing overall traction requirements to drastically cut daily fuel burn and lower operating costs.

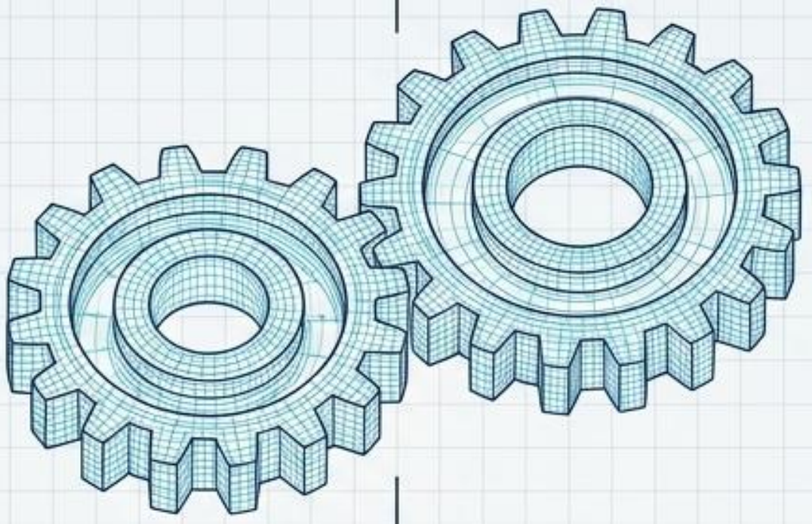


Sea-Trial-Free Digital Simulation

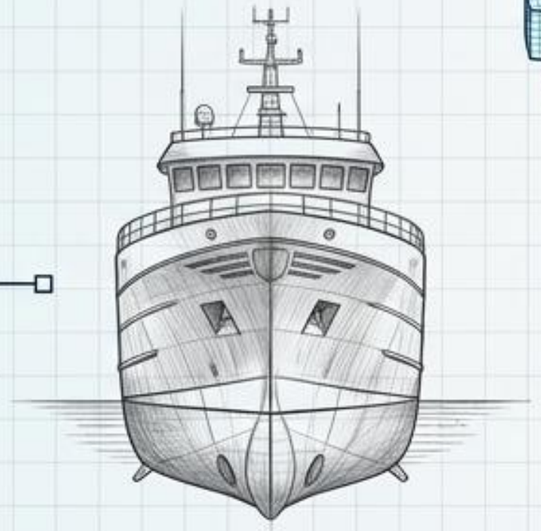
Testing structural modifications entirely in a zero-risk digital environment before ever deploying physical gear.

A Two-Stage Strategic Transformation for Modern Fleets

PHYSICAL APPLICATION



DATA EXTRACTION & DIGITAL MASTERY



Stage 1: System Optimization Project

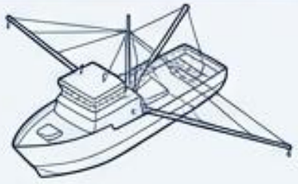
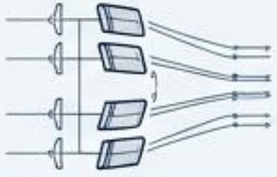
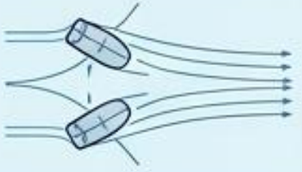
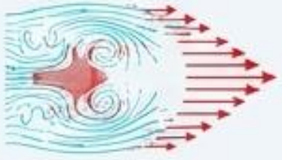
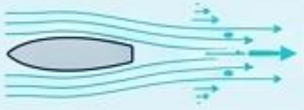
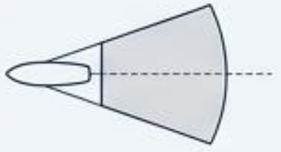
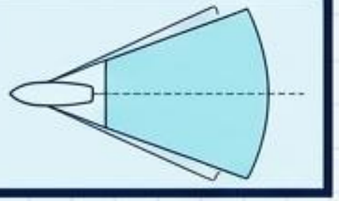
A direct, physical transformation of the gear (Migration to Twin Trawl) engineered to deliver immediate fuel reductions and catch efficiency.

