



About SMAR Azure

UK-based and founded more than a decade ago by Dr Sabrina Malpede and Dr Alessandro Rosiello, SMAR Azure has grown substantially over the years in terms of its team of dedicated professionals, yachting-specific technology and product portfolio. Our R&D team comprises three **expert software developers** and three specialists in **aerodynamics** and **structures**. We work closely with designers and manufacturers of sails, yachts and rigs to deliver **solutions** that are **tailored** to the needs of each customer. Our products/services have been chosen by **over 180 clients** in **27 countries** and across various segments of the yachting industry

SMAR Azure offers expert professional services to help sail, rig and yacht designers move **from concept to final sail design**, including fiber layouts and manufacturing details.

We combine our integrated sail-rig-boat design technology, with advanced FEM/FEA and CFD Rans tools to ensure the sail plan are developed to achieve the sought performance.

Our R&D team has a proven track record in the design, aerodynamics, structural and aeroelastic analysis of sailing vessels and their components. Consequently, we enable designers and manufacturers to operate more efficiently by:

- Cutting sail prototyping costs
- Increasing speed/stability performance
- Support the design team with accurate technical info, such as sail loads, forces and centre of effort.

Our Approach

SMAR Azure employs its sail design technology to draw any type of sail-plan. Sail performance is evaluated by simulating the impact of variations in sail trim, sailing conditions and sail shape geometric parameters. The outcome is an optimal sail-plan.

For instance, optimization studies can focus on developing fast shapes and/or easy to maneuver ones

At a glance

Fast Sail Plan design

Optimal sail-plan is defined via an automated evaluation of sail coefficients in a variety of sailing/trimming conditions and by varying the sail's geometry. Using our integrated sail design and analysis technology, optimal sail shapes can be achieved in both upwind and downwind conditions.

Optimal Fiber Layout

Moreover, our engineers design fiber layouts that are light, capable of holding the desired shape and easy to trim shape easy to trim to maximize the boat speed and stability.

Custom Software Development

SMAR Azure builds flexible and modifiable solutions that match your specific goals, requirements and activities.

Our skills range from development of enterprise solutions (including quoting and sales management systems and collaborative project management platforms), performance analysis applications (including aerodynamic, structural and aeroelastic methods) and tridimensional design systems. SMAR Azure develops feature-rich custom stand-alone solutions and customised versions of the extant SMAR Azure packages ,which are tailored to the user's unique requirements.

Why use SMAR Azure?

Expertise:

- Sail Design and Trimming
- 3D CFD - FEM - FSI analysis
- Ability to link CFD RANS results to Sail structural analysis
- Software development
- Yacht Design

Facts:

- Cutting Edge proprietary sail-rig design technology
- + 9 years of experience
- A multilingual team comprising software, naval and aerospace engineers
- 180 customers in 27 countries across 5 continents

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