

# Bring us the hard problem

Wyspa Technologies is a US small business providing performance prediction, hydrofoil and composite-structures engineering, proven on 90+ Grand Prix racing-yacht projects. We apply our in-house tools to unmanned surface vessels (USVs) and high-speed small craft.

| ENTITY                 | UEI          | CAGE    | BUSINESS TYPE  |
|------------------------|--------------|---------|----------------|
| Wyspa Technologies LLC | NWJRCE69AWH9 | Pending | Small business |

## Core competencies

- **Speed-power & hydrofoil performance prediction.** In-house tools: ITTC-1957 friction, systematic-series resistance, lifting-line foils, cavitation and ventilation limits. Validated against measured TP52 and Swan 42 sailing-yacht data.
- **Composite laminate engineering.** Classical laminate theory with progressive ply failure (Tsai-Hill, Tsai-Wu), an extensive reinforcement and core library, and 3D-to-2D ply flattening with drape prediction and DXF cut files.
- **Ride-control simulation.** Time-domain foil-borne motion simulation (surge, heave, pitch, roll) in irregular head seas with closed-loop ride-height, pitch and roll control.
- **Survey, scanning & compliance.** FARO 3D scanning and as-built models, stability analysis and USCG compliance documentation, CAD and cut files for builders.

## Lead concept: hydrofoil USV

A 20 ft unmanned hydrofoil craft with a proa hull: one main hull, one outrigger and three actively controlled foils.

| DESIGN TARGETS                 |             |
|--------------------------------|-------------|
| Length overall                 | 20 ft       |
| Payload                        | 500 lb      |
| Transit speed, foil-borne      | 20 kn       |
| Operation (up to 1.25 m waves) | Sea State 3 |

Design targets for a concept; not yet built or tested.

## Differentiators

- Engineering proven in Grand Prix sailing, where small speed margins decide results.
- Wyspa-owned, in-house tools: no third-party license dependencies, and fast iteration from analysis to design.
- Wyspa-owned 19 ft testbed for low-cost on-water validation.

## Relevant experience (commercial)

- 90+ yacht-performance and engineering projects, including TP52, Swan 42 and Etchells programs: performance prediction, rating-rule optimization, race-data analysis and weather routing.
- Structural engineering for a commercial electric-aircraft program.

## NAICS

541330 · 541370 · 541380 · 541690 · 541715

## Target missions

- Port and harbor security · maritime domain awareness (MDA) · ISR · distributed logistics · ocean observing
- Hydrodynamic and composite subcontracts for USV builders and primes