Stage 2: Technological Integration

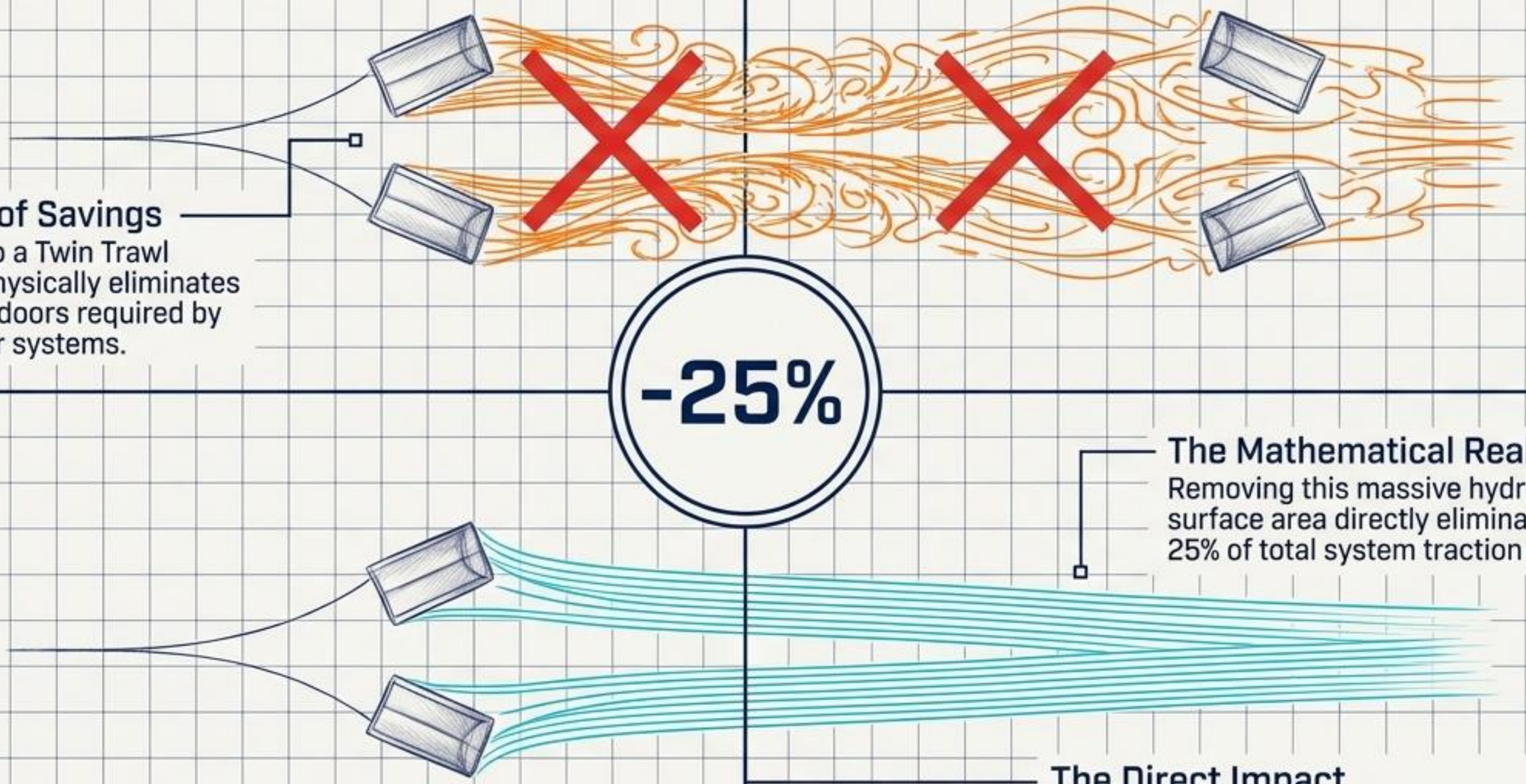
Embedding the Trawl Vision software ecosystem and specialized training directly into your operations team for continuous, in-house optimization.

The Structural Shift from Tangones to Optimized **Twin Trawl**

Evolution Matrix

	Legacy State: Outriggers / Tangones	**Future State:** **Twin Trawl**
System Footprint	Severely limited by outrigger length and vessel beam. 	Unrestricted, **maximizing potential swept area.** 
Hydrodynamic Drag Source	Requires **4 heavy Trawl Doors.** 	Requires only **2 Trawl Doors.** 
Fuel Consumption	High baseline due to **massive drag profile.** 	Dramatically reduced via **streamlined hydrodynamics.** 
Catch Efficiency	Standard coverage geometry. 	Maximized **effective sweeping coverage** per unit of time. 

Eliminating Redundancy Yields an Immediate 25% Reduction in Traction



The Physics of Savings

The transition to a Twin Trawl configuration physically eliminates 2 of the 4 trawl doors required by legacy outrigger systems.

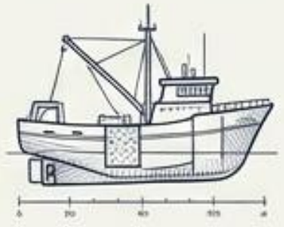
The Mathematical Reality

Removing this massive hydrodynamic surface area directly eliminates approximately 25% of total system traction resistance.

The Direct Impact

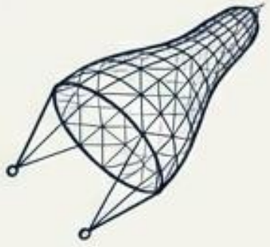
This structural optimization translates into an immediate, measurable drop in fuel burn and a reduction in greenhouse gas emissions.

Stage 1 Execution Flow: From Diagnosis to Delivery



Phase 1: Diagnostic Assessment

- Comprehensive evaluation of vessel power.
- Analysis of current rigging configurations.
- Calculation of total system resistance and existing energy losses.



Phase 2: Optimized Design Engineering

- Conducting comparative simulations (Current vs. Proposed).
- Optimizing net geometry, horizontal, and vertical openings.
- Tuning filtration efficiency to minimize drag.

Phase 3: Impact Delivery

- Finalizing a modern, stable, and secure system design.
- Guaranteeing significant fuel drops.
- Maximizing targeted catch performance.

Precision Engineering Requires Rigorous Operational Data

To guarantee absolute precision in our comparative simulations, the following inputs are required to map your vessel's unique physical profile:

Vessel Specs

Exact power output, propeller characteristics, and overall physical dimensions.

Current Configuration

Comprehensive specifications and geometry of the existing trawl system.

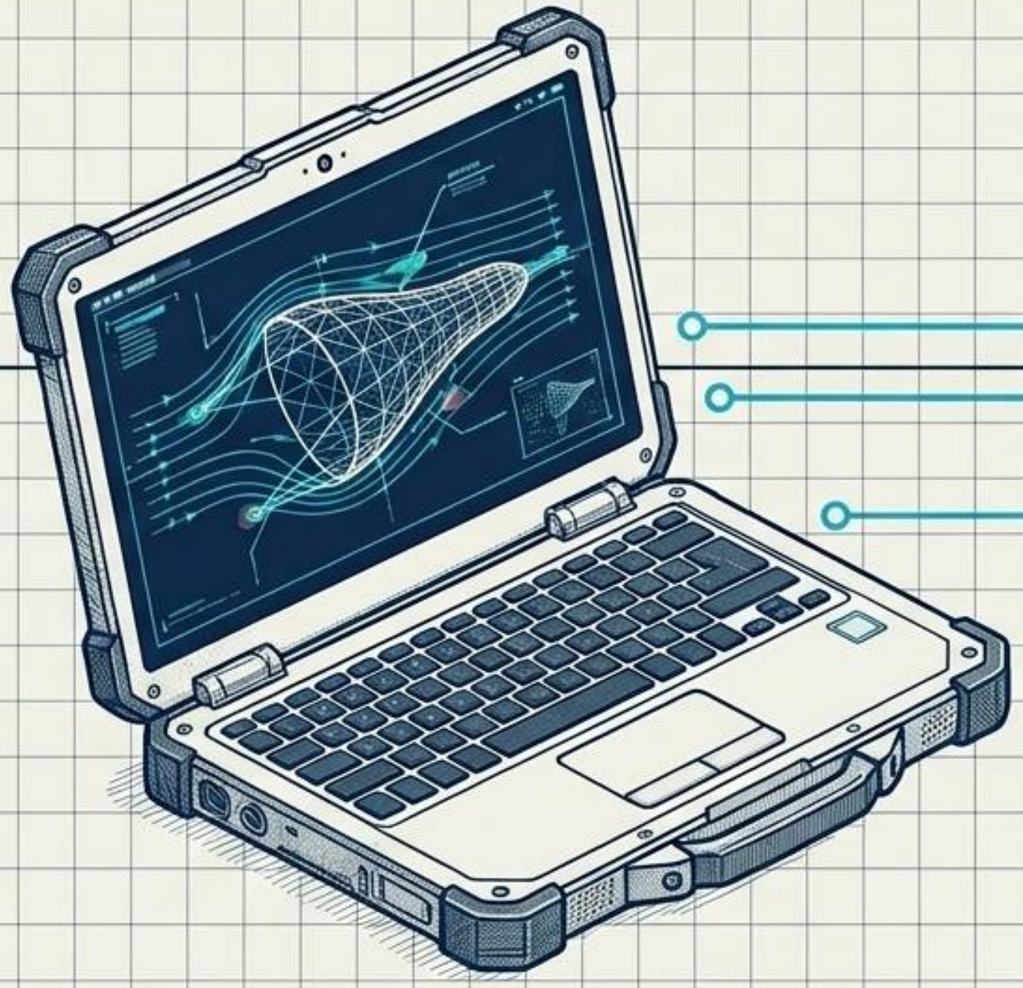
Operational Reality

Average speeds, real-world fuel burn rates, operating depths, and target species.

Technical Schematics

Official blueprints or detailed technical drawings of the current rigging setup.

Stage 2: Embedding Trawl Vision Capabilities Directly Into Your Fleet



The Core Asset

Trawl Vision Simulator (TVS) & Trawl Vision Designer (TVD) represent the industry's leading software toolkit for internal decision-making.

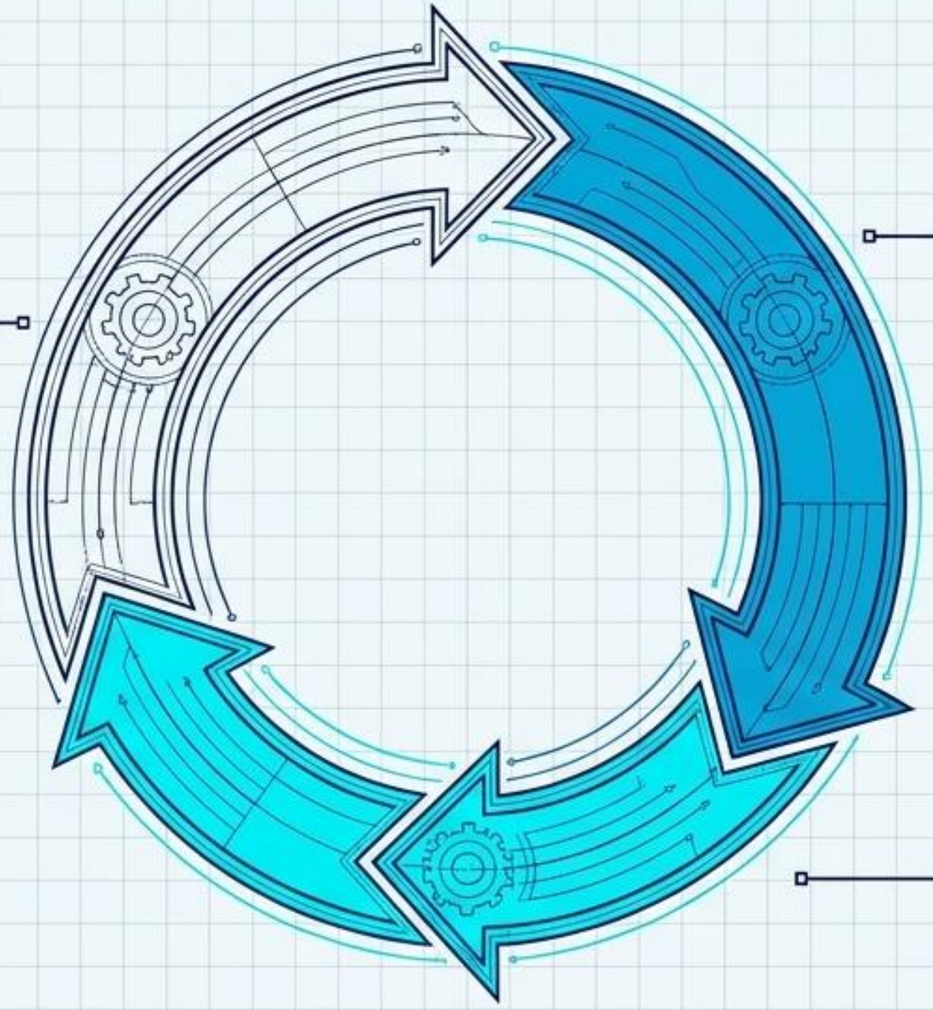
What is Included

A complete software license featuring a hydrodynamic simulation module, a gear design module, and access to a comprehensive industrial design library.

The Support Structure

Deployment includes specialized remote technical training via the internet and dedicated initial support to ensure seamless operational integration.

The Digital Twin Advantage Ends Trial-and-Error at Sea



Analyze.

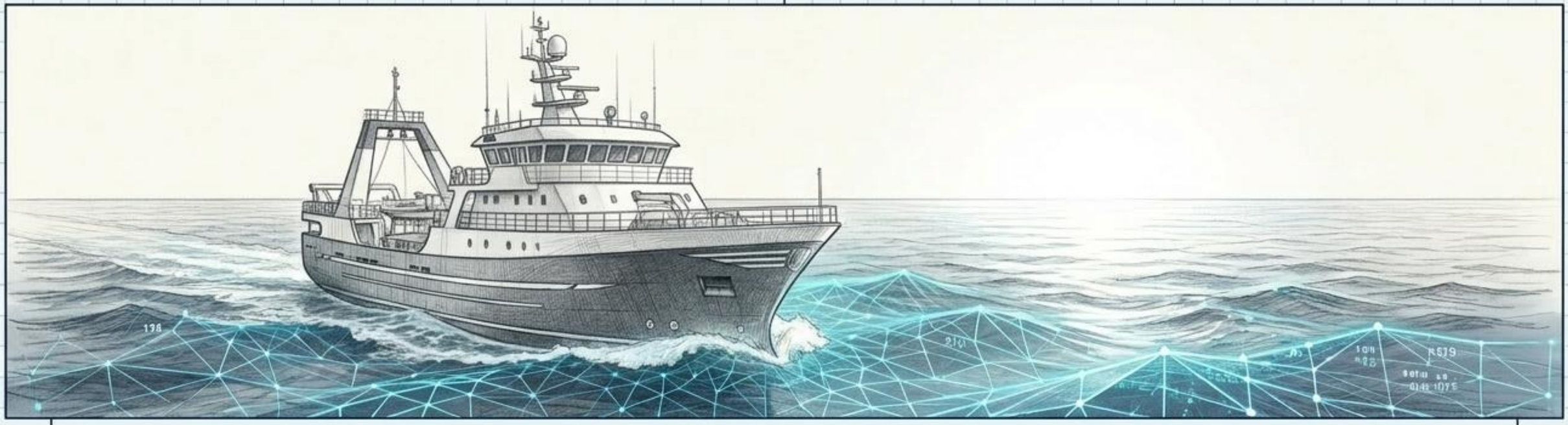
Instantly identify concrete opportunities for drag reduction and yield improvement within your current setups.

Simulate.

Test radical new configurations, net geometries, and rigging adjustments in a zero-risk digital environment, entirely eliminating the cost of physical sea trials.

Optimize.

Achieve continuous, compounding improvements in fuel burn reduction and catch yield, driven by your own fully-trained internal team.



> “Our methodology is clear: Reduce consumption, increase efficiency, and maximize profitability—without the risk of trial-and-error at sea.”

Engineering Operational Supremacy

Next Steps: Initiate the data transfer phase to begin the Stage 1 Diagnostic Assessment.

Frank Chalkling, Founder
& Trawl Vision Developer

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